

QUEEN
HC
111
.A1
D5
1996
no.4
c.2

IC

**FOREIGN DIRECT INVESTMENT AND MARKET
FRAMEWORK POLICIES: REDUCING
FRICTIONS IN APEC POLICIES ON
COMPETITION AND INTELLECTUAL PROPERTY**

*Discussion Paper Number 4
October 1996*

Discussion Paper



Industry Canada

Industrie Canada

Queen
Kc
III
A1
D5
1996
no. 4
C.2

**FOREIGN DIRECT INVESTMENT AND MARKET
FRAMEWORK POLICIES: REDUCING
FRICTIONS IN APEC POLICIES ON
COMPETITION AND INTELLECTUAL PROPERTY**

*Discussion Paper Number 4
October 1996*

by Ron Hirshhorn



Aussi disponible en français

Canadian Cataloguing in Publication Data

Hirshhorn, Ronald

Foreign direct investment and market framework policies: reducing frictions in APEC policies on competition and intellectual property

(Discussion paper; number 4)

Text in English and French on inverted pages.

Title on added t.p.: L'investissement étranger direct et les politiques d'encadrement du marché.

Includes bibliographical references.

ISBN 0-662-62355-X

Cat. no. C21-25/4-1996

1. Investments, Foreign -- Government policy -- Canada.
2. Competition -- Government policy -- Canada.
3. Intellectual property -- Government policy -- Canada.
4. Investments, Asian -- Canada.

I. Canada. Industry Canada.

II. Title.

III. Title: Reducing frictions in APEC policies on competition and intellectual property.

IV. Series: Discussion paper (Canada. Industry Canada)

HG4538.H57 1996

332.6'732271

C96-980412-1E

ACKNOWLEDGMENTS

This paper was written to provide background for discussions by the Economic Committee of APEC. It has benefited from information and suggestions provided by many persons, including various officials in APEC member economies. The author gratefully acknowledges the advice and comments provided by Robert Anderson, John Curtis, Ted English, Denis Gauthier, Surendra Gera, Derek Ireland, Arthur Kaell, Jock Langford, Ross Preston, Someshwar Rao and Zulfi Sadeque.

The views expressed in this discussion paper do not necessarily reflect those of Industry Canada or of the federal government.

The list of titles available in the *Research Publications Program* and details on how to obtain copies can be found at the end of this document. Comments should be addressed to:

Someshwar Rao,
Director, Strategic Investment Analysis
Micro-Economic Policy Analysis
Industry Canada
235 Queen Street, 5th Floor, West Tower
Ottawa, Ontario
K1A 0H5

Telephone: (613) 941-8187
Facsimile: (613) 991-1261

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
1. INTRODUCTION	1
2. FRAMEWORK POLICIES AND FDI	3
General Context	3
Framework Policies and MNEs	4
3. MULTINATIONAL ENTERPRISES AND APEC	7
4. COMPETITION POLICY	11
Introduction	11
Economies Without Competition Policies	12
The Competition Policies of APEC Economies	14
<i>The Institutional Framework</i>	15
<i>The Scope of Competition Law</i>	18
<i>Legislative Provisions</i>	19
<i>Enforcement Issues</i>	26
Addressing Interjurisdictional Issues	28
<i>The Extraterritorial Extension of Antitrust Law</i>	30
<i>Agreements Between Canada and the United States</i>	30
<i>Australia and New Zealand Closer Economic</i>	
<i>Relations Trade Agreement</i>	31
Conclusion	32
5. INTELLECTUAL PROPERTY	33
Introduction	33
Conflict and Compromise	34
<i>Bilateral Initiatives</i>	35
<i>Multilateral Initiatives</i>	36
IP Policies and Their Impacts	39
<i>General Features of IP Legislation</i>	39
<i>Sources of Friction</i>	46
<i>IP Protection and FDI</i>	48
Beyond Intellectual Property	49

6.	IMPLICATIONS	51
	Setting Reasonable Objectives	51
	Building on the Progress Achieved Internationally	52
	Learning from Existing Cooperative Arrangements	53
7.	CONCLUSION	55
	ENDNOTES	57
	INDUSTRY CANADA RESEARCH PUBLICATIONS	67

EXECUTIVE SUMMARY

1. The rapid expansion of foreign direct investment (FDI) and the growing role of global corporations are creating new challenges for the design of market framework policies. Between 1988 and 1993, the worldwide stock of FDI almost doubled. Multinational enterprises (MNEs), which have been the agents for this investment growth, are distributing their activities globally to fully exploit available production and organizational economies.
2. It has long been recognized that policies aimed at achieving national goals may conflict with the requirements for growth and welfare maximization in an interdependent world. Framework policies can distort the allocation of FDI and reduce the extent to which countries benefit individually and collectively from the activities of MNEs. Cooperative arrangements can help prevent policy conflicts, reduce resource misallocation and create an international environment that is more favourable to long-term business planning.
3. These issues deserve attention by APEC because FDI has been an important integrating force in the region and an important vehicle for promoting growth and spreading industrialization. Intraregional flows of FDI have brought host economies capital, along with much needed technology and management skills, while allowing home economies to share in the benefits from MNEs' access to lower cost labour and material inputs. The significant liberalization of foreign investment policies that has occurred in recent years (and that, among other things, has resulted in the emergence of China as an important host economy) suggests that policymakers have come to appreciate the general nature of these benefits. But, while some of the most direct and significant obstacles to the growth of MNEs have been eliminated, the process of reforming market framework policies has only begun. APEC policymakers must now turn their attention to other potentially important sources of system friction, which include (but are not restricted to) competition and intellectual property (IP) policies.

Competition Policy

4. Competition policy comprises the body of laws and regulations through which countries protect and preserve the role of open and competitive markets as a primary means for allocating economic resources. Effective competition policy promotes increased efficiency, which should be reflected in greater consumer choice, lower prices and improved product quality. The goal of open and competitive markets is served by liberalized policies that encourage international trade and investment. But while competition policy and FDI are complementary in principle, they may collide in practice.

5. There are a number of concerns relating to the potential impact of the competition policies of APEC economies on FDI and the gains from economic integration. First, a number of economies - Hong Kong, Indonesia, Malaysia, the Philippines, Singapore and Thailand - do not have competition legislation. Foreign trade and investment have limited the potential for anticompetitive practices in Hong Kong and Singapore, and to a lesser extent, other economies. In a number of these APEC economies, however, there is reason to question whether the benefits of FDI are being adequately realized. This question has become more important as sectors have been deregulated and privatized, and FDI has spread into service sector activities. Some ASEAN economies have recognized these concerns and are now preparing to enact competition laws.
6. Second, divergences in competition policy have, on occasion, been a source of friction between economies, and of higher costs for firms doing international business. There are some broad similarities in the policies of those APEC economies with competition laws. These include: the use of independent administrative and enforcement agencies; the classification of some offenses as criminal and some, civil; and the distinction, in all countries, between clearly anticompetitive practices that are prohibited outright, and restrictive agreements that may have some offsetting economic benefits and require examination on a case-by-case basis. But, at the same time, there are some significant differences in approach within APEC. The strong attachment of the United States to open competitive markets contrasts with the recent, very tentative movement towards competitive markets by the People's Republic of China. Chinese Taipei and Mexico have also only recently enacted competition laws. While certain anticompetitive practices (naked price-fixing, bid-rigging and related agreements to restrict competition) are prohibited outright in the United States, they are prohibited elsewhere only if they lessen competition "unduly" (Canada) or "substantially" (Australia). Traditionally, there has been a wide difference in the approach of the United States and Japan towards various potentially restrictive agreements. Differences remain, although the gap has narrowed as a result of both changes in attitude towards competition in Japan and a greater appreciation in the United States of the potential efficiency gains from certain horizontal arrangements (i.e., joint ventures) and non-price vertical restraints (i.e., exclusive dealing agreements).
7. The competition laws of APEC economies give recognition to the importance of encouraging innovation, but in some member economies there is a greater sensitivity to abusive activities by those holding intellectual property rights. In most economies, technology licensing agreements may be permitted subject to the results of a case-by-case review. Licensing restrictions are assessed according to detailed guidelines in Japan, and according to the provisions of the Monopoly Regulation and Fair Trade Act in Korea.
8. Differences in the nature and stringency of enforcement have added to the potential for conflict. The enforcement of U.S. law is relatively vigorous by comparison to most countries. This is partly because treble damage awards allowed under U.S. law have encouraged private

enforcement actions. The most serious differences over the implementation of competition policy have been between the United States and Japan. The United States has focused particularly on the application of Japan's competition policy to linked groups of Japanese companies known as *keiretsu*, which are seen to impede U.S. export sales in Japan. The Japanese Fair Trade Commission has strengthened enforcement and increased penalties in recent years, but the United States and Japan are still involved in discussions aimed at resolving differences over the application of competition law.

9. Third, although export agreements and other anticompetitive practices may impact heavily on other economies, they tend to be assessed almost entirely in terms of their impact on domestic residents. This problem could exist even if economies had identical competition laws. Moreover, the resulting potential for conflict increases as economic interdependence increases. The United States has reacted to the extrajurisdictional impact of restrictive practices by applying its competition policies extraterritorially. Economies have also tried to resolve interjurisdictional issues through agreements, such as the Competition Policy Agreement signed by Canada and the United States in August 1995, which sets out a procedure for notification and consultation where one party's enforcement affects the other party's interests.
10. Fourth, the implementation of competition policy suffers from the absence of arrangements whereby economies can coordinate their response to issues with broad international implications. This increases the potential for conflicts to arise and important issues to remain unaddressed.

Intellectual Property

11. Intellectual property rights in the form of trademarks, copyrights, patents, and industrial design rights, are the means by which governments protect brands, literary and artistic works, and new products and processes. Intellectual property laws that deal with industrial property (mainly patents) have the same broad objective as competition policy, namely to improve economic efficiency. But whereas competition policy addresses various possible sources of increased efficiency, IP policies are aimed mainly at achieving the dynamic efficiency gains that are the result of higher rates of innovation and technological change.
12. While considerable progress has been made in resolving disagreements in recent years, IP has been the source of considerable friction among APEC economies over most of the past decade. These tensions partly reflect differences in perspective between net exporters and net importers of goods that embody intellectual property rights (IPRs). Through pressure backed by the application of its trade laws (especially the "Special 301" provisions contained in the *Omnibus Trade and Competitiveness Act* of 1988), the United States succeeded in increasing IP protection for U.S. firms in most developing and newly

industrialized APEC economies over the latter half of the 1980s. These initiatives, however, did not create the level playing field in IP policy that is conducive to efficient international commerce. Considerable progress on the latter has now been achieved through the inclusion of an agreement on IP in GATT, now the World Trade Organization (WTO). The Uruguay Agreement on trade-related aspects of intellectual property rights (TRIPs) agreement signed in 1994, attempts to establish minimum international standards of IP protection and to provide effective support for these standards through the application of GATT-style enforcement procedures and dispute resolution mechanisms.

13. While APEC members have implemented some important IP changes in recent years, a number of economies still have some distance to go to meet international requirements. Some differences in the interpretation of the TRIPs provisions have also emerged. As well, there are some potentially contentious issues that were not addressed by the agreement, such as the question of IP owners' rights to control parallel imports of products embodying their IPR. While considerable progress has been achieved in reducing infringement, there are still gaps in some areas of IP enforcement within APEC.
14. Evidence suggests MNEs are less likely to transfer or license advanced technology to firms in economies with less effective IP protection. Firms are more likely to transfer older technology to economies with weaker IP policies.
15. IP policies are not the only, nor necessarily the most important, government policy affecting innovation. The ratio of patents to real R&D expenditures in the United States and elsewhere has been declining. Meanwhile, other policies designed to promote innovation have become important sources of policy friction. One example is government policies on procurement of technologically advanced products. Another example is government policies towards foreign participation in government-subsidized research consortia. In both areas, conflicts have arisen because of the perception that governments have tilted their programs to foster the growth of indigenous firms. With the pressure on countries to foster the development of internationally competitive enterprises, innovation policies in general have become a significant source of international friction.

Implications

16. APEC economies have a common interest in reducing frictions and creating an environment that is conducive to the efficient movement of capital and technology. To harness this common interest, there is a need, first, to gain agreement on some reasonable objectives. Policy harmonization would be an unrealistic objective, given the substantial economic, social and cultural differences among APEC economies. Harmonization around specific rules could also give rise to a rigid system that is difficult to change in response to new research findings on policy impacts. A more reasonable objective would be an agreement

on certain standards or benchmarks. These could pertain to: minimum baseline standards, in terms of the scope and coverage of competition and IP laws; the need for, and elements of, a system of effective enforcement; the basic principles that must be respected in the design and enforcement of competition and IP policies; and the process for addressing disputes among APEC members.

17. In IP, there has been considerable progress towards meeting these objectives. Although there are still some potentially troublesome issues to be addressed, APEC economies have significantly strengthened their IP policies in recent years. With the exception of Chinese Taipei, the People's Republic of China, and Papua New Guinea, all APEC economies have signed on to the principles worked out in the TRIPs agreement. There remains scope, however, for consultation and cooperation in implementing TRIPs, resolving issues that were not addressed by the agreement, and developing more effective enforcement practices.
18. In competition policy, efforts to work out principles of convergence at the international level are only beginning. APEC members can benefit, however, from the groundwork being undertaken at the OECD. This indicates that some common principles tend to guide the implementation of competition policy in OECD-member economies, and that there is considerable agreement among economies with respect to analytical tools, enforcement practices, as well as some aspects of legislation. APEC can also learn from, and build upon, the programs of technical assistance implemented at the international level, most notably by UNCTAD.
19. In terms of institutional arrangements, existing agreements illustrate a variety of options. Some agreements, such as the Treaty of Rome with its establishment of a supranational competition authority and the Australia-New Zealand Closer Economic Relations Trade Agreement with its harmonization provisions, are not immediately and directly relevant to APEC. Over time, as APEC evolves, these options may merit closer examination. For now, the experience of those countries that have signed agreements or memoranda of understanding to abide by a set of principles and cooperative procedures in applying competition policy is more instructive. Such agreements can contribute to reducing conflicts. It is worth exploring whether there is sufficient support within APEC to begin laying out a strategy that would ultimately lead towards some degree of policy convergence.

1. INTRODUCTION

The rapid expansion of foreign direct investment and the growing role of global corporations are creating new challenges for the design of market framework policies. It has long been recognized that government policies aimed at achieving national goals may conflict with the requirements for growth and welfare maximization in an interdependent world. These concerns, as they apply to trade, had an important influence on the recent Uruguay Round of negotiations under the General Agreement on Tariffs and Trade (GATT). The growing importance of global corporations, however, has added an important new element to the mix and heightened concerns about these policy conflicts – or “system frictions,” as one observer has labelled them.¹ The increasing globalization of economic activity is giving new impetus to efforts to extend international rules into the domain of what has traditionally been regarded as domestic policy making.

These issues are highly relevant to the Asia-Pacific Economic Cooperation (APEC) countries. Foreign direct investment (FDI) has been an important integrating force in the region and an important vehicle for promoting growth and spreading industrialization. Given the nature of these linkages and the importance of multinational enterprises (MNEs), as well as the diversity of governing approaches within APEC, the region is highly vulnerable to the frictions and conflicts that could undermine the benefits of globalization. Two broad issues need to be explored in this context. First, there is a need to identify elements of current framework policies that are of particular concern in terms of their impact on the flow of investment and the spread of technology. Second, there is a need to consider establishing mechanisms or cooperative arrangements that can promote market policies more compatible with the important contribution of MNEs to the growth of APEC economies.

A full examination of these issues would require a comprehensive analysis of divergences in APEC policies across a broad range of policy areas. The purpose of this paper is to conduct an initial inquiry into potential system frictions in two areas – namely, competition policy and intellectual property policy. These are both “framework” policies in the sense that they help to define the broad parameters within which business activity takes place, although it is recognized that the distinction between these policies and industry-specific forms of intervention can become blurred.

This paper contributes to the broader examination of liberalization within APEC. It complements the review paper on competition policy prepared by New Zealand last year and the subsequent discussions that took place at the Competition Policy Seminar held in Auckland in July 1995. It is relevant to a number of issues in the work plan of the Economic Committee of APEC, in particular the proposed research on the links between technology and foreign investment. The intent of this paper is to inform the dialogue among APEC members by providing a conceptual approach that directs attention to some important issues with respect to framework policies in general, and to competition and intellectual policies in particular. As such, it does not contain

specific recommendations. If members find that the concerns outlined in this paper deserve further attention, there may be a need for further work to identify reasonable policy objectives for APEC and to establish a process whereby members could work towards the achievement of these objectives.

Chapter 2 of the paper examines the general nature of the challenge to framework policies as a result of the growth in foreign direct investment, while Chapter 3 briefly considers the integrating forces that make these issues relevant to APEC. Chapter 4 examines the competition policies of APEC members and the concerns arising from differences in approach.² Chapter 5 looks at policy differences and related frictions in the area of intellectual property. In Chapter 6, the general implications of the discussion are reviewed and some considerations that should guide the development of a policy for APEC are examined. The final chapter offers some concluding comments.

2. FRAMEWORK POLICIES AND FDI

General Context

A number of factors underlie the growing pressure on governments to consider the impact of their policies on transnational and, in some instances, global corporations. A first factor is the size and pervasive impact of international production. During the 1980s, the growth in foreign direct investment greatly outpaced that in world trade. The worldwide stock of FDI was estimated at US\$2.2 trillion at the end of 1993 – almost double its 1988 value (in current dollars).³ Global enterprises have been the agents for this growth in foreign assets. It is estimated that there are about 37,000 global corporations, with some 205,000 foreign affiliates. The largest 100 non-financial MNEs are estimated to account for about a third of the total FDI stock of their home countries. Foreign sales generated by all MNEs exceed the value of all foreign sales through exports of goods and non-factor services.

A second factor has been a growing recognition of the benefits of FDI. Government policies have become much more accommodating to foreign investors than they were during the 1960s and 1970s, reflecting a greater sensitivity to the gains from economic integration. The economic literature has long recognized that FDI involves not only the transfer of capital but also, and more importantly, technology and intangibles, such as managerial skill and well-developed information and marketing networks.⁴ The competitive stimulus injected by foreign affiliates has also been shown to increase the rate of innovation and the level of productivity in the host country. FDI raises the technological capability of domestic firms in the same industry and often conveys important spillover benefits to related industries. But while documenting these benefits, some of the earlier literature also fed concerns about the market dominance of MNEs, along with their potential political power.⁵

More recent studies have emphasized the degree of rivalry among MNEs themselves.⁶ There has also been an appreciation of the gains arising from the economies of internalization; FDI can be an efficient way for firms to capitalize on their advantages, given the restrictions and costs associated with alternatives, such as exporting or licensing.⁷ These studies lend support to the view that MNEs contribute to more rapid technological change and improved economic growth.⁸

Rapid technological progress in information technology and transportation has reinforced the advantages of international production. This has enabled firms to decompose the production process so as to benefit from the particular advantages of different locations. In pursuit of competitive advantage, major MNEs will disperse various phases of research and development, design, sourcing, processing, assembly, and marketing throughout their global facilities.⁹ The experience of Otis Elevator in developing a new product, the Elevonic 411, is typical: the doors were developed by the company's French division, small gear components by the Spanish

division, electronics by the German subsidiary, the motor by the Japanese unit, while systems integration was handled by the Connecticut division. The decreasing costs of communications and coordination have also facilitated alliances and strategic partnerships that enable MNEs to share the risks of developing new technology. This has resulted in a variety of new organizational arrangements that extend across functions, firms, and geographic boundaries. The well-developed international networks through which global corporations exchange inputs and outputs accounts for a growing share of international trade; it is estimated that intra-firm trade already accounts for between a quarter and a third of total world trade.¹⁰

The distinction between national and foreign corporations has become less clear in this new world of truly global production. For policymakers, the question of "who is us" has become very real.¹¹ What has become even more apparent to governments is the costs of not participating in some way (i.e., as the home country of FDI or as host to FDI from abroad) in the new international arrangements designed to fully exploit available production and organizational economies.

