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THE CONSTRUCTION INDUSTRY
A SEPARATE BRANCH OF THE ECONOMY ^{1/}

by

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I. CONSTRUCTION AS A BRANCH OF THE NATIONAL ECONOMY IN CZECHOSLOVAKIA

Construction is a separate branch of material production, where the final products are buildings and constructions of various kinds, such as housing units, production halls, airports, highways, etc., the extraction of some raw materials, /for instance sand, gravel, clay for bricks and earthenware/, as well as the production of construction materials, construction elements and prefabricates.

Construction products are:

- the means of production such as industrial, agricultural, transportation and other plants, and raw materials used in construction such as cement, bricks, stone, etc.
- dwelling constructions of all kinds and various buildings used for cultural and social purposes, which are in the nature of durable consumer goods.

The task of construction is thus to provide the building parts of fixed assets of both productive and non-productive nature, necessary for ensuring extended reproduction, with the aim of satisfying the constantly growing material and cultural needs of all working people. The direct improvement of living standards of the working population is also ensured by the construction industry directly, when it fulfills its tasks in the field of cultural, social and housing construction.

The importance of the construction industry within the whole system of the national economy is reflected in the number of persons it employs. At present, approximately 8% of all employees in the national economy in Czechoslovakia work in construction. In Czechoslovakia construction forms 11,6% of the national income, while all other industrial branches 61% and agriculture 10,5%.

Thus the development of construction is a necessary prerequisite for the uninterrupted growth of all branches of production, the growth of social productivity of labour on the basis of technological progress and thus for an increase in material welfare and the cultural level.

Construction is one of the basic branches, which carries out investment intentions within the national economy.

Investment activities during the last twenty years have played and also at present play a key role in the development of the national economy of Czechoslovakia. Investments are an instrument with which the government can influence the quantitative and qualitative development of the material and technological foundation.

Investment policy, forms a part of national economic policy, which determines the concepts and aims of investment activities during various stages of economic development and thus the development of society as a whole; it also determines relations between those agencies which control investment policy /the government, ministries, productive and economic units and enterprises/ on the one hand and the investor, designer and enterprises making deliveries on the other.

Investment activities represent a long-term process, which begins with the design and preparations of a project on the part of the investor and which is completed by its actual construction and the assembly of the technological parts of the project /including test runs/ and the final evaluation of the project.

The most typical form of investment activity is the construction of new fixed assets for production, which serve for the replacement of obsolete and scraped fixed assets, as well as for the augmentation of fixed assets.

In the process of implementing investment policy, in the course of which construction has a key role to play, we are dealing with an extensive complex of problems concerning the reproduction of fixed assets, the structure and aims of investments, the terms of financing, the territorial distribution of investments from the point of view of utilizing raw material and labour power, the protection and formation of a favorable environment, etc.

Investment construction in Czechoslovakia, which was for the greater part ensured by the development of the construction industry and whose volume at present, during the five-year plan, represents a approximately 500 billion Czechosl. Crowns /Kčs/, has made an important contribution towards economic development. The following table provides an over-all /picture/ according to the Statistical yearbook "Statistická ročenka ČSSR 1971". Some data is in current prices/:

	1948	1960	1965	1970
Number of inhabitants /1000 persons/	12 339	13 654	14 159	14 334
Inhabitants in productive age /1000 persons/	7 547	7 634	7 960	8 185
Average number of persons employed in national economy /1000 persons/	5 545	6 063	6 477	7 034
Social product-/Billion Kčs/	130,6	348,2	405,6	676,9
Formed national income /billion Kčs/	70,2	176,0	178,5	281,0

Composition of used national income:

Non-productive consumption	92,6	80,5	86,5	76,7
Accumulation	7,4	19,5	13,5	23,3
Investments into national economy	12,2	56,6	62,6	88,5
Growth of social productivity of labour /1948 = 100/	100	246	271	341
Growth of private consumption /1948 = 100/	100	200	232	302
Growth of industrial production /1948 = 100/	100	372	515	665

The above figure demonstrate a high degree of development dynamics - for instance an increase in industrial production of over 6,5 times. This growth was accompanied by an increase in investments of approximately 7,2 times.

