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The Value of Territorial and Field-of-Use Restrictions in the International Licensing of Unpatented Know-How: An Empirical Study

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Data concerning the international transfer of technology, particularly in the area of unpatented know-how, are relatively scarce. In this article, Mr. Bleeke and Professor Rahl present the results of one of the first empirical studies conducted in this field. The study, in which significant information was gathered from United States corporate licensing attorneys and executives, is focused upon the extent to which territorial and field-of-use restrictions are necessary to facilitate the international transfer of unpatented know-how. The results provide a clearer picture for both policy makers and practitioners in the field.

The proper role of restrictive provisions in international licensing agreements has become an area of increasing international concern and debate. In recent years, the United Nations Conference on Trade and Development (UNCTAD) has sought, through an Intergovernmental Group of Experts, to develop an International Code of Conduct on the Transfer of Technology.¹ Several nations and regional organizations,

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This article is based primarily upon a study which was developed by Mr. Bleeke under the supervision of Professor Rahl in the Senior Research Program at Northwestern University School of Law. The project was proposed by the editors of the *Journal*, and research expenses were funded by the School of Law.

¹ UNCTAD Draft International Code of Conduct on the Transfer of Technology. TD/CODE TOT/14 (Mar. 28, 1979). See Davidow & Chiles, *The United States and the Issue of*

notably Mexico, India, and the Andean Community (ANCOM), have recently adopted registration regulations which prohibit or strictly limit certain types of restrictive provisions in international licensing agreements.²

The United States Department of Justice *Antitrust Guide for International Operations*,³ issued in 1977, outlines an important middle-of-the-road approach toward restrictive licensing provisions in general and especially toward know-how provisions.⁴ Recent decisions of the Commission of the European Communities have been quite strict as to patent license clauses prohibiting exports within the Common Market. The current draft of a proposed Commission regulation on patent licensing provisions continues a strict approach, with various exceptions. The draft, however, deals with know-how only where its licensing is ancillary to patent licensing, and, therefore, the general subject of know-how in the EEC promises to be in substantial doubt for some time.⁵

The use of restrictive provisions in international licensing agreements is thus being discussed at high policy levels, both in the United States and abroad. The discussion proceeds, however, without the aid of much empirical background information as to the importance of restrictive provisions in facilitating the international transfer of technology. Information is particularly lacking in the area of unpatented technology.

the Binding or Voluntary Nature of International Codes of Conduct Regarding Restrictive Business Practices, 72 AM. J. INT'L L. 247 (1978); Joelson, *The Proposed International Codes of Conduct as Related to Restrictive Business Practices*, 8 LAW & POL'Y INT'L BUS. 837 (1976).

² See Joelson, *supra* note 1, at 854-55.

³ U.S. DEP'T OF JUSTICE, ANTITRUST DIV., ANTITRUST GUIDE FOR INTERNATIONAL OPERATIONS (rev. ed. Mar. 1, 1977), reprinted in [1977] ANTITRUST & TRADE REG. REP. (BNA) No. 799, at E-1, and [1977] 2 TRADE REG. REP. (CCH) No. 266, at 1 [hereinafter cited as ANTITRUST GUIDE].

⁴ See Remarks of Douglas E. Rosenthal, Chief, Foreign Commerce Section, Antitrust Division, U.S. Department of Justice, concerning the ANTITRUST GUIDE on International Know-How Arrangements, A.B.A. Section on Corporations, Banking, and Business Law, New York, N.Y. (Dec. 15, 1978). Mr. Rosenthal spoke of the problem addressed by this study as follows:

There can be no absolute know-how property right that makes no accommodation to competition concerns. Elsewise know-how licenses and joint ventures become engines to erode free markets. Reciprocally, the promotion of competition cannot run roughshod over any exercise of a proprietary right in innovation. Elsewise know-how of dissemination will be discouraged.

Id. at 14-15. See also Kirkpatrick & Mahinka, *Antitrust and the International Licensing of Trade Secrets and Know-How: A Need for Guidelines*, 9 LAW & POL'Y INT'L BUS. 725 (1977).

⁵ *Proposal for a Commission Regulation on the Application of Article 85(3) of the Treaty to Certain Categories of Patent Licensing Agreements*, [1979] 2 TRADE REG. REP. (CCH) ¶ 10,118. See Ehrenhaft, *A Common Law Lawyer Looks at the Common Market's New Patent Licensing Regulation*, 12 INT'L LAW. 741 (1978).

A comprehensive, computer-assisted search of legal and economic literature, including federally-funded projects, yielded little in the way of empirical information. A visit by one of the authors to the Vienna offices of the United Nations Industrial Development Organization (UNIDO), a clearing house for international licensing information, revealed that empirical information on the role or importance of restrictive practice in know-how licenses is also lacking within the United Nations.

A study funded by the Mexican government and developed by Saadia Shorr to determine the impact of Mexico's national registration law on U.S. corporate perceptions of Mexican investment was terminated following an inconclusive feasibility study in 1976. The 1978 survey by Business International S.A. of corporate reaction to the proposed UNCTAD code of conduct dealt with probable corporate responses in the event of adoption of a given code, but did not examine actual responses to the international regulatory climate.

This lack of empirical information prompted the authors to conduct a study during 1978 and 1979 that examined the extent to which two common types of licensing restrictions—territorial and field of use—are reasonably necessary to facilitate the international transfer of unpatented know-how. This article presents the results of the study, together with some background information concerning the applicable United States and foreign laws. It is hoped that the information provided will assist policy makers in better understanding the role of such restrictions and in developing satisfactory antitrust rules.

In examining the role that territorial and field-of-use restrictions play in facilitating international licensing of unpatented know-how, the inquiry has been limited to international licensing to firms unaffiliated with the licensor. International licensing of affiliated firms is excluded, as is domestic licensing of all firms. A major component of the research was a questionnaire, which was mailed to corporate patent counsel of approximately 200 large U.S. corporations. The basic approach, through a series of questions, is to investigate the impact upon the flow of technology when the types of restrictions under study are prohibited.

For the purposes of this study know-how is defined as including, but not limited to, information such as methods, procedures, and technical training, as well as embodiment of information in tangible form such as formulas, designs, drawings, process manuals, and specifications. The questionnaire examines know-how transferred by straight

know-how licenses, and also as a component of combination patent/know-how or patent/know-how/trademark licenses.

For several reasons, the study concentrates upon unpatented know-how, rather than patented technology. First, although know-how generally is recognized to be a major component of international technology transfer, little is known about specific magnitudes of know-how transfer. Many agreements combine patented and unpatented technology, and aggregate royalty information is, therefore, of little value in determining the importance of the know-how component. This study looks at straight know-how licenses, but also seeks to determine the proportion of combination agreements which may be attributed to the know-how component.

Second, transfer of know-how technology appears to be growing at a faster rate than that of patented technology. This is particularly true in developing countries, where approximately 90% of all licensed technology received is of the know-how variety.⁶ Enrique M. Aguilar, former Director General of the Mexican Registry of Technology Transfer, suggests:

The Mexican experience has shown that more than 75% of technological licensing agreements do not involve patents and . . . fall within the category of know-how licensing contracts. Extensive research conducted at the international level demonstrates that in the future the trend will be to rely more on know-how licensing and to gradually reduce the use of patents as a main object in the contract (with exceptions in certain fields, such as pharmaceuticals).⁷

A third reason for concentrating this study on know-how licenses is that licensing of know-how, while protecting it, presents somewhat more difficult problems for the licensor than do patents, and know-how licenses accordingly often contain a greater number of restrictions than do patent licenses. The very existence of a patent may provide, for example, an effective territorial restriction, and a specific territorial clause therefore may not be needed to protect the licensor. Similarly, the terms of a patent sometimes provide an indirect field-of-use restriction, while such a restriction to be effective in a know-how context must generally be specifically stated. It should be noted, however, that where the usefulness of given know-how is dependent upon an under-

⁶ Mr. Gangadhar S. Gouri, Deputy Director, Industrial Operations Division, UNIDO, in recent discussions with one of the authors, suggested that given the context of developing nations as a whole, at most 10% of all technology transferred is done so by patents. Mr. Hubert A. Janiszewski, UNIDO Development Officer and consultant to the Portuguese Technology Registry, indicated that straight patent licenses comprised only 5% of all technology transfers to Portuguese licensees.

⁷ U.N. Doc. ID/WG.228/1 (1976).

lying patent, the patent may provide, as a practical matter, territorial and field-of-use protection for the know-how even in the absence of a specific clause in the agreement.

Although a number of different types of restrictions often appear in international know-how licenses, this article examines only territorial and field-of-use restrictions. These two types were chosen because they occur frequently and probably possess a greater claim to legitimacy than do some of the other restrictions occasionally encountered.

Territorial and field-of-use restrictions are often truly ancillary. Both their cost to competition and their benefit to technology transfer can be unclear. This study seeks to examine the extent to which such restrictions facilitate international transfer of know-how technology and to measure the impact when such restrictions are prohibited.

Use of territorial restrictions is the most recurrent problem in international licensing policy discussions. Quite naturally, a licensor does not wish to set up and encourage its own international competitors, and protection of the home market thus becomes a key ingredient in negotiations. If the home market cannot be protected, the license may not be granted. Territorial restrictions also enable the licensor to protect international markets other than the home market, either for the direct benefit of the licensor and its affiliates, or for the benefit of licensees.

