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Meeting of Government Experts on
Regulatory Functions in Transfer of Technology
Vienna, Austria, 29 May-2 June 1978

REPORT

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INTRODUCTION

The Meeting of Government Experts on Regulatory Functions in Transfer of Technology, organized by the United Nations Industrial Development Organization (UNIDO), was held at Vienna from 29 May to June 1978. The Meeting was financed by the United Nations Development Programme (UNDP).

The purpose of the Meeting was to discuss the scope of surveys regarding the impact on priority sectors of industry in selected developing countries of government measures to regulate technology transfer and the methods of carrying them out.

On the basis of a paper prepared by the UNIDO secretariat, the Meeting discussed the nature of the country surveys, the need for them and the results anticipated. It reviewed the feasibility of having UNIDO, in co-operation with the experts, prepare guidelines for evaluating and screening technology agreements.

It pursued the recommendations of the Meeting of Senior Officials and Heads of National Technology Registries or Similar Offices in Selected Developing Countries, held at Vienna from 6-10 March 1978,^{1/} to advance technological co-operation among developing countries.

The representative of UNDP stressed that these surveys in selected countries would be an innovation and expressed the willingness of UNDP to provide support through UNIDO to Governments interested in carrying out the surveys as discussed and agreed upon at the Meeting.

The discussions centred on the following main issues:

The role and functions of technology-regulating agencies in technological development (agenda item II);

Basic considerations for evaluating technology contracts in developing countries (agenda item III);

Surveys in selected countries and priority sectors regarding the impact of foreign technology (agenda item IV);

Technological co-operation among developing countries (agenda item V).

Annex I contains the list of documents presented to the Meeting. Annex II contains a detailed outline of points to be included in the country surveys as agreed upon by the experts.

^{1/}ID/WG.272/4.

CONCLUSIONS

The participants of the Meeting felt that UNIDO should initiate immediate action to implement the results of the discussions and expressed the desire to meet again in the future to assess the progress made and to guide UNIDO in the implementation of the programme. They stressed that UNIDO would need strengthening particularly in terms of financing, and expressed the hope that in the future UNDP would look favourably on a request of UNIDO for funds.

The participants concluded that the carrying out of surveys under the supervision of UNIDO would be an immediate result of the Meeting, along with the preparation of guidelines for negotiating technology agreements and further advancement of the concept of an international technology bank.

I. ORGANIZATION OF THE MEETING

The Meeting was opened by G.S. Gouri, Deputy Director of the Industrial Operations Division, UNIDO, on behalf of Abd-El Rahman Khane, Executive Director of UNIDO. It was attended by 11 government experts and 1 observer from developing countries and representatives of the United Nations Conference on Trade and Development (UNCTAD), UNIDO, UNDP and the United Nations Centre on Transnational Corporations (UNCTC). Annex III contains the list of participants.

II. THE ROLE AND FUNCTIONS OF TECHNOLOGY-REGULATING AGENCIES IN TECHNOLOGICAL DEVELOPMENT

The representatives of each of the participating countries briefly described their countries' systems of regulating foreign technology and their experience in this field.

The discussions focused on the following issues:

- (a) The present administrative and policy framework within which the regulatory agency operates;
- (b) The linkage of one country's regulatory agency with other government agencies, research and development institutions and industry;
- (c) Likely development and evolution of the applied regulatory and policy systems in the developing countries concerned.

It was noted that the objective of the regulatory measures introduced by different Governments was either to secure more beneficial terms of the technology flow into the respective countries or to promote local indigenous capabilities, taking into consideration the countries' needs and possibilities. For this reason a variety of approaches had been developed based in principle on regulation either through one single agency or through several agencies according to specific goals and national requirements.

The participants stressed the importance of technology transfer mechanisms and the need for linking such mechanisms closely with the planning process and economic and industrial policy making in the country.

The participants exchanged information with respect to the effectiveness of the applied measures, particularly with respect to obtaining better terms of transfer of technology.

It was felt that, since technology transfer was closely linked with the inflow of foreign investment, a close tie should be established between agencies regulating the flow of technology and foreign investment. The view was expressed that the agencies should adopt a flexible approach in their work.

The role of national technological policy was also discussed at length in the context of overall industrial policy and the need for individual developing countries to formulate technological policies.

It was pointed out that in principle regulating agencies were the executive agencies of the Governments in implementing their technological policies vis-à-vis domestic manufacturers and investors on the one hand and foreign suppliers of technology on the other. The view was expressed that no one system could be applied to all countries; how a system should be developed and applied should first of all be determined by specific national objectives and the economic and political situation of a country. The participants also discussed to some extent the role of technology-regulating agencies vis-à-vis the flow of technology embodied in imported capital equipment and complete plants and the difficulties in checking precisely the technological contents of such imports. It was felt that in the future the developing countries would have to examine this issue more closely.

