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PEOPLE'S REPUBLIC OF CHINA

REPORT ON A UNIDO MISSION\*

prepared by

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Investment Co-operative Programme Office  
World Bank/UNIDO Co-operative Programme  
Industrial Operations Division

Major Subjects:

1. Seminar on Selected Aspects of Financing and Promoting Industrial Investments (including joint ventures, and buyback deals)
2. Technical Assistance Projects

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## SUMMARY

The two-weeks UNIDO mission in May 1979 to the People's Republic of China showed the following results:

1. More than 70 participants from over 20 ministries and agencies, attended a 10-day Seminar on selected aspects of financing industrial plants. Major subjects of this Seminar, during which about half of the time was dedicated to question-and-answer sessions with hundred of specific items having been discussed.

Topics for which participants showed greatest interest included: joint ventures (legal, financial, organizational aspects; regulations for foreign investment and for import of technology; patents, licenses, and know-how agreements; buyback, parallel, and other compensation trade arrangements to pay for industrial plants and know-how; financial plans and sources of credits.

2. As a direct outcome of the Seminar, some of the seminar leaders were asked to assist (during evening-meetings) Governmental agencies in various specific deals including possible joint ventures (petrol refinery, instrument manufacturing) as well as in some details of a law for foreign investment.
3. As a consequence of the presentation on UNIDO's work, and of discussions with agencies outside the Seminar, we put up jointly with our Chinese counterparts a list of 34 Technical Assistance projects of which about 16 were marked "priority projects". Meanwhile (mid-June), this list has been largely confirmed by the Chinese authorities, and supplemented by a few other proposals.

4. The UNIDO mission had the following meetings with Government officials:

- Vice Minister Wei, Ministry for Economic Co-operation with Foreign Countries
- Vice Chairman Guo Ming, National Planning Commission
- Vice Minister Chow Tjen Nan, First Ministry for Machine Building Industry
- Mr. Chang, Secretary General of Chinese Enterprise Management Association
- Prof. Quijan, Director of Institute for World Economics,
- Mr. Wu Sheng, Director of the Shanghai "Bureau" for Machine Building and Electrical Industry.

During all of these meetings, the importance was stressed of managerial training, of improving existing factories and of attracting foreign partners in order to get access to modern technology and management.

5. The UNIDO Mission also had opportunities to visit machine tool factories in Peking and Shanghai, and the Industrial Exhibition in Shanghai. It is advisable that any mission prior to having official discussions with the Government should seek such opportunities, with a view to get a first-hand impression of the problems and achievements of the existing industry.

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Practical Introduction

## 1. Background

In February 1979, a ten person delegation from the People's Republic of China participated the European Management Symposium held at Davos. This participation had been initiated by UNIDO. Following the Symposium, the Executive Director and several senior UNIDO officials held discussions with that mission and with the Chinese Embassy regarding assistance in selected areas to be extended to China by UNIDO. The discussions were continued by myself. Considering the important plans of the P.R. of China regarding industrial investment, including foreign participation in such investments, we proposed holding a seminar on investment related matters in Peking. The proposal was accepted by the Chinese authorities by their letter of April 4 (Annex 1).

After the preparatory work had been done, we proposed a detailed programme for such a seminar and selected a mission team comprising two UNIDO staff members and three outside experts (Annex 2).

From our Chinese hosts we learned later that UNIDO was the first UN agency offering this type of assistance to China.

## 2. Time Schedule of the Mission

Four mission members arrived in Peking on the evening of 3 May and departed from Canton on the evening of 17 May, thus staying for 14 days "gross". The fifth mission member (Dr. Aladjov) arrived on 11 May and left on 20 May. The seminar on selected aspects of financing and promoting industrial investment projects lasted for nine full days. One additional day at the end of the seminar was dedicated to buyback agreements. We visited two machine tool factories in Peking and Shanghai respectively, as well as the industrial exhibition in Shanghai, and this took another 1½ days. Discussions on technical assistance (and other subjects?) with high ranking officials lasted for 1½ days. Two days were spent on travel and sightseeing (Great Wall, Ming Tombs, Imperial

Palace - Forbidden City, Summer Palace). Several evening meetings were held on specific subjects (see below).

Mr. Chen, Director of the Bureau of Foreign Affairs of the First Ministry of Machine Building Industry, welcomed our mission and regretted the "short time available for such an important seminar - the first of its kind in China".

A detailed report on mission scheduling is given in Annex 3.

The social events included: four official dinners given by the Ministry of Machine Building Industry, the Vice Chairman of the National Planning Commission and the Vice Minister of the First Ministry, the Director of the Shanghai Bureau for Machine and Electric Industry, and by UNIDO. Each of these dinners was attended by 25 - 30 persons. We were also invited to attend a performance of the Peking Opera.

### 3. Organization of the Government

Upon our request, the representative of the Ministry for Co-operation with Foreign Countries gave an outline description of the organization of the Government of China with special regard to the authorities dealing with the industrial sector. Details are given in Annex 4.

Of the more than 30 ministries comprising the Government of the P.R. of China, at least 14 are concerned with industry. Most important for UNIDO's substantive work seems to be the Enterprise Management Association of China and several State Organizations, especially the Construction Committee, the National Science and Technology Commission and the Corporations for Importing Technology and for Importing Machines.

Contacts between the Government and the UN organizations are the responsibility of the Ministry for Economic Cooperation with Foreign Countries (ECFC).



#### 4. The Industrial Sector in China

Statistics on industrial production is scarce and so is other well founded information. During the Davis Symposium, Prof. Tibor Mende gave an outline of the investment plans of the People's Republic. A summary of this outline plus supplementary information which was available in February 1979 (Becker-Boost report) is given in Annex 5. Annex 6 summarizes more recent information (May 1979) on production and investment in the manufacturing sector in China. The most important conclusion is that whatever the annual investment up to 1985 - the end of the present Five-Year Plan (ranging from \$30 billion to \$150 billion or between \$ 6 and \$30 billion per year) - there will be a considerable resource gap at least in foreign exchange. There is contradictory information and opinions vary regarding the preparedness of the Chinese Government to enter into large scale credit arrangements. In any case, conventional credits may have to be supplemented by two additional sources - buy-back arrangements and compensation deals for financing of industrial plants - and by foreign direct investment in industrial enterprises.

The extent to which increased exports from Chinese manufacturing industries and from the primary sector will be able to contribute to the foreign exchange income, cannot be estimated with reasonable accuracy. From the production of oil amounting to approximately 100 million tons per year, about 30 million tons are being exported at an estimated value of \$ 3 billion per year. The crude oil in China has a high paraffin content and is therefore difficult to process. We assume that cracking units and other plants to convert paraffinic into aromatic products might be an important sector for future investments with a view to producing petroleum products, such as naphta, suitable for buy-back agreements. Large reserves of coal and an estimated production of 600 million tons of coal per year indicate the increasing importance of the coal mining sector, which also offers opportunities for buy-back agreements for coal and coal products to pay for part of the imported mining equipment. The same may be true for the mining and processing of minerals and ores, including aluminium production. The light industries such as textiles and leather, handicrafts, certain metal working industries, etc., already account for a large proportion of Chinese exports; after the recent failure of the

trade negotiations regarding textiles between China and the EEC as well as the USA, there is not much hope of a drastic increase in the exports of textiles except for handicraft-type textiles.

From all our discussions, and judging by the questions asked during the seminar, it seems clear that the Chinese Government attaches the greatest importance and priority to the modernization of existing plants with a view to increasing their productivity. Several of the Chinese officials stated that the management of the Chinese industry is, in many cases, "economically backward" and that the self-reliance must be supplemented by outside assistance. Such assistance should concentrate on three aspects:

- improvement of technical, economical and financial management
- improvement of the quality of the products
- increase of efficiency (output) per worker

#### 5. The UNIDO Seminar

Annex 7 gives the original programme (4th draft) for the seminar called "Selected Aspects of Financing and Promoting Industrial Investment Projects". Since, for unforeseen reasons, Mr. Aladjov arrived one week later and due to the fact that consecutive interpretation consumes about one third of the total time available, it was decided to split/divide the Seminar into two parallel groups. The first group dealt with the financing and promoting of industrial investments with special reference to joint venture agreements, financial plan, planning? plans? investment conditions, the legal aspects of joint ventures and framework for foreign direct investment. The lecturers for this group were Mr. Becker-Boost and Mr. Hansen. The second group concentrated on specific industrial co-operation agreements such as technology transfer, regulation of foreign technology, model contracts and real contracts for plant construction, technology transfer and export sales. This group also dealt with compensation deals and buy-back agreements as a means to finance industrial plants. Lecturers for this group: Mr. Aguilar, Dr. Mohr and (from 11 May) Dr. Aladjov.

Upon arrival we handed over to our Chinese hosts, a considerable amount of background material - Annex 8 which, however, could not be translated in time and therefore was not made available to the participants.

For any future Seminar, suitable background material must be prepared in Chinese well in advance.

The Seminar was attended by more than 70 participants from more than 20 Ministries and agencies. Annex 9 lists the ministries and governmental agencies which were represented at our seminar; participants were generally from the levels of section chief up to Director of Department.

Annex 10 gives a summary of the highlights of our seminar as well as a selection of questions and answers.

A questionnaire on the evaluation of the seminar by participants, a sample of which is attached (Annex 11), was designed to allow an evaluation for reference when planning future seminars. The summary of about 50 written replies is as follows: Contents: 56% wanted more information, 32% felt it was appropriate, 12% said it was too general or too detailed or very good. The duration of the seminar: about 50% felt it was just right, 45% wished it had been longer. The presentation was said to be very good by about 30% of the participants, and 60% felt it was adequate/satisfactory; 10% said it was either too thorough or too superficial. Results: 75% of the participants said it would be of general use, with about 20% commenting that it was very useful. Almost all the participants agreed that the results were applicable to their day-to-day work.

When considering this evaluation, one has to bear in mind that the two groups had different contents and different presentations although the lecturers sometimes switched from one group to the other, depending on the subject. In future Seminars, we could be more selective, regarding the subjects as well as the participants.

## 6. Special Meetings and Visits

### (a) Plant Visits

Detailed reports are given on the visits to the Machine Tool Factory No. 2, Peking (Annex 12) and the Machine Tool Factory, Shanghai (Annex 13) as well as the Industrial Exhibition in Shanghai (Annex 14).

We believe that any mission whose members had no previous "feeling" for the level and capability of Chinese industry, should - if a visit to the Canton Fair is not possible - visit the Shanghai Industrial Exhibition, plus one or two factories in that area, to proceeding to "theoretical" discussions in Peking.

(b) Technical Assistance and UNIDO's role in the industrialization of the developing countries

On 4 May (afternoon), we presented to the roughly 70 seminar participants, a summary of UNIDO activities and the possibilities for technical assistance. Annex 15 describes this subject in detail, including a list of 34 Technical Assistance projects which were developed during the Seminar or brought to our attention at a special meeting on the morning of 14 May.

The relations with other UN organizations and specialized agencies (UNCTAD, FAO, ILO, ECA etc., World Bank Group, IDCAS and others) were also briefly described, as was UNIDO's organizational structure and its relation to UNDP.

Special emphasis was laid on the system of consultations and the results achieved so far; the subject of our Seminar - industrial financing will also be one of the subjects of a future Consultation Meeting.

(c) Meeting at Institute of World Economics (IWE) with Prof. Quijan, Mr. Luo and Assistants (9 May p.m.)

We visited our friends from the Davos delegation; the IWE is one of the Institutes of the Academy for Social Science of the P.R. of China which is a high level institution under the State Council. Regards and thanks were expressed to Dr. Khane and Mr. Fahlstrom and to Prof. Schwab. The welcome given by both Prof. Quijan and Luo was very warm. The discussion centered around possible co-operation between UNIDO and the recently created Enterprise Management Association of China (EMA) of which the IWE seems to be a charter member, also providing its Executing Secretary (Mr. Luo).

We discussed the topics for a meeting proposed by Prof. Quijan, with the General Secretary of FMA, Mr. Chang. Any Technical

Assistance, especially in the field of management, should include requests from the EMA.

(d) Chinese National Enterprise Association for Management (EMA)

We discussed, at a special night meeting on 9 May with Mr. Chang, Secretary General of EMA and a Vice Director of the National Economic Commission, Mr. Luo, Executive Secretary of EMA, and two other members as well as the four "core" members of the UNIDO mission, the possibilities and framework for future co-operation. We believe that EMA may become the most direct and probably the most efficient channel for UNIDO in the field of training industrial manpower and Prof. Schwab (European Management Forum) who visited EMA in April, gained the impression that this organization offers direct contacts with plant managers.

The quantification of the proposals for training should be made by EMA. EMA requests should be channelled to UNIDO via the Ministry for Economic Co-operation, but EMA would prefer to communicate directly with the respective UNIDO Divisions/Sections.

Regarding the financing of these activities, it was mentioned that the EMA has funds made available by the National Economic Commission; UNIDO's assistance in foreign financing would be highly appreciated.

(e) Meeting with Vice Minister Wei (Ministry for ECPC)

The full mission met on the afternoon of Monday, 14 May for about 1½ hours with Vice Minister Wei. He stated that the present Seminar which he considered to be/to have been a very successful one, was the first example of, he hoped, long-lasting co-operation between China and UNIDO. UNIDO should soon come back and hold similar seminars. He then commented on some specific items:

- China is studying the foreign investment regulations of many countries, to prepare for the issuing of a Chinese law on foreign investment with equality and mutual benefit as its basic principle. He said our seminar has been of great assistance in this field;
- More experts should come to China, including some from other UN organizations;

- Out of the "15 items list" as prescribed by us in the first meeting (Annex 15), he considered 5 items as feasible and important for our co-operation: technical assistance to factories through training, technology transfer, foreign investment law and regulations, experts to improve existing industries.
- UNIDO should send technical experts to bring technology to an advanced stage; as an example, the Vice Minister mentioned spare parts which wear out too quickly in China.
- China, being a "socialist developing country" will continue to assist other developing countries. Its assistance will include contributions to UNIDO/UNIDF.

The mission contributed to the discussion of the following points:

- UNIDO would like to implement any technical assistance projects in the field of industry and related trade (such as buy-back), this would be made possible by an expected large increase in the IPF for China, which may be discussed during Mr. Morse's forthcoming visit;
- referring to our seminar, we consider as particularly challenging innovative ideas (the new investment law and regulations how to repatriate profits; ownership problem, etc.); regulation of the transfer of technology; the combination of buy-back and compensation financing;
- UNIDO is offering neutral advice, not biased by commercial and political interests, regarding the selection of technology and of suitable partners for co-operation.
- UNIDO may propose a large scale programme for ECDC with China, in order to spread the message of self-reliance.

This meeting was even reported by Radio Peking via short wave; the Chinese Embassy in Vienna took this fact as proof of the importance which the Chinese Government attached to our mission.

- (f) Meeting (dinner) with the Vice Director (Vice Chairman) of the National Planning Commission (Mr. Guo Ming) and the Vice Minister of the First Ministry for Machine Building Industry (Mr. Chow Tjen Nan)

This meeting was arranged in connexion with an unscheduled dinner invitation on the last evening of our stay in Peking.

The Vice Chairman immediately started a very detailed and lively discussion with all mission members on the subject of foreign direct investment. He appreciated our frank presentation of our proposals, of which he was already aware

We played an impromptu game among ourselves presenting the views of Chinese interest, foreign investors expectations, etc. in such a way that the Vice Chairman acted as a moderator; this was one of the most concentrates and fruitful meetings we had in China.

On this occasion we proposed - following questions of the Vice Chairman - the following ideas:

- (a) There should be no fixed limit for repatriation of earnings, but a formula such as:  
an average return of  $x\%$  on bonds etc. in USA, Europe, Japan (applying a currency "basket") in the year for which the approval needs to be given, plus an incentive (for risk, etc.) of 6-8% points; at an average return of  $7\%$ , this would amount to 13-15% return p.a. It should be permitted to repatriate this portion of the profit without local (Chinese) taxes; an additional amount of 6-8% on this return should be allowed for repatriation but with an appropriate local tax; any profits beyond  $x + (12-16)$  should be reinvested.
- (b) The ownership question in a 49/51% joint venture could be solved according to the Yugoslav model where participation in equity gives the right to participate in profits and losses, and in management, but does not constitute ownership in fixed assets special regulations for the transfer of invested funds in the case of termination of a joint venture need to be developed.

Another problem which needs attention is the different treatment of foreign investors in their home countries; for example, US income from

foreign operations is largely tax-free; therefore, countries that had not planned double taxation agreements with China could put their investors at a disadvantage as compared with investors from other countries. A solution has not yet been proposed.

Long discussions were held on the balance between the need to attract foreign partners, and that of protecting the interests of the Chinese people. Buy-back arrangements were considered as an alternative or a supplementary way.

The Vice Chairman expressed his wish that UNIDO would continue to assist China in these matters.



中华人民共和国驻奥地利共和国大使馆  
**BOTSCHAFT DER VOLKSREPUBLIK CHINA**  
**IN DER REPUBLIK ÖSTERREICH**

Reference: PII / 100                      Vienna, 4 April, 1979

Subject: Seminar on joint venture, buyback and  
trade cooperation, etc.

