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Legal Framework for the
International Transfer of Technology

by
YUNHAI LIU

Thesis for the LL.M. Degree

Supervised by

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Abstract

The thesis deals with the interaction between the legal controls systems and commercial dimensions of technology transfer. The primary purpose is to undertake a comprehensive examination of the current legal framework which plays an important role in regulating the international transfer of technology.

The legal framework for technology transfer is viewed as an overall and integrated concept which consists of major national, regional and international legislation. The focus is upon those which have direct regulatory effects on the proprietary rights over technology, contractual conditions of technology transactions, behaviour of parties concerned, and the inflow and outflow of technology. Emphasis is also consciously placed on the traditional forms of legal regulation in developed countries and on special laws and regulations adopted by developing countries. The main issues are raised and discussed within the context of the North-South relations with respect to international technology transfer.

The bilateral and multilateral treaties for the legal protection and legal control of industrial property rights and their transfer are dealt with in an attempt to explore their role and generic characteristics as well as the related issues.

The thesis finally examines various aspects of the Draft Code of conduct for the international transfer of technology. The background and the current status of the code negotiations are studied and the outstanding issues are discussed. The Focus is placed upon the disagreement and the conflicting interests between different groups. The legal nature and the future of the Draft code are also observed. The Thesis concluded that the present legal framework is incomplete because of a lack of direct international regulation of technology transactions. The establishment of legally binding rules controlling technology transfer will likely depend upon the future developments in the national and regional legislation and the possible changes to the international political and economic structure.

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Abbreviations

BIT	Bilateral Investment Treaty
CEC	Commission of the European Community
COCOM	Coordinating Committee on Multilateral Export Controls
DOC	Department of Commerce
DOD	Department of Defence
EAA	Export Administration Act
GDP	Gross Domestic Product
ICC	International Chamber of Commerce
MCTL	Militarily Critical Technologies List
NATO	North Atlantic Treaty Organization
OECD	Organization for Economic Cooperation and Development
R&D	Research and Development
TNCs	Transnational Corporations
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
WIPO	World Intellectual Property Organization

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Introduction

Technology transfer in modern society is a sophisticated phenomenon which may be observed from a variety of perspectives. Present work attempts to deal with the interaction between the legal control systems and commercial dimensions of technology transfer. The primary purpose of this paper is to conduct a comprehensive examination of the current legal framework which plays a profound role in regulating international transfer of technology.

The legal framework examined in this study is viewed as an overall and integrated concept which consists of major national, regional and international legislation. The focus is upon those which have direct regulatory effects on the proprietary rights over technology, contractual conditions of technology transactions, behaviour of parties concerned, and the inflow and outflow of technology. No attempt is made to deal with indirect effects of certain legal systems on technology transactions, such as contract law, tax law and private international law.

The paper also consciously emphasizes the traditional forms of legal regulation in developed countries and special laws and regulations adopted by developing countries. The major issues are raised and discussed within

the context of the North-South relations with respect to international technology transfer. The author has no intention of fitting into the scope of this work the legal systems in communist countries, because the distinctive features of their ideological, political and economic policies suggest a separate study.

Most parts of this paper focus on the nation-state as the basic unit. The analytical framework covers unilateral legislation, bilateral and multilateral agreements involving the commitments of nation-states. This study chooses not to examine the voluntary control measures initiated and adopted by international organizations such as ICC's Guidelines for International Investment,¹ OECD's Guidelines for Multinational Enterprises,² UNIDO's Guidelines for the Acquisition of Foreign Technology in Developing Countries,³ and WIPO's Model Laws for Developing Countries.⁴

¹ ICC Brochure No. 272 (1972).

² See Annex to the Declaration on International Investment and Multinational Enterprises adopted by Governments of OECD member countries in 1976, reprinted in International Legal Materials 15, p. 969 (1976).

³ UN Doc. ID/98, 1973.

⁴ The model laws include Model Law for Developing Countries on Inventions (Geneva, 1965); Model Law for Developing Countries on Trademark, Names and Unfair Competition (Geneva, 1967), and Model Law for Developing Countries on Industrial designs (Geneva, 1971).

The first part of this paper is offered as a background study on three basic topics. The first topic provides a general observation of technology and its transfer, including the nature of technology and its role in economic development, the concept of technology transfer, its components, forms and channels. The second deals with the role and dominant position of transnational corporations in international transfer of technology, and with criticisms of their unfair business practices. The third covers three different theoretical viewpoints explaining the basic reasons for governmental control over technology.

Part II presents an overall review of the current legal framework functioning at different levels. The nature and methods of national and international legal regulation are examined. A classification is made in order to clarify the thrusts of different legal control systems. The noticeable features of the legal framework are also observed.

Part III deals with the basic forms of the technology control systems which have been traditionally developed and are currently in effect in major industrialized countries. Those examined include the patent legislation, the legal protection of know-how, control of technology exportation, national anti-trust law and its regional development. Emphasis is placed on the different legal

systems of certain individual countries and on a group of countries whose unilateral actions and multilateral arrangements represent the historical origin and reflect present developments. Efforts are made to look at their role, basic principles, legal application and regulatory methods.

Part IV focuses on the generic characteristics of special laws and regulations on technology transfer in developing countries. The legislative background and basic structure of these laws and regulations are examined in detail. The related issues and prospects are identified and commented upon. The Andean Investment code, a legal measure taken at the sub-regional level, is also observed with reference to its major provisions on governmental control of the commercial transfer of technology and restrictive business practices.

The chapters in Parts V and VI examine various aspects of the bilateral and multilateral treaties. Two types of bilateral agreements are reviewed. One is concerned with the bilateral protection of patents and related rights; the other deals with the investment treaties involving the bilateral commitments of the states with respect to the legal protection and facilitation of technology related rights and their transfer. For multilateral treaties, the Paris Convention as the most important regime for the international

protection of industrial property rights, is chosen to be observed with the emphasis on its historical development, the fundamental principles, major provisions and the issues on its reform. There is no intention to cover the more recent multilateral treaties inspired by the Paris Convention, whether universal or regional in application, such as the Patent Cooperative Treaty and the Patent Convention of the European Communities.

Part VII deals with the important international negotiations on the Code of Conduct for the transfer of technology. The background and the current status of the code negotiations are studied. The outstanding issues are examined. Attention is drawn to the disagreement and the conflicting interests between different groups. The legal nature and the future of the draft code are also observed.

Throughout this paper an attempt has been made to provide an overview of the dynamics of the current legal framework as a unitary regime with different effects at different levels. An effort has also been made to identify and examine the legal principles, functions and characteristics of the legislation and treaties that are the integrated components of that framework. It is anticipated that the following chapters may contribute to a better

understanding of the present legal systems controlling and regulating technology and its commercial transfer as well.

Part I

Trilogy of Technology Transfer - Technology, Transnational Corporations and Governmental Control

1. Technology and Economic Development

A. Technology and Science

The term 'technology' may find its origin in a Greek word "Texvoλoyia", which means "a discourse or treatise on an art or arts, the scientific study of the practical or industrial arts".⁵ In modern literature, 'technology' has been observed in a detailed manner and the definition of technology has gone far beyond its original meaning.

'Technology' is generally defined as the applied science or the science which applies scientific knowledge to practical purposes.⁶ On the authority of the Chamber's Science and Technology Dictionary, 'technology' is the "practice, description and terminology of any or all of the

⁵ The Shorter Oxford English Dictionary (1973) Ed. C.T. Onions, p. 2253.

⁶ Webster's Third New International Dictionary of the English Language, Ed. Philip Babcock Gove (1971), p. 2348.

applied sciences which have practical value and/or industrial use".⁷ This version may account for the generic nature of technology.

In a broader sense, however, "technology is and will remain far more than applied science. Technology involves a vast array of know-how,"⁸ which includes technical methods, production processes, design procedures, managerial skills, creative insights and innovative approaches."⁹

Science is another important term which has a symbiotic relationship with technology. Science usually refers to "a body of verifiable knowledge and an associated conceptual framework that attempts to structure the observable features of the nature world and to predict the outcome of observations and experiments yet to be conducted."¹⁰ The dynamics of science primarily comes out of intellectual curiosity or scepticism. At the same time, science also responds to socio-political forces such as the pursuit of prestige, the availability of public funds.¹¹ As compared

⁷ See Chamber's Science and Technology Dictionary (1988), p. 888.

⁸ See John V. Granger, Technology and International Relations (1979), p. 11.

⁹ Ibid.

¹⁰ Ibid, p. 9.

¹¹ Ibid.

with science, technology is "action-oriented, concerned with doing things, solving practical problems, the creation of goods and services that are marketable in the commercial sense or in the sense that they fill the perceived needs of nations as a whole."¹² It is quite obvious that the subject to which technology usually responds is a practical problem.

B. Socio-Economic Significance of Technology

The second half of the twentieth century witnessed the coming of a new era - the technology age.¹³ Technological advances at this new age have accelerated at an unprecedented speed. It is estimated that "more than 90% of the R and D undertaken since the beginning of recorded history has been accomplished in the last few decades."¹⁴ The accelerative development of technology undoubtedly brought about tremendous social and economic changes.

Technology has been called the "great, growling engine of change,"¹⁵ and welcomed as "our liberator from

¹² Ibid, p. 10.

¹³ See generally Alvin Toffler, *The Third Wave* (1980).

¹⁴ See Alexander King, *Science, Technology and International Relations in Technology and International Relations* (1987), ed. Otto Hieronymi, p. 20.

¹⁵ See Alvin Toffler, *Future Shock* (1970), p. 25.

famine, disease, and poverty."¹⁶ The achievement of technology is of great benefit and significant to providing higher living standards, more opportunities for choices, more leisure, and better improved communications.¹⁷ The technological advances, to some extent, have also transformed social relationships and the way of thinking by creating a new class of "planning staff," and a new definition of rationality, a new mode of thought which focuses on functional relations and the quantitative.¹⁸

Modern technology is also viewed as a major force or a determinant factor of economic development. It has been observed that between 1909 and 1949, about ninety percent of the growth in the United States per capita income was attributed to technological progress.¹⁹ Japanese industrial development since the war also indicates that the assimilation and application of foreign technology has played the key role in making Japan a successful industrial giant.²⁰ Now it can be concluded that one important reason why technology has

¹⁶ Ian G. Barbour, *Technology, Environment and Human Values* (1980), p. 36.

¹⁷ *Ibid*, p. 37-38.

¹⁸ See Daniel Bell, *The Coming of Post-Industrial Society* (1973), p. 188-89.

¹⁹ See Edwin Mansfield, *Technology Transfer - Productivity and Economic Policy*, p. 10.

²⁰ See Felix J. Trojer, *A Comparison of R&D Strategies in Europe and Japan*, see Hieronymi, *Supra* n. 14, p. 105-121.

drawn great attention of nation-states, especially the developing countries, lies in the fact that technology may provide the country with the cutting edge on economic viability and success.

2. Technology Transfer and Transnational Corporations,

A. Definition and Components

"Technology Transfer" can be best understood by addressing both its theoretical feature and practical aspects.²¹ Theoretically, technology transfer can be defined as a process of transferring from the technology supplying party to the acquiring party the technical knowledge and skills required to successfully achieve the particular industrial or commercial purposes. The term "technology transfer" does not necessarily contain an international connotation. However, when technology transaction involves parties with different nationalities or when technology is transferred across national boundaries, international technology transfer occurs.²²

²¹ There is no shortage of interpretations of Technology Transfer. However, different versions focus on different aspects of technology transfer, depending upon what purposes are pursued.

²² For differences between domestic and international technology transfer, see David J. Teece, *The Multinational Corporations and the Cost of International Technology Transfer* (1976), p. 20-23.

From a practical aspect, technology transfer will be considered complete when three conditions - creation, transmission, and reception of technology - are satisfied.²³ Technological creation constitutes the major elements of technology transfer, It may involve technology embodied artifacts, processes, know-how, and the naked or disembodied technologies.²⁴

The transmission of technology deals with the forms of technology diffusion and transfer mechanisms prevailing in the technology transactions. As for reception of technology, it not only means absorption of the transferred technology, but also means capability of making innovative development. In this regard, Dr. Zakaziya has pointed out when referring to the transfer of petroleum technology, "Ideally, a real transfer of technology lies in the ability of the developing countries to purchase or hire directly the most advanced technical means of petroleum exploration and development, ... It also lies, above all in developing the mental skills of its citizens to utilize these technical means effectively..."²⁵

²³ See John R. McIntyre and Daniel S. Papp, *The Political Economy of International Technology Transfer* (1986), p. 25.

²⁴ For the embodied and disembodied technology, see John V. Granger, *Supra* n. 8, p. 10-12.

²⁵ See Abdul R. Yousel, *The Role of Transfer of Technology in the Pursuance of Technical Progress in Technology Policies for Development and Selected Issues for Action* (UNCTAD, 1980), p. 3.

The structural components of technology transfer can be divided into three major categories: technological elements, "the people factor", and environmental elements. Technological elements are the subject-matter of technology transfer. They mainly consist of patented technology, a variety of know-how and technical expertise, and technological knowledge necessary for functioning of plant and equipment.²⁶ "People factor," a very active factor as compared with technical items, refers to individuals, business corporations and government agencies who are involved in the process of technology transfer. Environment setting is another decisive element affecting technology transfer. This element reflects the social, economic, political and legal situations and orientations of nation-states. It gives rise to the issue as to whether or not the transfer process is possible in certain circumstances and under certain jurisdiction.

B. Forms and Channels of Technology Transfer

Basic forms of technology transfer have been identified by making certain distinctions. One distinction is made between vertical transfer and horizontal transfer. The former transfer form takes place when technological knowledge is transmitted from applied research to the practical use.

²⁶ See Draft International Code of conduct on the Transfer of Technology, Chapter 1, p. 1-2. UN Doc. TD/CODE TOT/47 (1985).

The latter form occurs when technology employed by one entity in one location is transferred to another entity in another location.²⁷ Usually, horizontal transfer poses major issues calling for international discussion and solution.