The structure of investments developed in relation to the needs of the national economy, as well as to existing resources. Construction made an important contribution to the carrying out of investment projects. Total growth can be seen from the following: /according to "Statistická ročenka ČSSR 1971"/

	in billions of Kčs			
	1948	1960	1965	1970
Investment work and deliveries to the national economy	12,2	56,6	62,6	88,5
construction work	9,2	38,0	38,5	54,2
machines and installations	3,0	18,6	24,1	34,3
productive investments	8,3	41,3	46,9	61,8
non-productive investment	3,9	15,3	15,7	26,7

These figures show that while investments as a whole grew 7,2 times, the volume of construction work grew 5,9 times and machines and installations 11,3 times. The share of construction work in total investment costs /which can be calculated on the basis of the data provided in the cable/, is between 60-75% and forms the most important part of investment activities. From the point of view of structure, further analysis would show that the decisive share of investments/ approximately 40-45%, were concentrated on the development of industry, i.e. the process of industrialization.

From the point of view of the industrialization of under-developed regions, where construction played an important role, the size of investments undertaken in Slovakia and the general dynamics of the development of this Republic are very important. The following table provides data, according to "Statistická ročenka ČSSR".

	in mil. Kčs			
	1948	1960	1965	1970
Number of inhabitants /1000 persons/	3446	3994	4374	4529
Inhabitants in productive age /1000 persons/	2054	2193	2389	2586
Average number of persons employed in national economy /1000 persons/	1526	1571	1709	1997
Investment work and deliveries	3,6	17,0	20,8	28,1
construction work	3,0	12,4	13,6	17,9
machines and installations	0,6	4,6	7,2	10,2
productive	2,3	11,7	15,2	19,5
non-productive	1,3	5,3	5,6	8,6
Growth of investment work and deliveries /1948 = 100/	100	469	572	773

The table demonstrate the impact of the growth of investments upon the high level of development dynamics in industry, which ensured a high efficiency of invested resources, the share of construction work was over 60% of all investment costs - thus construction was decisive in the investment process and in industrialization of the economy. In view of the dynamics of economic development, in which investments played a key role in the process of industrialization and in view of the basic importance of construction for ensuring both productive and non-productive investments, the decisive role of construction for the industrialization of every country becomes apparent as well as for the industrialization of developing countries.

In Czechoslovakie successful industrialization was above all the result of the fact that both investment and construction were in harmony with the aims of socialist development, were managed by the government and also by the fact that construction become part of the state sector of the economy, and aquired the form of large and highly concentrated enterprises.

Construction, in its activities within the national economy, is indivisibly inter-connected with all branches of material production, above all with industry, which is the foundation of the economy.

The development of construction to a decisive extent depends upon the development of heavy industry, especially the machine producing industry, power generation and the construction material industry. The machine producing industry provides construction with modern technology, whose use in turn depends upon the electrification of production. The construction material industry provides construction with the main volume of basic raw materials, components, and parts /cement, reinforced concrete, glass, etc./. Construction uses the products of other industries, such as various metals, lumber, electric power, chemical products. Transportation is also of key importance to construction; it is required for the delivery of installations, and raw materials to the construction site.

The development of industry and other branches of the economy is, on the other hand, dependent to a great extent upon the rate of development and size of construction, which participates in bringing about increases in volume and improvements in the quality of fixed assets.

The most active part of fixed assets - working implements - are produced by heavy industry. However, if they are to be put into operation, it is necessary to form the conditions necessary for their functioning. For the normal functioning of machines, installations, aggregates etc., it is necessary to build new or enlarge existing buildings and constructions to prepare the foundations or constructions, to prepare the foundations or constructions for the mounting of installations, to instal, or enlarge the available supply of electrical energy, pipe-line and other communications, and to carry out other work relating to sanitary, technical, fire-prevention and other conditions. Even when installations are placed in existing production space, it is often necessary to carry out a reconstruction of buildings used for production purposes. Placing installations out in the open requires minimum costs as far as buildings are concerned, but even in such cases the necessity of forming other prerequisites for their exploitation is not diminished.