Finally, the discussions centred around the question whether technology-regulating agencies should, over a period of time, initiate specific policies on the transfer of technology based on current experience, and what role these might play in formulating industrialization and economic policies of their Governments.

prepare a proposal for a project to be financed by UNDP, taking into account the discussions held and the outline agreed upon for starting the implementation of the country surveys without delay. It was also felt that external resources for the country surveys would be required for fielding teams of two consultants for a period of about 4 months with support from UNIDO and UNDP and from other United Nations agencies if they wished to participate. If more than one survey was being carried out, a co-ordinator would have to be appointed, preferably from within the UNIDO secretariat, to supervise the implementation of the programme.

The government experts agreed that the surveys represented a positive effort towards self-appraisal in developing countries of certain important policies on technology transfer.

III. SURVEYS IN SELECTED COUNTRIES AND PRIORITY SECTORS REGARDING THE IMPACT OF FOREIGN TECHNOLOGY

On the basis of the paper prepared by the UNIDO secretariat, the participants discussed how UNDP-financed country surveys should be carried out by UNIDO in co-operation with interested Governments of developing countries.

The representative of UNDP pointed out that the Governments should show their interest in such surveys, particularly by giving guidance and providing proper resources for carrying them out.

The participants, after lengthy discussions of the background material, agreed that the surveys should include the following sectors:

- Mining and extraction industries
- Agro-based and food industries
- Ferrous and non-ferrous metallurgical industries
- Capital goods and engineering industries
- Drugs and pharmaceutical industries

As regards the countries that might be surveyed, it was felt that countries applying a wide range of regulating measures and representing various geographic regions should be selected to enable other developing countries to determine how the results of the surveys might be applied to their specific situations.

With this in mind, the Meeting identified the regions from which UNIDO would select the countries in which the surveys would be carried out after the Governments' concerned had officially expressed their interest. It was felt that since the Republic of Korea had great experience in regulating technology, experience that should be of interest to other developing countries, it should be one of the countries in which such a survey should be carried out. The opinion of the Meeting did not imply, however, that the representative of the Republic of Korea had expressed officially the desire of his Government to undertake such surveys.

It was agreed that it would be useful to convene the same group of experts after the first draft of the findings of a country survey was available to review it in the light of discussions held. Such a reconvening of the Meeting would enable the experts to appraise the outline of the surveys in the light of findings and, if necessary, to modify it to make it more compatible with the real needs. Furthermore, the methodology of carrying out such surveys might be discussed with the surveying teams in order to achieve the best system for carrying out future surveys in other developing countries. It was agreed that UNIDO should

IV. BASIC CONSIDERATIONS IN EVALUATING TECHNOLOGY CONTRACTS IN DEVELOPING COUNTRIES

The Meeting reviewed the documentation prepared by UNIDO, which was mainly based on earlier discussions held at Vienna from 6 to 10 March 1978 and on the experience of UNIDO in this field.

The Meeting expressed the view that UNIDO should continue to prepare concrete guidelines for evaluating and screening technology transfer agreements and expand the scope of its work to provide government agencies and technology recipients in developing countries with an effective tool that they could use to strengthen their negotiating position vis-à-vis suppliers of technology.

The discussions centred in particular on confidentiality, remuneration, restrictive business practices, guarantees, cost-benefit analysis of the technological project, technical assistance agreements between parent and subsidiary companies, franchising agreements, consulting and engineering services agreements, sublicensing and specific issues related to patent-licence and trade-mark licence agreements.

It was felt that the guidelines for evaluation to be prepared by UNIDO should compare the ways in which different countries handled the above-mentioned and other issues and should spell out in detail the implications of applying different methods. UNIDO guidelines should also provide concrete recommendations on terms of contracts. However, the guidelines should not become a "code" that technology recipients should in all circumstances apply.

With respect to the various issues raised, the experts offered a detailed explanation of practices followed in their countries that they believed would be useful to UNIDO in preparing the guidelines. It was suggested that this information continue to be collected in the future while the guidelines are being prepared.

Some of the participants suggested that UNIDO compile in the future a list of criteria regulating agencies in developing countries use in evaluating technology and disseminate it among these countries.

V. TECHNOLOGICAL CO-OPERATION AMONG DEVELOPING COUNTRIES

The session on technological co-operation among developing countries was a direct continuation of earlier discussions initiated by UNIDO and carried on at the Meeting of Senior Government Officials and Heads of National Technology Registries or Similar Offices in Selected Developing Countries. Three topics were discussed in particular.