Another distinction can be made between "direct" and "indirect" transfers. Direct transfer refers to direct relationships between the acquiring party and a number of supplying parties. When transfer of technology is made through different supplying sources, it is thus called direct transfer, and is opposed to the transfer by means of direct foreign investment, licensing agreements, and "turnkey" projects which form indirect transfers. In the latter case, one single supplying party is involved and may take all responsibility for the transfer process or sub-contract other technology suppliers.²⁸

Transfer of technology may also take contractual and non-contractual forms. The first may cover different contractual forms of transfer such as contractual joint

²⁷ Supra n. 19, p. 28.

²⁸ See The Channels and Mechanisms for the Transfer of Technology from Developed to Developing Countries. UN Doc. TD/B/AC.11/5 (1971), p. 13-15.

ventures, licensing agreements. The second mainly corresponds to the equity transfer mechanism by which technology is transferred through wholly or majority owned subsidiaries.²⁹

In practice, technology is transferred in a variety of ways. The main channels of transfer can be sorted out as the following.

The first is the purchase of a technical artifact and associated production technology. This transfer process is also called "reverse engineering". It allows the acquiring party an opportunity to absorb technological knowledge by restructuring the product of the same or similar kind.³⁰

The second is foreign investment. It can be examined from two major aspects: foreign direct investment and joint venture. In the first case, technology is transferred from the parent company to its subsidiary (where the parent company has substantial controlling interest). The parent company usually directs the transfer operation and fits the technology package into the different stages of an investment project. In the case of joint venture, the equity joint venture needs to be distinguished from non-equity joint

²⁹ See Assad Omer, Channels and Mechanisms for Transfer of Technology in Technology Policies for Development and Selected Issues for Action, *supra* n. 25, p. 30.

³⁰ *Ibid*, p. 31.

venture. An equity joint venture is a business entity where assets, rights and liabilities are shared through joint ownership of an incorporated enterprise.³¹

Transfer of technology in this kind of business form is usually made through capitalization of technology as part of a contribution to the equity share. Non-equity joint venture is a type of business cooperation established between participants on a contractual basis. Technology transfer in a non-equity joint venture primarily depends upon the contractual arrangements corresponding to the short or long term projects.

The actual technology transactions also involve various contractual arrangements specifically requiring the transfer of know-how, the provision of technical assistance and management skills. One of the major forms of such arrangements is the licensing agreement. Under this agreement, the acquiring party, by paying certain licence fees, obtains the authorized rights to use the industrial properties and secret know-how during the term of the contract. A licensing agreement gives the acquiring party legitimate access to legally protected technology. However, the property rights of technology are quite often licensed by the owners in an abusive or restrictive manner which affects

³¹ Ibid, p. 33.

the use that can be made by the acquirer of the desired technology.

There are two other important arrangements: technical assistance agreement and management arrangement. The first usually enables the acquiring party to obtain "non-proprietary" technical knowledge linked to the main technology transferred. Such kinds of knowledge may include feasibility studies, design and starting up of a particular facility, technical advice on the use of know-how and quality control, and technical assistance for maintenance and repair of equipment. Under the second type of arrangement, the supplying party usually takes control of the entire production management. The transfer of technology is achieved by means of the transmission to the acquirer of organization capacity which involves either special training programmes or the participation of the acquirer in certain operational functions.³²

It should be pointed out that the classified forms and channels of technology transfer may overlap and can be combined in an actual transaction. Also, the selection of mechanisms for technology transfer is affected by many factors such as the nature of the project, bargaining power, economic conditions and financial resources. Most important, the legal

³² For contractual arrangement, see Ibid, p. 34-35.

systems may promote or discourage certain forms of technology transfer.³³

**C. Transnational Corporations and Technology Transfer:
Two Fold Impacts**

No attempt to deal with the issue on technology transfer can ignore the transnational corporation. The emergence of the transnational corporation is an inevitable economic phenomenon caused by the advance of modern industrial society. In a legal sense, the transnational corporation can be viewed as "an aggregate of corporate entities, each having its own juridical identity and national origin, but each in some way inter-connected by a system of centralized management normally exercising its control from the seat of primary ownership."³⁴ Since the 1950s, the dramatic growth of the transnational corporation has brought about many significant changes in international relations. The increased trans-boundary activities engaged by transnational corporations have drawn the attention by nation-states. The concern has also been voiced over the politico-economic impacts of the transnational corporations. In recent decades the TNCs have

³³ For example, the regulations of the Andean Group Countries prohibit technology transfer through equity joint venture. See Decision No. 24 of the Commission of the Cartagena Agreement. 11 International Materials, p. 126 (1972).

³⁴ See Cynthia D. Wallace, Legal Control of the Multinational Enterprises (1982) p. 2.

become the main focus of international discussions on the trade and technology transfer issues.

The international technology transfer is one of the important business operations the TNCs carry out along with their overseas developments. The role and impact of TNCs in this field can be examined from both positive and negative aspects. It is undeniable that the TNCs, as the potent agents of economic transformation and development,³⁵ are at present the major supplying source of commercially disposable technology³⁶ and are the important vehicle for the international transfer of technology. The very fact is that the TNCs possess strong R&D capacity to upgrade existing technology and create new ones on a regular basis. The huge expenditures of the TNCs on R&D related activities also help to promote technological advances. It has been surveyed that in the United States the TNCs account for nearly 90 percent of net income to U.S. companies from foreign use of their technologies.³⁷ In 1971, the net inbound royalties received by U.S. TNCs from exported technology reached \$2.3 billion. This figure amounted to 11 percent of the entire U.S.

³⁵ See Harry G. Johnson, Technology and Economic Interdependence (1975), Chapter Five, p. 70.

³⁶ See A. Ewing, UNCTAD and the Transfer of Technology. 10 J. World Trade Law, p. 205 (1976). See also UNCTAD, Mid-Term Review and Appraisal of the Implementation of the International Development Strategy, UN Doc. TD/B/530 (1975).

³⁷ Supra n. 8., p. 65.

industrial R&D spending in that year and more than one-quarter of industrially financed R&D.³⁸ For heavy industrial R&D investment, in 1966 the U.S. TNCs expenditures in the technology-intensive sectors such as electrical machinery, instruments and chemicals and drugs ranged from 51 to 86 percent of total industry R&D outlays in the same areas.³⁹

The TNCs also play an important role in the capital flow and in transfer of technology to developing countries. "They inject capital and, through the export of the subsidiary's products, foreign exchange, they create new kinds of employment and in the course of doing so increase the skill levels of the local labor force through on-the-job experience and formal training. Their use of local sources of materials, components, and semi-manufactured goods provides a broader economic stimulus and frequently results in a diffusion of significant aspects of the parent company's technology to the indigenous economy, particularly through the impact of purchase specifications and standards and acceptance test procedure."⁴⁰

However, the past decades also witnessed increased concerns over the TNCs activities and practices in the host

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid., p. 109.

countries. The complaints against the TNCs mainly came from the developing countries. Some notorious practices engaged in by the TNCs have been singled out by the developing countries as the following: "It fiddles its accounts. It avoids or evades its taxes. It rigs its intra-company transfer prices. ... It overpays. It underpays. It competes unfairly with local firms. It is in cahoots with local firms. It exports jobs from rich countries. ... The technologies it brings to the third world are old-fashioned. ... It meddles. It bribes. Nobody can control it. It wrecks balance of payments. It overturns economic policies. It pays off governments against each other to get the biggest investment incentives."⁴¹

In the particular field such as international technology transfer, the TNCs have also encountered strong criticism. It has been alleged that the cost of technology transferred by the TNCs to developing countries is too high; the technology transferred is not appropriate to local conditions of developing countries. The TNCs often impose unfair contractual terms on the acquiring party, and engage in restrictive practices, which deny the developing countries

⁴¹ See Controlling the Multinational, in the Economist (Jan. 24, 1976) p. 68. See also Report of the Commission on Transnational Corporations, Annexes 1-111. UN Doc. E/5782, E/C 10/16 (1976).

access to the appropriate technology and the efficient use of the imported technology.

There are also other allegations against the TNCs which include the TNCs failure to invest in local R&D and to enhance local technological capabilities, their reluctance to use local skilled labor and managerial expertise, their exploitation of cheap labor and raw materials, and environmental and cultural inappropriateness of imported technologies.⁴²

The concerns of governments of developing countries have led to national defensive legislation in many developing nations. One of the tasks of such legislation is specifically designed to take control over the TNCs restrictive practices in technology transactions.

3. Control of Technology - Basic Theories

International conflict has long existed over advanced technology and its transfer. According to P. N. Takirambudde, the conflict can fall into two broad categories: consensual and nonconsensual conflict. The consensual conflict presumes that whereas the need for advanced technology is widespread, nation-states and private business

⁴² See supra n. 23, p. 86-87, supra n. 35.

enterprises consider the distribution of technology as a zero-sum situation. The genesis of consensual conflict lies in the politicization of technology production and distribution. By contrast, the emphasis of non-consensual conflict is not on the political impact of technology as such but rather expresses diverse views on the issues concerned.⁴³

A. "Power Politics"

The factual basis for "power politics" is the transition of technology from 'science international' to the tyranny of reality. As a result of such traditional change, science and technology have moved from a marginal activity in society to a central activity wherein survival no longer relies on production as such but rather on the speed of technological innovation and distribution.⁴⁴

These fundamental changes have led to the politicization of technology production. The partisans (nation-states, private corporations), came to increasingly rely upon technology resources as a base of power and wealth and became much interested in the manipulation of strategically important technology. The control of technology

⁴³ See Peter Nanyeny-Takirambudde, *Technology Transfer and International Law*, (1980), p. 77.

⁴⁴ J. Salomon, *Science and Politics* (1973), p. 50, p. 117, and p. 214.

resources was thus to be the noticeable feature of modern industrial society and investments in, and control of, such resources were to be critical for changing the balance of power and for economic growth. Science and technology in such an environment becomes increasingly central to diplomatic and strategic commercial transactions.⁴⁵ For the partisans, therefore, decisions have to be made in an atmosphere of competition for group survival and considerations of political expediency, and mechanisms have to be designed for determining what technology should be allowed to diffuse and what should be strictly controlled.

B. Nonconsensual Conflict

Economic Liberalism

Liberal theories believe that the international business transaction is by its nature the harmonized interplay where the best national interest and the international interest are combined. They also assume that international economic activity aims at maximizing global welfare which can be realized through traditional ways of technology transfer.⁴⁶

⁴⁵ Supra n. 43, p. 78.

⁴⁶ Ibid, p. 85.

Economic Liberals were opposed to the state control over economic activities on the grounds that such control distorted resource allocation and interfered with the flow of investment and the efficient division of labor.⁴⁷ Liberalism sought to abolish all types of statutory monopolies and legal protection including the patent system. It claimed that "patents hinder ... the progress of invention ... they hamper the prompt general utilization of useful inventions ... on balance they cause more harm than benefit to the inventors themselves and, thus, are a highly deceptive form of compensation ... patents are injurious to common welfare."⁴⁸

Since Liberal theories tended to argue under the ideology of general free-trade, they treated patent protectionism as part of tariff protectionism and patent monopoly as privileges in general.⁴⁹ Economic Liberalism had played an important role in strengthening opposition to monopoly and privilege during the free-trade movement in nineteenth-century Europe.⁵⁰ However, the late nineteenth century has seen the victory of the protectionists over the Liberal forces. Since the Second World War, the position of

⁴⁷ Ibid. See also R. Gilpin, U.S. Power and the Multinational Corporation (1975), p. 26.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid.

economic Liberalism has become weakened and there no longer exists strong and persistent opposition of economic Liberals to the patent and other related rights.

Mercantilism

As opposed to economic Liberalism, the mercantilism theory focuses on the priority of national interest and power. The mercantilist presumed that given a definite volume of international trade, the task of the state was to acquire the largest share possible for its own citizens. Therefore, the state should take protective measures that would keep out foreigners but at the same time, by means of commercial treaties and other diplomatic channels, provide the protection to its citizens and their property in other countries. The state's protection of its nationals and their property both at home and abroad was deemed necessary for the acquisition of wealth as the basis of national power.⁵¹ Mercantilism in theory and practices had no opposition to industrial grants and limited monopoly over technology resources.⁵²

⁵¹ Ibid., p. 86. See also E.F. Heckscher, *Mercantilism* (1955).

⁵² Since the Second World War, developing countries have challenged the existing regime for the international protection of the industrial property rights. In those countries, governmental control has been exercised over all sectors of economic activities. nationalization movement and protective legislation on technology transfer have taken place since 1950. From the theoretical standpoint, all those changes are considered similar to fifteenth-century mercantilism. But, the rhetoric of developing countries is focused on developmentalism instead of pursuit of national power.

Marxism

Like mercantilism, Marxism shares the conviction that the goal of the nation-state is to maximize its national interest. Both Marxists and mercantilism stress the need for national control over technology resources. However, Marxism observes and analyzes the economic issues within the framework of the political philosophy and ideology. Accordingly, Marxists view the nature of international economic activity as being class-based, and international regimes such as the intellectual property institution (the Paris Convention) are thus criticized as a tool for the exploiting classes.⁵³

Recent developments in developing countries have been characterized as neomercantilism.

⁵³ Supra n. 43, p. 89. Also supra n. 47, Gilpin, p. 27.

Part II

Scenario of Current Legal Framework

4. Basic Components

The legal framework for technology transfer encompasses two major categories of laws, regulations and treaties: the system of industrial property protection and those instruments which have special effects on the commercial transactions of technology.

