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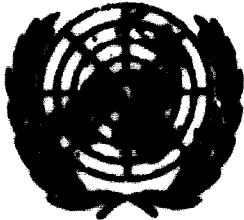
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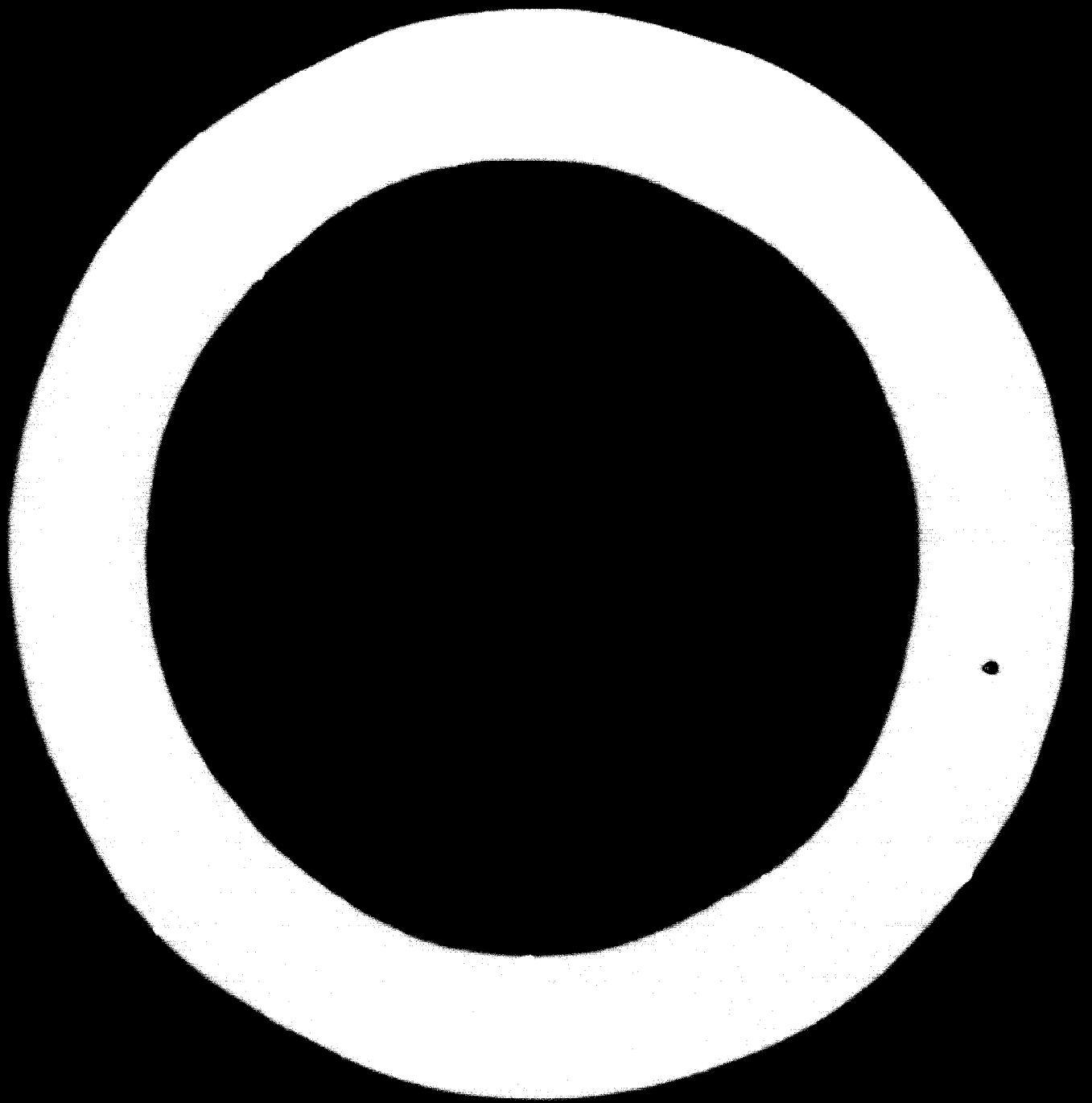
STUDY ON THE OPPORTUNITIES FOR SUBCONTRACTING
MANUFACTURING ACTIVITIES OF THE CSSR INDUSTRY
WITH INDUSTRIES IN DEVELOPING COUNTRIES 1/

by

Ladislav Riba
Ministry of Construction and Technology
Prague, CSSR

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Study on the opportunities for subcontracting manufacturing activities of the USSR industry with industries in developing countries

1. In order to explain the approach applied in the study it is necessary, as an introduction, to clarify the term subcontracting. This term, as it has been fixed in the practice of individual countries and in the international economic relations can be distinguished in three contexts:
 - a/ subcontracting understood as a subsupplier activity of a subcontractor for a certain final supplier - contractor in the frame of an industrial or economic activity accomplished in one country. These are e.g. subsupplies accomplished in the frame of investment activity, in the production of certain machines and equipments etc.;
 - b/ subcontracting accomplished in individual projects on the basis of a development programme. In this connection a specialized commissioned agency - when solving a certain development programme in a given country - selects a specialized firm that in the capacity of a subcontractor fulfils a given task for the developing country. This term is used especially for the preparation of development programmes, for working out investments projects etc.;
 - c/ international subcontracting accomplished with the informational assistance of UNIDO when an enterprise, firm or organization in a developed country acts as a contractor and an enterprise, firm or organization in a developing country acts as a subcontractor - sub-supplier of a certain production for the contractor.

The contractor, as a rule, ensures the final completion of the products and their sale. Between the subcontractor and the contractor a whole series of economic relations can result which we mention in individual parts of this study. When we speak in this study about the subcontracting activity we have in mind the latter form, viz. the international subcontracting.