If the licensor's purpose is to preserve the home market or a foreign market for the exclusive development of the licensor, know-how may often not be licensed at all if territorial protection is not permitted. If, however, the corporate goal is more closely tied to royalty return maximization than to market protection, the licensor may choose to license the technology even though a territorial restriction is prohibited and the royalty rate received may be less. As Professor Baxter has noted, a license of a territorial monopoly will command a higher price than a non-monopoly will.⁸

Field-of-use restrictions may also have a strong claim to legitimacy. Given the complexity of many modern processes and the different fields where such processes often may be applied, it is natural that field-of-use restrictions will be sought, limiting the type of product to be manufactured with licensed know-how, or the particular process to be used from among a group of related processes within the scope of the technology. Often the licensee has ability or interest only in a particular field of activity and little current use for applications in other fields.

⁸ Baxter, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 YALE L.J. 267 (1966).

Such a licensee may be quite willing to agree to a field-of-use restriction in exchange for a royalty rate encompassing only that field. The licensor may decide to grant licenses for different fields to different licensees, and may also wish to protect a given field for its own exploitation.

If, however, field-of-use restrictions are prohibited, the licensor will run the risk that in the future any licensee may enter a new field which the licensor wishes to protect for itself, or for other licensees. The result in some cases may be to discourage licensing. Or the licensor may decide to select only a single licensee who concentrates in one field. Development of the technology for other fields may be deterred. The net result may be a reduction in the total quantity of technology licensed, higher royalty rates for the single licensee than would be the case in the presence of a field-of-use restriction, and lower cumulative royalty receipts for the licensor.

To explore these questions on the utility of territorial and field-of-use restrictions, questionnaires were sent to U.S. corporate patent counsel to determine the extent to which current legal rules in different jurisdictions on territorial and field-of-use restrictions have affected technology flows in the past five years. Questions were also posed concerning probable corporate responses to future changes in the regulatory environment. The following sections of this article examine results of the survey.

THE QUESTIONNAIRE AND THE RESPONSE RATES

The questionnaire was composed of a short background section followed by four parts, each of which related to the licensing of unpatented know-how:

- A) Territorial restrictions preventing export back to the U.S. market;
- B) Territorial restrictions within, to, and from the European Economic Community;
- C) Foreign registration laws prohibiting export restrictions; and
- D) International field-of-use restrictions.

Each of the above listed parts was preceded by a short introduction, and the questionnaire concluded with a brief policy summary. A copy of the questionnaire, with a summary of survey results, is in the Appendix.

The initial drafts of the questionnaire were discussed with corporate patent attorneys, licensing executives, and officers of the United Nations Industrial Development Organization. All responses to the questionnaires were treated as confidential, and participants were assured that the names of individual companies would not be used.

The questionnaire was mailed to 196 licensing attorneys or executives, most of whom are members of the Association of Corporate Patent Counsel. Most major United States industries were represented, and responses of some sort were received from 71 corporations. The responses can be broken down as follows:

- A) 13 corporations indicated that as a policy matter they do not participate in studies of this type.
- B) 5 additional corporations indicated by letter that their licensing of unpatented know-how to unaffiliated foreign firms is minimal.
- C) Completed questionnaires were received from the remaining 53 corporations:
 - 1) 40 of these 53 firms (75%) indicated that they license know-how to unaffiliated foreign firms and answered the questionnaire in full.
 - 2) The other 13 firms in this group of 53 (25%) indicated that they do not license know-how to unaffiliated foreign firms.

Firms indicating that they do not license know-how were requested to return the questionnaire without answering additional questions.

Of the 13 corporations not licensing know-how, 9 firms are on the *Fortune* list of the 500 largest U.S. industrial corporations. Several of the respondents are industry leaders with very substantial foreign sales. It should be remembered, however, that some of these firms may be licensing know-how internationally, but only to their own affiliates.

The 40 companies answering the questionnaire in full had annual foreign sales in excess of \$75 billion. All but 4 of the firms were in the *Fortune* 500, 30 were in the *Fortune* 250, and 18 were in the *Fortune* 100. Ten of the 40 firms were in the chemical industry. Other industries, by *Fortune* classification, with 2 or more respondents were the following: electronics and appliances, industrial and farm equipment, metal products and manufacturing, motor vehicles, paper and wood products, petroleum refining, and pharmaceuticals.

Licensing Activity Background

The 40 firms responding in full held, at the time of the questionnaire, 4055 patent and/or know-how licenses, in which they were licensor, with foreign unaffiliated firms. Seven of the companies held 150 or more licenses. The largest number of licenses held by any one company was 650; the second largest was 480; the smallest was 3.

The 4055 licenses held by these 40 companies had the following composition:

<i>Combination patent/know-how licenses:</i>	1438	(35%)
<i>Combination patent/know-how/trade mark licenses:</i>	293	(7%)
<i>Straight know-how licenses:</i>	1004	(25%)
<i>Straight patent licenses:</i>	1320	(33%)

If one excludes the fourth largest licensor, which, as a corporate policy, only utilizes straight know-how or straight patent licenses, the survey results indicate almost as many straight know-how licenses as straight patent licenses:

<i>Total number of licenses:</i>	3678	
<i>Combination patent/know-how licenses:</i>	1438	(39%)
<i>Combination patent/know-how/trade mark licenses:</i>	293	(8%)
<i>Straight know-how licenses:</i>	928	(25%)
<i>Straight patent licenses:</i>	1019	(28%)

In order to analyze further the magnitude of international know-how licensing to foreign unaffiliated firms, the questionnaire asked participants to examine more closely the revenues from combination patent/know-how and patent/know-how/trade mark licenses. Specifically, corporations were asked the following question:

L3. Looking only at revenues from combination patent/know-how or patent/know-how/trade mark licenses to foreign unaffiliated firms, please give your best personal estimate of the percentage of such revenues which stem from the know-how (as opposed to patent) component (ignore trade marks).

— More than 75%
— 25%-49%
— 50%-74%
— Less than 25%

Of the 35 firms that responded to this question, representing 1606 combination licenses, the responses were as follows:

<i>More than 75%:</i>	<i>15 firms (43%)</i>
	<i>520 combination licenses (32%)</i>
<i>50%-74%:</i>	<i>11 firms (31%)</i>
	<i>789 combination licenses (49%)</i>
<i>25%-49%:</i>	<i>3 firms (9%)</i>
	<i>170 combination licenses (11%)</i>
<i>Less than 25%:</i>	<i>6 firms (17%)</i>
	<i>127 combination licenses (8%)</i>

Particularly with larger licensors, more than half of the revenue from combination licenses may be attributed to the know-how component. Only 9 firms, with 297 (18%) of the total combination licenses, indicated that more than half of the revenue from combination licenses may be attributed to the patent component. It would appear from these results that frequently licensors are licensing primarily know-how, with the patent component clearly secondary. Of these 297 licenses, over half are attributable to a single licensor. If this licensor is excluded, survey results indicate that in 90% of combination licenses, more than 50% of revenue received derives from the know-how component rather than the patent component. This finding is in accord with that reached by Taylor and Silberston in their study of the British patent system:

Many industrialists whom we consulted said quite categorically that the

main purpose of licensing is to exchange know-how, etc., with patents a minor consideration added in the small print at the end of an agreement to lend an extra element of precision and security to the contract.⁹

The figures provided by this survey on the magnitude of know-how in licensing agreements also correspond with an analysis of 3,500 license agreements of which the Commission of the European Communities has been notified. Of the agreements registered, 67% were straight know-how agreements or contained a know-how component, 56% were straight patent agreements or contained a patent component, and 56% were straight trade mark licenses or contained a trade mark component.¹⁰ This total exceeds 100% because combination agreements are counted under each component.

So that the information on the questionnaire could more accurately be interpreted, respondents were requested to give their best personal estimate as to the percentage of their firm's licensed know-how which is primarily proprietary, rather than commodity, in nature:

L4. We seek information on the licensing of both "proprietary" know-how and "commodity-type" know-how. Proprietary know-how encompasses technology generally possessed only by your firm, while commodity-type know-how includes technology understood by most firms in your industry. So that we might better interpret your responses to the questions which follow, please give below your best personal estimate as to the percentage of your licensed know-how which is primarily proprietary (rather than commodity) in nature.

— All.	— 25%-49%.
— More than 75%.	— Less than 25%.
— 50%-74%.	— None.

Responses from the 40 firms were:

All:	10 firms
More than 75%:	16 firms
50%-74%:	6 firms
25%-49%:	2 firms
Less than 25%:	4 firms
None:	2 firms

Of the 10 largest licensors, all but one responded that 75% or more of their licensed know-how was proprietary.

IMPACT OF U.S. ANTITRUST POLICY ON TERRITORIAL RESTRICTIONS OF INTERNATIONAL TRANSFER OF KNOW-HOW

United States antitrust law is not limited to transactions which take place within our national borders. Foreign transactions, including

⁹ TAYLOR & SILBERSTON, ECONOMIC IMPACT OF PATENTS 113-14 (1973).

¹⁰ J. CUNNINGHAM, THE COMPETITION LAWS OF THE EEC 148-49 (1973) (summarizing analysis by W. Schlieder, Director-General for Competition of the E.C.C.).

licensing abroad, which have the requisite effect on U.S. foreign or domestic commerce may be subject to U.S. antitrust law, regardless of where such transactions occur.

International know-how licenses, under certain conditions, however, may include clauses which prohibit export back to the United States of products produced abroad with licensed technology. The Department of Justice *Antitrust Guide* indicates that such restrictions might be permitted in an international know-how license if the time period of the restriction is reasonable, the restraint is unilateral, the product substantially depends upon licensed know-how, and the licensing agreement is not part of a continuing web of restrictive licenses.¹¹

Participants in the study were asked the following group of questions relating to this approach by the *Antitrust Guide*:

A1. If the United States tomorrow were unequivocally to prohibit clauses which restrict export of products produced under international know-how licenses back into the United States, would your company's current or future licensing policy be affected in any way?