The industrial property system is considered the oldest method of providing incentives to stimulate technological innovation.⁵⁴ The system as a branch of law was specially created and designed to encourage creativity of the population and allow inventors to benefit from their innovative activities. The system of industrial property protection has been established in most countries of the world. The fundamental part of the system is the legal affirmation and protection of monopoly rights over technology resources. Under the patent legislation, governments of nation-states grant such exclusive property rights as patents to inventors for a limited period of time in exchange for early disclosure of technological findings. Such legal rights

⁵⁴ See UNCTAD Report. Technology Policies for development and Selected Issues for Action, p. 39, UN Doc. TD/TT/94 (1988).

enable their holders to legally prevent others from making, using, and selling the invented product and process in the national territory of the granting state.⁵⁵ Regarding unpatented technology such as technical know-how which is heavily involved in technology transactions, legislation in most countries offers no statutory property rights or exclusivity. The general protection of this unpatented technology is its secrecy. When such undisclosed technology becomes the subject matter of a commercial transaction, its protection is usually limited to the contractual provisions relating to confidentiality.

The important development of an industrial property system at international level can be seen to be the establishment of the Paris Convention. The Convention concluded in Paris in 1883 was the first international regime for protection of exclusive property rights over inventions and innovation across national boundaries.⁵⁶ Under the Convention are established some important principles with respect to national treatment, the right of priority and the independence of patents.⁵⁷ The international development of an industrial property protection system such as the adoption

⁵⁵ Ibid, p. 40.

⁵⁶ For the history of the Paris Convention, see Stephen P. Ladas, *Patents, Trademarks, and Related Rights*, (1975), Vol. 1, p. 59-68.

⁵⁷ Ibid, p. 266-274.

of the Paris Convention helped facilitate the international flow of technology by minimizing the divergences of national legislation.

Under the second category, the thrust of the laws and regulations is not aimed at industrial property rights themselves but at the commercial exploitation of those rights and at a variety of specific issues arising from transfer of technology. However, legislative instruments relating to technology transfer may differ in different economies. In developed countries, transfer of technology is mainly affected by antitrust legislation. Antitrust law is intended to promote competition in open markets and prevent abuses of the dominant position enjoyed by the owners of patented or unpatented technology. Therefore the law is primarily concerned with restrictive business practices in technology transfer and strictly prohibits certain practices which have anticompetition effects on the domestic market. Again in some developed countries, for political and national security reasons, exports of certain technology are subject to governmental control under national legislation and sub-regional agreement such as U.S. Export Administration Act and COCOM's controls of exports of technology.⁵⁸

⁵⁸ Export control of technical data is to be dealt with in the following part.

In developing countries, a new form of legal regulation of technology transfer has emerged in the last two decades, that is special laws and regulations on the transfer of technology. The enactment of those laws and regulations has important effects on the international transfer of technology in the sense that they tend to regulate the process of technology transactions as a whole. As opposed to antitrust law, the emphasis of the special laws and regulations is placed on national public interest and achievements of local economic development. The general objectives of those laws and regulations are designated to overcome the imperfection of technology markets and to strengthen the bargaining power of local buyers of technology.⁵⁹ Under the special laws and regulations, various key issues, such as restrictive business practices, royalty payments, nature of imported technology, warranty provisions and duration of contracts, have been sorted out for the purpose of legal regulation. The registration and approval procedures were also established in order to inspect and assess the contractual conditions of technology transfer and their impact on local technological development.

⁵⁹ Other purposes of special laws and regulations include "control of the quality and absorption of imported technology"; "the protection of local technological development"; "regulation of the balance of payments"; "control of restrictive licensing agreement"; and "protection of local employment". See Guillermo Cabanellas, Jr., *Antitrust and Direct Regulation of International Transfer of Technology Transactions*, Chapter II, p. 30-46, (1980).

The different national legislation on transfer of technology reflects the differing political and economic needs for legal control over technology transactions.

5. Classification

The legal framework for international technology transfer covers a variety of laws, regulations and treaties which can be classified from different standards.

According to the extent and purposes of legal controls, the laws and regulations relating to technology transfer can be classified as direct and indirect regulation. Direct regulation means that the laws or regulations exert direct influence upon the process of technology transfer including the subject-matter, conditions and validity of contractual arrangements. Those laws and regulations reflect consciousness of states' intervention in technology transactions with a view to achieving certain political and economic ends. The special laws and regulations enacted in developing countries and the laws on export control of technology can be treated as the form of direct regulation of technology transfer. Indirect regulation means that the laws and regulations are not purposely legislated to control overall aspects of technology transfer. They do not directly intervene in the freedom of individuals to conclude technology

transactions. Their regulatory effects are limited to certain areas such as legitimacy of patent rights and restrictive business practices. Accordingly, patent laws and antitrust legislation can be considered as indirect regulation.

In the light of legal control over the direction of technology flow, the laws and regulations can be divided into import regulation and export regulation. The special legislation and regulations in developing countries belong to the category of import regulation as compared with the export controls in some developed countries.

According to territorial effects of legal regimes, the control systems can be classified as national regulation, regional regulation such as the Andean Pact and the EEC Treaty, and international regulation such as the Paris Convention.

6. Characteristics

One noticeable feature of the current legal framework is its incompleteness in the sense that there lacks a set of uniform rules which are designed to play a major role in regulating the contractual transfer of technology.

Traditionally, the international industrial property system such as the Paris Convention has been established to harmonize the development of national patent legislation. However, the major role of that Convention is deemed to facilitate the international diffusion and exchange of technology by laying down some fundamental principles such as national treatment.⁶⁰ It does not have any regulatory control over the contractual terms and conditions under which technology is transferred.

In practice, the conditions of technology transactions are mainly decided by the bargaining power of participating parties and their position in the related marketplace. This may indicate one reason why most developing countries have demanded direct international regulation and legal protection against unfair contractual conditions and the abuse of industrial property rights engaged in by multinational corporations.

Over the past decade, international negotiations on the Code of Conduct for technology transfer have been underway in an attempt to formulate uniform rules regulating the

⁶⁰ Sigmund Trimberg, The Role of the International Patent System in the International Transfer and Control of Technology, in Controlling International Technology Transfer, Sagati-nejad, Tagi, Moxcon and Perlmutter, eds. 1980. See also, The Role of the Patent System in the Technology Transfer to Developing Countries. UNCTAD, TD/B/AC11/191. Rev. 1 & Add. 1 (1975).

commercial transfer of technology. After prolonged discussions and negotiations, several key issues still remain outstanding because of a high degree of conflicting interests between different groups of countries.⁶¹

In the absence of direct international regulation of technology transfer, the functions of the current legal framework are largely carried out by diversified national laws and regional treaties pursuant to different legislative motivations.

⁶¹ See UNCTAD Report on Code Negotiations, UN Doc. TD/CODE TOT/49 (1985).

Part III

Legal Control Systems in Developed Countries

7. Patent Laws

A. Historical Backdrop

It is commonly believed that as early as 1331 in England, the rudiments of a patent system were found among the royal grant of trade privileges.⁶² However, the first systematic grant of patent rights did not come into existence until the passage of the Statute of Monopolies by English Parliament in 1623. Section I of the Statute declared void all monopolies and all commissions, grants, licenses, charters and letters patent heretofore made to any persons. However, patents of the sole working and making of any manner of new manufacture and the first true inventor were exempted for a certain period of time.⁶³ The Statute is considered as the Magna Carta of the rights of the inventor because for the first time in history it established the statutory requirement for the granting of a patent and the duration of the patent privilege.

Since the enactment of the Statute, the patent legislation in England and elsewhere has hardly changed in

⁶² See Nanyenya, *supra* n. 43, p. 56.

⁶³Ladas, *supra* n. 56, p. 6.

fundamental doctrine, and its principles were gradually adopted all over the world.⁶⁴

B. Subject Matter and Conditions

The English Statute of Monopolies briefly provided that the patentable invention should be a new manufacture. Subsequent legislation in England did not elaborate what constitutes a patentable invention. Generally, if the invention is a manufacture, and it is new, useful and not obvious to a person skilled in the art at the date of patent application, then it is a subject-matter for a grant.⁶⁵ A similar enumeration can be found in the statutes of Belgium, Germany and the United States.

However, under different national legislation, some inventions are exempted from the granting of the patent, if they are contrary to the public order, or are not industrial inventions such as combinations of credit or finance.⁶⁶ Scientific discoveries with no immediate results are also excluded by most national patent laws. In some countries the

⁶⁴ Ibid, p. 7.

⁶⁵ See Terrell, *The Law and Practice Relating to Letters Patent for Invention* (1921), p. 39.

⁶⁶ Supra n. 56, p. 21.

exemptions have been extended to natural and chemical products, articles of food and medicines.⁶⁷

There is one important condition for the grant of a patent, that is the condition of novelty of the invention. In general, the invention must be new as required by the patent law of each country. An invention is deemed to have lost its novelty if it has been known or used by others prior to the date of the patent application. Publication is also considered destructive of novelty of an invention.

In some countries, the novelty requirement is "absolute". That is to say an invention is not novel if it has been published in print or made known in any other way in any country before the application date.⁶⁸ In other countries, the standard of novelty is "relative". That means there is a certain limitation as to the nature, place and time with respect to prior publication or prior user.⁶⁹

⁶⁷ Ibid.

⁶⁸ See J. W. Baxter, World Patent Law and Practice (1973), p. 84-85.

⁶⁹ Ibid, p. 84-86.

C. The Underlying Role

When the Statute of Monopolies was first introduced in 1623, the founders could hardly have anticipated that the patent exemption would help to produce an industrial capitalist system dominated by such industrial giants as Imperial Chemical Industries, General Motors, and International Business Machines.⁷⁰ The significance of the patent system is that it found and employed legal means to regulate inventive activities and technology resources. The uniqueness of the patent legislation is the statutory grant of exclusive patent rights. Such technology-property rights have been perceived as the core underpinning and the functional grid of industrial capitalism.⁷¹

Patent law can be seen as a technology incentive system. It has played a pivotal role in promoting investment in technology production and encouraging the earlier disclosure of new inventions by means of granting and protecting exclusive rights.

Technology production is considered essential to a science based civilization. However, it is a risky venture.

⁷⁰ Supra n. 43, p. 59.

⁷¹ Ibid. See also, Franklin Jones, Historical Development of the Law of Business Competition, 35 Yale Law Journal, p. 905-938 (1926).

In the absence of legal protection, the outcome of technology investment will be readily available to all at almost zero cost.⁷² If the inventors have no secured means to appropriate the benefits from their creativity and financial undertaking, under-investment in technology-producing activities will be inevitable. Patent law overcomes the problem of nonappropriability through the establishment of the exclusive right protection system. The legal protection of exclusive rights makes the consequences of industrial and commercial undertakings more certain and predictable.⁷³ It guarantees that inventions and their exploitation will generate reasonable returns to sustain progress of the innovative activities.

8. Know-How Protection

A. Definition and Nature of Right

The concept of know-how is a relatively new notion as compared with that of "trade secrets".⁷⁴ There is no uniform definition as to its exact form and content. The term "know-how" usually refers to technical knowledge and experience acquired by an enterprise in the use and application of

⁷² J. Parker, *The Economics of Innovation* (1974), p. 217-18.

⁷³ *Supra* n. 56, p. 1883-84.

⁷⁴ For details of trade secrets, see Roger Milgrin, *Trade Secrets* (1978), p. 1-42.

industrial technology. It may take the written form of blueprints, designs, drawings, formulas, technical manuals and specifications. It may also include intangible elements such as production procedures, technical practice, training, consultation, personal visitation and inspection.⁷⁵

The commercial value and competitive advantage of technical know-how have been widely recognized. However, the nature of the right to know-how is not clearly defined by legislation. Because of the secrecy of know-how, it is difficult for the law to identify and define the subject matter of know-how as it is able to do so under patent law. Usually the rights in know-how are specified in various contractual relationships.

B. Legal Protection

Unlike patents, know-how has no statutory status. It is mainly protected by rules of private law. The legal remedy is usually based on contractual relationships and clauses such as confidentiality and obligations of non-disclosure. As to this, contract law is a dependable form of legal protection. The legal protection of know-how can also be obtained from provisions of tort law in respect of

⁷⁵ Supra n. 56, p. 16-17, and definition by the U.S. Court, *Mycalex Corp. of America v. Pemco Corp.* (1946), 68 U.S.P.Q. 317, 322, 64 F. Supp. 420 (D.M.D.), affirmed (1947, 159 F.2d.907).

industrial espionage and the breach of fiduciary relationships.⁷⁶ In some countries, there exist some statutory acts such as criminal law, the civil code and unfair competition act, which provide indirect protection based on either contractual or non-contractual relationships.⁷⁷ However, as one of the key conditions for that legal protection, know-how should retain its secrecy and not fall into the public domain.⁷⁸

9. National Antitrust Legislation - U.S. Antitrust Laws

A. Basic Antitrust Statutes

The United States antitrust laws are designed to prevent acts and practices which have anti-competitive effects. The actual antitrust statutes are very brief but contain broad sweeping language. As far as licensing transactions are concerned, there are three relevant antitrust provisions: (a) Section 1 of the Sherman Act which prohibits contracts and conspiracies attempting to restrain trade; (b)

⁷⁶ See Schachter and Hellowell, *Competition in International Business* (1981), p. 89; and *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 474-76 (1974); *Imperial Chemical Industries Ltd. v. National Distillers & Chem Corp.*, 342 F. 2d 737 (2d Cir, 1965); *Wilkes v. Pioneer American Insurance Company of Fort Worth, Texas* 383 F. Supp. 1135 (D.S.C. 1974).

⁷⁷ *Supra* n. 56, p. 1625-37.

⁷⁸ See *L. S. Donaldson Co. v. La Maur Inc.*, 299 F. 2d 412, 425 (8th cir.), *Cert. denied*, 377 U.S. 815 (1962); *Wilson Certified Foods Inc. v. Fairburg Food Products, Inc.*, 370 F. Supp. 1081, 1083-84 (D. Neb. 1974).

Section 2 of the Sherman Act which bars monopolization and conspiracies to monopolize; and (c) Section 4 of the Clayton Act which specifies civil penalties.