Framework Policies and MNEs

Framework policies – including competition policy, intellectual property legislation, corporation law, health and safety requirements, and labour standards – influence the behaviour of MNEs. Through their direct and indirect impacts, these policies will help to determine whether, and to what extent, countries benefit individually and collectively from the activities of MNEs.¹²

The significance of framework policies can be seen in simplest terms by looking at the challenges that FDI can pose for an individual host country. Where, for example, the local affiliate of an MNE is able to use its strategic advantages to dominate a market and prevent the entry of competitors, the welfare of the host economy will be diminished. In the absence of competitive pressures, the affiliate is more likely to become an isolated local enclave than a source of know-how and new technology for the host economy. The answer to these potential problems is an effective competition policy. The latter, of course, would be important even in the absence of FDI; the presence of a foreign affiliate simply increases the costs of an inadequate and ineffective competition regime.

The problem of optimal policy design becomes more complicated when the interdependencies that link the welfare of one country to decisions taken by policymakers in other countries are taken into account. For example, governments might seek to attract FDI by direct subsidies or by using their framework policies to provide indirect subsidies. The latter could involve the provision of monopoly rights or the relaxation of labour standards. To the extent that such initiatives cause MNEs to structure their global operations differently than they would on the basis of production and organizational economies, resources are misallocated internationally. Global welfare is lower as a result.

The precise impact of incentives on the investment decisions of MNEs are difficult to predict, however, because an initiative taken by one government is likely to provoke a response from other governments. Where incentives are provided through framework policies, the result could be a competitive lowering of standards among all countries. This competitive process may ultimately have little or no influence on the allocation of FDI, but countries will be left with standards that are inadequate and do not reflect a careful balancing of regulatory costs and benefits.

These considerations suggest that there is scope for cooperative arrangements that will improve the welfare of all countries. Cooperation can serve a number of purposes. It can reduce resource misallocation and policy conflicts of the sort discussed above. It can help governments to work out solutions to the policy issues raised by multinationals that involve different jurisdictions. A proposed acquisition of one major MNE by another, for example, is likely to be of interest to the competition authorities in a number of different countries. A more harmonious international policy environment will also reduce business uncertainty and be more amenable to the long-term planning that is required for business investment.

In a later chapter of this paper, we will consider the sort of cooperative arrangements that could respond to policy frictions that might occur within APEC. We anticipate that discussion only slightly by noting that cooperative solutions themselves involve costs and that some cooperative solutions have higher costs than others. Hence an appreciation of the importance of reducing system frictions only provides a starting point; there remains the problem of finding a cooperative solution that is appropriate in the context of the differing national interests of the economies affected.

3. MULTINATIONAL ENTERPRISES AND APEC

Given the importance of FDI and the growing role of MNEs within the Asia-Pacific region, the investment impediments and distortions created by framework policies should be of particular concern to APEC. The growth of FDI within APEC has been well documented elsewhere.¹³ For the purpose of this discussion, a brief review of some of the more important developments will suffice.

Table 1 shows FDI inflows relative to capital formation in a number of APEC member economies. A more comprehensive picture of the extent of foreign investment in APEC is provided by the data on FDI stocks in Table 2.¹⁴ The two tables illustrate the importance of FDI to APEC and its growing contribution to APEC economies in recent periods. Singapore has relied heavily on foreign investment (Table 1). Like Hong Kong, it has traditionally been a highly open economy, applying few restrictions to foreign investment. The heavy dependence of Malaysia on foreign capital is also apparent. Although it has not enjoyed as liberalized an investment regime as Hong Kong or Singapore, Malaysia has been relatively open by comparison to most developing economies. On the other hand, the data highlight the very limited role that FDI has played in the Japanese economy.

Table 1
Ratio of FDI Inflows to Gross Domestic Capital Formation in Selected APEC Economies
(Percentages)

	1971-75	1976-80	1981-85	1986-91
Australia	4.5	4.6	4.6	9.5
Canada	3.6	1.7	-0.7	3.7
China	0	0.08	0.9	2.3
Hong Kong	5.9	4.2	6.9	12.1
Indonesia	4.6	2.4	1.0	2.4
Japan	0.1	0.05	0.1	0.1
Malaysia	15.2	11.9	10.8	9.7
Mexico	3.5	3.6	2.7	7.0
New Zealand	4.8	6.1	4.9	8.6
Philippines	1.0	0.9	0.7	5.7
Republic of Korea	1.9	0.4	0.5	1.1
Singapore	15.0	16.6	17.4	29.4
Chinese Taipei	1.4	1.2	1.5	3.5
Thailand	3.0	1.5	3.1	6.3
United States	0.9	2.0	3.0	5.6

Source: United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 1993: Transnational Corporations and Integrated International Production*, New York: United Nations, 1993.

Table 2
FDI Inward Stocks, 1980, 1985, 1990 and 1994
(US \$ Millions)

	1980	1985	1990	1994
Australia	13,173	25,049	75,752	91,082 ^a
Canada	54,163	64,657	113,054	105,606
Hong Kong	1,729	3,520	13,413 ^b	19,669 ^b
Indonesia	10,274	24,971	38,883	47,146 ^c
Japan	3,270	4,740	9,850	17,772 ^a
Malaysia	6,078	8,510	14,117 ^b	31,436 ^d
Mexico	8,992	14,824	27,856	46,344
New Zealand	2,363	2,043	8,065	17,659
People's Republic of China	670 ^c	3,444	14,135 ^b	90,972 ^b
Philippines	1,225	1,302	2,098 ^b	5,133 ^b
Republic of Korea	1,140	1,806	7,874	12,000
Singapore	6,203	13,016	32,355 ^b	58,702 ^b
Chinese Taipei	2,405	2,930	9,735 ^d	14,152 ^d
Thailand	981	1,999	7,980 ^b	16,524 ^b
United States	83,046	184,615	394,911	504,401

a Estimates.

b Estimated by adding flows to stocks of 1991.

c Estimated by adding flows to stocks of 1990.

d Estimated by adding flows to stocks of 1981.

Source: UNCTAD, *World Investment Report 1995: Transnational Corporations and Competitiveness*, New York: United Nations, 1995.

A considerable portion of FDI inflows received by APEC member economies comes from other parts of the Asia-Pacific region. The United States and Japan account for much of the stock of FDI in other APEC economies, and the United States itself is a major host to Japanese FDI. In addition, other APEC members, including Canada and the Republic of Korea, have become significant sources of intra-regional FDI.

The emergence of China as an important host economy has been one of the most significant developments in the recent period. With the liberalization of China's investment policies, FDI has continued to grow, and in 1992, China was the largest recipient of FDI among all APEC member economies. The indicated growth in the relative importance of FDI in the United States is also significant. Traditionally the world's main exporter of FDI, the United States has also become the largest recipient of FDI.

FDI flows in the world economy increased rapidly in the 1980s, and the rate of increase accelerated in the second half of the decade. APEC economies, and especially East Asian members, have been major beneficiaries of this growth in FDI. While U.S. investment flows to East Asia decreased during the 1980s, Japanese FDI grew rapidly, influenced by high labour costs

and the appreciation of the yen in the middle of the decade. Japanese manufacturing firms were initially attracted to the newly industrializing economies (NIEs) of Asia, but by 1987 the rising wages and appreciating currencies of the NIEs led Japanese manufacturers to start shifting their activities towards the economies of the Association of South-East Asian Nations (ASEAN) and China.¹⁵ Within the NIEs, FDI gradually shifted towards technology-intensive manufacturing and the production of services. Since the mid-1980s, the NIEs have themselves become significant sources of FDI. As with Japan, the loss in competitiveness caused by currency appreciations and labour shortages led to a regional restructuring of production. Outward FDI by Hong Kong, Korea, Singapore and Chinese Taipei, like Japanese FDI, has also gone to protect markets in industrialized economies.

FDI flows to East Asian economies have continued at a high level through the early 1990s, notwithstanding the declines elsewhere, and especially the substantial drop in FDI flows to the United States. In the recent period, along with China, Mexico has become a much more important host to foreign investment. A major liberalization of Mexico's foreign investment regime accompanied the implementation of the North American Free Trade Agreement (NAFTA), and FDI inflows into Mexico more than doubled between 1990 and 1992.

The increase in FDI is reflected in the growth of foreign affiliates and the increasing internationalization of production. The general evidence cited in Chapter 2 suggests that the MNEs in APEC (Table 3) have brought benefits to both home and host economies. This is supported by Canada's experience. As an economy that has historically been heavily dependent on foreign investment but has also become a major source of outward FDI since 1980, Canada has had considerable interest in understanding the effects of FDI. The bulk of the evidence suggests that FDI has made a positive contribution to Canadian growth. A recent study, for example, found that foreign-owned MNEs made an important contribution to enhancing Canada's international competitiveness over the 1985 to 1988 period.¹⁶ Another study has found that, over the 1980s, the growth, productivity, and profit performances of outward-oriented Canadian firms were superior to that of domestically oriented firms.¹⁷

In East Asia, MNEs played an important role in the spread of industrialization. Flows of FDI to the NIEs and the ASEAN helped to reduce the borrowing requirements of these economies, provided them with much needed technology and management skills, and increased the competitive pressures facing local producers. Studies of specific economies indicate that foreign firms provided a positive stimulus to technological change. For example, a study of Thailand involving the estimation of production functions found that foreign firms were more efficient than domestic firms.¹⁸ Similarly, the productivity (especially capital productivity) of foreign firms was significantly higher in a study of Korea.¹⁹ A survey of Japanese firms found that in economies such as Chinese Taipei and Thailand, which encouraged investment, FDI was the main vehicle used to transfer technology.²⁰

Policymakers have come to appreciate the general nature of these benefits, judging by the significant liberalization of foreign investment policies that has occurred in recent years. By reforming those framework policies which limit FDI inflows and restrict the activities of foreign

Table 3
Number of Parent MNEs and Foreign Affiliates in Selected APEC Economies,
Latest Year Available

	Parent Corporations in Country	Foreign Affiliates in Country	Year
Australia	732	2,450	1994
Canada	1,447	4,475	1993
Hong Kong	500 ^a	2,828	1991
Indonesia	313 ^a	3,472 ^b	1985
Japan	3,650 ^c	3,433 ^d	1993
Mexico	—	8,420	1993
New Zealand	247	1,717	1993
Philippines	—	1,952	1987
Republic of Korea	1,049	3,671	1991
Singapore	—	10,709	1986
Chinese Taipei	—	5,733	1990
United States	2,966 ^c	16,491 ^f	1992

a For 1993.

b As of May 1995.

c Number of parents (not including the finance, insurance, and real estate industry) in March 1993, plus the number of parents in finance, insurance, and real estate in December 1992.

d Number of foreign affiliates (not including finance, insurance, and real estate) in March 1993, plus the number of foreign affiliates in finance, insurance, and real estate in November 1992.

e Some data on bank parent companies and small non-bank parent companies are for 1989.

f Some data for small banks and non-bank affiliates are for 1987.

Source: UNCTAD, *World Investment Report 1995: Transnational Corporations and Competitiveness*, New York: United Nations, 1995.

enterprises, APEC member economies have eliminated some of the most direct and significant obstacles to the growth of MNEs. In relation to the broader objective of enhancing the benefits from increased economic integration within APEC, however, the process of reform has only begun. Policymakers must gradually turn their attention to other policies that can distort investment flows and hinder corporate decision making. In the chapters that follow we look at two of the potentially more important of these other sources of system friction.

4. COMPETITION POLICY

Introduction

Competition policy can be defined as the body of laws and regulations through which countries protect and preserve the role of open and competitive markets as a primary means for allocating economic resources. It is aimed at preventing the exercise of market power and promoting economic efficiency. Competition laws derive their justification from a large economic literature that shows theoretically and empirically how market competition tends to contribute to a more efficient allocation of resources (allocative efficiency) and to lower production costs (technical or productive efficiency).²¹ Increased efficiency will be reflected in greater consumer choice, lower product prices, and higher product quality.

There is an equity as well as an efficiency aspect to more competitive markets. A firm that restricts output and raises prices above competitive levels is, in effect, imposing a tax on consumers. By eliminating the ability of firms to exercise power, competition authorities are also eliminating the ability of firms to impose an unjustified tax that unfairly redistributes income from consumers to producers.²²

Governments, of course, affect the overall market environment in a number of ways. Trade, industrial and fiscal policies, government ownership, and government regulation all affect the allocation of resources and may have a significant impact on the strength of market competition. Although, in this paper, the term "competition policy" refers to government intervention through competition law, under a broad interpretation competition policy incorporates all aspects of government policy that are intended to affect the competitive environment of firms.²³ In some cases, governments may best strengthen the role of market forces not through the use of competition policy, but rather by eliminating subsidies, regulations, or trade restrictions. While our focus is on government laws that aim explicitly at preventing anticompetitive business practices, it is important to be aware of the broader context.

The goal of open and competitive markets is served by liberalized policies that encourage both trade and investment. But while competition policy and FDI are complementary in principle, they may collide in practice. Weak or inadequately enforced competition policies that are unable to address restrictive practices reduce the opportunity for new foreign investment. Overly restrictive merger legislation under either competition or investment statutes may discourage major foreign acquisitions, even in circumstances where major efficiency gains could be realized. Moreover, MNEs, with their specialized assets and well-developed networks, are themselves frequently in a position to exert market power and engage in anticompetitive practices.²⁴ The presence of MNEs, therefore, increases the need for effective competition policy.

These issues take on additional complexity because the activities of MNEs extend across jurisdictional boundaries. An export cartel consisting of the corporations in economies A and B, for example, may impact primarily on consumers in economies C and D. A merger or joint venture involving MNEs headquartered in different economies generally requires the approval of competition authorities in both jurisdictions. These issues can be a source of conflict between governments, and between governments and MNEs. Cross-jurisdictional effects could be a source of friction even if economies had similar competition regimes. Substantial divergences in approach add to business uncertainty and increase the potential for conflict.

Additional concerns arise if economies are encouraged to use competition along with trade policy to extract additional gains from the exercise of market power internationally. Some recent literature provides conceptual support for the selective use of government trade and industrial policies to enhance the international market power of home-based oligopolies. The conclusions of these studies, however, are very sensitive to assumptions made about the reactions of other firms and, more particularly, other governments.²⁵ Such exercises in strategic policy making are likely to encourage policy rivalry of the sort discussed in Chapter 2, which ultimately results in all economies being worse off.

The relevant concerns, as they apply to APEC member economies, can be placed under three general headings: the absence of competition policy in some economies; divergences in approach (including differences in enforcement) among those economies with competition policies; and the inadequacy of the arrangements available to address interjurisdictional conflicts. Each of these topics is discussed below.

Economies Without Competition Policies

Many APEC member states, including Hong Kong, Indonesia, Malaysia, the Philippines, Singapore, and Thailand, do not have a competition policy. Most of these economies do have legislation to prevent misleading advertising and to provide for price controls where necessary. They do not have a body of legislation, however, that addresses anticompetitive practices in their various guises and that is backed by a separate, largely independent enforcement apparatus.

The Price Fixing and Anti-Monopoly Act B.E. 2522 (1979) of Thailand is an example of price control legislation (Table 4). This law empowers the Central Committee on Price Fixing and Anti-Monopoly to declare particular goods controlled and thereby subject to price controls. The law includes provisions against unfair trading, but these are directed not at general abuses of market power but at activities that could influence the public availability or pricing of goods.

Similarly, the prices of certain essentials are regulated under Malaysia's *Price Control Act*. Under this legislation, for example, the price of rice has been held at a level much above the import price to support paddy farmers.²⁶ Such policies are not aspects of competition policy. They are aimed at achieving social objectives, such as the elimination of poverty.

Table 4
**Pricing and Misleading Advertising Legislation, Singapore,
 Thailand and Malaysia**

	Pricing Legislation	Misleading Advertising Laws
Singapore	<i>Price Control Act, 1950</i>	<i>Consumer Protection Act, 1975</i>
Thailand	Prescription of Prices and Goods and Anti-monopoly Act, 1979	Consumer Protection Act, 1979 Food Act, 1979
Malaysia	<i>Price Control Act, 1973</i> <i>Control of Supplies Act, 1961</i>	<i>Trade Description Act, 1972</i>

Although views are changing, government planning and direction still holds considerable appeal as a mechanism for organizing economic activity in a number of East Asian economies. APEC members such as Malaysia and Thailand have used development plans not only to achieve social objectives but also to promote the best use of the country's scarce management and capital resources. The willingness of these economies to embrace market mechanisms of coordination has been tempered by the traditional concern that market competition involves an element of duplication and waste that developing economies can ill afford. Malaysia's *Industrial Co-ordination Act*, for example, allows the government to consider whether approval of a licence is consistent with economic and social objectives and would promote the orderly development of manufacturing activities in Malaysia.

The view that competition policy is unnecessary for small open economies has also been very influential. Domestic producers, it is argued, are subject to adequate discipline from import competition and from the threat of entry by foreign producers. As a result, measures of industry concentration provide a misleading picture of the extent of market power in these economies.

Both of these arguments have more merit in some situations than others. Government planning has more appeal in the earlier stages of economic development when management resources are especially scarce and the task of coordinating economic activity is less complex. In the early stages of development, market coordination problems may also be significant.²⁷ As an economy broadens and deepens, and as more and more information is required for central planning decisions, the comparative organizing strengths of decentralized, competitive markets are likely to become more apparent.²⁸

As for international market pressures, clearly these can be an important disciplinary mechanism. In Hong Kong and Singapore, highly liberal trade and investment policies have limited the potential for anticompetitive practices. Competition policy is more important where non-traded goods, notably at the retail level, are involved and where international market restrictions

exist. Less reliance can be placed on import competition where foreign producers are subject to significantly higher transport or other costs than domestic firms.²⁹ In some circumstances, domestic producers may be able to effectively restrict imports. For example, MNEs have been known to use their control over subsidiaries and affiliates to block these sources of potential import competition. Import cartels have also limited the effectiveness of import competition in some Asian economies.

There appears to be increasing recognition of the merits of competition policy among Asian economies. Draft competition bills have been prepared in Thailand and the Philippines, and Malaysia is planning to introduce a competition law shortly. While these developments are partly in response to concerns about the high degree of concentration in specific markets, they are also part of a general shift towards increased liberalization, which has included a reduction in investment restrictions and initiatives to reduce government regulation and ownership. The establishment of a competition policy can complement and support these other initiatives. As the experience of more developed APEC economies illustrates, privatization and deregulation do not in themselves ensure an improvement in efficiency. It is generally by exposing protected industries to the bracing winds of market competition that gains are achieved. An effective competition regime could help ensure that the potential benefits of such economic reforms are realized.

Competition policies can also help these economies more fully to realize the benefits of FDI. As discussed above, the strength of market forces has an important influence on the benefits that host economies derive from foreign investment. A competition regime helps to protect the host country's interest. It helps to reduce the dangers of market abuse that arise from the increased openness of the economy to foreign investment. This safeguard is likely to become increasingly important as foreign ownership extends to new areas, including services, that are subject to little or no import competition, and to activities that had previously been under public ownership or regulation.

From the perspective of foreign investors, the existence of a competition regime with an independent enforcement authority can be a source of increased certainty and stability. This depends, of course, not simply on the establishment of a competition policy, but on the development of appropriate procedural safeguards and the isolation of the system from political pressures. It also depends on the willingness of policymakers to allow competition policy to substitute for other more discretionary policies that have been used to control foreign investments and acquisitions, and the activities of MNEs.

The Competition Policies of APEC Economies

Given the economic, historic, cultural and social differences within APEC, it is not surprising that there are major differences in members' competition laws.³⁰ Some APEC economies have a more recent and/or less firm attachment to open, competitive markets than others. The widest divergence in perspective is represented by the United States, which has a

long history of active antitrust activity, and by the People's Republic of China, whose 1993 act represents a significant, but still tentative, movement in the direction of competitive markets. When the *Sherman Act* was passed in 1890, there was already a well-developed base of common law being applied to antitrust activities in the United States. Chinese Taipei and Mexico have also only very recently enacted competition laws. Korea is an interesting example of a country that relied on government planning and direction in its earlier phases of development but now places considerable emphasis on the role of market forces. As distinct from these economies, Australia and Canada introduced their first competition acts around the turn of the century. An 1889 Canadian act was the first legislation in western economies designed to prevent firms from forming agreements in restraint of trade.

There have been other factors pushing member economies in somewhat different directions. Historically, Japan has favoured a model of corporate governance that facilitates the achievement of the potential gains from long-term contractual arrangements. This model is quite different from common practice in the United States and most other APEC economies, however.

