



**TOGETHER**  
*for a sustainable future*

## OCCASION

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



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

## FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)



D00781



Distr.  
LIMITED  
10/10/73  
10 October 1973  
ORIGINAL: ENGLISH

United Nations Industrial Development Organization

Expert Group Meeting on <sup>Industrial</sup> Co-operation between  
Developed and Developing Countries in Promotion  
of Industrial Exports

for

(title changed in 10/WG.42/4/Ann.1)

CO-OPERATION BETWEEN HUNGARY AND DEVELOPING  
COUNTRIES IN PROMOTION OF INDUSTRIAL EXPORTS<sup>1</sup>

prepared by

The Institute of Economic and Market Research,  
Budapest, Hungary

The views and opinions expressed in this paper are those of the Institute and do not necessarily reflect the views of the secretariat of UNIDO. This document has been reproduced without formal editing.

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.



Distr.  
LIMITED

ID/WG.41/4/Corr.1  
27 October 1969

ORIGINAL: ENGLISH

United Nations Industrial Development Organization

---

Expert Group Meeting on Industrial Co-operation  
between Developed and Developing Countries  
for Exports

CO-OPERATION BETWEEN HUNGARY AND DEVELOPING  
COUNTRIES IN PROMOTION OF INDUSTRIAL EXPORTS

Corrigendum

Cover Page: Change title of meeting to read as follows:

Expert Group Meeting on Industrial Co-operation between Developed  
and Developing Countries for Exports

The main trend of development of the Hungarian economy

and its foreign trade

Due to historic, economic and geographical conditions and the special features of economic development, the Hungarian People's Republic is vitally interested in the unimpeded development of international trade links.

The last two decades signify a turning point in the history of the Hungarian economy. After the Second World War the Hungarian economy began to develop rapidly. The industrial production grew, the export capacity increased and, of course, the import requirements also expanded considerably. The development was mainly characterized by considerable efforts in investments, and speedily expanding efficient economic-technical co-operation with the Council of Mutual Economic Assistance (CMEA) member countries. This co-operation considerably boosted the Hungarian foreign trade whose rate of growth exceeded even that of the production.

In 1967, in Hungary's foreign trade the proportion of the CMEA countries amounted to a round 70 per cent, that of the industrialised western countries to 25 per cent whereas the share of the developing countries in the Hungarian foreign trade was about 5 per cent.

Recently the development of the Hungarian economy entered a new phase. It became necessary to slacken the rate of economic development to a certain degree so that the qualitative indices of production should catch up with the quantitative progress of production achieved earlier. The transformation of the methods of economic guidance and working out a chain of comprehensive measures that aim at a greater conformity between production and demand,

'27 000

Contents

	<u>Page</u>
I. THE MAIN TREND OF DEVELOPMENT OF THE HUNGARIAN ECONOMY AND FOREIGN TRADE	3
II. HUNGARIAN CONTRIBUTION TO THE INDUSTRIALIZATION OF THE DEVELOPING COUNTRIES	5
1. The Hungarian commodity export and the industrialization of developing countries	5
2. Equipment for the food industries	6
3. Pharmaceutical equipments	7
4. Bauxite exploitation in Guinea	9
(a) Brief survey of the antecedents	10
(b) Conditions in the Kassa Island bauxite mines at the time the Hungarian experts arrived there	11
(c) Work of the Hungarian experts	13
5. Solutions for co-operation in production furthering the industrialization of developing countries	15
(a) Joint co-operation undertakings	16
III. POSSIBILITIES AND PROBLEMS OF FUTURE CO-OPERATION	25



higher technical and qualitative level of the products and a superior degree of efficiency of investments, became questions of the day.

The planned increase of industrial production and personal consumption brought about sounder conditions for the expansion of the commodity export to and the economic relations with the developing countries. This refers particularly to certain raw materials and some industrial products, too. As far as can be foreseen the consumption of colonial food-stuffs e.g. coffee, cocoa, tropical fruit etc. will further increase and import from the developing countries grow accordingly. In line with the advance of industrialization the import of certain industrial consumer goods - textiles, shoes, and household appliances - will also increase.

The Hungarian foreign trade can supply the developing countries with a wide range of various industrial products, and within the latter with machines and industrial equipments, too. The presumable expansion of the Hungarian import demand will facilitate purchases of the developing countries, increase their solvency and import capacity in products which are indispensable for their economic development.



II.

**HUNGARIAN CONTRIBUTION TO THE INDUSTRIALIZATION  
OF THE DEVELOPING COUNTRIES**

**1. / The Hungarian commodity export and the industrialization  
of developing countries**

Hungarian foreign trade enterprises of the machine industry have repeatedly exported complete factory equipments to developing countries. The more than a hundred complete equipments and smaller factories that were delivered from 1956 to 1967 include thirty mills; from these latter Iraq has bought sixteen and India five. The list of complete factories also contains ten oxygen factories and a number of thermal power stations set up in India and the United Arab Republic. Other items in this group include equipments of glass-works, smaller waterworks, hydroelectric power plants, mining igniter factories, pharmaceutical packing factories, concrete railway sleeper works, poultry processing and food industry plants and brick-works.