2. As to the appreciation of possibilities of CSSR to join in the international subcontracting activity we start, first of all, with the evaluation of the economic development in CSSR until now. Like the whole socialist system, also CSSR reached in the course of socialist building up important success in the sphere of standard of living, production, productivity of labour and development of science and technique.

The industrial production, the productive basis of the national economy increased in the last period in comparison with 1937 about 7,2 times, in Slovakia nearly 24 times. The productivity of labour in the industry increased in comparison with 1946 about 4,3 times. The centre of the development of national economy lay especially in the development of the productive basis of the economy, namely of machinery. With its productive potential CSSR has ranged among the most developed countries in the world and in the socialist camp. The employment of the population has grown intensively (to one of the highest levels in the world) and a full employment has been reached. The national income on one inhabitant in 1970 increased nearly 3,8 times in comparison with the pre-war level and the per capita consumption in the years 1948 to 1968 about 2,6 times. The social and health security of the population has increased. The change-over of the productive relations has been accomplished. In this

connection a rapid development of standard of living and a high level of social security of the population has been achieved. We can characterize the whole level of the Czechoslovak economy by the following indices (see Statistical Year-book ^{CSSR} 1971):

	1946	1960	1965	1970
Number of the population (thousands of persons)	12 339	13 654	14 150	14 334
Population in the productive age (thousands of persons)	7 547	7 634	7 960	8 185
Average number of employees in the national economy (thousands of persons)	5 545	6 063	6 477	7 034
National product (in billions of Kčs)	130,6	348,2	405,6	676,9
National income (in billions of Kčs)	70,2	176,0	178,5	281,0
Shares in the use of national income				
unproductive consumption	92,5	80,5	86,5	76,7
accumulation	7,4	19,5	13,5	23,3
Growth of the social productivity of labour (1948 = 100)	100	246	271	341
Growth of the per capita consumption (1948 = 100)	100	200	232	302
Growth of the industrial production (1948 = 100)	100	372	515	665

From the analysis a high development dynamics and change-over of the economic basis of CSSR is perceptible.

- From the point of view of the industrialization policy and experience of its implementation the process of industrialization of Slovakia is exemplary. The Slovak Socialist Republic with the active help of the Czech Socialist Republic has changed in the last 25 years from a small developed country into an industrialized republic which has expressively contributed to the total increase of the effectiveness of the development in CSSR.

We show the basic data on the development in CSSR, according to the Statistical Year-book CSSR in the following table:

	1948	1960	1968	1970
Number of inhabitants (thousands of persons)	3 446	3 994	4 174	4 329
Population in the productive age (thousands of persons)	2 054	2 193	2 369	2 586
Average number of employees in national economy (thousands of persons)	1 526	1 571	1 709	1 997
Index of the growth of industrial production (1948 = 100)	100	523	753	1 199
Growth of investment works and supplies (1948 = 100)	100	469	572	773

In the Slovak Socialist Republic tens of new industrial enterprises have been built and a series of new productions have been introduced. Much knowledge and experience from the industrialization of Slovakia can significantly contribute to the implementation of the industrialization process in developing countries.

4. In the development of the Czechoslovak economy an important role has been played by the foreign trade. The total value of the national income in 1970 having been 381 billions Kčs the total turn-over of the foreign trade was nearly 54 billions Kčs, i.e. it shared in the national income with nearly 10%. The development of the foreign trade expressively influences the development and the effectiveness of the Czechoslovak economy. CSSR as a country with an uncomplex and limited raw-material basis has to acquire a number of raw-materials by imports and, at the same time, as a country with a limited market, has to increase the specialization and concentration of its production by means of foreign trade. The total development of the Czechoslovak foreign trade is shown in accordance with the Statistical Year-book CSSR - 1971 in the following table (in millions Kčs):

	1960	1968	1970
Turn-over - total	26 964	35 599	53 910
Imports - total	13 072	19 242	26 605
Exports - total	13 892	19 357	27 305

5. From a more detailed analysis it would be perceptible that - apart from the mutual economic, scientific and technical cooperation of CSSR with the Comecon countries - the foreign trade with developing countries is of essential importance for the development of the Czechoslovak economy. The foreign trade relations with these countries are accomplished with due regard to the equality of rights, mutual economic advantage and noninterference with internal affairs. The total characteristics of the foreign trade with these countries is shown according to the Statistical Year-book CSSR - 1971 in the following table (in millions of Kčs):

	1960	1965	1970
Turn-over of the foreign trade of CSSR with developing countries - total	2 814	3 408	4 091
from which Asian	1 408	1 740	2 066
African	746	1 123	1 345
Latin American	660	617	681
Imports of CSSR from developing countries - total	1 279	1 507	1 629
from which Asian	692	696	706
African	330	536	499
Latin American	257	261	434
Exports from CSSR to developing countries - total	1 535	1 901	2 462
from which Asian	716	1 050	1 369
African	416	587	856
Latin American	403	260	247

At the same time the total annual turn-over of the foreign trade with a number of developing countries is somewhere between 300 - 600 millions of Kčs, e.g. with Egypt, India, Iraq, Pakistan etc.

6. The economic relations between CSSR and developing countries are materialized in the foreign trade sphere not only as a business with direct payments and or short-term credits but also in the form of long-term credits (including the state tied credits to promote the industrialization of the developing countries), and further by construction of plants in individual countries (either by participation in the construction or by complex supplies on turnkey basis). In the frame of supplies of investment goods (but also besides them) the technical, technological and other expert assistance is provided, personnel for the operation of new plants is trained, know-how and licences are traded etc. Further, industrial cooperations have been developed recently with financial and management participation.