In the construction of buildings from prefabricated components produced industrially a number of construction and assembly operations must be carried out /preparation of the foundation, assembly, the construction of water pipelines, sewerage, electrical installations, etc./.

Production implements can also be commissioned only after the necessary construction and assembly work has been carried out, which again arguments fixed assets.

Construction also forms various objects of a non-productive nature, such as dwelling units, school buildings, hospitals, theatres, clubs and other cultural and social institutions. As a consequence of this volume of non-productive fixed assets grows and the prerequisites for the improved satisfaction of the material and cultural needs of the people are formed.

The task of construction as one of the branches of material production is thus in carrying out a large number of various types of construction and assembly work, which make it possible to commission new fixed assets into operation and to argument existing fixed assets of both productive and non-productive nature.

Construction can be divided into construction for industrial purposes, for agricultural purposes, for transportation purposes, for housing and other purposes, according to the branch for which construction and assembly work is done. Thus in construction for industrial purposes we can for instance distinguish between the construction of power plants, machine producing plants, metallurgical complexes, oil processing plants, chemical plants, the consumer goods industry, food processing plants and plants in other branches of industry; in transportation construction the construction of highways, railways, pipeline installations, airports, the construction of bridges, etc.

From this it also follows that enterprises and other organisational units, whose activities are concerned with construction work /the construction, general repairs and maintenance of buildings and other constructions, work pertaining to fixed assets which are firmly connected with the ground, such as installations, facilities, etc., geological research necessary for the realization of an investment project and the whole field of production of basic raw materials for construction/should also be included in the construction branch.

Besides this construction fulfils yet another important task within the national economy, which contributes to improvement of the environment. This concerns the production of construction materials, which are based on the processing of waste, as for instance when the cinders from electric power plants or slag and dross from metallurgy are utilized. In these cases construction makes use of redundant materials from other productive processes and thus rids society and the environment of superfluous waste.

On the other hand construction and especially the production of certain construction materials must in their production adhere to various measures aimed at the protection of the air and water and against pollution, as well as against noise, which is also a form of environmental pollution, of both a productive or non-productive nature.

In the socialist countries, government economic plans together with directives concerning the development of industry, agriculture and other branches of the economy, determine the tasks for construction.

Construction, as well as all other branches of the national economy in Czechoslovakia, is founded upon the social ownership of the means of production and the collective labour of workers. It is developed on the basis of state plans, which are elaborated according to the principles of the laws governing a socialist mode of production. Construction makes broad use of modern technology, and employs numerous ranks of skilled workers and technical experts. The uninterrupted and from the point of view of the volume of production, the steadily growing flow of production is realised by industrial methods. Thus construction has all the basic traits characteristics of large-scale industrial production.

The basic principles and methods of organisation of socialist production are connected with construction, which has many common traits with industrial production. At the same time however, construction has a number of technological and economic specific traits, which lead to the existence of specific forms of organisation, planning and financing.

It should be stressed, that the content of construction has been subject to change. Thus for instance during the industrialization of construction by such means as prefabrication, etc., work formerly carried out at the construction site has been transferred to permanent plants. Among the processes which have remained at the construction site, the share of assembly work has steadily grown and has, to an increasing extent, become mechanised.

Construction has undergone a long historical development before it became an independent branch of social production. For the socialist mode of production and for the rapid development of the national economy as a whole, the existence of a large-scale, independent construction industry is a basic prerequisite for further development. The intentions of central agencies concerning the development of individual branches of the national economy and the industrialization of various regions could not be carried out if the construction industry were not unified from a production and organisational point of view and were not controlled by central agencies in the sense of fulfilling the investment intentions and targets of the government.

