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TAX BARRIERS TO TECHNOLOGY TRANSFERS

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I. INTRODUCTION

Technology transfer is high on the agenda of international issues for developing countries. The developing countries have two goals: to accelerate the rate of technology transfer and to reduce its cost.[1/] Unfortunately these goals may conflict with each other.

The developed countries realize the importance of making more technology available to the developing countries. This is particularly true since developed countries conduct more than 95 percent of the world's research and development. But the developed countries cannot simply mandate that privately held technology be made freely available. As with any other good or service, the holders of technology will be willing to sell if they receive an attractive rate of return. The rate of return in developing countries may be unattractive for a variety of reasons: exchange controls, potential patent infringements, fear of expropriation, or high taxes. The conflict between the goals of developing countries and the capabilities of developed countries has been discussed in numerous international groups.

II. INTERNATIONAL DIALOGUE ON TECHNOLOGY TRANSFER

The developing countries want access to the technology of the developed countries at reduced or zero cost. The developed countries respond that they cannot accommodate this demand because the technology is privately held and national governments cannot dictate the price at which it is sold. But developed nations are willing to support a declaration that technology should be made available to the developing countries at fair, reasonable, and equitable rates. Discussion of these topics has taken place in several international groups.

A. UNCTAD. Within the United Nations Conference on Trade and Development (UNCTAD), the developing countries, acting in the guise of the Group of 77, have proposed a code of conduct regulating the transfer of technology. One section of the code declares that all countries have the right to technology. Therefore, it concludes, all countries should promote the transfer of technology at prices favorable to the developing countries. A favorable price would presumably be lower than the market price. The Manila Declaration, adopted by the Group of 77 in February 1976, states: "The developed countries should grant the developing countries unrestricted access to existing technology irrespective of the ownership of such technology." 2/

In those instances where payments are made for technology, the code proposed by the Group of 77 would encourage countries to treat payments for technology as distributions of profits whenever close economic relations exist between a buyer and a seller. This treatment would mean that royalties would be taxed as profits at the corporate level and then further subject to a withholding tax when paid to the licensor.

The developed countries responded with an alternative code of conduct. The alternative code suggests that transfers of technology will be best encouraged by a system which allows the source and recipient enterprises to negotiate freely the terms of the transfer. Taking direct issue with the code proposed by the Group of 77, the developed countries contend that, while private owners of technology should license enterprises within developing countries on reasonable terms, they cannot be expected to serve as instruments of foreign aid.

U.S. Secretary of State Kissinger echoed these sentiments in his Nairobi speech before UNCTAD IV. He noted that technology resides primarily in the private sector and that the developed and developing countries should work together toward creating an environment conducive to its transfer. He then proposed "that voluntary guidelines be developed that set forth the conditions and standards of technology transfer which encourage, facilitate, and maximize the orderly transfer of technology." 3/

B. OECD. Members of the Organization for Economic Cooperation and Development (OECD) have tentatively agreed on a set of guidelines for multinational enterprises that contain a section on transfers of technology. Since the OECD is composed primarily of developed countries, it is understandable that the guidelines stress proprietary rights tempered by reasonable licensing terms. The guidelines provide that enterprises should:

> (1) endeavour to ensure that their activities fit satisfactorily into the scientific and technological policies and plans of the countries in which they operate, and contribute to the development of national scientific and technological capacities, including as far as appropriate the establishment and improvement in host countries of their capacity to innovate;
>
> (2) to the fullest extent practicable, adopt in the course of their business activities practices which permit the rapid diffusion of technologies with due regard to the protection of industrial and intellectual property rights;
>
> (3) when granting licenses for the use of industrial property rights or when otherwise transferring technology do so on reasonable terms and conditions. 4/

C. Meeting of Foreign Ministers. The Working Group on Transnational Enterprises of the Meeting of Foreign Ministers is made up of representatives of Latin American nations plus the United States. The Latin American group proposed on the one hand that transnational enterprises make no charge for technology transferred between a subsidiary and the home country, and in the alternative, that only competitive, market prices be charged. The U.S. responded by pointing out that, since costs are associated both with the development of technology and its transfer, it is appropriate that a price be charged on licenses between a parent firm and its subsidiary. 5/

D. Eminent Persons Report. The United Nations eminent persons report on multinational corporations reviews the positions of the developing and developed countries on the technology transfer issue. Developing countries, it notes, feel that technology should be made available at a very low charge because the transfer supposedly does not involve extra costs. "Developing countries argue that the technology provided by multinational corporations has already been produced and that the corporations have already derived ample reward from its use in the developed countries for which it was primarily intended." 6/

The developed countries, the report continues, feel that this argument misses the point. Research and development is a risky business; some projects succeed, others fail. The successful ones must bear the costs of the unsuccessful projects in addition to their own. Thus, it is incorrect to conclude that no charge should be made for the transfer of a successful technological venture merely because its costs have more or less been written off.