The cooperation in these spheres has taken place practically in all fields of national economy. Very important are e.g. the supplies of Czechoslovak equipments for the constructed plants in the sphere of fuels and energetics, ferrous and non-ferrous metallurgy, a number of machinery branches, foundries, a number of chemical concerns, enterprises of food and consumer's industry etc. Important are also Czechoslovak supplies of equipments for communications techniques, transportation, building machines and machines for the production of building materials, e.g. cement works, etc. In these and further spheres CSSR has gained important experience and its external relations with developing countries are still being extended and intensified. The existing knowledge and experience create also favourable conditions for further development of various forms of relations between CSSR and developing countries.

7. Favourable conditions in this sense are also created by the existing state of the Czechoslovak economy not only in the raw-materials sphere but also, from the view of subcontracting possibilities, in the sphere of man-power resources.

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As follows from already mentioned data, the existing state of the Czechoslovak economy is characterized by a relatively high employment of population (about 45%) and relatively exhausted resources of man-power. From the data that we have shown it follows that CSsR has relatively low population and man-power growth and relatively exhausted resources for further increase of employment. The development of employment in individual branches of national economy is shown according to the Statistical Yearbook 1968 - 1971 in the following table (in thousands of persons):

	1963	1970
Man-power resources - total	6 356	6 557
Employees in national economy	6 477	7 034
from which: industry	2 480	2 646
building industry	621	606
agriculture	1 262	1 183
forestry	104	104
transportation	332	376

The above analysis shows that the biggest quantity of employees is in the industry and a more detailed analysis would show that it is in machinery and consumer's industry. Here, however, are concentrated highest demands for man-power in the future. At the same time, long-term prognoses show the possibility of a very insignificant increase of population and employment in the national economy; they will have to secure the development of the tertiary sector and a possible further reduction of working time. It means that in the productive sphere and in the industry in particular the Czechoslovak economy cannot count with further resources of man-power and already at present the increase of production in the industry is accomplished in 90% by the increase of the productivity of labour.

These tendencies are taken into account also in the fifth fiveyears plan of the development of the Czechoslovak economy. The objective, therefore, is that the Czechoslovak economy must in its further development assess carefully the development of those branches and spheres of production that have high demands of man-power. Apart from the increase of the productivity of labour, it is necessary to search for new ways how to solve this problem. One of these ways can be indeed the intensifying of industrial cooperation with developing countries accomplished in the form of international subcontracting between CSSR and developing countries in those spheres that would be economically and mutually advantageous for CSSR and for developing countries.

8. At the same time the five years plan for the years 1971-1975 reckons with further rapid development of external economic relations that would be expressed by an increase of the total turn-over of the Czechoslovak foreign trade by about 36 - 38%. In accordance with it a further increase of the foreign trade with developing countries is expected. This growth creates extensive opportunities not only for mutual increase of imports and exports between CSSR and developing countries but also for a more extensive use of various forms of foreign trade relations including the industrial cooperation. In this frame, therefore, not only imports of raw-materials from developing countries but also increase of imports of industrial goods to CSSR are expected.

9. International subcontracting, as it is conveyed in the UNIDO documents, includes a relatively broad scope of activities from simple commercial operations to investment participation in building plants, technical assistance, training of personnel and so de facto contributing to the industrialization of developing countries. International subcontracting is closely linked up with further programmes

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like assistance in product adaptation of developing countries for exports and investment promotion. Together with the programmes of technical and technological assistance, the operations of UNIDO create a number of opportunities for the development of economic, commercial and industrial co-operation. This extensive approach to the international subcontracting activity and co-operation is from the view of its development very advantageous because it enables, in accordance with specific conditions, to use the most suitable forms of this activity and in this way to ensure the necessary and mutually advantageous effectiveness of subcontracting relations. From the view of use values of products it is also favourable that it enables developing of these relations as to individual products or to their individual parts or partial components or special complements of final products.

This broader approach to the utilization of subcontracting relations creates conditions for their more extensive application between individual enterprises, further between enterprises and banks (i.e. the participation of the financial sphere in this field) and if need be other organizations and institutions. It is favourable that it enables the development of this activity not only bilaterally, i.e. between two countries but also multilaterally, i.e. in certain cases between some more developed and developing countries for a production of a certain product.

10. When analysing possible advantages of international subcontracting for the developing countries and also for CSSR it is necessary to proceed from possible general advantages and risks of subcontracting relations. The subcontracting activity can have favourable consequences for developed countries as well as, especially, for developing countries.

As to the developed countries it can bring about possibilities of effective production of such products that require extensive utilization of labour (in developed countries there is, as a rule, lack of man-power), and, furthermore, of such products for which it is necessary to import raw-materials from developing countries (namely raw-materials with high transportation costs or with high waste during the production process or raw-materials with low durability and with a considerable risk of their deterioration) etc.

At the same time, the international subcontracting enables also the desirable completion of some technically very difficult products by a number of complements the production of which does not require highly qualified labour.

As to the developing countries the international subcontracting enables to increase the production, to extend the industrialization, to increase the employment and, in this way, the standard of living in these countries. Favourable are also the consequences for the increase of the qualification of the population and thus for the growth of the general cultural level. From the economic point, important are the possibilities of increasing exports, stabilizing sales of products, further increasing specialization of the production, increasing technical level of produced products, technical, technological and economical level of production, transfer of experience from the management of enterprises etc. are also important. It is also often the case that with the transfer of the production processes production experience is transferred which strenghtens the level and tradition of enterprises in developing countries and thus opens them broader possibilities in the world markets.

International subcontracting from these points of view extends mutual opportunities of economic, technical and scientific co-operation of USSR with developing countries with a view to production co-operation.