In the socialist countries, for instance in Czechoslovakia, the government controls construction as a branch, up to the level of individual construction enterprises. Construction enterprises carry out their main activity, i.e. construction work for their clients, according to the plan and according to contracts concerning deliveries and sub-deliveries. They also carry out construction work within the framework of their own enterprise. Besides this main activity, construction enterprises may have other activities, among them:

- supplementary production, which includes the exploitation and processing of construction materials, the production of construction components for constructions and for finishing work. This

production is predominantly for the needs of the enterprise itself and usually utilizes local source of construction raw materials;

- auxiliary production, usually includes the centralized /within the enterprise/ production of semi-finished products /concrete mixtures, mortar, etc./, a thermal power-plant, the production of assembly components for casing, maintenance and machine shops;
- auxiliary services, usually include design units of the construction enterprise, the operation of housing, social and other facilities.

All these activities are carried out by the employees of the construction enterprise, partially at construction sites, partially in permanent plants. Construction enterprises also operate their own lorry transportation.

In all construction enterprises, main construction activity can be divided into main construction production and affiliated construction production.

Main construction production concern all basic types of construction work.

Affiliated construction production includes specialized construction work, such as isolation, glass-concrete constructions and work, facing of walls, sanitary and heating installations, painting, locksmith, tin-smith and other types of work. Affiliated construction production can be done either by specialized organisational units or by units which at the same time carry out both main and affiliated construction production. It should be stressed that affiliated construction production, which includes various construction trades, also belongs to the state sector of the economy and is controlled and planned within the framework of the Ministry of Construction by a central agency.

At present the construction branch is managed and planned essentially as a sector having three specializations. Construction production can be classified according to production specializations, in the following manner: buildings, with sub-specializations of dwelling, civil and agricultural buildings; industrial buildings; and engineering constructions with sub-specializations of aquatic constructions and others.

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In view of the importance of construction for the process of industrialization and increasing standard of the people, if this branch is of great importance for the developing countries. Its successful development requires the purposeful, systematic attention and on the part of the government, which places a high priority on its advance. On this basis and hand with the machine producing industry, the process of industrialization can proceed rapidly as can the construction of housing, etc.

II. THE SPECIFIC TRAITS OF CONSTRUCTION AS AN INDEPENDENT BRANCH OF THE NATIONAL ECONOMY

Contrary to other branches of the national economy, for instance manufacturing or others, the development of construction necessitates taking into account a number of specific traits, which are typical for this particular branch.

Buildings and other constructions which are the final products of the construction industry differ from other industrial products or processes by specific aspects, which on the one hand are the result of the process by which they are produced and on the other by the specific traits typical of the final products themselves.

The economics and management of the construction industry are to a great extent influenced by these specific traits, which make it impossible to simply transfer methods used in other industrial branches. From the point of view of efficiency, it is necessary to constantly bring construction production closer to the level of development achieved by other industrial branches, i.e. to complete the industrialization of construction.

The basic traits of construction products and construction processes lead to the following characteristic traits of construction production:

- a/ The individual nature of the majority construction products. With the exception of buildings, each individual construction project has its own specific traits. Each requires preparatory work or at least some part of it, to take place before construction is begun. Each type of construction product requires the elaboration of documentation and determination of the method of construction work /this is the content of the project design/ to be undertaken. It is also necessary to individually determine the volume and price of the work to be done and thus to elaborate an individual budget. For almost every construction it is necessary to work out a special set of technical and economic indicators. The individuality of construction production can, to a certain extent, be done away with by typization and standardization of production. Nevertheless even in such cases the individuality of construction products remains, because even a typified project must be modified in view of local conditions.
- b/ A relatively long production cycle. In comparison to other industrial branches, the production cycle in construction is relatively long. From the point of view of management of construction production and in comparison with manufacturing the situation in construction, as far as financing, invoicing the setting of time stages, etc. is more difficult.

For this reason the shortening of the period of time necessary for the completion of a construction, with the help of progressive organisation methods, has become an important economic task in this field.