In the Hungarian commodity export to the developing countries, the supply of complete factory equipments is - from the aspect of Hungary - of paramount importance for in several cases it includes, in addition to the value of the exported machines and equipments, intellectual export, too.

To start with it can be stated that the Hungarian industry and trade have gained, in general, favourable experiences in the export of complete equipments serving the industrialization drive of the developing countries in spite of certain negative symptoms that turned up in the last few years. These can be attributed to the fact that we were not always in command of sufficient experiences and that the purchaser country did not always make suitable preparations for accommodating the projects.

In the following the particulars of the experiences obtained in the transacted industrial exports will be examined.

## 2. / Equipment for the food industries

Over the last fifteen to twenty years Hungarian food processing and the manufacture of equipments for the food industries as well as the export of the latter has increased considerably. In the developing countries there is a seemingly lasting demand in these articles and Hungary succeeded to satisfy a part of the demands with good results. Hungary mainly supplied a larger number of equipments of the milling industry which, however, did not represent a high value. The capacity of the milling industry equipments ranges from twenty to fifty tons daily. In addition to the supply of the equipment, the installation work was directed and the handling crew trained by Hungarian experts.

For example

- a part of the handling crew of the mills supplied to Iraq was trained in Hungary in order to ensure expert operation of the equipment ;
- the installation was carried out or guided by Hungarian experts ;
- the preliminary operations during the running-in period were also carried out by Hungarian specialists, and the plant was only handed over when perfect and safe operation started.

A good example for the supply of Hungarian equipments for the food industry to developing countries is the fruit-juicer plant delivered to India. The one delivered to Hyderabad produces two thousand litres of fruit juice per

hour and, owing to a special construction, it is also suitable for processing Indian fruit e. g. mango.

The very popular soft drink known by the name "Sasip" is produced with this equipment and partly exported by the Indian firm with notable success.

An important export item of the Hungarian foreign trade is complete slaughter-house equipment. In several developing countries - e.g. in the UAR - a number of slaughter-houses are operating equipped by the Hungarian industry. These are, generally, not large sized plants, devised for the slaughtering of only 100-150 carcasses of 100-1000 species. In this connection, the supply of the equipment includes technical assistance in the handling, crew, in directing personnel and the experts are trained in Hungary, where they are given the opportunity of acquiring practical know-how in similar slaughter-houses. The Hungarian exporter develops and adapts the equipment in accordance with the requirements and demands of the importer.

Sometimes, not complete factories but only parts of the equipment are supplied. For example, a part of the machinery of the tinned food factory under construction in Kerbala (Iraq) - for the processing of vegetables and fruit - was supplied by a Hungarian firm. Similar equipments were supplied to Guinea and the Sudan.

It is hoped that the above said made it clear that the export of equipments for the food industries includes simultaneous assistance in the training of experts, helps raising the level of the industrial production, moreover, in some cases it contributes to develop and expand commercial activities in the purchasing developing country.

### 3. / Pharmaceutical equipments

Experiences gained in the export of pharmaceutical equipments to developing countries show that this sphere of trade and industry requires greater

circumpection than the group dealt with above because considerable co-operation in the supply is needed which again raises many special problems. A striking example is the equipment of the Hungarian pharmaceutical packing plant exported to Ghana.

In 1961, a Hungarian foreign trade enterprise concluded an agreement with the representatives of the Ghana Ministry of Industry and undertook to supply a pharmaceutical packing plant of a value amounting to £36,500 pound sterling. It was Ghana's commitment to build the factory whereas the exporting Hungarian enterprise undertook, in addition to supplying the equipment, to install it and to put the plant in operation.

The importing partner, however, did not make the factory building available nor did he provide for conditions needed for the installation and, thus, prevented the delivery of the equipment in due time. The fulfilment of the order could only be carried out with considerable delay.

Previously there was neither a pharmaceutical factory nor a pharmaceutical packing plant in Ghana and therefore experienced leaders, technicians and skilled workmen were not available. Consequently, right from the beginning unexpected problems had to be solved. The Hungarian enterprise drew the attention of the Ghanaian authorities to this fact and the training of a relative small number of only nine Ghanaian experts started in Hungary subsequently. It now became the task of this staff's small number to solve the problems of the new plant. Competent persons were fully aware that the nine trained men were not sufficient even before the plant started to operate.

The completed plant, fitted out with up-to-date equipment, was handed over by the Hungarian firm to the Ghanaian purchaser. A joint report stated that

- the technical level and capacity of the plant meets the requirements stipulated in the contract ;

- the technological documentation made available by the Hungarian supplier is suitable for the production of first-class pharmaceutical products and packing.

After the factory was handed over the Ghanaian importer did not require further assistance of the Hungarian enterprise and sought for other possible solutions.