The development of international subcontracting creates in this way conditions for further extension of the foreign trade between USSR and developing countries and for the increase of exports from developing to socialist countries. Finally, this form of co-operation enables utilization more extensively of the common endeavour of USSR and developing countries for the economic, technical and scientific development and for an acceleration of the economic growth in developing countries.

11. These questions are intensively studied by competent organizations and some proposals are elaborated for international subcontracting relations between USSR and developing countries. Also a number of specific cases have already been experienced. Prospectively a number of opportunities arise especially in the light-industry, first of all in the textile industry, further in machinery and other sectors. Special attention to all these questions is given by the Committee for the Co-operation with the UNIDO which is an advisory organ for the questions of the Czechoslovak participation in the operational activity of UNIDO and further by the competent enterprises of foreign trade.

Favourable conditions for the development of the subcontracting activity have been also created by the meeting of the representatives of Czechoslovak organizations with the Chief of Export Industries Section, Industrial Policies and Programming Division of UNIDO, Mr. M. Franek. In this meeting in which the representatives of Czechoslovak state organs and of selected foreign trade organizations took part the basic questions of the subcontracting activity were clarified and thus the conditions for their further development between USSR and developing countries have been strengthened.

12. A successful development of the international subcontracting calls also for creating preconditions for the removal of possible problems and risks of this activity. These are especially problems of reaching the desirable quality in the production of respective products, further problems of some differences in technical standards between individual countries, some problems resulting from the foreign trade operations. Furthermore, it is necessary to solve some connected questions, e.g. increase of the raw-materials output and of production of material for the production of co-operated products etc. Furthermore, it is necessary to keep in view a whole complex of financial problems, e.g. financing of some enterprises and guarantee of their effective development, questions of economic risks, participation in the profits between the contractor and subcontractor etc. Special attention must be given to the quality of management of subcontracting enterprises, especially to the qualification and experience of the management personnel etc.

It is necessary to have all these and other problems in mind when developing international subcontracting relations so that individual actions may be effective and may help to extend these relations. At the same time, it has to be kept in mind that a realization of some ineffective actions could deteriorate the whole concept of international subcontracting. Solution of problems creates preconditions for a successful development of international subcontracting relations between CSSR and developing countries.

13. As to the relations between CSSR and the developing countries it is necessary to respect legal norms of CSSR and the state of accomplished relations with developing countries. These relations are, as a rule, based on negotiations of bilateral intergovernmental committees, or on other official economic and commercial negotiations. At the same time, the organizational structure of the Czechoslovak industry and foreign trade has to be respected. The Czechoslovak industry is

composed of big production units (as a rule sectors-wise) having tens (thousands) of employees and directed by general directorates. The said organizations of concern, trust or combination type have, as a rule, their own sales, design, research and construction bodies. A number of these organizations and big enterprises have a long tradition and represent, therefore, favourable partners for the industry of developing countries.

Foreign trade relations in CSSR are materialized through the organizations of foreign trade which also act for CSSR as the partners of foreign commercial and industrial organizations. These organizations are big enterprises with considerable experience in the organization of external economic relations. The development of international subcontracting activity has to count with the participation of the organizations of foreign trade and of the industrial organizations. It is necessary to establish first contacts through the organizations of foreign trade.

Foreign trade organizations in CSSR are directed by the Ministry of Foreign Trade. Czechoslovak industrial enterprises and their superior organs - general directorates - establish direct foreign trade relations only exceptionally and, as a rule, with the participation of foreign trade organizations.

For individual sectors and branches that could be connected with the international subcontracting activity these enterprises of foreign trade are of significance:

- KOVO is a sole exporter and importer of products of fine machinery: bureau machines, printing machines, laboratory apparatus, measure and telecommunication techniques, complete wireless and television studios etc.;
- MOTOKOV deals with the trade of motor cars and lorries, busses, tractors, motorcycles, car outfit, complex service stations and car repair stations etc.;

- **PR. GUINVEST** is a foreign trade enterprise for imports and exports of machines, machine equipments and capital goods, e.g. diesel engines, diesel generating sets, industrial cooling equipments, air channels, traction apparatus, cranes, trams and trolleybuses etc.;
- **SKODAEXPORT** exports and imports mainly investment units in these branches: steam energetics, nuclear energetics, smelting and metallurgical equipments, machinery plants, machines and equipments of tobacco industry, electrical locomotives and trolleybuses etc.;
- **STROJEXPORT** deals with exports and imports of machines, equipments and investment units for construction, road & terrain works, for open and deep mining and for treatment of coal and ores, for geological survey, for geophysical and hydrological works, for railway, urban and river transportation works, for water works etc.;
- **STROJIMPORT** exports and imports especially machine-tools, cornice brakes, tools and measuring instruments, wood-machining machines, and investment complexes for manufacturing industry etc.;
- **TECHNOEXPORT** is an exporter and importer of machines and equipments for chemical industry (oil refineries, petrochemical plants, fertiliser production, rubber and paper industry) and for the food industry (beets and cane-sugar mills, distilleries, breweries, mills, bakeries, dairies) and exports and imports projects and licences, provides technical assistance, implements the construction part of the projects etc.;
- **CENTROTEX** exports and imports cotton and linen goods, wool tissues, printed cotton and silk tissues, furniture tissues, velvets, carpets, blankets, knitted goods, clothing etc.;
- **Československá KERAMIKA** deals especially with the exportation of grinder products, technical porcelain, basalt products, heat resisting products, china and ceramics etc.;