Differences in legislative design also reflect differences in the weight attached to different objectives. These weights will determine how member economies resolve conflicts that may arise between competition and efficiency, and between these economic goals and broader social objectives. The different approach of competition authorities can be traced, as well, to differences in expert opinion on the impact and significance of various corporate practices.

Despite these differences, those APEC economies with competition laws have tended to incorporate some common features in their policies. These include: a recognition of the importance of an independent enforcement authority and of a judicial or quasi-judicial hearing mechanism that adheres to the principle of due process; agreement on the need to prohibit naked agreements between firms to restrict competition, along with a number of other clearly anticompetitive practices; and acceptance of the importance of establishing a process to review certain restrictive agreements that may have some offsetting economic benefits.

The Institutional Framework

The institutional frameworks adopted by APEC members have some similarities:

- The administration and enforcement of competition law is generally the responsibility of largely independent agencies or government bureaus (Table 5).
- The ultimate enforcement of competition law is through the courts.
- In most economies, competition law includes both civil and criminal provisions.³¹

In designing competition law, member economies have been attracted to the use of a civil standard for some offences because the burden of proof is lower than under criminal law. Canada amended its legislation a decade ago because of the difficulties of gaining convictions when they relied exclusively on criminal law.

Table 5
Competition Policy in APEC Member Countries:
Laws and Institutions

	Main Legislation	Geographic Limitation (if any)	Covers Government Enterprises	Administrative Enforcement Agencies
Australia	<i>Trade Practices Act</i> , 1974 <i>Prices Surveillance Act</i> , 1983 Competition Code	No ¹	Yes ²	Trade Practices Commission Prices Surveillance Authority
Canada	<i>Competition Act</i> , 1986		Yes	Director of Investigation and Research Bureau of Competition Policy
Japan	Anti-monopoly and Fair Trade Law, 1947		Yes	Fair Trade Commission
Mexico	Federal Law on Economic Competition, 1993		Yes	Federal Competition Commission
New Zealand	<i>Commerce Act</i> , 1986 <i>Fair Trading Act</i> , 1986			Commerce Commission
People's Republic of China	Law Against Improper Competition, 1993		Yes ³	Administrative Department for Industrial and Commercial Affairs
Republic of Korea	Monopoly Regulation and Fair Trade Act, 1980		No	Fair Trade Commission
Chinese Taipei	Fair Trade Law, 1991		Yes ⁴	Fair Trade Commission
United States	<i>Sherman Act</i> , 1890 <i>Clayton Act</i> , 1914 <i>Federal Trade Commission Act</i> , 1918 <i>Webb-Pomerene Export Act</i> , 1918 <i>Robinson-Patman Act</i> , 1936 <i>Celler-Kefauver Act</i> , 1956 <i>Hart-Scott-Rodino Antitrust Improvement Act</i> , 1976	Restricted to trade between states, international trade, intra-state trade that is within the power of Congress to regulate, and foreign trade with direct effects in the United States.	Unclear	Department of Justice Federal Trade Commission

1 Currently legislation applies to companies operating in Australia and to individuals operating in Territories and interstate but generally not to individuals operating intra-state. State legislation known as the Competition Code to become operative on July 1996 will overcome this latter limitation.

2 While not all state and territory and government enterprises are yet covered by the *Trade Practices Act*, they will be covered as of July 1996. Recent reforms will also make these enterprises subject to the *Prices Surveillance Act*.

3 While it applies to state-owned enterprises, it appears not to apply to the business activities of state agencies.

4 State-owned companies were, however, granted a temporary four-year exemption.

Institutional arrangements also reflect a recognition of the importance of distancing competition authorities from political pressures. In Canada, a number of institutional features promote independence and distinguish competition policy from many other instruments of government policy.³² First, under the *Competition Act*, the Director of Investigation and Research, who is responsible for carrying out criminal and civil investigations, is an independent official, appointed by the Governor in Council. Second, administration is transparent in that the activities of the Director and his staff (the Bureau of Competition Policy) follow established and well-publicized guidelines and administrative procedures. Third, there is a clear separation of investigative and adjudicative functions. The Director refers criminal matters to the Attorney General for prosecution before the courts. Civil matters are brought before the Competition Tribunal, a distinct, quasi-judicial body comprised of Federal Court judges and individuals with a business and economics background. Legal interpretations made by the Tribunal can be appealed to the courts.

In most other economies, the separation of investigative and adjudicative functions is not as clear with respect to civil matters. Competition authorities, however, are usually accorded considerable independence, and administrative decisions of the relevant agencies are almost always subject to judicial review. In Korea, the Secretariat of the Fair Trade Commission (FTC) investigates alleged violations and may seek voluntary correction of more trivial violations. Significant charges are brought before the seven commissioners of the FTC, who may order corrective action, levy a surcharge, or file a complaint for criminal prosecution. Final decisions of the Commission can be appealed to the Seoul High Court and, thereafter, to the Korean Supreme Court.

The Japanese Fair Trade Commission (JFTC), an independent agency, has exclusive authority to enforce Japanese antitrust law. When there is sufficient evidence of a possible infringement, the JFTC will initiate an investigation. It may then initiate a hearing or make a recommendation to the infringing party to take appropriate measures. If the party accepts the recommendation, the JFTC hands down a "recommendation decision" without an adjudicative procedure. This constitutes a formal legal measure. If the infringing party does not accept the recommendation, the JFTC will initiate a hearing procedure and then issue a hearing decision. While the JFTC may initiate a hearing procedure if this is judged to be in the public interest, most cases are resolved by recommendation decisions. JFTC decisions are subject to review, on matters of law, by the Tokyo High Court.

In China, the relevant authority with responsibility for administrative investigations is situated within a government department. This is similar to the situation that prevailed in Korea prior to the 1990 reforms, which transformed the Fair Trade Commission into an independent regulatory agency. In Chinese Taipei, to emphasize the independence of the Fair Trade Commission, the nine commissioners are prohibited from participating in the activities of political parties. While the competition policies of both China and Chinese Taipei allow for criminal sanctions, they place considerable emphasis on administrative enforcement. Chinese Taipei's Fair Trade Commission often holds informal hearings to solicit the views of experts on particular matters under investigation.

Mexico's new Federal Competition Commission (FCC) is an independent, professionally staffed agency with investigative and adjudicative functions. Cases brought before the Commission are decided by the five commissioners who constitute the Plenum. Through its administrative decisions, the FCC may block a proposed business initiative (such as a merger) or impose certain conditions on its implementation, order the cessation of an offending business practice, or impose a (potentially very high) fine.

In New Zealand, the competition agency, the Commerce Commission, administers both the main competition law (*Commerce Act*) and complementary legislation addressing misleading practices and unsafe products (*Fair Trading Act*). In addition to the enforcement activities of the Commission, New Zealand's legislation can be enforced by private action. Civil penalties, which tend to be based on the consequences of the offensive action, can be substantial.

In Australia, non-criminal actions may be brought before the Federal Court of Australia by the main competition agency – the Australian Competition and Consumer Commission (ACCC) – or by private parties. A special tribunal, the Australian Competition Tribunal (ACT), reviews adjudicative decisions by the ACCC on authorization and notification applications.

The institutional framework in the United States is unique in a number of respects. Antitrust laws are enforced by both state and federal agencies. The United States is the only economy where national enforcement is shared by two agencies, the Department of Justice and the Federal Trade Commission. While both agencies can pursue civil offences, only the Department of Justice can prosecute a criminal charge. The U.S. system is also distinguished by the importance of private actions, which account for over 90 percent of all civil antitrust suits. While other APEC economies allow private actions, the incentives do not compare to those under the U.S. system of treble damages.³³

The Scope of Competition Law

In most APEC economies, national governments have jurisdiction over all anticompetitive activities within the country's borders. The exceptions are Australia and the United States. In those two federations, individual states have drawn on their constitutional powers to develop competition laws to cover activities mainly within state boundaries.³⁴ In Australia, the states have recently agreed to extend the federal competition law (the *Trade Practices Act*) to all intra-state activities.

In terms of activity coverage, none of the APEC member economies have gone as far as the European Union (EU) in applying their legislation to anticompetitive government subsidy programs. Competition authorities, however, generally do attempt to ensure that their concerns are considered in the policy-making process. In Korea, ministries are required by law to consult with the Fair Trade Commission before taking actions that restrict competition. Moreover, in most economies, government enterprises that are involved in strictly commercial activities are subject to competition law. The law is less clear in the United States,³⁵ but government

enterprises are far less important in that country than in other APEC economies. The question of what constitutes a commercial, as distinct from governmental, activity is, of course, open to interpretation, and public sector initiatives that would be subject to competition law in some economies have been deemed to be outside the law in others.³⁶

Legislative Provisions

Market Structure and Mergers

APEC members have generally relied on an *ex ante*, rather than an *ex post*, approach, using merger legislation to influence market structure. It is mainly through deregulation and privatization that APEC economies have attempted to effect changes in already concentrated markets. These initiatives have been supported by measures to provide a right of access to essential facilities, such as local telephone networks and electricity grids, on fair and reasonable terms. Probably the most concerted effort to reduce concentration and reform an economy's industrial structure was that undertaken in Japan during the period of occupation following World War II.³⁷ Over the more recent period, competition law has been used to address market structure concerns by two economies – the United States and Korea.³⁸

In the United States, authorities can seek to break up a monopoly by using Section 2 of the *Sherman Act*. A company is open to a charge of monopolization if there is "wilfull acquisition or maintenance" of market power, "as distinguished from growth or development as a consequence of a superior product, business, acumen, or historical accident."³⁹ A market share of more than 70 percent is generally deemed to be evidence of market power. Although demonopolization is an instrument of last resort, U.S. antitrust authorities have succeeded in dissolving a large number of national and regional monopolies over the years. The largest restructuring in recent years was the result of a 1982 consent decree ordering AT&T to divest itself of 22 local telephone companies.

In Korea, concern has focused on the large conglomerates (*jaebols*) that dominate the economy. As of 1992, 78 conglomerates with assets over US\$559 million were being monitored by the Fair Trade Commission. Sales of the 30 largest conglomerates amounted to roughly 80 percent of Korean GNP. In an attempt to reduce the power of these conglomerates, the government has introduced a number of measures, including prohibitions on cross-shareholding and cross-payment guarantees among affiliated companies; limits on affiliates share ownership of unrelated firms; and restrictions on the voting rights of finance and insurance companies. The government is hoping to weaken the financial power of the largest conglomerates by limiting the debt guarantees that they can provide to subsidiaries.

Mergers

The merger provisions of APEC members' competition laws⁴⁰ are similar in a few respects:

- Pre-merger notification of competition authorities is generally only required for proposed mergers above a certain size threshold, as measured by the assets and/or sales of one or both parties, and/or the size of the transaction.
- Mergers are never subject to an outright prohibition. In all economies, rulings depend on an assessment of the proposed merger's effects.

APEC members differ on the size thresholds they use to identify mergers of interest, on their process of review, on the factors that they analyze to assess the effect of a merger, and on the criteria by which they judge the desirability of a merger. Some merger laws also have unique aspects. While members often apply this section of the law to major transactions that do not constitute full mergers, Korea also treats the establishment of a major new enterprise as a form of business integration that is subject to the merger review provisions.

Most member economies require that companies undertaking a transaction above a specified size threshold pre-notify the antitrust authorities (Table 6). Allowing the competition authorities an opportunity to flag potential concerns at this stage is generally viewed as desirable because of the costs and difficulty of unwinding a transaction after it has been completed. While Australia does not require pre-merger notification, parties may voluntarily seek authorization from the Trade Practices Commission if they are concerned that a merger or acquisition may breach the act. New Zealand has replaced the mandatory pre-merger notification scheme it had prior to 1991 with a voluntary scheme, similar to Australia's.

Table 6
Merger Requirements and Tests

	Pre-Merger Notice Required	Assessed Mainly in Terms of Competitive Impact (C) or Against Broader Criteria (B)
Australia	N	B
Canada	Y	B
Japan	Y	C
Mexico	Y	B
New Zealand	N	B
People's Republic of China	N.A.	N.A.
Republic of Korea	Y	B
Chinese Taipei	Y	B
United States	Y	C

N = no

Y = yes

N.A. = not applicable.

In the United States and Australia, mergers are unlawful if they are considered likely to lessen competition substantially and thereby to result in higher consumer prices. U.S. policy in this area reflects its greater preoccupation, as compared to small open economies, with the strength of domestic competition. Mergers that are considered likely to substantially lessen competition and result in higher consumer prices have not traditionally been allowed in the United States, even when they also offer the promise of significant efficiency gains. In considering the impact of a merger on market competition, the U.S. authorities place considerable emphasis on such factors as market definition, market concentration, and the likelihood of timely and effective market entry in the event that prices should rise above the competitive level as a consequence of the proposed merger.

In other APEC economies, mergers that reduce competition may be allowed if they are deemed to produce benefits that more than compensate for any potential loss to consumers. Under Canadian law, a merger will be permitted if it can be shown that the resulting efficiency improvement will more than offset any lessening of competition.⁴¹ The Canadian act also includes a long list of factors to be considered in assessing the impact of a transaction on competition. As well as looking at the effect on market concentration, Canadian authorities are directed to consider such factors as the extent of import competition, barriers to entry, and the likelihood that one of the parties will fail in the absence of the merger.

In some cases, mergers are assessed against a public-interest test that allows for consideration of a broad range of factors. In the case of Chinese Taipei, the Fair Trade Law requires the Fair Trade Commission to base its decisions on an assessment of impacts of the intended merger on the "overall economy." In the Commission's decisions, influential factors have included impacts of the merger on employment, on competitiveness, and on regional development. New Zealand's Commerce Commission reviews mergers in terms of their "public benefits." Amendments that came into effect in 1991 require New Zealand's Commerce Commission to take account of the efficiencies resulting from a merger, but they explicitly leave open the consideration of other public benefits.

In addition to merger controls, a number of economies have legislation allowing foreign takeovers to be blocked if they are judged to be a threat to national security. While such legislation is not part of competition policy, it could significantly impact on the competitive environment, as well as the opportunities for FDI, in particular markets. In the United States, this authority resides with the President. Out of nearly 1,000 transactions reviewed since the U.S. statute was enacted, only one acquisition of a U.S. firm has been blocked on national security grounds; a number of others have been approved after foreign investors agreed to ensure that the transaction conformed with national security requirements.⁴²

Prohibited Conduct

All APEC governments prohibit certain anticompetitive practices. A per se prohibition is applied to those practices which are deemed to have little economic merit – or, at least, insufficient

merit to justify the added enforcement costs and the increased uncertainty that would result from designating them to be a reviewable practice. Virtually all member economies prohibit naked price-fixing and practices that support it, such as the division of markets among producers and agreements restraining output among competing producers. It is generally recognized that these activities are fundamentally in conflict with open, competitive markets.

Here again, U.S. legislation is among the most stringent. Naked price-fixing, bid-rigging, and related agreements to restrict competition are prohibited in the United States regardless of their impact. Similarly, in New Zealand it merely must be shown that a price-fixing arrangement exists for a contravention to arise. In other economies, restrictive practices must have a significant impact on competition in order to be unlawful: in Canada, only an agreement to lessen competition "unduly" is a criminal offence; in Korea and Australia, the focus is on agreements that "substantially" lessen competition.

In most economies, prohibited conduct also extends to certain potentially restrictive pricing practices. This includes: price discrimination, which involves charging competing buyers different prices for the same product or service; predatory pricing, which involves selling below production cost in an effort to drive out competing firms; and resale price maintenance, which occurs when manufacturers demand, as a condition of supply, that retailers adhere to a specified price. In Australia, specific prohibitions on price discrimination have been removed, but anticompetitive price discrimination can still contravene other more general competition law provisions (e.g., misuse of market power). In the United States, price discrimination is unlawful (under the *Robinson-Patman Act*) if there is a "reasonable possibility" that competition may be harmed.⁴³ In addition, both in that economy and elsewhere, there is a need to establish that the price differences are not justified by some underlying differences in cost or terms and conditions of sale – a test that is often difficult to meet. Enforcement of the predatory-pricing provision is also problematic because of the difficulty of distinguishing predatory behaviour from legitimate pricing competition. Predatory pricing is one of the "private sector" market abuses explicitly addressed in China's Law Against Improper Competition.

Many of the restrictive practices of particular concern to competition authorities are a result of the attempt by dominant firms to exercise their market power. Predatory pricing, for example, is only a sensible strategy where a firm possesses sufficient market power to later recoup its losses by charging well in excess of costs. Two APEC members, Korea and Chinese Taipei, closely monitor firms that are in a position to exercise market power (Table 7). Both maintain a registry of dominant firms and subject them to a number of specific prohibitions. Dominant firms are forbidden, for example, from engaging in improper or unreasonable pricing, restricting output, and establishing entry barriers. Under proposed amendments to the Fair Trade Law, Chinese Taipei's FTC will no longer be required to publish a list of dominant firms.⁴⁴

In Mexico's new competition law, there is also recognition of the need to pay special attention to potential abuses by firms with market power. However, the government does not attempt to maintain a registry of dominant firms. Indeed, the legislation requires a case-by-case approach, in which market power can be assessed in relation to a number of factors besides

Table 7
Designation and Monitoring of Dominating Firms and Major Conglomerates

	Designation of Dominant Firms	Designation of Major Conglomerates
Australia	N ¹	N ¹
Canada	N	N
Japan	N	N
Mexico	N	N
New Zealand	N	N
People's Republic of China	N.A.	N.A.
Republic of Korea	Y	Y
Chinese Taipei	Y	N
United States	N	N

N = no

Y = yes

N.A. = not applicable.

1 Under the *Prices Surveillance Act*, firms may be "declared" and may have to notify the ACCC of an intention to raise prices.

quantitative measures of market share. Among the factors highlighted are the availability of imports, the existence of domestic substitutes, barriers to entry, and transport costs.

Reviewable Practices and Exemptions

APEC members have adopted a much less rigid policy towards certain potentially restrictive practices that can contribute to significant improvements in economic efficiency. The general approach consists in either exempting specific, well-defined practices from prosecution under the law or applying a "rule of reason" test, under which the activities are examined on a case-by-case basis to determine if their beneficial effects are likely to outweigh their anticompetitive consequences.

There are differences within APEC in the practices that member states have singled out for special consideration and in the criteria that are employed to assess those practices. Traditionally, there has been a wide gulf between Japan and the United States, which has attached importance to the general prohibition of restrictive agreements. While major differences remain, the gap has narrowed somewhat as a result both of changes in attitudes towards competition within Japan and of a greater appreciation in the United States of the procompetitive merits or competitive neutrality of various potentially restrictive activities.

In part, changes in U.S. legislation and court decisions reflect developments in the industrial-policy literature on horizontal and vertical agreements. Horizontal agreements affect the relationship

between competitors in a market and thus are an obvious focus of antitrust concern. However, it is now generally accepted that there are important differences between "naked restraints," such as price-fixing and market-dividing, and other cooperative arrangements that may lead to significant improvements in static or dynamic efficiency. While all APEC members prohibit "naked restraints," they are generally prepared to at least consider the merits of horizontal arrangements such as joint ventures, intellectual-property licensing arrangements, standard-setting, and specialization agreements among smaller firms.

Legislative responses in the United States to this new perspective on horizontal arrangements have included passage of the *National Cooperative Research Act* of 1984 and the *National Cooperative Research and Production Act* of 1993. The former provides for registered R&D agreements to be judged on their reasonableness and limits the damages that can be recovered under an antitrust suit to actual, as opposed to treble, damages. The latter extends the limitation on damages to production joint ventures where the principal production facilities are located in the United States or its territories and where a party comes from a country that provides "national treatment" to U.S. joint venture participants under its own laws.

Vertical restraints are practices that limit the action of one or both parties interacting as buyers and sellers. Resale-price maintenance is a vertical price restraint that, as noted above, is generally subject to a per se prohibition. Recent interest has focused on non-price vertical restraints, such as exclusive dealing agreements, tied sales, and exclusive territorial arrangements. While these agreements may decrease competition between brands and create barriers to market entry, they may also enhance efficiency. Exclusive dealing arrangements, for example, can facilitate cooperation among firms that would otherwise be concerned about technical information being leaked to their competitors. By strengthening the commitment of the two parties, an exclusive arrangement also reduces the risks associated with any specialized investments that must be made as part of the transaction.