Section 1 of the Sherman Act simply provides in its first sentence that: "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is declared to be illegal."⁷⁹

Contained in the second sentence of the same section are the criminal penalties for a violation, which carry a fine of one million dollars as to corporations, or one hundred thousand dollars or three years in jail, or both, as to individuals.

Under Section 2 of the Sherman Act, every person who attempts to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony. The criminal penalties for a violation are identical to those prescribed in Section 1.⁸⁰

Section 4 of the Clayton Act is usually considered the most important because of its severe civil penalties.

⁷⁹ 15 U.S.C. § 1 (Ed, 1982), p. 132.

⁸⁰ 15 U.S.C. § 2.

Under Section 4 of the Act, any person who shall be injured in his business or property by reason of anything forbidden in antitrust laws may sue therefore in any district court of the United States ... and shall recover threefold the damages by him sustained and the cost of suit....⁸¹

B. Application of Antitrust Law to Patent and Know-how Licensing.

The U.S. antitrust laws have co-existed with the patent law for almost a century. The Constitution of the United States empowers Congress to establish a patent system with a view to "promoting the progress of science and useful arts, by securing for limited times to ... inventors the exclusive right to their respective ... discoveries."⁸² The first U.S. patent law was passed by congress in 1790.⁸³

⁸¹ 15 U.S.C. § 15. In addition, it is worth noting that although not as often involved in intellectual property and licensing transactions as Sections 1 and 2 of the Sherman Act and Section 4 of the Clayton Act, there are other relevant antitrust provisions and statutes: Section 3 of the Clayton Act, which proscribes anti-competitive sales and contracts for the sale of goods (whether patented or not) on condition that the purchaser will not use or deal in the products of a competitor; Section 16 of the Clayton Act, providing for injunctive relief against threatened loss or damage by a violation of the antitrust law; and the broadly stated proscription of Section 5(a)(1) of the Federal Trade Commission Act, which provides that unfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce, are declared unlawful. See 15 U.S.C. § 14; § 26 and § 45(a)(1).

⁸² U.S. Const., Art. I § 8, c. 1.8.

⁸³ The first Congress of the U.S., in its second session, enacted the first Patent Act on April 10, 1790.

However, there has been found a tension between patent licensing and application of antitrust laws. Under the patent law, a patentee can exploit his patent rights in an exclusive manner without any fear of antitrust challenge.⁸⁴ However, if he decides to exploit the patent by licensing to others, he comes immediately under the scrutiny of the antitrust laws. In fact, no patentee can ignore the fact that there exists the possibility of a private action alleging patent misuse and antitrust violation because any action taken by the patentee to enforce patent rights or to enforce provisions of a patent license is likely to be countered with an allegation of patent misuse or antitrust violation.

A patentee usually faces two types of actions: (a) a private antitrust action which may subject the patentee to the risk of paying treble damages to anyone injured in his business by reason of the antitrust violation; (b) a finding of patent misuse which will eliminate the ability of the patentee to enforce his rights and therefore render the patent essentially worthless.

⁸⁴ In *Bement v. National Harrow Co.*, the Supreme Court rejected a claim that licensing or use of the invention was required by the antitrust laws, noting that "the very object of these (patent) laws is monopoly". 186 U.S. 7091 (1902), U.S. Supreme Court reports, 46 law, Ed. p. 1058.

The doctrine of patent misuse is based more on general equitable principles than on the antitrust laws.⁸⁵ An important difference between an action claiming patent misuse and an antitrust action for treble damages is that the former can protect a so-called infringer who has not even been injured by the misuse,⁸⁶ and the latter, on the other hand, is only available to those who have suffered from damage caused by the antitrust violation.⁸⁷

Patent misuse is frequently associated with restrictive practices which attempt to extend the monopoly rights of a patent beyond their legitimate limit, such as restrictions after the expiry date of the patent;⁸⁸ exclusive dealer agreements to market a patented product;⁸⁹ and tying of sales of unpatented goods to a patent license.⁹⁰

⁸⁵ *Morton Salt Co. v. G. S. Suppiger Co.*, 314 U.S. 488 (1942).

⁸⁶ The U.S. Court of Appeals has recently in *Senza-bel Corp. v. Seiffhart*, 803 F. 2d 661, 668 (Fed. Cir. 1986) concluded that conduct not sufficient to support a finding of antitrust violation may still constitute a misuse.

⁸⁷ *Zenith Radio Corp. v. Hazeltine Research Inc.*, 395 U.S. 100, 114 n. 19 (1969).

⁸⁸ *Brulotte v. Thys Co.*, 379 U.S. 29 (1964).

⁸⁹ *F. C. Russell Co. v. Consumer Insulation Co.*, 226 F. 2d 373 (3d. cir., 1955).

⁹⁰ *United States Plywood Corp. v. General Plywood Corp.* 370 F. 2d 500 (6th cir., 1966).

A patentee, once found guilty of patent misuse, will face a temporary loss of royalties from licensees or damages from the infringers. Such penalties remain valid until the consequences of the misuse have been fully dissipated.

Insofar as know-how is concerned, because of its secret nature and its lack of a statutory status similar to that established for the patent, know-how tends to be exploited by its holder in a more abusive manner than the patent. Accordingly, exploitation of know-how, especially the know-how licensing is "subject to antitrust standards which, if anything, are stricter than those applied to patent licenses."⁹¹

C. Per Se Violation and Rule of Reason

Because of the sweeping generality of the antitrust statutes and difficulty of proving damage in some complicated situations, the U.S. Supreme Court has gradually developed the concept of per se violations. The best statement of this concept can be found in the case of *Northern Pacific v. United States*, where the Court stated: "However, there are certain agreements or practices which because of their pernicious effect on competition and lack of any redeeming virtue are

⁹¹ Antitrust Division of U.S. Department of Justice, *Antitrust Guide for International Operations* (1977), in *Antitrust & Trade Reg.*, Rep. No. 799, p. 33-345.

conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use."⁹²

Application of per se violations has rendered the court decisions much easier in certain types of cases and to some extent, provided certainty and predictability to licensing transactions.

Under Section 1 of the Sherman Act, all contracts that restrain trade or commerce are prohibited. However, the U.S. courts have limited the prohibition of Section 1 to "unreasonable" restraints of trade.

The legality of certain restrictions in patent licensing seems to be based on reasoning from a 1926 Supreme court decision in the case of United States v. General Electric Co. In this case, price fixing restrictions were viewed by the court as a permissible "condition of sale", because "when the patentee licenses another to make and vend

⁹² 356 U.S. at 5, 2L. Ed. 2d. at 549; In 1970, the Antitrust Division of the U.S. Department of Justice sorted out nine types of restricting licensing clauses that were considered per se violations of the antitrust laws. Those restrictive clauses include "tying arrangements"; "mandatory package licensing"; "licensing cartel agreements"; "restrictions after sales of patented goods"; "exclusive licensing"; "restrictions on the price of the licensed product"; "royalty payment for the unrelated products"; "restrictions after expiration of the license or patent rights"; "mandatory grant-back or exclusive grant-back license". See 5 Trade Reg. Rep. (CCH) § 50, 146 (1977).

and retain the right to continue to make and vend on his own account, the price at which his licensee will sell will necessarily affect the price at which he can sell his own patented goods. It would seem entirely reasonable that he should say to the licensee, 'Yes, you may make and sell articles under my patent but not so as to destroy the profit that I wish to obtain by making them and selling them myself.'"⁹³

There are three important tests associated with application of the rule of reason.⁹⁴ First, the restrictions must be ancillary to the lawful main purpose of a contract. Second, the scope of the restrictions must not be substantially greater than necessary to achieve the lawful main purpose. The third criterion is the reasonable duration of the restrictions.

10. EEC Competition Law and Regulations for Patent Licensing
A. The Treaty of Rome - Articles 85 and 86

EEC competition law is mainly embodied in Articles 85 and 86 of the Treaty of Rome of 1957, which seeks to create

⁹³ 272 U.S. 490-91 (1926).

⁹⁴ See Tom Arnold, U.S. Antitrust and Misuse Law, in the Law and Business of Licensing (1980) p. 360. 99-101. See also *supra* n. 91, p. 3-4.

a "Common Market".⁹⁵ Articles 85 and 86 are considered to contribute to that purpose by prohibiting unnecessary restrictions on competition.⁹⁶

⁹⁵ i.e. The Treaty Establishing the European Community. Article 2 of the Treaty reads:

"The Community shall have as its task, by establishing a common market and progressively approximating the economic policies of Member States, to promote throughout the Community a harmonious development of economic activities, a continuous and balanced expansion, an increase in stability, an accelerated raising of the standard of living and closer relations among the States belonging to it.

⁹⁶ Articles 85 and 86 of the Treaty resemble, respectively, Sections 1 and 2 of the U.S. Sherman Act of 1890. Article 85 reads in part:

1. The following shall be prohibited as incompatible with the common market: all agreements between undertakings, decision by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market, and in particular those which:
 - (a) directly or indirectly fix purchase or selling prices or any other trading conditions;
 - (b) limit or control production, markets, technical development, or investment;
 - (c) share markets or sources of supply;
 - (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
 - (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.
2. Any agreements or decisions prohibited pursuant to this Article shall be automatically void.
3. The provisions of paragraph 1 may, however, be declared inapplicable in the case of:
 - any agreement or category of agreements between undertakings;
 - any decision or category of decisions by associations of undertakings;
 - any concerted practice or category of concerted practices which contribute to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not:
 - (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives;

Article 85 prohibits agreements or concerted practices that have the effect of restricting or distorting competition within the Common Market. Under Article 85(1) of the Treaty, the following practices shall be prohibited because of their incompatibility with the Market:

- a) direct or indirect price fixing;
- b) control of production, markets, and technical development;
- c) market sharing or the sharing of sources of supply;
- d) the application of unequal conditions to parties undertaking commercial transactions;
- e) imposition on other parties of additional obligations unconnected with the subject of a contract.

-
- (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.

Article 86 reads:

Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market insofar as it may affect trade between Member States. Such abuse may, in particular, consist in:

- (a) directly or indirectly imposing unfair purchase or selling prices on other unfair tradition conditions;
- (b) limiting production, markets or technical development to the prejudice of consumers;
- (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

Pursuant to Article 85(2), any agreements violating the provisions of Article 85(1) shall be automatically null and void. However, it does not provide for any damages remedy as compared with the U.S. antitrust laws.

It should be noted that Article 85(3) exempts from the application of Article 85(1) restrictive agreements and practices which prove to be conducive to an improvement of the production or distribution of goods or to technical and economic progress.

Article 86 of the Treaty prohibits the abuse of a dominant market position. Under its provisions, any improper exploitation by one or more undertakings of a dominant position within the Common Market shall be prohibited because of its negative effects on trade between Member States.

B. EEC Regulations for Patent Licensing - The Block Exemption

On January 1st, 1985, EEC Regulation 2349/84 went into effect.⁹⁷ As of that date, patent and know-how licensing agreements complying with the Regulation will be granted an automatic exemption from the prohibition of Article 85(1) of the Treaty of Rome, and the parties to such

⁹⁷ The Regulation was adopted by the Commission of the European Communities on July 23, 1984, O. J. Eur. Comm (No. L219) 15 (1984).

agreements will be protected against liability from fines for the failure to notify the EEC Commission for an individual exemption under Article 85(3).⁹⁸

The adoption of Regulation 2349/84 can be viewed as an important development of EEC competition law with respect to licensing agreements. It also represents the latest result of a persistent effort made by CEC (the Commission of the European Communities) to refine its policies towards patent licenses and especially, to formulate a regulation for automatic exemption of the acceptable license terms.⁹⁹

Regulation 2349/84 consists of 27 numbered paragraphs which define its scope and justification for the terms of the exemption. The principal provisions of the Regulation which affect the conclusion of licensing agreements are contained in the first three articles. Article 1 provides for an exemption of seven restrictive obligations which are

⁹⁸ Agreements that are caught by Article 85(1) will be immune from fines if they are notified to the Commission pursuant to Regulation 17/62, O.J. Eur. Comm. (No. 3) 204 (1962).

⁹⁹ The major milestones in the long way to adoption of the Regulation include the Commission's 1962 announcement on patent licensing agreements; the cases decided by the Commission in the early 1970s and thereafter, the publication of a draft of a proposed regulation in 1979 and the decision of the European Court of Justice in the Maize Seed case. See Comm. Mkt. Rep. § 2698; § 9485; § 8805.

normally caught by Article 85(1).¹⁰⁰ Article 2 - the so-called "white list" contains a list of potential contractual provisions which are "generally not restrictive of competition and therefore not even subject to notification."¹⁰¹ Article 3 sets forth the "blacklist" of contractual provisions or restrictions whose inclusion in a licensing agreement will make the exemption unavailable.¹⁰² This Article is of importance to the licensing transactions because it has supplemented and clarified the legal prohibition of EEC competition law against certain restrictive practices.

However, it should be pointed out that the block exemption provided for by Regulation 2349/84 only applies to

¹⁰⁰ Supra n. 97, Art. 1 at 18-19. These exempted obligations include such restrictions as "the licensor's obligation not to license other"; "territorial protection between the licensor and the licensee"; "non-competition between licensees"; "obligation to use the licensor's trademark"; and other less restrictive obligations of the same type referred to in Article 1.

¹⁰¹ Ibid, Art. 2 at 19-20. These provisions are "tying arrangements"; "minimum payment or quantity"; "restrictions on field of use"; "restrictions on the use of property rights after the expiry of the license"; "restriction on sublicensing"; "obligation to affix a patent notice"; "obligation to preserve the secrecy of know-how"; "obligation to assist in patent infringement actions"; "quality control"; "nonexclusive grant-back arrangements"; and "most-favored licensing agreement".