- CHEMPOL is a sole exporter of products of the Czechoslovak chemical, pharmaceutical and cosmetic industry; it further imports rubber, chemicals, resins etc.;
- EXICO exports especially leather, textile and rubber footwear, sporting shoes for all kinds of sports, leather and textile gloves, igelit, rubber and leather confection, imports leather etc.;
- JABLONEX exports mainly glass and metal jewellery, pearls, glass buttons, Christmas garnitures, artificial flower and fruit;
- K.A. EXPORT exports and imports especially fur raw-materials, fur coats and linings;
- Commercial activity of MERKURIA involves exports and imports of consumer products. They export: hand workshop tools, agricultural tools, lamps, household tools, enamelled oven-ware, products from plastic materials, clocks, cameras and microscopes, cooling equipments of middle capacity, equipments for large kitchens and large laundries and chemical drycleaner's etc. The imports include: tools, cooling techniques, electrical and gas engines, photo-cinema materials, optics, clocks etc.;
- PRAGUE EXPORT deals with exports and imports of toys, sporting materials, bureau equipments, leather fancy goods and other consumer goods;
- LIGNA exports especially logs, poles, pulpwood, sawn wood, log-houses, matches, boards, furniture, cellulose, paper, products of paper; imports wood, cork, paper etc.

In addition further enterprises and organizations of foreign trade exist in CCSR.

At the same time, we presume that establishing co-operation relations in the world is often very complicated. It often happens that it does not use to be a simple relation of two

partners (suppliers of machines, technology, know-how, owners of licenses, consultants, financial experts, customers etc.).

It is natural that in spite of the strong concentration of a number of these activities and of the removal of duplicities in socialist countries it will be in a number of cases a matter concerning more organizations and a proposal of co-operation will have to be simultaneously considered by more enterprises and organizations from many different angles.

14. A substantial assistance in developing international subcontracting activity in CSSR can be provided by the Czechoslovak Chamber of Commerce. Its members are all Czechoslovak foreign trade enterprise, big industrial enterprises and important Czechoslovak economic institutions. The Czechoslovak Chamber of Commerce in many ways helps to establish and develop enterprises and other institutions that are engaged in the foreign trade. It cooperates with foreign Chambers of Commerce and other organizations of a similar character, supports exchange of information on opportunities of the foreign trade with CSSR etc. Its activity, therefore, helps in establishing foreign cooperation, technical, scientific and investment contacts so that in many fields of international subcontracting its activity can be very useful.

15. In the sphere of technical and scientific relations the foreign trade activity is realized by the foreign trade enterprise POLYTECHIN. It transacts mediation of a scientific and technical co-operation, trades licences and patents, technical documentation, technological procedures and production experience, acts as an agent for consulting and engineering services in all fields of investment and industrial activity etc. Further, it negotiates preinvestment

activities - subcontracting and expert services for the technical assistance of UR. It sends also Czechoslovak scientists, technicians and economists abroad and arranges training of foreign fellows in the Czechoslovak factories, research institutes and other places. In these ways it can participate in developing international subcontracting activity.

16. As to the whole development of international subcontracting activity and the development of co-operation of Czechoslovak industrial enterprises with the enterprises and organizations in developing countries in the field of industrial co-operation the Joint-Stock Company for Foreign Trade FINCOM can play an important role. This company is engaged in the economic participation (it organizes financing and capital participation in enterprises abroad) to support the Czechoslovak foreign trade in this country and abroad. Its activities are very close to commercial operations of the international subcontracting which creates favourable conditions for its active participation in this field.

FINCOM has in this sense a fair qualification for the co-ordination activity in the field of international subcontracting. At the same time FINCOM - as a commercial and financial enterprise for the support of foreign trade and foreign investment - has close relations not only to foreign trade enterprises but also to industrial enterprises, research and design institutes and other economic institutions in CSSR. The contents of FINCOM's commercial activities create preconditions for its positive activity as a co-ordinating place in CSSR for international subcontracting. FINCOM is a joint-stock company that is engaged in short-term financial business and in long-term investing abroad by means of joint ventures, financial participations, organization and co-ordination of industrial and commercial co-operations of a complicated type. Besides these financial

operations FINCOM renders its clients either in CSSR or abroad, financial service, consulting and also auditing services.

17. When considering more complicated forms of co-operation relations related especially to the construction of new plants or to the modernization of the existing ones a rational investment policy begins to be significant. From this view, it is important, first of all, to join the international subcontracting with the design of new or modernized plants by the contractor (or by another organization in the developed country), and, further, to provide supplies of basic machinery and sets. In this connection, it is possible to use for simpler production that does not require high qualification used (secondhand) machines and equipments (from capacities that would be reduced in a developed country to enable the introduction of a certain production in a developing country). It makes it possible to reduce investment costs of plants and to use sufficient number of man-power in developing countries.

18. For the international subcontracting activity good conditions in CSSR can be created by the existing experience of design and engineering enterprises and organizations. These have worked out a number of successful projects of enterprises built in developing countries.

Such an enterprise is e.g. KOVOPROJEKTA Praha which is a design, engineering and consulting company. It supplies complex project units and render engineering and consultant service for the construction, reconstruction and modernization of machinery and electrotechnical plants or factories, further metallurgical factories etc. In the scope of its activity one can find sectors of heavy, and electrotechnical machinery, industrial transportation equipments, motorcar and tractor industry, aircraft industry, mechanical engineering, light engineering etc. Similarly, further Czechoslovak

design and engineering organizations are engaged in design and consulting activity in further sectors of national economy, e.g. CENTROPROJEKT Gottwaldov is engaged in designing plants of consumer's industry etc. A number of Czechoslovak organizations are engaged especially on problems of the rationalization activity and on elaboration of rationalization projects in the sphere of production and in the sphere of management. Such an organization is e.g. the company for rationalization and management in machine industries ORG. PROJEKT Praha that proposes rationalization and modernization actions for industrial enterprises in USSR and abroad. The rationalization of the production, organization and management is always proposed after an analysis of the present state of production, which is followed by the elaboration of the project and the participation in its implementation.