<i>Total number of firms responding:</i>	40		
<i>Firms responding "yes":</i>	17	(43%)	
<i>Firms responding "no":</i>	23	(57%)	

Firms answering "yes" provided the following observations:

"Such a prohibition would have the effect of restricting or perhaps eliminating licensing of our proprietary know-how. It would not affect the licensing of our commodity know-how."

"We would license only:

- a) Controlled companies;
- b) Noncurrent technology; or
- c) Peripheral (i.e., noncompetitive) products."

"We would be reluctant to license newly developed technology prior to recovering appropriate R&D expenses."

"We are primarily a manufacturing company. Absent special circumstances it would be contrary to our interests to set up competitors. The kinds of rewards one gets from licensing know-how do not approach manufacturing and sales profits. However, there are cases in which our know-how may not jeopardize our manufacturing and marketing position (old technology which can be obtained from a number of sources, a product we no longer make or are phasing out and so on)."

"Licensing is a potential source of revenue from a market area that otherwise cannot be exploited. The gain though is not relevant if the net effect is to establish a new competitor who can claim that he is using licensed technology."

"[The proposed prohibition] might well affect our actions in a specific situation where we would consider it contrary to our best interests to

¹¹ *Id.* at 33-36 (Case F).

set up foreign competition with our domestic sales. We would strongly oppose such an inflexible prohibition because it is unnecessary (in view of existing antitrust laws), unduly restrictive and would serve no useful purpose."

Some firms responding "no" to question A1 stated that they never use export restrictions as a matter of policy. Others merely refuse to license relevant U.S. patents which are necessary for effective utilization of the know-how. Some may not need territorial restrictions because of other environmental factors faced by licensees, such as high transportation costs or tariffs.

One company expressed concern that a U.S. prohibition on export restrictions would prejudice its position as an international *licensee* and stated:

"We are more likely to encounter territorial restraints as a licensee. In the foreign context, our interests could be prejudiced by a U.S. rule which made contracts with such limitations unenforceable. Foreign licensors of the technology might, as a result, favor licensees in countries where such limitations would be enforced."

A2. *Have there been any instances in the past five years in which your firm has licensed know-how technology (to a foreign unaffiliated firm) which would probably not have been licensed had you been prohibited from including a clause restricting export back to the United States?*

Total number of firms responding: 17

Firms responding "yes": 8 (47%)

Firms responding "no": 9 (53%)

Only firms answering "yes" to question A1 were asked to answer question A2. The following explanations were provided by firms indicating that they had licensed in the past five years know-how which probably would not have been licensed had they been prohibited from including a clause restricting export back to the United States:

"Limited term, low royalty license involving current technology and where the licensee required the right to use the technology after expiration of a short term."

"We won't license in a case where the licensee would be able to put us at a competitive disadvantage. This has occurred in several process invention areas. In most cases we simply withhold a license under relevant U.S. patents."

"We are cautious in establishing a lower cost competitor."

One firm answering "no" indicated that although the firm does not include a clause prohibiting export back to the United States, "we do not in some cases *give our permission* to sell in the U.S." (emphasis in original). The respondent continued: "I don't know how we would have acted if we were required to give such permission."

A3. *Have there been any instances during the past five years in which your firm has refused to license know-how to a foreign firm because you believed that you could not include a restriction prohibiting export back to the United States?*

<i>Total number of firms responding:</i>	29	
<i>Firms responding "yes":</i>	2	(7%)
<i>Firms responding "no":</i>	27	(93%)

A corporation answering "yes" indicated that it had refused within the past five years to license "products which are not covered under United States patents" to foreign firms, because it believed it could not include a restriction prohibiting export back to the United States.

Firms answering "no" generally indicated that they seldom or never use territorial restrictions.

"We do not use such clauses directly. We use territorially limited grants."

"As a general rule we have avoided such restrictions. The people who would respond to such license requests would be aware of this general rule—hence would have been likely to respond "no interest" to any license request if there was serious concern about exports to the United States."

A4. *If your company is prohibited from including a clause restricting exports back to the United States in an international know-how licensing agreement, which of the following courses of action is most likely:*

Total number of firms responding: 33

- *We will not license the technology at all.*
11 firms (33%)
- *We will license the technology but will seek additional compensation through higher royalty rates.*
6 firms (18%)
- *We will license the technology but will not generally seek additional compensation.*
16 firms (48%)

Four additional firms indicated they would not license at all if the United States market were jeopardized, but in other cases would license and seek additional compensation. For example, one firm responded:

"In a strong product line, why would we establish a competitor? With other types of technology, say a product we've discontinued or decided not to launch, we'd be pleased to license as the only way to reap a reward."

This sentiment was apparently shared by the majority of responding firms. Firms, which because of transportation costs, etc., considered the United States market quite safe, generally stated they would license

even in the absence of export restrictions. Most of these firms apparently had already negotiated a maximum royalty and did not think that additional royalty payments could be obtained in the absence of restrictions.

Firms which perceived the United States market to be in possible jeopardy generally would not license at all and stated:

"If we're seriously concerned about protecting our market share in the United States, we wouldn't consider licensing the know-how at the inception."

"Technology important enough to make this a factor would probably not be offered for license, *e.g.*, a good commercial exclusive position in our normal product line would not be licensed."

"We rely on circumstances, not specific restrictions, to guard against competing with ourselves—and if circumstances did not effectively restrict that competition, we would not extend a license."

"We will be more selective concerning what technology is licensed. The royalty compensation would likely be considered secondary to export-import effect. Advanced technology is less likely to be licensed than older technology."

On current negotiations, one firm commented:

"The potential loss of competitive advantage from maintaining our own firm's proprietary position in the United States and Canadian markets could not be offset by royalties received. We have two substantial agreements under negotiation, prohibiting the foreign firms from marketing in North America, which would not be pursued if such restrictions were prohibited. In some cases a higher royalty could alter that position if our own business was not materially affected or other domestic licensees would not be at a disadvantage."

Firms not seeking additional compensation stressed stability in the United States market stating, *e.g.*:

"Our position is that our reputation and marketing experience keeps us ahead of competitors even if the technology used is the same."

"We always seek as much compensation as we can obtain and we can usually depend upon United States patents to preclude exports back to the United States (we do not include United States patents in grant)."

"The main deterrent to exports back to the United States is cost, not restrictions in license agreements."

"We believe we have superior marketing and distribution systems which provide a competitive advantage over our foreign licensee."

"Export of the sort of products we are talking about is usually not practical for economic reasons, so that export restrictions are not needed to protect the licensor."

"We usually decline to license our United States patents, but use no export restrictions."

Corporations seeking additional royalties required compensation for

“development of market,” “loss of market share,” and “loss in domestic sales.”

The responses to this question strongly indicate that most corporations are not willing to compensate for the absence of restrictive provisions by charging a higher royalty rate. Heavy capital investment in the United States and the importance of United States market share make it necessary for firms to restrict exports back to the United States. If such an export restriction is not permitted and it appears that conditions favor export back to the United States market, firms generally will not license know-how at all. Thus, higher royalty rates are not an acceptable alternative to restrictive export provisions.

This observation is particularly interesting in light of the statement by Taylor and Silbertson that “the economically desirable or ‘correct’ rate of royalty is such that the licensee contributes to the cost of discovery and development of the licensed product or process at the same rate per unit of output as the licensor.”¹² It would appear that, in the presence of sunk capital costs and manufacturing economies of scale by the licensor, royalty rates will be fixed at a level where the licensee contributes more to the per unit cost of discovery and the development of the licensed product than does the licensor. If because of economies of scale profits are greatest on the marginal products manufactured, the licensor will not sacrifice the most lucrative part of his market in exchange for a royalty which recovers only his proportional research and development expense. Similarly, if capital is already invested, the licensor will not jeopardize that existing capital by opening his market to foreign competitors. Such a conclusion certainly is borne out by the results of the survey which indicates that sunk costs and market protection are so important that often no royalty rate is adequate to compensate for loss of market position.

Question A5 was to be answered only if question A4 indicated that in the absence of an export restriction, the firm was likely to seek additional compensation. Since only six firms indicated they would seek higher compensation in such a situation, the sample size for question A5 is small. Of the six firms seeking additional compensation, four firms answered A5. In addition, seven other firms gratuitously answered this question.

A5. If the answer to A4 above indicates that your firm is likely to seek additional compensation, which of the following factors would be most considered by you in determining the level of additional compensation? (You may check more than one.)

¹² TAYLOR & SILBERSTON, *supra* note 9, at 171.

- Total number of firms responding: 11*
- *Licensee's marketing organization in the United States.*
7 firms
 - *Licensee's total capital.*
2 firms
 - *Production cost differentials.*
7 firms
 - *Elasticity of United States demand.*
4 firms
 - *Length of reverse-engineering period.*
8 firms
 - *Licensee's profit per item sold.*
3 firms
 - *United States import tariff rates.*
3 firms
 - *Licensor's market share in United States.*
7 firms
 - *Relative negotiating strengths.*
4 firms

A6. *The Justice Department [Antitrust] Guide . . . uses the time period that would be required for others to reverse-engineer the know-how as a method for determining a "reasonable time" period for a territorial restriction in a know-how license. In your opinion, is this a fair standard?*

Total number of firms responding: 40

<i>Firms responding "yes":</i>	9	(22%)
<i>Firms responding "no":</i>	31	(78%)

This question received the greatest number of comments of any question on the survey. More than 75% of the firms responding indicated that they do not consider the reverse-engineering period to be a fair standard for determining a reasonable time period, and all but two of the firms so responding provided additional comments, a sample of which are given below:

"There are occasions wherein the value of the know-how is not in 'what works' but instead in 'what *doesn't* work.' You simply can't lay down *one* general rule for determining a 'reasonable time.'"

"Should include market development period."

