OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

FAIR USE POLICY

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

15045

United Nations Industrial Development Organization

Distr.
LIMITED

ID/WG.454/5
20 November 1985

ENGLISH

Tenth Meeting of Heads of Technology
Transfer Registries

Cairo, Egypt, 8-13 December 1985

TRENDS IN TECHNOLOGY TRANSFER FLOW

Preliminary version*

Prepared by

UNIDO Secretariat

* This document has been reproduced without formal editing.

V.85-36489

C O N T E N T S

1.	Introduction	2
2.	Technology	2
3.	Technology Transfer	3
4.	Technology Transfer Channels as reflected in existing legislation	5
5.	Technology Transfer and Competition	9
6.	Technology Transfer Regulation	14
7.	Technology Transfer and Unpackaging	25
8.	Transfer of Technology and Intellectual Property Legislation	28
9.	Technology Transfer and Tax	28
10.	Technology Transfer flows	30

1. Introduction

The Technological Information Exchange System (TIES) has over the past years collected and exchanged information related to technology transfer policies, institutional arrangements and technology transfer flows. During a meeting in Caracas 1983 it was considered positively that this information should be used in a wider context and that an annual review on technology transfer trends should be prepared. UNIDO Secretariat in cooperation with the TIES member institutions have prepared this first preliminary version of an annual report on 1984. It is expected that the content will be critically reviewed at the forthcoming annual TIES meeting in Cairo. The report could be divided into two broad interrelated areas of concern, namely technology transfer policies and flows. In the part covering policies major attention will be given to trends in technology transfer legislation in developing countries, in particular vis a vis the recent introduction of a law of this nature in the People's Republic of China and the existance of three draft laws (e.g. Egypt, Costa Rica and Argentina). In order to be able to compare existing transfer flows attention has also been given to existing tax laws, unpacking policies and industrial property legislation.

The analysis of technology transfer flows to developing countries has been based on information obtained from Argentina, Mexico, Peru, Portugal, Poland, Spain, the Philippines, Egypt and the People's Republic of China. It is hoped that in the final version of this report information will be incorporated from Venezuela, Nigeria, Malaysia and the Republic of Korea.

2. Technology

Much has been said about technology and its place in the economic development of a country. However, defining technology has proved to be a difficult task and it is not uncommon that different people speak of technology with a different interpretation and differing points of view of the term, depending on their own fields of activity.

Engineers would identify technology by the nature of the physical and chemical transformations involved or by the equipment in which the technology is embodied and would define technology as "scientific study of the practical and industrial arts". Economists would identify technologies by the production factors and the outputs and would define technology as "skills, knowledge and procedures for making and doing useful things".

For entrepreneurs the concept of technology is dynamic one, the ultimate goal being the production of goods and services at a profit within the constraints of demand and competition and for public enterprises the social environment. They would define technology more as the package of product designs, production and processing techniques and managerial systems.

This has resulted in a wide range of perceptions regarding the nature of technology and the difficulty of finding an all-embracing definition.

3. Technology Transfer

The concept of technology as a principal input for an economic activity is distinct from the concept of technology as from scientific knowledge as scientific information usually flows freely without significant constraints, whereas technology as a production input is a commodity which is traded on the world market under extensive protection.

Non-commercial

A considerable amount of technology as a scientific knowledge is transferred either completely without payment or merely in return for a fee or payment for the administration of the transfer. Such payments relate principally to access to databases, fees for attendance teaching courses etc. Sometimes, when the technology is well known, a literature search can give sufficient information on production details that it can be used on a commercial basis. The sources for such search are technical and scientific libraries, patent specifications, published company

reports etc. UNIDO has among its services a Industrial Technological Information Bank (INTIB) which principal objective is to assist entrepreneurs in searching for such industrial technological information.

Commercial

To be commercially exploitable technology must have a unique value. It must be secret, confidential, restricted or covered by some form of intellectual property protection such as patent, registered designs or copy right.

Therefore to be the subject of a commercial transaction in technology transfer the technology must either be only obtainable from a proprietor on commercial terms or must be protected by some statutory restriction or confidential contract whereby its use is controlled again on commercial terms.

This can then be obtained in various forms namely through a direct sale, grant of a license to use the propriety or secret knowhow, technical assistance, management or engineering services.

Direct sales: This form of technology transfer, where the property rights or trade secrets are transferred from the seller to the buyer, provides for the transfer of knowhow such as drawings, process schedules, speed feeds, computer programmes, for the use on a continuing basis. This direct sale of knowhow might also include the assignment of rights in patents covering the technology.

Licensing: Technology may also be transferred through the grant of a permission to do a particularly thing, e.g. exercise a certain privilege which the grantee could not legally do absent such permission. This can be the use of propriety or secret knowhow with associated rights to receive assistance from a licensor at a given period of years, it may include patents, trademarks, models or information on formulas, processes, industrial techniques which are secret or otherwise difficult to obtain.

Technical Assistance

Technical assistance is another way of transferring technology and is often associated with direct sale or licensing of property or secret knowhow. It can also be provided as an individual transaction. It can cover a variety of assistance ranging from the designs of a new product, training, trouble shooting, equipment repair and maintenance, quality control, testing, to assistance to be provided on a short term basis to solve an isolated problem.

Management Assistance:

The main problem in establishing manufacture of a new product or use of a new process may be integrating a number of features unfamiliar to the present management of the company and therefore assistance may be required. This may be related to the management of the construction set-up when the construction is contracted to various parties, start-up supervision, production supervision and marketing assistance.

Engineering Assistance:

Engineering assistance is often required to design some specialized part of an industrial plant such as a water filtration unit etc. (detailed engineering) or to design the manufacture process as a whole such as equipment and process design, information about heat balances etc. (basic engineering).

4. Technology Transfer Channels as reflected in existing legislation

The various different perception of technology and technology transfer is also reflected in the existing legislation related to technology transfer. Very few have attempted to define technology and prefer to describe it through defining the channels through which it is transferred.

The UNCTAD draft international code of conduct on the transfer of technology (A United Nations effort to harmonize national approaches towards transfer of technology) defines technology as "systematic knowledge for the manufacture of a product, for the application of a process or for the rendering of a service and does not extend to the transactions involving the mere sale or the mere lease of goods". This definition has only been followed in the draft technology transfer legislation of Egypt. Other definitions are either more abstract like in Venezuela which defines technology as "intangible knowledge regardless of their forms" or less complicated like in the draft law on Technology Transfer in Argentina were an attempt has been made to simplify the definition of technology and to establish a clear linkage between definition of technology and forms through which it can be transferred. Technology is then defined as "Industrial Property Rights and Technical knowhow for the Production of goods and services".

A review of various technology transfer legislations [1] reveals that the description of technology transfer varies from country to country. Following the broad classification of direct sale, licensing, technical assistance, management assistance and engineering assistance, the technology transfer terminology used can be described as follows:

Direct sales

i. supply of machinery (Nigeria)

Many legislations take into account the direct sale of computer programmes models and industrial drawing, know-how or assignment of rights as technology transfer, but do not explicitly say so. Only Mexico, the Philippines and Egypt mention it in connection with assignment of industrial property rights and Brazil and Argentina in connection with computer programmes.

1) For a listing of legal regimes consulted see Annex I

Licensing

1. license of industrial property rights (Argentina, Portugal, Senegal, China, Rep. of Korea, Spain, Egypt)
2. license of specific industrial property rights
   a. patent license (Malaysia, Mexico, Brazil, Nigeria, Venezuela, Philippines, Peru, Portugal, China, India, Costa Rica)
   b. trademark license (Malaysia, Mexico, Brazil, Nigeria, Venezuela, Philippines, Peru, Portugal, India, Costa Rica)
   c. models and industrial drawings (Peru, Portugal, Mexico, Venezuela)
3. technical know-how (All countries reviewed)
4. computer programmes (Brazil, Argentina, Egypt, Mexico)

All countries consider the licensing of industrial property rights, and the licensing of know-how. However, it can be observed that some countries cover any industrial property right while others specifically mention which industrial property rights are covered, in order to exclude e.g. copy-right and trade-names. It must be mentioned in this connection that the most countries do not speak of the license of know-how but rather of transmission of technical know-how, supply of technical know-how or the supply of industrial technology, illustrating the tendency to consider knowhow as "show how" rather than a trade secret.

The legal status of computer programmes is not very clear. It may be dealt with within the copy right law, or industrial property law. Including computer programmes specifically in technology transfer legislation, will give the government a control on the transfer of computer programmes without defining its legal status other than that it is considered a "technology".