As far as we know it lasted a long time until the plant could start production. Let me suggest that this developed be a lesson to both partners :

- there were no suitable preparations made for the project to integrate with the development plan of the country ;
- it was not pre-established how the economically efficient operation of the plant - the only one of its kind in the country - could be ensured ;
- at the time the investment was started there might have been some conceptions as to the development of Ghana's pharmaceutical industry. These ideas did not work out in whole, the first stage, however, became realized and being the only plant of its kind, it was not utilized for a long time. In this context there are still several other questions that require an answer, for considerable values and energy became squandered away on both sides, and this, of course, did not serve the interest of either partner.

#### 4. / Bauxite exploitation in Guinea

One of the most important assignments of the Hungarian economic organs was the mining of bauxite at certain places of occurrence in Guinea,

chiefly on the Kassa Island. In view of the important experiences Hungary has obtained in the course of this undertaking, we shall deal with this subject in detail.

a. / Brief survey of the antecedents

When the government of Guinea nationalized some enterprises in November 1961, the bauxite mines on the Kassa Island, that were hitherto the property of the Bauxites du Midi, became a Guinean state-owned enterprise. As a result the State had to provide for the further exploitation and marketing of the bauxite available.

Between the two world wars the Bauxites du Midi mined bauxite in the South of France. As early as the nineteen thirties the company explored for bauxite the Guinean Los Islands and other regions too. However, the Bauxites du Midi was not able to finance either the bauxite exploitation projects in Africa or those in France. Therefore, immediately after the Second World War it became a subsidiary company of ALCAN (Aluminium Limited of Canada). With the capital input of ALCAN the explorations on Kassa were completed and with an investment of ten million dollars a bauxite washing and drying plant was built there, and other areas of Guinea were also explored for bauxite.

In the course of the latter the general outlines of a scheme for mining bauxite, building railroads, a harbour and an alumina factory were worked out, the realization of which would have required a hundred million dollars. According to plans and on the basis of the conditions agreed upon, the Bauxites du Midi signed an agreement to finance a part of the infrastructural investments (network of roads and telecommunication, etc.). In 1961 - the third year of the country's independence - the government of Guinea was of the opinion that the Bauxites du Midi did not meet its obligations and demanded that the delay should be recovered. However, the negotiations in order to reach a consensual agreement were unsuccessful. Subsequently, the government of Guinea nationalized the Bauxites du Midi as per November 13th 1961.

After the State has taken over the proprietorship of the Bauxites du Midi the Harvey Aluminium Ltd. put in a claim for an exploitation licence of the bauxite deposits in Guinea. The government of Guinea found that the terms of the Company for the exploitation of bauxite on the Kassa Island were not acceptable and made inquiries whether it were possible to obtain assistance from the socialist states.

To be fully informed it should be known that following the nationalization of the mines French and Canadian experts, who earlier directed the bauxite exploitation of Guinea, broke off their work at once and left Guinea. Consequently, bauxite mining in Guinea was practically discontinued. In view of the fact that at that time experts for directing the production were not yet available in Guinea, Hungary was willing to help Guinea in this difficult position and sent experts to reorganize and start production. It is well known that there are considerable bauxite deposits in Hungary that has wide experiences in the field of bauxite mining and processing; the competence of a large number of well trained Hungarian experts is acknowledged throughout Europe.

b. / Conditions in the Kassa Island bauxite mines at the time the Hungarian experts arrived there

Hungarian specialists in bauxite mining and aluminium processing went to Guinea at the beginning of 1962 with the aim to reorganize and start continuous production in the bauxite mines and ore dressing plants on Kassa Island, formerly owned by the firm Bauxites du Midi.

The industrial centre of Kassa is situated on a smaller island at about 5 kilometres from Conacry. It consists of a number of open mines, ore-washer, drying units and port installations for conveying the concentrated bauxite. These plants were established by the Bauxites du Midi and, in 1962, have been normally operating for ten years.

The bauxite occurrences on the island consist of several pockets. Exploited on the surface with baggers, the bauxite is conveyed with dumpers to stamp mills where, after crushing and screening, it is thoroughly flushed. In the washing process clay and sand in the bauxite, are eliminated. The elutriated bauxite is then dried in masonry fired rotary kilns. In this way a product of 11 module and 4,5 per cent silica content was produced which, even in this enriched form, was of far worse quality than bauxite found on other areas of Guinea (Boké, Kinko). The dried bauxite was kept in store-houses of about 30,000 tons capacity whence it was transported by a conveyor belt system to the harbour and shipped by portal cranes.

The mining machines were in a completely used up condition, moreover, the overwhelming part of the means of transport was also unfit for use. This shows that in the years prior to the nationalization the former owner did not carry out even the most urgent renovations. As a result, the originally excellent equipment was in a poor condition and lacking operational safety at the time the group of Hungarian experts arrived.

The spare parts, except for a few, could only be brought from the manufacturer direct, however, orders were rejected because of the attitude of some West-European companies and, therefore, the most urgently needed parts could only have arrived on the spot with a delay of one-two years.