"Reverse engineering is an undeterminable time. How much effort is to be expended in reverse engineering? One person? 100 persons? How important is the reverse engineering to the company doing it? Would prefer a period based on how long the know-how remains secret to those in the industry."

"Time for reverse-engineering is too dependent on technical sophistication of those who are doing the engineering. More important criteria are barriers to market entry. Such barriers are best known to the licensing parties."

"Often manufacturing processes and resulting products (including tolerances, materials, etc.) are not capable of reverse engineering."

"A period equal to a United States patent term (17 years)."

"Reverse engineering time plus say 50% more. There should be a payoff for the cooperation and ultimate dilution of the market."

"Tying it to how long the information remains secret makes sense, as does a longer period if the secret will not be secret for very long. This will encourage parties to agree on a disclosure to provide a lead time."

"Other factors such as spill-over of licensor's reputation and technical support can add substantial value over the pure design know-how and can affect value of license for which compensation and extra time extension should be available."

"Relating the 'period' to reverse engineering time is theoretical and artificial and will require higher 'up front' payments."

"The period should include not only the time necessary theoretically to develop a prototype without the know-how but also the time necessary to put the product into production and then resolve the inherent initial production problems in order to obtain a comparable product."

"It may be a fair standard for some products but not a fair standard in the case of certain high technology products and processes."

"A 'reasonable time' is for as long as the know-how remains confidential, *i.e.*, not a matter of public knowledge."

"Length of patent rights in the country of the licensee at a minimum."

"Set arbitrary time—10 to 15 years."

Six firms indicated that a "reasonable time" is that negotiated by the parties through arm's-length negotiation. Many firms expressed concern that the reverse-engineering period is highly variable. This is determined in large part by the technical sophistication of the particular licensee and by the willingness of the licensee to devote resources to the particular research and development effort.

The vast majority of the respondents stated that the reverse-engineering period is not a reasonable standard for determining the permissible life of a know-how license. It is imprecise, highly variable, and dependent in large part upon the sophistication of the licensee. Reverse-engineering is generally more relevant to products than to processes since often manufacturing processes are not capable of reverse-engineering.

Douglas Rosenthal, Chief of the Foreign Commerce Section of the Antitrust Division of the United States Department of Justice, suggested, however, in an address to the American Bar Association that "it should not be abandoned until something better comes along."¹³ And few respondents to this study agreed upon what that "something bet-

¹³ Remarks of Douglas E. Rosenthal, *supra* note 4, at 7.

ter” might be. In the meantime, Mr. Rosenthal noted: “Although subjective, it is theoretically accessible to a factfinder through expert testimony. Also, it provides something constructive to contrast with what seems an excessive ‘life of the know-how’ standard.”¹⁴

The reverse-engineering standard requires further evaluation. The objections raised by respondents are substantial and the *Antitrust Guide*'s position is perhaps too narrow. Reverse engineering was defined by the Supreme Court, in *Kewanee Oil Co. v. Bicron*, as “starting with the known product and working backward to devine the process which aided in its development or manufacture.”¹⁵ Trade secret cases arising under state law have used the reverse-engineering test to determine the length of an injunction against use of the secret by one—usually a former employee—who has misappropriated it. But it does not follow that this is an appropriate test for restrictive know-how licenses. The impediment to personal freedom imposed by an injunction against an employee may be so great as to demand a shorter time limitation than is desirable in the context of an international license. Such licenses are negotiated voluntarily at arm's length, and misappropriation is not involved. A time limit in excess of the reverse-engineering period serves to increase contractual freedom and does not diminish personal freedom. The benefits of international know-how transfer may warrant an incentive for the licensor in excess of the reverse engineering period.

The *Antitrust Guide*, apart from this question, appears to be taking a realistic and appropriate view as to the value of export restrictions in know-how licenses. Such restrictions may be more important in know-how agreements, as the *Antitrust Guide* assumes, than in many patent agreements. A patent by its very nature protects territorial rights, and it may give field-of-use protection as well. As Douglas Rosenthal has noted:

Know-how and patents are different. The latter necessarily confers monopoly power in an innovation. The former does not. Anyone who can figure out what the innovation is in an unpatented product or process can immediately begin to make, use and sell it without paying a royalty. Accordingly, what makes sense when applied to patents is not automatically and totally applicable to know-how. By avoiding such an oversimplification, the *Guide* here exhibits a virtue rather than a fault.¹⁶

¹⁴ *Id.*

¹⁵ 416 U.S. 470, 476 (1974).

¹⁶ Remarks of Douglas E. Rosenthal, *supra* note at 9. Mr. Rosenthal was commenting on the decision in *United States v. Studiengesellschaft Kohle, m.b.H.*, 200 U.S.P. (BNA) 389, [1978] 2 TRADE CAS. (CCH) ¶ 62,291 (D.D.C. 1978). The court held that the use of economic leverage of a process patent to restrain and prevent the sale of unpatented products made by the process is a *per*

The results of this survey substantiate Mr. Rosenthal's statement and underscore the role which export restrictions play in facilitating the international transfer of technology.

In summary, 43% of the firms responding indicate that a prohibition by the United States on export restrictions would affect their future licensing policy, and half of these firms substantiate their statement by noting that there have been instances in the past five years in which their firm licensed know-how which would probably not have been licensed had an export restriction been prohibited. In the absence of such restrictions, 51% of respondents indicated that they would not license the technology at all or would attempt to increase the cost of technology by raising royalty rates. Since export restrictions are apparently a necessary incentive in many technology transfers, the Justice Department *Antitrust Guide's* position of permitting export restrictions in certain international know-how licensing agreements appears to be sound.

The vast majority of respondents (78%) disagree, however, with the *Antitrust Guide's* position that restrictions in licenses should not be permitted to extend beyond the reverse-engineering period. Most respondents consider such a standard highly variable and dependent upon the sophistication of the licensee. Since the licensee has access to the technological information at the time the license is granted, rather than years later when reverse-engineering has finally been accomplished, the licensee has an opportunity to further develop the knowledge supplied and maintain its state-of-the-art position.

At the end of the reverse-engineering period, the licensee is already in full production and has developed its market. If the technology had not been licensed, the licensee would merely be starting up, following its in-house development of the product. Thus, at the end of the reverse-engineering period when the license restriction expires, the licensee already has progressed along a production experience curve and therefore has had an opportunity to improve upon its efficiency of production, in addition to developing its market share.

Despite objections to the reverse-engineering period, however, firms do not agree on an alternative standard. Given this lack of consensus, we believe that the reverse-engineering idea should be retained with modifications at present, particularly because of the *Antitrust Guide's* relatively liberal view on territorial restrictions. We would

se violation of section 1 of the Sherman Act. *Id.* at 405, [1978] 2 TRADE CAS. (CCH) ¶ 62,291. This holding does not imply, however, that territorial restrictions in international know-how licenses are *per se* illegal.

suggest, however, an addition of from 25% to 50% in the time period to compensate licensors for the fact that the licensee at the end of the reverse-engineering period will be in full production with a developed market.

Ideally, the time period of a restriction should include market development, and we believe that in many cases courts could make this determination on the basis of expert testimony with little more uncertainty than is already incorporated in the determination of the reverse-engineering period. If, however, such a calculation is not performed, we suggest the arbitrary add-on as a compromise which will overcome some of the clear inequality of the present time restriction, while preserving some of the favorable objective features of the reverse-engineering test. We would also suggest that where the reverse-engineering period is very short, perhaps less than two years, an add-on in excess of 50% could be applied to compensate for lead time which the licensee is receiving.

TERRITORIAL RESTRICTIONS AND THE EEC

European Economic Community (EEC) law appears to be quite strict as to international know-how license clauses which prevent licensees producing in the EEC from exporting products to other EEC member states, subject to the possibility of obtaining an exemption under article 85(3) of the Rome Treaty, or under the draft patent license regulation now being considered.¹⁷ EEC law may also apply to restrictions which prohibit export to the EEC and, in rare cases, from the EEC.

Respondents were asked, in the series of questions which follows, to discuss the impact of EEC rules concerning territorial restrictions upon know-how flows. Corporate responses to this section of the questionnaire were highly consistent. Nearly all firms indicated that current EEC rules concerning territorial restrictions do not substantially affect the quantity of technology currently transferred to the EEC. If the EEC, tomorrow, were to expressly permit territorial restrictions in know-how licenses, licensing behavior by U.S. firms apparently would not be greatly affected.

B1. Have EEC rules of the kind mentioned above impacted in any way upon the quantity of know-how you have transferred to licensees in the EEC during the past five years?

Total number of firms responding: 40

¹⁷ See text at note 5 *supra*.

<i>Firms responding "yes":</i>	6	(15%)
<i>Firms responding "no":</i>	34	(85%)

Affirmative respondents provided the following statements:

"We had a number of license agreements dating from the 1950's to 1960's which we found it necessary to modify, so as to enable a licensee in one EEC country to freely export to other EEC countries. As a general rule we may now restrict a license to use of manufacturing know-how in one or more countries but we rarely provide restrictions on sale of product (except as may be possible by patents in countries outside the licensed area)."

"The impact is not always clear."

"We licensed know-how in a particular field to one U.K. company and one Dutch company, giving each exclusive manufacturing rights in their respective home countries, but leaving selling territory unrestricted because of EEC rules. Because both licensees were free to sell throughout the EEC (and elsewhere), it proved impossible to obtain a third licensee in the EEC, even though there appeared to be a 'need' or 'place' for same."

"We have done such licensing on a careful, more limited basis than in the past."

"We do not include export restrictions."

"Licenses which might otherwise have been granted for single countries must now be evaluated on an entire EEC basis."

As the above figures show, however, the current EEC position toward territorial restrictions does not appear to substantially affect most United States multinationals.