Technical Services

i. technical services (Argentina, Brazil, Nigeria, Philippines, Portugal, China, Republic of Korea, Costa Rica, Egypt, Peru, Spain)
ii. technical assistance (Malaysia, Argentina, Venezuela, Mexico, Portugal, India, Costa Rica, Egypt, Spain)

iii. construction (Portugal, Spain)

iv. training (Peru, Venezuela, Egypt, Philippines, Nigeria, Egypt, Brazil, Portugal, Spain)

v. technical consultancy (Philippines)

Some countries (e.g. Peru) include in the definition of the supply of technical know-how all related services (management, training etc.) and expressively exclude from technology transfer those short-time services, which do not constitute a supply of technical data. In Brazil a definition of a technical service contract is given which may encompass the various descriptions mentioned earlier namely "a technical service contract is a contract for the specific purpose of planning, programming and preparation of studies and projects as well as the execution of the rendering of the services of a specialized nature, needed for the countries productive system."

Management assistance

i. management of enterprises (Nigeria, Venezuela, Mexico, Portugal, Costa Rica, Peru, Egypt).

Management agreements are often considered technical service agreements but the importance of management assistance is recognized in many countries and has resulted in the tendency to include such agreements in the different forms of technology transfer. On the other hand several countries (e.g. Malaysia) exclude specifically such contracts from their conception of technology transfer.

Engineering assistance

i. basic/detailed engineering (Nigeria, Venezuela, Mexico, Republic of Korea)

ii. engineering consultancy (Argentina, Mexico, India)

iii. engineering services (Spain)

Some countries have specified specifically basic and detailed engineering, engineering consultancy and services underlining the concern of these countries of the impact which this type of service can have on technological capabilities in the countries.

Others

Apart from several countries which have specific legislation on joint ventures (e.g. China, Yugoslavia, Cuba, Ethiopia). None of the countries reviewed has specifically included joint ventures as a form of technology transfer in their transfer of technology legislation. These joint venture agreements are then covered by Foreign Investment Laws despite a growing number of joint-ventures agreements which include a substantial amount of technology transfer. Furthermore franchising agreements (e.g. fast food chains) are considered within the scope of technology transfer by many countries, in particular in association with a transfer of know-how.

5. Technology Transfer and Competition

With a view to protect and promote competition, industrialized countries have developed antitrust laws that have an impact over broad areas of commercial activity, including technology trarsfer.

Antitrust laws apply to contracts which act to restrain trade unreasonably, thus affecting national economic interests, or to arrangements that tend to lessen competition through attempts to create illegal monopoly power (for example, through corporate acquisitions and mergers, or market divisions). They also aim at preventing technology suppliers from abusing or misusing their monopolistic position in the market resulting from ownership of industrial property rights.

The main illegal provisions may be briefly summarized as follows:

a) Tie-ins

A tie-in is a provision under which a licensor forces his licensee to purchase or lease non-patented goods or services as a necessary condition to secure a licence under one or more patents for invention. However, such provisions could be permissible to the extent that they would be necessary to insure the effectiveness of the licensed technology.

b) Package licensing provisions

Package licence is an agreement in which the licensee is granted licence under more than one patent and a package licensing provision is generally viewed as too restrictive if the licensee is induced to accept further licences which he does not need.

c) Total sales royalties

Such a restriction occurs when the licensee is charged royalties on products which are not entirely patented, or for the use of know-how which has entered into the public domain.

d) Post-expiration royalties

These provisions impose upon a licensee the obligation to pay royalties after the patent in question has expired.

e) Tie-outs

These provisions tend to prevent a licensee from competing with the licensor by purchasing, using or selling products similar to or in the same category as the products covered by the licensed patent.

f) Territorial restrictions

The unlawfulness of restrictions pertaining to the territories to which the licensee may export the patented goods has to be decided by taking into account the circumstances of each case.

g) Patent validity contesting (Licensee estoppel)

Provisions under which a licensee agree not to attack the validity of the licensed patent are illegal according to U.S. and E.E.C.

h) Grant back provisions

In such provisions the licensee is requested to grant back to the licensor either an assignment or an exclusive license as to any improvement that he makes within the scope of the licensed technology.

i) Cross-licensing and patent pooling

It may be unacceptable to provide for a network of licences and for the pooling of technical knowledge with the intent to suppress competition and/or to divide the market into exclusive trade areas.

j) Price fixing provisions

These restrictions consist in the determination of prices, components of prices or discounts for the products made under license.

k) Quantity or volume restrictions

A clause requesting the licensee to limit the quantity or volume of production of the licensed product is usually viewed as illegal.

l) Field of use restrictions

It may be unlawful to charge the licensee with an obligation to restrict his exploitation of the licensed invention to one or more technical fields of application that are covered by the licensed patent.

The restrictions listed above are examples of restrictive business practices, as defined in the antitrust laws of the United States, E.E.C. and Japan. These practices may be divided into two basic categories: per se violations, on one hand, and practices which may be declared illegal according to the so-called "rule of reason", on the other hand. The first category is constituted by violations which are deemed to be restrictive of competition by themselves (price fixing provisions, quantity and volume restrictions, tie-in, tie-out, grant-back, post expiration royalties, package licensing); the second concerns practices which, according to the circumstances of the case, may be declared illegal after an examination of all aspects and consequences of the arrangement, if they are found to be concretely restrictive of competition so as to be declared illegal. Field of use restrictions, territorial restrictions, cross licensing and patent pooling, for example, are not deemed to be restrictive of competition by themselves.

The E.E.C. and Japanese antitrust regulations provide for notification or registration procedures by which licence agreements are submitted to approval. Injured parties or even administrative bodies may be empowered to initiate proceedings in the courts or before trade commissions against offenders, who may be sued for damages or fined. Illegal provisions are null and void, and an additional sanction may consist in the forfeiture of patent rights held by an offender.

As regards the E.E.C., "fair competition" is recognised in the Preamble of the Treaty of Rome as one of the maxims of the E.E.C. and rules on competition are further laid down in Articles 85-90 of the Treaty.

Act. 85(1) states what kind of agreements, decisions and concerted practices are prohibited. They must show two characteristics i.e. they must prevent, restrict or distort competition and they must affect trade between the member states.

Furthermore, the article lists agreements and practices which are considered to have that effect. The list is not exhaustive, it simply comprises the most usual types of agreements and practices likely to affect the freedom of competition. Article 85(3) of the same treaty provides for specific conditions for exemption of the application of article 85(1). Art. 86, on the other hand, prohibits "any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it as incompatible with the common market in so far as it may affect trade between mumber states."

In the light of the experience of applying the treaty of Rome on patent licensing the E.E.C. has defined certain restrictions which are specific for patent licensing and which can normally be regarded as satisfying the conditions laid down in Art. 85(3). It is believed that these restrictions generally contribute to improving the production of goods and to promoting technical process. They are considered to make patentees more willing to manufacture, use and put on the market a new product or to use a new process, so that undertakings other than the patentee acquire the possibility of manufacturing their products with the aid of the latest techniques and of developing those techniques further. For more details see Reg. No. 2349/84 on the application of Art. 85(3) of the Treaty to certain categories of patent licensing agreements.

The Regulation does not apply to agreements concerning sales alone. The experience has so far been too limited to specify certain restrictions in line with Act. 85(3) on patent pools, licensing agreements entered into connection with joint ventures, reciprocal licensing.

Exclusive licensing agreements are not in themselves incompatible with Act. 85(1) where they are concerned with the introduction and protection of a new technology in the licensed territory, or where the agreements are concerned with the introduction and protection of a new process for manufacturing a product which is already known.

Software contracts and competition

The growing importance of software agreements in the U.S.A. has led to some recent development with respect to the application of the antitrust regulations. Commonly certain use restrictions are applied and recent court practices do not deem these as being contradictory to the antitrust law.

Use restrictions in software may include some or all of the followings:

i) A limitation to use by a specified user only;
ii) Use restricted to a determined location, that is a single physical place, generally defined by a single mailing address and building;
iii) Use to support exclusively terminals operated by the user;
iv) Use on a single central processing unit (CPU);
v) Use on one CPU at a time at a site having several suitably configured systems.

At least in the United States the validity of these restrictions from an antitrust perspective does not seem challenged.