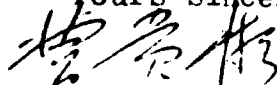
Mr. E. Becker-Boost, *4. 11. 9. 79*

I would like to refer to our meeting on 26 January this year and to our conversations on 25 March with regard to the possibility of your visit to China to conduct a seminar and give advice on joint venture, buyback and trade cooperation arrangements, etc. Reference is also made to your proposed tentative Programme dated 30 March 1979.

Now I am pleased to inform you that we agree with your proposal, namely you and other three experts would visit China for a duration of two weeks to conduct a seminar on the above subject. With regard to the timing of the visit I am now communicating my Ministry, Ministry of Economic Relations with Foreign Countries, and shall inform you soonest possible. Meanwhile, may I request you to make the necessary arrangement, including the approval of your proposed programme by the Secretariat of UNIDO.

Thank you for your kind co-operation.

Yours sincerely



Cao Guibin

First Secretary and  
 Alternate Permanent Representative to UNIDO

Mr. E. Becker-Boost  
 Director  
 Investment Co-operative Programme Office  
 UNIDO

Annex 2

Seminar Leaders:

1. Dr. Erich Becker-Boost (Chairman of the Panel), Director,  
Investment Co-operative Programme Office, UNIDO, Vienna
2. Mr. Enrique Aguilar, Industrial Development Officer,  
Development and Transfer of Technology Section, UNIDO, Vienna
3. Dr. Peter Aladjov, former Chairman of Board, BAFAG, Munich (FRG)
4. Dr. Alfred Mohr, Solicitor, Vienna  
(specialist for contracts in East-West industrial trade)
5. Dr. Georg Hansen, Head of Department, OECD, Paris  
(specialist for foreign investment regulations)

Mission scheduling

On 4 May, we met in the morning (after a brief pre-view immediately after our arrival) with officials mainly from the two host organizations - the Ministry for Economic Co-operation with Foreign Countries (abbreviated ECFC) and the First Ministry for Machine Building (MBI), led by Mr. Wong (Deputy Director 6th Department, ECFC) and Mr. Chen, Director of the Bureau of Foreign Affairs of the First Ministry MBI.

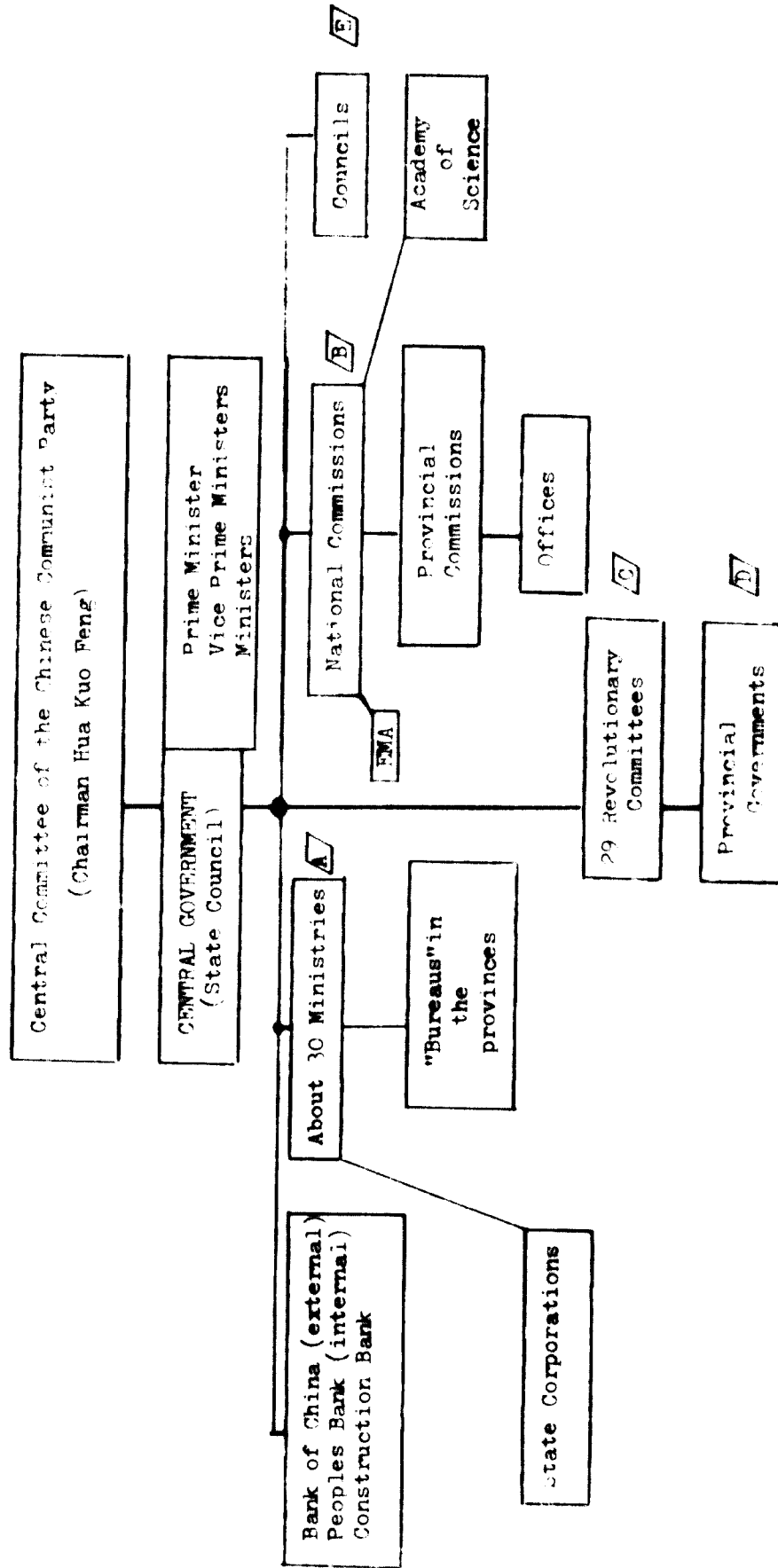
Also present were Mr. Suon, Deputy Director of the Bureau for Science and Technology in the First Ministry MBI. Mr. Tien, Division Chief in the same Ministry (who accompanied the mission from its arrival at Peking until its departure from Khouangzhov, Canton), Mr. Chan, Division Chief in the Ministry ECFC (formerly a staff member of the Mission of the P.R. China to the UN in New York), and two more staff members from the Ministry MBI and from the Machinery and Equipment Export Corporation. Our very able interpreter was Mr. Lo, an economist in the Institute for World Economics, (whose director, Prof. Quijan, headed the Chinese Delegation to Davos and Vienna).

After the introduction of the UNIDO mission and a warm welcome, we agreed on the following schedule:

- Seminar: 9 days from Friday 4 May through Tuesday 15 May 1979 (including Saturdays);  
first afternoon for introducing UNIDO in "plenary"; 9 morning sessions, lecturing in 2 groups, each 30-40 participants;  
9 afternoon sessions for questions and answers.
- Technical assistance: Half a day before beginning and one day after the conclusion of the seminar for preliminary listing ideas and requests for technical assistance; including a meeting with the Vice Minister of the Ministry ECFC.
- Factory visits: One machine tool factory in Peking (originally two factories visits were scheduled, but our time was requested for work with our Chinese counterparts on several practical actual cases; (see below)
- Other events: Two days (2x  $\frac{1}{2}$  Sunday plus one working day) were scheduled for "standard" sightseeing in and around Peking, plus half-day in Shanghai)

The proposed deadline for our stay was 15 May which we adhered to. On 16 May we left for Shanghai, where we visited a modern large machine tool factory (see Annex 13) and the permanent Industrial Exhibition (Annex 14).

Some observations on the Organizational Structure  
of the Government of the P.R. of China



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Explanations:

A Ministries

There are about 30 ministries including at least 14 for industry:

- 1st to 7th Ministry for Machine Building
- Agricultural Machinery
- Chemical Industry
- Petroleum and Petrochemicals
- Textiles
- light industry
- steel industry
- metallurgical industry

At least 15 other ministries cover the following subjects:

Foreign Trade, Agriculture, Forestry, Water and Power, Interior (?), Health (?), Communication, Transport, Railroad, Defense, Culture, Education, Finance, Foreign Affairs, Economic Co-operation with Foreign Countries.(ECFC), and others. The ministers are members of the State Council, and hence, the Vice Ministers (up to 5 for each Ministry), are very important for the day-to-day business.

Each Ministry is headed by a Minister and up to 5 Vice Ministers; there are departments, divisions, and sections. The 6th Department in the Ministry for ECFC deals with UN organizations.

The Minister for ECFC is one of the Vice Prime Ministers.

Under the Ministry of Foreign Affairs, there are two important State Corporations; all contracts have to be concluded with these corporations:

- Corporation for Importing Technology
- Corporation for Importing Machinery

**B** Commissions:

The most important commissions are:

- National Planning Commission
- National Economic Commission
- National Construction Commission
- Commission for Legislation
- Natural Science and Technology Commission

After a certain decentralization was introduced, the National Economic Commission seems to have gained importance. Most of the national commissions have "subsidiaries" in the provinces, cities and autonomous regions. Each of the provincial Economic Commission has an "Office for Industry and Transport".

The Science and Technology Commission is also in charge of the Academy of Social Sciences (including the Institute for World Economics) and the Academy of Natural Sciences. The Director of the Institute for World Economics, Prof. Quian, was the leader of the Davos delegation. The National Economic Commission is also responsible for the Enterprise Management Association (Organigramm see Annex 16).

**C** There is one Revolutionary Committee in each of the provinces, cities and autonomous regions.

**D** The Provincial Governments regulate industrial enterprises, co-ordinated with the respective "Bureaus" which are part of the ministries; only important and large enterprises are run directly by the Central Government. (For example, the City of Peking is even planning a large fertilizer and a petrochemical plant.)

The provinces seem to receive greater autonomy for industrial investment decisions. In this respect the so-called "bureaus" under the Ministry for Machine Building for instance, are of great importance:

- 4 -

The Shanghai Bureau dealing with machine building and electrical industry, for example, is responsible for about 400 factories, employing more than 300 000 workers.

E Councils:

Among the Councils, The Council for the Promotion of International Trade (President: Mr. Wang Yao Ching) - of which Mr. Kuo of the Institute for World Economics is also a member - represents the Chinese people in all trade related aspects. Its task is to establish and maintain contacts with foreign enterprises and commercial circles; the Council also keeps contacts with those countries with which no diplomatic relations exist, as well as with non-governmental organizations.

Any foreign enterprise or institution which wishes to open an office in China, needs the approval of the Council.

Enterprise-Government relations

Projects are studied and proposed by Enterprises or Ministries. After an investment decision is made by the Central Government, any investment project is being implemented by the National Planning Commission, the Bank of China, and other agencies. Foreign participation in enterprises is under investigation, including the status of such joint ventures.

## The Industrialization Potential of China\*)

### 1. General

The new orientation of China stems in many respects from the attitude of the former Prime Minister Chou en Lai. Chairman Mao Tse-Tung was the last leader of the Chinese People's Republic for whom modernization was synonymous with "westernization". Chou did not look upon it this way.

One of the main consequences of the new orientation through which isolationists and radicals have been expelled from the political scene, is the new 10 Year Economic Plan. This plan, however, despite its name, covers only the period from 1978- 1985.

### 2. Economic Basis

The population of China is estimated to be close to 900 million. The per capita income of China is estimated by the World Bank to be \$ 410 p.a.; the GNP, hence, would be in the order of \$ 360 billion (1978). The savings rate is high, which may make local investment capital available at a rate of \$ 40-50 billion p.a.(?). China has no foreign debt.

### 3. Industrial Development

Within the framework of the Plan, 120 large industrial projects are envisaged. These projects aim at the doubling of steel production from 30 to 60 million tpa, an increase in coal mining from 600 to 1,000 million tpa and an increase of grain production from 205 to 400 million tpa in 1985. Other products include gas and oil developments, railways, power plants, and non-ferrous metals. Steel plants are under construction by Japanese firms, and negotiations are under way with companies from Federal Republic of Germany and Austria.

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\*) In this paper, "China" stands for "The Peoples Republic of China". Most of the information was gathered from a speech of Prof. Tibor Mende and subsequent discussions at the Davos Symposium, 6 February 1979, including comments made by the Chinese delegation.



The projection for the production of grain is the weakest point of the plan, as China has not been able to raise grain production by more than 50% over the last 22 years. Grain imports continue to be at a \$ 300 - 500 million p.a. rate. Part of the industrial projects, however, could be implemented under certain conditions. The absence of a whole generation of technicians, due to the closing of schools during the Cultural Revolution, may be an obstacle to accelerated development. About 10,000 students will be sent abroad to study at universities. On the other hand, new incentives for production are being introduced, thus abolishing the policies followed so far. The administration has also recognized that tourism could be an important source of income for the country.

The new Plan envisages total investments in the amount of \$ 600 billion until the year 1985 of which \$ 230 billion will have to be imported. There are already import contracts signed (although some of them are "letters of intent" only) in the order of about \$ 43 billion, among others: iron and steel \$ 21 billion, petroleum development \$ 3.5 billion, coal mining \$ 4 billion, fertilizers, infrastructure equipment. Military and weapon imports are not included in this programme. Last year, China purchased plant equipment at a value of \$ 3.2 billion which was paid in cash. Therefore, plant and equipment and services imports would have to be almost 10-fold compared to last years' imports.

Exports are estimated to be in the order of \$ 173 billion until 1985, and transfers from Chinese working abroad will be at about \$ 12 billion. Tourism will add \$ 8 billion, production of gold \$ 4 billion; the increase in exports of oil and coal is not predictable at the present time. The present capacity of the Chinese oil fields is said to be about 100 mill tpa (export quota: 20-30 mill tpa?) which capacity could be raised to about 400 - 450 mill tpa in 1990 which is in the order of Saudi Arabia's present production (namely 7-11 mill bpd). Such an increase however, would require deep sea (off-shore) drilling for which no prospects can be seen yet. Japan is now importing about 260 mill. tpa of crude oil; 60 - 70 mill tpa (at a present value of about \$ 6-7 billion p.a.) might be supplied from China.

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The net income is estimated to be at a total of about \$ 197 billion; thus, China would have to cover \$ 30 - 35 billion by foreign loans until the year 1985, debt servicing will add another estimated \$ 3 billion. With an increase in oil and coal production by 20% each, the foreign exchange deficit would be reduced to about \$ 20 billion. There are furthermore "educated guesses", that the investment programme might not be fully implemented. At an implementation rate of 90% (regarding imports only), there would be no foreign exchange deficit at all provided that the increase in exports would be achieved and maintained and the terms of trade would not deteriorate.

#### 4. Job Creation and Training

Even the massive investments in large scale industry alone cannot provide jobs for the increasing population. If we assume that out of the \$ 600 billion investment, about half will be in productive large scale enterprises, and at an investment of between about \$ 50,000 and \$ 100,000 per job, only between 3 and 6 million people could be directly employed in these industries which means that several hundreds of thousands of industrial workers must be trained during the next few years. Language problems may delay the necessary efforts. Applying a multiplier ratio of 3:1 (sub-contracting, downstream and ancillary industries and services) a total of about 13 million jobs may be created until 1985. The population increase during the same period, however, is estimated to be 70 million.

During the construction period, as well as for the erection of all the infrastructure projects (railways, roads, power stations), there will be millions of people temporarily employed. However, the solution to the employment problem obviously continues to rest on the agricultural work force.

Jobs which may be lost as a consequence of the intended mechanization of agriculture, would probably be balanced by the still strong sector of rural small scale industry.

There is a special problem of unemployment among young people in the cities, provoked by the return to the cities of young people who were assigned to work in agriculture.

## 5. Financing

Up to now, only a few loan agreements with the West have been concluded; several more are under discussion. The agreements concluded so far are \$ 1.2 billion export agreements with 10 British banks; a certain percentage of \$ 13.6 billion French supplier credits; a Eurocredit of \$ 2 billion arranged by a consortium of 20 Japanese banks (to be concluded in February 1979 at LIBOR + 0.625% or 0.375% as requested by the Chinese Government); there is no Yen-Credit under negotiation; the Japanese credit is essentially earmarked for financing of a steel plant to be erected near Shanghai.

The Bank of China is now active in 139 countries and business contacts exist with 828 foreign banks; only in 1977/78 there were delegations from 75 foreign banks visiting China with the intention to offer credits at favourable conditions.

Japan and China in 1978 signed a trade contract covering \$ 20 billion up to 1986 (to be extended to 1990) A combination of Japanese aid funds with loans may also be considered.

In addition, China may count upon the USA applying the Most-Favoured-Nations clause on her, although this is still the subject of discussions in the US Senate and has some bearing on the discussion on "frozen-assets" of the USA. China will be interested in joint venture projects

some of which have been concluded with Japan or with Chinese enterprises in Hongkong.

The pattern of foreign equity participation has not yet been set by the Government of China. A lot of work needs to be done and a "New Foreign Corporate Act" is said to be ready this year. Two issues, however, seem to be clear already: first, a maximum of 49% foreign participation may be allowed, with the Chinese partner being either the Government of the Municipality or other entities; the local contribution would be land, infrastructure, labour, management; the foreign

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contribution is expected to be: financing, plant and equipment, know-how, export marketing. Second, no profit on invested capital may be allowed for remittance to foreign countries (as an expression of the basic rule that all productive enterprises in China belong to the people of China). The foreign partner may be granted the right to export a certain quantity of goods manufactured in the joint venture which would allow a certain (not defined) return on investments. It is possible, that limited-time partnerships, leasing, and buyback and compensation agreements may play an important role in the setting up of new industries in China. Production sharing and processing agreements have already been concluded. Japanese trading houses again, have an edge over their western competitors.