¹⁰² Ibid, Art. 3, at 20-21. These contractual provisions include "no-challenge clauses"; "automatic extension of the license to cover patents not originally licensed"; "noncompetition clause"; "royalty payment for unpatented products"; "maximum quantity control"; "price restrictions"; "customer and marketing restrictions"; "grant-back of rights in improvements or new application"; "obligation to accept unwanted licenses"; and other restrictions relating to passive sales [Article 3(10)] and parallel imports [Article 3(11)].

bilateral patent and know-how licensing agreements¹⁰³ and the Commission also reserves the right to terminate the application of the block exemption once an exempted agreement has been found to have certain effects incompatible with the conditions of Article 85(3) of the Treaty.¹⁰⁴

11. Control of the Export of Technology

A. Unilateral Regulation

The current legal control over technology exports can be divided into two broad categories: national or unilateral regulation and the multilateral control coordinated by the related countries. It is important to note that among the major industrial countries, the United States plays a leading role in maintaining strict unilateral export restrictions on technology and its transfer.¹⁰⁵

¹⁰³ Ibid, Art. 1, Art. 9, Recitals (7) and (8). For know-how licensing agreements, in 1986, the Commission of the European Committee issued a Memorandum entitled "The Treatment of Know-How Licensing under the Competition Rules", and in 1987, the substance of that Memorandum became a proposed block exemption for know-how licensing agreements. See Draft Commission Regulation on the Application of Article 85(3) of the Treaty to Certain Categories of Know-How Licensing Agreements. 30 O.J. Enr. Comm (No. C214), 2 (1987).

¹⁰⁴ Ibid, Art. 9.

¹⁰⁵ For export control in France, Norway, Spain and the United Kingdom, see Henry Oahl, U.S. Restrictions on High Technology Transfer: Impact Abroad and Domestic Consequences, 26 Colum J. Transnat'l. L. (1987) p. 27-42.

Under U.S. law, export control is intended to serve three basic purposes:

- *Protection of national security* - to prevent U.S. technology from contributing to the military strength of unfriendly countries that may produce adverse consequences to U.S. national security.¹⁰⁶
- *Promotion of foreign policy* - to implement a variety of U.S. foreign policy objectives and to fulfil international obligations.¹⁰⁷
- *Guarantee of domestic short supply* - to protect the U.S. economy from suffering as a result of the exploitation of scarce materials and from increased inflation due to the exports of technology.¹⁰⁸

The basic statutes effective in the United States are the 1979 Export Administration Act (EAA) and the 1985 Amendments Act. Under the EAA, two major government agencies are authorized to perform export control duties. One is the Department of Defence (DOD) and another is the Department of Commerce (DOC). The DOD is required to administer export controls mainly for the national security purpose. Its responsibilities include the development of the Militarily Critical Technologies List (MCTL), review of export license

¹⁰⁶ 50 U.S.C.A. app. § 2404 (West Supp. 1986).

¹⁰⁷ Ibid, § 2405.

¹⁰⁸ Ibid, § 2406 and 15 C.F.R. § 377 (1986).

application to communist countries and some non-communist destinations.¹⁰⁹ The DOC is responsible for export controls on dual-use technologies (military and non-military) through its own Control List which covers over 100,000 items divided among 240 classifications.¹¹⁰ Exporters in the United States planning to export technologies must first apply to the DOC for either a general license or a validated license.¹¹¹ The type of license required is decided by both the special requirements for that particular technology in the Control List and the intended destination of technology.

Under the EAA and related regulations, the penalty for violation of export restrictions may vary. Violators may be prosecuted by the Justice Department and subject to fines and imprisonment.¹¹² There are also different administrative sanctions applicable, such as suspension or denial of export privileges conferred under the EAA.¹¹³

¹⁰⁹ See Ihor Fedorowycz, Preventing the Transfer of Militarily Critical Technology to the Soviet Bloc: The Case for Strong National Security Export Controls, 26 Colum J. Transnat'l L. (1987)1, p. 65-67.

¹¹⁰ 15 C.F.R. §§ 368-399 (1987); see also, National Security Protection: The Critical Technologies Approach to U.S. Export Control of High-Level Technology, 15 J. Int'l L. & Econ. p. 575 (1981).

¹¹¹ Ibid, 15 C. F.R. §§ 371, 1-3.

¹¹² Ibid, § 387. 1 (a) (1) (ii) (1987).

¹¹³ Ibid, § 387. 1 (b) (1) - (3).

It should be noted that the U.S. export restrictions have an extensive impact on technology transfer abroad. They greatly affect the transfer of dual-use technology because of national security concerns. For U.S. foreign policy consideration, technology exports are also subject to the political assessment of the U.S. Government over the situations in technology importing countries. South Africa has had export restrictions imposed on it for its racial policies, and Libya and Syria for their support of international terrorism.¹¹⁴

B. Multilateral Controls - COCOM

The Coordinating Committee for Multilateral Export Controls, so called COCOM, is an informal non-treaty organization consisting of the United States, its NATO allies (except for Iceland¹¹⁵) and Japan. The general scheme of COCOM is to seek coordination among the member countries' export control over strategic technology and materials exported to the Soviet Bloc and other communist countries.

¹¹⁴ Matthias K. Hentzen, United States Export Restrictions for Foreign Policy and National security Purposes: The 1985 Amendment to the Export Administration Act and Beyond, 26 Colum J. Transnat'l L (1987) p. 103.

¹¹⁵ i.e. Belgium, Canada, Denmark, France, the Federal Republic of Germany, Greece, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Turkey and the United Kingdom.

Multilateral export control under COCOM is mainly achieved through the creation and administration of the International List, which has been approved by the member countries for strategic control of technology and goods significant to the development and production of military systems.¹¹⁶ Compared with the Control List administered by the U.S. Commerce Department, COCOM's International List seems less restrictive because of a lack of effective enforcement power within COCOM.

COCOM has no formal treaty status within the meaning of international law. Decisions made by COCOM therefore do not bind member governments. However, they obtain legal force when they are adopted by a member country's export legislation.¹¹⁷ In general, entities within the COCOM member countries are required to obtain export licenses for the transfer of technologies and commodities under the International List to non-member destinations.¹¹⁸

¹¹⁶ Supra N. 109, p. 73-74.

¹¹⁷ See Note, COCOM: Limitations on the Effectiveness of Multilateral Export Controls, 2 *wis. Int'l. L.J.* (1983) p. 106-119-20.

¹¹⁸ Supra n. 109, p. 76.

Part IV

Current Forms of Legal Intervention in Developing Countries

12. Observation - Initial Policies and Dilemma

"The drive to industrialize was the prime aim of economic policy for many developing countries in the years immediately following independence."¹¹⁹ During that period, policies toward transfer of technology were designed to strengthen industrialization policies. To this end, most developing countries offered many incentives to technology transfer from abroad. These included guarantees on convertibility of foreign exchange, tariff protection, tariff remittance on inputs, and tax incentives such as tax holidays, investment allowances, accelerated depreciation and tax exemption.¹²⁰

It is no doubt that the earlier policies introduced by developing countries were successful in promoting a large inflow of foreign technology and a higher rate of industrialization. In the years between 1960 and 1977, the share of industry in GDP had risen from 17 to 25 percent among low-income developing countries, and from 32 to 36 percent

¹¹⁹ F. Stewart, *Technology Transfer and North/South Relations*, in *Technology and International Affairs* (ed. 1981), p. 203.

¹²⁰ *Ibid*, p. 204.

among middle-income countries.¹²¹ During such a short period, developing countries accounted for an increasing proportion of world manufacturing value added. In 1960, the figure for the developing countries' proportion was 6.9 percent; in 1977, 9 percent.¹²²

However, in the course of industrialization, developing countries had soon realized that there were so many restraints arising from international economic exchange. In the field of technology transfer, developing countries have encountered a significant dilemma. On the one hand, developing countries attempted to take advantage of achievements and opportunities offered by new technology in order to expedite their economic and technological progress; on the other hand, they have faced tremendous difficulties obtaining appropriate technology because of the imperfection of international technology markets and the lack of direct legal regulation. In the field of the international transfer of technology, developing countries have very limited bargaining power due to the fact that most of desired technologies are either controlled by a handful of

¹²¹ Ibid, p. 205; see also World Development Indicators (World Bank, 1979); Industrialization for the Year 200: New Dimensions (UNIDO, 1979), see generally, W. Baranek and G. Ranis, Science, Technology and Economic Development (1978).

¹²² Ibid.

multinational corporations¹²³ or withheld by the government of a nation where the technology supplier is located.¹²⁴ Various business restrictive practices prevailing in technology transactions further prevent developing countries from importing technology on reasonable terms and conditions and affect their ability to adopt imported technology to the local economy. As far as the international legal system is concerned, there is a total absence of any direct regulations specifically dealing with contractual transactions of technology.¹²⁵

"As the consequences of the unregulated inflow of technology came to be realized, new objectives evolved. These objectives concern the characteristics of the imported technology, its costs, and its effects on local decision making and local technological developments."¹²⁶ To achieve these objectives, a number of developing countries have introduced active regulatory policies. The Andean Pact led

¹²³ See generally, Vernon, *The Power of Multinational Enterprises in Developing Countries*, in the case for the Multinational Corporation (ed. 1977), p. 151.

¹²⁴ Such as U.S. Trading with the Enemy act of 1917 or the Export Administration Act of 1979.

¹²⁵ See UNCTAD Report, *A Strategy for the Technological Transformation of Developing Countries*. UN Doc. TD/B/C.6/90.

¹²⁶ See Stewart, *supra* n. 119, p. 209.

the way in this respect.¹²⁷ Many others have enacted complex laws and regulations relating to direct control of technology transactions. These legal measures taken by developing countries can be considered as a significant sign of governmental intervention in technology transfer with a view to overcoming the imperfection of the international technology markets.

13. Laws and Regulations on Transfer of Technology

Although developing countries present significant cultural, political and economic differences, "a basic core may be detected in the field of transfer of technology regulations. This implies that a common theoretical support and similar practical problems have been used and faced in most technology importing countries".¹²⁸

¹²⁷ e.g., Decision 24 of the Cartagena Agreement Commission (1970).

¹²⁸ See G. Cabanellas, Jr., Antitrust and Direct Regulation of International Transfer of Technology Transactions, I.I.C. Studies (1980) vol. 7, p. 15.

A. Basic Structure

(1) Scope of Application

a. Types of Transactions

The recent laws and regulations on transfer of technology in developing countries generally apply to the following arrangements.¹²⁹

(a) Agreements for the licensing of industrial property rights such as patents, utility models and industrial designs;

(b) Agreements for the know-how licensing;

(c) Agreements involving the provision of technical assistance, consultancy and services;

(d) Industrial and technical co-operation agreements, such as the provision of engineering services for the setting up of a plant.

b. Parties to Transactions

The following parties involved in transfer of technology transactions are governed by most of the laws and regulations:

¹²⁹ See generally, Compilation of Legal Material Dealing with Transfer and Development of Technology, UNCTAD TD/B/C.6/81 (1982).

(a) Transactions between private independent parties, one of which is at least resident, or is a national of the importing countries,

(b) Transactions between a local public entity or state owned enterprise and a foreign company or organization;¹³⁰

(c) Transactions between a locally established foreign-owned enterprise and a local entity (public or private.)¹³¹

As to parent-subsidiary transactions, legal solutions adopted by developing countries are intended to treat such transactions in a manner identical to transactions between independent parties when transactions involve payments.¹³²

¹³⁰ Article 2 of China's Regulations on Technology Contract (1985) also covers the companies, enterprises and organizations outside of China. See Interade Supplement (November, 1985) p. 40. It should be noted that as far as its overall economic developments and its per capita income level are concerned, the people's Republic of China is still considered a developing country. In addition, China's Regulations on Technology Contract has, in many aspects, similar features to those enacted in other developing countries.

¹³¹ Under Philippines Technology Regulations, foreign-owned companies refer to any enterprises, partnership, corporation or other form of business organization formed, chartered or existing under the laws of the Philippines, and majority of the outstanding capital of which is owned by aliens.

¹³² e.g. Decision No. 24 of the Commission of the Cartagena Agreement, Art. 21 and Brazil Law No. 4131, Art. 14.

(2) Registration and Approval Procedures

Most of the laws and regulations adopted by developing countries require that all agreements or contracts for the transfer of technology be submitted to the relevant government agency for registration. The registration process usually involves governmental evaluation and approval, although this process may vary from one country to another.

In some countries, application for registration must be made after the parties have reached and signed the agreement.¹³³ The screening authority thus has the discretion so as to approval or disapprove it. In some other countries, the laws and regulations provide for more flexible procedures which allow the submission of draft contracts for approval and permit the amendments to contracts to be made for registration at any time during the evaluation period.¹³⁴

The registration and approval procedures have certain legal effects on the contractual transactions and the parties thereto. Under some of the laws and regulations the enforceability of the agreement or contract depends upon its

¹³³ Such as the laws and regulations of China, Mexico and Yugoslavia. Also see, Yugoslavia's Law on Foreign Investments, 28 ILM 1546-1555 (1989).

¹³⁴ e.g. the laws of India and Venezuela. Also see Venezuela's Decree No. 727: Foreign Investment, Technology Licensing and Foreign Credit Regulations, 29 ILM 278-298 (1990).

registration and approval.¹³⁵ Some other laws and regulations provide that only registered agreements are eligible for availability of foreign exchange for royalties and other payments.¹³⁶ In many developing countries, the laws and regulations contain criminal and administrative penalties for those who fail to register an agreement, provide false data on registration or refuse to furnish required information.¹³⁷

(3) Control of Restrictive Business Practices

Control over restrictive practices involved in transfer of technology is an important part of laws and regulations enacted by developing countries. These laws and regulations, when dealing with restrictive practices, intend to protect certain broader interests closely related to the economic and technological development of technology importing countries. "This approach is based on the premise of the existence of de facto inequality in the bargaining position of the parties to transfer of technology agreements, and therefore seeks to prohibit any practice that establishes a relationship of dependence or control over the productive,

¹³⁵ e.g. the laws of Mexico, Nigeria and Yugoslavia.

¹³⁶ For example, in Brazil and some member countries of the andean Pact, lack of approval may imply that the foreign currency needed for such payments can not be obtained from the banks.