In Data General Corporation Antitrust Litigation the trial court stated that software/hardware tying arrangement should not ordinarily be deemed illegal. It is interpreted as indicating that almost no practical restrictions on consumer use of software can be held unlawful for no restraint would have a substantial enough effect on competition, in general, to be condemned as an "undue" restraint.

These use restrictions make it possible for the supplier to maximize the income obtainable from the commercialization of a software as he can increase or charge a new fee in accordance with the number of type of use given thereto.

6. Technology Transfer Regulation

Scope

The impact of foreign technology on recipient countries and on the development of indigenous technological capability largely depends on the capacity for local absorption and adaptation thereof. In order to avoid increasing technological dependence, countries often apply a selective approach in the acquisition of technology, and this approach aims at enhancing their own technological potential. Moreover, technology has to be acquired in a way which is proper to secure the pursuance of the national development objectives. That is why some countries have enacted regulations in view to control if requirements pertaining to feasibility, adequacy and cost of technology, among others, are fulfilled, and to exclude or at least minimize restrictive conditions sought to be imposed by technology suppliers.

The objectives of technology transfer legislations in developing countries enlighten the differences between these regulations and antitrust laws: whereas antitrust laws aim at promoting competition, developing countries legislations tend to exert a more general control upon technology transfer, so as to guarantee fair negotiation practices, in particular vis-à-vis cost, but also to ensure that acquisition of technology will strengthen the national capabilities. Often specific attention is devoted to agreements between local affiliates and foreign parent companies. In addition it defines the technology transfer policy of the country and in this framework the approval authority is obliged to evaluate the agreements. Although each country has established its own framework, the trend observed is that the laws stipulate that technology transfer agreements should result in one of the following benefits to the country

- develop and turn out new products
- improve quality and performance of products
- cater for full utilization of local resources
- expand export for increased foreign exchange earning
- facilitate environment protection
- improve management and administation
- upgrade scientific and technology standards

This implies that among others the technology must be appropriate and not already available in the country. Some countries also specifically state what type of technology transfer transactions fall outside the framework. That would be the case of inferior or obsolete technologies.

The absorption capacity of the recipient enterprise of the country is sometimes mentioned as a criteria for technology transfer evaluation.

Registration/authorization/approval

Mostly all transfer of technology laws contain provisions on compulsory authorization/approval/registration of the technology transfer agreements by a competent authority. However, there is a trend to allow automatic approval for transfer of technology agreements which are insignificant with respect to scope or amount.

For example, the draft technology transfer law of Argentina requires only registration without prior authorization for such technology transfer agreements which involves smaller amounts (Art 4). The maximum amount applicable to this simplified procedure will be established by Regulations.

Consequences of non-registration

If registration/approval is denied most legislations provide that agreements are then null and void.

For example, Act 11 of the Mexican Law for the control and registration of the transfer of technology and the use and exploitation of patents and trademarks (1982) states that "the acts, agreements or contracts .... which had not been registered in the National Registry of Transfer of Technology will be null and void....." This means that such an agreement cannot be enforceable before any authority and that fulfillment thereof cannot be required before Mexican Courts.

Purpose of registration

Moreover, some legislation explicitly provide that no payment can be made abroad for the benefit of the technology supplier if the agreement is not registered. This requires a close cooperation between the competent authority for approval of technology transfer agreements and Central Bank authorities.

There is a trend to define precisely the purpose for registration of agreements as in the draft Technology Transfer Law of Argentina (1985) which states that agreements must be registered if they are to be valid for:

i) fiscal, exchange and accounting purposes,
ii) presentation in any administrative or legal proceedings,
iii) use against third parties,
iv) use by the receiving firm in seeking official backing and promotional benefits laid down in Argentine legislation or regulations related thereto.

Period for Approval

In many countries the competent authority, has to render a decision within a prescribed time. After the expiry of this term which is usually 60 or 90 days after e.g. the receipt of the application or after the provision of the relevant documentation and information to satisfaction of the competent authority, the agreement will be deemed approved/authorized/registered.

Moreover, this does often apply for any revision or reneval (if permitted) of the term of the agreement. See for example Art. 11 of Regulations of the People's Rep. of China on Technology Import Contract Administration (1985) which states: any revision or renewal of the terms of the contract shall be handled in accordance with article 4 and article 10 (these articles relate to the approval procedures of new contracts).

These rules on the rendering of a decision within a prescribed time have the advantage of avoiding long-lasting uncertainties which would hamper the technology transfer process.

Enforcement

Certain laws on transfer of technology also provide for the monitoring of the execution of the agreements to be carried out by the competent authority or other e.g. government agencies designated for this task to ensure the enforcement of the agreement as approved by the authority. Furthermore there is a trend to include penalties in the legislation for:

i) failure to present the contract for registration
ii) the furnishing of false data for registration
iii) refusal to supply information when required
iv) execution of the contract under different requirements than those registered etc.

Such penalties consist usually of fines, however some countries would go further (e.g. the draft transfer of technology law of Egypt, Art. 14) and stipulates that any person who commits any one of the above mentioned acts shall be punished by imprisonment up to one year and a fine or one of these penalties.

Other legislation (e.g. the new draft Transfer of Technology Law of Argentina) provide for cancellation of registration and specific disqualifications from carrying on commercial activities for up to two years for the managers or directors concerned when the parties have failed to comply with the transfer of technology law, counterfeited documents or submitted documents for registratic when are different from those effectively in force.

Appeal

It should also be mentioned that transfer of technology legislation sometimes expressly provide for the right to appeal either to the same authority or to a higher organ by the parties concerned on matters referred to above.

Undesirable clauses

In technology transfer legislation much emphasis is given to the definition of clauses which are undesirable or illegal. These undesirable clauses often have a restrictive nature on the use of the technology. The approaches towards these restrictive practices can broadly be divided into two namely:

1. An exhaustive list of undesirable/illegal clauses (e.g. Mexico, Nigeria, China)

2. An illustrative list of undesirable /illegal clauses (e.g. Philippines, Argentina, Spain, Brazil)

An exhaustive list has the advantage of providing clear guidelines while its disadvantage is the apparent inflexibility of applying these regulations. On the other hand, an illustrative list may give cause to uncertainty, though offering flexibility, especially when it is not combined with a general provision. Therefore a catch-all provision added to an illustrative list could be used to eliminate such uncertainties. See e.g. the Andean Pact, Decision 24 Act 20(h) which include "other clauses with equivalent effects" to its illustrative list on undesirable contract clauses.

The prohibition of undesirable clauses are usually further qualified by various types of exceptions. General exceptions may refer to more or less precisely defined circumstances and involve an evaluation by the appropriate authorities. In transfer of technology laws they are often formulated in broad terms such as "when the transfer of technology assumes special interest to the national economy" or "when it is beneficial for the country". Such a provision gives a substantial

responsibility to the approval authority in deciding about the acceptability of an agreement. In some cases the legislation provides for more detailed criteria for allowing exemptions such as in the case of the Philippines which allow certain exemptions when a "substantial use of raw material", is involved.

The prohibition are only in a few instances formulated in a strictly per se manner as for example, act.6 of the Egyptian Draft Law on the Organization of Transfer of Technology and Decision 24, Art 20(b) to (a) of the Andean Pact where no exceptions are provided for, but normally the laws provide for certain exceptions even if the prohibition of the practices will be per se in nature.

See for example Art 7 of the Portuguese Decree No. 53/77 where provisions such as tie-in provisions, grant-back provisions, volume restrictions, and price-fixing provisions are subject to the exceptions in para. 2 of Act 7 which states that exceptions may be accepted "when the transfer of technology assumes special interest for the national economy".

A comparison with the existing practice of the application of the antitrust legislation (see chap. 5) and the existing technology transfer legislation, reveals that all restrictive clauses under antitrust legislation are included one way or the other in the Technology Transfer legislation namely

a) Tie-ins
b) Package licensing provisions
c) Total sales royalties
d) Post expiration royalties
e) Tie-outs
f) Territorial restrictions
g) Patent validity contesting
h) Grant back provisions
i) Cross licensing and patent pooling
j) Price fixing
k) Quantity or volume restrictions
l) Field of use restrictions

There are however various clauses which could have a negative impact on the development of local technological and managerial capabilities which are regarded therefore undesirable within the framework of the technology transfer policy. These are:

a) limitations on the recipients research and technological development activities related to the technology transferred

b) obligation for the recipient to execute sales on exclusive representation contracts with the technology supplier

c) clauses which restrict or forbid the use of the technology supplied after the expiration of the agreement

d) obligation where the recipient is required to use permanently or for any unreasonable period personnel designated by the technology supplier

e) clauses which restrict the recipient from access to improvements of the technology, even if the recipient is willing to make additional payments

f) the imposition of an inappropriate duration of the agreement

g) predominance of a foreign language for interpretation purpose

h) the imposition of quality control methods or quality standards

i) obligations where the consent of the licensor is required before any modification to products, processes or plant can be effected by the licensee.

j) obligation to submit to foreign jurisdiction

These clauses are considered illegal or undesirable in many technology transfer laws, and their interpretation is closely related to the scope of the law as described previously.