#### 6. Concluding Remarks

The question arises, whether the new pragmatic approach will last - it was the result of hard struggles. A collision of unforeseen factors may change the situation at any time. However, one can observe a cyclical change of pragmatical and radical attitudes in China. The impact of tourism, training of Chinese students and technicians abroad, and the role of the technocrats is not known yet. The arguments in favour of the pragmatic approach are overwhelmingly strong provided the Army supports the new leaders and assuming that the Chinese people will be longing for some continuity in economic and industrial policy.

The new leaders have undertaken to deal with an immense task, namely to transform a 900 million population into a "modern" society (whatever that may imply). Although the most recent birth control programmes have been effective, China's population increases by about 11 million each year under the prevailing conditions. This means that, if only 4-5% of China's GNP can be exported, (equivalent to about 16-20 billion US\$ p.a. by 1985 and exports of \$ 100 billion p.a. in 2000), the country will become one of the largest trading nations of the world.

Regarding the time framework, one may recall that Japan became an industrial nation between 1868 and 1935, that is, during a 67 years time span; the USSR needed about 30 years, and Taiwan, Korea and other Asian countries much less. China, hence, may well be in the industrial forefront in 30-40 years from now, with a probable share of around 10% in world industrial production by the year 2000.

The peoples of the Far East maintain high savings and the individual subordinates to the group. They have generally high work ethics, and the "I" is less important than the "We". Both features distinguish them from the Western peoples. Japan and China could supplement each other. The lack of resources in Japan as well as the aging labour force (although there is a huge potential of first class technicians), could be combined with the young, well organized labour force and the demand for modern equipment in the Chinese People's Republic.

Negative aspects may be: a possible income gap between rural and urban population, a possible over dependence on foreigners with all the well-known side-effects etc. The future power in that area may come from their strength in maintaining their own culture rather than from "westernization".

#### Annex

- A List of the Members of the Chinese Delegation to Management Symposium in Davos
- B Questions raised by 11 international journalists to the Chinese delegation, and summary reply.

List of the Members of the Chinese Delegation to  
Management Symposium in Davos

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Head

Mr. Qian Junrui                      Head of the World Economic  
Research Institute, Chinese  
Academy of Social Science

Deputy Head

Mr. Song Yifeng                      Researcher of                      "

Deputy Head & Secretary-General

Mr. Luo Yuanzheng                      Deputy Head of                      "

Members

Mr. Yao Naian                      Researcher of the International  
Trade Research Institute, Ministry  
of Foreign Trade

Mr. Chen Minghe                      Engineer, Ministry of Coal Industry

Mr. Chen Mingjia                      International financial expert,  
Bank of China

Mr. Chang Minghao                      Researcher of the World Economic  
Research Institute

Mr. Yin Jiqing                      Economist

Ms. Ge Ren                      Technician, Ministry of Coal  
Industry

Ms. Wu Heping                      Interpreter

Questions to Chinese Delegation - Davos February 1979

A) Political Questions

1. You said in your Davos-paper, Europe should unite against hegemonistic power. How do you see the role of Switzerland in this context as a neutral country?
2. What about the western trade with Russia? If a western company is already trading with Russia, is it possible for that firm to trade also with the Chinese? Or must the western companies before trading with China, give up all the investments in the USSR? If your answer is yes, does that mean that the western countries must all give up trade with the USSR, or does China consider also that western trade with the USSR is needed, both for Russia and the western countries.
3. Which differences did you remark in your daily life between the last Chinese government and the new?
4. Do you see a chance to come to a peaceful co-existence with the present regime of Taiwan considering, that there are common positions of both sides, for example in the case of regaining the former Chinese areas of the USSR (Amur and Ussuri)
5. Within the Chinese-Japanese peace-treaty is a so-called anti-hegemonial clause for the Asian area. Moscow says, this is a confrontation against the USSR. Is that true?
6. What do you expect for the future of Hongkong. Does China intend to prolong the treaty with Great Britain?

7. Who is actually the real leader of China and so far responsible for its opening, Teng or Hua?
8. How will be, in your opinion, the reaction upon the opening of China by all middle-management-people, who made career in a time when Mao's Self-Aid-Principle had the absolute priority?



B. Economic and business related questions

1. In your introductory speech you spoke about compensation deals with Europe - do you think that western countries will accept a flood of Chinese products in the years to come?
2. Could you give a piece of good advice on how to do business with the Chinese?
3. Could you give an example of a wrong approach?
4. Can you say anything general about after which criteria you are choosing among companies/products - in particular if several companies are offering the same products.
5. In your interview with the Journal de Genève you have answered questions. More precisely:
  - a) What kind of products would your country like to import from Switzerland?
  - b) Do you see Swiss banks operating in your country
  - c) Do you see Ciba-Geigy or the like (Sandoz, Roche, Brown, Boveri, Sulzer, etc) operating in your country in a mixed company?
  - d) Is it true that your country would not allow the transfer of dividends abroad? How in this case could the Swiss companies eventually operating in your country be interested to invest?
6. What about the joint-ventures? Will China take these over after a couple of years?
7. What do you think about the possibility for installing a real free market system in China?
8. Has your Government decided which are the fields of the economic growth which foreign investments can be developed in?

9. Which are the main goals, in term of social progress, that the present economic policy made by your Government wants to achieve?
10. Does your Government plan a priority list of foreign investments, in the sense of choosing first public enterprises and then the private ones?
11. To fulfil the ambitious plans to develop your economy you have to export not only raw materials and oil but more and more industrial goods. What kinds of goods are ranking first for the future export?
12. There are many negotiations between China and German producers of investment goods. On what sections Westgermany has the best chances to get real contracts for delivery?
13. Which chances do you see for the Swiss Exporting Industry in China?
14. Where can one receive exact figures about the Chinese market and generally about the Chinese Economy?

C) Other

1. What benefits did the Symposium bring to you?
2. Have you been approached by bankers? With any results?
3. Professor Mende said that about 10 000 students will be sent abroad - to which countries will they go? Mainly to the US?
4. What kind of people do you plan to send abroad for training? Factory managers? Technicians? Factory workers?
5. Does the China delegation plan to contact any Latin American Group to exchange information on joint ventures or transfer of technology? In the affirmative case, which countries would they be interested in?

Summary Reply

The Head of the Chinese Delegation said that the ten members of his delegation had a great number of personal contacts with entrepreneurs, bankers and scientists from many European countries at the Davos Symposium. It has given his delegation a unique chance to get a better understanding of the economic situation in Europe and the probable development of the whole Western World.

"We have learned enormously about possibilities of co-operation which we hope to start in the economic, technological and scientific field. In a second phase we will learn more about the advanced European system of management". Prof. Quian stated. He underlined that his government will prove very flexible in reacting to European proposals. Future co-operation between Europe and the People's Republic of China could have many different forms as long as were based on the principle of equality and mutual benefit. Prof. Quian stated that "we are open here in Davos to any proposal which we will forward to our government for serious consideration. The future co-operation may have manifold forms, among them private loans, government loans and joint ventures."

The Institute of World Economic Research has many links with industry in China. The inclusion of China in the European co-operation network would be discussed in China soon.

He said that a Chinese proverb means "good beginning - good end".

The following

Annex 6

SUMMARY OF THE INDUSTRIAL SITUATION IN CHINA

is an excerpt

from the German-language "Country Report No. 7/79" ( 1/ ) on the People's Republic of China ( 2/ ).

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Since March (1979), there have been increasing signs of a toughening of the internal political situation; western technology and management methods continue to be resented, but an imitation of western life styles is definitely unwanted. The erstwhile aim to catch up with the industrialized nations by the year 2000 appears to have moved into the far-distant future.

Indicative thereof are the 32 contracts concluded with Japanese firms during the last six months: The purchase of industrial installations valued at US\$ 2.7 billion (integrated steel works, petro-chemical plants, etc.) has been declared as "held in abeyance". A considerable retrenchment, particularly affecting the build-up of heavy industry, seems to be taking place.

Reason therefor appears to be the realization that the original plans would greatly exceed the material, personal and financial resources which the country could make available.

Instead, principal emphasis is now to be placed, besides on agriculture, on electric power generation, coal mining, the transport system and the building materials industry. Increasing autonomy is to be given to industrial enterprises; wages are to be more widely based on the earner's contribution; more incentive systems are to be used; and plant is to be increasingly financed through credits, as distinct from government grants.

During 1978, industry grew at 12 % and thus did considerably better than agriculture. Whether the intended overall economic growth rate of 8.4 % was reached is not known, but doubtful.

Agriculture is severely hampered by difficulties in operating, maintaining and repairing agricultural machinery; as a consequence, the proclaimed aim of "comprehensive mechanization of agriculture by 1985" has been abandoned.

The mining and power sector has exceeded its targets, producing (1978):

coal	600 million tons
crude oil	110 million tons
natural gas	100 billion cubic metres
electricity	160 billion kilowatt-hours.

Nevertheless, the energy sector remains a major bottleneck; much industrial capacity remains unutilized because of its problems.

Another principal problem area is that of lack of managerial competence, organization problems and a shortage of skilled workers. Nevertheless, preliminary

1/ Ostasiatischer Verein E.V., Hamburg, FRG; 3 June 1979.

2/ Condensation and translation by W.H. Oettinger, ICPO.

Annex 6/2

figures indicate the following growth rates (1977-78) which in most cases were in excess of targets:

	growth rate (%)	actual production (1978) in millions of tons
iron	36.0	34
steel	29.0	31
rolled steel products	31.0	21
chemical fertilizer	31.2	44 (11 months)
cement	20.7	60
tractors	22.2	-

Further increases are expected for 1979, partly due to the coming on-stream of several plants purchased in 1973/74.

In future, increasing attention is to be paid to product quality; the introduction of international standards is no longer excluded.

Production of consumer goods is to be emphasized (quartz watches, automatic washing machines and 300 other consumer products are to be produced, starting during the next two years).

Also shipbuilding is to be increased and harbors are to be modernized (Dutch and Japanese assistance).

China's foreign trade is estimated at about \$US 20 billion. Two-thirds of this refers to trade with 14 western nations with whom imports and exports were almost balanced in 1978 (see appendix).

China will continue to be cautious in accepting bank credits; instead, other financing methods are to be pursued, including "compensation trade" which first came into mention in March 1978. Also, "joint ventures" (up to 49 % foreign participation) are seen as real possibilities.

Appendix

	Imports from China (cif)	Exports to China (fob)	Volume of Trade
Japan	2 030,3	3 048,7	5 079,0
Hong Kong (Jan-Nov)	2 038,7	55,4	2 094,1
FRG	366,7	955,1	1 361,8
USA	356,1	823,6	1 179,7
Canada	82,9	441,8	524,7
France	225,0	197,4	422,4
Italy	200,3	188,5	388,8
Great Britain	212,3	174,9	387,2
Singapur (Jan-Nov)	312,4	48,4	360,8
Netherlands	125,4	131,6	257,0
Belgium/Luxemburg	44,6	203,4	248,0
Switzerland	49,7	93,6	143,3
Sweden	55,7	83,2	138,9
Austria	28,5	54,6	83,1
Norway	12,6	60,0	72,6
Denmark	31,8	8,0	39,8
<b>T o t a l</b>	<b>6 173,0</b>	<b>6 608,2</b>	<b>12 781,2</b>
Missing periods	213,7	9,4	223,1
<b>Grand Total</b>	<b>6 386,7</b>	<b>6 617,6</b>	<b>13 004,3</b>

Note: The "missing periods" cover 1/11 of the figures for Hong Kong and Singapur.

Source: National statistics. Currency conversion based on averages of the IMF, except Hong Kong (\$US 1.00 = \$HK 4.626).

Peking-Seminar: Selected Aspects of Financing and Promoting  
May 1979 Industrial Investment Projects

A. UNIDO: Investment related activities

	<u>Aguilar</u>	<u>Becker-Boost</u>
1. Pre-investment activities		X
2. Investment promotion (search for partners)		X
3. Redeployment		X
4. Industrial financing		
5. Technological advisory services	X	
6. Information sources and services offered by UNIDO	X	
7. Consultancy services	X	X



**B. Joint venture agreements****Introduction**

Prospects for and problems with foreign direct investment  
(Becker-Boost, Hansen)

	Aguilar	Becker- Boost	Hansen	Mohr
<b>1. <u>Motivations for the establishment of joint ventures</u></b>				
<b>1.1. <u>Motives for foreign partners (from market economy and planned economy countries)</u></b>		X		
General				
1.1.1. <u>Safeguarding of existing markets</u>		X		
- Import restrictions				
- Favourable cost situation				
- Obligation to purchase locally-made goods				
1.1.2. <u>Opening of new markets</u>		X		
1.1.3. <u>Safeguarding of raw material supply</u>		X		
1.1.4. <u>Shortage and high cost of labour in industrialized countries</u>		X		
1.1.5. <u>Comparative cost and price advantages</u>		X		
- Cost				
- Incentives				
- Price				
- Return on investment				
1.1.6. <u>Possibilities of transferring existing production units to developing countries (redployment)</u>		X		
1.1.7. <u>Spread of risks</u>		X		
<b>1.2. <u>Motives of local partners</u></b>				
1.2.1. <u>Markets (export and local)</u>	X		X	
1.2.2. <u>Know-how: access to appropriate production methods</u>	X			
1.2.3. <u>Management</u>	X			
1.2.4. <u>Foreign exchange financing</u>		X	X	X
1.2.5. <u>Efficient utilization of locally available natural resources</u>			X	
1.2.6. <u>Continuing access to R + D</u>	X			
<b>2. <u>Preconditions for establishing joint ventures in developing countries</u></b>				
2.1. <u>Investment climate</u>		X		
2.2. <u>Political conditions</u>		X		
2.3. <u>Economic conditions and incentives</u>		X		
2.3.1. <u>Stability of the economy and government policies</u>				
2.3.2. <u>Foreign exchange situation and controls, repatriation of capital and profits, import licenses</u>				

- 3 -

	Aguilar	Becker- Boost	Hansen	Mohr
2.3.3. Size of market and purchasing power		X		
2.3.4. Local labour situation				
2.3.5. Employment possibilities for expatriates				
2.3.6. Infrastructure of host country and project requirements				
2.3.7. Other measures for market protection				
2.3.8. Other incentives				
2.3.9. Local facilities for financing and insurance				
3. <u>The Role of foreign partners</u>	X		X	
3.1. Technology transfer				
3.2. Training of operating staff				
3.3. Management (technical, commercial)				
3.4. Product development and adaptation				
4. <u>Role of the host (central or provincial) Government</u>	X	X		
4.1. Establishing production facilities				
4.2. Providing physical infrastructure				
4.3. Providing institutional infrastructure				
4.4. Local cost financing				
5. <u>Financial consideration</u>				
5.1. The role of equity/foreign direct investment				
5.2. Equity/loan (ST, LT) ratio in small and large enterprises				
5.3. Sources of financing joint ventures		X	X	
5.3.1. Multilateral institutions				
5.3.2. Bilateral institutions (tied funds?)				
5.3.3. Industrial firms				
5.3.4. Commercial banks/suppliers and buyers credits (export financing)				X
5.3.5. Capitalization of know-how etc. into equity		X	X	
5.3.6. Special problems with equipment suppliers as joint venture partners				
5.4. Tripartite and quadropartite arrangements				
6. <u>Legal aspects of joint ventures</u>				
6.1. Mutual obligations of partners: investment agreements		X		
6.2. Decision making and control			X	X
6.3. Number and type of agreements needed		X		X
6.4. Arbitration (an international arbitration and arbitration scheme)			X	X
6.5. Consequential loss insurance				

- 4 -

	Aguilar	Becker- Boost	Hansen	Mohr
7. "The birth of a new joint venture" (sample)	X	X	X	X
8. <u>Conclusions and recommendations</u>	X	X	X	X

C. Specific industrial co-operation agreements  
(excluding compensation and buyback)

	<u>Aguilar</u>	<u>Becker-Boost</u>	<u>Mohr</u>
1. Limited time partnerships		X	
2. Leasing of industrial plants		X	
3. Franchising	X		X
4. Subcontracting (horizontal and vertical integration of local plant production with foreign plants)	X		X
5. Export sales and marketing agreements			X
6. Licencing of patents and trade marks/technology licence agreements	X		
7. Non-patented know-how transfer (engineering, marketing, management, training)	X		
8. Regulation on foreign technology (samples)			
9. Outline for model contracts for licencing and technology transfer	X		
10. Samples: real contracts model contract for construction of plants	X		

D. Investment conditions for foreign partners

Introduction: G. Hansen

	<u>Aguilar</u>	<u>Becker-Boost</u>	<u>Hansen</u>	<u>Mohr</u>
1. UNIDO investment information on selected developing countries - a comparative analysis		X		
2. Laws and rules in selected other countries (Yugoslavia, Poland)	X		X	X
3. Legal framework: incentives and disincentives by <u>home</u> and <u>host</u> countries			X	X
4. Bilateral agreements regarding taxation, investment protection etc.			X	
5. Taxation on profits, royalty etc.			X	X
6. Remittance of profits	X		X	
7. Treatment of equity; expropriation/nationalization	X	X		
8. Host government role: implementation of policies and criteria (examples)	X		X	

E. Compensation trade and buyback agreements as a means to finance industrial plants

Introduction: Definition and delineation (Mohr)

	Aladjov	Becker-Boost	Mohr
1. Examples and experiences - an overview	X		X
2. Product suitability and selection (quality, competitiveness, long-term world market adaptation); products which are difficult to trade on world markets	X		X
3. Intermediate products/semi-finished goods (subcontracts)		X	
4. Project evaluation (feasibility study)		X	
5. Pricing: Various formulae for product pricing UNIDO service to give neutral advice	X	X	X
6. Financing schemes: Plant supply Product supply	X	X	
7. Guaranty requirements for lenders; ideas for creating a multilateral guaranty institution		X	X
8. Costs (premium) for risk insurance	X		X
9. Legal aspects, arbitration	X		X
10. Sample contracts (DKH)			X

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\* Mr. Aguilar and Mr. Hansen are not involved in this subject.