- c/ The mobility of construction production and the immobility of the products. Contrary to other industrial branches, construction production is usually immobile, bound to a particular site, while the process of construction is constantly moving. The product itself is at the same time the place of work. After completion of the construction, work is completely terminated and is moved to an entirely different site. This specific aspect brings with it a number of problems, as far as management is concerned, which do not exist in other branches of the economy. This concerns above all higher demands made upon the organisation of work and production, as well as the necessity of solving the problem of stabilization of a cadre of skilled construction workers, who must be transferred from one construction site to the next. It is also necessary to invest financial resources into various facilities necessary for the functioning of the construction site. Finally in the management of construction a new element appears, i.e. the participation and increased role of territorial /local/ bodies, especially when dwelling and civic construction is taking place. The mobility of the process of construction brings with it a number of specific problems which must be dealt with when problems of concentration and specialization are being solved and when the localization of plants for the production of prefabricated components is decided; whether to build them as ambulatory units or plants with permanent sites, etc.
- d/ Meteorological conditions. Construction, in the majority of cases, is carried out in the open air. Previously, in many countries, this led to the seasonal character of construction. At present a number of technological and other measures make it possible to eliminate the influence of weather conditions and thus also the seasonal character of construction work.
- e/ Construction requires the work of a large number of skilled professions and trades. This is connected with greater demands made upon the organisation of work in this branch, in comparison to other branches, especially if we take into account the necessity of coordinating the available resources and manpower available to various enterprises, and within the construction branch as a whole.
- f/ During the realization of construction work, a large number of various materials, construction elements and components are used. This leads to greater demands made upon the acquisition and stocking of raw materials, the keeping of records of all stocks, the analysis of standards of material usage, of deliveries and the inspection of the use of materials, etc.

Besides the mentioned specific traits, a number of others exist, which must also be taken into account. In the process of forming and developing the construction industry it is necessary to take all these aspects into account, since this is very important for ensuring the efficiency of the functioning of this branch and thus the general economic growth of the country.

III. PROBLEMS OF THE INDUSTRIALIZATION OF CONSTRUCTION IN CZECHOSLOVAKIA

In Czechoslovakia construction as a branch of the economy has a rather long tradition, which especially during the last quarter century when construction became a state sector, has undergone rapid development.

The insufficient level of construction and the production of construction materials in the past, were the main cause of a number of difficulties in the development of fixed assets in manufacturing, in dwelling construction, in construction for cultural and social purposes, in agriculture and elsewhere. For this reason, after the formation of a state sector, it was necessary to begin with the industrialization of construction, which represents the basic method of increasing the efficiency of production in this branch and thus the fulfilment of development tasks in the national economy as a whole. By carrying out the industrialization of construction the government was preparing not only for an accelerated rate of investment, but also for the implementation of technological progress and the reproduction of production in general.

The industrialization of construction includes the development of technology, the introduction of progressive work and production organisation on the basis of more intensive division of labour within construction, as well as the development of new branches and thus further division of labour between construction and other branches of the national economy.

The industrialization of construction above all assumes rapid technological development of the whole branch, which includes not only the introduction of new technology, in the form of new machines and facilities, but also the use of new materials and finally also the technological development of all final products of the construction industry. The transition of construction to a higher, industrialized level, which is in accord with the demands and level of developed, industrial, large-scale production and the utilization of the most progressive technology in the whole branch, also assumes the introduction of progressive methods of organisation of work and production, such as the stream method of construction.

The industrialization of construction, which aims at forming a large-scale, modern construction industry with modern machines and facilities at its disposal, and which will be capable of fulfilling the task of the development of the national economy, requires a certain duration of time. During this period of time, the task of construction is to rapidly catch up with other branches of the economy, as far as the level of development of its forces of production is concerned, and to do away with the previously existing contradiction between the investment needs of the national economy /based on

large-scale machine production/ on the one hand and the demand for higher living standards on the other; this contradiction could not be resolved while construction retained its small-scale nature, based on various crafts. The industrialization of construction includes a number of various changes and become a necessity for the economic development of the whole country after this branch becomes part of the state sector of the economy.