As a consequence of these findings, U.S. courts have gradually moved away from a per se approach to non-price vertical restraints. Recent practice follows a Supreme Court ruling that non-price vertical restraints are to be analyzed using a rule of reason.⁴⁵

In Japan, while the Anti-monopoly Act prohibits cartels by firms and trade associations, certain cartels are exempted from the act if they meet specified conditions. Special provisions permitting such exemptions are set forth not only in the Anti-monopoly Act itself, but also separately in individual laws such as the Small and Medium-Sized Enterprises Organization Act and the Export and Import Act.

Over time, stricter criteria have come to be applied in assessing cartels and other restrictive arrangements in Japan. In fiscal year 1965, the peak period, there were 1,079 exempted cartels. By fiscal year 1993, the number of approved cartels in Japan had dropped to 67.

Other APEC members have been prepared, to varying degrees, to accommodate potentially restrictive practices. Chinese Taipei's competition law introduces the possibility of a

broad variety of exemptions for concerted activities,⁴⁶ but these can only be granted following a public-interest review by the Fair Trade Commission. Early experience does not suggest that these exemptions are likely to be heavily used.⁴⁷ Korea's Fair Trade Commission can similarly approve cartels that contribute to any one of a number of objectives, including industrial rationalization or restructuring, and enhancing small-firm competitiveness.

Under Canadian law, non-price vertical restraints and specialization agreements are reviewable practices. As with mergers, they will be approved if there is reason to believe efficiency gains will offset the costs of any lessening in competition. The Canadian *Competition Act* also provides for the exemption of qualifying joint ventures. Under the competition laws of both Australia and New Zealand, certain restrictive practices are permissible if they are expected to give rise to sufficient public benefits.

Most economies provide some form of exemption to export agreements. Even within the United States, there has been a long-standing exemption (going back to 1918) for export agreements registered with the government that do not restrain trade within the country.⁴⁸ Cooperative agreements may open opportunities to small and medium-sized enterprises that would otherwise be unable to export. Export associations, however, are often aimed at establishing a cartel that can effectively restrain competition. Export cartels may be justified as a response to the market power of monopsonistic buyers or import cartels, but generally this is not the case. This form of exemption raises particular concerns because it primarily impacts on other countries. It invites a response from the antitrust authorities of the country that is affected by the cartel, thereby raising the issue of extraterritoriality (addressed in Chapter 5).

In Australia, New Zealand, Japan and Korea, firms may apply to the antitrust authorities and receive prior approval of a restrictive agreement. Limited protection from antitrust prosecution is provided for joint ventures registered in the United States, and joint ventures and specialization agreements registered in Canada.

Competition Policy and Intellectual Property Rights

Given the importance of knowledge-intensive activities and the development and application of new technology to MNEs, those provisions of competition law that relate to innovation are of special interest. The relevant sections of competition law are those which pertain to intellectual property rights, technology licensing agreements, and R&D joint ventures. However, competition policy may have its main impact through its overall effect on market structure. The most significant contribution of competition policy may come from the prevention of excessive concentration, which is generally accompanied by weak incentives to innovate.

Competition laws permit the legitimate exercise of intellectual property rights. At the same time, care generally has been taken to ensure that competition law can be applied against holders of intellectual property rights who abuse those rights to create anticompetitive effects.⁴⁹

As noted above, most economies have introduced special provisions allowing firms to enter into R&D joint ventures. Qualifying joint ventures are thereby treated differently from other arrangements that may raise issues under the merger provisions of the law. In the United States, 300 research joint ventures were registered in the nine years following the passage of the *National Cooperative Research Act* of 1984, which recognizes the potential benefits of joint ventures in terms of scale or scope economies and risk-spreading. In addition, however, some governments have attempted to use this aspect of competition policy to support efforts to foster the growth of domestic, knowledge-based industries. Here, as well, U.S. policy – and particularly the recent *National Cooperative Research and Production Act* – is of interest. For a production joint venture to qualify for an exemption under this legislation (enacted in 1993), production must take place principally in the United States, and the venture must be controlled by a U.S. citizen or a person from a country offering “reciprocal” national treatment.⁵⁰

In addressing technology licensing agreements, most economies have again adopted a case-by-case approach, which enables them to deal effectively with anticompetitive practices without discouraging efficiency-enhancing arrangements. In some cases, detailed guidelines have been developed for the assessment of restrictions incorporated in licensing agreements. Japanese guidelines, for example, distinguish between restrictions that are not of concern (i.e., geographic limitations or tie-in requirements that are necessary to ensure the effectiveness of the licensed technology); restrictions that may be of concern, depending on the circumstances (i.e., covenants not to handle competing goods or to use competing technology during the term of a licensing agreement, or exclusive-selling requirements); and restrictions that are likely to be treated as unfair trading practices (i.e., restrictions on the selling price of patented goods in Japan or restrictions on R&D activities).⁵¹ In Korea, licensing restrictions in restraint of trade are identified in the Monopoly Regulation and Fair Trade Act. Among the prohibited contract provisions are those which require the technology importer to purchase raw materials, basic parts or equipment from the licensor or suppliers designated by the licensor; prevent the technology importer from developing new markets for the sale of products containing the licensed technology; and limit sales volume or prices for items produced by the licensee.

Licensing agreements are also closely monitored in some APEC member economies without competition legislation. In Malaysia, for example, technology-transfer agreements must be approved by the Malaysian Industrial Development Authority (MIDA). In reviewing proposed agreements, the MIDA attempts to ensure that local firms are not subject to unfair or unjustifiable restrictions and that license fees are commensurate with the level of technology to be transferred.

Enforcement Issues

The substantial divergence among the competition policies of APEC members raises the potential for tension and conflict, and differences in the nature and stringency of enforcement add to that potential. The most serious concerns arise where foreign firms are being discriminated against in the enforcement of competition laws. Competition authorities, for example, could use their discretion to deny foreign firms exemptions or to establish a more difficult test for foreign

acquisitions. A lack of transparency in the review process may feed such concerns and create a general climate of uncertainty that adds to the risk of investment in particular economies.

It is not apparent that antitrust laws are being enforced in a discriminatory manner in APEC economies. Moreover, in terms of the adequacy of enforcement, it would at least appear that most APEC members with well-established policies have made efforts to identify and remedy serious deficiencies in their enforcement capacity. In Canada, enforcement was considerably strengthened as a consequence of the major reforms introduced in 1986. The 1990 amendments to Korea's legislation resulted in higher penalties for violators and a greater emphasis on enforcement. In New Zealand, changes to strengthen enforcement of the merger law were introduced in 1990. In 1993, Australia increased the maximum penalty possible under the *Trade Practices Act* to A\$10 million. Subsequent enquiries have found Australia's deterrence and enforcement arrangements to be operating satisfactorily.⁵²

There are differences, however, in the stringency of enforcement within APEC. In the United States, the existence of two enforcement agencies, the encouragement of private actions, and the possibility of launching class actions have all contributed to especially vigorous enforcement of antitrust legislation.

U.S.-Japanese Disputes and the Role of Keiretsu

The implementation of competition policy has been a source of long-standing dialogue between the two largest APEC economies. U.S. interest has been focused, for example, on Japan's competition policy as it applies to *keiretsu*, groups of companies linked together through various means, often including interlocking directorships and extensive stock cross-holdings. Some *keiretsu* establish vertical relationships, linking manufacturers with their suppliers or bringing together manufacturers and distributors. Non-vertical *keiretsu* generally consist of a number of industrial companies in different industries, a trading company, and an affiliated bank.

The United States has been concerned lest vertical *keiretsu* make it difficult for foreign suppliers of materials and components to sell into the Japanese market. The question has been raised, for example, as to whether upstream, vertical *keiretsu* between manufacturers and parts suppliers could create a barrier to the export of U.S. auto parts to Japan. At the same time, concern has been expressed that *keiretsu* involving downstream linkages between manufacturers and distributors may, in some cases, pose a barrier, blocking the access of final-goods manufacturers to Japanese consumer markets.

Keiretsu operate in a system subject to some distinct capital-market influences. Institutional, as distinct from individual, investors are much more important in Japanese than in North American equity markets.⁵³ Institutional investors in Japan tend to be guided by long-term objectives and by understandings with other members of the corporate group that discourage the trading of shares. These arrangements make major Japanese corporations relatively resistant to corporate takeovers.

These aspects of Japanese practice do not necessarily reflect an inadequate enforcement of antitrust legislation. Even if *keiretsu* do impede competition – and this has been a matter of dispute⁵⁴ – there is a need to consider their potential efficiency-enhancing features. To a considerable extent, the *keiretsu* represents an alternative to the North American and European model of corporate governance; it provides a different, but no less legitimate, approach to resolving the coordination and control problems that accompany commercial activities. In many situations where *keiretsu* have been established to reduce the costs and risks of contracting between manufacturers and suppliers, for example, North American firms have resorted to vertical integration.

Some observers have been more concerned about the distribution or downstream *keiretsu*, which have tied up major retailers through exclusive dealing arrangements.⁵⁵ This has had the effect of limiting access to distribution channels.⁵⁶ Still, exclusive dealing in itself would not necessarily be in violation of competition laws in other member economies. In Canada, for example, such arrangements are evaluated on a case-by-case basis that leaves broad scope for the realization of efficiency gains.

The Japanese Fair Trade Commission has strengthened enforcement and increased penalties in recent years, encouraged in part by the 1989-90 negotiations with the United States under the so-called “Structural Impediments Initiative.” Cartel surcharges were raised from 1.5 to 6 percent of sales in 1991. That year, the JFTC also launched its first criminal case in 17 years and published its “Distribution System and Business Practices Guidelines.” In 1993, the United States and Japan agreed to carry on negotiations on structural and other economic issues in the context of the U.S.-Japan Framework for a New Economic Partnership. In these negotiations, Washington is pushing for greater openness and clarity in the application of competition law (along with other regulations) as well as for further action against those activities which are seen to impede market access for foreign producers and foreign goods and services.

Addressing Interjurisdictional Issues

The greatest potential for conflict arises, however, where the consequences of anticompetitive conduct in one jurisdiction fall largely on the residents of other jurisdictions. Since MNEs account for a major share of the transactions that extend across national boundaries, they are the source of most interjurisdictional conflicts.

The difference in competition policies among APEC economies might well contribute to such conflicts. But even if competition policies were identical, conflict could arise where competition authorities assess the costs and benefits of anticompetitive conduct in terms of strictly national considerations. From their particular perspectives, national governments will come to very different conclusions about the merits of specific mergers and restrictive practices. This is clearly what occurs when antitrust exemptions are granted to export and import cartels: countries are maximizing national benefits and ignoring the obvious extrajurisdictional costs that these practices entail.

Much anticompetitive conduct that is a source of interjurisdictional conflict takes the form of trade measures. Protectionist initiatives, such as antidumping, countervailing duties, and voluntary export restraints, have been a significant source of international tension. The continued use of such measures stands in contrast to the general thrust of trade policy, which has been in the direction of increased liberalization and promotion of globalized competition. Antidumping has been a particular source of conflict – and a particular concern from the vantage point of those who advocate a greater role for market forces. Whereas the objective of competition policy is to protect the competitive process and encourage efforts to reduce costs and prices, antidumping protects particular competitors and discourages low pricing.⁵⁷ In this case, some would argue that it is the failure to apply competition policy – and to use the antipredatory provisions of the law, where appropriate – that contributes to international conflict. One notable attempt to address this issue, in a trade agreement between Australia and New Zealand, is discussed below.

The activities of antitrust authorities will spill over national borders not just through trade but through their overall impact on MNEs. For example, both the United States and the European Union at one time initiated antitrust proceedings against IBM Corporation. Had either jurisdiction carried forward its action, developments in the worldwide computer market could have followed a very different course.⁵⁸ The dangers of uncoordinated policy responses to antitrust issues with multinational implications are also illustrated by another more current issue:

In the '90s firms within nations and across nations are contemplating combinations to build a data superhighway. A given cooperative effort ... might be a benefit for the world or it might be a monopolistic monster. Do we need a unified understanding of global impacts and would we profit from a unified legal treatment, lest one nation strike down a blessing for the world, or all nations lack the tools to control a manipulative monster?⁵⁹

Uncoordinated policy responses to activities that impact on several economies not only give rise to conflicts and to policy gaps; they also result in increased administration and enforcement costs for governments and higher compliance costs for corporations. An MNE attempting to acquire another firm with global operations faces the costs and uncertainties of dealing with several authorities and complying with a number of different merger requirements. The proposed merger of Gillette and Wilkinson Sword, for example, was investigated by the agencies in eight countries before finally being blocked by antitrust authorities in the United Kingdom.

At the international level, one notable response to these issues has been the program on the convergence of competition policies established by the Organisation for Economic Co-operation and Development (OECD). The studies and discussions organized by the OECD Committee on Competition Law and Policy are not aimed at achieving uniformity in laws and institutions, but rather greater "similarity in underlying principles, policy objectives and enforcement efforts."⁶⁰ The committee's interim report observed that significant progress had already been achieved with respect to convergence among members on objectives and other principles, analytical tools, enforcement practices, and some areas of substantive law.

Within APEC, member economies have followed different approaches to addressing these interjurisdictional issues. Three different avenues that have been pursued in this context are described below.

The Extraterritorial Extension of Antitrust Law

The United States has been among the strongest advocates of nations' rights to take action against certain trade restraints occurring abroad. Those rights are seen to apply to foreign conduct that has direct, substantial, and reasonably foreseeable anticompetitive effects in a domestic economy or on the ability of a nation's industries to compete fairly in foreign markets. The "effects" doctrine, interpreting the *Sherman Act* to give U.S. courts jurisdiction over anticompetitive acts abroad that affect the domestic U.S. market, appears to have been first enunciated in 1945, in a decision prepared by Judge Learned Hand.⁶¹ A more recent decision by the Supreme Court emphasizes that "the Sherman Act applies to foreign conduct that was meant to produce and did in fact produce some substantial effect in the United States."⁶² Jurisdiction of U.S. courts over foreign-based anticompetitive acts that have a "direct, substantial, and foreseeable" effect on U.S. international commerce is based on the U.S. *Export Trading Company Act* of 1982, as amended.

Criminal, civil, as well as administrative actions have been initiated against alleged restraints of trade taking place outside the United States that have produced anticompetitive effects in U.S. markets. Both the government and private parties have sought enforcement against extraterritorial restraints of trade. Private proceedings were initiated in U.S. courts by Westinghouse, for example, against producers in several countries that were alleged to have participated in an extraterritorially based cartel that fixed the world price of uranium.⁶³

Both in applying the 1982 law and the "effects test," U.S. authorities take into account the interest of other nations through the concept of comity. In their jointly issued Antitrust Enforcement Guidelines for International Operations (April 1995), the U.S. enforcement agencies indicate that they will always take issues of comity into consideration before bringing a case or issuing a complaint.

The U.S. International Operations Guidelines identify a number of factors that U.S. antitrust authorities may take into account in performing "a comity analysis." One, but not necessarily the most important, consideration is "the relative significance and foreseeability of the effects of the conduct on the United States as compared to the effects abroad." The guidelines point out that a decision to prosecute an antitrust extraterritorially "represents a determination by the Executive Branch that the importance of antitrust enforcement outweighs any relevant foreign policy concerns."

Agreements Between Canada and the United States

To help minimize conflicts arising from extraterritorial antitrust issues, APEC member states have entered into various agreements and understandings. Canada and the United States

have had several bilateral understandings in relation to competition law dating back to 1959.⁶⁴ The most recent of these was the 1984 Memorandum of Understanding (MOU), which set out a relatively elaborate regime for notification and consultation in cases where one party's enforcement activities might affect the national interests of the other. The two countries concluded a new Competition Policy Agreement on August 3, 1995. The new agreement, which replaces the 1984 MOU, incorporates key characteristics of the earlier MOU and contains further improvements in light of the experience under the MOU.

While the 1984 MOU was essentially an informal political arrangement between the two governments, the 1995 agreement is a binding agreement under international law. This change of status underscores the two countries' commitment to the avoidance of disputes and to closer cooperation in the application of their competition laws. Like the 1984 MOU, the 1995 agreement provides a procedure for notification and consultation in cases that implicate the other party's interests. The 1995 agreement builds on the procedure in the earlier MOU and introduces a number of improvements. It sets out a non-exhaustive list of "comity" factors that the two countries will consider when one of them is contemplating enforcement action that might adversely affect the other country's interests. In addition, since the U.S. Federal Trade Commission and Canada's Bureau of Competition Policy are both responsible for the administration of laws relating to deceptive marketing practices, the 1995 agreement contains new commitments for cooperation in this area.

The North American Free Trade Agreement (NAFTA) resulted in new initiatives to promote cooperation. NAFTA established a Working Group on Trade and Competition (under Article 1504) and set out certain obligations for the three signatories. The obligations to which the parties agreed (under Article 1501) include "notification, consultation and the exchange of information relating to the enforcement of competition laws and policies in the free trade area" (Article 1501). This takes Canada and the United States closer to a principle of positive comity, which entails a duty to assist the other economy in remedying anticompetitive conduct in one's own jurisdiction. The working group established under NAFTA is to look at "issues concerning the relationship between competition laws and policies and trade in the free trade area."

Australia and New Zealand Closer Economic Relations Trade Agreement

The Australia and New Zealand Closer Economic Relations Trade Agreement (ANZCERTA) provides another example of how APEC members have responded to the tensions associated with increasing economic integration. The two economies signed the agreement in 1983, and five years later undertook a number of initiatives to move closer to the goal of establishing a single market. These initiatives resulted in some important agreements on competition policy. The countries agreed to end the use of antidumping in bilateral trade and to replace it with competition policy. Accordingly, their respective laws on abuse of market power were expanded to cover predatory pricing involving cross-border sales. The investigatory powers of the competition authorities in each country were adjusted as well to allow the handling of trans-Tasman disputes.

ANZCERTA did not result in the creation of a common competition policy, as in the EU. But it did effectively address an important source of conflict. In addition, a steering committee established to oversee the overall review of business laws in Australia and New Zealand identified a number of areas of competition policy where there was scope for increased harmonization over time.

Conclusion

In terms of the objectives of promoting economic integration and maximizing the gains from FDI, the current competition policies of APEC members give rise to a number of concerns that their governments may wish to address individually or collectively in the future.

First, there is reason to question whether APEC host economies are adequately realizing the benefits from the presence of multinational enterprises. This question pertains particularly to those member economies that have not yet implemented competition policies. It is a question that has become more important as a result of the growth in FDI, the spread of foreign investment into the service sector, and the opening up of activities that had previously been subject to government regulation and government ownership.

Second, significant differences in competition policy and the lack of coordinating mechanisms have increased the costs and risks of doing international business. While some convergence of views is occurring in the area of enforcement principles and practices within APEC economies, competition law provisions vary substantially among jurisdictions. Moreover, governments acting wholly on their own may be unable to formulate an effective joint response to issues that are of mutual concern. MNEs face added uncertainty as a result of these policy differences and the absence of institutional mechanisms that can facilitate an effective joint response to anticompetitive issues that are of concern to several economies.

Third, because competition policies are designed to achieve national objectives, conflicts between economies are likely to arise from time to time. To maintain and promote competition in their jurisdictions, competition authorities must counter anticompetitive activities whether they originate at home or abroad. From their particular perspectives, governments will often reach different conclusions about the desirability of global mergers. Restrictive practices are assessed differently when their anticompetitive effects fall primarily on foreign, rather than domestic, consumers. Governments have also been prepared to limit the exercise of competition policy when that serves national objectives. As economic interdependence within APEC grows, the potential for such conflicts also increases.

Fourth, governments have only developed limited arrangements to address the conflicts associated with their economic interdependence. In the absence of appropriate agreements, attempts to apply competition law to extraterritorial events may possibly provoke conflict. While governments are aware of these dangers and there have been some significant efforts to promote bilateral and multilateral cooperation on enforcement matters, there is a need to consider extending and strengthening cooperative arrangements.

5. INTELLECTUAL PROPERTY

Introduction

Intellectual property rights (IPRs) in the form of trademarks, copyrights, patents, and industrial-design rights, are the means by which governments protect brands, literary and artistic works, and new products and processes. While intellectual property (IP) laws protect the expression or embodiment of ideas, ideas themselves can receive protection under common law as trade secrets. Patents, copyrights, and design rights are aimed at encouraging creative activity. Trademarks identify products and their sources, thereby serving as rules of orderly marketing.