The first topic was the UNIDO technology information system (TIES). The participants expressed their desire to speed up the development of this system. Several participants officially informed the UNIDO secretariat that their countries would join TIES.

The second topic was the technological advisory services of UNIDO, which were felt to be very useful, provided that UNIDO could secure high-level professional advisers on short notice. The experts discussed at some length their experience with UNIDO advisory assistance and reviewed ways of strengthening such activities.

The third issue was the UNIDO proposal to establish an international technology bank, the creation of which would introduce a new and independent force in the market of technologies. The desire was expressed that UNIDO continue its work in developing such a bank. It was felt that a special government expert group meeting should be convened to discuss the subject further. The concept was found to be impressive, provided that a number of issues concerning the work of the bank, its scope of operations and financing issues could be solved.

Annex I

LIST OF DOCUMENTS PRESENTED TO THE MEETING

- | | |
|-------------------|--|
| ID/WG.275/4/Rev.1 | Surveys on the impact of foreign technology in selected countries and priority sectors |
| ID/WG.275/5 | Technological co-operation among developing countries |
| ID/WG.275/6 | Basic considerations for the evaluation of technology contracts in developing countries |
| ID/WG.275/7 | The role and functions of technology regulatory agencies in technological development |
| ID/WG.275/8 | Recent developments in the regulation of foreign technology in selected developing countries |

Annex II

ASSESSMENT OF EFFECTIVENESS OF GOVERNMENT MEASURES IN REGULATING
TRANSFER OF TECHNOLOGY TO ATTAIN NATIONAL OBJECTIVES:

DETAILED OUTLINE

Part one

I. Introduction

(This part will cover a brief overview of the economic situation in surveyed countries, specifically with regard to the flow of technology in the last five years, also including the projection of the next five years, on the basis of development plans.)

1. Definition of national development objectives
2. Definition of sectoral development objectives
3. Definition of the industrial sector's objectives and other related sectors, such as services and infrastructure
4. Description of the scope and methodology of the survey

II. Government measures relating to transfer of technology

1. Detailed description of applied mechanisms relating to transfer of technology
 - (a) Centralized system
 - (b) Multiagency approach
2. Description of objectives of applied mechanisms
3. Legal framework of technology transfer mechanism
 - (a) Legislative
 - (b) Administrative
 - (c) Procedural guidelines
4. Evaluation procedures for technology transfer arrangements, which are understood to cover:
 - Industrial property rights
 - Know-how (instructions, manuals, models etc.)
 - Technical assistance
 - Management contracts, including franchising operations
 - Engineering and consulting services
 - Importation of complete plants

- (a) Procedural aspects
- (b) Policies and guidelines in the evaluation such as:
 - Cost, including royalty considerations
 - Elimination of restrictive business practices
 - Availability of local technology
 - Local capability to absorb, adapt and improve the imported technology
 - Disaggregation of the technology package
 - Alternative sources of technology

5. Modes of entry of foreign technology

- (a) Foreign investments and partially owned
- (b) Contractual arrangements between independent parties

6. Linkages of transfer of technology mechanism inside the country with

- R and D institutions
- Monetary institutions
- Local engineering firms
- Planning bodies
- Manpower development institutions
- Procurement offices
- Technical information agencies
- Import control bodies
- Others

7. Monitoring, absorption and adaptation of technology acquired

III. Effectiveness of technology transfer mechanism

(a) Specific criteria for determining effectiveness

- Foreign-exchange savings
- Elimination of restrictive business practices
- Increase in export earnings
- Promotion of domestic technological services, particularly consulting and engineering services
- Development of overall production capacities
- Promotion of R and D efforts, particularly in priority sectors
- Optimal use of imported technology by sharing with other users
- Create or increase employment opportunities
- Spill-over effects of imported technology
- Best use of local inputs
- Increase of local technological skills
- Other

(b) Other related issues

Flow of technology in relation to the ownership of recipient enterprise

Effect of government regulatory measures on corporate policies of major suppliers of technology

"Hidden" costs of imported technology, such as incentives granted, tariff and non-tariff protection and transfer pricing

Cost-benefits of the project

Implications of procedural and screening mechanisms applied

IV. General assessment of the impact of imported technology in relation to national and sectoral objectives

Part two

V. Studies on specific industrial sectors

1. General characteristics of the surveyed sector(s)
2. Contribution of surveyed sectors to overall industrial development
3. Assessment of impact of technology transfer mechanism at the sectoral level (here criteria developed in chapter III of the study will be closely scrutinized and investigated at the sectoral level).