The speed and the nature of industrialization of construction in Czechoslovakia was influenced by number of factors. The following were among the most important:

- The specific nature of construction, which has already been mentioned above. Because of these specific aspects it was very difficult to rapidly introduce into construction methods of organisation of work and production, management and planning, which are normal in other industrial branches. It was therefore necessary to develop specific organizational forms, planning methods, method to stabilize the labour force, etc.
- The historical conditions under which industrialization took place, i.e. the results achieved in the construction industry before 1945 and especially between 1945 and 1948. After World War II Czechoslovak construction was splintered and relatively backward, its technological level was that of the crafts, without the possibility of using more advanced forms of technology and organisation of work. It was incapable, under the existing conditions of private ownership in the construction industry on the one hand and state ownership in other branches of industry on the other, of fulfilling its tasks in the development of the economy. A qualitative change occurred only after 1948, when a state sector was formed in the construction industry and thus the foundation laid for its further development, as well as the prerequisites of centralized control of the industry in the interests of the whole national economy.
- The technological level and long-term outlook for the development of other industrial branches, especially those which are, or which in the near future will be part of the raw material foundation of the construction industry also strongly influenced the rate of industrialization. This concerned above all the long-term development of production of construction materials, metallurgical products, the development of the chemical industry, the consumer goods industry and others. Government directives played a key role in forming conditions in which a sufficient amount of construction materials were available. This concerned especially the utilization of local materials and thus reducing unnecessary transportation. National committees /Local governments/ have played an important role in this context. The formation of a raw material foundation for the construction industry was accelerated in those regions of the country, where large constructions were undertaken. This was achieved most often by building prefabrication plants and

by the use of progressive construction materials.

It was also necessary to rapidly develop the production of materials which are traditional in Czechoslovakia, such as cement, bricks, lime, etc.

The machine producing industry also played an important role in the development of construction. Centralized management and centralized balancing of requirements and resources of both the machine producing and construction industries made it possible to change the structure of the machines used by construction to modernize both the construction process and the production of construction materials.

- Standardization and unification have played an important role in the development of construction in general, since they are prerequisites for the improved technological and economic levels of development. They have been introduced especially where buildings and construction components which are often repeated are used; this forms the prerequisite for large-scale production and the wide-spread use of components. By decreasing the assortment of construction components and their combinations it has been possible to introduce mass production, improved technological procedures in production and assembly, the formation of conditions for specialization and cooperation in production; also the procurement of material has been simplified as well as the elaboration of material balances for construction at all levels of management. Basic assumptions for the utilization of all types of technological progress have thus been formed.

Standardization and unification are also extremely important for the development of new forms of international division of labour within the framework of the Council for Mutual Economic Aid, whereby machines, facilities and/or products, project designs etc. are exchanged, etc. In the recent past, in the construction industry of Czechoslovakia, standardization has above all concentrated upon dwelling construction and civic construction in the form of volume standardization. This term designates the standardization of final products - of the buildings as units.

Standardization of elements concerns individual construction components, from which the final product is made; they are therefore especially useful in constructions for industrial purposes, but also in other fields of construction. Standardization has made an important contribution to increasing the efficiency of construction and the production of construction materials, above all by the fact that it is possible to manage and plan in an optimum manner the technological facilities necessary for construction, at all levels of management.

- In the process of industrialization of construction and the production of construction materials high degrees of specialization, concentration, combination and cooperation have been introduced. The development of the division of labour among the members of the Council for Mutual Economic Aid offers Czechoslovak construction huge possibilities in this respect.
- Czechoslovak research and development, their development and specialization have also made an important contribution to the speed and nature of industrialization of construction. After the formation of the state sector it was necessary to begin with the formation of a scientific and technological foundation for this particular branch, including its material prerequisites and personnel, so that it could in the future, achieve the levels existing in other branches of industry. For instance as recently as 1960, construction had 10 times less personnel in research than other industrial branches. At present the situation is essentially evened out and is in accord with the needs of construction.

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The progress of developing the construction industry depends upon concrete historical, productive, raw material, meteorological and other conditions existing in every country. However there exists a general tendency to form a highly developed, industrialized and centrally managed construction industry, which has its own research and development foundation - a construction industry capable of fulfilling development tasks and in the developing countries, capable above all of carrying out the process of industrialization of the whole economy.