F. Summary - Conclusions - Future Work for UNIDO

A question and answer session will be held with the main objective

to

- a) identify additional information needed and requested from UNIDO and other sources and
- b) to develop a programme for technical assistance to be rendered by UNIDO (or other agencies) on the subject matter.

G. Supplement (General information): Industrial investment activity in the world

- on request -

Peking Seminar on Industrial Financing and Investment

Background Information to be Distributed

A. UNIDO: Pre-investment Activities

1. UNIDO Investment Promotion Services: An Assessment of Effectiveness
2. UNIDO Company Roster
3. Manual for the Preparation of Industrial Feasibility Studies, ID/206, 1978
4. Search for Partners, EMF Co-operation Network
5. Directory of Financial Resources, UNIDO

B. Joint Venture Agreements

1. Industrial Joint Venture Agreements in Developing Countries, ID/68, 1971
2. Motivations and Preconditions for the Establishment of Joint Ventures, IOD/89, 1978
3. Joint Industrial Ventures between Local and Foreign Private Investors in Developing Countries, ID/WG. 237/13, 1976
4. IFC Information (incl. press releases)
5. Stock of Direct Private Foreign Investments from 17 DAC Member Countries
6. Export Credits - the Consensus under Strain, R. Leeper, The Banker, 1979)
7. Export Credit Insurance as a Means of Expanding and Diversifying Exports of Manufactures from the Developing Countries, UNCTAD, 1976
8. The Export Credit Financing System in OECD Member Countries, OECD, 1976

C. Specific Industrial Co-operation Agreements  
(excl. compensation and buyback)

1. The Limited-Time Partnership Concept: International Leasing, E. Becker-Boost
2. Industrial Collaboration Agreements, UNCTAD, 1977
3. Licensing, Turn-key and Joint Venture Contracts
4. Sample Contracts regarding the Transfer of Technology
5. The Preparation of a Model Form of Contract Covering the Licensing of Patents and Know-how in the Petrochem. Industry, UNIDO, ID/WG. 291/4



6. Preliminary Draft of the UNIDO Model Form of Cost Reimbursable Contract for the Construction of a Fertilizer Plant, UNIDO, ID/WG. 281/12, plus Technical Annexures for the draft
7. Recent Developments in the Regulation of Foreign Technology in Selected Developing Countries, UNIDO ID/WG. 275/8
8. National Approaches to the Acquisition of Technology, UNIDO, ID/187, 1977
9. The Cost of Technology Transfer in the Petrochemical and Fertilizer Industry, UNIDO, ID/WG. 219/6
10. Mexican Law of Technology Transfer and its Impact on the National Economy, UNIDO, ID/WG. 178/7
11. Basic Elements of International Licensing Agreements Involving Developing Countries, UNIDO, ID/WG. 178/2

D. Investment Conditions for Foreign Partners

1. Draft Convention on the Protection of Foreign Property, OECD, 1967
2. Model Double Taxation Convention on Income and Capital, OECD, 1977
3. Investing in Developing Countries, 4th Revised Edition 1978  
Offprints of DAC Chairman's Report 1978, incl. Chapter VI  
Recent Trends in Financial Resource Flows to Developing Countries  
plus Statistical Annex
4. Investment Conditions in Selected Developing Countries, ICPO

E. Compensation Trade and Buyback agreements as a Means to Finance Industrial Plants

1. Buyback Study, A. Mohr
2. Report on Expert Group Meeting on Buyback Agreements, UNIDO/EX 78, 1979
3. The Feasibility of Repayment of Investment Loans in the Form of Manufactured Exports, ID/WG. 47/7, 1969
4. Review of the Present Stage of Payments between Developing Countries and Socialist Countries of Eastern Europe, UNCTAD TD/B/AC 22/2, 1977
5. Summaries of Replies received from Governments to the Questionnaire addressed to them by the Secretary General of UNCTAD, TD/B/AC 22/3, 1977
6. Payments Arrangements in India's Trade with the Socialist Countries of Eastern Europe, TD/B/AC 22/4, 1977

7. Four Sample Contracts for Sale of Machinery and Licensing
8. Transfer of Resources for Industry: Future World Pattern, E. Becker-Boost
9. Colombia

F. Summary

G. General Background Information

1. The Initiation and Implementation of Industrial Projects in Developing Countries, ID/146, 1975
2. A Survey of Development Co-operation for Changing Development Needs, OECD, 1978
3. Salient Features of Recent Development Experience and Developing Country Participation in the World Economy, OECD, 1978
4. Co-operation for Energy Investment in Developing Countries, OECD, 1979
5. Co-operation for Natural Resources and Industrial Development in Developing Countries (draft), OECD
6. General Conditions Applicable to Loan and Guarantee Agreements, International Bank for Reconstruction and Development (The World Bank), 1974
7. Improving Financial Co-operation with Developing Countries in Longer Term Perspective, OECD 1979
8. External Indebtedness of Developing Countries, OECD, 1979
9. A Factual Survey of the Transfer of Resources to Developing Countries, OECD, 1979
10. Project implementation - time horizon and interlinkage

Ministries and agencies participating in the  
UNIDO Seminar in Peking

- The First Ministry of Machine Building
- The Scientific and Technical Dept.,  
First Ministry of Machine Building
- The State Capital Construction Commission
- The Dept. for External Affairs from  
the Ministry of Agricultural Machine-Building Industry
- The Institute for Foreign Trade
- The Ministry of Textile Industry
- Ministry of Economic Relations with  
Foreign Countries
- The Ministry of Finance
  
- The Ministry of Petroleum Industry
- The Department for External Affairs from  
the Ministry of Petroleum Industry
- The Ministry of Railways
- The Ministry of Coal Industry
- The State Economic Commission
- The Ministry of Light Industry
- The Ministry of Metallurgical Industry
- The Ministry of Chemical Industry
- The Company for Parts Supply of General  
Dept. for Automobile of the First Ministry of  
Machine Building
- The Dept. of Machines for Construction of the  
State Capital Construction Commission
- The General Company for Export of the  
First Ministry of Machine Building

- The Legislative Committee of the Standing Committee of the National People's Congress
- The State Planning Commission
- The Legislative Institute of the Academy of Sciences of China
- The Research Institute of World Economy

Summary of the Proceedings of the UNIDO Seminar on  
Selected Aspects of Financing and Promoting Industrial Investment  
Projects

Group I

About 40 participants

1. Subject: Foreign Direct Investment

Role of Foreign Direct Investment (FDI) in developing countries. Out of \$ 70 billion total external flow 1978, FDI contributed \$ 9 billion. A direct investor wants to play a major role in a foreign plant. "Portfolio" investment was \$ 12 billion; the latter was defined as "investment in equity, with less than 25%", because this may be considered a minimum below which no real influence on enterprise management exists. Portfolio investment is (arbitrarily) defined as investing money (e.g. oil revenues) for profit and/or maintaining value of property.

The stock of FDI is \$ 77 billion (1978) cumulative. Comparative figures were given (total world industrial production \$ 2600 billion; China GNP guess \$ 350-450 billion; industrial production per year \$ 40 billion? total investment "guess" figure for all sectors: \$ 45 - 60 billion p.a.; if FDI for China should be meaningful, an FDI of about \$ 1-2 billion per year should be assumed based on an industrial investment of \$ 8 billion p.a. (?); FDI might contribute 1/3 - 1/2 of the FX requirements in industry (own "wild guess" to challenge Chinese reaction). Compare order of magnitude: \$ 1 billion = 4 fertilizer plants, 2/3 steel plant, 6 cement plants, all of "standard" size.

The Chinese participants did not react to our figures. Drastic increase in FDI in recent years due to offshore banking (Petrodollars, Hong Kong, Central America, Singapore) were discussed.

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Questions and Answers:

How much of the total increase in cumulative stock of FDI happened in countries in Asia? (Hong Kong, India, Indonesia, S. Korea, Malaysia, Philippines, Singapore, Taiwan)

Net Benefits? Employment creation from \$ 1 billion in industrial investment = 2000 jobs; if FDI relates to 49% of equity, then, about 100,000 jobs are created with \$ 1 billion FDI which of course is little for China with an increase in work force of several million people per year.

Export earnings/balance of payment through FDI; foreign management know how and improving local skills; knowledge of world markets; FDI attracts additional loan capital.

Negative factors: external debt (through repatriation of earnings); change in social structure - westernization; may create consumer wishes which are not socially beneficial; if subcontracting is the object of FDI, then, industrialization only superficial (CKD- projects); dependency on experts instead of producing for local needs; bad effect of (wrong) comparison of wages of foreign partner's staff with local staff.

2. Subject: Joint Ventures

Motivation for foreign investor and local sponsor (discussion "as if" between Hansen and Becker-Boost). Main motives for foreign investor - safeguard market (profit from participation replaces profit from exports which may be barred); utilize (exploit?) cheap labour; infrastructure provided by host Government; re-exports under favourable conditions; tax and other incentives.

Motives for Chinese Government/sponsor: import substitution/foreign exchange savings; training of local labour and management in joint enterprises (or in the country of the partner); acquiring specialized know-how in technology, marketing, management; foreign exchange contribution (can be "invisible" if know-how etc. would be capitalized); additional creation of jobs at high level and high labour efficiency; continuous access to product development.

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Questions and Answers:

Can a joint venture be controlled with less than 10% share in equity? (Yes - example - ENI/Montedison; Management power is not directly related to equity participation). We grouped into 4 groups:

- Above 50% in equity - majority, dominating
- 25 - 49% meaningful equity participation, foreign participation in management
- 1 - 25% portfolio investment
- 1 - 10% small participation often offered by equipment suppliers (to facilitate their sales efforts - mostly added to prices of equipment)

Equity participation: Valuation of Chinese inputs versus valuation of foreign inputs. It is assumed that the Chinese input consists of land, buildings, some locally made equipment and labour; foreign input in imported machinery, know-how, management.

Valuation of land and buildings? After extensive discussions, it was agreed that there is a wide range (from \$ 1 to several hundred \$ per square meter) depending on location, infrastructure, etc.

Labour: wages range from Y 40 to Y 120 per month, or an average of \$ 0.30 / hour. There are developing countries with lower wages (Sri Lanka, Korea) and others with higher wages (India, Latin America).

Industrialized countries range between \$ 8 and \$ 12 per hour gross wage ("price" of labour to an enterprise).

During the last plenary meeting, this item was again discussed with the conclusion, that skilled labour in China may be "shadow priced" at about \$ 1.75/hour. (Subproblem: ILO rules for labour; avoiding exploitation). [Question and Answer session 12 May.]

Comparison of Wages, in \$/hour

(Assumptions for explanatory reasons only)

	China actual (skilled worker)	China "projected"	W. Europe
1. Gross Wage (to be "paid" by enterprise)	0.30	1.40 - 2.10	20
2. Degree of "efficiency"		70%	100% (reference point)
3. Effective wage		2.00 - 3.00	20
4. Social security, strikes, holidays, sick and annual leave, corporate taxes etc. related to labor costs	provided by Government	0.56 - 0.84 (40% assumed)	12 (60%)
5. Earnings before income tax	0.30	0.89 - 1.26	8
6. Income taxes	-	-	2.40 (30%)
7. Net pay to worker (average)	0.30	1.05	5.60
8. Monthly take-home pay in US\$	60	200	900

Comparison of major expenditures

Rent	5	15	250
Food	45	70	350
Health care, education, transportation	-	-	50
9. Monthly "BALANCE"	10	115	250



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This wage structure giving a preliminary indication of a possible future wage and income structure for skilled workers in China, concluding that "effective wages" based on a 70% efficiency (mainly due to large overheads) could be assumed at between \$ 2 and \$ 3 per hour. It must be taken for granted that the present low wages cannot be offered to joint venture enterprises since these wages include considerable Government "subsidies" - namely all social expenditures and taxes etc., as mentioned under items 4 and 6.

Valuation of foreign know-how, technology, management:

A way out of the hypothetical valuation of Chinese and foreign inputs may be an agreed sharing at a 51/49 ratio regardless of "actual" values which probably can never be agreed upon unanimously anyway. There was a question - how to avoid over-valuation of foreign inputs.

Sample: We invented the "Tientsin Fertilizer Plant" as an example to discuss joint venture and financial problems.

Investment \$ 200 million (FX 120, LC 80)

Equity 40% = \$ 80 million [ Chinese 40  
Foreign 40

Loan (LT + MT) \$ 120 million

P + L estimate (simplified) in US \$ per ton of urea product for 500,000 tons of urea per year

oil 0.8 x 80 = 72 \$ / t urea (assuming \$ 11/bbl)

labour 500 people 1 (!)

Depreciation 7% p.a. 28

Maintenance 3% p.a. 12

Bags 17

Total manuf. costs 130

Taxes 20

sales price 170

gross profit before taxes \$ 20/t urea

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Return on investment:  $\frac{40 \times 500,000}{200} = 10\%$  (ROI)  
 (before taxes)

Question: What is profit on equity?

Interest on loan = 8% on 120 = 9.6 \$ million p.a.  
 Total profit 20 million p.a.

balance 11.4

Profit on equity =  $\frac{11.4}{80} = \underline{\underline{13\%}}$  p.a.

This profit can be used either for paying dividends, for reinvestment, or for buildup of reserves. Local value added: 72 + 1 + part of depreciation, may be about 60%. Implications of the problems "who fixes prices and cost items" were discussed, as well as the impact of increasing wages etc. The "breakeven point" as a function of plant utilization was discussed.

Questions and Answers:

- Need for a "project work group" including the many ministries and agencies, plus banks, for implementation of a joint venture;
- Who invites for bidding in a joint venture?
- Who prepares and pays for feasibility studies?  
 (pre-investment: UNIDO/UNDP; detailed - foreign and local partner)
- Is international competitive bidding excluded if the foreign partner wants to supply plant and machinery?
- Who evaluates bids? (UNIDO could assist on request)
- Loan capital available from offshore banks in HongKong?
- Who decides about profit distribution and cost structure?  
 (e.g. higher petroleum/naphtha prices could shift profits from the fertilizer company to the Petroleum Refinery)
- What happens with the residual value of fixed assets?
- Who pays for eventual losses in foreign exchange and local currency?

- Why is equity needed? To answer this question, we illustrated the breakeven point case, showing that there is a chance for a 13% profit on equity as well as a risk for an 80% on equity loss; such losses as well as delays in payments from farmers for the fertilizer they receive as against immediate billing from the raw material supplier (in other words, the potential risk) cannot be covered by short term working capital, but needs equity.
- The Chinese can borrow foreign exchange and run any plant by themselves - why joint venture? (foreign partner may help to increase the plant utilization and to achieve better prices, both yielding in higher profits).
- Taxation on profit on equity? Foreign investors would pay taxes in China and in their home country depending on the tax laws.
- Which minimum profit does a foreign investor expect? Problem - appreciation/depreciation of currencies; difference in prevailing interest rates in various currencies (from 1% p.a. for sfr to 12% p.a. for US \$ deposits). Solution: see report on the meeting with Vice Chairman of National Planning Commission. In any case, 12% p.a. on equity is too small an incentive (ANDEAN group law had to be changed to 20%).
- What is the value of non-protected industrial property when it is converted into equity?
- Since the product price for domestic sales is fixed by the Chinese Government, the profit available for reinvestment or distribution is also fixed by the Government. (There was a lengthy discussion)
- Do foreign investors prefer to provide equity or loan? (an industrial enterprise is not a bank): Very vivid discussions on equity, loan, profit took place among the participants themselves.
- What is the impact of new technology on the efficiency of a joint venture? How does labour-saving technology relate to the exploitation of low-wage labour in certain industries, in which labour cost make up for 30% or more of total manufacturing costs e.g. in Europe (shoes, toys, furniture, textiles?)

- What is on the average the contribution of FDI to total industrial investment in developing countries? (10-15%; but "average" figures may be misleading).
- Who pays for the physical infrastructure needed for a joint venture? (Infrastructure should be financed separately from industrial projects - recommendation of the Fertilizer Consultation Meeting).
- Agreements needed for joint ventures? (see Table in Becker-Boost's leasing paper)  
More than 12 agreements may be needed, between foreign partners (industrial firm, plant supplier, export credit guaranty institution, Government, Banks) and Chinese partner (Government, Bank of China, People's Bank, enterprise).

Dr. Mohr and Dr. Hansen explained in detail the types of contracts to be concluded.