In addition, it should be mentioned that the developing countries often fail to recognize the concept of opportunity costs. The owner of technology is foregoing alternatives when he makes technology more widely available. As technology is disseminated, it loses its scarcity value. This reduction in value is clearly a cost and it is appropriate that the owner charge for it.

III. TAX TREATMENT OF TECHNOLOGY TRANSFERS

The developing countries want technology made widely available at preferential rates enforced by government regulation, while the developed countries prefer to rely on market forces. While this impasse will be difficult to resolve, interim steps can be taken to accelerate the flow of technology. The tax rates which developing countries apply to royalty income often impede the transfer of technology. Modification of these tax rates could remove an important barrier to the inflow of technology to developing countries.

A. Tax Policy in Developed Countries. The tax treatment of royalties in the developed countries can be used as a point of reference for evaluating the tax policies of developing countries. There are two tax issues: whether royalties paid by the recipient of the technology are a deductible expense of doing business, and the rate of withholding tax levied by the country paying for the technology.

The non-discrimination article of the revised OECD model income tax treaty provides that "royalties ... paid by an enterprise of a Contracting State to a resident of the other Contracting State shall, for the purpose of determining the taxable profits of such enterprise, be deductible under the same condition as if they had been paid to a resident of the first-mentioned State."[7/] The deduction is, however, limited to an arm's length amount. The developed countries tend to follow this approach. Since royalties paid to residents are generally deductible, they also are deductible when paid to non-residents.[8/]

The royalty article of the revised OECD model income tax treaty provides that "royalties arising in a Contracting State and paid to a resident of the other Contracting State shall be taxable only in that other State if such resident is the beneficial owner of the royalties."[9/] Payments for technology made by a subsidiary corporation to its parent, or by an unrelated corporation to a foreign licensor, are characterized as royalties. Many of the income tax treaties between developed countries follow the OECD principle of assigning exclusive taxation of royalties to the State of the recipient's residence.[10/] Table 1, shows the withholding rates on royalties provided by tax treaties between the United States and a number of developed countries. Most rates are zero, with the exception of the treaties with Canada, France, and Japan which provide that the State where royalties arise may levy a low withholding tax.

B. Tax Policy in Developing Countries. By contrast, the developing countries tend to restrict the deductibility of royalty payments. These countries view royalties as

Table 1

Withholding Tax Rates on Royalties [1/] Stipulated in Income Tax Treaties between the United States and Selected Developed Countries

U.S. Treaty with:	Treaty Withholding Rate on Industrial Royalties (Percent)
Austria	0
Belgium	0
Canada	15
Denmark	0
France	5
Germany (Federal Republic)	0
Italy	0
Japan	10
Luxembourg	0
Netherlands	0
Norway	0
Sweden	0
Switzerland	0
United Kingdom	0

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1/ Rate at which a country may tax royalties paid to a resident of the other country.

Source: Tax Treaties, Commerce Clearing House, Inc., Table entitled Withholding Under Tax Treaties, p. 169.

thinly veiled profit distributions rather than legitimate expenses of acquiring technology. Accordingly, three different approaches are used; deductibility of royalty payments is denied; it is limited; or it is dependent on government approval of the technology transfer agreement. The approaches followed by selected countries are illustrated in Table 2.

Because they need tax revenue, and because technology is largely a one-way flow from developed countries, developing nations are often unwilling to follow the OECD treaty model which grants the exclusive right to tax royalties to the residence country of the licensor. For example, in the model treaty developed by members of the Andean Pact (Bolivia, Columbia, Ecuador, Peru, and Venezuela), the OECD principle is just reversed and the sole right to tax royalties paid for technology is reserved to the country where the technology is used. [11/] In practice, most developing countries levy some withholding tax on royalties arising within their borders that are paid to residents of other States. The term "withholding" is something of a misnomer, since the withholding tax is a final tax on distributions to foreign recipients which is additional to any tax levied on profits at the corporate level. Two approaches are used: the withholding tax may be levied on gross royalties or it may be levied on gross royalties less some allowance for expenses. The approaches are illustrated in Table 3.