Desirable clauses

Desirable clauses can either be reflected in clauses related to the rights and obligations of the parties or in specific guarantee clauses. In recent years Technology Transfer legislation has focussed more on the issue of clauses which could guarantee a successful technology transfer compared to earlier legislation where reference was sometimes made to performance guarantees such as in the case of Malaysia where "the technology must perform in the manner expected by the technology buyer. The agreement should at least define guarantees with respect to the production capacity, product quality and specifications and other features of the manufacturing process".

Recent legislation in China and the draft laws of Egypt, Argentina and Costa Rica, are much more explicit about the guarantees and obligations of the parties to ensure a successful technology transfer. For example in the Chinese Law it is formulated as follows "the supplier shall guarantee that he is the legimate owner of the technology to be supplied and the technology is capable, accurate, effective and capable of delivering the technical ends as specified in the contract".

The draft Argentinian law has specified in more detail what it considers guarantees and the following items should be considered in the contract: patent infringement, correctness, completeness, performance, suitability. The Egyptian Draft Law is in this respect unique as it includes a variety of obligations and clauses which should be included in the agreement which no other legislation has covered. Most notable is the obligation to "disclose risks which may result from utilization of the technology, particularly environment, public healty" and "to make good damages resulting from the utilization of the technology effecting persons and property". Furthermore it makes reference to contractual guarantees when it concerns employment of local labour and utilization of local resources.

Many Technology Transfer Laws have made reference to training recognizing it as an important vehicle for effective technology transfer. These clauses have in common that a detailed training programme should be annexed to the contract. Some countries e.g. Brazil,

Malaysia, India, specify the scope of field of training activities, time schedule for the implementation, location of training, number of trainees etc.

Technology Payments

As a principle objective of many technology transfer laws is to reduce the cost of the technology acquired, almost all laws state that the price or counterservice have to be reasonable considering the character, novelty and complexity of the technology and not out of proportion to the technology acquired. Furthermore, the price is not allowed to constitute an unwarranted or excessive burden for the national economy. It is sometimes also expressly stated that the price to be established for the transfer shall not be less favourable than the compensation normally required for such transfer from other recipients or by other suppliers under similar circumstances (e.g. Peru, Spain).

Payments for technology are usually in the form of fixed lump-sum, or royalty payments or a combination of both, but can also be in the form of a fee for technical services.

To determine the level of payment is a complex task where various aspects of the technology transfer should be taken into consideration such as its degree of innovative content, its field of use, the availability of competing technologies and duration of agreement guarantees and warrantees.

Royalty

As far as royalty payments are concerned, certain countries (e.g. the Philippines, Malaysia, India, Peru) apply fixed maximum rates of such payments, which may vary according to e.g. the type of technology or the sector of industry concerned. The rates usually range fom 1 to 5%. Sometimes they are explicitly stated in the relevant laws themselves (Costa Rica, Andean Pact) but the rates may also be determined by regulations or by policy guidelines worked out by the competent authority referred to in the transfer of technology laws. (See, e.g. Mexico and the Philippines)

Art. 8 of the draft transfer of technology law in Costa Rica states that payments or credits for the assignment, sale and licensing of trademarks and invention patents, the provision of information and know-how and franchise licences may not exceed the equivalent of 5% of the base amount and that payment exclusively for license of trademark shall be maximum 1 per cent.

Furthermore, in para. 4 of the same article the law determines the basis of calculation for such payments. It stipulates that the calculation base shall be, total gross sales less discounts or refunds of sale, commissions, freight charges, taxes, security and the CIF value of imported inputs. In Brazil the basis for calculation of royalties are net sales price minus the value of components imported either from the supplier or other source related to or designated by it and in India royalty is calculated on the basis of ex-factory selling price of the product net of excise duties minus the cost of standard bought out components and landed cost of imported components.

The deduction of landed costs is also applied by the Philippines on imported raw materials and components, in order to encourage the utilization of indigenous raw materials and components. The landed cost shall take into account the CIF value, customs duty, compensating tax and importation charges.

In certain countries no minimum guaranteed royalty is allowed (e.g. India, Costa Rica), but can for example as in the Philippines be permitted provided that the amount falls within the allowable ceiling, deemed reasonable for a particular industry.

In Spain, minimum payments are considered being an undesirable condition of a contract, when they are based on royalty rates proportional to the rate of activity in its different expressions and in Costa Rica the obligation to make fixed minimum payments for transfer of technology independently of production is also considered as being such an undesirable condition of a contract.

In Peru (Art. 20 of Res. 005-81-ETC-35) the obligation to pay a minimum amount when the rates or percentages of accrued royalties do exceed a certain amount is forbidden.

Furthermore, the establishment of payments through royalty rates proportional to the level of production is sometimes not allowed. This is for example the case in Spain if not a deduction is made of the value of the products or components supplied by the transfer and incorporated in the production process.

Lumpsum

Lumpsum payments are likely to be stipulated in turnkey contracts where the supplier bears the total responsibility for carrying out and completing a clearly identified project, but may also be used in other types of contracts such as for example in fixing the price for the supply of equipment and materials or the granting of licenses and know-how.

In a lump-sum contract the supplier agrees to fulfill the obligations set in the contract for a price fixed in a lump-sum. It may also be used as a separate sum fixed for each set of obligations in a contract.

Lump-sum payments in addition to royalties may be subject to certain limitations. In the Philippines for example, this may be allowed to the extent that the total payments shall be proportionate with the value of the technology.

In India when deciding on the reasonableness of such payments, account will be taken of the value of production so that the lumpsum and the recurring royalty, if any, is an acceptable propation of the value of production.

Lump-sum payments are often paid in instalments over a certain period. In India regulations state that these are paid in three standard instalments. The first instalment is to be paid after the agreement is taken on record, the second on delivery of technical documentations and the third are on the commencement of commercial production or four years after the agreement is taken on record, whichever is the earlier.

Service fees

Some professional services are paid at a fixed rate per man-hour. In the Philippines foreign technician's fee as an additional form of payment are not allowed to exceed U.S.D.100 man/hour and payment for highly specialized consultancy services for specific consultancy arrangements shall not be more than the current rates of such consultants in their home countries or the current international market rates for such consultants whichever is lower.

These fees are often established in the internal rules of the competent authorities and little is stipulated in the technology transfer laws themselves on remuneration, for technical services. One exception is Art 10 of the Draft Transfer of Technology law of Costa Rica which states that remuneration for technical, scientific and administration assistance in any form must be based on the number of technicians, the respective individual fee and the estimated period which will be necessary for the provision of the service. For these services payment of royalties or other types of remuneration based on percentages of invoices or production will not be accepted.

7. Technology Transfer and Unpackaging

In order to direct towards greater involvement of the acquiring party to supply certain parts included in a technology transaction itself, the use of local resources and local personnel may be the most efficient form of unpackaging.

In the packaged form technology transfer relates to operations which do not involve any indigenous participation. An example of this is a turnkey contract, where the supplier is charged with the feasibility and project studies, the installation and starting-up of manufacturing equipments and sometimes even the management of the receiving enterprise, including marketing and distribution.

These types of contracts have been used in the transfer of technology agreements in the developing countries, due to their lack of industrial experience, corporate skills and indigenous consultancy firms.

The main drawback is that they increase the dependence of foreign capital, machinery and materials which accordingly weakens the demand for indigenous goods and services, including domestic R & D. Furthermore, they may lead to over-pricing either directly or indirectly e.g. in the form of overdesign or in other forms of safeguards taken by the supplier to ensure the attainment of his contractual, obligations i.e. to deliver the entire technology in time and without defects which he will be solely responsible for.

Provisions on unpackaging in the contract of using the local resources and local personnel can be provided for either as:

1) an obligation to use the local capabilities of the recipient's country or,
2) prohibiting restrictions on the use of local inputs (tying clauses and/or restrictions on use of personnel)

Furthermore, similar effects may be achieved by provisions obligating the parties to set up programs for research and development, training programs or other programs for exploring the possibilities of replacing foreign inputs by local inputs.