3. Subject: Project appraisal and implementation

A special lecture was devoted to the appraisal of investment projects and their implementation. Detailed discussions concentrated on the parallel implementation of the project paper, and the required physical infrastructure and marketing arrangements. The final horizon was given as between 4 and 9 years needed for preparation and implementation of projects including startup until the "product on hand" stage will be reached.

4. Subject: Financing of Joint Ventures

Based on many samples (Nickel Brazil, Silver Peru, Egypt Sugar Beets, Yugoslavian compressors for refrigerators, SAVA Semperit Yugoslavia) mostly taken from a summary on IFC/investments prepared by R. Oestreicher the setting up of financial plans was discussed in some detail. First, the foreign and local currency requirements need to be determined. Then, the equity/loan ratio must be fixed. The financial plan, then, is derived from available sources of funds: multilateral and bilateral official funding, LT commercial bank financing including export credits, and ST/MT bank lending, as well as equity contributions. These sources of funds were explained in detail with special emphasis on "soft term" funds (IDA, KFW, etc.)

From the many examples it was concluded that equity should be about 40% of total financing required, except in expansion projects.

The problem of import duties on equipment was discussed, as well as the meaning of "economic return" as distinct from financial return.

Questions:

- Which taxes are to be deducted from gross profit on equity?  
(Different taxes - corporate and income taxes; different treatment if earnings are re-invested).
- Would any limitation on profit repatriation refer to pre-or after-tax profits?

5. Subject: Foreign Investment Law

Any law issued in China would be based on mutual benefits, namely incentives for foreign investors as well as benefits to China. The Foreign investment regulations in 17 developing countries were presented, based on an ICPO summary table extracted by R. Oestreicher from ICPO's Investment Information. Selected important items were discussed as follows:

General: Most DC (developing countries) welcome foreign investment in principle, either as investments in joint ventures or in existing (state controlled) enterprises. (Syria e.g.) Question: Are there any rules governing foreign investment in Western countries? There are restrictions in France, Denmark, UK and other countries; the Antitrust Laws prevent certain investments. Other groups of DC's were mentioned which restrict FDI, or have a negative attitude; laws in CMEA countries were also mentioned.

Ownership: 5 groups of countries were evaluated - 100% foreign ownership permitted; 50-100%; below 49%; minimum participation requested (Syria, Vietnam); and countries with special rules for EPZ.

Nationalization: 4 groups of DC's right reserved to nationalize if public necessity is established; nationalization with adequate compensation; nationalization not possible; no legislation exists.

Approval to establish joint ventures: 4 groups of DC - approval required; approval required in special cases; registration needed; application according to specific criteria.

Repatriation of earnings: Some DC's impose no restrictions, many countries restrict the return on investment which may be repatriated.

Questions: - repatriation at which exchange rate?

- Practical barriers - if foreign exchange is not available for example?
- Ownership limit is often reduced with increased level of development of a country; foreign partners should be complementary to local resources.
- Benefits of export processing zones? (FX income, training of workers, processing of local resources). Disadvantages? (reduced supplies to local customers, possible exploitation of local labour.)



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The negotiation covered: Technology, pricing for products, guarantees from foreign and local partners, financing, organization, motivation for joint venture, legal questions, and marketing and training of staff.



Group II

Group 2 dealt with the following subjects:

A. Aspects related to Technology Transfer

- licencing of patents and trade marks
- technology agreements
- export sales and marketing agreements
- know-how transfer
- regulation on imports of foreign technology

B. Legal aspects

C. Trade aspects

- Compensation trade and buyback agreements:  
(pricing for plant and products; financing of plant and services; guaranty requirements; risk insurance; payments arrangements based on East-West trade experience)
- Arbitration

The following comments refer to selected sessions only; a more comprehensive report may be prepared by the main speakers of this group, Mr. Aguilar and Mr. Mohr, at a later date.

A. Selected questions and answers on Technology Transfer

1. Medium and small scale firms from Western countries may be better partners for Chinese enterprises, than large multinationals, since their processes and technologies may be easier to adapt to Chinese conditions.
2. Exchange of information with foreign companies is covered by secrecy agreements: exclusivity for patents and know how for countries and/or regions. What happens with improvements made by Chinese partners, in products or processes? How to quantify such improvements (rules discussed) Who owns such improvements?

3. Foreign companies should be compelled to use locally made plant and equipment. Problem: performance guarantees (lengthy discussion) Design should be done by technology supplier, except for standard equipment such as motors, vessels, etc.
4. Problem with restrictions: developing countries do not wish to accept restrictions for exports of products made under licensing agreements; initially, inspite of the great demand in China, exports of many manufactured goods are needed to pay for plant and services. (Re-exportation into countries for which no sales or secrecy agreements exist!)
5. The problem of choosing the "appropriate" capacity for a production plant was illustrated with a Japanese example (polyethylene); market buildup by permitting imports of the product to be manufactured, must be considered.
6. Impact of the Antitrust Law and the Treaty of Rome (Article 85/86 on free exchange of goods) on business practices in USA and Europe.
7. Conflicts between national patent and technology laws and supra-national laws are possible (case: Deutsche Grammophon, EEC decision).
8. How to avoid an over-valuation of technology - how to buy technology at low cost, and to optimize the use of such technology.
9. UNIDO assistance to build up local technological capability.
10. Will the initial lump sum fee for know how be gradually reduced, or replaced by running royalties?
11. Discussion of "sliding royalty calculation formula".
12. Problems with accounting: would a Chinese enterprise open the books to report local and foreign sales? Or would royalty have to be calculated based on the full plant capacity?

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13. Three different patent fees were discussed: right to manufacture, right to sell, and right to use a product.

(Problems: Paris Convention, Article 5 - patents filed in one member country can be used in another).

14. Penalty clauses in licence contracts is how to calculate penalties: liquidated damages, consequential losses, etc.; problem of limitation of penalty claims to relatively small sums.

15. Royalty payments - initial lump sum, or in installments, or related to production level, or a combination of both or to raw material consumption; other method: 15% of profit can be used as a basis for royalty calculation.

16. Separate fees for technical (customer's) services.

17. Any licensor should get a part of the benefit derived from using his technology; this principle may be acceptable to Chinese partners as well.

18. Rational: what does a foreign expect from (or why does he need) royalty payments?

- To recover license fees paid to third parties - to keep competitors at "some distance" - to pay for customer service (advise on application of products) - to use trade marks. All these are "real" cost items. The problem is always how to find a fee which is "just and equitable" for both partners.

19. Level of royalties - 1-5% of sales price (depending on industry, exclusivity of contract, competitive position, etc.)

20. Problem with expansion projects - e.g. if capacity is expanded by adding shifts.

21. How to calculate basic product price in China for local and export markets. UNIDO advice may be welcome on a case-by-case basis.

B. Legal Aspects of Contracts, Technology, Joint Ventures

The following aspects were discussed: liquidated damages (quantity and quality of products), consumption of raw materials and utilities, delay in startup. A special case was mentioned: "loss of consequential profits" resulting also from not keeping supply obligations to clients, higher costs/lower warnings possibly during the whole life time of a project (e.g. the hypothetical "Tientsin Fertilizer Plant" which may have losses up to \$ 20 or more million per year, or several hundred million dollars during the lifetime - much more than the total investment costs amount to!) Contractors' responsibility is negligible.

Possibly, for multilateral schemes for insuring such losses. US law versus European law (suppliers fully responsible if not otherwise agreed). Minimum obligation: to repair the direct damage - which is grossly insufficient. Penalties are due according to West European law even if no damage occurred!

Export Risk Insurance

Subjects: premium (why could Government of exporting countries not pay the premium instead of the supplier = client?) - 3.5% on value of export contract. Retained (5-10%)

Arbitration

4 possibilities - in supplier country; in China; in Switzerland; international agency (UNIDO? ICC Paris)

C. Buyback and Compensation Agreements

The presentation was mainly based on 2 papers prepared by Dr. A. Mohr and Dr. P. Aladjov. The comprehensive Mohr - paper which was prepared for the Expert Group Meeting on Financing can be made available on request. The Aladjov-Paper is being attached as Annex .

The discussion on these items was supplemented by a special lecture held by Mr. Aladjov on May 15.

Since the participants had little knowledge about the different Western payment modalities, the conventional payment system was also discussed. Payment modalities were then explained in case there is no cash in free foreign exchange currencies available, or if there are no credits available, or credits unwanted for whatever reasons. Compensation transactions were recited in great detail and with several concrete examples.

For each form and different proceedings concerning compensation transactions, graphic displays of figures were presented on the black board.

A great deal of time was dedicated to parallel transactions: versatility and flexibility is needed in this kind of transactions. All details were discussed on hand of examples. This type of transaction is practised not only to save free currency but also to secure exports from socialist (COMECON) and other countries.

The presentation on buyback transactions met the special interest of the participants. On hand of the many questions asked, this type of transaction seems to be favoured. The questions concentrated on:

Repayment of "credit"; price fixing, preparation of technical documentation, banking procedures, guarantees/ securities, etc.

The development and transaction of a buyback business was described: Basic concept and planning; plant supply and erection; production; financing and guarantees; interest payment; cost of the deal; banking procedures; contract settlement; legal aspects; role of "consultor" and trader.

All these points raised many questions which caused a great deal of discussions among the participants themselves. Questions like "how is the raw material distribution in the world? were also raised in the context of buyback deals with minerals, etc.

Although, all subjects discussed were very interesting to the participants, it was all too new, and the basic idea of such transaction is not yet very familiar to the participants.

CONDENSED VERSION

On the last day, according to the initially agreed schedule and work programme, both groups attended a condensed version of the contents of the seminar topics presented to the other groups.

Mr. Becker-Boost and Mr. Hansen lectured at Group 2, Mr. Aguilar, Mr. Mohr and Mr. Aladjov at Group 1. Lecturing was in the morning and in the afternoon, there was a "plenary final meeting" with most of the about 70 participants, providing opportunity for more questions; more than 12 questions were raised on this occasion, which were answered following the subject matters:

1. Information sources on world market prices? (Bids from competitors; London commodity market; World Bank tables; list prices for many capital goods; magazines and newspapers (ECN; UNIDO))
2. Maximum level for local wages? (see at another part of this report)
3. What is the appropriate portion of manufactured products to be brought back? (Heavy equipment: 40%; light industry: up to 100%; average: 20-40%)
4. How are differences considered between local and export prices in buyback deals?  
Reasons of model market price fluctuations? (exports at marginal cost; need to increase exports; over/under supply, etc.; Government intervention from East and West, etc.)
5. Price fixing for buyback products?
6. Difference between buyback and compensation deals?
7. Costs for licenses and trade marks: are they parallel or consecutive? Know-how licence is more than 80% of all DC/IC transactions)
8. What happens after a patent becomes outdated? (After 18 years, e.g. existence of "storage" patents).

9. Joint ventures: difference between "equity" and "contractual" joint ventures - payout period - which system is better for China?
10. Comparative figures for construction (building) costs in Europe? (land - \$ 0.10 - 5 per m<sup>2</sup>, factory buildings 50 - 200 per m<sup>2</sup>; housing \$ 500 - 1000 per m<sup>2</sup>)
11. Types of depreciation: straight line; accelerated? (Assuming 15 years straight line - difference between technical obsolescence or depreciation, and tax law amortisation rates)
12. Situation in Yugoslav foreign investments? (Foreign investors can invest in Yugoslav companies in order to attain mutual business goals, and sharing risks and income"); 125 joint ventures with foreign partners up to now !)

#### FINAL SPEECHES

The Seminar was concluded with remarks by all five Seminar leaders, and closed with a speech of high appreciation given by Mr. Chang (Director, First Ministry). We thanked the organizers and the interpreters.





Visit to No. 2 Machine Tool Factory in Peking

On Sunday, 13 May, the "core" of the UNIDO mission visited a factory to produce high precision machine tools. This factory operates under the First Ministry of Machine Building Industry. Production is about 1000 units per year with about 24 different types, mainly drilling, shaft boring, grinding, gear boxes, and planing machines. The factory has 9 production workshops and 2 auxiliary shops. The plant runs 3 shifts a day including Sundays. Out of a total workforce of 3800 people, 800 are considered "management" (over 20%!) including 300 engineers, quality control staff etc. A large portion of the staff is engaged in social welfare including health care, Kindergarten, university, etc. 40% of the staff are women, including the Head of the plant, Madame Lu, who received us together with several senior staff members.

The factory gives the impression of a well maintained plant, although buildings and equipment need modernization. For example, the air conditioned room for producing high precision crank shafts, appears provisionally equipped. There was one modern planing machine with numerical control.

Training of staff is done under a special Education Department; some workers study outside the working hours, at a "factory university", which gives them the chance to graduate as an engineer after three years; so far, 40 people have been graduated, especially in machinery design. The second course comprises of 70 worker-students.

The management said they need foreign assistance from companies working in the same field of precision machine making, preferably from Switzerland and the USA. The Head of the plant said, management needs improvement and therefore, training in management techniques is of utmost importance. A special request was made for modern sophisticated testing equipment however without detailing such requests.

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Since none of the mission members happened to be a machine tool specialist, we agreed to the following procedure:

- UNIDO would send a specialist to this factory to identify in detail the need for assistance (in software and hardware);
- training through experts coming to the factory and/or sending technical people from the factory abroad, would be organized;
- UNIDO would assist in searching for suitable joint venture partners, subcontracts, etc.

This procedure, however, is subject to a formal request channelled through the Ministry for Economic Co-operation.

Shanghai Machine Tools Factory (16 May 1979)

We were received by the Vice Engineer and 3 other senior staff members.

1. Organization and Staffing

The factory reports to the "Shanghai bureau for machine building and electrical equipment", which reports to the First Ministry for Machinebuilding; connexions with the Municipality of Shanghai seem to be marginal. The "Bureau" supervises 400 factories with about 300,000 workers; it is responsible for fulfilling the targets of the Plan. It can propose new productions within the limits of the Plan, but all investment and other major decisions have to be approved or will be taken, by the First Ministry.

The factory has a total staff of about 6000 people; breakdown:

Production workers	4,400
engineers	100
technicians	500
students (at famous factory university)	140
management incl. planning and administration	900
social welfare workers etc.	?

2. Production

The factory produces 2000 grinding machines per year, mainly cylinder grinders, surface grinders, gear grinding and crank shaft grinding machines (for automobile engines), including double desk grinders. Every year, 50 - 60 different types have to be produced due to changing requests. A Forgery and foundry are also part of the plant.

- 2 -

A small plant existed before the liberation in 1949, but most buildings and equipment have been installed after that time. 400,000 m<sup>2</sup> of area are used. The flow of work seems to be well organized. The plant and each machine are well maintained and overall and detailed impression are better than in No. 2 Machine Tool Factory at Peking; the workers seem to be motivated and concentrated on their job which in some parts of the production requires high skills (production control, high precision polishing and grinding etc.) \*)

The company has its own R + D facilities; we observed a 3-axis measuring/control machine just under development. Such developments the management said, are undertaken without outside help except for photographic material as it is available on foreign prospectus, and for books.

Most of the tools and equipment needed to manufacture the grinding machines, are made in the factory, except for a few older parts (supplied by GDR), or specialized machines (supplied by MAAG, Switzerland), and accessories for numerical controlled machines.

### 3. Profit and loss considerations

For the first time, we had the opportunity in a frank and open discussion, to analyze the price/cost structure of such a company. Prices are calculated according to the "capitalistic" scheme: cost plus taxes plus profit. The Central Government approves prices for domestic market (and therefore, profits). Export prices depend, of course, on the market situation; the company is not affected by any changes since the State Export Organization is handling such sales, (and credits domestic prices for all sales). Exports are about 10% of total sales.

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\*) The reason for the low labour efficiency (\$ 8000 per m/y) cannot be seen from such a visit.

- 3 -

The price/cost ratio was given as follows:

sales price	=	100% (ex factory)
manufacturing cost	=	63% (1978 average for all machines produced)
tax	=	5% (comprehensive tax collected by the Shanghai municipality)
profit	=	32% (!)

Sales expenditures are not considered. Based on questions and answers and own estimates, the cost structure is approximately as follows:

Annual gross sales value Y 50 million (ex factory)

63% cost = Total 31.5 Y million per year

Labour cost = 4.0 (a)

Material = 4.0 (b)

5-6% Depreciation 1.5 (c)

Overhead = 1.5 (d)

spareparts/  
maintenance (4.2) 1.0

utilities and  
other costs 19.5 (?)

Total 31.5 Y million p.y.

1 Yuan = about \$ US 0.65

(a) 4,400 director labour x 900 Y/year = 3.96 Y million

(b) labour: material cost ratio given as 1:1

(c) Present net value of fixed assets was given as Y 25 million

(d) Assuming wages for 1600 people = Y 1.44 million

Labour cost, therefore, are about 8% of sales value, or 25% of total manufacturing cost. The labour efficiency (productivity) is low even for a labour intensive branch like precision machine tool making, namely \$ 8,000 per year and (direct) worker. Wages: minimum 40-50 Y/month maximum 123, average 75. The cost breakdown, however, does not give a satisfactory explanation: "other cost" calculated as the balance between total cost and itemized cost estimate, amounts to Y 20 million per year, or about 60% of total costs, for which no explanation can

be given yet; utilities can probably not count for more than a few million Y/year. Social costs ("university" etc.) may absorb a large amount of this item.

The factory, however, reportedly maintains cost control for each type of machine produced; costs are calculated on a monthly basis.

The taxes (5% on sales) relate to the machine building industry; other branches may have other tax levels.