The rationale for patents is to be found in the unique characteristics of intellectual property, in particular its ability to remain intact as it is passed from user to user. Because it is inherently difficult to control the spread of ideas, inventors would have difficulty appropriating the benefits from their products or services in the absence of some form of protection. Patent laws aim at reducing the gap between the private and social rates of return from the generation of novel ideas, and thereby, at increasing the incentive for inventive activity.

Intellectual property laws that deal with industrial property (mainly patents) have the same broad objectives as competition policy: to improve economic efficiency and thereby increase the rate of economic growth. But whereas competition policy can be applied with a view to tapping various sources of efficiency, IP policy is aimed mainly at achieving the dynamic efficiency gains that are the result of higher rates of innovation and technological change.⁶⁵

Empirical studies point to the high social rate of return from investment in industrial innovation and also to the substantial disparity between private and social returns.⁶⁶ One recent U.S. survey, for example, finds that between one-third and two-thirds of the economic benefits of R&D are not captured by the organization that performs it.⁶⁷ While these results might be seen as suggesting a need to strengthen patent protection in the United States, there are difficulties in determining the appropriate degree of protection. For one thing, there are other ways to promote innovation; subsidies, for example, could be more efficient under some circumstances. Second, the link between increased IP protection and higher rates of technological change is far from clear. Besides encouraging innovation, patents involve the requirement that technical information be released publicly, which can promote technological diffusion and transfer. On the other hand, IPRs may retard technological progress by preventing other firms from developing new products and processes that build on the original innovation.

Third, the dynamic benefits from patent protection must be weighed against the static losses from the creation of an effective monopoly involving less output and higher prices. There have been some attempts to work out the optimal degree of protection by balancing the positive incentive effect on invention against the inefficiencies due to underutilization.⁶⁸ In general, these

results suggest that the optimal IPR – its scope, duration, transferability, conditionality, etc. – is likely to vary between inventions and industries, depending on a number of factors that can, at best, be assessed only in vague terms.

Intellectual property issues have taken on an additional and still more complex dimension because of the increasingly important role of innovative products in trade and investment. Indeed, historically, intellectual property policy has been one of the most contentious areas in dealings between APEC members. There is a basic tension between economies that are primarily exporters of IP products and economies that are importers, either of IP products directly or of foreign investment with an IP component. In addition, less developed countries have had some special concerns about the costs of complying with demands for stronger IP policies. In the case of intellectual property, however, unlike that of competition policy, there has been an effective multinational response to these sources of international conflict.

In the next section, we look at how IP has been a source of friction within APEC and at efforts to resolve differences through bilateral and multilateral negotiations and the establishment of agreed-upon international frameworks. This is followed by a discussion of current IP policies in APEC member economies and by a consideration of the impact of IP on FDI. The final section adopts a broader focus to show that IP policies are not the only, nor necessarily the most important, source of friction in the general area of innovation policy.

Conflict and Compromise

While considerable progress has been made in resolving disagreements in recent years, intellectual property has been a source of considerable friction among APEC members over most of the past decade. These tensions reflected in part the perceived differences of interest or of perspective between net exporters and net importers of goods that embody IPRs. While importing economies will benefit over the longer term from the resulting increase in global innovation and global commerce, often the most direct and visible impact of more stringent IP protection is its adverse effect on the importing economies' terms of trade and balance of payments. As an importing country (and one whose residents account for less than 10 percent of the patents granted), Canada has had to grapple with these trade-offs. Some heated policy debates, for example, accompanied changes to Canada's drug patent legislation in 1987 and 1993.

Less developed economies have had additional concerns over and above those they shared with other net importers of technology. For example, while stronger industrial property protection could raise the cost of some essentials, such as pharmaceuticals, most less developed economies did not believe they were in a position to realize potentially offsetting benefits in terms of increased domestic R&D or increased investment in knowledge-intensive activities. Stronger trademark and copyright laws would threaten the producers of counterfeit trademark goods and pirated copyright goods, who comprised a significant economic sector in some less developed economies.

Attitudes have changed in recent years as developing economies have come to appreciate that adequate IP policies would serve their own interests as trading and investing nations. Significant industrial property protection has become more important to developing and newly industrialized economies that have become more dependent on the private sector and less reliant on government ownership and regulation. Moreover, in some newly industrialized economies, the importance of effective patent and copyright policies has become apparent as a consequence of the growing significance of their own knowledge-intensive industries.

Bilateral Initiatives

These changes have come at the end of a decade punctuated by numerous IP disputes. In the mid-1980s, the protection of American intellectual property became an important U.S. policy objective. The U.S. International Trade Commission projected that in 1986, worldwide losses to all U.S. producers from intellectual property infringement ranged from US\$43 billion to US\$61 billion.⁶⁹ The United States responded to mounting industry pressure to help control these losses through some early multilateral work on counterfeit goods in the GATT context and in bilateral negotiations backed up by the application of trade laws.

Section 337 of the *Tariff Act* of 1930, as amended, provides a private remedy for infringement. It enables domestic holders of IPRs to apply to the International Trade Commission for the seizure and forfeiture of infringing goods or for a prohibition against their entry into the United States. It also allows firms to seek remedies in federal district courts. Section 337 has recently been amended to apply equally to foreign owners of imported goods, as required under GATT.⁷⁰

Section 301 of the *Trade Act* of 1974, as amended, gives the President broad powers to enforce U.S. rights under bilateral and multilateral agreements and to seek to eliminate acts, policies, or practices of foreign governments that burden or restrict U.S. commerce. The *Omnibus Trade and Competitiveness Act* of 1988 amended the *Trade Act* of 1974 to include what is called the "Special 301" provision. This requires the U.S. Trade Representative to identify annually those foreign countries which deny adequate and effective protection to U.S. products and, from this group, to single out those countries that "have the most onerous or egregious acts, policies, or practices." The latter group of "priority countries" are subject to investigation, which must be completed within a specified time period and could result in the imposition of retaliatory measures.

Special 301 has greatly enhanced the U.S. government's ability to negotiate improvements in foreign intellectual property regimes. While intellectual property violations have prompted "301 investigations" of only a few APEC member economies (Korea, Thailand, and, more recently, the People's Republic of China), the U.S. Trade Representative has entered into discussions and negotiations with most developing and newly industrialized APEC members. There have also been extensive negotiations with Japan, which is the industrialized economy that has raised the most significant IP concerns in the United States.

Negotiations initiated by the U.S. Trade Representative under these various trade laws have had a significant impact. For example, Hong Kong, which had been identified in the mid-1980s as having one of the weakest IP regimes, had substantially strengthened its laws and increased its enforcement by the end of the decade. Korea revised its intellectual property laws in 1987 to satisfy U.S. concerns and preserve its access to the U.S. market. Singapore, Malaysia, and Indonesia all introduced new copyright legislation in 1987 to address U.S. concerns relating especially to software piracy. Losses to U.S. copyright industries from piracy in these three economies are estimated to have fallen from US\$637 million in 1984 to US\$87 million in 1988.⁷¹

On the other side of the Pacific, the most significant development was the modernization and substantial improvement in Mexican IP laws that occurred over 1991. With the signing of the North American Free Trade Agreement in December 1992, Canada, the United States, and Mexico committed themselves to "provide adequate and effective protection and enforcement of intellectual property rights" and to "make every effort" to adhere to international IP treaties. This reinforced the reforms underway in Mexico, and it supported the passage of legislation in Canada to abolish compulsory licensing and restore 20-year protection for patented drugs.

Court actions brought by major corporations have also helped to deter IPR infringement. IBM, for example, has been particularly aggressive in protecting its intellectual property through the courts. It initiated numerous court cases in Chinese Taipei, Singapore, and Hong Kong throughout the 1980s, even though the damage awards were often less than the cost of prosecution.⁷²

Multilateral Initiatives

While government and corporate initiatives in the United States have helped to strengthen IP protection, they could not create the level playing field in IP policy that is conducive to efficient international commerce. Bilateral agreements may not provide equivalent protection to the technology of countries that are not party to the agreement.⁷³ Moreover, bilateral agreements establish standards and modes of IP protection that may depart significantly from what is globally desirable. Such agreements may become influential, but they do not necessarily provide the appropriate model for future intellectual property agreements.

Given these considerations, much effort has gone into ensuring that IP issues are effectively addressed at the multilateral level, such as through the inclusion of an agreement on intellectual property in GATT, now the World Trade Organization (WTO). The Uruguay Agreement on trade-related aspects of intellectual property rights (TRIPs), signed by Ministers in April 1994, attempts to establish minimum international standards of IP protection and to provide effective support for these standards through the application of GATT-style enforcement procedures and dispute resolution mechanisms. It extends the benefits of national treatment and most-favoured-nation treatment to the owners of intellectual property who are nationals of WTO members. To ensure that intellectual property rights are appropriately enforced, members are required to establish civil and administrative procedures that are effective, fair, and equitable, and not unnecessarily

complicated or costly. They must also provide for the possibility of provisional judicial orders where delay is likely to cause irreparable harm. A WTO Council has been established to monitor compliance with the TRIPs agreement.

The TRIPs agreement incorporates major sections (i.e., Articles 1-12 and 19) of the Paris Convention for the Protection of Industrial Property. It does not apply to, but does not derogate from, other parts of the Paris Convention, the Berne Convention (literary and artistic works), the Rome Convention (performers, producers of phonograms, and broadcasting organizations), and the Treaty on Intellectual Property in Respect of Integrated Circuits. (The two most important conventions, Paris and Berne, are discussed in the inset).

With respect to patents, the TRIPs agreement supplements the Paris Convention by specifying a 20-year term for almost all inventions. In the granting of patent rights, there is to be no discrimination between products that are imported and those which are produced locally. As well, working requirements under patent law can be satisfied by imports, along with domestic production. The agreement permits compulsory licensing but sets out detailed conditions for its use.⁷⁴ For example, a compulsory license may be authorized when this is necessary to permit the exploitation of another invention that constitutes "an important technical advance of considerable significance." Inventions may be deemed by WTO members to be unpatentable if they pertain to diagnostic, therapeutic, and surgical methods and to plants, animals (other than micro-organisms), and biological processes for the production of plants or animals.⁷⁵ WTO members may also exclude inventions from patentability if this is believed to be necessary to protect public order or morality.

With respect to copyright, one of the most important provisions is the requirement that members extend copyright protection to computer programs and databases. The TRIPs agreement also requires that authors of computer programs and cinematographic works, and the producers of phonograms, be given the right to authorize or prohibit the commercial rental of their works to the public; and that performers receive protection from the unauthorized recording and broadcast of live performances.

The TRIPs provisions relating to trademarks and service marks supplement the terms of the Paris Convention with respect to eligibility for registration; rights conferred; term of protection (no less than seven years, renewable indefinitely); requirements for use; and conditions of licensing. Members must permit the owners of registered marks to assign their trademark with or without the transfer of the underlying business.

A separate provision is included to prevent the misleading use of geographical indications. This is aimed at designations suggesting that a good "originates in a geographical area other than the true place of origin," as well as any use that would constitute an act of unfair competition.

Another significant component of the TRIPs agreement is Section 7, which provides for the protection of confidential commercial information. Members are required to provide for the protection of information that is secret, has commercial value because it is secret, and "has been

Paris Convention of March 20, 1883 for the Protection of Industrial Property

The provisions fall into three categories:

- (1) *National Treatment: Each contracting state must treat the nationals of other contracting states no less favourably than it treats its own nationals.*
- (2) *Right of Priority: On the basis of a regular first application filed in one of the contracting states, an applicant will, for a specified period of time, have priority in applying for protection in any of the other contracting states.*
- (3) *Common Rules – including:*
 - * *The right of a patent may not be refused because it is subject to restrictions or limitations resulting from domestic law.*
 - * *Each state may take legislative measures to grant compulsory licences to prevent the abuses which might result from the exclusive rights conferred by a patent, but only with certain limitations.*

Berne Convention of September 9, 1886 for the Protection of Literary and Artistic Works

There are three basic principles:

- (1) *National Treatment: Works originating in one of the contracting states must be given the same protection in each of the other contracting states.*
- (2) *Automatic Protection: Protection must not be conditioned upon compliance with any formality.*
- (3) *Independence of Protection: Protection is independent of the existence of protection in the country of origin of the work.*

In addition, minimum standards of protection are specified, with special provisions established for developing countries.

Source: Based on *World Intellectual Property Organization*, Geneva, 1984.

subject to reasonable steps ... by the person lawfully in control of the information, to keep it secret." This section also requires that governments take steps to protect confidential information that is submitted by pharmaceutical and other producers requiring product marketing approval.

While not all members of APEC belong at the present time to GATT and while transitional periods of five years (for developing countries) and 11 years (for least-developed countries) were established, the TRIPs provisions go a long way towards reducing the uncertainty associated with IP policies. The TRIPs agreement creates a more favourable environment for trade and investment by MNEs. In addition, it reduces the danger that disputes and discriminatory policies will undermine the international trading order. The latter is especially important to smaller economies, which have the largest stake in the continued development of an open and fair system of international commerce.

IP Policies and Their Impacts

APEC members have implemented some important changes in IP policy in recent years. Among the more significant of the recent changes are:

- Mexico's enactment of legislation in 1991 to comply with the high standards of IP protection incorporated in NAFTA;
- Chinese Taipei's implementation of a new legislative framework that offers increased levels of IP protection;
- Indonesia's implementation of its first patent law in 1991, and of a revised trademark law in 1993;
- Korea's 1993 amendments to its copyright and computer software laws; and
- Canada's repeal of compulsory licensing provisions affecting pharmaceutical products.

Several APEC members, however, still have some distance to go to meet GATT requirements and effectively address the concerns of foreign or domestic holders of IPRs. As well, some substantive issues that have emerged in the implementation of TRIPs could become a source of friction. While enforcement of IP laws has improved, the risk of infringement remains significant in some areas. The evidence suggests that those APEC members with weaker IP policies are less able to attract certain types of investment and to benefit from the transfer of advanced technology.

General Features of IP Legislation

Intellectual property legislation in APEC member economies includes some or all of the following: copyright laws to protect the original expression of an idea; patent laws to protect novel and useful products or processes; industrial design laws to protect new or original product designs; trademark laws to protect words or symbols that indicate the origin or sponsorship of goods or services; and special laws to protect the layout design of integrated circuits. To be patentable, an invention must generally be new, involve an inventive step, and be industrially applicable. Less significant inventions that are not patentable may qualify for limited protection as "utility models" in some economies. In addition, all but a few APEC members provide protection for industrial and trade secrets. In Commonwealth countries (Canada, Australia, New Zealand, Singapore, and Malaysia), trade secrets are protected by common law rather than by statute.

Most APEC economies are signatories to a number of international IP conventions, the more important of which, as noted earlier, are the Paris Convention for the Protection of Industrial Property and the Berne Convention for the Protection of Literary and Artistic Works. However, the different protocols associated with these conventions have allowed considerable diversity in approach. Canada, for example, adheres to the Rome Agreement of the Berne Convention on Copyrights, but it has not yet adopted the more demanding Paris Act of this Convention. The TRIPs agreement will reduce this diversity. In its approach to patents, the Philippines has made

reciprocity a basis for its treatment of foreign applicants, rather than adopt the principle of "national treatment" required by international agreements.

Table 8 highlights some characteristics of patent legislation in APEC member economies. With the exception of Brunei Darussalam, which is not included in the table, all members have independent patent systems.⁷⁶ Until recently, Singapore simply issued a certificate of registration where a patent had already been granted in the United Kingdom. In February 1995, however, Singapore's new *Patents Act* came into force, providing for the independent examination of applications by the island state's Patents Registry. While a number of APEC members currently offer protection for less than the 20-year minimum period specified in the TRIPs agreement, required amendments are generally being introduced or planned. Australia and New Zealand have both just extended their patent terms to 20 years.⁷⁷ Mexico increased the term and extended the level of protection with the passage of a new industrial property law in July 1994. All APEC economies now extend patents to pharmaceuticals, although in Thailand certain pharmaceutical products receive only limited protection. While Thailand has a Pharmaceutical Patent Board (PPB), with broad authority to review pharmaceutical costs and prices, it is now in the final process of amending its current patent law and this will result in the repeal of all pharmaceutical patent provisions, including those pertaining to the PPB. As a consequence of a 1992 memorandum of understanding with the United States, the People's Republic of China widened its patent coverage to include pharmaceuticals, chemicals, beverages, and foodstuffs.

While some economies provide for the cancellation of unworked patents, most allow a compulsory licence to be issued if a patent has not been worked within a certain period of time. Justifications for the issuance of a compulsory licence include the need to assure adequate product availability, to strengthen competition, and to allow the working of a dependent patent, as well as the protection of the public interest.⁷⁸ Based on such factors, some patent laws provide relatively broad authority for the issuance of compulsory licenses. In the Philippines, a compulsory licence can be issued two years after registration if a patented item is not being used on a commercial scale or if domestic demand is not being met to an "adequate extent and on reasonable terms." Malaysia, the Philippines, and Thailand all allow the government or its agent to exploit patented inventions on the grounds of public interest. While compulsory licensing is provided for in the TRIPs agreement, it is to be employed in exceptional circumstances and subject to a number of safeguards.

Some, but not all members, allow IP owners to restrict imports of foreign products incorporating the patent. In the United States, the courts have upheld patent restrictions that limit the right of foreign licensees to sell the product in that country. In Indonesia, on the other hand, the importation of patented products or goods made under a patented process does not constitute infringement. Similarly, recent legislation confirms that parallel imports of legitimate versions of protected products are acceptable in Singapore. The TRIPs agreement does not address this issue.⁷⁹

Table 9 focuses on the copyright legislation of APEC members. Virtually all member economies now treat computer software and data compilations as literary works for IP purposes,

Table 8
Patent Legislation

	Conventions and Treaties	Legislation	Duration	Compulsory Licensing Provisions	Notable Features
Australia	<ul style="list-style-type: none"> • Paris Convention 1883 • Patent Cooperation Treaty 1970 • Budapest Treaty 1977 • GATT/TRIPs 1995-6 	<ul style="list-style-type: none"> • Patents Act 1990 • Patents Regulations 1991 	<ul style="list-style-type: none"> • Standard 20 years f.f. • Petty patents can be renewed for 6 years • Patents of addition continue for unexpired term of principal patent 	<ul style="list-style-type: none"> Yes • After 3 years if requirements of public not satisfied • Patentee can oppose application 	<ul style="list-style-type: none"> • Unavailable for biological processes, process of production for food and medicine involving a mixture of known substances
Canada	<ul style="list-style-type: none"> • Paris Convention 1883 • Patent Cooperation Treaty 1970 • GATT/TRIPs 1995-6 	<ul style="list-style-type: none"> • Patent Act 1989 	<ul style="list-style-type: none"> • 20 years f.f. 	<ul style="list-style-type: none"> • 1993 law ended compulsory licensing for drugs 	
Hong Kong	<ul style="list-style-type: none"> • Paris Convention 1883 • GATT/TRIPs 1995-6 	<ul style="list-style-type: none"> • British Patents Acts 1949, 1977 	<ul style="list-style-type: none"> • Inventions - 20 years F.I. • Registered designs - 25 yrs. 		<ul style="list-style-type: none"> • Reviewed yearly • As defined in Britain
Indonesia	<ul style="list-style-type: none"> • Paris Convention 1883 • GATT/TRIPs 	<ul style="list-style-type: none"> • Law No. 6 1989 • Gov Regs., June 1991 	<ul style="list-style-type: none"> • 14 years f.f. • + 2 years if revenue costs do not cover expenses • 5 years for small patents 	<ul style="list-style-type: none"> Yes • If not worked within 3 years after filing 	<ul style="list-style-type: none"> • Improving an existing patent gets priority • Patent can be delayed for 5 years for social or development national reasons
Japan	<ul style="list-style-type: none"> • GATT/TRIPs 1995-6 	<ul style="list-style-type: none"> • Patent Law No. 121 (last amended 1994) 	<ul style="list-style-type: none"> • 20 years f.f. 	<ul style="list-style-type: none"> Yes • Be subject to consultation 	<ul style="list-style-type: none"> • Inventions with no industrial utility and those lacking in novelty are unpatentable
Malaysia	<ul style="list-style-type: none"> • Paris Convention 1883 • GATT/TRIPs 1995-6 	<ul style="list-style-type: none"> • Patents Act 1983 (as amended in 1986) • Patent Regs. 1984 	<ul style="list-style-type: none"> • 15 years F.I. • 5 years - utility innovations (improvements) 	<ul style="list-style-type: none"> Yes • If not worked in 3 years • If needed to work new patent 	<ul style="list-style-type: none"> • Renewable • Discoveries, theories, plant and animal varieties and surgical methods for humans are unpatentable
Mexico	<ul style="list-style-type: none"> • Paris Convention 1883 • GATT/TRIPs 1995-6 • Patent Cooperation Treaty (since January 1995) 	<ul style="list-style-type: none"> • Industrial Property Law 1994 (replaced the Law for the Promotion and Protection of Industrial Property 1991) 	<ul style="list-style-type: none"> • 20 years f.f. • 23 years for pharmaceutical and chem. products if licence given to a majority Mexican-owned company in first 6 months • 15 years - designs • 10 years - small inventions 	<ul style="list-style-type: none"> Yes - in exceptional circumstances • If not worked in 3 years (imports can satisfy requirement) • For national emergency 	<ul style="list-style-type: none"> • Inventions based on animal, plant, or human tissue are unpatentable • Not renewable
New Zealand	<ul style="list-style-type: none"> • Paris Convention 1883 • Madrid Agreement 1891 • GATT/TRIPs 1995-6 	<ul style="list-style-type: none"> • Patents Act 1953 (and associated regulations and amendments) 	<ul style="list-style-type: none"> • 20 years f.f. for inventions (Jan. 1, 1995) • Patents of addition apply for unexpired period of parent patent 	<ul style="list-style-type: none"> Yes • If not worked in 3 years from scaling or 4 years from date of patent (the later date applies) 	<ul style="list-style-type: none"> • Must pay renewal fee every 3 years after the 4th year