USSR has relatively extensive capacity of design, engineering and consulting enterprises and organizations which are at disposal. The activities and experience of these organizations and enterprises can considerably contribute to the development of the international subcontracting activity especially in those cases where this activity will be joined with the construction or modernization of enterprises in developing countries, with their design, inspection of implementation and with the application of higher co-operation relations.

In connection with the design of plants it is useful to secure the creation of a healthy living environment, to propose broader relations of location of individual plants in the territory and to secure the whole rational solution of relations in the territory. Even though these problems do not have priority importance in developing countries up to now as they do in developed countries they still successively call attention. It is, therefore, in a number of cases advisable to elaborate complex territorial or regional plans

taking into account the possibilities of the territory as well as those of the country. These plans propose the organization of productive and non-productive activities in the given territory, infrastructure, care for environment etc. In this sense considerable experience has T&PLM, Czechoslovak Institute for Regional Planning in Prague, who works out regional plans and special location studies for individual regions in USSR as well as for a number of developing countries.

It may be, therefore advisable in some cases to support the international subcontracting activity by the territorial planning activity and thus to ensure its complex and highly perspective effectiveness. At the same time, it is necessary to evaluate some further broader aspects, e.g. relations to the whole development of the economy in the developing country, possibilities of a rational use of its natural wealth, creation of infrastructure in the country etc.

10. In this connection it is desirable to present a short information on the system and preparation of the investment process as accomplished in USSR. This preparation follows, as a rule, the long-term concept and is applied in the so-called preparatory and project documentation. The whole structure of this documentation is shown on the scheme below:

Preparatory and project documentation

Project study deals with the main (technical, economic, architectural, territorial etc.) features of the investment projects, and with the time co-ordination of the preparation and implementation of individual project units/elements

Feasibility study

(Basis for the decision on usefulness, necessity and effectiveness of the project, its location, financing and provision of material)

Project document

(Complex technical, economic and architectural solution of the project)

Contains: - design
 - budget

Executor: Chief design and engineering consultant
 , design and engineering organization)

Complex project solution

(Basis for negotiation of approval of the project for implementation contracts, credit contracts and enlistment of the project into the operational plan of investments)

Final project

(Basis for the construction, for assembly preparation and for the supplies)

Next phase of the investment process is the implementation phase which works with the so-called implementation documentation. This is formed by the supplier documentation (designs etc.), further by construction and assembly diary (record on progress of the works on the site, their

quantity and quality) and, finally, the documentation of the erection of the building. For some important projects special deadlines of the construction works are worked out and the progress of the implementation is controlled by the central bodies according to these deadlines.

Considerable attention is also given to the technical and economic evaluation of the project (we mention these questions in another part of this study).

The preparation and implementation of the projects are guided by an implementation plan. This plan contains:

- time plan by units and operation processes;
- start of the production and measures to secure the deadline;
- data on value of individual works and supplies (if required);
- delimitation of the construction plot, concept of social and operational facilities on the site;
- agreed supply system and specification of necessary imports;
- requirements for complex testing of operation and guaranty tests.

An essential part of the project is the budget documentation that distributes total investment costs by individual items and by individual units. On the basis of the so-called partial budgets a total budget of the building is worked out which contains:

- project and survey works,
- operational sets including supplementary budgetary cost,
- buildings including supplementary budgetary costs,
- machines, equipments, tools (capital goods),
- art works,
- subsidiary budgetary costs,
- other budgetary costs,

- budgetary costs,
- budgetary reserve,
- 4 budgetary costs and expenditures not included in the price of capital goods.

Tender budgets include basic budgetary costs, supplementary budgetary costs and subsidiary budgetary costs.

In the realization of the construction works so-called supply relations are applied. During the construction works the general designer carries out the inspection the aim of which is to assess and confront whether the construction works run according to the project. At the same time, the investor carries out the inspection on the site the aim of which is to control the volume, level and quality of supplies, adherence to construction terms, adherence to contracts and contract terms, control the volume and quality of works carried out etc.

An important control function on spending financial means is fulfilled by the bank and central bodies.

When working out the preparatory and project documentation for abroad Czechoslovak organizations apply experience of Czechoslovak practice, experience of projects worked out for foreign partners and valid rules and principles in countries for which the projects and further documents are elaborated.

20. A great importance in connection with the development of international ^{sub}contracting and with the realization of the scientific and technical cooperation has also the licence policy. In many cases the international subcontracting business will be linked with licence agreements, or know-how. In this sphere it is necessary to take into account the domaine and the exact characteristics of the licence, the

progressivity of technical solution, the possible length of duration of the licence agreement, possible volumes of production of technically progressive products and their exports to the country of the contractor as well to other countries, further questions of sublicences, problems of the quality of raw-materials for the production of licenced products, legal and economic questions etc. Important is also the difference between industrial and commercial use, assessment of the quality of licenced products and consequences of nonadherence to this quality etc. At the same time it is necessary to specify the form of licence payment, e.g. one payment or successive fees in dependence on the volume of production, or a combined form, or another way (e.g. in the frame of the subcontracting agreement to include the licence fees into the price of subcontracted products).

The importance of the technical assistance carried out by experts both in the developing country (when introducing new productions) and in the developed country (when training technical personnel and workers from the developing countries) should be mentioned in this context.

CSSR pays (in frame of its scientific and technical policy) great attention to the problems of the trade with licences. Especially in the last ten years Czechoslovak licence trade has extended considerably. The licence policy touches practically all fields of the national economy and, above all, those which are practical from the Czechoslovak standpoint for the subcontracting activity.