Table 2

Deductibility of Royalty Payments in Selected Countries When Paid to Nonresidents

Deductibility Denied	Deductibility Limited	Deductibility Limited and Depends on Government Approval of Transfer Agreement
Brazil -- if nonresident is controlling corporation or interest	Brazil -- limited to 5 percent of sales if not paid to a principal shareholder	Mexico -- limited to 1.5 to 3.0 percent of net sales
Argentina -- if nonresident is a related party	Argentina -- limited to an arm's length amount if not paid to a related party	India -- limited to 5 percent of sales if not paid for the acquisition of capital rights
	Philippines -- deductible if not excessive	Guatemala -- limited to 15 percent of gross sales
	Ghana -- limited to a fair and reasonable amount	

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Source: Tax Treaties Between Developed and Developing Countries, United Nations Department of Economic and Social Affairs, 1969 and 1972.

Cahiers De Droit Fiscal International, Studies on International Fiscal Law, International Fiscal Association, Volume LXa, Premier Sujet, 1975, I and II.

Table 3

Withholding Tax Treatment of Royalties Arising in Selected Developing Countries and Paid to Nonresidents not Maintaining a Permanent Establishment in the Developing Country

Country	Tax on Gross Royalty	Tax on Gross Royalty Less Expense Deduction
Brazil	25.0%	
Chile	37.5	
India [1]	40.0	
Israel [2]	25.0	
Mexico [3]	5.0 to 42.0	
Pakistan	60.0	
Peru	37.0	
Philippines	35.0	
Argentina		41.0%, with expense deduction of 50% of royalty
Ghana		50.0%, with deduction for reasonable expenses
Panama		45.0%, with expense deduction of 50% of royalty
Uruguay		38.0% rate reduced to 19.0% if expenses incurred directly associated with royalty
Venezuela		15.0% to 50.0%, with expense deduction of 20.0% of royalty

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[1] India taxes royalties paid to foreign companies under approved agreements made after March 31, 1975.

[2] A recently signed treaty between the U.S. and Israel provides for a rate of 15 percent on industrial royalties. The treaty has not yet been ratified.

[3] Plus a sales tax of 4% of gross royalty.

Sources: Cahiers De Droit Fiscal International, Studies on International Fiscal Law, International Fiscal Associaton, Volume LXa, Premier Sujet, 1975, II.

Tax Treaties between Developed and Developing Countries, United Nations Department of Economic and Social Affairs, 1972.

"Arrangements for the Transfer of Operative Technology to the Developing Countries", Division of Public Finance and Financial Institutions of the United Nations Secretariat, 1971.

"Brief Resumé of Taxation of Investment Income of Nonresidents", Government of India memorandum, unpublished.

C. <u>Taxation as a Barrier to Technology Transfer</u>. The tax policies which restrict or prohibit the deduction of royalties or levy a high withholding tax on royalty income paid to non-residents can significantly retard the transfer of technology. Since the withholding taxes are assessed on gross income with only a limited deduction for expenses, the tax liability may be a very large portion of net royalty income. For example, Mexico levies a tax as high as 42 percent on gross royalty income paid to nonresidents. It is difficult to determine the expenses associated with the generation and transmission of technology, but if expenses are 50 percent of the gross royalty income, the tax liability works out to 84 percent of net income.

Table 4 illustrates the effective royalty tax rates, defined as tax liability as a percent of net royalty income. Various levels of expense (25, 50, and 75 percent) are assumed in computing net royalty income. Each country's corporate tax (if any) on royalty income, plus its withholding tax, taking into account any allowable expense deductions, are then expressed as a percent of net royalty income. In many instances the effective tax exceeds 50 percent. This is high in the sense that 50 percent is greater than the rate

Table 4

Effective Tax Rates 1/ in Selected Developing Countries on Net Royalty Income

Country	If Actual Expenses, as a Percent of the Gross Royalty Are: 25%	50%	75%
Argentina 2/	82.0%	123.0%	246.0%
Brazil 3/	73.3	110.0	220.0
Chile	50.0	75.0	150.0
Ghana 4/	33.0	50.0	100.0
India	53.3	80.0	160.0
Israel	33.3	50.0	100.0
Mexico 5/	56.0	84.0	168.0
Pakistan	80.0	120.0	240.0
Panama	30.0	45.0	90.0
Peru	49.3	74.0	148.0
Philippines	46.7	70.0	140.0
Uruguay	25.3	38.0	76.0
Venezuela 6/	53.3	80.0	160.0

1/ Tax Liability as a percent of actual net royalty income.
2/, 3/ Includes the taxes on royalties at the corporate level as profits due to denying the deductibility of royalties paid to foreign controlling shareholders.
4/ If expense deduction of 50% of royalty allowed for tax purposes.
5/ Assumes the maximum rate of 42 percent.
6/ Assumes the maximum rate of 50 percent.