The major part of the machinery, crushers, sieves, belt-conveyors, ribbon support, harbour installations etc. - were in a deplorable state chiefly because of corrosion caused by sea-water and complete negligence of maintenance. The situation was aggravated by the total absence of indispensable spare parts. The steel structure of the conveyor was corroded to such extent that its collapse was to be feared. The pipe-line conveying sea-water to the bauxite washing plant, and the harbour installations too, were in a similar condition.



The conditions on Kassa Island were further aggravated by the fact that, after the nationalization, the former proprietors were not willing to buy Kassa bauxite. Hence, the Guinean authorities were short in funds so badly needed for renovations and financing of maintenance works. In 1962, the year following the nationalization, they could sell only a mere 10,000 tons, and even that quantity was bought by Hungary.

A further difficulty arose because in the period after the nationalization, the supply in good quality bauxite on the world market surpassed demand. Owing to oversupply the prices fell below the former price level. In 1962-1963 only socialist countries bought bauxite from Guinea in order to help solving the problems due to the short-fall of incomes. Only at about the middle of 1964 was the ALCAN Company willing to buy a certain amount of bauxite with a French firm acting as a middleman in the deal.

c. / Work of the Hungarian experts

It was pointed out earlier that the French and Canadian technical and administrative personnel that managed the open bauxite mining on Kassa Island left immediately when the mines were nationalized. As a stopgap arrangement, in order to maintain operation somehow and to replace the western specialists, the government of Guinea sent a few experts from abroad to Kassa Island who, however, worked hitherto in other areas. Soon after, the team of Hungarian experts who had sufficient experiences in bauxite mining and engineering as well, arrived on the Island.

In addition to the extremely bad condition of the machinery - as described above - several new problems arose when it came to start production going anew. In the first place it should be mentioned that the group of Hungarian experts did not bring along new equipment; this was not their intention for they came to the island in order to direct the operation of the mines. This was,

however, contrary to the expectations of the local authorities who thought that the Hungarian experts will not only direct the reorganization of the production but renew and retool the plant, and fill up gaps in the machinery and the means of transport. Thus, the arrival of the Hungarian experts did not come up to expectations. The Hungarian partner, however, was not bound to supply equipment for this, and none whatever agreement between Guinea and Hungary to this effect.

From the aforesaid it follows that - because of the deteriorated condition of the equipment unfit for operation - the Hungarian experts had to shoulder a great number of tasks which did not crop up at an earlier stage.

Owing to depression in the world market further difficulties arose in the marketing of the produced bauxite. The occupational force at the Kassa Island bauxite mines was higher than justified and the excess of labour could not be directed to other areas. As a result the prime costs of the production increased.

After working for three years the group of Hungarian experts successfully accomplished its assignment and returned home.

To sum up it can be stated that the above described important venture of Hungarian experts clearly showed the areas where our knowledge should be improved. These areas are:

- organization of exploitative work under tropical conditions and ensuring continuous operation under difficult circumstances ;  
in this respect the above described undertaking was useful, for the Hungarian experts became acquainted with all phases of productive work ;
- they got to know the performance of labourers in tropical areas, working conditions there, and other related problems as well.

Finally, it can be said that the collaboration of the Hungarian group of experts was fruitful for both the Guinean authorities and the Hungarian partner and made it possible to gain experiences - this refers first of all to the Hungarian partner - which could be utilized elsewhere too. The Guinean partner obtained considerable help for it was able to sell the mined bauxite despite very unfavourable conditions on the world market and, in addition, the Hungarian experts trained an adequate number of specialists on the spot.

5. / Solutions for co-operation in production furthering the industrialization of developing countries

Experiences of Hungarian foreign trade enterprises show that the relatively higher industrialized countries as e.g. India, the United Arab Republic, Pakistan, Syria, Iran and some Latin American countries e.g. Argentine and Brazil demand, in addition to the supply of machines and equipments, industrial co-operation in production.

A number of the above enumerated developing countries introduced import restrictions in some fields of industry where domestic production has already reached certain results and is therefore able to substitute import products. A case in point is India, one of our most important trading partners. Import restrictions include certain means of transport, transformer substations, various steel structures, smaller electro-motors, erecting cranes and many other products as well. As a result of the restrictions, a number of equipments or individual machines can only be imported to developing countries on rare occasions.

The endeavours of the developing countries to enter into co-operation are justified in many respects because, among others,

- co-operation helps to increase domestic employment ;
- raises the technical level of the home industry ;
- steps up the training of experts and
- increases the export capacity of the industry.

A generally accepted form of co-operation between exporter and importer is that the purchasing party arranges for the inland production of a part of the machinery and equipment on the basis of the technical prescriptions of the exporter. Recently customers often undertake to carry out the major part of the installation on the spot. Adapting themselves to the new market requirements, Hungarian exporter enterprises supply the more complicated equipments, produce the necessary technical documentation, train technicians designated by the developing countries and give professional advice in general.