B2. Have the above-mentioned rules caused you to expand your direct investment in the EEC rather than license know-how to unaffiliated firms?

Total number of firms responding: 40

<i>Firms responding "yes":</i>	2	(5%)
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<i>Firms responding "no":</i>	38	(95%)
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One firm responding affirmatively commented that it was currently in the process of "trying" to expand direct investment rather than license know-how to unaffiliated firms in the EEC. Firms responding negatively provided the following comments:

"This would be a definite factor if a situation came along."

"Other factors indicate that direct investment in the EEC is inappropriate now."

B3. Have EEC rules on export restrictions in any way affected the level of royalty payments you receive from your know-how licensees?

Total number of firms responding: 40

<i>Firms responding "yes":</i>	1
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<i>Firms responding "no":</i>	39
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The affirmative respondent provided the following comment:

"The EEC rules tend to justify a licensor in seeking higher payments. Whether this leads to higher payments in fact is very difficult to say. To predict the results of a negotiation on a different set of facts (or with different rules) requires speculation."

B4. Have EEC rules pertaining to clauses limiting exports within the EEC caused you generally to select know-how licensees which are larger (and therefore can market throughout the EEC) than the EEC licensees you would have selected in the absence of export rules?

Total number of firms responding: 40
Firms responding "yes": 1
Firms responding "no": 39

The firm answering "yes" noted:

"To a prospective second or other subsequent licensee, the perception of the competitive strength of the first or other existing licensees is often greater than the reality, so that the licensor is best advised to choose a larger, stronger company or companies as initial licensee."

Another firm answering "no" commented:

"It should be obvious if one cannot profitably license several companies within a territory like the EEC, then the most effective technique is to either license the largest producer capable of supplying the entire territory or alternatively to set up your own production facilities."

B5. If the EEC were to announce tomorrow that there are no prohibitions as to territorial restrictions in know-how licenses, how would your licensing policy within the EEC change? Does your company, for example, currently hold a store of know-how which can be licensed profitably to the EEC only if restrictions on exports are permitted?

Total number of firms responding: 37
Policy would change: 10 firms (27%)
Policy would not change: 27 firms (73%)

Of the ten firms suggesting that their licensing policy would change if territorial restrictions were permitted, some of their comments included:

"More licensing to more companies of the same know-how."

"Licenses which might otherwise have been granted for single countries must be evaluated on entire EEC basis."

"Certainly—we would include territorial restrictions."

"In general would facilitate licensing considerations."

"We would look at seeking out additional licensees for the same technology we already license. While we have no store of know-how simply waiting to be licensed if the rules change, there are some areas where I think licensing would become of interest if marketing could be restricted, where, under present rules, we are attempting to exploit know-how cap-
tively."

No firm suggested that it currently holds a store of know-how which can be licensed profitably to the EEC only if restrictions on exports were permitted.

In conclusion, EEC prohibitions upon export restrictions do not appear substantially to have reduced know-how flows to licensees in the EEC. Several licensors indicated that as a policy matter, they never use territorial or field-of-use restrictions in a know-how license. This technique may be particularly effective when the technology transferred is proprietary rather than commodity-type in nature. As discussed earlier, proprietary know-how encompasses technology generally possessed by only one firm, while commodity-type know-how includes technology understood by most firms in the industry. When licensing state-of-the-art proprietary technology to licensors in highly developed countries, patents may provide an effective territorial barrier. In contrast, when licensing to underdeveloped countries, the technology transferred is often commodity-type in nature and may no longer be protected by patents or may never have been patentable. In the case of developing countries, therefore, explicit territorial restrictions in know-how agreements may be necessary more frequently than in the EEC context.

This may explain in part why responses to the questionnaire indicate that EEC prohibitions on territorial restrictions have had a lesser impact upon technology flows than have prohibitions on territorial restrictions imposed by developing countries. In addition, as noted in the next section, developing countries often dictate royalty rates and confidentiality limitations which, when coupled with prohibitions on territorial and field-of-use restrictions, substantially affect licensor perceptions of investment opportunities and reduce technology flow.

FOREIGN REGISTRATION LAWS PROHIBITING EXPORT RESTRICTIONS

Several foreign countries and regional organizations require know-how licenses to be registered with a licensing authority. Such licensing authorities often prohibit clauses in license agreements which limit export of products created with the technology, subject to the granting of exceptions in particular instances.

The current drive toward technology registration laws, which now numbers in excess of 15 major countries, originated in substantial part with the Cartagena Agreement in 1970 to which the Andean Group (Ancom) countries of Bolivia, Colombia, Ecuador, Peru, and Vene-

zuela are signatories.¹⁸ Article 20 of the Andean Community's "Common Regime of Treatment of Foreign Capital and Trademarks, Patents, Licenses and Royalties" and the guidelines established by Decision 85 of the Ancom Group prescribe norms that the five member governments will apply in evaluating contracts for technology in their countries. Article 20 reads in part:

Except in exceptional cases, duly qualified by the competent body of the recipient country, no clauses will be accepted in which the exportation of the products manufactured on the basis of the respective technology is prohibited or limited in any way.

In no case shall clauses of this nature be accepted in connection with subregional trade (interchange) or with the exportation of similar products to third markets.¹⁹

Strict national registration laws have raised a serious question as to whether technology flows will diminish in the presence of such regulation. Daniel R. McGlynn summarized the dilemma as follows:

Although the operation of many of the technology transfer agencies is but a year or two old, the international business community has, in general, actively protested against such legislation, predicting that strict enforcement of such technology transfer laws would virtually stop investment and technological transfer to such countries. Preliminary statistics concerning new direct foreign investment in the Ancom Group countries seem to demonstrate such a trend.²⁰

Question C1, as follows, seeks to gather empirical information concerning the impact upon technology flows of the prohibition against export restrictions in the Ancom agreement:

C1. The Andean Community (Ancom) under its "Common Regime of Treatment of Foreign Capital and of Trademarks, Patents, Licenses, and Royalties" prohibits licensees in the Ancom Group from signing licenses which contain clauses restricting exports from the Andean countries, subject to certain exceptions. Has the Ancom agreement in any way affected the quantity of know-how which your company has licensed to unaffiliated firms in the Andean countries?

<i>Total number of firms reporting:</i>	39
<i>Firms responding "yes":</i>	15 (38%)
<i>Firms responding "no":</i>	24 (62%)

Several of the comments suggested a very substantial impact:

"Company refuses to license further—we have only one license and have turned down requests for others."

¹⁸ See UNIDO, NATIONAL APPROACHES TO THE ACQUISITION OF TECHNOLOGY 27 (1977).

¹⁹ U.N. Doc. ID/WG.275/2 (1978) (unofficial English translation of Decision 24 of the Committee of the Cartagena Agreement).

²⁰ Note, *Technology Transfer and Industrial Property Law in Developing Countries*, 8 LAW. AMERICAS 394, 396 (1976).

"We have deliberately not entered into license agreements because of the Ancom agreement."

"Because of the extent of involvement in licensing we stay out of certain Andean countries except to sell in through agents."

"Have refrained from granting licenses."

"Less inclined to license a company in Ancom."

"No licensing activity in such areas."

"Restricted quantity and quality of know-how transferred."

"[Corporate experience by other units in our company] with obtaining registration of agreements in Ancom countries is one factor which has discouraged [our unit] from doing any licensing of know-how to unaffiliated firms in Ancom. Effort and expense is too great to be justified by potential return."

Four firms answering "yes" expressed concern over Ancom regulation, particularly Ancom's unwillingness to permit the confidentiality obligation to survive the term of the agreement. Firms answering "no" apparently either did not have opportunity to license in Ancom or did not generally impose export restrictions in any international know-how licensing agreements.

Question C2 concerns national registration regulations prohibiting export restrictions in India and Mexico. India's general guidelines for foreign collaboration arrangements provide: "To the fullest extent possible, there shall be no restrictions on free export to all countries."²¹ Article 7 of the Mexican Law for the "Registration of the Transfer of Technology and the Use and Exploitation of Patents and Trademarks" prohibits licensing contracts when "the exportation of the transferee's products or services is prohibited against the best interests of the country."²²

The Mexican experience under its technology registration law is reasonably well-documented. From January 29, 1973 until May 31, 1975, 6,528 contracts were presented to the Registry either for information or for registration, and 600 were rejected. Of these, 136 contracts (23%) violated the Mexican law prohibiting export restrictions which are contrary to Mexico's interests. Of the 136 contracts, 105 contained a total export prohibition, while the remaining 31 contracts contained export restrictions on particular geographical areas or countries.²³ Thus, it would appear that a government prohibition on export restrictions might affect technology flows to developing countries. The purpose of question C2 was to test this probable impact.

²¹ U.N. Doc. ID/WG.275/8 (1978).

²² Art. 7, cl. VII (published in D.O. Dec. 30, 1972) (unofficial, English translation from U.N. Doc. ID/WG.275/2 (1978)).

²³ UNIDO, *supra* note 18, at 45.

C2. Have national registration regulations prohibiting export restrictions in India and Mexico affected the quantity of know-how you have licensed to those countries in recent years?

Total number of firms responding: 40
Firms responding "yes": 10 (25%)
Firms responding "no": 30 (75%)

Firms answering "yes" provided the following comments:

"No new licenses in India. In Mexico, we have become very cautious limiting our activities mainly to affiliates."

"Because of the extent of government involvement in licensing we stay out of these countries."

"Don't do it any more."

"We have deliberately not sought licenses in Mexico."

"Ceased transfer to India. Transfer to Mexico in abeyance."

"Have no interest in spending the time necessary to get approvals at the royalty rates and other restrictions allowed."