Part three

VI. Recommendations

Part IV A

The following sectors will be surveyed in detail:

1. Mining and extraction industries
2. Agro-based and food industries
3. Ferrous and non-ferrous metallurgical industries
4. Capital goods and engineering industries
5. Drugs and pharmaceutical industries

Part IV B

The surveys should cover a representative sample of developing countries applying varying governmental measures to regulate technology transfer. In principle, UNIDO will select the countries in close collaboration with the interested Governments.

The following regions have been preliminarily identified from which individual countries will be selected:

- Andean Group
- Association of South-East Asian Nations
- Eastern African Region
- Middle East
- Western African Region
- South Europe

Note: The Republic of Korea may also be one of the countries selected.

Annex III

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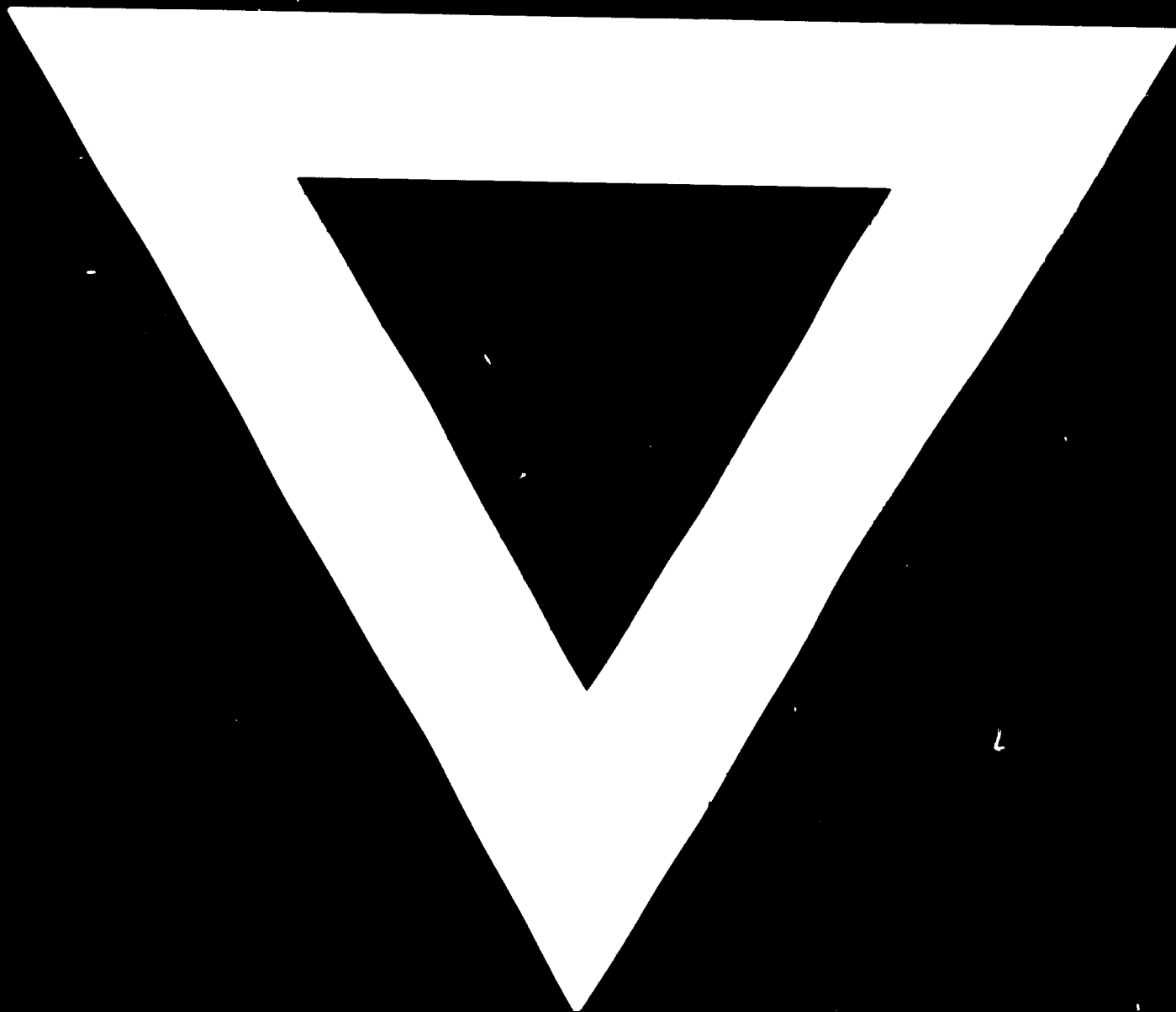
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