In the last one-two years co-operation proposals were suggested several times but only few agreements have been reached. On the basis of the actually established few agreements we shall now attempt to sum up the characteristic features and to draw conclusions thereof.

a. / Joint co-operation undertakings

Accommodating itself to up-to-date conditions one of the Hungarian foreign trade enterprises is now establishing an autoclave producing plant together with an Indian engineering works. The major part of the equipments is supplied by the Hungarian exporter firm.

After operations will have started the new plant will sell its products partly on the inland market and partly export them to the neighbouring countries. The products will be marketed under a common trade-mark. The Indian enterprise can be expanded if the results achieved are favourable.

From the aspect of Hungary the joint manufacture of road machinery with Indian partners is to be considered as an important initiative in the field of co-operation. The production of asphalt masticators promises to be particularly suitable for common production and marketing.

In accordance with the agreement the Hungarian enterprise will produce the necessary production documentation and supply a part of the machinery. The Indian partner will carry out the bigger, voluminous work such as e.g. steel sheet construction and inner walling. The building and installation is being carried out in accordance with Hungarian industrial designs and documentation under the guidance of Hungarian experts.

With a validity of ten years, a co-operation agreement has been reached between a Hungarian exporter firm and Garlick and Co. Pvt. Ltd. of India for the production of running blocks. By the terms of the agreement the Hungarian firm will convey the technical documentation for the production of 0.5, 1.2, 3 and 5 ton running blocks to Garlick's and provide for the training of Indian specialists at the Hungarian enterprise. The Indian partner pays in addition to the documentation a certain commission for a stipulated time.

A Hungarian exporter firm has reached an agreement with the Indian firm Mujurat Machinery Manufact. Co. (Bombay) for co-operating in the production of acid and alkali resisting enamelled machines of the chemical industry.

Although actual agreements for co-operation in production have only been reached sporadically, it is a question that deserves to be examined thoroughly in view of the fact that industrial co-operation becomes gradually a generally accepted practice in the developing countries and is, at the same time, in conformity with Hungarian commercial interests. The Hungarian parties interested always aim at taking part in the co-operation with intellectual export too, and to participate in the setting up or expansion of productive capacities that may later help to satisfy Hungarian demands by supplying commodities. A case in point is the establishment of slaughter-houses in developing countries.

Hungarian enterprises have already taken part in the building of complex units which make it possible that long-range economic relations between Hungary and the interested developing countries should be established. This possibility arose in cases when Hungary could take part in the development of new industrial branches. For that purpose

- Hungary took part in the foundation of the pharmaceutical industry in Ghana by supplying machines and equipment for the production and packing of pharmaceutical products ;
- our activity in the development of the bauxite, alumina and aluminium industry of Guinea can be considered effective ;
- and the same can be said of Hungary's contribution to the shaping and development of the foodstuff industries.

Extremely varied forms of co-operation with the developing countries came in general use in the common supply of industrial equipments depending on the simpler or more complex character of the problem at issue, the internal economic conditions and the actual requirements of the country interested. Experiences show that the most simple form is - practically - the supply of machines and equipment connected with technical assistance. This, however, cannot be considered co-operation in the wider sense of the word. In view of the fact that only few demands have arisen in this field in the last few years, it must be said that, for lack of experience, it was not easy to satisfy even the actual demands.

In the developing countries one can meet with many varied forms of joint enterprises and co-operation in production e.g. share in the capital, joint ownership of enterprises, establishment of subsidiary companies etc.

An appropriate example for a Hungarian firm taking part in a joint enterprise abroad is the agreement the Egyesült Izzólámpa és Villamossági Rt.

**(United Incandescent Lamp Factory)** has concluded with a private firm in **Ceylon**. The main clauses of the agreement are the following : the **Hungarian enterprise** has a stake of 10,000 £. in the capital of the newly founded **Tungsrain-Ceylon Company**. The **Hungarian enterprise** obtains preferential shares of 7 per cent fixed interest. A bank guarantee provided by the **Ceylon firm** assures the transfer of the profit and a currency clause guarantees the dividends and the paid-up capital. The partners have agreed that, provided mutual understanding, after the expiration of a term of five years the **Hungarian firm** can assign to the **Ceylon firm** its shares that are payable in equal rates in the course of the subsequent five years.

- The equivalent of the machinery supplied by the **Hungarian partner** is to be paid off by the **Ceylonese partner** and for this purpose the **Hungarian partner** has granted a five years' credit on easy terms.
- The component parts needed for the production of incandescent lamps is to be supplied by the **Hungarian partner**. It is intended that an increasing part of the components should later be supplied by local production.
- It is a matter of course that the **Hungarian partner** will provide the entire technical assistance for both the fitting together of the incandescent lamps and the production of the components at a later date.
- During the time the **Hungarian partner** has a holding in the capital he is entitled to appoint the chief engineer of the enterprise. The chief engineer, a fully qualified member of the board of directors, is to safeguard the **Hungarian interests**, and he is also responsible for the high grade quality of the products. He draws his salary from the **Ceylonese enterprise**.

- With the consent of the Hungarian partner the Tunggram trade mark will be used by the new enterprise and as an offset it will draw a royalty that amounts to 2 per cent on sales in Ceylon and to 5 per cent on exported products.