A company answering "no" remarked:

"We have entered into four such agreements with Mexican parties and five with Indian concerns. In none of the agreements were licenses under our United States or Canadian patents granted."

C3. Have any other national registration laws prohibiting export restrictions affected the quantity of know-how you have licensed?

Total number of firms responding: 38
Firms responding "yes": 8 (24%)
Firms responding "no": 30 (76%)

Firms responding "yes" provided the following responses:

"In general we don't want our technology revised in the country and exported to another country."

"Brazil—Although we have continued to license to Brazil, their restrictive laws relating to technology transfer make such agreements far less commercially attractive and will diminish the scope and number of such agreements in the future."

"Made finalizing a license impossible in several countries."

"Yes, in Japan."

"We are generally disinterested in licensing to countries which harass licensors."

"We have reduced licensed products to Colombia, Venezuela, Brazil and Argentina."

C4. Have the above-mentioned national registration laws caused you to expand your direct investment rather than license know-how to foreign unaffiliated firms?

Total number of firms responding: 40
Firms responding "yes": 4 (10%)
Firms responding "no": 36 (90%)

Firms responding "yes" supplied the following comments:

"Yes, Colombia and Venezuela."

"In every instance of Latin American licensing, the registration laws are an important factor. The net effect has probably been to increase more direct participation, but other factors, such as taxes, may be more important."

One firm answering "no" commented that it is presently conducting "a study that might result in a 'yes' in the near future." Another firm answering "no" stated that direct investment laws are just as onerous as are laws regulating licensing to unaffiliated firms.

C5. Have the above-mentioned national registration laws in any way affected the level of royalty payments you require when licensing know-how?

Total number of firms responding: 37

Firms responding "yes": 9 (24%)

Firms responding "no": 28 (76%)

Firms answering "yes" provided the following responses:

"We increased royalties by virtue of shorter time period required by Ancom."

"High front end demands."

"Problems have arisen in Brazil."

"Royalties much more contentious."

"Reluctant to license, so less money."

"Government approval requires a second negotiation."

Firms indicating "no" commented:

"It would affect our royalties—we'd want more. But the laws in the countries are usually also unrealistic in royalty amount."

"But we license less because adequate incentive is denied us."

C6. Have the above-mentioned national registration laws caused you generally to select know-how licensees which are different from the licensees you would have selected in the absence of such laws? For example, are the licensees you select either larger or smaller than the licensees you would have selected in the absence of such laws?

Total number of firms responding: 37

Firms responding "yes": 4 (11%)

Firms responding "no": 33 (89%)

Firms answering "yes" provided the following comments:

"Would choose licensees with no current export business."

"We are inclined to avoid countries regardless of size of firm."

"Tendency only, not that much experience."

Part C of the questionnaire provides substantial empirical evi-

dence that prohibitions on export restrictions from the Andean Community have affected know-how transfers of 38% of the respondents. Registration laws in Mexico and India have affected 25% of the respondents, and national registration laws in other nations have had an impact on 24% of the respondents. Apparently national registration laws have had a significant cost.

The cost of national registration was discussed by Enrique Aguilar, former Director General of the Mexican National Registry of Technology Transfer, during a recent visit by one of the authors to the United Nations Industrial Development Organization in Vienna, Austria. Mr. Aguilar estimates that between 1973 and 1975, while he held the position of Director General of the Mexican Registry, perhaps 50 contracts with Mexican licensees were totally cancelled by international licensors as a result of his government's initiative. In addition to cancellation, however, a major cost component in national technology registration is the impact that regulations have upon a licensor's perception of investment opportunities and his image of the regulatory environment surrounding the licensee. To measure this important change in perception, Mexico's Secretary of Industry and Commerce authorized, in 1975, a feasibility study by Saadia Schor to measure changes in perception of United States multinationals toward licensing in Mexico. The study, unfortunately, was never completed and empirical data on impact remains lacking.

The present study has concentrated on empirical information. It is our conclusion that the information which we have received indicates that foreign registration laws have had a substantial effect upon United States corporate perceptions of licensing opportunities and that the flow of technology to developing countries has been significantly reduced. This is a measured cost that must be balanced against the benefits which such laws provide to developing countries in the area of balance of payments effects, etc.

Corporate responses to the survey indicate that the impact of national registration laws upon know-how flows would have been even greater had not licensors had the opportunity to withhold certain United States patents which are necessary to effectively utilize the know-how transferred. The withholding of relevant patents often serves as a substitute for territorial and field-of-use restrictions. The study also indicates that, in addition to national prohibitions upon territorial and field-of-use restrictions, licensors are especially concerned with regulations dictating royalty rates and regulations forcing disclosure of confidential information. Apparently this combination of regu-

lations explains in part why licensors consider the impact of registration laws in developing countries to be greater than the impact of EEC prohibitions.

Finally, national registration laws in developing countries often prohibit restrictions on export back to the United States market, while EEC regulations are applicable only when competition within the EEC would be affected. Thus, laws in many developing countries are broader in reach than are similar EEC regulations. This realization, that registration laws in developing countries are perhaps more likely to force opening of the United States market than are EEC regulations, may explain why survey respondents indicate that the impact of foreign registration laws upon know-how flows is greater than the impact of regulations promulgated by the EEC.

FIELD-OF-USE RESTRICTIONS

Technological know-how can often be utilized in diverse fields of activity, diverse stages of production, or diverse industries, or to produce diverse products. Licensing authorities of some foreign nations do not appear to be supportive, however, of field-of-use restrictions in know-how licenses, and the EEC's position is as yet undetermined. Article 7, clause IV of the Mexican "Law on the Registration of the Transfer of Technology,"²⁴ for example, prohibits contracts which limit, without justification, field-of-use. Section D of the questionnaire evaluates the impact of field-of-use restrictions upon technology flows. The written responses to this section are consistent with unanimous agreement that foreign treatment of field-of-use restrictions does not impact technology transfer.

D1. Has the EEC's approach to field-of-use restrictions impacted in any way upon the quantity of know-how you have licensed to unaffiliated firms in the EEC during the past five years?

<i>Total number of firms responding:</i>	40
<i>Firms responding "yes":</i>	0
<i>Firms responding "no":</i>	40 (100%)

D2. Have national registration laws pertaining to field-of-use restrictions of non-EEC countries in any way impacted upon the quantity of know-how you have licensed to those countries in recent years?

<i>Total number of firms responding:</i>	40
<i>Firms responding "yes":</i>	1 (3%)
<i>Firms responding "no":</i>	39 (97%)

²⁴ *Id.* at 42.

D3. If tomorrow the United States were to prohibit field-of-use restrictions in all international know-how licensing agreements affecting United States imports or exports, would your current licensing policy be affected?

Total number of firms responding: 39

Firms responding "yes": 16 (41%)

Firms responding "no": 23 (59%)

The responses to question D3 concerning the impact of a change of United States policy are in sharp contrast to the previous two questions concerning the current policies of foreign governments. While in each of the previous questions the firms nearly unanimously indicated no impact, more than 40% of the firms responding to question D3 suggested that if the United States were to prohibit field-of-use restrictions, current licensing policy would be affected. Apparently firms consider field-of-use restrictions important, but do not believe that technology registries in foreign governments and in the EEC are taking an unreasonable attitude, as of now, toward such restrictions. Firms indicating that licensing policy would change provided the following comments:

"The price would go up for those technologies with wide applications."

"Our policy would have to reflect the potential loss of control of an asset we spent effort and money developing."

"Most of our licenses are field-of-use limited."

"In some cases we would not license and in others we would require additional compensation."

"We need United States government support for the concept of *plant* licenses. We also need 'tools' to compete with foreign contractor-licensors that can bid low because they are financed by their governments."

A firm indicating no change in policy stated:

"We do not 'restrict' the uses to which a licensee can use our technology by extracting a commitment not to use the technology to manufacture other products besides the 'licensed product.' If there are other applications, they are unlicensed and we are free to assert our patents."

D4. In your international know-how licensing agreements, which of the following two types of restrictions do you generally consider more important?

Total number of firms responding: 33

— *Territorial restrictions.*

19 firms (58%)

— *Field-of-use restrictions.*

8 firms (24%)

— *Territorial restrictions and field-of-use restrictions are equally important.*

6 firms (18%)

Firms indicating that territorial restrictions are most important provided the following comments:

“Our licensing is in the area of chemical processes, and as such field-of-use restrictions are difficult to police and enforce. Territorial restrictions are used not as to sale of product but as to where the licensee is permitted to practice the licensed practice. Only value of such a restriction was to secure multiple licenses in some instances.”

“The technology licensed generally relates to manufacturing. By territorial limitation we can have a number of licensees each at a different location. The products so manufactured are competitive.”

“Territorial restrictions—field-of-use has been generally self-restricting.”

“Most technology is field-of-use limited by its very nature and losing this limiting right would not hurt us relatively as much.”

The following comments are from firms considering field-of-use restrictions most important:

“Territorial restrictions usually are or will become ineffective. Thus we will not license in a situation where we must depend upon a territorial restriction to protect our own business interest. We will consider licensing where a field-of-use restriction can be imposed.”

“When analyzed, the definition is almost always a field-of-use definition.”

“Field-of-use permits optimization of use of technology through selection of licensee best able to utilize same in a given field.”

Respondents considering territorial and field-of-use restrictions equally important suggested:

“Depends on size and diverseness of licensee.”

“The relative importance of territorial and field-of-use restrictions depends on the particular factual circumstances; for example, whether there is any reasonable prospect that the licensee would export to the United States; whether there are relatively large diverse markets for the products.”