New products are tax-free in the first year of production. The central government receives the gross profit of 32% (!) on sales, but returns part of this to the factory, as an incentive to workers (up to 10% of salary) and for new investments. Otherwise, this "profit" would be many times higher than in comparable factories in market economy countries (which operate on a pre-tax profit of 6-10% on sales), and outrageous when it is based on "equity".

If we assume fixed assets at Y 25 million  
+ working capital at Y 17 million (4 months of sales value?)  
= total capital of Y 42 million.

Assumed hypothetical "equity" 40% = about Y 17 million;  
gross profit on equity =  $\frac{16}{17}$  = about 100% (!); the  
assumed value of fixed assets seems to be too low  
compared to the sales value: a figure of Y 40 million  
appears more appropriate.

#### 4. Other remarks

Questions regarding foreign participation were only cautiously answered; this is a new topic which is under study. This factory would like to get into a "co-operation" with a technologically advanced company in the same line of products. The Vice Director of the Bureau Mr. Wu Sheng on occasion of a dinner discussion, also did not have any specific proposals or ideas regarding foreign co-operation, but was rather reluctant, and mentioned that "there were other forms of co-operation: joint ventures" without saying which form he had in mind.

#### Visit to the Industrial Exhibition, Shanghai

On May 16, the "core" members of the UNIDO Mission visited the Shanghai Industrial Exhibition, arranged by the Shanghai "Bureau" (which is the provincial "subsidiary" of the First Ministry for Machine Building Industry). We were received and guided by the Director of the Exhibition, together with Mr. Tien.

The Shanghai Industrial Exhibition is designed with a view to exchanging technical experiences, promoting the development of production and presenting a general picture of Shanghai's industry.

It has halls for metallurgy, machine-building and electrical machinery, ship-building, chemical industry, metres and instruments and tele-communication equipment, light industry, textile industry, and arts and handicrafts. It covers a floor space of more than 10,000 square meters, with more than 4,000 items on display.

Among the exhibits, some of which being models, the following were more impressive:

- Numerical controlled machine tools, large-sized thread grinding machine, 300,000 kw, turbo-generator unit with inner water-cooled stator and rotor, 630-ton press for metal powder products, 32-ton tip lorry (400 hp) for mines, agricultural machinery, 10,000-ton freighter, 12,000 hp diesel engines, petroleum exploration ships, and vessels for special purposes including a Hoovercraft and a hydrofoil, passenger vessels for 1200 people and 400 t freight, a 25,000 t container ship.
- Low-alloy steels, high temperature alloys, precision alloys, rare-earth metals, raw materials for transistors and various kinds of irregular shaped steel products and tubes;
- Electronic computers, test metres, automatic metres, radios and TV communication equipment, medical appliances and new type electronic elements of different descriptions;

- Various kinds of petroleum products extracted from crude oil, petro-chemical products, medicines based on an integration of Chinese and western pharmacology, antibiotics as well as high efficient insecticides of low toxicity;
- Many kinds of wrist watches, cameras, sewing machines, bicycles as well as cotton, silk and woollen fabrics;
- Elaborate ivory and jade carving along with woollen needle-point tapestry;
- In addition, the Exhibition recommends the new achievements in connexion with acupuncture anaesthesia and rejoining of severed limbs.

With the rapid development of Shanghai's industry, new products are daily on the increase; accordingly the exhibits are changed and supplemented from time to time.

Among the exhibits mentioned above, we were impressed by some conventional equipment as developed by the Chinese machine industry, such as a jersey and jacquard knitting machine, a circular knitting Machine, air-jet looms for towel production, etc. Two models of automobiles are exhibited: a 90 hp passenger car (production rate: 2000-3000 pieces per year). a 95 hp/25 seat bus, a digital computer with 500,000 bits/s and 32,000 storage capacity; a laser scalpell.

The Shanghai Exhibition offered a good opportunity to collect some information on product prices: (1 Y = US \$ 0.67)

- passenger car: 20,000 Y domestic price
- Color TV set: 2,000 Y
- Camera (square old "Rollei" type) 100 Y
- Writswatch with automatic calendar: 180 Y
- Bicycle: 170 Y (3 gear: over 200 Y)



UNIDO Mission to the P.R. of China, 3 - 17 May 1979:  
Co-operation between China and UNIDO - Technical  
Assistance Projects

The main purpose of our mission to China, based on my proposal after the Davos Symposium, was to hold a 9-day Seminar on the Regulation and Promotion of Foreign Investment, Compensation and Buyback agreements to finance industrial plants, and on Technology Transfer. This Seminar was attended by over 70 participants from more than 20 Ministries and Government Agencies.

As a "byproduct" of this mission, however, we developed and discussed a list of possible projects for Technical Assistance to the Chinese industry which I attach. This list may serve as a basis for more detailed discussions on technical assistance during a special mission which I understand is under consideration.

I herewith also propose to have a special session of the Programming Committee dealing with the attached list of project concepts/ideas.

The Chinese officials - under the direction of Mr. Wong from the Ministry for Economic Co-operation with Foreign Countries (6th Department) and Mr. Chen, Director of the Bureau of Foreign Affairs of the First Ministry for Machine Building Industry - requested, at the beginning of the Seminar, a brief summary of the technical assistance which UNIDO could render with special emphasis on investment related matters. During this "improptur", I gave in an afternoon-session on 4 May, an outline of UNIDO's work, assisted by Mr. Aguilar. Possible technical assistance was arbitrarily grouped under the following 15 headings:

- 2 -

- 1 - Industrial Planning
- 2 - Institutional Infrastructure
- 3 - Feasibility Studies (The UNIDO Manual was presented)
- 4 - Management of factories
- 5 - Technical assistance to industrial plants by branch, especially: chemicals (incl. fertilizers, petrochemicals and pharmaceuticals), engineering industry, agro-based industry, iron and steel and metallurgical industries.
- 6 - Industrial fairs (organizing fairs) especially for export goods
- 7 - Developing of a "bankable" format of investment project presentations for foreign co-operation
- 8 - Search for co-operation partners (company roster, Investment Promotion Services, Investment Promotion Meetings, etc.
- 9 - Offering redeployment and subcontracting opportunities from industrialized countries
- 10 - Assistance in locating foreign exchange sources for industrial financing
- 11 - Economic/technical co-operation among developing countries and information on their investment policies (new UNIDO Service)
- 12 - Training for Investment Promotion Officers in our four Investment Promotion Offices
- 13 - Advice on buyback and compensation deals to finance industrial plants
- 14 - Technological Advisory Service
- 15 - Industrial Information

Items 1 - 6 and 12 include various forms of training which seems to receive high priority in China.

During a question-and-answer session, several participants asked for details. In this and all subsequent discussions, reference was made to the above given list and the respective numbers.

Questions were raised such as:

- Which assistance is given and how, in the field of Planning? (need for parallel planning of manufacturing and infrastructure, for instance)
- What means Institutional Infrastructure/ (EPZ, Centers for product adaptation, investment promotion agencies, industrial research, institutes for metrology, fairs, training for development bankers, rural industrialization, etc.)
- How is technical assistance under item 5 being implemented? (Inplant training, pilot plants supply, providing experts, e.g. for repair and maintenance, quality control, computer application)

Hoping that financing could be secured (see below), we encouraged participants to propose to the mission requests for such assistance. We also discussed possibilities for technical assistance especially with the Enterprise Management Association (EMA).

On 14 May, we had a special meeting, at the end of the Seminar, with all officials involved to discuss future co-operation between China and UNIDO, on which occasion the two leading officials (Mr. Wong and Mr. Chen) expressed their thanks and congratulations to the "great success" of the Seminar; they expressed the hope that future assistance would be given at a "similar high level of expertise". On this occasion, the question of financing the technical assistance was discussed in some detail. We discussed three sources of external funding:

- (a) UNIDF
- (b) UNDP
- (c) A revolving Fund

- (a) UNIDF. Question: How much money could China expect from UNIDF within the next 2-3 years?

I explained the "rules of the game" of UNIDF - although at least the Ministry for Economic Co-operation (as the channel for China's contribution to UNIDF) is aware of those rules. The above question could not be answered, I explained, since we neither know the future total pledges to UNIDF - not to speak about the problems with special purpose contributions - nor do we have a country allocation comparable to the IPP. As a rough indication of the possibilities, I mentioned that there would probably be room for a number of technical assistance projects for China, especially if special purpose contributions could be mobilized. A tentative estimate of the costs for projects concepts will be prepared shortly for discussion in a proposed special meeting of the Programming Committee. There would be, in a first round at least 20 "eligible" projects for UNIDF.

- (b) UNDP: Mr. Bradford Morse is planned to visit China in July 1979. We advised the Chinese representatives to present our UNIDO project list - if possible after the proposed UNIDO special programming mission will have visited China - to Mr. Morse in order to indicate priority needs for the industrial sector, and to prove the need for more funds.

Out of the \$ 15 million allocation for three years (!) only \$ 900,000 were reserved for specific industrial assistance, but the Executing Agency was not yet decided. The participants of the Seminar expressed their dissatisfaction about the fact that no money was left for industry. We made it clear that such decisions were outside UNIDO's control. More complex methods such as SIS and multi-"bi" financing, have not been discussed on this occasion.

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(c) Revolving Fund

I have proposed to consider a "Revolving Fund" which would be supplemented, after an initial (reimbursable) contribution for instance from UNIDF, from a "surcharge" on all equipment and plant import contracts including buyback and compensation deals. For example, 1% of the value of such contracts (in foreign exchange) would have to be paid by the foreign supplier - or the Government of such exporters as a means of export support/subsidy - into a "Chinese Industrial Development Fund". Our counterparts seem to be very interested in such a proposal, assuming that it would not be a hidden increment on the price of goods and services from foreign suppliers. They will study this proposal.

Costs of Technical Assistance

We discussed the cost for the three common types of assistance.

Experts: UNIDO does have, in selected fields, very good experts but the time such experts could be made available to China, is limited due to staff and budget constraints. We would however, consider similar seminars to be held under UNIDO auspices. Therefore, outside experts - either on a personal basis, or from consulting firms - need to be hired. Fees are usually in foreign exchange, but per diem and travel (on Chinese Airlines) could be partly paid for in Chinese currency. The sometimes high fees - exceeding the standard rates as used by UNDP - cannot be afforded by UNIDO as Dr. Khan had already explained to the Chinese delegation to Davos.

There seems to be 4 ways out of the dilemma, assuming that the providing lower level, cheaper experts does not seem an acceptable solution;

- in exceptional cases, we find retired executives who are available at nominal fees,
- China contributes to the cost of experts by "topping" all costs over and above the maximum which UNIDO could pay (from the above mentioned Fund, e.g. or from the National Economic Commission via IFA (?))

- mixed arrangements (with bilateral or other "donors")
- subcontracting to consulting firms, although this is in many cases more expensive than the hiring of experts as needed by China.

Training: Expected to be financed "by UNIDO". We gave them a cost idea - between \$ 30,000 and \$ 60,000 for an average in-plant-training course. Bilateral assistance was not discussed. Ways to reduce costs of inplant group training courses should be sought. However, there may be a cost increase if interpreters need to be added to each course.

Equipment: We explained that in many technical assistance projects, there is an equipment component sometimes of considerable magnitude. (I mentioned the Cuba pharmaceutical pilot plant) If such equipment could be provided from countries with non-convertible currencies (e.g. India) to UNIDF, there might be a possibility of financing such equipment. Considering the apparently high level of Chinese production quality, such hardware, however, would probably be acquired from countries with freely convertible currency, which on the other side may be special purpose contributors to UNIDF (UK, FRG).

<u>Cost samples:</u>	<u>in US \$'000 equivalent:</u>	
	<u>Chinese Currency</u>	<u>Foreign Exchange</u>
One Seminar	7	20
One in plant group training	20 (travel)	35
Experts (1 m/m)	4	6 - 10

Conclusions: Mr. Wong and Mr. Chen (Dir. First Ministry) both proposed to start immediately with smaller T.A. projects to intensify the co-operation between China and UNIDO. To this end, a UNIDO team should come to China (or, a Chinese team could come to Vienna), to discuss in detail the projects annexed to this memo. The First Ministry for Machine Building, as well as other ministries wished to establish direct contacts with UNIDO (e.g. with Mr. Agalar and myself) - but I referred this

question repeatedly to Mr. Meng of the 6th Department (Ministry for Economic Co-operation with Foreign Countries) - through which all UNIDO - China contacts should be channelled.

Vice Minister Wei, Ministry for Economic Co-operation, referred to Dr. Khan's visit in 1976 and stated that the co-operation between China and UNIDO had just begun with our Seminar, and that such co-operation has a "bright future"; he also referred to the visit of Mr. Morse (UNDP) in July this year, and stressed the need for UNIDO to assist in giving better "economic management" to Chinese industry, since this is considered backward. (See separate report on this meeting).

Mr. Chang Yen Ling, General Secretary of the Enterprise Management Association of China (EMA), at a meeting on 10 May (see separate report) emphasized the need for training in industrial management, in order to bring existing capacity which is insufficiently utilized, to a higher level and output per worker.

It is interesting to note that the EMA is funded by the National Economic Commission (one of the highest bodies in China) which may be of interest as a supplementary source of funds for high level (high cost) experts.

UNIDO's technical assistance seems to be limited in terms of volume, only with regard to constraints in funding and to language barriers.

List of Project Proposals

The following technical assistance projects have been listed at a joint meeting with representatives from the Ministry for Economic Co-operation with Foreign Countries and from other Ministries in order to initiate the selection of priority projects and to estimate the cost of a possible Technical Assistance programme in the field of industry for the P.R. of China. Projects marked with an (\*) were put forward by the UNIDO mission. Several project ideas were developed in a meeting with the "Enterprise Management Association of China" (EMA).

Projects No. 1-16, 20, 26 and 33 have been tentatively marked "urgent" by our Chinese counterparts and should receive priority.

The 34 proposals listed below for technical assistance to the Chinese industry, will be supplemented by a few more requests to be transmitted to UNIDO through the Ministry for Economic Co-operation with Foreign Countries (Mr. Wong); projects No. 32 and 33 were added after the mission's departure from Peking; Proj. No. 34 was formerly numbered as 23 (double counting).

The projects could be grouped into 6 groups:

- A - Training
- B - Technology Transfer and Information
- C - Technical assistance to factories
- D - Joint Ventures and Investment Promotion
- E - Compensation and buyback deals
- F - Other



Industrial Branch on SubjectAssistance required\* (1) Thermal power station (300 MW)

- c) Advice in the acquiring of technology and engineering matters from foreign countries
- b) Assistance in financial plan and selection of financial sources

\* (2) Instruments Manufacturing

- a) to get advice on technology offered from various foreign producers of instruments
- b) To get assistance in a possible joint venture contract

[Remark: Mr. Aguilar had detailed discussions on this project in Peking.]

\* (3) Insulated Electrocarbon Brushes

Advice on possibilities to export these products by means of buyback or compensation trade arrangements against imports of foreign equipment needed to manufacture the product.

\* (4) Machine tool manufacturing

Based on the mission's visit to Machine Tool Factory No. 2., the need for assistance was assessed to

- a) train managers of the factory
- b) train specialized skilled workers in foreign machine tool factories
- c) search for joint venture partners for precision tool machine manufacturing in existing plant
- d) supply of modern testing equipment

\* (5) Regulations and law for foreign (direct) investment

(discussions with Dr. Mohr and Dr. Hansen started in Peking already; basic view-points were exchanged between the Vice-Chairman of the State Planning Commission and the UNIDO mission)

- a) Experts to draft regulations and prepare for the Law on Foreign Investment, which is expected to be issued "shortly";
- b) Assistance to establish a specialized "Office for Foreign Investment";
- c) Special advice on profit sharing, repatriation of earnings and joint venture organizational structure

(6) Transfer of Technology  
(discussions started by Mr. Aguilar already)

- a) Experts to draft Law and Regulations on transfer of foreign technology to China.
- b) Setting up of a Central (National) Office for Technology Transfer, or of specialized technology transfer units in selected ministries

[Remarks: Project proposals (5) and (6) could be combined]

\* (7) Electrical machinery building

(8) Environmental protection

\* (9) Ball bearings manufacturing

\* (10) Industrial and factory management

Training of design engineers for electrical machinery (e.g. electrical motors/and equipment  
Training of design engineers in the field of equipment to prevent pollution

Training of design engineers for manufacture of ball bearings.

- a) Training of factory managers (especially in the machine tools industry)
- b) Setting up of regional and sectoral training centers (EMA proposal)
- c) Sending experts to China for lecturing management subjects (EMA proposal: 10-20 experts p.a.)
- d) Training of Chinese managers in USA and Europe

[Remarks: Projects (7)(3)(2) and partly (10) would consist of in-plant group training courses (10-20 people each), fellowships, and experts advising factory and offices in China.]