Some countries e.g. have strict rules on the use of local inputs, especially for civil engineering and consultancy. (See India, Foreign Collaboration-Policy and Guidelines, Part 1, Cl. IV. 4(X))

In these cases, a total turnkey contract is not possible since the technology must be partially unpacked.

Others oblige the recipient to give preferential treatment to local inputs. (See The Andean Pact, Decision 24 Art. 24)

In the draft Transfer of Technology law of Argentina, all technology transfer transactions included in the law except transfer of, licence to, or rental of computer programs, proposed by Public Authorities, national undertakings, state companies etc. and companies of any kind with a majority state holding are required to carry out a technological breakdown of the project in order to permit the greatest possible Argentine participation in the provision of goods, services and technology.

In the draft Transfer of Technology law of Egypt, Art. 9 states that a contract must guarantee the "utilization of the materials, technical knowledge, consulting and engineering services and other resources available, as well as recourse to assistance from national research centres in solving the problems of production and its development".

Thus, unpackaging in this context means that domestic consulting firms should be charged or at least associated with the preparation of project studies, domestic enterprises should provide construction and ancillary services and preference should be given to raw materials and goods (components, tools etc.) available or productible in the country. As far as it is initially necessary to enter into management contract with foreign agencies, the period of such contracts should be kept to a minimum and adequate training and association in management must be ensured.

Nevertheless, a strict obligation to use local resources may give rise to certain drawbacks. If the recipient does the co-ordination work himself and if he has little experience, the possible co-ordination mistakes may raise the price but also the risk that the recipient may be left with a non-functioning technology e.g. if a defect is due to a failure of the recipient or his subcontractor for which the recipient is responsible as the supplier may be less willing to agree to performance guarantees where local inputs are used which are out of his control. Furthermore, the accelerated replacement of foreign inputs by local inputs may slow down the attainment of full performance by the technology in the shortest possible time and may affect the quality of the goods produced.

8. Transfer of Technology and Intellectual Property Legislation

Intellectual property legislation comprises two main branches industrial property (patents for inventions, industrial designs, utility models, trademarks etc.) and copy right in literary, musical and artistic works. However, there is a trend to have such legislation with technology transfer issues requiring the approval of th transfer of intellectual property rights.

For example within the framework of the creation of the African Intellectual Property Organization of 1977 (the Bangui Agreement) some regulatory control laws in this respect have been agreed upon.

Subject to this control are licensing agreements, assignments and transfers of registered trademarks or patents which involve payments abroad or which are granted to or obtained by natural or legal persons who are neither nationals nor residents on the national territory of one of the member states.

On pain of nullity, the contracts must be submitted to the competent national authority for prior control and approval within twelve months following their conclusion and before their insertion in the special register of the Organization.

The control of these contracts consist of making sure that they do not contain any clauses imposing restrictions on the acquirer not deriving from the rights conferred by the patent (or registration of a mark) or which are not necessary for upholding such rights.

Parties to the Bangui Agreement are, the Benin, Burkina Faso, Cameron, Central African Rep., Chad, Congo, the Gabonese Republic, the Ivory Coast, Mali, Mauritania, Niger, Senegal and Togo.

9. Technology Transfer and Tax

In addition to technology transfer regulations, laws concerning tax, customs, foreign investment and trade and other matters also affect the technology transfer agreements. In particular, the turnover and

income taxes to be paid by both parties in their respective countries may reach a level that would make a profitable business impossible. However, many countries have concluded double taxation agreements that provide for reduction of the taxes that have to be paid by the parties to a licence agreement, either through deductions for the taxes that have been paid in the other country or through a division of the taxes paid between the two countries in question.

In many countries, royalties to be paid by the licensor under a transfer of technology agreement may be considered to a certain extent as a legitimate item of expense to be deducted from the taxable income. In Venezuela for example, royalty and technology fees are considered expenses and are deducted from the gross income of the company concerned, provided that the technology is received and used in Venezuela.

In India royalty and technical services fees are considered as income and therefore subject to income tax. It must be noted that only a 20% income tax is applied on lumpsum payments when the transfer (e.g. drawings, specifications) is taking place outside India, as to a 40% income tax when the transfer takes place in India.

However, most countries require the licensor to pay an withholding tax on royalty payments made except when there is an existing tax treaty (double taxation agreement) between the recipient and supplier country.

Some countries have different tax rates on intangibles (any payment measured in royalties as percentage of sales, production etc.) and on tangibles (technical assistance). For example in the case of Peru, the tax rate on the former is 55% and on the latter 16%.

It is interesting to note that in the Rep. of Korea, income tax or corporation tax on royalties shall be exempt for five years from the rate of acceptance of a report of a contract concerned with regard to the royalties to be acquired by the licensor in accordance with the contents of a technology inducement contract.

In the new Argentinian draft transfer of technology law, provisions on taxes on payments connected with transfer of technology services are for the first time regulated in the transfer of technology law itself.

These provisions (Art. 22 and Art. 23) state that:

i) 60% of payments connected with technical assistance, engineering or consultancy services unobtainable in Argentina are to be deducted from the balance sheets of the receiving firms provided that they have been duly registered and effectively rendered.

ii) 80% of payments connected with transfer of rights or licenses to apply patents of invention and other items not covered by point 1 above are to be deducted from the balance sheets of the receiving firms.

If there are payments related to different percentages, the higher percentage shall apply.

10. Technology Transfer flows

Based on the information obtained by TIES, on transfer of technology transactions for 1984, this chapter deals with technology transfer flows from the angle of collaboration type, sectorial distribution of contracts, country of origin of the technology imported, royalty rate of the contracts concluded and approved royalty payments

The countries reviewed in this chapter are: Argentina, Egypt, Mexico, Peru, People's Rep. of China, the Philippines, Poland, Portugal and Spain.

It should be noted however, that internal technology transfer transactions i.e. contracts concluded with an indigenous company, enterprise, organization etc. are not subject to this analysis.

Type of Collaboration (table 1, graph 1)

Approximately 50 per cent or more of the number of transfer of technology contracts concluded by the countries reviewed contain transmission of know-how and licensing, sale or assignment of trademarks. In this connection it is interesting to note the relatively low percentage (10.3 per cent) showed by Egypt on licensing, sale and assignment of trademrks, which is less than half the percentage shown for this type of collaboration by the other countries reviewed, even when taking into consideration the small number of agreements and the association with foreign investment.

Only in the Philippines, patent licensing contracts represent more than 10 per cent (17%) of the number of contracts concluded while in Peru the figure is as low as 1 per cent.

With the exception of Egypt, where contracts involving management assistance account for 33.3 per cent, both engineering and management assistance represent at a maximum 10 per cent of the contracts concluded.

Technical services range from approximately 5 - 35 per cent. A breakdown of these services shows that a major part of them consist of training of local personnel and labour.

Of the countries reviewed only Mexico presents transfer of, licence to, or rental of computer programms as a separate collaboration type, which means that the actual sum or percentage of this type of agreements are not distinguishable for the other countries reviewed.

Sectorial distribution of contracts

A breakdown of the number of contracts by sector (table 2) shows that by a large majority most contracts are related to the manufacturing sector.

A further breakdown of the number and percentage of contracts related to the manufacturing sector only, shows a concentration in percentage ranging from 54-73 per cent for products such as chemicals, chemical, petroleum, coal, rubber, plastic products and frabricated metal products, machinery and equipment (Table 3).