Table 8
Patent Legislation (Cont'd)

	Conventions and Treaties	Legislation	Duration	Compulsory Licensing Provisions	Notable Features
People's Republic of China	<ul style="list-style-type: none"> • Paris Convention 1883 • Patent Cooperation Treaty 1970 	<ul style="list-style-type: none"> • Patent Law of P.R.C. 1985 (regulations 1985) (amended 1993) 	<ul style="list-style-type: none"> • 20 years F.I. – inventions • 10 years - utility models and designs 	<ul style="list-style-type: none"> Yes • If it is in public interest • If someone is denied permission to work an unused patent 	<ul style="list-style-type: none"> • Not renewable • Not available for scientific discoveries, animal or plant varieties • Granted for processes used in producing plant and animal varieties
Philippines	<ul style="list-style-type: none"> • Paris Convention 1883 • GATT/TRIPS 1995-6 	<ul style="list-style-type: none"> • Republic Act 1947 (amended 1978) 	<ul style="list-style-type: none"> • 17 years F.I.- inventions • 5 years - utility models and designs (renewable for two 5-year periods) 	<ul style="list-style-type: none"> • May be applied for after 2 years if unworked • At any time if in public interest 	<ul style="list-style-type: none"> • First-to-invent system • Not available for scientific principles, ideas; process not directed to making and improving a commercial product
Republic of Korea	<ul style="list-style-type: none"> • Paris Convention 1883 • Patent Cooperation Treaty 1970 • Budapest Treaty 1977 • GATT/TRIPS 1995-6 	<ul style="list-style-type: none"> • Patent Law 4207 (established in 1961, amended in 1973, 1990) 	<ul style="list-style-type: none"> • 15 years from publication, but within 20 years from application date 	<ul style="list-style-type: none"> Yes • If not worked within 3 years 	<ul style="list-style-type: none"> • Subject to cancellation if unused for 5 consecutive years
Singapore	<ul style="list-style-type: none"> • Paris Convention 1883 • Patent Cooperation Treaty 1970 • Budapest Treaty 	<ul style="list-style-type: none"> • Patents Act 1994 • Patent Rules 1995 (both effective Feb. 23, 1995) 	<ul style="list-style-type: none"> • 20 years f.f. 	<ul style="list-style-type: none"> Yes • If not worked 3 years after grant • Food and medical devices: at any time 	<ul style="list-style-type: none"> • Prior to Feb. 23, 1995, patent protection was obtained by re-registering U.K. patent
Chinese Taipei	<ul style="list-style-type: none"> • FCN treaty w/US 1946 • bilateral agreement w/Australia on industrial property 1994 • bilateral agreement w/Japan, Switzerland on patent priority 1996 	<ul style="list-style-type: none"> • Patent Act 1944 (amended 1994) 	<ul style="list-style-type: none"> • 20 years f.f. - inventions • 12 years - utility models • 10 years - new designs 	<ul style="list-style-type: none"> Yes • For national emergency • Non-profit use • Unfair competition 	<ul style="list-style-type: none"> • Not available for new varieties of plants and animals but allowed for breeding processes of new varieties of plants
Thailand	<ul style="list-style-type: none"> • GATT/TRIPS 1995-6 	<ul style="list-style-type: none"> • Patent Act 1979 (amended 1992) 	<ul style="list-style-type: none"> • 20 years f.f. 	<ul style="list-style-type: none"> Yes – 3 years after patent granted • If not worked • If inadequate supply • If in public interest 	<ul style="list-style-type: none"> • Amendment created Pharmaceutical Patent Board to prevent exploitation • Recognizes priority rights (although not member of Paris Convention)
United States	<ul style="list-style-type: none"> • Paris Convention 1883 • Patent Cooperation Treaty 1970 • Budapest Treaty • GATT/TRIPS 1995-6 	<ul style="list-style-type: none"> • Patent Acts 1836, 1952 (amended) 	<ul style="list-style-type: none"> • 20 years f.f. (as of June 8, 1995) • May be extended up to 5 years where issue of patent is delayed by interference proceeding 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> • First-to-invent system • Protection covers appearance not structure or mechanical features

f.f.: From date of filing.

F.I.: From date of issue.

The TRIPs Agreement on Patents

General Principle:	"Patent rights shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced."
Duration:	20 years from the filing of an application
Compulsory Licensing:	<p>Countries must recognize the importation of patented products as meeting working requirements.</p> <p>Conditions are applied on circumstances and manner of compulsory licensing. These include adequate notification and remuneration and right of judicial review. Dependent patents benefitting from compulsory licensing must involve an important technical advance.</p>
Possible Exclusions:	<p>Diagnostic, therapeutic and surgical methods.</p> <p>Plant and animal inventions and essentially biological processes for the production of plants or animals. Inventions that may pose a risk to "ordre public" or morality.</p>

as is required under the TRIPs agreement. Where protection is not based on the life of an individual, as with computer software, the minimum term is generally 50 years, again consistent with the agreement. Notable exceptions are Indonesia, which provides only 25 years' protection to software, and the Philippines, which extends protection to sound recordings for only 30 years. As a result of a 1994 reform, Mexico protects the royalty rights of authors for their lifetime and for up to 75 years after their death.

Copyright protection is subject to various qualifications. Korea has been protecting foreign works published only after October 1, 1987, the date on which its adoption of the Universal Copyright Convention became effective. The Philippines permits the reproduction and adaptation of translated published works without the authorization of the copyright owner. While Thailand's 1978 copyright law had a number of gaps, the new legislation that came into force in March 1995 significantly strengthens the protection afforded literary works, including computer software.

Process Issues

The relatively high cost of filing for IP protection (especially patent protection) has been an issue both within and between economies. A survey undertaken in Canada highlighted the particular concerns of smaller firms about the high and growing costs of applying for and protecting IPRs.⁸⁰ Filing problems are magnified where a firm is seeking IP protection in a foreign country

Table 9
Copyright Legislation

	Conventions	Legislation	Duration of the Law	Notable Features
Australia	<ul style="list-style-type: none"> • Berne 1886 • Rome 1961 • Geneva 1971 • Brussels 1974 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Act 1968 	<ul style="list-style-type: none"> • Life of author plus 50 years 	<ul style="list-style-type: none"> • Recent amendments extend rental rights to copyright owners with respect to commercial rental arrangements
Canada	<ul style="list-style-type: none"> • Berne 1886 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Act 1988 	<ul style="list-style-type: none"> • Life of author plus 50 years (some exceptions) 	
Hong Kong	<ul style="list-style-type: none"> • GATT/TRIPs 	<ul style="list-style-type: none"> • British Copyright Act 1956 • Copyright Ordinance 1984 		<ul style="list-style-type: none"> • Includes expertise gained during a period of employment
Indonesia	<ul style="list-style-type: none"> • GATT/TRIPs (Bilateral agreements with some European countries, United States and Australia) 	<ul style="list-style-type: none"> • Law No. 6 of 1982 (amended by Law 7 No. 7 198) 	<ul style="list-style-type: none"> • Generally life of author plus 50 years • 50 years - films, recordings, performances, translations • 25 years - computer programs, compilations and photographic work 	<ul style="list-style-type: none"> • Compulsory licensing • May be required to translate to Indonesian language and reproduce work there
Japan	<ul style="list-style-type: none"> • Berne 1886 • Rome 1961 • Geneva 1971 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Law • Law on Intermediary Business concerning Copyrights 	<ul style="list-style-type: none"> • Life of author plus 50 years 	
Malaysia	<ul style="list-style-type: none"> • Berne 1886 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Act 1987 • Copyright Regulations 1990 	<ul style="list-style-type: none"> • Life of author plus 50 years - literary • 50 years - films, published editions, works of government 	<ul style="list-style-type: none"> • Renewals
Mexico	<ul style="list-style-type: none"> • Berne 1886 • Rome 1961 • Geneva 1971 • Brussels 1974 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Law 1963 • Copyright Reforms 1991 	<ul style="list-style-type: none"> • Life of author plus 50 years (if transferred to an heir) - if no heir, rights to go to Secretariat of Public Education) 	<ul style="list-style-type: none"> • Law favours rights of author over rights of company • Protects computer software, technical, scientific and legal works
New Zealand	<ul style="list-style-type: none"> • Berne 1886 • Geneva 1971 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Act 1994 	<ul style="list-style-type: none"> • Life of author plus 50 years - literary, musical and artistic works • 50 years - photographs, films, recordings 	<ul style="list-style-type: none"> • Recent amendments identify computer programs as form of literary work, and provide for copyright of satellite and cable transmissions
People's Republic of China	<ul style="list-style-type: none"> • Berne 1886 • Geneva 1971 	<ul style="list-style-type: none"> • Copyright Law of P.R.C. 1991 	<ul style="list-style-type: none"> • Life of author plus 50 years <u>or</u> • 50 years • Renewable for 10 years 	<ul style="list-style-type: none"> • Newspaper and media reports are not covered • Protection for written, spoken, recorded works, construction drawings, maps and computer software

Table 9
Copyright Legislation (Cont'd)

	Conventions	Legislation	Duration of the Law	Notable Features
Philippines	<ul style="list-style-type: none"> • Berne 1886 • GATT/TRIPs 		<ul style="list-style-type: none"> • Life of author plus 50 years • 30 years for sound recordings 	<ul style="list-style-type: none"> • Allows reproduction and adaptation of translated, published works without authorization of copyright owner • Some educational materials can be reprinted without permission of foreign copyright holder
Republic of Korea	<ul style="list-style-type: none"> • Geneva 1971 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Law 3916, 1986 (amended 1993) 	<ul style="list-style-type: none"> • Life of author plus 50 years • 50 years from date of release for collective works 	<ul style="list-style-type: none"> • Foreign works protected if released after October 1, 1987
Singapore	<ul style="list-style-type: none"> • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Law of 1987 	<ul style="list-style-type: none"> • Life of author plus 50 years • 50 years for collective works 	<ul style="list-style-type: none"> • Based on British law
Chinese Taipei	<ul style="list-style-type: none"> • No (Bilateral agreement with United States) 	<ul style="list-style-type: none"> • Copyright Law (amended 1992-93) 	<ul style="list-style-type: none"> • Life of author plus 50 years – or • 50 years protection extended 	
Thailand	<ul style="list-style-type: none"> • Berne 1886 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Act 1994 	<ul style="list-style-type: none"> • Life of author plus 50 years 	
United States	<ul style="list-style-type: none"> • Berne 1886 • Geneva 1971 • GATT/TRIPs 	<ul style="list-style-type: none"> • Copyright Act 1978 (as amended) 	<ul style="list-style-type: none"> • Life of author plus 50 years • For collective works, 75 years after publication or 100 years from creation (whichever comes first) 	<ul style="list-style-type: none"> • Recent amendments provide permanent rental rights to authors of computer programs

with distinct language and process requirements. While Japan recently amended its law to allow filings in English, the translated Japanese claim is the official version that governs all disputes.

The Patent Cooperation Treaty (PCT) represents one attempt to reduce the costs of global protection. Under this agreement, an applicant can file one "international" patent application designating member countries in which a patent is sought. Member countries will consider the application under their own laws, but they cannot reject an application that adheres to PCT requirements on formal grounds. Most APEC economies are not yet party to this treaty.

The ASEAN economies have signed a Framework Agreement on Intellectual Property Cooperation to improve IP protection in the region. An expert group will be exploring the possibility of establishing ASEAN patent and trademark systems.

Process requirements are more costly and time-consuming in some economies than others. Some foreign firms have been concerned not only about the costs of the Japanese process, but about the fact that information on their innovation will become available to competitors before protection has been obtained. According to a recent agreement signed with the United States, Japan has introduced a "post-grant opposition system" and improved an accelerated examination procedure that allows applications to be processed within 36 months. For its part, the United States has agreed to end the current arrangement whereby applications are kept confidential until the patent process is completed. A bill to establish an application publication system was submitted to Congress but not acted upon in 1995. Like most other economies, the United States will begin publishing pending applications 18 months after filing.

The United States is one of the few economies in the world to have a "first-to-invent patent" system. While the intention of this system is to stimulate innovative activity by offering protection to the actual inventor rather than to those who first file a patent application, it has been argued that the evidentiary rules discriminate against foreign inventors.⁸¹ The "first-to-file" system used in other economies, however, is alleged to favour larger firms, which can more easily comply with the time-consuming and costly application process.

Sources of Friction

Substantive Concerns

While the TRIPs agreement has reduced policy differences and eliminated a number of the sources of conflict among APEC members, some unresolved issues could become new sources of friction. Some of these issues relate to the implementation of the TRIPs agreement. An APEC seminar held in Sydney in 1995, for example, revealed important differences among members in the interpretation of various patent provisions, including those pertaining to the protection of confidential information submitted to governments, patent working requirements, and the justifications for compulsory licensing. The TRIPs dispute settlement mechanism is intended to address problems arising from these and other issues, but it may not be operational for some time.

There are also issues that were not addressed, or fully resolved, by the TRIPs agreement. The agreement does not rule on the right of IP owners to control parallel imports of legitimately made versions of products embodying their intellectual property. This is a potentially contentious issue because parallel imports can significantly affect market prices, as well as the returns to IP owners. The TRIPs provisions allowing signatories to exclude certain items from patentability may be another source of friction. As man-made animals are commercialized, for example, the inability to patent these inventions in certain countries is likely to become a more important issue.⁸² In addition, new and challenging copyright issues have emerged since the TRIPs agreement as a result of the emergence of the global information infrastructure. The application and enforcement of copyright in a digital environment raises new concerns that need the early attention of APEC members.

Enforcement Issues

Inadequate enforcement of IP laws has been a major problem in many developing and newly industrialized APEC economies. While there are still gaps in some areas, infringement is less common today, as a result of the increased efforts devoted to enforcement. Recent initiatives of note by APEC member economies include the following:

- Korea began to strengthen enforcement since 1993 and introduced custom law changes to help identify and prevent the export of infringing goods.
- Thailand's new Copyright Act, which came into force in March 1995, significantly strengthened protection for computer software. Thailand is also planning to establish an Intellectual Property and International Trade Court, which would strengthen its system of legal deterrence.
- The Philippines established an Interagency Committee on Intellectual Property Rights in 1993 to improve administration and enforcement.
- Chinese Taipei has been attempting to reduce the illegal export of counterfeit goods through export-monitoring systems.
- Singapore has relied heavily on private enforcement, but the government recently began to increase its inspection activities.
- Mexico recently established the Mexican Industrial Property Institute, an autonomous body with strong investigation powers, as part of its efforts to achieve more effective implementation of its legislation.

These and other reforms have helped to change the environment for investment and technology transfers within APEC. The situation has changed significantly even since 1991, when an independent survey found that U.S. firms were reluctant to engage in IP-related activities in a number of less developed APEC economies.⁸³ Concerns about IP protection were reflected in the firms' unwillingness to invest in joint ventures, to transfer their newest technology to subsidiaries, and to license their newest technology to unrelated firms. The study found that U.S. firms in different industries often perceive the situation quite differently. Some industries are more concerned than others about infringement in specific economies because IP protection for

their products is less well developed and also, in some cases, because their technology is more vulnerable to imitation.

IP Protection and FDI

The survey reported in the paragraph above suggests that the strength of a country's IP protection is likely to influence the type of activities undertaken by MNEs. In particular, MNEs are less likely to transfer or license advanced technology to firms in economies with less effective IP protection. A recent study of the investment decisions of U.S. chemical firms supports the view that intellectual property protection influences the composition of foreign investment.⁸⁴ In locations with weaker IP protection, a larger proportion of U.S. chemical firms' investment is devoted to either sales and distribution or rudimentary production and assembly; less investment is directed to R&D and to more complex and more complete production systems. The data also suggest tentatively that firms transfer older technology to economies with weaker IP protection. Executives interviewed by the researchers confirmed that their firms do indeed transfer their more advanced technologies to countries with relatively strong IP protection.

MNEs are developing complex organizational strategies that make them increasingly sensitive to the comparative advantages offered by different locations for particular activities. Advances in communication and information technologies have made it possible for MNEs to coordinate a wider range of activities in an increasing variety of locations. As a result, firms are dispersing their activities to realize the advantages offered by different geographic locations in terms of resources, human capital, market proximity, and other factors. IP and other government policies help to determine the advantages of particular locations for specific MNE activities.⁸⁵

It is less obvious that the strength of a country's IP protection will have a significant influence on the amount of direct investment it receives. Other factors, such as market size, wage costs, and economic growth are arguably more important than IP policy in determining the appeal of a country to potential investors.⁸⁶ In empirical tests aimed at identifying the variables that influence U.S. FDI across industries and countries, the strength of IP protection did not emerge as a statistically significant variable.⁸⁷ However, in one more disaggregated analysis, which looked at the factors affecting U.S. FDI over 1989-92 in particular countries, the strength of IP protection was found to be a statistically significant independent variable.⁸⁸ Both these results need careful interpretation. In the tests using more aggregated data, the effects of IP may simply have been swamped by the effect of other factors that have a more important influence on foreign investment; the results do not necessarily indicate that the stringency of IP protection has had no effect on U.S. direct investment. On other hand, in the test using disaggregated data it has been suggested that IP protection may be serving as a proxy for a number of correlated factors; it may represent a broad range of legal and administrative practices that convey a country's attitude to private property in general, and the property of foreigners in particular.⁸⁹

Beyond Intellectual Property

IP policies help to shape the environment for innovation, but they are not the only – nor necessarily the most important – government policies affecting the innovative process. Patents, for example, appear to be very important to inventive activity in the pharmaceutical industry, of substantial importance in the chemical industry, but of much less significance in other industries. In one U.S. survey, patent protection was judged to be essential for the introduction of 30 percent or more of the inventions in only the pharmaceutical and chemical industries. In another three industries (petroleum, machinery, and fabricated metal products), patent protection was considered to have been essential for the introduction of only 10 to 20 percent of inventions.⁹⁰ Another U.S. survey provides similar findings, although it too concentrates on relatively large multi-product firms and therefore does not reflect the potential importance of IPR protection to small firms.⁹¹

Moreover, by some indicators, the role of patents has declined over time. The ratio of the number of patented inventions to real R&D expenditures in the United States, for example, has declined since the 1960s. The decline has been substantial, and it has been replicated in other countries, including the United Kingdom, Germany, and France. There is debate about the causes of the downward trend in the patent/R&D ratio: it may reflect a reduced propensity to patent, reduced returns to R&D, or a shift over time towards higher-valued patents.⁹²

A recent study emphasizes the mutual understanding that exists among firms that are developing new products and processes in complex areas that impact on several different patents and patent owners.⁹³ In such situations, it is argued that firms exercise restraint in enforcing their patents, with the understanding that such cooperation is necessary for each firm to effectively pursue its own activities. For this, among other reasons, firms may be inclined to downplay the role of patents and to rely on alternative mechanisms and strategies to capture the return from their innovations.