In the initial stage the capacity of the factory will amount to three million electric bulbs. The machinery has already reached Ceylon and the installation has started in the building made available by the Ceylonese partner.

There is no doubt that the new factory will function successfully and, therefore, the two partners are now examining together the possibilities of how to expand co-operation. As a next step production is to be expanded by adding a fluorescent lamp and a vacuum technical glass producing plant. The Hungarian partner has submitted the technical and commercial offers and as negotiations stand at present there is good hope that the contract can be signed this year. The Hungarian partner is willing to underwrite a holding in the capital needed for the establishment of the new plants and to grant credit for the supply of the machinery on similar terms as outlined above.

In addition to co-operation in the production, both partners intend to bring about a joint commercial organization. The scope of activity of the latter would cover the following :

- it is to be charged with the marketing of the products of the Ceylon factory partly in Ceylon and partly in the neighbouring countries in the Far East ;
- it is to be entrusted with selling on the same area vacuum technical products and other articles of the electrical industry produced by others than the Ceylon plant.



In the above outlined co-operation in the field of vacuum engineering the Hungarian partner is a productive plant authorized to transact foreign trade on its own, but the interested parties are an integrated Hungarian organization on the one hand, and a foreign enterprise on the other. There are, however, cases when the Hungarian productive plant is not authorized to do foreign trade on its own and such a co-operation has to be carried out under the auspices of a Hungarian foreign trade company. A case in point is the co-operation in the pharmaceutical industry. In Hungary there are at present five large-scale pharmaceutical works and the total value of the exported pharmaceutical products amounts to around 100 million dollars yearly. Since neither of the five large-scale enterprises is authorized to export on its own they have established an independent corporate body, the **Medimpex Foreign Trade Company**, a sales organization which is in the joint ownership of the five firms. Relying on a contractual basis detailed directives, Medimpex has a key position in establishing common enterprises in the pharmaceutical industry, and it is also responsible for business with productive units. The contractual conditions between the Hungarian and the foreign partner are similar to the ones fully outlined above in the case of the incandescent lamp factory. The Hungarian partner supplies the machinery, provides the plant with basic materials and semi-finished products, furnishes the technological documentation, arranges for the training of experts and the temporary work of Hungarian specialists on the spot etc. On the other hand, the partner abroad puts at the disposal of the joint enterprise the ground, the buildings and the circulating funds etc. In addition to joint production the co-operation agreement generally contains the establishment of a joint sales organization too.

There is also a similar trend in the foodstuff industry. Although agreements have not yet been reached the negotiations with a private firm of the Lebanon regarding the refoundation of a common cheese factory are at an advanced stage. The authorized capital of the enterprise will be \$ 500,000 and the value of the

machinery and equipment will represent the half of it. Supplied by the Hungarian partner the latter will embody the share of the Hungarian partner in the capital. The co-use factory is proposed to process Hungarian basic materials according to Hungarian standards and with Hungarian technical assistance.

To sum up, in the past one or two years the so-called "production sharing system" comes more and more to the fore in the Hungarian economy. The developing countries generally demand that the Hungarian enterprise should give complex assistance in the establishment of the project, i.e. grant credits, give technical aid, supply machinery and equipment, take charge of the installation and put the plant in operation. The developing country pays off the granted credit with the products of the newly set up plant.

This kind of agreement is particularly advantageous for the developing country because the new plant provides the economic basis for the repayment of the credit the country had recourse to. This form of co-operation brings about a sort of joint interest between the country that grants the credit, i.e. that gives assistance and the interested parties of the developing country. This clear form of co-operation between Hungarian enterprises and firms in the developing countries has not yet been established, however, our economic organs seriously consider to introduce it.

Joint enterprises represent at present the closest co-operation that has hitherto developed in our collaboration with developing countries. Generally accepted in the relations between developing countries and highly industrialized western countries it has already certain traditions there. The socialist countries, and within the latter Hungarian enterprises, have established this kind of co-operation in a few selected cases only. In our view Hungarian enterprises should act more resolutely if a similar demand arises from the part of developing countries.

In the collaboration with the developing countries, economic assistance - and this refers to joint enterprises too - is, in the view of Hungary, a means

for establishing and expanding economic relations, a target it wishes to realize based on the principle of mutual advantages.

Hungarian enterprises have always considered it a condition of vital importance and will continue to do so in the future too, that the share and interestedness of the developing countries in the total capital should amount to at least 51 per cent or even more. This fact in itself shows clearly and unambiguously the priority given to the developing countries interested.

Up to now Hungarian enterprises co-operated mainly with state organs and state-owned enterprises of the developing countries, although in several cases co-operation could be established with private owners too. In our view it is to the purpose to increase co-operation with private capitalists of the developing countries provided the consent and with the assistance of the government of the interested developing country.

Experiences show that there is a certain divergence between the activity of Hungarian enterprises and that of enterprises and agencies of industrially developed western countries.