- \* (11) Silicones manufacturing technology  
2 people trained in Japan (six months?).  
Proposed companies: Shin Etsu Chemical Industry Co. Ltd., Tokyo Shibaura Electric Co. Ltd., Toray Silicone Co. Ltd.
- \* (12) The structural design and manufacturing technology for aviation tires  
2 people trained in USA (six months?);  
proposed companies: The Firestone Tire and Rubber Company; The General Tire and Rubber Company; The Goodyear Tire and Rubber Company; The B.F. Goodrich Inc. Uniroyal Company
- \* (13) The synthesis and application of plastic additives  
2 people trained in Britain (six months?);  
proposed companies: ICI-Imperial Chemical Industries; Shell Chemicals U.K.  
FRG: Bayer ; Switzerland: Ciba-Geigy
- \* (14) Anticorrosive technology for chemical industry  
2 people trained in Britain (six months?);  
at Manchester University; and USA:  
The Anticorrosive Center, Department of Metallurgy, Ohio State University.
- (15) Seminars  
Seminars should be held - similar to the one held from 4-15 May - on the same and other topics in the field of industry. Some seminars would be held in Peking, others in provincial capitals; management topics should be dealt with, as well as problems with export/import contracts for industrial plant and equipment supply.

\* (16) Technical assistance to selected branches, especially to the machine building industry

In addition to the projects mentioned under 1-4 and 7, 9 and 11-15, the FMA proposed to select other factories for testing and developing technology, which includes the supply of pilot plants, plant simulators, testing equipment and other items. Requests:

- a) Assistance in the design of automatic testing equipment;
- b) studying the conservation of materials used in the machine building industry, especially of spare parts which now show an excessive loss; co-operation with research institutes for training is required.

(17) Technical assistance in the field of transfer of technology

T.A. would be requested on the regulation and promotion of technology transfer;

- a) experts to assist in the setting up of a National Office for Transfer of Technology, including the drafting of relevant laws and regulations
- b) experts to assist in China, on a case by case request, the evaluation of specific technology contracts with regard to technical, economical, financial and legal aspects.

(18) Patent search

It is proposed, in co-operation with WIPO, to continuously follow in selected industrial branches all patents registered with the European Patent Office (Munich), in order to keep the Chinese authorities abreast of most recent developments.

(19) Compensation trade and buyback deals for financing industrial plants

An expert should examine alternative ways for China to conduct compensation trade, buyback financing, parallel trade, and combinations of these, with the objective of financing industrial plants. Such relations should be investigated for partnerships with industrialized as well as with developing countries.

(20) same as (19)

UNIDO Service to advise China on actual real compensation/buyback contracts for industrial financing; case-to-case assistance would include advice on technical, financial, market matters regarding Chinese products suitable for such industrial projects financing.

(21) Compensation trade and buyback deals for industrial project financing

A Meeting should be organized in Vienna - the Chinese officials proposed September 1979 - to bring together a group of about 10 Chinese officials dealing with compensation/buyback methods, with selected international "traders" and inviting some from socialist countries with relevant experience (Romania, Yugoslavia) to discuss aspects and problems which may emerge from large-scale applications in China of this method of financing of industrial plant and equipment.

(22) Export promotion

- a) Training in marketing of industrial products to be exported to Europe, USA and Japan
- b) Technical assistance to set up an Office (Institute) for design of export goods.

(23) Coordinating and organizing visits of foreign industrialists to China

Develop and implement on a trial basis through UNIDO a system for co-ordinating visits of foreign industrialists to China by industrial branch, including advice and relevant information on the suitability of such public and private firms as future potential partners for joint venture and other long-term co-operation. The purpose is to replace the inordinate and arbitrary flow of foreign businessmen into China, by a more orderly manner, in co-operation with Governments from industrialized and developing countries concerned.

(24) Organizing visits of Chinese industrialists to Europe and the USA and advanced developing countries

Organize and implement through UNIDO on a trial basis, in one or two selected (very specific) industrial sub-branches, visits of Chinese industrialists to factories in the same branch in Europe and the USA and to advanced developing countries with UNIDO contributing advice on suitable partner firms as well as providing the foreign exchange portion of the total costs - possibly in co-operation with bilateral aid.

(25) Industrial Information

Providing through an expert, systematic information on the most recent industrial development in selected sub-branches of industry, including the application of INTIB and possibly TIBS.

• (26) Technical assistance in production of tape recorders and TV sets

(Proposed by National Economic Commission)  
UNIDO organizes Technical Assistance in improving and controlling quality standards of tape recorders and TV sets already produced in China

(27) UNIDO Financial Advisory Service

- a) UNIDO Service, to advise China, on a case-by-case basis, on sources of concessional and favourable commercial financing for industrial projects;
- b) to give special assistance, on request, to the Construction Bank, and the People's Bank on evaluation of industrial projects especially joint venture projects, to be partly financed by one of the two institutions.

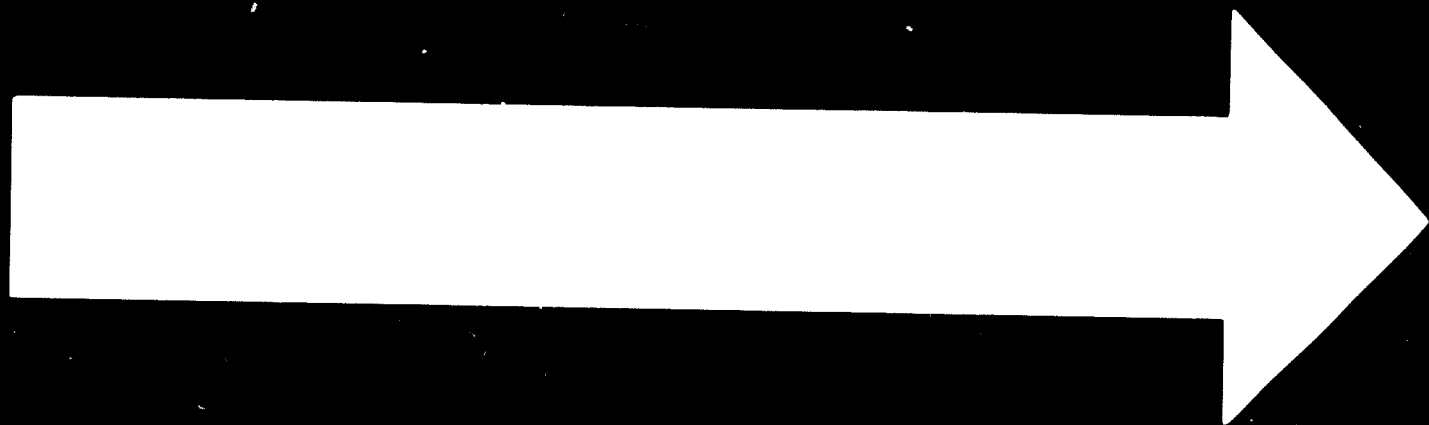
(28) Institutional Infrastructure

UNIDO assistance to establish or improve in China, institutes for metrology (to introduce DIN norms, for example), for R + D in selected branches, for developing and guiding export processing zones, and specialized industrial financing institutes (with one equity - feature, for example as a financial holding).

(29) Feasibility studies and economic analysis of industrial projects

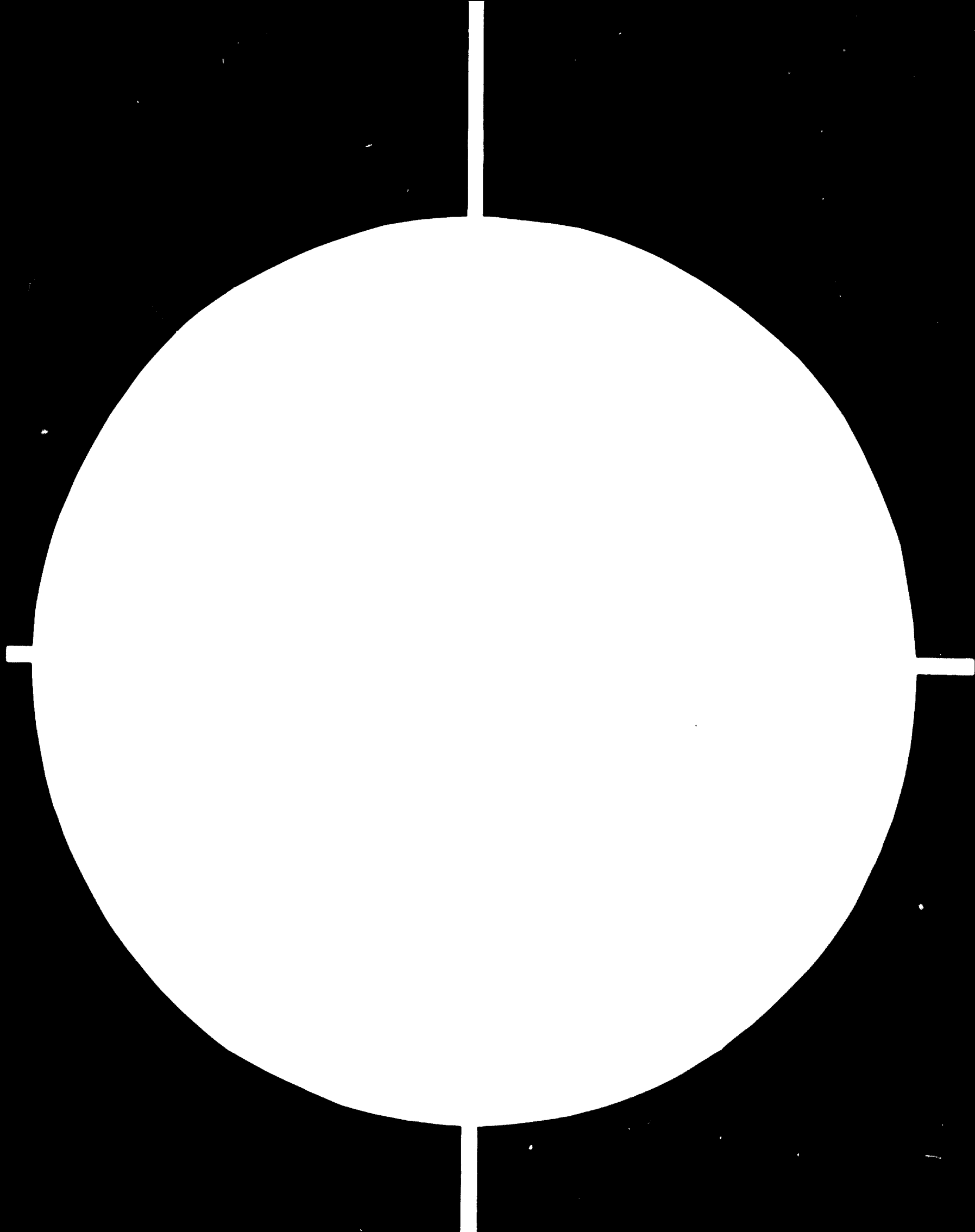
- a) UNIDO assistance in preparing industrial feasibility studies - by training of groups of specialists from the Planning and Economic Commissions, the People's and Construction Bank, and selected Ministries;
- b) UNIDO assistance, on a case-by-case basis, in assessing the economic benefit for China of selected industrial projects including joint ventures.

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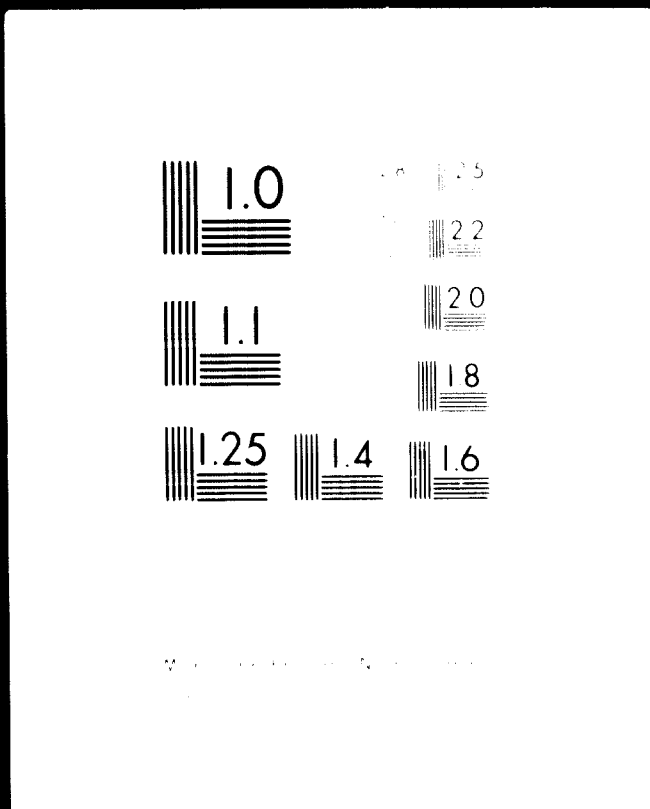
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(30) Assistance to visiting industrial fairs

UNIDO giving assistance to visitors from China to industrial fairs in Europe and USA, with a view to guide and give advice, through experts, on exhibits, "state of the art", exhibiting companies etc. (Trial basis is most welcome).

(31) Industrial Planning

UNIDO assistance to the analysis of development plans with a view to cross-sectoral planning, parallel implementation of industrial and related (e.g. infrastructure projects. etc.

\* (32) Assistance to petroleum refining industry

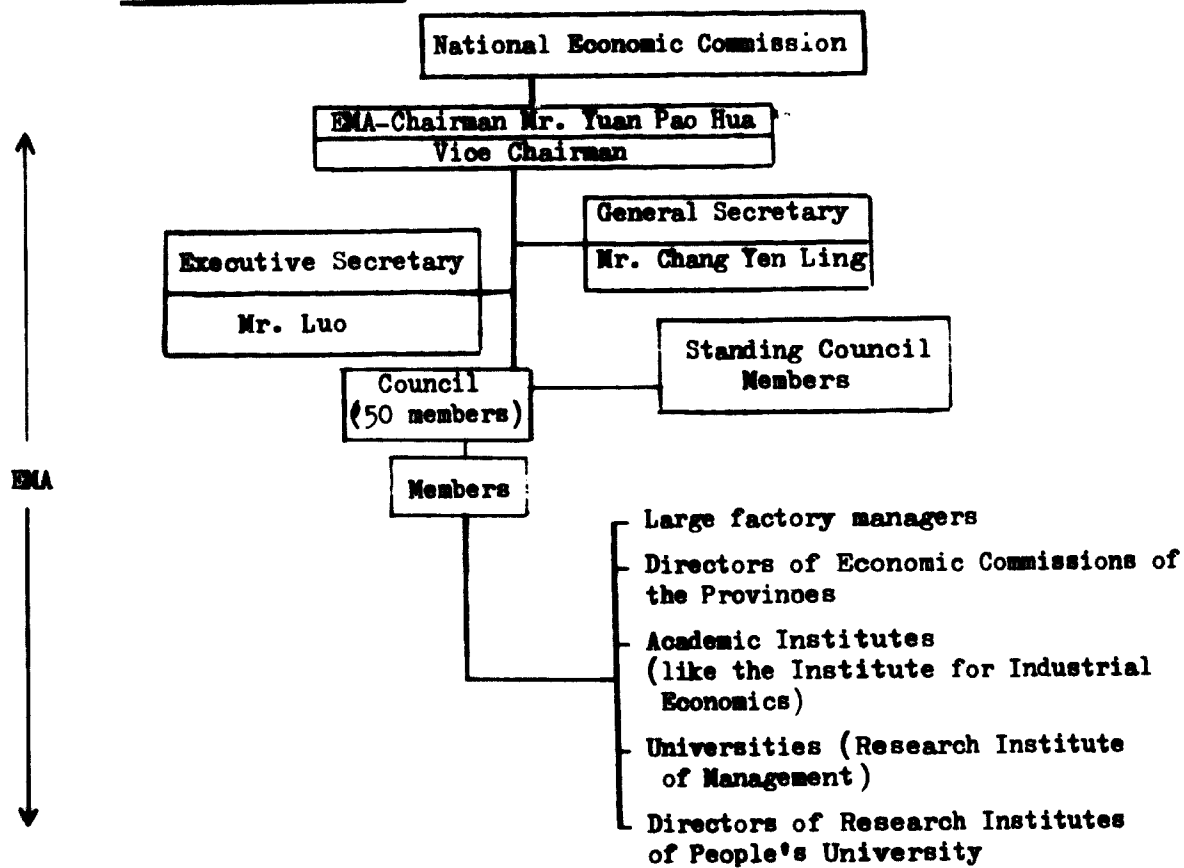
Specific advice on technical and licencing matters of refinery projects (such as platforming plants) (already started in Peking by Mr. Aguilar)

(33) Training in Investment Promotion

Secondment for half-a-year each, of Chinese officials for investment promotion (2 to New York, one to Cologne, one (French speaking) to Brussels - already initiated-.

(34) Joint Ventures

UNIDO assistance in search for suitable partners on a case-by-case basis; screening and forwarding to China of possibilities for subcontracting and co-production; UNIDO giving advice on suitable industrial partners for joint ventures in China.

The Chinese National Enterprise Management AssociationOrganization of EMA:

The National Economic Commission is a high body directly under the State Council (Central Government) which started in 1978 as a separate organization after having been combined previously with the National Planning Commission.

- 2 -

During our discussion on 9 May, Mr. Chang made an extensive statement: the EMA was set up in March 1979. The purpose of the EMA is "to bring existing capacity in full play"; most of the few hundred thousand enterprises are considered "backward" especially in terms of economic and financial management. More advanced technology and equipment are the tools which need to be introduced and properly used. Learning from the past and from foreign countries, especially regarding scientific management techniques, is the objective of the EMA as well as is the training of administrative and technical personnel in the enterprises. "Large scale" training programmes are intended to be set up for factory managers; including study classes for directors of Provincial Economic Commissions and for the autonomous regions; for this year, several such classes have been scheduled. A Training Center will be erected in Peking. Relations with foreign countries and enterprises in the field of management will be established; delegations and documentation will be exchanged. Example: A study group went to Japan on management subjects; Japanese experts were invited to give lectures on management of enterprises.