¹³⁷ e.g. Technology Law of Mexico.

technological or marketing activities of the acquiring party or any practice that adversely affects the economy or development policies of the acquiring country."¹³⁸

There are a variety of restrictive practices found in technology transfer and most of those practices are subject to legal examination and prohibition. The laws and regulations usually target practices, such as "restriction on field of use and volume of output"; "non-objection to the validity of industrial property rights"; "tying clauses"; "price-fixing"; "grant-back clauses"; "non-competition clauses"; "export restrictions"; and "restrictions after expiration of industrial property rights".¹³⁹

(4) Obligation Provisions

In order to encourage the parties to reach a satisfactory agreement based upon good faith and upon fair and honest business practices, transfer of technology laws and regulations adopted by developing countries impose certain obligations on the parties to technology transactions. These obligations usually deal with the responsibilities of the parties such as to describe in the contract the nature and

¹³⁸ See UNCTAD Report, Restructuring the Legal Environment: International Transfer of Technology, p. 35 UN Doc. TD/B/C.6/91.

¹³⁹ UNCTAD Report, Control of Restrictive Practices in Transfer of Technology Transactions, UN Doc. TD/B/C.6/72.

specifications of imported technology;¹⁴⁰ to guarantee legal validity and ownership of industrial property rights;¹⁴¹ and to preserve confidential character of technical know-how.¹⁴² Some laws and regulations include particular provisions which require the technology supplier to perform specific obligations such as performance guarantees; provision of technical services; provision of technical training of local personnel; and the use of local resources and personnel.¹⁴³

(5) Choice of Law and Jurisdiction

In respect of any potential disputes or litigation derived from technology transactions, most laws and regulations provide that the laws of the host country apply to

¹⁴⁰ e.g. Brazil Law No. 5648 and Act No. 15, Sect. 2.5.1, 4.5.1, 5.5.1; China's Regulations on Technology Contract, art. 5(1), art. 6; Yugoslavia's Technology Law, art. 24(a).

¹⁴¹ e.g. China's Regulations, art. 6; Brazil's Act No. 15, Sect. 4.5.2(d)(vii); Mexico's Technology Law, art. 15, sect. xii; Yugoslavia's Technology Law, art. 24(9).

¹⁴² Supra n. 138, p. 19; Mexico Technology Law, art. 15, sect. xi; Yugoslavia's Technology Law, art. 24(10); China's Regulations, art. 7.

¹⁴³ e.g. Brazil's Act No. 15, sect. 4.5.1(d)(e), 5.5.1(e); China's Regulations, art. 5(2); Yugoslavia's Technology Law, art. 24(3)(6); Zambia's Industrial Development act, sect. 15(e); see also Brazil Normative Acts Nos. 55 and 60 on specialized technical services; Decision No. 24 of the Cartagena Agreement Commission, art. 24.

registered contracts.¹⁴⁴ Such provisions on applicable law can be deemed part of local control over the legal elements involved in transfer of technology transactions. In some developing countries, the laws and regulations prohibit the parties from laying down contractual clauses making foreign jurisdictions competent in matters relating to registered transactions.¹⁴⁵ In some other cases, the regulatory authorities require express covenants submitting disputes to local courts.¹⁴⁶ These legal provisions attempt to prevent the local transferees from inconvenient and costly foreign litigation. "The belief that foreign courts will be reluctant to apply the importing country's law, especially where the country's public policy is involved, also underlies this agreement to forum clauses".¹⁴⁷

¹⁴⁴ Supra n. 128, p. 29. See also, China's Regulations on Technology Contract, art. 5, which provides that "the conclusion of technology import contract shall abide by the Foreign Economic Contract Law of the People's Republic of China and other relevant legal provisions". See also, Foreign Economic Contract Law of PRC, chap. vi, arts. 37 and 38, which provide that parties "may submit the case the Chinese or other arbitration bodies" they "may bring their disputed case to the people's court if no arbitration clauses are included in the contract and they fail to reach a written agreement on arbitration after the dispute arises".

¹⁴⁵ See Decision No. 24 of the Cartagena Agreement Commission, art. 51.

¹⁴⁶ Supra n. 128, p. 30.

¹⁴⁷ Ibid.

B. Issues and Prospects

The emergence of transfer of technology laws and regulations represent a recent development in the legislation at the national level. There is no doubt that these laws and regulations have important impacts on international technology transfer.

However, it should be pointed out that the laws and regulations enacted by developing countries are not well established in a sense that many of them are ad hoc and uncoordinated in nature.¹⁴⁸ Those laws and regulations seem to have a short-term goal and are not co-ordinated with other institutions such as the economic planning bodies and councils of scientific and industrial research. As to the registration and approval process, the screening authorities of developing countries are also faced with difficulties evaluating the effects of imported technologies due to limited knowledge of highly diversified technologies, or because of a lack of qualified personnel to provide technical advice, or because of the excessive costs of any detailed evaluation.¹⁴⁹ In addition, the laws and regulations adopted by some developing countries take extreme measures when dealing with specific

¹⁴⁸ Supra n. 138, p. 10.

¹⁴⁹ Supra n. 128, p. 20.

issues such as certain restrictive practices and applicable laws and forums.

Under the basic principles of international law, each state has the right to enact laws regulating certain activities within its own jurisdiction. However, international economic and technological interdependence and interplay objectively demand mutual understanding and harmonized legal solutions to various issues. To this end, the unilateral legislation of developing countries still needs implementation and judicial interpretation. It is hoped that the laws and regulations on transfer technology will function in a way that they not only help achieve the objectives of developing countries, but also satisfy the legitimate rights and interests of the parties to technology transactions.

14. Regional control - The Andean Foreign Investment Code

In 1969, the Andean Subregional Integration Agreement was concluded in Cartagena, Colombia, by the representatives of Bolivia, Chile, Colombia, Ecuador, and Peru. Venezuela became a member in February of 1973. The main objective of this Agreement is to create an Andean common market similar to the European Common Market.

On December 31, 1970, the Commission of the Agreement¹⁵⁰ passed Decision No. 24. This is so called Andean Investment Code, which deals with, among other things, foreign investment, patents, trademarks and technology licensing.¹⁵¹ The Investment Code has been implemented as a result of member states' proposals for adoption of "standards that will facilitate the use of modern technology, without limiting the market for products manufactured with foreign technical assistance..."¹⁵² The Commission then declared that "national enterprises must have the best possible access to modern technology... It is necessary to establish effective mechanisms ... under which foreign technology is acquired".¹⁵³ To this end, the Investment Code provides that all patents, trademarks and technical assistance agreements involving foreign technology transfers to a member state must be registered with the Control Office,¹⁵⁴ and decisions on the approval or disapproval of the proposed transfer should

¹⁵⁰ The Commission is the supreme agency of the Agreement with a president serving a term of one year's duration. For the modified Andean fact, see Commission's Decision 236: codification of the Cartagena Agreement (1988), 28 ILM 1169-1211 (1989).

¹⁵¹ e.g. Common Regime of Treatment of Foreign Capital and Trademarks, Patents, Licenses and Royalties, in 11 Int'l Mat'ls 126 (1972).

¹⁵² Ibid, p. 126.

¹⁵³ Ibid, p. 127.

¹⁵⁴ Ibid, art. 6(f), p. 131.

depend on the "effective contribution of the goods incorporating the technology".¹⁵⁵

Legal control of restrictive practices in technology transfer is one of the important aspects of the Investment Code. Provisions on restrictive practices are contained in Article 20, which provides that member countries will not authorize the signing of contracts concerning the transfer of foreign technology or patents which include certain restrictive clauses such as tying restrictions; price fixing; production control; non-competition clauses; grant-back clauses; export restrictions.¹⁵⁶

¹⁵⁵ Ibid, art. 18, p. 132.

¹⁵⁶ Ibid, Art. 20, p. 133. Article 20 of the Investment Code provides that Member Countries will not authorize the signing of contracts concerning the transfer of foreign technology or patents which contain:

- (a) Clauses by virtue of which the furnishing of technology imposes the obligation, for the recipient country or enterprises, to acquire from a specific source capital goods, intermediate products, raw materials, and other technologies or of permanently employing personnel indicated by the enterprise which supplies the technology. In exceptional cases, the recipient country may accept clauses of this nature for the acquisition of capital goods, intermediate products or raw materials, provided that their price corresponds to current levels in the international market;
- (b) Clauses pursuant to which the enterprise selling the technology reserves the right to fix the sale or resale prices of the products manufactured on the basis of technology;
- (c) Clauses that contain restrictions regarding the volume and structure of production;
- (d) Clauses that prohibit the use of competitive technologies;
- (e) Clauses that establish a full or partial purchase option in favor of the supplier of the technology;
- (f) Clauses that obligate the purchaser of technology to transfer to the supplier the inventions or improvements that may be obtained through the use of the technology;

It should be noted that since its adoption, the chief goals of the Investment Code have not been fully achieved mainly because of slow progress in national legal implementation.¹⁵⁷ However, despite slow development of the Investment Code at the national level, the transfer of technology is still controlled and regulated by the existing Code and the laws of member states. Technology transactions with inappropriate contractual provisions are still subject to rejection or disapproval by the screening authorities.

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- (g) Clauses that require payment of royalties to the owners of patents for patents which are not used; and
 - (h) Other clauses with equivalent effects.

¹⁵⁷ See John R. Pate, Andean Group Updated: Crisis and Changing Concepts of Integration (1976).

Part V

Bilateral Agreements

15. Bilateral Protection of Industrial Property Before and After the Paris Convention.

Earlier development of bilateral agreements on industrial property rights can be found in various commercial treaties and special conventions. By 1883, there were more than sixty such treaties concluded between different countries.¹⁵⁸ All of these treaties contained stipulations for the protection of industrial property rights such as trademarks and industrial designs. Only two of those treaties, i.e. the Treaty of Commerce of 1881 between Germany and Austria-Hungary, and the Customs Convention of 1876 between Austria-Hungary and Liechtenstein, particularly dealt with the reciprocal protection of patent rights.¹⁵⁹

After the adoption of the Paris Convention in 1883, bilateral treaties were still entered into by member countries for a more effective protection of the industrial property of their nationals. Some bilateral treaties went further to repeal the obligation of working patents, which was stipulated

¹⁵⁸ See Stephen P. Ladas, *Patents, Trademarks and Related Rights* (1975), Vol. I, p. 43.

¹⁵⁹ *Ibid*, p. 46.

by Article 5 of the Convention,¹⁶⁰ and the forfeiture for imported goods produced with the design or model.¹⁶¹ As another continuing development, the bilateral treaties were also concluded by the member countries and non-member countries. Under the indirect influence of the Paris Convention, the principle of national treatment has been generally adopted in such treaties, and in some cases, the non-member countries also obtained the special advantages contained in the Convention, such as the right of priority. The typical bilateral treaties were the Conventions of 1925 and 1928 between Germany and the Union of Soviet Socialist Republics.¹⁶²

16. Bilateral Investment Treaties - European Practice

Since the Second World War, the Bilateral Investment Treaty (BIT) has emerged as a unique means favoured by major European industrialized countries to deal with investment situations in developing countries. These countries took the lead in negotiating the BITs with the host governments.¹⁶³

¹⁶⁰ Ibid, p. 46.

¹⁶¹ Ibid.

¹⁶² Ibid, p. 199-200.

¹⁶³ For the European countries involved in the negotiations on the BITs, see Mark S. Bergman, *Bilateral Investment Protection Treaties: An Examination of the Evolution and Significance of the U.S. Prototype Treaty*, 16 N.Y.U.J. Int'l L. & Pol., p. 10 (1983).

During 1979 and 1980, twenty-four BITs were negotiated and some of them have come into effect since.¹⁶⁴

The general scheme of the BITs is to seek the more extensive and secured protection for investment "by way of the most precise clauses possible".¹⁶⁵ This reflects a great concern of European countries over a variety of control measures in developing countries on investment activities engaged in by their nationals. Although the protective schemes of the BITs may differ in their respective content, the issues and the approaches thereto are quite similar.

The BITs mainly deal with such issues as national treatment or most favoured nation treatment;¹⁶⁶ expropriation of investments;¹⁶⁷ entry control;¹⁶⁸ free transfer of capital;¹⁶⁹ and the settlement of disputes.¹⁷⁰ Although

¹⁶⁴ Ibid.

¹⁶⁵ See Voss, *The Protection and Promotion of European Private Investment in Developing Countries - An Approach Towards a Concept for European Policy on Foreign Investment, A German Contribution*, 18 Common Mkt. L. Rev., p. 363, 370 (1981).

¹⁶⁶ See the text of Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Republic of the Philippines for the Promotion and Protection of Investments, reprinted in 52 British Year Book of International Law (1981), p. 250-54.

¹⁶⁷ Ibid.

¹⁶⁸ Ibid.

¹⁶⁹ Ibid.

technology is not singled out as a major topic, it is indeed defined by BITs as part of investment assets.¹⁷¹ This may create potential impacts on the technology transactions and the parties thereto.

17. The U.S. Bilateral Investment Treaties - The U.S. Prototype

The U.S. has long relied upon Treaties of Friendship, Commerce and Navigation (FCN) to deal with its interstate relationships.¹⁷² However, the post war period saw dramatic changes in the international business and investment arena. It seemed that the U.S. FCNs no longer provided satisfactory solutions to the changing situations.¹⁷³

In early 1982, the U.S. Government announced its intention to negotiate with Panama the BIT. A year later, the U.S. signed BITs with Egypt and Panama.¹⁷⁴

¹⁷⁰ Ibid.

¹⁷¹ Ibid, Article 1.5(iv).

¹⁷² See Walk, Modern Treaties of Friendship, Commerce and Navigation, 42 Minn. L. Rev. p. 805 (1958).

¹⁷³ Supra n. 163, p. 6-8.

¹⁷⁴ Ibid.

These BITs, concluded by the U.S., are based on the U.S. prototype which serves as the sole basis for future negotiations on BITs.