IV. SPECIALIZATION, CONCENTRATION AND COOPERATION IN CONSTRUCTION

Specialization in the construction industry usually has the same forms as in other branches of the economy. From the point of view of the object of specialization, the following types of enterprises providing construction work exist:

- the universal type, which carries out various kinds of specialized work;
- the specialized type, which carries out only one, certain, special kind of construction work.

The majority of universal enterprises are organized on a territorial basis, usually under the name "Pozemní stavby, národní podniky" /Ground Constructions, national enterprises/, with the name of the city or town added. Another kind of universal construction enterprise are those managed by the National committees /local government/ of districts, towns or city districts. They are, however, of a less universal character than the former.

Among specialized enterprises are those whose specialization has been formed according to type of construction, such as Aquatic Constructions, Transportation Constructions, etc. or enterprises, which specialize in a certain type of work.

At present however, specialized enterprises to a large extent carry out activities, which do not, strictly speaking, belong into the framework of their specialization, as well as various non-productive activities, so that in fact we do not yet have construction enterprises, with some exceptions, which are really specialized.

According to territorial specialization there exists for instance in Prague both a Ground Constructions enterprise, as well as the Prague Construction enterprise. District, town or city district construction enterprises are also specialized for their given territory.

From the point of view of specialization, the activities of other branches of the national economy which to a growing extent produce complete components or whole units for construction are very important for the process of specialization within this industry. This concerns for instance the production of components and boards made of wood, complete construction elements such as housing nucleus or whole living modules, etc.

Construction can also efficiently apply all concentration methods. Optimum concentration from the point of view of size of construction enterprises cannot be determined absolutely. Optimum size depends upon the type and localization of production, the

method of management employed, the manner in which clients are dealt with and their number, and a number of other factors. It is possible to effectively manage even a very large enterprise, if the method of organisation and management are chosen in an appropriate manner and if the size of the enterprise is in harmony with other conditions.

From the point of view of concentration /and also partially from the points of view of specialization/, enterprises can be classified as large, medium or small scale: the operational criterion is the decisive one.

Large-scale construction enterprises deal with large and medium size investment projects, which they carry out in an industrial manner, with the use of heavy machinery, advanced technology and organisation of work. They include above all national enterprises, managed by the Ministry of Construction.

Medium-size construction enterprises deal with medium size construction which is scattered in space and with small-scale construction which is concentrated in one place, with reconstructions, adaptations and repairs. They include regional, district, town and city district construction enterprises, as well as the Prague Construction Enterprises and others.

Small-scale construction enterprises deal with scattered, small-scale construction, with repairs and maintenance. They include local facilities, which provide construction services for the population, construction maintenance in non-construction enterprises and some cooperative enterprises.

The growing specialization of construction enterprises and their individual sections /construction units, etc./ requires an increasing degree of cooperation between enterprises, as well as between units within an enterprise. For instance if a non-specialized construction enterprise previously did all the work necessary for the construction of a factory, after specialization, this work will be undertaken by a number of enterprises: one will deal with the engineering network, another the main and affiliated construction work on the building itself, a third enterprise will deal with heating and a fourth with isolation. A similar situation will arise when work is organised by a single enterprise which has specialised squads /for digging, brick-laying, carpentry, laying of concrete, etc./.

Cooperation in construction is realized at lower production levels /between plants, construction units, sections, squads/ enterprise managements plan and manage this cooperation. Cooperation outside the enterprise is dealt with by the plan of the construction enterprise and is made more precise on the basis of contracts drawn up between enterprises.

One form of cooperation is designated by the term "general deliverer": an enterprise thus designated is responsible for delivering the investment project as a whole, but part of the construction is done by sub-deliverers, who cooperate in carrying out the project. This greatly simplifies the position of the investor, who deals with only one enterprise, one /general/ deliverer. The function of the general deliverer need not however necessarily be undertaken by a production enterprises, but also by other types of enterprises.