For many MNEs, IP policies have become less of a concern than other government policies that are aimed at promoting innovation but are designed especially to foster the growth of indigenous firms in the technologically advanced sectors.⁹⁴ Innovation policies have come into being as a consequence of governments' growing appreciation of the importance of technological change to competitiveness and economic growth. But while some public support for innovation is justified on economic grounds, government initiatives in this area have not been designed with an exclusive, or even a primary, focus on efficiency. A few examples illustrate the nature of the additional policy frictions that come into view when we expand our focus from IP to innovation policy more generally.

Government procurement as it relates to technologically advanced products has long been an area of concern and occasionally of dispute, and problems remain despite the code agreed to in the Tokyo Round. The dispute between the United States and Japan over supercomputers illustrates some of the problems. The United States, which dominated the global market, had experienced difficulty penetrating the Japanese market. This was attributed to the deep discounts

that Japanese supercomputer makers were providing to universities and government agencies. At the same time, the Japanese argued that U.S. government policies prohibiting non-American supercomputer purchases by the Defense Department effectively closed off a significant part of the U.S. market to their producers. In a settlement reached in 1990, the Japanese government agreed that its agencies would "throw out excessively low bids." No provision for monitoring compliance was included in the agreement, and there was no commitment by the United States to change its policies regarding supercomputer procurement.

Government policies towards research consortia have been another source of friction. Collaborative efforts with respect to R&D have become increasingly popular as firms seek ways to share the increasing costs and risks of developing new products and processes. In the United States, pre-competitive research consortia have been encouraged by the enactment of a specific antitrust damage limitation⁹⁵ and by the provision of public subsidies. Sematech, a government-subsidized consortium established in 1967 to help U.S. firms regain their leadership position in the semiconductor market, is often held up as an example of what can be achieved through collaborative research programs. The role of foreign subsidiaries in such consortia, however, can be problematic. Japan has recently changed its policy to allow selected Japanese subsidiaries of foreign MNEs to participate in government-sponsored projects. However, foreign-owned companies usually do not get national treatment in government-supported consortia. The United States has established stringent requirements related to performance and reciprocity for the participation of foreign affiliates in federally funded technology consortia.⁹⁶ Some recent proposals being discussed in the United States would impose even more stringent requirements on foreign affiliates belonging to government-supported consortia.⁹⁷ In addition, as noted earlier, in order to qualify for favourable antitrust treatment under the U.S. *National Cooperative Research and Production Act*, domestic production and other requirements must be satisfied by production joint ventures.

National innovation policies may give rise to potentially significant economic distortions. In addition, they invest the nationality of corporations with a significance that is becoming less and less appropriate. As noted earlier, the globalization of economic activity makes the answer to the question "Who is us?" increasingly unclear. Nonetheless, with increasing economic integration and the attendant pressures on countries to foster the development of internationally competitive enterprises, innovation policies are likely to become a growing source of international friction.

6. IMPLICATIONS

Foreign investment has been an important motive force underlying the growth of APEC economies. Notwithstanding the substantial historical, economic, social, and cultural differences among APEC members, they have a common interest in reducing frictions and creating an environment that is conducive to the efficient movement of capital and technology, and to the realization of the benefits of dynamic change. How can this common interest be harnessed to address the concerns outlined in previous sections of this paper? In answering this question, there are a number of factors that should be taken into account. Here, the purpose is not to set out a specific course of action but rather to highlight some considerations that can guide possible future work aimed at developing a policy strategy for APEC members.

Setting Reasonable Objectives

In assessing the implications for APEC of the issues raised in this paper, consideration must be given to the substantial differences among its member economies. As we have seen, competition and IP policies, with their accompanying administrative and enforcement infrastructures, are much more developed in some than in others. Divergences in policy are partly a product of different levels of economic development. They also reflect substantial economic, social, and cultural differences. From their differing vantage points, APEC members have come to view some business practices quite differently and to attach different weights to the social and economic factors that must be balanced in implementing competition and IP policies.

In establishing reasonable objectives for APEC members, it is also necessary to take account of the inability of the academic literature to offer precise guidance on a number of important policy questions. There is a general murkiness in academic discussions on the appropriate nature and stringency of IP protection. While the literature offers clearer guidance on competition policy issues, research is continuing on many important questions. The assessment of vertical and horizontal agreements (aside from "naked restraints"), for example, has changed over time and, conceivably, will continue to change as new findings emerge. There are some unsettled issues, as well, regarding the interface between IP and competition policy. The competition authorities in the United States, for instance, are taking a closer look at the role of competition in a modern, innovation-driven economy.⁹⁸ The Canadian government is also sponsoring a research project on the interface between competition and IP policies.

Both of those considerations argue against efforts to achieve policy harmonization. Full harmonization is not only unrealistic, but it is also likely to be undesirable, given differences in national values and given the need for IP and competition policies to adapt over time to new information on how various factors affect static and dynamic efficiency. Harmonization around

specific rules will give rise to a rigid system that cannot easily accommodate differences and that is difficult to change in response to new situations.⁹⁹

A more reasonable objective would be a set of agreements pertaining to the adoption of certain standards and benchmarks. More specifically, the discussion in Chapters 4 and 5 of the paper suggests that it would be desirable to achieve agreement in four areas: on some minimum baseline standards, in terms of the scope and coverage of competition and IP laws; on the need for, and elements of, a system of effective enforcement; on the basic principles that must be respected in the design and enforcement of competition and IP policies; and on a process for addressing disputes among APEC members.

Building on the Progress Achieved Internationally

In coming to terms with the policy issues raised by this paper, APEC members are not starting from scratch; there is a significant amount of experience at the international level in addressing issues of policy convergence. In the area of intellectual property, there has already been considerable progress internationally towards meeting the objectives identified above. The appropriate principles to guide public policy are set out in the WTO TRIPs agreement, which in turn builds on principles set out in a series of international conventions going back, in some cases, over 100 years. There are some issues that were not resolved by this agreement and could become a source of tension, but the context and the institutional framework for addressing IP issues today is very different from what existed prior to GATT. Recent reforms have brought IP policies in less developed APEC economies closer to accepted international standards. The WTO also addresses the need for a mechanism to resolve international disputes over IP. This accord applies to all APEC economies except Chinese Taipei, the People's Republic of China, and Papua New Guinea, which are not currently members of the WTO.

In competition policy, efforts to work out principles of convergence at the international level are only beginning. No international accord on competition policy exists, but important groundwork is being undertaken by the OECD Committee on Competition Law and Policy. While there are significant differences in the competition policies of more developed economies, the OECD work indicates that there are also some important commonalities. There is general consensus on the purpose of competition and on the major issues that must be addressed. OECD countries agree on the need for adequate penalties and a significant public monitoring and investigative capacity to deter and punish anticompetitive behaviour. There is also considerable agreement on the main principles that should guide competition policy. In particular, there is recognition of the need for countries to adhere to the principles of non-discrimination and transparency. It is generally accepted, as well, that the enforcement of competition law must be subject to due process and the rule of law.¹⁰⁰ These features, which strengthen the role of competition law domestically, are of added importance in relation to the impact of competition law on international commerce.

In addition, APEC members can learn from, and build upon, the important programs of technical assistance that have been implemented at the international level. The less developed members of APEC currently receive technical assistance from the World Intellectual Property Organization (WIPO). As well as providing training, assisting with legislative development, and helping countries modernize their IP administration, WIPO has an active ongoing program of seminars and conferences in Asia and the Pacific.¹⁰¹ Without duplicating WIPO's efforts, cooperative programs with respect to intellectual property standards and enforcement could be initiated within APEC. By sharing specific information on programs and processes as well as potential violators, members might be able to strengthen IP enforcement in the APEC region as a whole.

In the area of competition policy, APEC could usefully put a program in place to supplement the limited technical support provided by UNCTAD to less developed members. APEC members that are introducing, or have only recently implemented, competition policies can benefit from the experience of those members with a significant body of case law and a history of administration and enforcement. A systematic effort would require the establishment of an appropriate mechanism to develop training programs, arrange for exchanges of officials, and organize meetings and consultations.

Learning from Existing Cooperative Arrangements

APEC members could benefit, as well, from the experience of those countries which have established cooperative arrangements. These could take a variety of forms. An agreement may simply involve a commitment by members to abide by agreed principles. Alternatively, it could incorporate well-defined procedures for reconciling opposing views and resolving conflicts. Further, agreements could be backed by an enforcement procedure, which could lead to sanctions being imposed on non-complying members.

Some existing agreements, although not all directly or currently relevant to APEC, illustrate the options. The Treaty of Rome shows one way to resolve interjurisdictional issues: establish a distinct competition policy to govern transactions between member economies and assign administration and enforcement to an independent supranational authority. Individual members of the European Union apply their own competition laws to those activities whose effects are largely within their own borders. The European Commission itself has broad authority over competition matters affecting trade between countries, including the ability to prevent the provision of grants and subsidies that may impede competition within the EU.

The EU provides an extreme model of policy convergence that would be difficult for any other group of economies to replicate. But the basic idea of establishing a distinct supranational authority to help resolve disputes and to initiate remedial action where agreed-upon principles are being violated should not be too readily dismissed. An independent authority can increase the pressure on members to abide by the terms of an agreement. It can promote adherence to agreed-upon procedures for containing and resolving disputes. And it can help to ensure that the interests

of all members are considered in negotiations between two or more member economies. Over time, as APEC evolves, the establishment of a central authority with responsibility for administering agreements and initiating remedial actions could conceivably become an option to be evaluated.

The Australia-New Zealand Closer Economic Relations Trade Agreement, which was discussed earlier, illustrates another form of cooperative arrangement. This involves a less extreme form of policy convergence than the EU model. Unlike the latter, it does not result in the creation of a common competition policy. But it is more than an agreement over principles: the two countries harmonized certain aspects of their policies to end the use of antidumping and thereby eliminate a potentially significant source of dispute. ANZCERTA also involved a commitment by the two parties to work towards further policy harmonization over time. Again, this is not a model that has immediate relevance to APEC. There may come a point, however, where it will be opportune to review those provisions of the competition policies of APEC members that are particularly troublesome to other members and/or significant obstacles to further economic integration.

Another option for closer cooperation within APEC on these matters is a memorandum of understanding committing the signatories to a set of principles and cooperative procedures. The agreement on principles could, for example, pertain to those principles of competition policy indicated above: non-discrimination and transparency; and respect for due process and the rule of law. The agreement on procedures could specify what is required to give expression to the principle of comity. This would include requirements for notification, information-sharing, and consultation. Preferably, members would agree not only to follow established procedures to minimize conflicts, but also to cooperate in the enforcement of competition policy - i.e., to adopt the principle of positive comity. The 1995 Competition Policy Agreement between Canada and the United States was discussed in Chapter 4. An example of positive comity is the agreement signed by the United States and the European Community in 1991.¹⁰² Experience indicates that MOUs with clearly defined procedures and generally accepted principles for addressing disputes can contribute to reducing conflicts.

7. CONCLUSION

APEC member economies have been major beneficiaries of the increase in FDI and the accompanying growth and diversification in MNE production. FDI flows have, to a considerable extent, remained within the region, thereby promoting increased economic integration. APEC members now face the challenge of sustaining these investment links and realizing the full benefits of new forms of globalized or regionalized production. To meet this challenge, APEC members will want to address those elements of current framework policies which are a significant source of friction and a potentially significant impediment to the efficient flow of investment and spread of technology.

Both of the framework policies examined in this paper can make an important contribution to improving economic efficiency. Policies aimed at competition and intellectual property (specifically, patents) should work together to bring about an environment that is conducive to the maximization of both static and dynamic efficiency. While there is room for debate about the specific policy features that will lead to the optimum, an appropriate environment is more likely to be achieved if all members agree on the need for certain basic standards and for effective systems of enforcement. An efficient framework is also more likely to be achieved if members adhere to certain principles, including especially non-discrimination, and agree to cooperate to address interjurisdictional and multijurisdictional issues.

As the interdependence among APEC members increases, the potential for policy conflicts will also increase. Governments typically confine their focus to the interests of their own residents, even when business activities within their jurisdiction have significant implications for the residents of other countries. In addition, there has been concern that governments may themselves provoke conflict through strategic initiatives aimed at enhancing the market power of home-based firms in international markets.

Significant progress has been made in reducing policy frictions in the area of intellectual property. Although there are still some potentially troublesome issues to be addressed and there remain concerns about the adequacy of enforcement in some areas, APEC economies have significantly strengthened their domestic IP policies in recent years. While the recently implemented TRIPs agreement does not resolve all issues, it does establish an important basis for further reform and puts in place a much needed mechanism for the resolution of international disputes by the WTO. Most, but not all, APEC economies are members of the WTO. There remains broad scope for consultation and cooperation among APEC members in implementing the TRIPs agreement, resolving issues that were not addressed by the agreement, and developing more effective enforcement practices.

More effort is required to establish a basis for cooperation in the area of competition policy. Establishing channels for consultation and technical cooperation will help. Member

economies that are introducing, or have only recently implemented, competition policies can benefit from the experience of those APEC members with long-established policies and well-developed enforcement systems. Beyond that, members must consider whether there is sufficient support to begin laying out a strategy that would ultimately lead towards some degree of policy convergence. This latter exercise needs to be aimed at objectives that are reasonable in the context of wide economic, social and policy differences between APEC members. And it should draw upon the experience of countries that have entered into various types of cooperative arrangements.

ENDNOTES

1. Sylvia Ostry, *Governments and Corporations in a Shrinking World: Trade and Innovation Policies in the United States, Europe and Japan*, New York: Council on Foreign Relations, 1990.
2. Chile is excluded from the discussion as it was not a member of APEC when this paper was being drafted.
3. Reported in K. Sauvant et al., "Market Access Through Market Presence: Trends and Policies on Foreign Direct Investment," OECD Round Table on the New Dimensions of Market Access in a Globalizing World Economy, July 1994. Data comes from UNCTAD, *World Investment Report 1994* (forthcoming).
4. For example, T.A.B. Corley, "John Dunning's Contribution to International Business Studies," in P.J. Buckley and M. Casson, *Multinational Enterprises in the World Economy*, Vermont: Edward Elgar Publishing Co., 1992.
5. S. Hymer, *The International Operations of National Firms: A Study of Direct Foreign Investment*, Ph.D. Dissertation, Massachusetts Institute of Technology, 1960.
6. J. Cantwell, *Technological Innovation and Multinational Corporations*, Oxford: Blackwell, 1989.
7. P.J. Buckley and M.C. Casson, *The Future of the Multinational Enterprise*, London: Macmillan, 1976.
8. J. Cantwell, "Innovation and Technological Competitiveness," in P.J. Buckley and M. Casson, *Multinational Enterprises in the World Economy*, Vermont: Edward Elgar Publishing Co., 1992.
9. UNCTAD, *World Investment Report 1993: Transnational Corporations and Integrated International Production*, New York: United Nations, 1993.
10. K. Sauvant et al., op. cit.
11. This expression comes from R. Reich, "Who is Us?," *Harvard Business Review* 68(1) (Jan/Feb. 1990).
12. In a Canadian context, these issues were addressed in Someshwar Rao, *Global (Stateless) Corporations and the Internationalization of Business: Implications for Canada and Canadian Marketplace Framework*, Industry Canada, 1993.

13. We would refer the reader in particular to: APEC Economic Committee, *Foreign Direct Investment and APEC Economic Integration*, Singapore: APEC Secretariat, June 1995.
14. Data on FDI inflows provide a partial picture because they do not take account of the re-investment of earnings by foreign-owned affiliates. Comprehensive data on the inward and outward FDI stocks of APEC members is provided in "FDI and APEC Economic Integration," *ibid.*
15. The NIEs (often called "the Four Tigers") include Chinese Taipei (Taiwan), Hong Kong, the Republic of Korea (South Korea), and Singapore. ASEAN members include Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.
16. Ronald Covari and Robert Wisner, *Foreign Multinationals and Canada's International Competitiveness*, Investment Canada, Working Paper No. 16, June 1993.
17. Someshwar Rao, Marc Legault and Ashfaq Ahmad, *Canadian-Based Multinationals: An Analysis of Activities and Performance*, Industry Canada, Working Paper No. 2, July 1994.
18. S. Tambunlertachai and E.D. Ramstetter, "Foreign Firms in Promoted Industries and Structural Change in Thailand," in E.D. Ramstetter (ed.), *Direct Foreign Investment in Asia's Developing Economies and Structural Change in the Asia-Pacific*, Boulder, Colorado: Westview Press, 1991.
19. C.H. Lee and E.D. Ramstetter, "Foreign Firms in Promoted Industries and Structural Change in Thailand," in E.D. Ramstetter, *ibid.*
20. From S. Urata, "Changing Patterns of Direct Investment and the Implications for Trade and Development," in C.F. Bergsten and M. Noland (eds.), *Pacific Dynamism and the International Economic System*, Washington: Institute for International Economics, 1993.
21. Some degree of monopoly power, however, may be necessary to realize the benefits of innovation. This provides a justification for intellectual property laws, as we discuss later in the paper.
22. Equity objectives are defined more broadly (i.e., to include the welfare of small business), and given greater weight in some economies than in others. Under Canada's competition law, efficiency objectives are generally given priority.
23. New Zealand prefers this broader use of the term "competition policy." Under this usage, competition law is one part of competition policy, which encompasses a range of government initiatives to "enhance the scope for free and fair competition between firms."
24. These issues are discussed in Someswar Rao, *Global (Stateless) Corporations and the Internationalization of Business: Implications for Canada and Canadian Marketplace Framework*, *op. cit.*

25. For example, see J.D. Richardson, "Empirical Research on Trade Liberalisation with Imperfect Competition: A Survey," *OECD Economic Studies*, 12, 1989.
26. To achieve the objectives of this program, the government has had to limit rice imports and enter into milling, which has become increasingly unprofitable due to the high price of inputs. Shaik Mohd. Noor Alam bin S.M. Hussain, "Promoting Competition Trends in Malaysia: Legislative and Non-Legislative Measures," paper presented to the International Symposium on Competition Law and Policy, Singapore, April 1993.
27. This justification for intervention is discussed in: *The East Asian Miracle: Economic Growth and Public Policy*, a World Bank Policy Research Report, Washington: The World Bank, 1993.
28. Tim Hazledine, "A Competition Policy for Malaysia?," paper prepared for Bureau of Competition Policy, 1992.
29. This issue, as it applies to Canada, is discussed in R.D. Anderson and D. Khosla, *Competition Policy as a Dimension of Economic Policy: A Comparative Perspective*, Industry Canada Occasional Paper No. 7, October 1994.
30. This is also highlighted in the survey of APEC members' competition policies conducted by New Zealand. See "APEC Committee on Trade and Investment: Proposal for a Work Programme on Competition Policy," New Zealand submission to CTI, October 1994.
31. The criminal provisions of the law, however, may not pertain to anticompetitive behaviour. In Australia and New Zealand, for example, a criminal offence under competition law could only result from actions such as resisting the execution of a search warrant.
32. This is discussed in R.D. Anderson and D. Khosla, *Competition Policy as a Dimension of Economic Policy: A Comparative Perspective*, Industry Canada Occasional Paper No. 7, October 1994.
33. Chinese Taipei's Fair Trade Law allows private parties to claim up to treble damages, but it includes a requirement to post court fees. The latter has reduced the incentive for private actions.
34. In the United States, state antitrust laws can reach activities that are interstate as long as they are not preempted by the Commerce Clause.
35. The Supreme Court has said: "We reiterate that, *with the possible market participant exception* ... action that qualifies as state action is 'ipso facto ... exempt from the operation of the antitrust laws.'" *Omni Outdoor Advertising Inc. v. City of Columbia*, 111 S. Ct. 1344, at 1355, reversing 891 F. 2d 1127 (4th Cir. 1989) (emphasis added).
36. For example, it has been argued that, in some of its initial interpretations, Taiwan's Fair Trade Commission has adopted a very broad interpretation of what constitutes "official

- conduct." As a result, a number of activities by government agencies that would generally be regarded as commercial, have gone unchallenged. Lawrence S. Liu, "Efficiency, Fairness, Adversary and Moralsuasion: A Tale of Two Chinese Competition Laws," presented at the Symposium on the International Harmonization of Competition Laws, Taipei, Taiwan, March 1993.
37. This is discussed in: Masu Uekusa, "Effects of the Deconcentration Measures in Japan," *Antitrust Bulletin*, Fall 1987. Uekusa found that the policies of the occupation period greatly reduced concentration during the 1950s, but that these effects were not sustained over the subsequent decade.
 38. Japanese law empowers the Fair Trade Commission to break up dominant firms, but this would not be undertaken without consulting the competent ministries.
 39. *United States v. Grinnell Corp.*, 384 U.S. 563 (1966).
 40. Besides excluding those economies without competition laws, this discussion excludes the People's Republic of China, which does not have a merger law.
 41. This is sometimes referred to as a "total welfare approach." It gives recognition to all savings achieved, whether they accrue to consumers or producers. By contrast, under a "consumer surplus approach," benefits are evaluated strictly in terms of the savings that are passed along to consumers. See Paul S. Crampton, "Alternative Approaches to Competition Law: Consumers' Surplus, Total Surplus, Total Welfare and Non-efficiency Goals," *World Competition* 17(3) (March 1994).
 42. The proposed acquisition that was blocked was the China National Aero-Technology Import and Export Corporation's acquisition of Mamco Manufacturing Company. Edward M. Graham and Michael E. Ebert, "Foreign Direct Investment and US National Security: Fixing Exon-Florio," *The World Economy* 14(3) (September 1991).
 43. Price discrimination may also be unlawful under U.S. antitrust laws in other circumstances: e.g., when it is implemented through a per se unlawful tying arrangement.
 44. The bill to amend the Fair Trade Law was recently approved by Taiwan's cabinet, but is expected to take some years to enact and implement.
 45. *Continental T.V. Inc. v. GTE Sylvania Inc.*, 433 U.S. 36 (1977).
 46. Exemptions are provided for seven types of cartels: standard-setting cartels, research or marketing cartels, specialization cartels, export cartels, import cartels, recession cartels, and small business cartels.
 47. Lawrence Liu, op. cit.