The U.S. prototype is similar to European BITs, but its scope is expanded in the fields of the establishment of investment rights, prohibition on performance requirements by the host government and the international minimum standard of treatment.¹⁷⁵

¹⁷⁵ Ibid, p. 19-33.

Part VI

International Treaty - the Paris Convention

18. The Establishment of the Convention

The earlier national patent laws were so divergent that they were unable to provide adequate protection of foreigners' rights over industrial property.¹⁷⁶ Diversity of national legislation on patents can be attributed to the fact that each patent law was developed independently, pursuant to its general philosophy and tradition of its legal, judicial practices without any conscious consideration of its external effects and potential conflicting interests. As far as the international technology exchange was concerned, the incompleteness and uncertainty of the legal protection of industrial property rights afforded by various host countries became the major concern of foreign inventors. Such concern was especially apparent when the government of Austria-Hungary called upon the different countries to attend an international exposition to be held at Vienna in 1873. Because of inadequate protection of foreign patents in the host country, there was tremendous unwillingness on the part of potential participants to show their inventions at the Exposition. It was then considered a good opportunity to deal with divergence of national laws by taking advantage of this international

¹⁷⁶ See Ladas, *supra* n. 158, p. 19-31.

gathering at the Exposition. An agreement was consequently reached to create a congress for the purpose of reforming national patent legislation. This was the first significant step toward the final establishment of the Paris Convention of 1883.¹⁷⁷

At the Congress of Vienna in 1873, discussions were focused on patent matters and the means for achieving uniform patent legislation in all countries. Congress adopted four resolutions. Among other resolutions was one that created a permanent executive committee with the power to continue the work commenced and to carry out further discussions and conferences on transnational protection of exclusive rights.

In 1878, the International Congress on Industrial Property was held at Paris. The topic of discussion at this Congress was still unification of legislation, but more emphasis was placed on the securing of minimum unification. The issues discussed not only involved patents but also involved trademarks, designs, models and other related rights. At this Congress was also adopted a resolution creating a Permanent International Commission with "the task of determining the bases of a uniform legislation".¹⁷⁸

¹⁷⁷ Ibid, p. 60.

¹⁷⁸ Ibid, p. 63.

Following the 1878 International Congress, another important International Conference met at Paris in 1880. At this Congress, the focus of discussions was shifted from uniform legislation toward the adoption of a number of provisions to be incorporated in an international convention as a basis for minimizing diversity of national patent systems.¹⁷⁹ After the discussion and the deliberation on suitable provisions, the Conference adopted a draft convention which was later submitted for approval at the 1883 International Conference in Paris. The 1883 Conference signalled the final stage in the creation of the international regime for the protection of industrial property rights. On March 20, 1883, eleven of the participating countries signed the Convention and its Final Protocol.¹⁸⁰ With the exchange of ratifications, the Convention finally went into effect on July 7, 1884.¹⁸¹

19. Major Provisions of the Paris Convention

A. The Principle of National Treatment

As provided in Article 2 of the Convention, national treatment relates to the acquisition of all industrial property rights; terms and conditions of these rights and the

¹⁷⁹ Ibid, p. 63-67.

¹⁸⁰ Ibid, p. 67.

¹⁸¹ Ibid, p. 67-68.

related obligations; and the legal protection and remedy afforded by national law. According to Article 1, the national treatment clause applies to all of the subject matters as defined by the term "industrial property". Under the principle of national treatment, foreign nationals entitled to the advantages of the Convention are guaranteed equal treatment with nationals of the patent-granting country in all matters with respect to the acquisition, recognition, and enforcement of rights of industrial property.¹⁸²

B. The Right of Priority

The Convention establishes the right of priority to facilitate the practical workings of the principle of national treatment. Without a right of priority, an applicant for a patent had to file an application simultaneously in all countries to avoid the loss of the novelty of the invention due to its publicity. Under the right of priority, a prior patent application filed in one country does not, for a period of twelve months after such filing, affect the novelty of the same invention subsequently filed in any other countries recognizing the right of priority and the date of such

¹⁸² Ibid, p. 267.

subsequent filing is considered the same as that of the first filing.¹⁸³

C. The Principle of the Independence of Patents

Article 4 of the Convention provides that patents applied for in the various member states by nationals entitled to the benefits of the Convention are independent of patents obtained for the same invention in other countries, whether members of the Union or not. This means that the termination or expiration of a patent in one country does not affect a patent for the same invention in another state.¹⁸⁴

D. Limitations on Patent Rights

The Convention imposes major substantive limitations on the national patent systems of its contracting countries. These limitations mainly relate to compulsory license, revocation and forfeiture of patent rights. Under Article 5 of the Convention, a compulsory license may not be applied for, although a patent has not been worked or has been insufficiently worked, until three years after the date of the grant of the patent or until four years from the filing date

¹⁸³ Paris Convention for the Protection of Industrial Property (as revised at Stockholm in 1967), art. 4, See Ladas, *supra* n. 158, Appendix 2, p. 1919-1920.

¹⁸⁴ *Ibid*, art. 4.

of the patent application. It also provides that revocation of a patent is permissible only if the compulsory license has not sufficiently prevented abuses of the exclusive rights conferred by the patent, and that no revocation will be granted until two years after the issuance of the compulsory license.¹⁸⁵

Article 5 of the Convention also prohibits member states from the forfeiture of patent rights on the grounds that the patent holder imports into the country patented articles produced in a foreign country. It provides that the forfeiture of the patent shall not result when patented articles manufactured by the patent holder in any of member countries of the Union are imported into the country where the patent has been issued.¹⁸⁶

20. The Reform of the Paris Convention: Main Proposals of Developing Countries

For almost a century the basic principles and philosophy of the Paris Convention of 1883 have been defended as a just and universally practicable system.¹⁸⁷ It has been

¹⁸⁵ Ibid, art. 5.A (2-4).

¹⁸⁶ Ibid, art. 5.A (1).

¹⁸⁷ See J. E. O'Farrell, Industrial Property Rights and their Economic Aspect, AIPPI, 1972/II, p. 7.

also assumed that the Convention and its successive revisions have mainly served to promote economic and technological development, especially of developing countries through the protection of the invention by the grant of the patent.¹⁸⁸ However, over the past decades, this optimistic evaluation of the Convention has been critically challenged by developing countries. Based upon the fact that nationals of the developing countries own only about one percent of all patents, whereas foreign nationals hold six times more grants in the developing countries than nationals of these countries,¹⁸⁹ and that ninety to ninety-five percent of the patents held by nationals of the developed countries are never worked in developing countries,¹⁹⁰ developing countries therefore argue that the international patent system has not served its basic purpose of encouraging technology to be effectively transferred and worked in their countries. They also claim that under the principles of the Convention developing countries have no choice but to give their stronger foreign partners "unlimited freedom to utilize their power at the expense of the others".¹⁹¹ Accordingly, developing countries have expressed their strong demand for a meaningful

¹⁸⁸ Ibid.

¹⁸⁹ UNCTAD Report, The International Patent System: The Revision of the Paris Convention for the Protection of Industrial Property Right, UN Doc. TD/B/C.6/AC3/2 (1977) p. 25.

¹⁹⁰ Ibid.

¹⁹¹ Ibid.

reform of the Convention. Their main proposals for such reform involve the following major aspects:

1. Preferential Treatment - Developing countries suggest that the revised Convention should establish the principle of preferential treatment for developing countries. Preferential treatment should be granted without reciprocity to nationals of developing countries and enable them to benefit from the free choice of types of protection,¹⁹² the longer priority period,¹⁹³ and less patent fees.¹⁹⁴

2. Local Working of Patents - Developing countries take a stand that each member state of the Union should not be constrained to adopt any legislative measure needed to prevent the non-use of patents in host countries. The measure may include the granting of compulsory licenses and forfeiture of patent rights. The Convention should not restrict or prohibit member countries from resorting to any of these measures.¹⁹⁵

¹⁹² This mainly refers to inventor's certificates. See WIPO's Basic Proposals, Memorandum by the Director General, in preparation for the Diplomatic Conference on the Revision of the Paris Convention, UN Doc. PR/DC/3 (1979), art. A, p. 18.

¹⁹³ Developing countries proposed a fifty percent longer priority term. Ibid, art. B, p. 72.

¹⁹⁴ Developing countries suggested that all countries should charge developing countries' nationals fifty percent of the fee charged to others for obtaining and maintaining patents and trademarks. Ibid, art. A, p. 66.

¹⁹⁵ Supra n., 189, p. 33.

3. Restriction on import monopolies - Under Article 5 quater of the Convention, the patentholder has a monopoly right over a product imported into a country where he has obtained a valid patent on the process of producing the product. Developing countries argue that the exclusive right to a manufacturing process is not enough to justify the import control in the local market of the host country. In addition, the majority of developing countries do not provide patent protection to products manufactured by the patented process in their countries, providing no protection to imported products produced by the patented process. They therefore suggest that the monopoly right of the patentholder over importation should be limited by eliminating or changing Article 5 quater of the Convention.

It should be noted that like many other issues outstanding in North-South negotiations, the proposed change to the Paris Convention has also faced the hardship of reaching consensus mainly because of the conflicting interests among different groups of countries. However, there still exists a hope for a compromised solution when the participating countries come to realize that economic and technological development requires a more harmonized international system.

Part VII

International Negotiations on the Code of Conduct for Technology Transfer

21. History of the Code Negotiations

The idea of establishing an international code of conduct was first initiated by developing countries both inside and outside the United Nations forums. It was also reinforced by a number of studies produced in the late 1960s and early 1970s, which stressed the significant role of transfer of technology in the development process of developing countries as well as the prevailing conditions affecting the inflow of technology to these countries.¹⁹⁶ The formal proposal for international regulation of technology transfer was made at the first session of UNCTAD held in Geneva in 1964. The Conference of 1964 recommended that "competent international bodies ... should explore possibilities for adaptation of legislation concerning the transfer of industrial technology to developing countries, including the possibility of concluding appropriate

¹⁹⁶ See the earlier work by UNCTAD. e.g., The Transfer of Technology to Developing Countries, with Special References to Licensing and Know-how Agreement. UN Doc. TD/28/Supp.1.(1967); Major Issues Arising from the Transfer of Technology to Developing Countries, UN Doc. TD/B/AC.11/10 Rev. 2 (1975). The Possibility and Feasibility of An International Code of Conduct on Transfer of Technology, UN Doc. TD/B/AC.11/22 (1974).

international agreements in this field".¹⁹⁷ In 1973, the Trade and Development Board of UNCTAD made a further request to the Intergovernmental Group on Transfer of Technology as to "study the possibility and feasibility of an international code of conduct in the field of technology transfer."¹⁹⁸

In mid-1974, the concept of an international code became more pronounced when the General Assembly in its significant Programme of Action in the Establishment of a New International Economic Order decided that "all efforts should be made: to formulate an international code of conduct for the transfer of technology corresponding to needs and conditions prevalent in developing countries".¹⁹⁹ Following the General Assembly's decision, an Intergovernmental Group of Experts was convened to prepare a draft outline to serve as a basis for a universally applicable code of conduct.²⁰⁰ The negotiations and debates have been conducted by the Group of Experts among three "regional" groups - "Group B" consists of most of developed countries; "Group D" consists of the U.S.S.R. and other socialist countries; and "Group of 77",

¹⁹⁷ Proceedings of the United Nations Conference on Trade and Development, A.IV.26, Annexes 57, UN Doc. E/CONF.46/141, Vol. I.

¹⁹⁸ Trade and Development Board Res. 104(XIII), 13.UN TDBOR, supp. 2, TD/B/476 (1973).

¹⁹⁹ G.A. Res. 3202, 5-VI UN TDBOR, Supp. (No. 1)5, UN Doc. A/9559 (1974).

²⁰⁰ Res. 3(III), 14 UN TDBOR, Annexes, Agenda Item 8.1, Annexes 2, UN Doc. TD/B/520 (1974).

consists of developing countries. During UNCTAD IV in Nairobi in 1976, the Conference adopted resolution 89(iv) which decided "to establish within UNCTAD an intergovernmental group of experts, open to participation of all member countries, in order to elaborate [a draft code of conduct for the transfer of technology]".²⁰¹ The Group of Experts established by UNCTAD IV was given a mandate to formulate provisions ranging from mandatory to optional without prejudice to the final decision regarding the legal nature of the Code. Since 1976 to 1978, the Group of Experts had held six sessions during which Group B and the group of 77 revised their previous drafts while Group D submitted its own new draft.²⁰²

In December of 1977, the General Assembly, by its resolution 32/88, decided to convene a United Nations Conference on the Code of Conduct under the auspices of UNCTAD to negotiate the draft code and take all decisive measures necessary for its adoption.²⁰³ Since 1978, six sessions of the Conference have been held. The draft code of conduct discussed at the sixth session held in Geneva in May of 1985 represents the latest results of the negotiations on the Code.

²⁰¹ Reproduced in UNCTAD Report on its Fourth Session, UN Doc. TD/217 (1976).

²⁰² UN Doc. TD/AC.114 (1976); TD/AC.1/9 (1977); TD/AC.1/15 (1978); TD/CODE TOT/1/Add.1 (1978), Annexes I, II and III.

²⁰³ See G. A. Res. 32/188, UN. GAOR, Supp. No. 45, 117; UN Doc. A/32/45 (1977).

22. Structure and Consensual Aspects of the Draft Code

The structural arrangement of the present draft code basically remains the same as those previously discussed during the earlier sessions of the Conference.²⁰⁴ The draft code consists of a preamble and the following nine chapters:²⁰⁵

1. Definitions and Scope of Application;
2. Objectives and Principles;
3. National Regulation of Transfer of Technology Transactions;
4. Restrictive Practices;
5. Responsibilities and Obligations of Parties to Transfer of Technology Transactions;
6. Special Treatment for Developing countries;
7. International collaboration;
8. International Institutional Machinery; and
9. Applicable Law and Settlement of Disputes.