In the Hungarian practice - despite our rather slight experiences - the duration of the joint enterprises is fixed in each case. This meets best the interests of the assisted countries because the purpose of the establishment of a project and handing it over to a developing country is to strengthen in full the economy of the developing country at issue.

These kinds of solution seem sensible in the practice of industrial co-operation with the developing countries, for the reason that the risks of the venture are shared and the interest in it is common. This aim is important not only from the aspect of the developing country but for the Hungarian partner too.

Other experiences refer to countries who regularly demand complicated machines and equipment. In these developing countries permanent commercial and technical activity must be displayed on a larger scale. Therefore, in countries which are supplied by Hungary with a larger amount of machines, a suitable network must be set up and a larger quantity of components stored on the spot. Experiences show that in a similar case it is more economical to co-operate with local firms because this reduces risks, enables greater agility and common interests are to the mutual advantage of both in this respect too.

Hungary has just taken the initial steps along this path. Should closer industrial co-operation with the developing countries evolve on a wider scope, so this will initiate a number of organizational measures.

The new system of economic management introduced in Hungary affords favourable possibilities and increasingly ensures the aligned work of the interested organs. In the following we shall deal in the above sense with the long-range possibilities of further Hungarian contribution to the industrial development of the developing countries.

III.

**POSSIBILITIES AND PROBLEMS OF FUTURE CO-OPERATION**

From the aspect of the potentialities of the Hungarian engineering industry and on the basis of the present and expectable demands of the developing countries, the following machines and equipments will be of greater importance in Hungarian exports, partly as individual machines and partly as complete factory equipments or in the form of collaboration in the fitting out of complete plants.

In the first place hydro-electric and thermal power plants should be mentioned. The developing countries make every effort to expand their energy systems and import a great number of hydro-electric and thermal power plants. Taking into consideration the general trend of technical development it can be stated that there is a greater need for higher capacity power plants. In view of the potentialities of some developing countries it must be taken into account that at some places there will be demand for smaller capacity power plants too, particularly where local energy sources are utilized in order to satisfy the energy needs of smaller economic areas. On the basis of the experiences gained hitherto it can be stated that Hungarian firms can meet similar requirements.

Larger developing countries undertook very definite measures for building up domestic metallurgical bases. Hungary is not prepared to build and equip entire iron-works, it is, however, able to supply supplementary metallurgical equipment and plants producing certain semi-finished goods. For example, the machinery of tube factories and cable works could be supplied.

The Hungarian conditions are by and large the same in the field of the chemical industry. Hungary does not produce equipment for what might be called the key industry of chemistry, that is large chemical works, it could

however, equip smaller plants; this is the right place to point out that a great number of oxygen factories in various developing countries were equipped by the Hungarian industry which can supply other kind of chemical equipment too and there is no doubt that it can meet requirements in this field.

There are good prospects for the collaboration of the Hungarian industry in developing the alumina and aluminium industry. Some developing countries with large bauxite resources have made efforts to establish an alumina and aluminium industry. In this field Hungary has ample experiences due to this kind of work it has executed mainly in Hungary itself, however, in developing countries too. Hungary can take part first of all in the planning of alumina and aluminium factories; there are, however, certain possibilities for supplying equipment in co-operation with other countries.

Hungary could successfully collaborate in developing the pharmaceutical industry of certain developing countries interested. Hungary has gained substantial experiences - substantial even on an international scale - in the production of pharmaceutical and veterinary products. The development plans of a number of developing countries include the foundation of pharmaceutical industries and the production of veterinary products. There is no doubt that the Hungarian industry is able to equip pharmaceutical factories and packing plants with good results.

The development of the foodstuff industry is also important from the aspect of the developing countries. Hungary has a developed foodstuff industry and the experiences gained in this field enable it to participate to a greater extent in the equipment of the foodstuff industry just now developing in the major part of the developing countries. It was mentioned earlier that some results have been already achieved in this field. The foodstuff industry is of vital importance in the industrialization plans of the developing countries for

It improves the victualling of the population and makes it possible to utilize perishable food, large amounts of which are now wasted. Refrigeration, at present the most rapidly developing branch of the foodstuff industry throughout the world, is of particular importance for countries situated in a tropical climate.

In a tropical climate refrigerating machines and air conditioners are of great importance. Hungary has adequate experiences in the manufacturing of refrigerators and considerable capacity is available so that the developing countries can be supplied with these facilities in order to raise the technical standard of the production.

An important field where the demands of the developing countries coincide with the possibilities of the Hungarian industry is telecommunication. In the developing countries nearly all branches of the communication system develop more and more. In this the Hungarian industry has participated up to now by the supply of telephone exchanges, however, it is able to establish network of telephones, set up wireless and television transmitters, supply radio and television receivers and equip plants producing these apparatuses. A number of incandescent lamp and neon tube factories of Hungarian make are operating in developing countries with good result.

In addition to the supply of large and complex equipments the growth and industrialization of the developing countries can also be furthered with the supply of the products of the engineering industry which are not closely related to the realization of some large industrial projects or co-operation on a wider scope. Such are different kinds of serial machines as e.g. machine tools, compressors and pumps. The products of the Hungarian instrument industry could also play an important role on the markets of the developing countries.