48. The *Webb-Pomerene Export Act* permits agreements solely for the purpose of exports. To receive approval, export agreements must not restrain trade within the United States and must not restrain the export trade of a domestic competitor. Later amendments broadened the exemption to include agreements that do not restrain trade in the United States *substantially*, or restrict the export trade of a competitor *substantially*.
49. The limits of the intellectual property rights exemption were tested in a recent Canadian case against NutraSweet Company. In its decision, the Competition Tribunal found that NutraSweet had attempted to foreclose competition in the market for aspartame by paying a substantial allowance to customers who displayed its logo and requiring these customers to exclusively carry the NutraSweet brand. See Anderson and Khosla, *op. cit.*
50. This legislation and related U.S. initiatives are discussed in M.A.A. Warner and A.M. Rugman, "Recent U.S. Protectionist R&D Policies: Are Canadian Multinationals Exempted?" *Canadian Business Law Journal* 23(3) (June 1994).
51. Japanese Fair Trade Commission, *Guidelines for the Regulation of Unfair Trade Practices with Respect to Patent and Know-How Licensing Agreements*, February 1989.
52. The *National Competition Policy Report* (the Hilmer Report), August 1993; Australian Law Reform Commission, *Compliance with the Trade Practices Act 1974*, May 1994.
53. At the end of 1990, roughly three-quarters of the equity of publicly traded companies in Japan was owned by institutional investors. This compares with just over 50 percent for U.S. equities.
54. Japan disagrees with the contention that *keiretsu* have posed a barrier to foreign suppliers and foreign manufacturers of final goods.
55. Sylvia Ostry, "New Dimensions of Market Access: Overview from a Trade Policy Perspective," presented to the OECD Round Table on the New Dimensions of Market Access in a Globalizing World Economy, July 1994.
56. The importance of entry restrictions is highlighted in R. Anderson, "Competition Policy Aspects of the U.S.-Japan Structural Impediments Initiative; Implications for Canada," *Canadian Competition Policy Record*, June 1991.
57. However, it may be because there are equity objectives that are served by protecting a particular competitor that trade measures are adopted. The rules and structures of competition policy are not designed to address such concerns. This is discussed in Arthur Kaell, "International linkages: Competition and Industrial Policies," Canadian Discussion Paper, OECD Committee on Competition Law and Policy, 1992.

58. Eleanor M. Fox, "Competition Law and the Next Agenda for GATT/WTO," presented to the OECD Round Table on the New Dimensions of Market Access in a Globalizing World Economy, July 1994.
59. Ibid., p. 9.
60. From Committee on Competition Law and Policy, "Interim Report on Convergence of Competition Policies," May 1994.
61. *United States v. Aluminum Company of America* 148 F.2d 416 (1945).
62. *Hartford Fire Ins. Co. v. California*, 113 S. Ct. 2891 (1993).
63. *re Uranium Antitrust Litigation Westinghouse Elec. Corp. v. Rio Algom Ltd.* 617 F.2d 1248 (7th Cir. 1980).
64. Fulton-Rogers Understanding of 1959; Basford-Mitchell Understanding of 1969; Memorandum of Understanding Between the Government of Canada and the Government of the United States of America as to Notification, Consultation and Cooperation with respect to the Application of National Antitrust Laws, March 9, 1984.
65. IP policy, however, may also have a significant impact on allocative and technical efficiency. Equity considerations also arise since IPRs tend to redistribute wealth among marketplace participants – creators and users, large and small firms, and innovative and generic firms.
66. Edwin Mansfield, "Intellectual Property, Technology and Economic Growth," in F.W. Rushing and C.G. Brown (eds.), *Intellectual Property Rights in Science, Technology, and Economic Performance*, Westview Press: San Francisco, 1990.
67. Zvi Griliches, "The Search for R&D Spillovers," NBER Working Paper 3768, Cambridge, Mass.: National Bureau of Economic Research, 1991.
68. The initial study in this area was: W.D. Nordhaus, *Invention, Growth and Welfare: A Theoretical Treatment of Technological Change*, Cambridge, Mass.: MIT Press, 1969.
69. U.S. International Trade Commission, *Foreign Protection of Intellectual Property Rights and the Effects on U.S. Industry and Trade*, USTC Publication 2065, February 1988.
70. A 1988 GATT Panel Report found Section 337 to be in violation of U.S. obligations since it failed to provide national treatment to the foreign owners of imported goods, in accordance with Article III(4) of the GATT.

71. The International Intellectual Property Alliance, *Trade losses Due to Piracy and Other Market Access Barriers Affecting the U.S. Copyright Industries: A Report to the U.S. Trade Representative on 12 "Problem Countries,"* Washington, April 1989.
72. One of IBM's most successful cases was initiated in 1982 and involved allegations that the Japanese corporation Fujitsu had infringed on its software programs to develop IBM-compatible computers. It was determined that IBM was entitled both to back payments and to ongoing royalties for providing Fujitsu with access to its software. Ashoka Mody, "New International Environment for Intellectual Property Rights," in Rushing and Brown, *op. cit.*
73. *Ibid.*
74. Involuntary licensing is "an involuntary contract between a willing buyer and an unwilling seller imposed and enforced by the state." G. Julian-Arnold, "International Compulsory Licensing: The Rationales and the Reality," *IDEA* 33(4) (1993).
75. Plant varieties are to be protected, however, either under patent law or through a *sui generis* system.
76. In Brunei Darussalam, patent protection is granted by the issuance of a certificate of registration. This is issued on the basis of a patent granted in the United Kingdom, Malaysia or Singapore. The duration of the certificate corresponds to the duration of the relevant foreign patent.
77. Prior to recent amendments, the patent term was 16 years from issue in Australia, and 16 years from filing in New Zealand. Australia had allowed an additional four-year term for pharmaceutical patents, but this provision has been repealed. New Zealand had allowed patent extensions of up to ten years in exceptional cases to all patentees who could prove "inadequate remuneration." Extensions were most commonly sought for pharmaceuticals.
78. For example, the *Patents Act* that recently came into force in Singapore provides for the issuance of a compulsory license, three years after a patent is granted, if: 1) there is no production of the patented product in Singapore, without good reason; 2) the patented product is produced in insufficient quantities to meet domestic demand, and/or sold at an unreasonably high price; 3) as a result of the refusal of the patent holder to grant a license, export markets are not being supplied, the working of a dependent patent is hindered, or commercial development in Singapore is prejudiced; or 4), as a result of conditions imposed by the patent holder on licensees or product users, commercial or industrial development in Singapore is affected.
79. Where IP owners do not have the right to prevent parallel imports of legitimately made foreign versions of products embodying their intellectual property, the principle of "exhaustion" is deemed to apply. Article 6 of TRIPs states that "... nothing in this

Agreement shall be used to address the issue of the exhaustion of intellectual property rights."

80. Price Waterhouse, *Innovation and Intellectual Property Rights in Canada*, Ottawa: Science Council of Canada in collaboration with Industry, Science and Technology Canada and Consumer and Corporate Affairs Canada, 1990.
81. In accordance with the TRIPs agreement, U.S. patent law has been amended to permit a patent applicant to establish a date of invention based on evidence of inventive activity in any GATT member country. This change became effective January 1, 1996.
82. The patenting of inventions relating to animal varieties raises moral problems in some societies. The Philippines, for example, respects the position of the Church, that the patenting of animal life forms, which includes human life forms, is immoral.
83. Edwin Mansfield, *Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer*, Discussion Paper 19, International Finance Corporation, The World Bank, 1994.
84. This is based on unpublished research by Jeong-Yeon Lee at the University of Pennsylvania. It is described in Mansfield, *Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer*.
85. This raises the possibility that IP protection will be used by governments to attract R&D and other desired MNE activities. Although this has not been an issue within APEC, it has been alleged that some countries are ratcheting up patent protection to compete for pharmaceutical R&D. Under such circumstances, cooperation among countries can help to establish appropriate maximum standards of IPRs.
86. Market size has been identified as an important factor because in smaller markets foreign investors will not be able to capture available economies of scale. A. Scaperlanda and L. Mauer, "The Determinants of U.S. Direct Investment in the EEC," *American Economic Review*, 4, 1969.
87. Edwin Mansfield, "Unauthorized Use of Intellectual Property; Effects of Investment, Technology Transfer, and Innovation," in M.B. Wallerstein, M.E. Mogee and R.A. Schoen (eds.), *Global Dimensions of Intellectual Property Rights in Science and Technology*, Washington, D.C.: National Academy Press, 1993.
88. Ibid.
89. Edwin Mansfield, *Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer*, op. cit.

90. Edwin Mansfield, "Patents and Innovation: An Empirical Study," *Management Science* 32(2) (1986).
91. R.C. Levin, A.K. Kleverick, R.R. Nelson and S.G. Winter, "Appropriating the Returns from Industrial Research and Development," *Brookings Papers on Economic Activity*, 1987. The authors of this survey have noted that the results could be influenced by the underrepresentation of small firms.
92. For example, Samuel Kortum, "Equilibrium R&D and the Patent-R&D Ratio: U.S. Evidence," *The American Economic Review* 83(2) (May 1993).
93. Sylvia Ostry and Richard Nelson, *Technonationalism and Technoglobalism: Conflict and Cooperation*, Brookings Institution, 1995.
94. This is explored in Ostry and Nelson, *ibid.*
95. As noted previously, the *National Cooperative Research Act*, passed in 1984, allows the organizers of a research joint venture to file a notification with the antitrust enforcement agencies, thereby limiting damage exposure to single rather than treble damages. A 1993 amendment extended such treatment to production joint ventures as well.
96. These are contained in the *American Technology Preeminence Act* of 1991.
97. V. Kumar and S. Magun, *The Role of R&D Consortia in Technology Development*, Report prepared for Industry Canada, 1994. Also, Warner and Rugman, *op. cit.*
98. *U.S. Federal Trade Commission and Department of Justice Antitrust Guidelines for the Licensing of Intellectual Property*, April 6, 1996; and *Federal Trade Commission Hearings on Global and Innovation-Based Competition*, 1995-96.
99. Uniformity would also involve a loss of those benefits in terms of improved policy design and application that may be achieved over time as a consequence of competition between jurisdictions.
100. These principles are highlighted in the *Interim Report on Convergence of Competition Policies*, by the OECD Committee on Competition Law and Policy, 1994.
101. For example, according to the WIPO journal, *Intellectual Property in Asia and the Pacific*, WIPO undertook the following activities in APEC economies over the fourth quarter of 1993: organized a seminar on the Role of IP in the Development of the Asean Economies; sponsored a seminar on Enforcement of IPRs; organized a seminar on the Use of IP Information by Enterprises, in cooperation with the Chinese Patent Office; provided advice to the Chinese Patent Office on IP computerization; organized a seminar on the Use of IP Information by Enterprises, in conjunction with the Invention Office of the Republic

of Korea; provided consultants to help Indonesia with various administrative problems and training requirements; provided expert advisory assistance to Malaysia; provided expert advice and training to officials in the Philippines; held an Asian Regional Seminar on Industrial Property Licensing and Technology Transfer in the Republic of Korea; sent a consultant to provide training to officials in Singapore; and, provided expert advice to Thailand on both patent and trademark matters.

102. Both the Canada-U.S. MOU and the U.S.-EC agreement are discussed in Bill Neilson, "The Inevitable Connections Between Free(r) Trade Areas and Competition Policy: AFTA, NAFTA, and Other Experiences," presented to the ASEAN-Canada Comparative Law and Policy Symposia, Singapore, April 1993.

INDUSTRY CANADA RESEARCH PUBLICATIONS

INDUSTRY CANADA WORKING PAPER SERIES

- No. 1 **Economic Integration in North America: Trends in Foreign Direct Investment and the Top 1,000 Firms**, Industry Canada, Micro-Economic Policy Analysis Staff including John Knubley, Marc Legault and P. Someshwar Rao, 1994.
- No. 2 **Canadian-Based Multinationals: An Analysis of Activities and Performance**, Industry Canada, Micro-Economic Policy Analysis Staff including P. Someshwar Rao, Marc Legault and Ashfaq Ahmad, 1994.
- No. 3 **International R&D Spillovers Between Industries in Canada and the United States**, Jeffrey I. Bernstein, Carleton University and the National Bureau of Economic Research, under contract with Industry Canada, 1994.
- No. 4 **The Economic Impact of Mergers and Acquisitions on Corporations**, Gilles McDougall, Micro-Economic Policy Analysis, Industry Canada, 1995.
- No. 5 **Steppin' Out: An Analysis of Recent Graduates Into the Labour Market**, Ross Finnie, School of Public Administration, Carleton University and Statistics Canada, 1995.
- No. 6 **Measuring the Compliance Cost of Tax Expenditures: The Case of Research and Development Incentives**, Sally Gunz, University of Waterloo, Alan Macnaughton, University of Waterloo, and Karen Wensley, Ernst & Young, Toronto, under contract with Industry Canada, 1996.
- No. 7 **Governance Structure, Corporate Decision-Making and Firm Performance in North America**, P. Someshwar Rao and Clifton R. Lee-Sing, Micro-Economic Policy Analysis, Industry Canada, 1996.
- No. 8 **Foreign Direct Investment and APEC Economic Integration**, Ashfaq Ahmad, P. Someshwar Rao and Colleen Barnes, Micro-Economic Policy Analysis, Industry Canada, 1996.
- No. 9 **World Mandate Strategies for Canadian Subsidiaries**, Julian Birkinshaw, Institute of International Business, Stockholm School of Economics, under contract with Industry Canada, 1996.

- No. 10 **R&D Productivity Growth in Canadian Communications Equipment and Manufacturing**, Jeffrey I. Bernstein, Carleton University and The National Bureau of Economic Research, under contract with Industry Canada, 1996.
- No. 11 **Long-run Perspective on Canadian Regional Convergence**, Serge Coulombe, Department of Economics, University of Ottawa, and Frank C. Lee, Industry Canada, 1996.
- No. 12 **Implications of Technology and Imports on Employment and Wages in Canada**, Frank C. Lee, Industry Canada, 1996.
- No. 13 **The Development of Strategic Alliances in Canadian Industries: A Micro Analysis**, Sunder Magun, Applied International Economics, 1996.

INDUSTRY CANADA DISCUSSION PAPER SERIES

- No. 1 **Multinationals as Agents of Change: Setting a New Canadian Policy on Foreign Direct Investment**, Lorraine Eden, Carleton University, 1994.
- No. 2 **Technological Change and International Economic Institutions**, Sylvia Ostry, Centre for International Studies, University of Toronto, under contract with Industry Canada, 1995.
- No. 3 **Canadian Corporate Governance: Policy Options**, Ronald J. Daniels, Faculty of Law, University of Toronto, and Randall Morck, Faculty of Business, University of Alberta, 1996.
- No. 4 **Foreign Direct Investment and Market Framework Policies: Reducing Frictions in APEC Policies on Competition and Intellectual Property**, Ron Hirshhorn, 1996.

INDUSTRY CANADA OCCASIONAL PAPER SERIES

- No. 1 **Formal and Informal Investment Barriers in the G-7 Countries: The Country Chapters**, Industry Canada, Micro-Economic Policy Analysis Staff including Ashfaq Ahmad, Colleen Barnes, John Knubley, Rosemary D. MacDonald and Christopher Wilkie, 1994.
- Formal and Informal Investment Barriers in the G-7 Countries: Summary and Conclusions**, Industry Canada, Micro-Economic Policy Analysis Staff including Ashfaq Ahmad, Colleen Barnes and John Knubley, 1994.

- No. 2 **Business Development Initiatives of Multinational Subsidiaries in Canada**, Julian Birkinshaw, University of Western Ontario, under contract with Industry Canada, 1995.
- No. 3 **The Role of R&D Consortia in Technology Development**, Vinod Kumar, Research Centre for Technology Management, Carleton University, and Sunder Magun, Centre for Trade Policy and Law, University of Ottawa and Carleton University, under contract with Industry Canada, 1995.
- No. 4 **Gender Tracking in University Programs**, Sid Gilbert, University of Guelph, and Alan Pomfret, King's College, University of Western Ontario, 1995.
- No. 5 **Competitiveness: Concepts and Measures**, Donald G. McFetridge, Department of Economics, Carleton University, 1995.
- No. 6 **Institutional Aspects of R&D Tax Incentives: The SR&ED Tax Credit**, G. Bruce Doern, School of Public Administration, Carleton University, 1995.
- No. 7 **Competition Policy as a Dimension of Economic Policy: A Comparative Perspective**, Robert D. Anderson and S. Dev Khosla, Economics and International Affairs Branch, Bureau of Competition Policy, Industry Canada, 1995.
- No. 8 **Mechanisms and Practices for the Assessment of The Social and Cultural Implications of Science and Technology**, Liora Salter, Osgoode Hall Law School, University of Toronto, under contract with Industry Canada, 1995.
- No. 9 **Science and Technology: Perspectives for Public Policy**, Donald G. McFetridge, Department of Economics, Carleton University, under contract with Industry Canada, 1995.
- No. 10 **Endogenous Innovation and Growth: Implications for Canada**, Pierre Fortin, Université du Québec à Montréal and the Canadian Institute for Advanced Research, and Elhanan Helpman, Tel Aviv University and the Canadian Institute for Advanced Research, under contract with Industry Canada, 1995.
- No. 11 **The University-Industry Relationship in Science and Technology**, Jérôme Doutriaux, University of Ottawa, and Margaret Barker, Meg Barker Consulting, under contract with Industry Canada, 1995.
- No. 12 **Technology and the Economy: A Review of Some Critical Relationships**, Michael Gibbons, University of Sussex, under contract with Industry Canada, 1995.
- No. 13 **Management Skills Development in Canada**, Keith Newton, Industry Canada, 1995.

JOINT PUBLICATIONS

Capital Budgeting in the Public Sector, in collaboration with the John Deutsch Institute, Jack Mintz and Ross S. Preston eds., 1994.

Infrastructure and Competitiveness, in collaboration with the John Deutsch Institute, Jack Mintz and Ross S. Preston eds., 1994.

Getting the Green Light: Environmental Regulation and Investment in Canada, in collaboration with the C.D. Howe Institute, Jamie Benidickson, G. Bruce Doern and Nancy Olewiler, 1994.

**To obtain copies of documents published under the
RESEARCH PUBLICATIONS PROGRAM, please contact:**

Publications Officer
Micro-Economic Policy Analysis
Industry Canada
5th Floor, West Tower
235 Queen Street
Ottawa, Ontario, K1A 0H5

Telephone: (613) 952-5704
Fax: (613) 991-1261