These chapters of the draft code deal respectively with a variety of key issues relating to international technology transactions and attempt to provide for the

²⁰⁴ See UNCTAD, Draft International Code of Conduct on the Transfer of Technology, UN Doc. TD/CODE TOT/20 (1979); TD/CODE TOT/25 (1980).

²⁰⁵ UNCTAD, Draft Code of Conduct, UN Doc. TD/CODE TOT/47 (1985).

possible legal norms and standards governing such transactions.

According to the main purpose and function of each chapter, the substantive provisions of the draft code may be divided into two basic categories: (i) those focusing on the legal control of technology transactions and the conduct of the parties thereto. The provisions under this category are contained in Chapter 4 regarding the elimination of restrictive practices; Chapter 5 dealing with clarification of responsibilities and obligations of parties to technology transactions; and Chapter 9 on applicable law and dispute settlements. (ii) Those concerning the necessary measures to be taken by States and their commitments to the Code. Those provisions are included in Chapter 3 relating to certain measures and criteria that States may adopt; Chapter 6 dealing with special treatment for developing countries; Chapter 7 concerning international cooperation; and Chapter 8 on the establishment of an international institutional machinery responsible for the application and implementation of the Code.

It should be noted that the negotiations during the past six sessions of the Conference had reached a certain

consensus on some of the important aspects of the Code.²⁰⁶ The provisions all agreed upon by different Groups include those concerning the main objectives of the Code (Chapter 2); national regulatory action (Chapter 3); special treatment for developing countries (Chapter 6); and international collaboration (Chapter 7). The provisions under Chapter 5 and Chapter 8 are also agreed upon with the exception of the subparagraphs on confidentiality (provisions 5.4(ii)), the nature, mandate of international institutional machinery and its Review Conference (provisions 8.1(a) and (b)).

23. Major Issues Outstanding at the Sixth Session

There are two key issues existing throughout the negotiations on the Code: one is "restrictive practices"; another is "applicable laws and settlement of disputes". The negotiations on both these issues during the previous sessions had encountered tremendous difficulties because of conflicting interests between the regional groups. The sixth session has also failed to produce the final agreement on those issues.

A. Restrictive Practices (Chapter 4)

There are a number of controversial subjects which were debated by the regional groups.

²⁰⁶ Ibid. and Background note prepared by the UNCTAD secretariat, TD/CODE TOT/49 (1985).

(1) Conceptual Conflict

In discussing the introductory section of Chapter 4, Group B insisted on the basic principle of competition and took the position that "restrictive business practices" in the transfer of technology should be prohibited or controlled due to their anti-competitive nature. By contrast, the position of the developing countries was that there should be an avoidance of all practices which, whether anti-competitive or not, are unfair and thus adversely affect the economic and technological development of the technology recipient countries. The approach adopted by the developing countries has been identified as a development test approach, as opposed to the competition test approach taken by the developed countries.²⁰⁷

(2) The Rule of Reason

In formulating the text of Chapter 4, Group B attached such qualification as "unreasonably" or "unjustifiably" to the prohibition of certain restrictive practices. This essentially reflects the United States' approach, particularly the notion of the "rule of reason"

²⁰⁷ See Miller and Davidow, Antitrust at the United Nations: A Tale of Two Code, 18 Stan. J. Int'l L., p. 347 (1982).

introduced into the inflexible prohibition of anti-competitive practices under the Sherman Act.²⁰⁸

However, the Group of 77 did not accept this approach for fear that the "rule of reason" would be taken advantage of by the supplying party to impose restrictions in the face of the Code. In addition, the issue of reasonableness under U.S. laws is evaluated and determined by the courts on a case by case basis. However, the Code of Conduct is to depend on "self-interpretation" by the parties. This may create great difficulties for two parties to agree upon what practices they both regard as "reasonable".

(3) Affiliated Parties

Group B's position has been that restrictions for the purpose of rationalization or reasonable allocation of functions between parent company and subsidiary or among enterprises belonging to the same concern should be considered acceptable unless such restrictions amount to an abuse of a dominant position of market power within the relevant market.²⁰⁹ However, the Group of 77 held that restrictions

²⁰⁸ See G. E. Weston, New Trends in the U.S. Antitrust Law: the Patent-Antitrust Interface as an Example, 15 IIC Studies, p. 269 (1984). See also B. A. Reeves, Antitrust and International Technology Licensing: A Primer, 11 Connell Int'l L. J. 263-74 (1978).

²⁰⁹ For proposals by Group B, see supra n. 205, Appendix D.

between commonly owned enterprises should be examined pursuant to the rules, exceptions and factors applicable to all transfer of technology transactions. This position is in line with the above-said development test approach taken by developing countries.

Discussions on restrictive practices at the end of the sixth session had failed to finalize the title and formal text of Section A of Chapter 4. However, the Conference had succeeded in drawing up the fourteen practices to be avoided by parties to technology transactions.²¹⁰

²¹⁰ These restrictive practices include:

- (1) Grant-back provisions which require the acquiring party to grant-back to the supplying party improvements arising from the acquired technology;
- (2) Non-challenges to validity of the supplying party's patents and other types of protection for inventions involved in the transfer of technology;
- (3) Exclusive dealing which restricts the freedom of the acquiring party to enter into sales or representation agreement relating to competing technologies or products;
- (4) Restrictions on research and development programmes undertaken by the acquiring party with respect to adaptation of the transferred technology as well as in connection with creation of new products and processes;
- (5) Restrictions on the use of adequately trained local personnel;
- (6) Price fixing which imposes control of prices to be charged by acquiring parties for products manufactured or services produced using the technology supplied;
- (7) Restrictions on adaptation or innovations by the acquiring party to meet local conditions;
- (8) Exclusive sales or representation agreements which require the acquiring party to grant exclusive sales or representation rights to the supplying party or any person designated by the supplying party;
- (9) Tying arrangements requiring the acquiring party to accept additional technology, future inventions and improvements, goods or services not wanted by them;
- (10) Restrictions on exports by the acquiring party;

B. Applicable Law and Settlement of Disputes

These issues are dealt with by Chapter 9 of the Code. Because of difficulty reconciling the disagreement between different Groups, no text had so far been formally completed under this chapter.

Group B's original position had been that the parties should have the freedom to choose the applicable national law and forum, but on condition that there should exist a substantial relationship between the applicable law and the parties.²¹¹

The Group of 77, on the other hand, had proposed that the law of the acquiring countries should be applicable to matters relating to public policy and sovereignty. The Court and other tribunal of the acquiring country should have jurisdiction over disputes deriving from the conditions or the effects of the contract, which concern public policy or

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- (11) Patent pool or cross-licensing agreements among technology suppliers which limit access to new technological developments or which would result in an abusive domination of an industry or market;
 - (12) Restrictions on publicity by the acquiring party;
 - (13) Payments and other obligations after expiration of industrial property rights;
 - (14) Restrictions after expiration of arrangement.
- See Supra n. 205, Section B, Chapter 4 of the Draft Code.

²¹¹ See UNCTAD Draft Code, TD/CODE TOT/35, Annex A; and TD/CODE TOT/37.

sovereignty. As regards international matters not involving the public policy of the acquiring country, the parties are allowed to choose the applicable law. Choice of forum is also permitted as long as it does not exclude the jurisdiction of the courts of the acquiring country.²¹²

Group D took the position that the parties should have the right to choose the law applicable "within the limits permitted by their national legislation", and that the applicable conflict-of-laws rules should be also used by the arbitral commissions or other organs deciding the disputes when the parties have not agreed on the choice of law.²¹³

At the sixth session, negotiations on Chapter 9 were focused exclusively on the controversial issue concerning the choice of law. Various proposals and suggestions were presented in order to make a compromise between those who favour the contractual freedom of the parties to choose the applicable law and those who stress the observance by the parties of the binding rules of the laws of the host countries.²¹⁴

²¹² Ibid.

²¹³ Ibid. See also, Informal Text on Chapter 9 proposed by Group D, TD/CODE TOT/47 (1985), Appendix A.

²¹⁴ At the very end of the sixth session, the President of the Conference proposed the following compromised text in an attempt to reconcile disagreement between the regional groups:

24. Legal Nature and Future Action

The nature of the final code once was the most debated issue during the negotiations. The Group of 77 had been persistent in its demand that "an international legally binding instrument is the only form capable of effectively regulating the transfer of technology".²¹⁵ They feared that if the Code was not legally binding, developing countries would not receive their full entitlement under it. However, both Group B and Group D held the position that the Code of Conduct should consist of guidelines which are voluntary and legally non-binding.²¹⁶

The parties to transfer of technology transactions may, by common consent, choose the law applicable to their contractual relations, it being understood that such choice will not prevent the application of relevant rules of national legal system which cannot be derogated from by contract.

However, the participating countries at the sixth session, because of the lack of time, were unable to evaluate this proposal in a thorough manner. See *supra* n. 205, Appendices A and F; and Background Note by the UNCTAD secretariat, UN. Doc. TAT/CODE TOT/49(1986).

²¹⁵ See e.g. UN Doc. TD/B/C.6/14 (1976); TD/CODE TOT/1/Add.1 (1978), Annexes I-III.

²¹⁶ *Ibid.* See also, Schachter, *The Twilight Existence of Non-binding International Agreements*, 71 *Am. J. Int'l L.*, p. 296; also note that discussion on the nature of the Draft Code reflects two different alternatives for giving effect to the final code: a convention or treaty which is legally binding on Member States under international law. The procedure for the conclusion of a convention, however, requires the specified number of signatures and ratifications by the participating countries. The creation of a convention may also demand changes or amendments to the existing domestic legislation. This may not be accepted by some developed countries. Another alternative is a legal instrument which is not formally binding, such as a resolution of the U.N. General Assembly

During the second session of the Conference, the Group of 77, having taken into account the positions of other Groups and certain practical issues relating to international convention, proposed that the Code should be adopted as a Final Act of the Conference for endorsement by a resolution of the General Assembly, and a review Conference would be convened five years after the adoption of the Code to review the Code in all its aspects, "with a view to bringing about its universal applicability as a legally binding instrument".²¹⁷ This proposal was accepted by other Groups with the understanding that the Conference should not prejudge the final outcome of the Review Conference and that the issue on the legal nature of the Code would be the one among many others that the Review Conference should have to evaluate.²¹⁸

The Code negotiations, although extremely protracted, have made significant progress in formulating the final provisions of the Code. As observed by the President of the Conference, the negotiations at the sixth session "were within a hair's breadth of reaching agreement on the draft code".²¹⁹ Since the sixth session of the Conference,

or the Final Act of the negotiating conference.

²¹⁷ Statement by the Spokesman for the Group of 77 at the second session of the conference, see UN Doc. TD/CODE TOT/21.

²¹⁸ See Appendix E of the Draft Code at the fifth session of the Conference on November 4th, 1983, UN Doc. TD/CODE TOT/41.

²¹⁹ See Background note, *supra* n. 206.

pursuant the General Assembly resolution 40/184 of 17 December 1985 and other resolutions passed by Assembly during 1986 and 1989,²²⁰ the Secretary-General of UNCTAD and the President of the Conference on the Code of Conduct have carried out consultations with regional groups and interested Governments with a view to searching for possible solutions to the hard core issues outstanding in the Code. During the consultations, tremendous efforts have been made by all participating groups and Governments towards the settlement of their differences. However, despite all those efforts, no concrete solutions have so far been reached as to the final completion of the draft code.

²²⁰ See UNCTAD Report on Future Consultations on A Draft International Code of Conduct on the Transfer of Technology, UN Doc. TD/CODE TOT/56 (1990).

Conclusion

The current legal framework for international technology transfer is not considered complete in the sense that a direct international regulation system - as one important missing part of the legal framework, has not been established. Under the present legal framework, control of technology transfer is still the matter of nation-states and mainly subject to the national and regional legislation. The situation is unlikely to undertake a dramatic change because common ground has not yet been found for individual countries to accept the minimum compromise with respect to the new international norms for the direct control of the commercial transfer of technology.

The past international negotiations on the Code of Conduct have shown that the clash between different interests of the participating countries is the main stumbling block affecting the adoption of the Code. Although the protracted Code negotiations have seen differences in approaches become fewer, those that remain are the most sensitive key issues and are more crucial to the final fate of the international negotiations on the Code. It can be predicted that the future code negotiations will be an even more difficult task.

However, the possibility of adopting the Code of Conduct for international technology transfer still exists because a consensus has already emerged in favour of establishing a direct legal control system to regulate the international transfer of technology. The most important aspect of this consensus is a recognition of the competing priorities of developing countries which view the acquisition of advanced technologies as fundamental to their industrialization and economic growth, and technology suppliers for whom the current regime of industrial property protection was designed. In addition, in the field of technology transfer, a direct international legal system is still needed to accommodate the conflicting interests of both suppliers and recipients of technology, to facilitate the international transfer of technology by harmonizing diversified national and regional legal systems and to regulate contractual conditions of technology transactions and the legitimate use of industrial property rights.

It is believed that, notwithstanding the presence and persistence of some constraints affecting the final adoption of the draft code, the interplay of international political and economic relations, the increased global exchange of technology and the demand for a more homogenized legal framework for the international transfer of technology may act as the important factors forcing all participating

countries to come to a recognition that the conflicting interests have to be compromised and that the fundamental rules have to be established. It is realistic to anticipate that in the near future, a draft code of conduct will be adopted as voluntary international norms which will serve as the principal guidelines for all parties and all countries involved in the international technology transfer. The main objectives of the draft code are to establish general and equitable standards on which to base the relationships among parties to technology transactions and governments concerned, to take into account the special needs of developing countries and the legitimate interests of technology suppliers, and to encourage international technology transactions under conditions where bargaining positions of the parties are balanced in such a way as to avoid abuses of a stronger position. It is also appropriate to say that the future adoption of the draft code will pave the way for the establishment of legally binding rules regulating international technology transactions. However, the final nature of the code of conduct will be more likely determined by the future developments in the national and regional legislation and the possible changes to international political and economic structures.

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