Experiences prove that special care must be devoted to meet such requirements, as for example adapting the finish of the machines and equipments to special climatic conditions. Tropicalization might require to search for specific technical solutions in each case separately.

When there is a question to export machines with intricate mechanism whose handling is complicated, these due regard should be given to the technical culture of the operators which should be above the average technical level of the given developing country. When these circumstances have not been taken into account it happens sometimes - if the handling and repair of the exported machines is complicated - they become easily unfit for use even if the construction is good and the quality adequate. In view of this it is sometimes more convenient to export machines which can be easily manipulated.

In order to accelerate the industrialization of the third world it does not suffice to merely sell machines. The latter must go hand in hand with the training of the staff, and services and the supply of component parts must also be organized. This, of course, is easier said than done and the problems connected with it can only be solved with the collaboration of the local authorities.

This goes to show that the export of investment goods is not concluded when the transport is effected because close connections must be kept up later too. It is in the interest of both the developing countries and the exporter that further services should be developed after the contract for the delivery of machines and equipments had been fulfilled.

In the economic relations with the developing countries the supply of complete equipments is of considerable importance. In this case in addition to the value of the machines and equipments, considerable intellectual export can also be transacted. There is an increasing demand for complete equipments



in the developing countries probably due to the fact that they are not in command of sufficient professional skill, planning capacity, technical experiences and frequently the organization framework is not yet suited to establish new plants or new industrial branches independently.

It is no mere chance that countries at the initial stage of economic development require that exporters or entrepreneurs should hand over the equipments in an "all set for the start" state. This means that the supplier has to provide for all factors that are necessary for the efficient operation of the project. This, of course, enhances the responsibility of contractors and expands the scope of the supplied equipments and services connected with it.

Hungary has exported hitherto complete equipment in a small way only and has never yet undertaken the obligation to hand over a project in a "turned key" state. In the future, however, we must endeavor to join in this venture which is, of course, connected with greater risks.

However, in order that these transactions should be fruitful for both partners several factors have to be taken into consideration. For example, the preliminary data and the technology to be applied in the planned project must be chosen and determined with utmost care. One cannot rely in every case on the suggestions of the purchasing partners because the local managers have not always a good grasp of the situation when it comes to decide on the character and the economically efficient dimensions of a plant. It is a matter of course that one has to come to an understanding with the local managers regarding the demands.

From the aspect of the investor it is important to carefully weigh and determine the refundment of costs. For example, the raw materials to be found on the spot, the number and qualitative level of the available manpower, the intensity of work there and whether there are local firms suited

for co-operation, adequate auxiliary materials, and - from the aspect of the investment - local selling and purchasing possibilities and several other questions as well must be taken into account.

Experiences show that the equipment to be delivered must be tested beforehand even if this should cause considerable additional charges. If it turns out ultimately, after delivery and installation, that there are flaws in the equipment, the surplus costs of repairs on the spot will be far higher - not to mention the fact that the exporting firm may lose its good reputation.

The supply of complete equipments requires extensive technical collaboration and the contribution of great many experts. Hungarian productive firms must employ a large number of specialists in the developing country in which a plant is to be established.

In the supply of complete equipments to developing countries credits have an important role as equipments can, in general, only be sold if long-term credits are granted.

Hungary's capacity in granting credits is, of course, not unlimited. On the other hand the credit needs of the developing countries are on the increase; in recent times they ask, in addition to the credits granted for the machines and equipment, that the building material, the wages needed for building and installation and technical assistance, should also be given on credit, moreover, they wish to obtain various consumer goods on credit up to the value of the purchasing power of the wages.

These demands of the developing countries are understandable for their own economic resources do not suffice to solve the many economic tasks that ensue from industrialization. Hence, they are obliged - if there is a possibility - to have recourse to credits for being able to cover the total costs arising from the construction of a plant.

For the reason, to mention no other, that Hungary's possibilities in granting credits are restricted it is necessary to collaborate with other developed countries in the establishment of large-scale projects and complete factories. In this regard Hungary should take socialist countries into account in the first place for their aims are guided by the same endeavours.

We consider the collaboration between Hungarian firms and enterprises of developed western countries a positive phenomenon, a view that hitherto has already been supported by successful practical example.

From what has been said earlier it appears that preliminary steps have already been taken for establishing economic relations between the developing countries and Hungarian enterprises and that the experiences gained hitherto are a good basis to put collaboration on a broader basis.

The evolution and the dimensions of the unfolding of a collaboration on a broader basis is influenced by several factors. One of the most important factors is the extent of evolution and development of the Hungarian economy for it influences Hungary's capacity of supplying goods and granting credits to the developing countries.

The prospective economic development between Hungary and the developing countries will bring about conditions under which the increase of imports - and changes in the proportion of trade as well - might be mutually advantageous. Although this increase may take place independently from schemes, considerations and measures can influence its speedy and smooth realization.

•••