21. The licence activity of CSSR is connected with the activity of the research basis. In CSSR some 150 000 employees work in the research and means spent in research surpass 3% of national income. In CSSR many problems have been solved which represent the top world technical level. These are e.g. some textile technologies and textile machines, machine-tools and equipments, health technique, medicaments etc. Many technically progressive solutions have been rendered

by CSOR in the form of licences to industrially developed and developing countries.

The results of research in CSOR achieved so far and the development of licence trade create preconditions for the useful combination of subcontracting relations with the licence policy in those cases where it will prove necessary and effective.

22. At the same time, it is desirable to examine the effectiveness of international subcontracting relations. It is possible to appreciate this effectiveness by comparing benefits (savings of social labour), which result from the realization of subcontracting, with incurred costs (part of which are investment costs). It is possible to express the effectiveness /E/ e.g. by this formula:

$$E = \frac{C_1 - C_2}{K}$$

where C_1 are annual costs (production and transportation) before subcontracting

C_2 are annual costs (production and transportation) after subcontracting

K are costs of the subcontracting.

Reciprocal value is represented by the time of return T:

$$T = \frac{K}{C_1 - C_2}$$

If it brings about an increase of the quality of products where the effectiveness will influence the price /P/ it is useful to calculate according to the following formula:

$$E = \frac{(P_2 - C_2) - (P_1 - C_1)}{K}$$

$$T = \frac{K}{(P_2 - C_2) - (P_1 - C_1)}$$

In timely differentiated relations it is useful to respect in the calculations the factor of time by discounting individual values in time. It is possible to compute all calculations in national or world currencies.

In all these analyses it is necessary to take into account wage, tax, tariff and other differences in different countries that can influence the effectiveness. At the same time it is necessary to take into account the increased demands on labour, e.g. the increase of transportation costs etc. Beside these aspects great importance have the noneconomic effects and consequences.

The total effect of international subcontracting relations is divided in an agreed proportion through prices between the subcontractor and the contractor.

23. A broader use of international subcontracting relations and their mutual economic advantage for USSR as well as for developing countries is conditioned by a number of economic, technical, organizational and other preconditions, especially:

- a/ by the attainment of a necessary quality of products in developing countries so that these products may become economically effective as component for the final production in USSR and would not deteriorate the quality and technical parameters of final products;
- b/ the attainment of necessary qualification of workers in developing countries so as to guarantee not only the desirable quality of the production but also the necessary economic effectiveness of this production, i.e. the economical use of raw-materials, the necessary productivity of labour etc. In other words the subcontracting activity must be economically advantageous for the developing country and this advantage must not be depreciated by the eventual low qualification;

- c/ necessary level of qualification of the technical and management personnel so that the greenfield industrial process may be accomplished with the necessary organizational and management level and to guarantee its fluency and its total sufficient level;
- d/ providing for necessary sales of products if the volume of production of a given capacity trespassed the agreed sales opportunities between the enterprise in the developing country and the enterprise in CSAR; this problem is very important from the point of view of the total effectiveness of the production and of the usefulness of the subcontracting solution for the developing country;
- e/ providing for the sufficient quantity of fuel and energy and raw-materials (on the basis of a reliable geological survey) not only quantitatively but also qualitatively, i.e. providing for such raw-materials that are qualitatively suitable for the given production and give guarantee of good parameters and of desirable valorization of the final product;
- f/ providing for necessary natural resources, i.e. especially for water etc. and survey of possibilities of supplementary perspective resources for the possible extension of capacities;
- g/ evaluation of consequences of the respective production to the whole quality of living environment, e.g. to countryside, water, air etc. and evaluation of possible costs on liquidation of these negative consequences, i.e. desulphurize equipments, installation of catchers of solid emissions, purification of waters etc.);
- h/ evaluation of complex preconditions that have to be accomplished for the effective function of the investment in question especially in the sphere of accompanied investments, e.g. investments in communications, housing etc. which condition the whole operation of a certain investment and its effectiveness.

24. At the same time, a great importance has a right selection of the production as to the interests of the developed country as well as of the developing country. From the point of view of the developed country the concern is that this production may help to solve some of its problems resulting from the high degree of industrialization (e.g. the said lack of man-power) and that it may follow its production and trade needs. At the same time, if the capitalist enterprises seek, above all, for profit socialist enterprises aim at strengthening economic development and increase of effectiveness in the own as well as in the developing country, at overbridging the lack of man-power etc. From the point of view of the developing country the concern is that the subcontracted production may follow, if possible, the perspective needs of development of the production and interests of the country and, at the same time, that it may be realized on a relatively needful technical level, i.e. that it may not perspectivevely establish a low technical level that could in the future de facto retard the development in the developing country.

From this point of view it is, in my opinion, needful to assess very carefully the various aspects of selection of enterprises and subjects of activity for the international subcontracting. Together with the evaluation of commercial views it is necessary to take into consideration also some broader questions that are connected with the perspective economic development in both countries which also create conditions for mutual positive evaluation of the international subcontracting activity. These are problems of longterm economic factors as well as problems of social factors, especially continuous increase of the qualification of man-power, development in individual regions of the country, problems of environment etc.

25. In order to make the international subcontracting activity successful it is necessary to solve some important problems from the point of view of developing countries.

Firstly, it is a system of legal conditions relating to the stability of mutual economic relations between individual firms and, at the same time, some necessary economic guarantees for those cases when some problems arise in the economy of production in the developing country.


Secondly, it is a creation of a system of technical and economic guarantees as to the quality of production, quality of used raw-materials for these products and as to the durability and reliance of these products. These problems are very serious because insufficient quality of products produced in the frame of international subcontracting can cause not only depreciation of these products but also depreciation of the whole final production which conceivably can lead under certain circumstances to big economic losses. The constitution of a system of technical and economic guarantees as to the quality of production, used raw- and other materials etc. must be in a high degree influenced by the contractor.