The conclusion that United States licensors consider territorial restrictions more important than field-of-use restrictions is in accord with a study conducted by Business International S.A. in April 1978.²⁵ Business International asked thirty United States multinationals to react to specific provisions of the proposed UNCTAD Code of Conduct, including export restrictions and field-of-use restrictions. While 77% of respondents indicated that a prohibition on export restrictions would decrease the flow of technology to unrelated foreign companies, only about 60% of respondents thought that a prohibition on field-of-use restrictions would decrease the flow of technology.

D5. If you are prohibited from including a field-of-use restriction, which of the following courses of action is most likely and why?

Total number of firms responding: 27

²⁵ Business International S.A., *Transfer of Technology: A Survey of Corporate Reaction to a Proposed Code* (April 1978) (private report prepared for sponsors only).

- *We will not license the know-how at all.*
7 firms (27%)
- *We will license the know-how but will demand additional compensation through higher royalty rates.*
8 firms (28%)
- *We will license the know-how but will not generally seek additional compensation.*
12 firms (44%)

Two additional firms indicated they would not license at all in some circumstances and would demand additional compensation in others.

When asked this same question in the context of territorial restrictions earlier in the questionnaire, 33% of the firms indicated they would not license the know-how at all, 18% indicated they would seek additional compensation, and 48% indicated they would license but not seek additional compensation. Thus, if corporations are prohibited from including a field-of-use restriction, they will react in a manner very similar to the manner in which they react when prohibited from including a territorial restriction. The primary distinction in behavior is that firms are perhaps somewhat less likely to license the technology at all when faced with a prohibition on export restrictions, particularly if the United States market is jeopardized, while they are more likely to license and seek additional compensation when faced with a prohibition on field-of-use restrictions.

Firms indicating they would not license the technology at all if a field-of-use restriction is prohibited commented as follows:

“In this industry, can’t make up lost sales.”

“Decision to license absent such restrictions involves careful assessment of risks that technology could be used to detriment of the licensor.”

Firms seeking additional compensation responded:

“If we desire to include a field-of-use restriction, there are presumably relatively large diverse markets for the products. Should such restrictions be prohibited, our licensing program would be limited and we would generally seek additional compensation.”

“Getting the higher rates is not easy with increasing licensee sophistication and foreign government license regulations and approvals.”

D6. Have laws prohibiting field-of-use restrictions caused you generally to select know-how licensees which are different from the licensees you would have selected in the absence of such laws?

Total number of firms responding: 37

Firms responding “yes”: 0

Firms responding “no”: 37 (100%)

POLICY SUMMARY

The policy summary section of the questionnaire posed the following questions:

If your company has a defined policy with regard to international know-how licensing, please summarize briefly. If possible, include in your answer the following:

- A. Is international licensing of know-how primarily a profit activity or a service activity ancillary to other corporate activity?*
- B. At what level of corporate decision-making are international know-how licensing decisions generally made?*

Of the 30 firms responding, 22 firms (73%) considered international licensing of know-how to be primarily a profit activity. Eight firms considered international licensing of know-how to be a primarily service activity. Many of the remaining firms considered international licensing both a profit and a service activity.

Seven firms indicated that international know-how licensing decisions are made at the vice president level. The executive committee or top management was indicated by 5 firms. Four firms made licensing decisions at the division level, one firm at the product manager level, one firm at "just below corporate," and one firm at "just below V.P."

Firms responding that licensing is a service activity provided the following comments:

"Licensing is considered to be ancillary to our corporate marketing activities, *e.g.*, to support hardware sales where licensing is necessary to conform to local content requirements, to gain access to markets which are closed to our products by licensing unaffiliated companies or companies in which we have or are acquiring an equity interest."

"All licensing of company technology is secondary to the marketing and manufacturing functions of primary ongoing products."

"International licensing of know-how is usually ancillary to our manufacturing activity and is practical (1) when manufacturing via a subsidiary in a particular territory is not attractive or (2) when local manufacturing is a prerequisite to sale of other goods made in the USA."

The following comments come from firms which consider international licensing of know-how to be a profit activity:

"We license our product design know-how to foreign companies on a reasonable fee basis. The fee is applied to sales. Our primary concern is fee/royalty income."

"As long as the return is good enough we will run our R & D and update our technology. We do not want to become a "sand and gravel" contractor."

"Our technologies are available for licensing once the company has decided not to manufacture and/or sell the product in the area involved."

"It is primarily a profit making activity but quite often serves to help

promote the sale of product or to provide our international people with a product source for resale when we can not compete with our own manufactured goods.”

“It is our policy to license know-how in support of the general business of the company to maximize profits.”

“We will license overseas that technology which we do not intend to exploit ourselves or in those situations where licensing will not have an adverse effect upon our own operations.”

Three additional firms, indicating that international know-how licensing was neither primarily a profit activity nor a service activity, provided the following insights:

“Licensing of know-how is generally done only when such licensing expands markets for our products by providing second sources. Second sources give customers the courage to design in a product.”

“As is true with most U.S. companies, we are a licensee more often than we are a licensor and licensing in is more important than licensing out, as that is an important way for us to get new technology.”

“Licenses are mainly the fall-out of programs with technical discoveries that do not or no longer fit in our normal commercial activity but which have some value in other businesses.”

SUMMARY OF RESULTS

- 1) Straight know-how licenses account for 25% of all licenses granted to unaffiliated foreign firms, straight patent licenses account for 33%, and combination patent/know-how licenses account for 42%.
— 74% of firms responding indicate that more than 50% of their revenues from combination agreements are attributable to the know-how component.
- 2) Nearly half (49%) of responding firms indicate that they have licensed know-how technology in the past five years which would probably not have been licensed had they been prohibited from including a clause restricting export back to the United States.
— Most firms when confronted with a prohibition upon export restrictions are more likely not to license the technology at all than to seek additional compensation through higher royalty rates.
- 3) More than 75% of firms responding do not consider the time period that would be necessary to reverse-engineer the know-how to be an acceptable standard for determining “a reasonable time period” for restrictions in a know-how license. At the end of the reverse-engineering period the licensee is already in full production and has developed its market.
— We recommend that a period of time greater than the reverse-

engineering period be adopted, as necessary to assure a fair standard.

- 4) EEC regulations prohibiting territorial restrictions do not appear to have substantially affected the quantity of know-how transferred by U.S. licensors to unaffiliated licensees in the EEC.
- 5) National registration laws in developing countries, however, have significantly reduced technology flows. Nearly 40% of respondents state that regulations in the Andean Community have affected the quantity of know-how which they have licensed to unaffiliated licensees. Of the respondents, 25% indicate that national registration regulations in Mexico and India have had impact upon the quantity of technology they have transferred.
 - Unlike EEC regulations which are applicable only when competition within the EEC is affected, national registration laws in developing countries are often broader in their reach and explicitly prohibit restrictions on export back to the U.S. market.
- 6) Foreign regulations pertaining to field-of-use restrictions have not substantially affected technology flows. Most firms (57%) consider territorial restrictions more important than field-of-use restrictions.

APPENDIX

QUESTIONNAIRE AND NUMERICAL SUMMARY OF RESPONSES

EMPIRICAL STUDY OF THE VALUE OF TERRITORIAL AND FIELD-OF-USE RESTRICTIONS IN INTERNATIONAL LICENSING OF UNPATENTED KNOW-HOW

Project Directors: Joel A. Bleeke and James A. Rahl
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Chicago, Illinois 60611

January, 1979

INTRODUCTORY NOTES

1. Scope of Inquiry. This study examines the role that territorial and field-of-use restrictions play in facilitating international licensing of unpatented know-how. The questionnaire investigates the impact upon technology flows when such restrictions are prohibited in licensing agreements. Our inquiry encompasses only international licensing to unaffiliated firms (not members of your group); domestic licensing is excluded.
2. Confidentiality. We recognize that some of the information sought may be sensitive. All questionnaires received will be treated as secret and will be read only by the directors of the research group. As each questionnaire is read and the responses are tabulated, the questionnaire will be destroyed. No information will be published in such a way that individual companies can be identified. We will clear questions of confidentiality with you in cases of doubt.
3. Timetable. We would like the completed questionnaires returned by February 28, 1979. If you are willing to participate but will have difficulty in meeting this timetable, please contact us.

QUESTIONNAIRE

Name of corporation _____

Name of person or
persons who supervised
completion of this form _____

Position _____

Telephone number
and extension _____

If you are answering only for a particular
division or subsidiary of your corporation
or if you are answering only for a particular
type of know-how technology, please indicate
the name of that division, subsidiary or
technology type. _____

If a particular division, subsidiary or type of technology is specified above, please answer all sections of the questionnaire, including the initial background section and the concluding policy summary section, only in terms of the particular division, subsidiary or technology type specified.

If other divisions, subsidiaries or managers of other technology types are willing to participate in this project, we would very much appreciate your assistance in providing them with additional copies of the questionnaire, or in notifying us so that we may provide additional copies.

This questionnaire is composed of a short background section followed by four parts, each of which relates to licensing of unpatented know-how:

- A. Territorial restrictions preventing export back to the U.S. market;
- B. Territorial restrictions within, to and from the European Economic Community;
- C. Foreign registration laws prohibiting export restrictions;
- D. International field-of-use restrictions.

Each of the above listed parts is preceded by a short introduction. The questionnaire concludes with a brief policy summary.

LICENSING ACTIVITY BACKGROUND

1. Does your company license unpatented know-how to unaffiliated (not members of your group) foreign firms?

YES 40 NO 13

If "no", you need answer no further questions. Please return questionnaire. Thank you.

-
2. Approximately how many patent and/or know-how licenses (in which you are licensor) does your company currently hold with foreign unaffiliated firms?

4055

Please give your best personal estimate as to the percentage of the above-given total which falls in each of the following categories:

- 35% Combination patent/know-how licenses.
- 7% Combination patent/know-how/trade mark licenses.
- 25% Straight know-how licenses.
- 33% Straight patent licenses.