Source: Refer to the sources of Tables 2 and 3.

at which either the developed or developing countries customarily tax ordinary business income. There are even instances where effective rates may exceed 100 percent.

Such tax rates may well frustrate the goal of easier access to technology. High taxation clearly acts as a barrier to the importation of technology from countries such as France and the Netherlands which customarily exempt foreign income from domestic taxation. In these cases, the high taxation imposed by developing countries simply erodes the after-tax earnings of French and Dutch sellers of technology. What is not so widely recognized is that high taxation of royalty income also acts as a barrier to the importation of technology from countries such as the United States, the United Kingdom, Japan, and West Germany which provide a foreign tax credit. Depending on the country, the amount of foreign royalty income will be measured either on a net or on a gross basis for purposes of calculating the foreign tax credit limit. If foreign royalty income is measured on a net basis (after related expenses), the taxes imposed by developing countries may easily exceed the creditable limit. Particular companies may have excess foreign tax credits from other types of foreign source income which can be used to "shield" royalty income from taxation by the home government. Thus, if developing countries reduced their withholding taxes on royalties, this would not so much transfer revenue to the treasuries of the developed countries, as it would reduce the overall tax burden on the sellers of technology.

Sooner or later, the suggestion is likely to be made that the developed countries provide tax relief or incentives for industrial royalties received from developing nations. At some stage, this suggestion might be seriously entertained. But clearly the developing nations themselves are responsible for the first step in moderating the taxation of royalty income.

FOOTNOTES

The authors are associated with the Office of International Tax Affairs of the U. S. Treasury Department. The views expressed are the personal opinions of the authors and do not represent the views of the Treasury Department.

1/ New York Times, "Poor Nations Demand Change in Getting Technology of Rich", June 24, 1976.

2/ Declaration and Program of Action of the Group of Seventy-Seven, "Transfer of Technology", Article I, Paragraph C(4).

3/ Speech before the Fourth Ministerial Meeting of the United Nations Conference on Trade and Development, Nairobi, Kenya, May 6, 1976.

4/ "Guidelines for Multinational Enterprises", OECD, Committee on International Investment and Multinational Enterprises.

5/ Indeed, section 482 of the United States Internal Revenue Code requires that, for tax purposes, either the parties enter into a prior cost sharing agreement, or an arm's length charge be made for such transfers.

6/ "The Impact of Multinational Corporations on the Development Process and on International Relations", Report of the Group of Eminent Persons to Study the Role of Multinational Corporations on Development and on International Relations, United National Economic and Social Council, May 1974, p. 56.

7/ Double Taxation of Income and Capital: Revised Texts of Certain Articles of the 1963 OECD Draft Convention and of the Economic Commentary Thereon, Organization for Economic Cooperation and Development, 1974, p. 27.

8/ Some developing countries point to the commentary on the business profits article of the OECD draft as evidence that royalties should not be deductible. The business profits article provides that expenses, wherever incurred, on behalf of a permanent establishment shall be deductible in determining the taxable profits of the permanent establishment. A foreign permanent establishment is essentially a foreign branch of a parent corporation. The commentary suggests that royalty payments by a permanent establishment to its head office should not be allowed as deductions in computing the permanent establishment's taxable profits. It seems, however, that this is merely advising that a royalty account does not need to be set up between a home office and a branch since, pursuant to the business profits article, a portion of the research expenses incurred to produce the technology presumably was already charged against the foreign branch income.

9/ Double Taxation of Income and Capital: Revised Texts of Certain Articles of the 1963 OECD Draft Convention and of the Economic Commentary Thereon, Organization for Economic Cooperation and Development, 1974, p. 21.

10/ This is true even though the country's internal tax code may provide for a royalty withholding tax. The U.S. statute, for example, in the absence of a treaty, calls for a 30 percent withholding tax to be levied on royalty payments to non-residents.

11/ Cahiers De Droit Fiscal International, Studies on International Fiscal Law, International Fiscal Assocation, Volume LXa, Premier Sujet, 1975, I, 14.