Table 1: Number and percentage of contracts by collaboration type

Year: 1984

Country \ Contract	Know-how		Trademark franchising		Patent		Engineering assistance 1/		Technical services 2/		Management assistance 3/		Computer programmes		Total		No. of contracts
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.		No.	%	
Argentina	195	34.4	126	22.3	39	6.9	60	10.6	107 5/	18.9	39	6.9	-	-	566 10/	100	359
Mexico	155	22.1	183 4/	26.1	45	6.4	49	7.0	183	26.1	42	6.0	44	6.3	701 10/	100	401
Peru	79	32.0	82	34.0	2	1.0	0	0	76 6/	30.5	5	2.5	-	-	244 10/	100	104
Philippines	56	30.3	50	27.0	32	17.3	10	5.4	18 7/	9.7	19	10.3	-	-	185 10/	100	70
Portugal	143	43.8	89	27.2	20	6.1	1	0.3	58 8/	17.7	16	4.9	-	-	327 10/	100	151
Egypt 11/	14	35.9	4	10.3	3	7.7	3	7.7	2 9/	5.1	13	33.3	-	-	39 10/	100	15

1) Basic and detailed engineering
2) Construction set up, equipment, repair, maintenance, training, quality control
3) Management of construction set up, start-up supervision, administrative supervision, marketing, production supervision
4) Including tradenames (14) copyright (15)
5) Including training 35
6) Including training 49
7) Including training 14
8) Including training 25
9) Including training 1
10) The total number is higher than the actual number of contracts concluded, as one contract may contain more than one collaboration type
11) Only transfer of technology contracts associated with Foreign Investment

GRAPH 1

Percentage of contracts by collaboration type

Year 1984

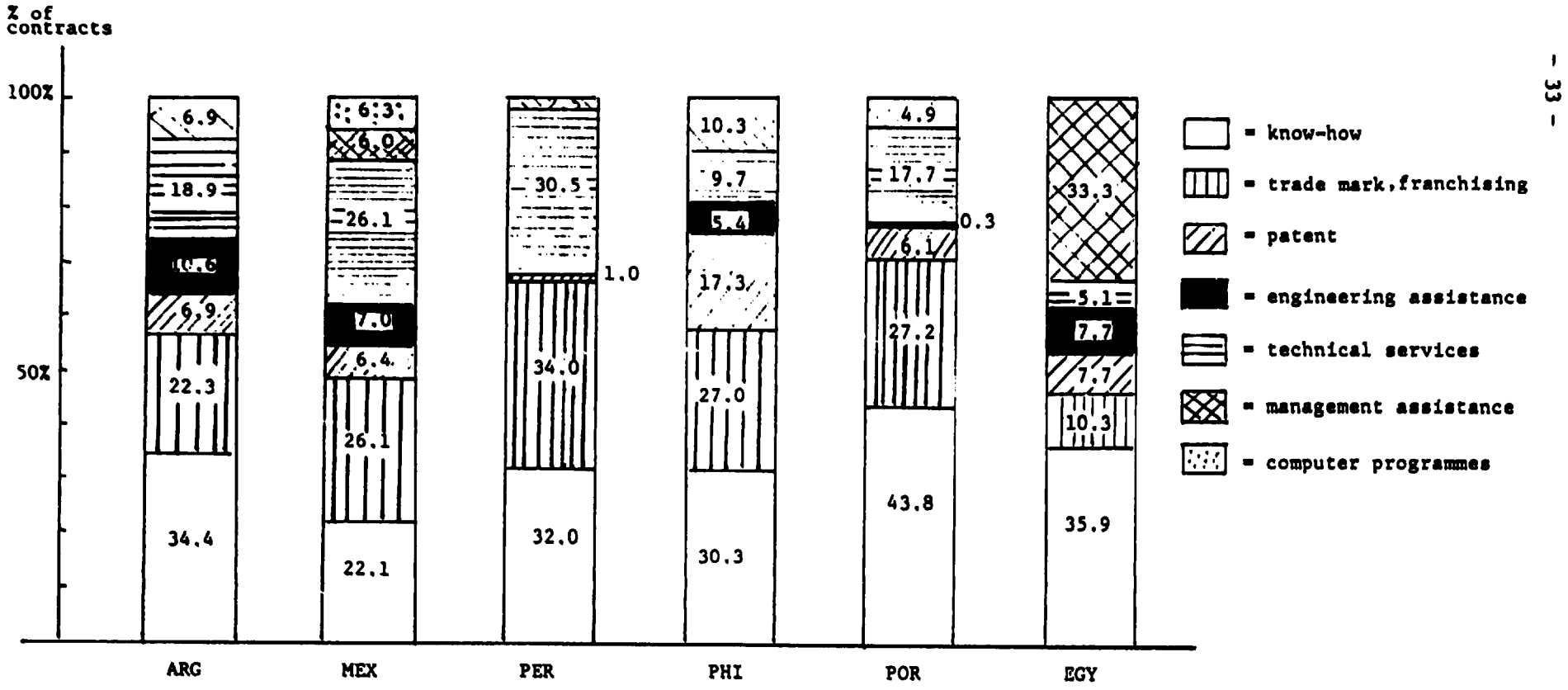


Table 2: Number of contracts by sector

Year: 1984

Sector \ Country	Argentina	Mexico 1/	Peru	Philippines	Portugal	Spain 2/	Egypt 4/	P.R. of China 5/	Poland
Agriculture, hunting, fishing	11	3	2	2	2	46	0		
Mining	7	14	1	2	1	15	1		
Manufacturing	311	289	96	63	138	535	14		
Electricity, gas, water	10	6	1	0	0	82	0		
Construction	4	0	0	1	2	9	0		
Wholesale, retail trade, restaurants, hotels	1	22	1	1	4		0		
Transport, storage, communication	2	1	1	1	0		0		
Financing, Insurance, Real Estate, Businesses	11	17	2	0	4		0		
Community, social and personel services	2	28	0	0	0		0		
No classification	0	21	0	0	0	89 3/	0		
Tot. no. of contracts	359	401	104	70	151	776	15	136	0 6/

1. New contracts only
2. The numbers include new, modified and extended contracts
3. No classification
4. Only transfer of technology contracts associated with Foreign Investment
5. Only licensing contracts
6. No transfer of technology contracts concluded during 1984.

Table 3: Number and percentage of contracts by manufacturing sectors

Year: 1984

Country / Manufacturing sector	Argentina		Mexico 1/		Peru		Philippines		Portugal		Spain 2/		Egypt 3/	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Food, Beverages, Tobacco	20	6.5	61	21.1	25	26	14	22.2	8	5.8	29	5.3	0	0
Textil/Leather	32	10.3	28	9.7	7	7.2	1	1.6	23	16.7	34	6.2	2	14.3
Wood, wood products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paper, paper products	5	1.6	15	5.2	1	1.1	3	4.8	4	2.9	9	1.5	1	7.1
Chemicals, chemical petroleum, coal, rubber plastic products	98	31.5	58	20.1	51	53.1	25	39.7	46	33.3	98	18.2	3	21.5
Minerals, non metallic	5	1.6	4	1.4	1	1.1	4	6.3	8	5.8	24	5.3	1	7.1
Basic metal industries	16	5.1	11	3.8	1	1.1	0	0	2	1.4	309	57.6	1	7.1
Fabricated metal products, Machinery, equipment	130	41.8	98	33.9	9	9.3	16	25.4	42	30.4			6	42.9
Other manufacturing industries	5	1.6	14	4.8	1	1.1	0	0	5	3.7	32	5.9	0	0
Total	311	100	289	100	96	100	63	100	138	100	535	100	14	100

1/ New contracts only

2/ The number of contracts include new, modified and extended contracts.

3/ Only transfer of technology contracts associated with Foreign Investment.

Food, beverages and tobacco products account for approximately 20-25 per cent of the manufacturing sector in Mexico, Peru and in the Philippines, while only in Argentina and Egypt the percentage of textile and leather products amount to approximately 14-16 per cent of the manufacturing contracts.

Furthermore, it should be noted, that among the countries reviewed no technology transfer has taken place with respect to wood and wood products.

Country of origin of the technology imported

Table 4 and graph 2 show the technology flows by percentage of supplier countries, based on the number of contracts concluded. USA and the EEC account for an average 73% of the number of transfer of technology contracts. With the exception of the two European countries, Portugal and Spain, reviewed in this analysis where the EEC and other western European countries account for approximately 70-75 per cent and the U.S.A. only between 17-18 per cent of the number of technology transfer contracts concluded, U.S.A. stands out as the leading supplier of technology.

It is interesting to note that in Egypt 20% of the number of technology transfer contracts associated with foreign investment was concluded with Japan, a percentage which is far above the average of 5.3 per cent of the countries reviewed.

A breakdown by region of the countries only summarized as others in Table 4 and graph 2 is presented in Table 5. It shows that the use of technology from socialist countries and Africa was very slight during 1984.

For Asia, Oceania (Japan excluded) and Latin America the percentage is a bit higher, but it should be noted that included here are also "tax-havens" such as Panama, Bermuda and Barbados. In Argentina for example 26 out of 33 contracts concluded within the Latin American region were concluded with countries which are classified as "tax havens".