Mr. Chang expects an extensive involvement of UNIDO in management training, and he warmly welcomed our first contribution with our Seminar, as well as our initiative to get a Chinese delegation to the EMS at Davos in February this year.

Mr. Aguilar and myself presented UNIDO's activities which may lead to future co-operation with the EMA. Mr. Chang showed special interest in the following subjects

- the Company Roster (explanation was needed regarding the Co-operation Network of the European Management Forum)
- high cost of experts (joint financing UNIDO-EMA?)
- marketing of export products
- technology transfer (in general terms)

- 3 -

- production sharing, subcontracting, etc. through search for partners, incl. redeployment and subcontracting projects
- INTIB and TIES (advice on how to negotiate foreign technology proposals): EMA wants to participate in the Lisboa (October 1979) TIES meeting of Directors of Technology Offices from 15 developing countries.
- assistance in marketing incl. buyback contracts
- language training (bilateral sources?)

Mr. Chang's proposals for future co-operation are as follows:

- (1) China will accept foreign experts (10-20 per year) to give lectures and to train management
- (2) EMA will select factories in China to develop and test specific technology and to improve existing plants, including the setting up of pilot plants for such purposes
- (3) Training centres should be established in China (how many? purpose?)
- (4) EMA will select technical personnel and factory managers for which UNIDO should organize training in management techniques and in technical matters; he referred to Fahlstrom's figure given in Vienna: 40-100 people per year (we felt, 100-200 should be the target).

Such training as mentioned under (4) should also include design of new factories; we expressed concern about likely difficulties to find plant contractors who are willing to transfer such know-how. High level engineers should be training first. UNIDO's group training projects in design of machines in Egypt, in basic engineering in Mexico, and in machine tools in India, were mentioned.

We concluded, that training programmes should be among the first co-operation projects between EMA and UNIDO. Preparatory work: EMA will select staff according to language ability, management experience, etc.; language problems may become a high barrier, and interpreters may have to accompany each group.

Compensation and Buy-Back Transactions:

Practical Introduction

Dr. Peter Aladjov

1. Introduction

The industrialization in countries suffering from acute shortage of hard currencies, i.e. countries of the third world, the socialist countries of Eastern Europe (CMEA) and others, led to the development of various forms of payments. The conventional forms of payment, cash, bank credits, suppliers credit, buyers credit etc., are for many of these countries, not always acceptable, due to the shortage of freely convertible currencies or due to the desire not to incur unacceptable debts with the industrialized western countries. A policy of achieving a trade balance is also a contributory factor. Most of the developing countries have a negative trade balance with the industrialized western world, which decreases their ability to develop their imports, especially of plant and equipment which is badly needed to speed up their industrialization. According to the latest statistics, the debts of the developing countries have risen to US\$ 200 billion. The CMEA countries have an estimated debt of US\$ 54 billion to the industrialized western countries.

As this high indebtedness is not acceptable of the countries with a future potential demand for large-scale investment, one is therefore forced to apply other forms of payment, which will facilitate the financing of the industrialization plans. Such forms of payment may be acceptable to all countries concerned as on the one side the industrialized countries do not have to provide high credits, and on the other side the developing countries will not incur enormous debts but they will rather be able to use their raw materials, semi-manufactured and manufactured goods as a means of payment.

Buyback agreements offer the additional effect of tying the supplier of plant and services and equipment to his customer - since the plant supplier has a much greater interest than in turn-key projects (or product-on-hand plants), to enable his customer to produce products of competitive quality at the specified time.

2. Forms of Payment

Practical experience has shown that compensation transactions in their various forms are the most suitable forms of payment. It is important to distinguish between three basic forms of compensation transactions:

**Barter Deals:**

Direct compensation (barter) is the simplest form of this type of business. The contract partners agree, that the seller will accept goods from the buyer as a means of payment (in other words: goods against goods) as full or part payment for his deliveries.

**Parallel Transactions:**

Counter-purchase is the most usual form of compensation trade. Both partners agree that the seller will accept either a part of his export value in cash, and for the balance, he will accept goods from the buyer; alternatively, the entire value of his exports can be paid in goods. A compensation contract is independent from the supply of equipment contract and can be realised over a longer period of time than the delivery takes of the equipment supplied by the exporter. There is no obligation that the goods to be traded in a parallel transaction should be manufactured using the imported machinery or equipment. The amount to be purchased under the counter-purchase-agreement is negotiated separately for each business. In the early days of such deals, the demand for a counter-purchase was relatively small. Normally one was requested to accept a counter-purchase of 10 to 30% of the export value. Recently the requirements of the buyer of equipment for counter-purchase has risen substantially; they are usually between 50 and 60%, sometimes even as much as 100%. In some exceptional cases the buyer of equipment has requested a counter-purchase of 200%, reflecting a desire to receive more hard currency than is actually needed to pay for the planned import. Of course, such requests would only be accepted if there is a tough competition among suppliers. It is important to distinguish between the various goods, which are offered in counter-trade:

- **Free choice:** the seller of equipment can select suitable goods of his own choice, from the offers of the buyers of equipment.



- Limited product list: the seller (exporter) of equipment is offered to purchase only certain types and quantities of products. This restriction is a result either of difficulties in supply, or due to the fact that certain goods can be easily exported against free currencies and are therefore not offered under this transaction. (The transaction for the supply of 10,000 Volks-wagen Golf-cars for the GDR against 90% payment with machine tools is an example of a recently concluded contract)
  
- Negative product list: Here is agreed, that certain specified products or types of products cannot be purchased.

These and other types of conditions and limitations are an integral part of counter-trade agreements.

Examples:

- (a) In Yugoslavia, countertrade is regulated by state laws. Each Yugoslav importer is obliged to present together with the import-contract a signed export-contract, which will bring in the "hard currency" required to pay for the imports. Counter-purchases are required of 40% for industrial equipment and to 100% for consumer articles. The reason for these regulations is the negative trade balance.
  
- (b) Rumania has instructed all its industries to engage in compensation and parallel-transactions. For all these transactions there are numerous variations, which are negotiated on a case to case basis between the contract partners.

Buy-Back:

This is a relatively new form of counter-trade. One has to distinguish between buy-back and co-operation transactions, which may include many aspects of compensation trade. Buy-Back-transactions as well as compensation transactions are strongly objected to by most industrialized Western countries with free market economies. Certain governmental and business circles refer to compensation-transactions as a "relapse into the stone age". Despite such critical opinions, most western industrialized countries reluctantly accept compensation-transactions as a "necessary evil" as a means of not having to lose specific export possibilities or even a country's market entirely.

The use of buy-back as a specific type of compensation transaction has gained more and more ground also in developing countries. In the buy-back transaction the seller (supplier) of turn key plants, or of know-how, is prepared to accept as part of the payment, products, which will be produced from the supplied plant or know-how. The buyer takes over the turn-key plant and commits himself to fulfil his payment obligations by supplying goods which are produced by the plant. Such an agreement is extremely complicated and therefore, there is no standard contract form, which could be used for buy-back-transactions in a general manner.

The theoretical definitions of academics and experts have up to now not contributed a great deal to bring about a practical solution to these problems. The contract partners have to negotiate a contract which is tailor-made to meet their specific requirements. Certain guidelines have to be considered. In order to record some of the practical aspects, the nature of this type of transaction is summarized, based on the experience from commercial, marketing and banking points of view.

### 3. Basic Concept of a Planned Transaction

The buyer of a plant in a developing country must know his requirements as exactly and detailed as possible, and he must be assured that the project is beneficial to his country, considering the planning and industrialization guidelines of the said country. The buyer then must find the most suitable partner(s). The buyer, who has made the purchasing decision for an industrial plant, has to consider all "standard" items which are part of a feasibility study or/and an appraisal.

#### Technical Aspects

Before concluding a contract all the items have to be clarified between both sides which are "standard" in any plant supply contract, such as the overall concept of the proposed project, the problem of management and communication lines between the contract partners, a detailed technical specifications of the plant to be supplied, the starting up of the plant with the necessary provisional acceptance certificate (PAC) and the final acceptance certificate (FAC).

Financing

The project is assumed to be financed by the foreign supplier of the plant. Suppliers are able to do this out of their own financial sources only in exceptional cases. Therefore, the financing will be arranged either by the suppliers' bank or by a banking consortium. The following points have to be considered before any bank or banking consortium will decide whether to provide the necessary financing: the reliability and "standing" of the supplier, the standing of the buyer; full documentation about the profitability of the project (a feasibility study should ideally be presented); copies of contracts, if the contracts are already concluded, or an initial contract, protocols, studies, technical summaries etc; guarantees, repayments plans for loans, and (eventually), trader-agreements have to be presented.

Down-payment: It is normal, that the buyer on signing the contract makes a down-payment in an agreed hard currency. This down-payment is between 15 and 30% of the contract value. The down-payment is usually linked to a down payment guarantee, issued by the seller. This guarantee is automatically reduced with every part delivery of the plant.

Guarantees: In order to secure the financing, which the banks will supply, the supplier will normally ask for a guarantee from the buyer, that the repayments are guaranteed through the supply of products, which will be produced by the plant. The nature and form of such a guarantee is a matter to be negotiated by the contract partners. If the seller (supplier) is able to obtain an export-insurance-guarantee (hermes, Cofa, ECGD), then a supply-guarantee by the buyer may not be necessary.

Interest: For such transactions, the normal bank interest rates are calculated. The interest rate is fixed for a certain period of time and for the remaining period, it can be varied.

Loan repayments: Repayments of credits after deduction of the down payment, are made through the delivery of goods, which are manufactured by the supplied plant. A repayments plan must be integrated into the contract. This plan must include the following points: quantity and value of the proposed (part or full) deliveries of the goods produced; quality, timing, the right to protest against bad quality, late delivery etc.

After each part shipment the debtor (the buyer of the plant) has to present the following documents in order to receive the necessary credit note from the supplier: full set of shipping documents, detailed invoice, legalized certificate of origin, insurance policy, eventual packing list.

Prices: The price for the produced goods is calculated in two ways: Through calculating real production costs plus return on investments; or in the form of the export market price, which is dependent on the internationally prevailing price levels, quality of goods, competitors' role etc. Both partners must agree on a pricing formula.

Duration of contract: The duration of the concluded contracts lasts from the signing of the contract until the last delivery under the buy-back agreement, and after full repayment has taken place. Any contract may cover further deliveries and similar future business.

Execution and situations: Both parties have to agree on a place of execution of their contract. Western industrial countries always insist on the law of their domicile as a "place of execution". Both parties have also to agree on a place of legal enforcement. Western industrial countries, again, insist on the law of their domicile.

For any claims or disputes arising, it is to be recommended, that a friendly solution should be found. In case both parties are unable to settle their dispute in this way, the matter should be presented to a neutral court of arbitration.

#### 4. Banking Procedure

Both parties agree on the banking procedure of the contract with the sellers bank. It is usual, that the bank, which is providing the financing, also takes over the responsibility of running the accounts for the said project. This account will be debited with the total costs of the industrial plant, interest and all other costs incurred. The buyer must also make his repayments through this bank and each time the required documents are

presented, his account will be credited. It is to be recommended, that a bank-to-bank agreement for such a business is concluded (that means between the supplier's and buyer's banks directly). The agreement can regulate, which banking methods will be used, be it guarantees letters of credits, etc.

#### Role of a Consultant

A consulting company or a consultant may be contacted and contracted by both parties to provide limited or complete information about the planned transactions. He can also provide a financing proposal. An international organization such as UNIDO could act as a consultant.

#### Role of the Trader

In case it is necessary to place the buy-back transaction through a trading house, the seller of the industrial plant should sign the necessary contract. The trader can, also without the knowledge of the buyer of the plant, be included in such a transaction or already in the main contract be named as the purchaser of the buy-back product. This procedure is necessary, when the supplier of the plant is for example a machinery manufacturer and has no direct use for the products, which will be produced from his plant or is not willing to take on the responsibility of marketing these products. The role of the trader, who is well informed about the marketing possibilities of various products, is very important. It is estimated for example, that between 20 to 25% of total exports from the FRG are made by trading-houses. As regards imports from developing countries this percentage is probably much higher. The main area of activity for the trader is the developing country.

#### New Trends in International Commerce:

In introducing buy-back agreements it is a common opinion that this type of transaction is suitable, due to its complicated and long term nature, mainly for big companies only. Detailed studies, however, show that also smaller and medium sized industrial companies can use this form of business as in some cases the contract can be concluded quicker, the delivery will take place in a shorter time and the buy-back goods could perhaps be easily sold with obvious advantages. Big investment projects on a national scale are of course reserved mostly for the larger companies.

The progress in industrialization of the developing countries can only take place with the implementation of constructive economic and financing instruments. Financial help and advice is not sufficient: The inclusion of the powerful possibilities of the developed industrial countries could play a vital role here.

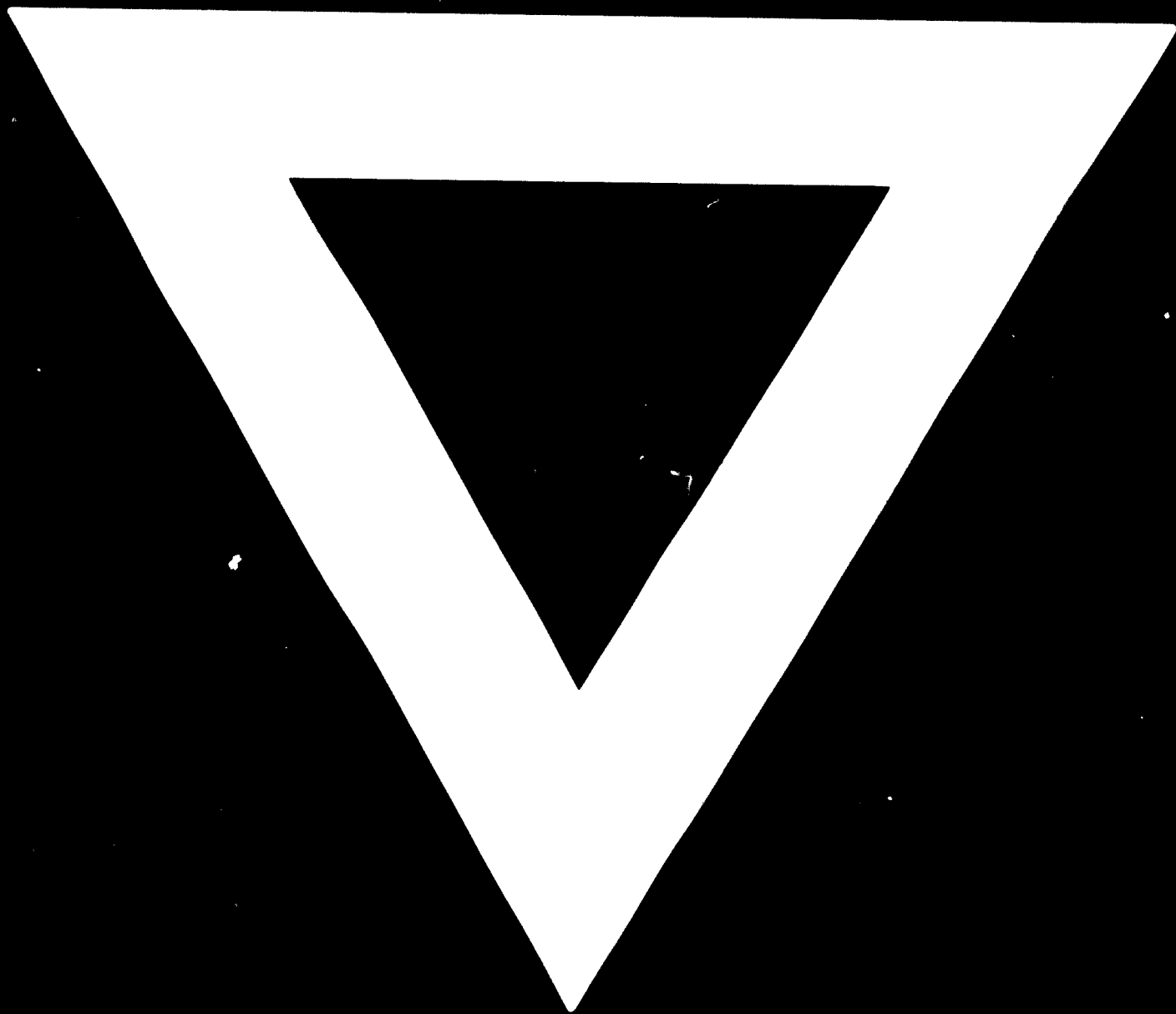
There are many possibilities open to the industrialized countries and the implementation of new payment and financing forms is an expression of this. It is therefore wrong to believe that the use of such forms necessitates "a relapse into the stone age", it is more a flexible acceptance of the existing state in which the developing countries find themselves.

#### Future Development

The developments taking place in the Peoples Republic of China cannot easily be compared to that of the developing countries, the COMECON, or the other third world countries. China is a special case: Due to the enormous reserves of human and natural resources it is possible to foresee that through a synchronised and co-ordinated action of all economic factors one can expect an enormous progress combined with social development.

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

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