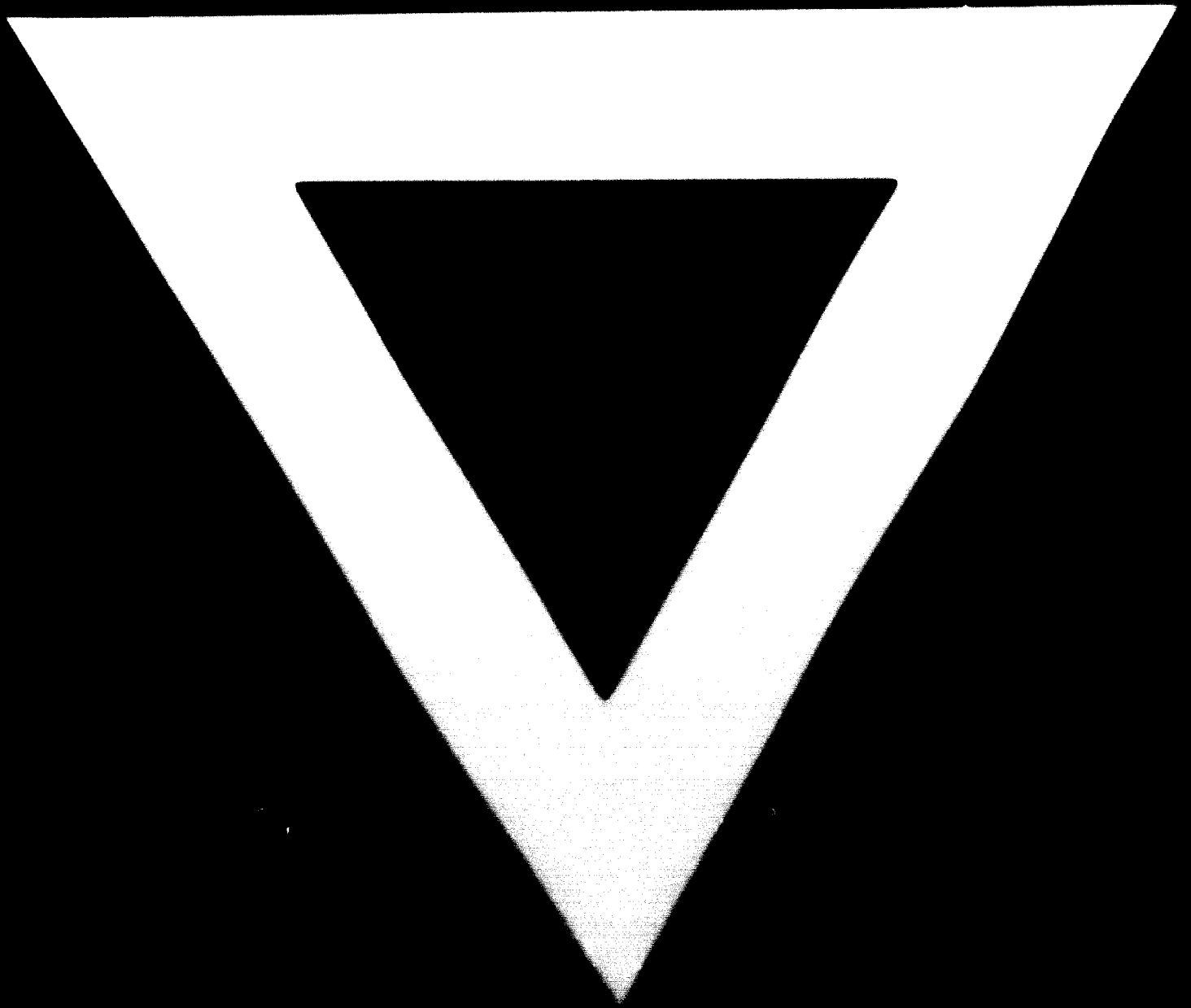
Thirdly, the problem of technical standards as to the identity of standards in the developed and developing country as well as to the technical level and quality of produced products. In connection with it it is necessary to take into account also some specific conditions of production in individual countries resulting e.g. from climatic or other conditions of these countries (problems of durability of products and of consequences of climatic conditions and quality of products.). Further, it is necessary to take into account needs of qualitative adjustment of products or subsupplies for certain countries

(e.g. difficult climatic conditions, special adjustment for these conditions) etc.

Fourthly, it has to be taken into consideration that in rendering technical assistance special questions arise connected with the use of patents and inventions. The main concern is to evaluate possibilities of licensed production; in some cases the right of producing certain products according to the patent documentation may be rendered free of charge in the subcontracted volume or eventually in the broader volume. Further it is necessary to solve main problems connected with the transmission of production and technical experience, e.g. know-how and evaluation of a number of related questions.

It is necessary to assess carefully and often also to clarify a number of these and other questions for a correct and mutually advantageous function of international subcontracting relations. Very important in this connection will be an agreement, on financial or other compensations in case of unfulfilment of conditions on one or another part.

26. According to preliminary investigations it can be expected that Czechoslovak foreign trade and industrial organizations will welcome the opportunity of international subcontracting relations and mutually advantageous implementation of these relations between Czechoslovak enterprises and enterprises in developing countries. Taking into consideration the actual situation of the Czechoslovak economy, viz. relatively limited resources of man-power and need of intensification of national economy, it can be presumed that a number of subcontracting suggestions and solutions will be very suitable and technically and economically interesting. It can be expected that many Czechoslovak enterprises and organizations will not only welcome a number of specific proposals but also will submit their own proposals for the international subcontracting activity.
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