Table 4: Percentage of contracts by supplier country

Year: 1984

Recipient country / Supplier Country	Argentina	Mexico	Peru	Philippines	Portugal	Spain	Egypt 3/	Average of the countries
U. S. A.	37.6	66.1	54.0	56.3	17.8	17.7	26.7	39.5
E. E. C.	35.3	17.2	26.0	8.5	50.0	64.6	33.3	33.5
Non-E. E. C. members 1/	11.4	5.7	11.5	22.5	21.7	11.3	6.7	13.0
Japan	2.5	3.5	2.8	4.2	0	4.1	20.0	5.3
Others 2/	13.2	7.5	5.7	8.5	10.5	2.3	13.3	8.7
Total	100	100	100	100	100	100	100	100

1/ Western European countreis being non-EEC members.

2/ See following table, Breakdown by region.

3/ Only transfer of technology contracts associated with Foreign Investment.

Graph 2

Percentage of supplier countries

Year: 1984

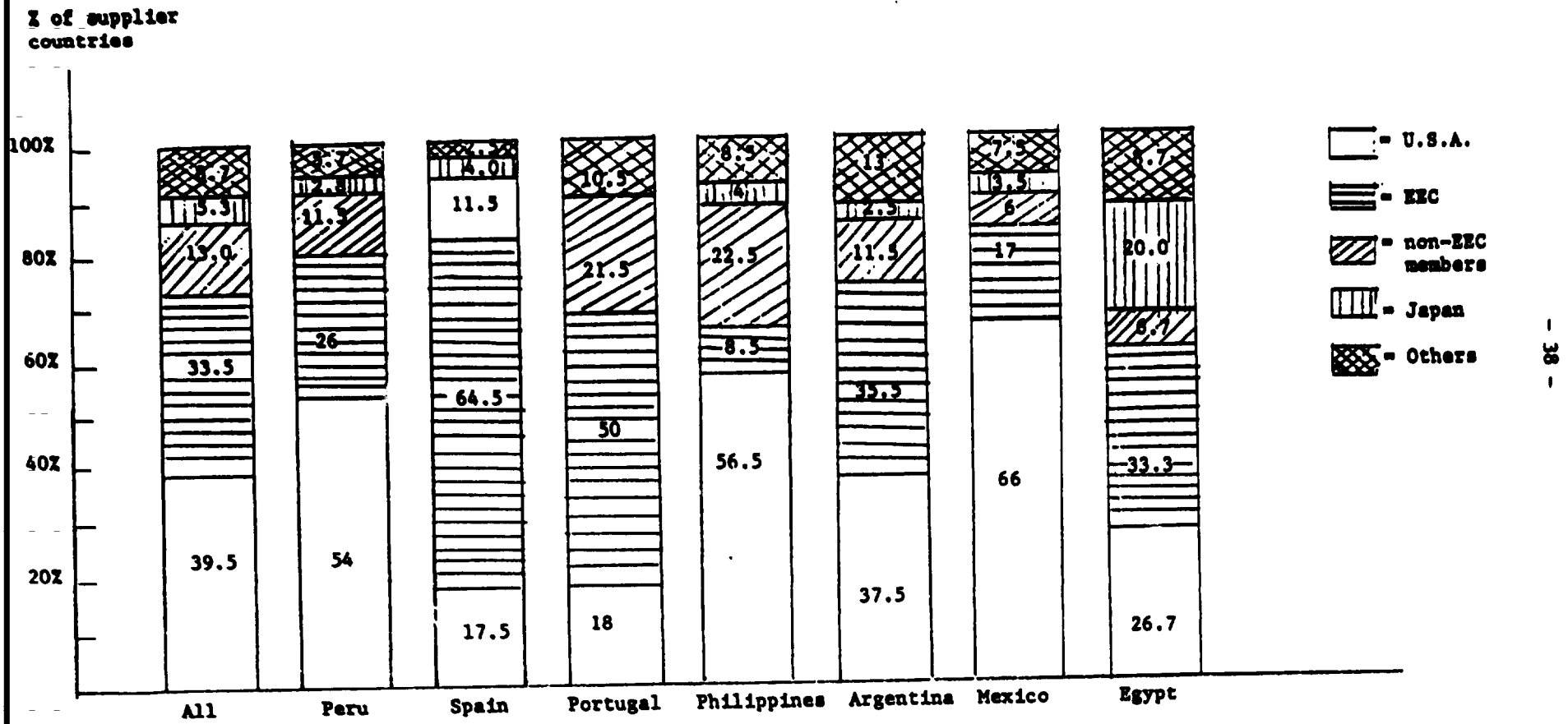


Table 5: Regional breakdown of supplier countries referred to as "others" in table 4

Year: 1984

Region	Argentina	Mexico	Peru	Philippines	Spain 1/	Portugal 1/	Egypt 2/
Latin America	9.1%	3%	3.9%	0%	-	-	0%
Canada	1.9%	3.75%	0.9%	1.4%	1.3%	0%	6.65%
Africa	0.2%	0%	0%	0%	-	-	0%
Socialist Countries	0.4%	0.5%	0%	0%	-	-	0%
Asia.Oceania (except Japan)	1.6%	0.25%	0.9%	7.1%	-	-	6.65%
Total	13.2%	7.5%	5.7%	8.5%	2.3%	10.5%	13.3%

1/ Material available not sufficient to give the percentage figures for Latin America, Africa, Socialist countries, Asia and Oceania (Japan excluded).

2/ Only transfer of technology contracts associated with Foreign Investment.

Royalty rate of the contracts concluded

Graph 3 shows the percentage of the number of contracts by royalty rate for 1984 based on net sales.

In the Philippines more than 75 per cent of the contracts for 1984 had a royalty rate between 0-2.99 per cent, while the same royalty rate only accounted for approximately 20-30 per cent of the technology transfer contracts of Argentina, Peru and Portugal during the same period.

In Argentina and Portugal, 46.8 per cent respectively 51.5 per cent of the number of contracts concluded during 1984 accounted for a royalty rate of 5 per cent or more, while in the Philippines only 1.5 per cent of the contracts concluded during the same period had a royalty rate of 5 per cent or more.

Approved royalty payments

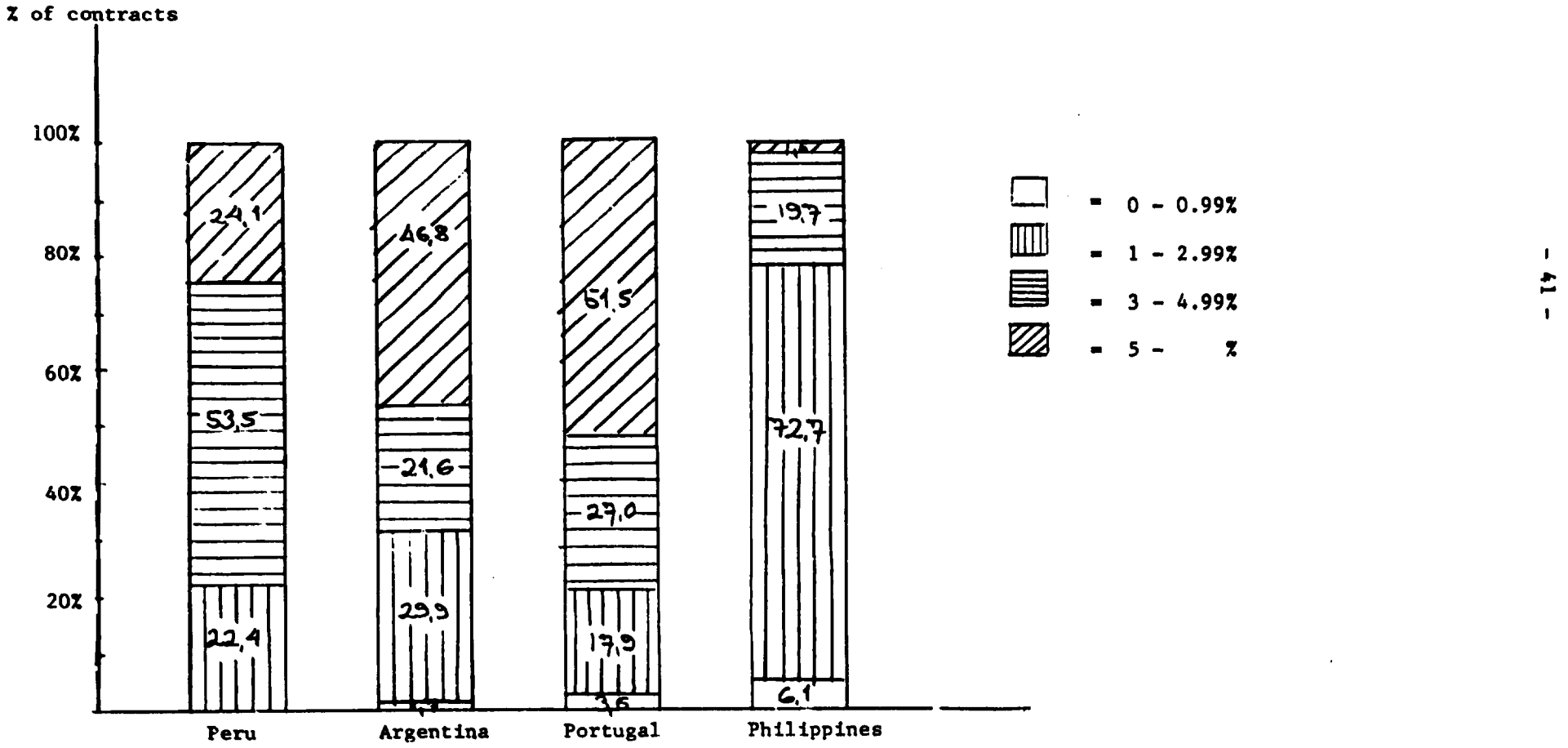
Graph 4 shows the total approved royalty payments for the People's Rep. of China, Egypt, the Philippines and Portugal. The People's Rep. of China shows by far the largest amount, U.S.D. 121,892,700, but it should be noted that it allows approved payments for a maximum of 10 years, while both the Philippines and Portugal apply a maximum of 5 years for such payments.