3. Looking only at revenues from *combination* patent/know-how or patent/know-how/trade mark licenses to foreign unaffiliated firms, please give your best personal estimate of the percentage of such revenues which stem from the know-how (as opposed to the patent) component (ignore trade marks).

- | | |
|--------------------------------|-------------------------------|
| <u>15 firms</u> More than 75%. | <u>3 firms</u> 25%-49%. |
| <u>11 firms</u> 50%-74%. | <u>6 firms</u> Less than 25%. |

Please note: The remainder of this questionnaire examines your Company's licensing policy for unpatented know-how. "Know-how" as used here includes, but is not limited to, information such as methods, procedures and technical training, as well as embodiment of information in tangible form, such as formulas, designs, drawings, process manuals and specifications. The questionnaire examines know-how transferred by straight know-how licenses and know-how transferred as a component of combination patent/know-how or patent/know-how/trade-mark licenses. Only international licensing to unaffiliated firms is examined. Domestic licensing is excluded.

We seek information on the licensing of both "proprietary" know how and "commodity-type" know-how. Proprietary know-how encompasses technology generally possessed only by your firm, while commodity-type know-how includes technology understood by most firms in your industry. So that we might better interpret your responses to the questions which follow, please give below your best personal estimate as to the percentage of your licenses know-how which is primarily proprietary (rather than commodity) in nature.

- 10 firms All.
- 16 firms More than 75%.
- 6 firms 50%-74%.
- 2 firms 25%-49%.
- 4 firms Less than 25%.
- 2 firms None.

A.

TERRITORIAL RESTRICTIONS PREVENTING EXPORT BACK TO THE U.S. MARKET

Introduction:

The *Antitrust Guide for International Operations* of the U.S. Department of Justice (1977) (Case F) indicates that international know-how licenses may under certain conditions include clauses which prohibit export back to the United States of products produced with licensed know-how. Such clauses might be permitted, for example, where the time period is reasonable, the restraint is unilateral, the product substantially depends upon the licensed know-how and the

Appendix: International Licensing of Unpatented Know-How
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licensing agreement is not part of a continuing web of restrictive licenses. The following questions relate to the *Guide*.

1. If the United States tomorrow were unequivocally to prohibit clauses which restrict export of products produced under international know-how licenses back into the United States, would your company's current or future licensing policy be affected in any way?

YES 17 NO 23

If "yes", please explain.

2. If your answer to No. 1 above is 'yes', have there been any instances in the past five years in which your firm has licensed know-how technology (to a foreign unaffiliated firm) which would probably not have been licensed had you been prohibited from including a clause restricting export back to the United States?

YES 8 NO 9

If "yes", please explain.

3. Have there been any instances during the past five years in which your firm has refused to license know-how to a foreign firm because you believed that you could not include a restriction prohibiting export back to the United States?

YES 2 NO 27

If "yes", please give specific examples.

4. If your company is prohibited from including a clause restricting exports back to the United States in an international know-how licensing agreement, which of the following courses of action is most likely:

11 We will not license the technology at all.

6 We will license the technology but will seek additional compensation through higher royalty rates.

16 We will license the technology but will not generally seek additional compensation.

Please give reason for your policy; for example, heavy initial capital investment, importance of market share, economies of scale, etc.

5. If the answer to No. 4 above indicates that your firm is likely to seek additional compensation, which of the following factors would be most considered by you in determining the level of additional compensation? (You may check more than one.)

7 Licensee's marketing organization in the United States.

2 Licensee's total capital.

7 Production cost differentials.

4 Elasticity of United States demand.

8 Length of reverse engineering period.

3 Licensee's profit per item sold.

3 United States import tariff rates.

7 Licensor's market share in United States.

4 Relative negotiating strengths.

 Other (please specify) _____

6. The Justice Department *Guide* (p. 34) uses the time period that would be required for others to reverse-engineer the know-how as a method for determining a "reasonable time period" for a territorial restriction in a know-how license. In your opinion, is this a fair standard?

YES 9 NO 31

If "no" what method do you believe would be preferable for determining a "reasonable time period"?

B.

TERRITORIAL RESTRICTIONS AND THE EEC

Introduction: European Economic Community law appears to be becoming quite strict as to international know-how license clauses which prevent licensees producing in the EEC from exporting products to other EEC member states, subject to the possibility of obtaining an exemption through a proceeding for that purpose. In certain situations, EEC law may also sometimes apply to restrictions which prohibit export *to* the EEC. (For example, a license between a United States licensor and Polish licensee containing a restriction on export to Germany and Denmark.) Finally, the EEC may prohibit restrictions upon exports *from* the EEC, if an effect on competition within the EEC would result, although such cases are rare.

1. Have EEC rules of the kind mentioned above impacted to any way upon the quantity of know-how you have transferred to licensees in the EEC during the past five years?

YES 6 NO 34

If "yes", please explain; if "no", has your company within the last five years licensed any know-how to unaffiliated firms in the EEC?

2. Have the above-mentioned rules caused you to expand your direct investment in the EEC rather than license know-how to unaffiliated EEC firms?

YES 2 NO 38

If "yes", please give specific examples.

3. Have EEC rules on export restrictions in any way affected the level of royalty payments you receive from your know-how licensees?

YES 1 NO 39

If "yes", please explain.

4. Have EEC rules pertaining to clauses limiting exports *within* the EEC caused you generally to select know-how licensees which are larger (and therefore can market throughout the EEC) than the EEC licensees you would have selected in the absence of export rules?

YES 1 NO 39

If "yes", please give examples.

5. If the EEC were to announce tomorrow that there are no prohibitions as to territorial restrictions in know-how licenses, how would your licensing policy within the EEC change? Does your company, for example, currently hold a store of know-how which can be licensed profitably to the EEC only if restrictions on exports are permitted?

Policy would change: 10

Policy would not change: 27

C.

FOREIGN REGISTRATION LAWS PROHIBITING EXPORT RESTRICTIONS

Introduction:

Several foreign countries require know-how licenses to be registered with a national licensing authority. Such licensing authorities often prohibit clauses in license agreements which limit exports of products created with the technology, subject to the granting of exceptions in particular instances.

1. The Andean Community (Ancom) under its "Common Regime of Treatment of Foreign Capital and of Trademarks, Patents, Licenses, and Royalties" prohibits licensees in the Ancom Group from signing licenses which contain clauses restricting exports from the Andean countries, subject to certain exceptions. Has the Ancom agreement in any way affected the quantity of know-how which your company has licensed to unaffiliated firms in the Andean countries?

YES 15 NO 24

If "yes", please explain; if "no", has your firm within the last five years licensed any know-how to unaffiliated firms in the Andean Community?

2. Have national registration regulations prohibiting export restrictions in India and Mexico affected the quantity of know-how you have licensed to those countries in recent years?

YES 10 NO 30

If "yes", please explain; if "no", has your firm within the last five years licensed any know-how to unaffiliated firms in India or Mexico?

3. Have any other national registration laws prohibiting export restrictions affected the quantity of know-how you have licensed?

YES 8 NO 30

If "yes", please give name of country and explain.

4. Have the above-mentioned national registration laws caused you to expand your direct investment rather than license know-how to foreign unaffiliated firms?

YES 4 NO 36

If "yes", please give examples.

5. Have the above-mentioned national registration laws in any way affected the level of royalty payments you require when licensing know-how?

YES 9 NO 28

If "yes", please give examples.

6. Have the above-mentioned national registration laws caused you generally to select know-how licensees which are different from the licensees you would have selected in the absence of such laws? For example, are the licensees you select either larger or smaller than the licensees you would have selected in the absence of such laws?

YES 4 NO 33

If "yes", please explain.

D.

FIELD-OF-USE RESTRICTIONS

Introduction:

Technological know-how can often be utilized in diverse fields of activity, diverse stages of production, or diverse industries, or to produce diverse products. The EEC and licensing authorities of some other foreign nations do not appear to be supportive, however, of field-of-use restrictions in know-how licenses.

1. Has the EEC's approach to field-of-use restrictions impacted in any way upon the quantity of know-how you have licensed to unaffiliated firms in the EEC during the past five years?

YES 0 No 40

If "yes", please give examples; if "no", has your company within the last five years licensed any know-how to unaffiliated firms in the EEC?

2. Have national registration laws pertaining to field-of-use restrictions of non-EEC countries in any way impacted upon the quantity of know-how you have licensed to those countries in recent years?

YES 1 NO 39

If "yes", please give name of country and explain.

3. If tomorrow the United States were to prohibit field-of-use restrictions in all international know-how licensing agreements affecting United States imports or exports, would your current licensing policy be affected?

YES 16 NO 23

If "yes", please explain.

4. In your international know-how licensing agreements, which of the following two types of restrictions do you generally consider more important? (Please check one.)

19 Territorial restrictions.

8 Field-of-use restrictions.

6 Territorial restrictions and field-of-use restrictions are equally important.

Reason:

5. If you are prohibited from including a field-of-use restriction, which of the following courses of action is most likely and why?

7 We will not license the know-how at all.

5 We will license the know-how but will demand additional compensation through higher royalty rates.

12 We will license the know-how but will not generally seek additional compensation.

Reason:

6. Have laws prohibiting field-of-use restrictions caused you generally to select know-how licensees which are different from the licensees you would have selected in the absence of such laws?

YES 0 NO 37

If "yes", please explain.

POLICY SUMMARY

1. If your company has a defined policy with regard to international know-how licensing, please summarize briefly. If possible, include in your answer the following:

A. Is international licensing of know-how primarily a profit activity or a service activity ancillary to other corporate activity?

Profit activity: 22

Ancillary activity: 8

B. At what level of corporate decision-making are international know-how licensing decisions generally made?