Moreover, as far as Egypt is the total approved royalty payments are based on transfer of technology contracts associated with foreign Investment where only 5 contracts out of 15 contained royalty payments.

Graph 3

Percentage of contracts by royalty rate (based on net sales)

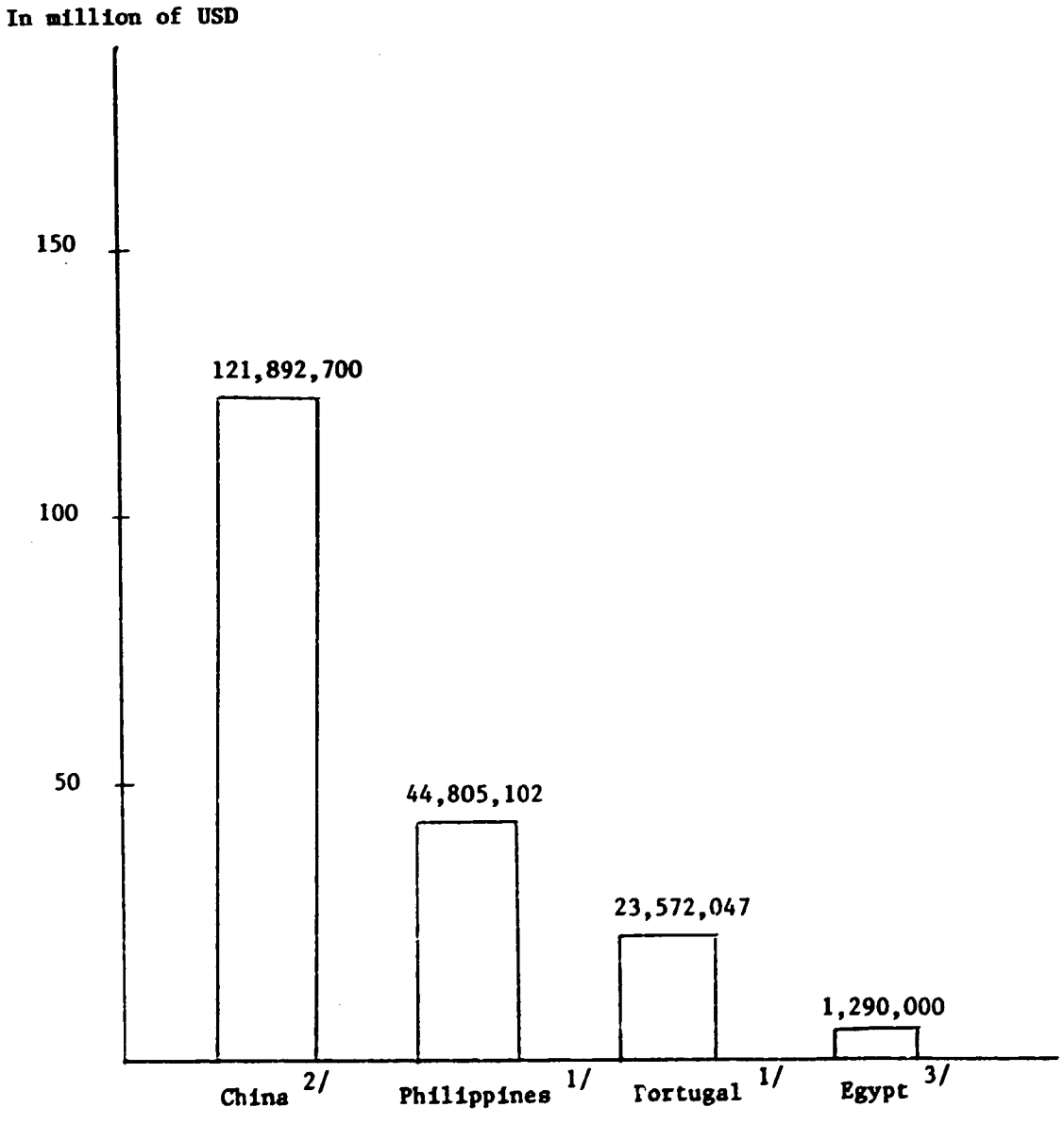
Year: 1984



Graph 4

Total approved royalty payments

Year: 1984



1/ Approved payments max. 5 years

2/ Approved payments max. 10 years

3/ Only transfer of technology contracts associated with Foreign Investment.

Annex 1

Legal Regimes and other information sources consulted

Argentina:	Draft law on Transfer of Technology (1985)
Brazil:	Normative Act No. 015 of September 1975
Costa Rica:	Draft law on the Transfer of Technology (1984)
Egypt:	Draft law on the Organization of Transfer of Technology (1985)
India:	Foreign Collaboration - Policy and Guidelines Annexure (1982) Extract from Industrial Policy Statement, July 23, 1980 Country Profile 1983-1984
Malaysia:	Industrial Coordination Act (1975) Investment Incentives Act (1968) and its amendments, Country Profile 1984-1985
Mexico:	Laws for the Control and Registration of Transfer of Technology and the Use and Exploitation of Patents and Trademarks (1981).
Nigeria:	National Office of Industrial Property Decree No. 70 (1979), Country Profile 1984-1985
Peru:	Resolution No. 005-81-EFC/35. Transfer of foreign technology, patents and trademarks and exploitation of patents and trademarks (1982), Decision 24 of the Andean Pact (Commission of the Cartagena Agreement, 1970), Country profile
Philippines:	Rules and Regulations to implement the intent and provisions of Sec.5 P.D. 1520 creating the Technology Transfer Board within the Ministry of Industry (1978), Presidential Decree No. 1263 (1977), Policies adopted by the Technology Transfer Board, Country Profile 1984-1985
Portugal:	Foreign Investment Code, Decree Law No. 348/77 of August 1977, Decree No. 53/77, Regulations governing authorization procedure for technology transfer (1977), Country Profile 1982-1983

P. R. of China: Regulations on the People's Republic of China on Technology Import Contract Administration (1985), Country Profile 1984-1985

Rep. of Korea: Foreign Capital Inducement Act (1973), the Enforcement Decree of the Foreign Capital Inducement Act (1981), The Naropaly Regulation and Fair Trade Law No. 3320 of 31 December 1980 Country Profile

Senegal: The Bangui Agreement 1977 Country Profile 1984-1985

Spain: Decree 2343/73, regulating the transmission of Technology (1973), Order of 5 December 1973 on the recording of technology agreements on the Register created by Decree 2343/1973 of 21 September, Order of 30 July 1981 amending the regulations on registration of technology transfer agreements.

Venezuela: Decree No. 746 on the registration of existing transfer of technology agreements, 11 February 1975, Decree No. 2422, regulating Decision 24 on Transfer of Technology, 8 November 1977, Decision 24 of the Andean Pact (Commission of the Cartagena Agreement, 1970).