To realize cooperation in construction is often a very demanding task. This is especially true at the level of operational management, particularly in the complicated cooperation which exists in the construction of housing estates, where dwelling and civic buildings are being built; various enterprises construct engineering networks, make deliveries of panels, housing nuclei and non-technological facilities, etc. An effective form of concentration of construction and an instrument for limiting the volume of inter-enterprise cooperations, which are difficult to deal with, is combination.

Combination in construction can be carried out in two forms:
a/ as vertical combination, where the exploitation of raw materials, the production of semi-finished products and the production of the final product are combined into a single enterprise;

b/ as horizontal combination: the combining of main and affiliated construction in a single enterprise may serve as an example.

A construction enterprise usually combines the following activities:

A: Production activities, which include:

- /a/ main production activities, i.e. - construction work on main and affiliated construction production
- auxiliary construction production
- technological auxiliary production, etc.

- /b/ other construction activities, i.e. for instance:
 - lending of machines
 - lending of repeatedly used materials, for instance lumber for casings
 - deliveries and stock rooms or stock yards
 - other productive activities

/c/ industrial production, for instance:

- the operation of quarries, sandpits, the production of prefabricated components, cement, etc.

/d/ transportation

- lorry transportation /within and outside construction site/
- transportation of persons, etc.

Besides these productive activities, construction enterprises also deal with:

B: other /non-productive/ activities, the most important of which are the following:

- research and development
- designing
- geological research
- enterprise dining facilities and canteens
- housing for personnel
- apprentice schools and training centres
- social services
- education and courses for personnel.

Expedient combination is highly efficient, but also has its rational limits. The formation of construction enterprises with the highest degree of complexity tendencies of various other branches and specializations and slows down their development as far as industrialization is concerned; combination can then become a barrier to concentration and the development of specialization. This can also occur because the complicated relationships which develop on the basis of numerous cooperations with other enterprises, are sometimes very difficult to deal with, from the point of view of management.

Generally it may be concluded that the expediency of a complex enterprise depends upon its level of development and upon the conditions under which it exists at a given time. If further complexity becomes inexpedient, due to current developments, then it is necessary to adapt the degree of combination to the new situation. A state of permanent equilibrium does not exist, since the process of division of labour repeatedly disturbs it.

Specialization, concentration, and cooperation are very important for the efficient activities of construction in any country. It therefore seems expedient to develop them purposefully, on the basis of existing natural, raw material and other conditions and thus to ensure the increased output of construction, accompanied by lower costs.

V. THE DEVELOPMENT OF CONSTRUCTION IN
CZECHOSLOVAKIA

Before World War II., the Czechoslovak construction industry was scattered among a number of small-scale enterprises, which in the majority of cases were in fact artisan trades. For instance in 1930, there were approximately 27 600 construction firms, where 300 000 people were employed, including the owners of the firm. The following table surveys their distribution according to size:

	Number of firms		Number of workers	
	number of firms	% of total	number of persons	% of total
Construction firms total	27 600	100.0	300 000	100.00
less than 5 persons	20 753	75.3	43 500	14.5
from 6 to 20 persons	3 781	13.7	38 400	12.8
from 21 to 500 persons	3 008	10.9	194 400	64.8
over 500 persons	28	0.1	23 700	7.9

Thus on the average, one firm employed less than 11 persons, including the entrepreneur. Of these, a full three quarters were firms, where an average of 2 persons worked, including the owner. One seventh of firms employed an average of 10 persons, one tenth of firms employed an average of 65 persons and only 28 firms /that is only one firm in a thousand/ employed an average of 846 persons.

Only medium size and large firms has a technological foundation and of these, only 28 large firms had technology of a sufficient level, as far as the number and quality of machines was concerned.

During the Nazi occupation of Czechoslovakia the situation in the construction industry deteriorated. All construction activity which did not serve the war effort /military buildings and buildings for the armaments industry/ was forbidden. Workers from the construction industry were transferred elsewhere, mostly into the armaments industry. The machines owned by construction firms were partly confiscated for the war effort; the remainder underwent severe deterioration during the war, since it was not regularly renewed or supplemented. In general, it is possible to say, that the Czechoslovak construction

industry was completely disrupted by the occupants during the war.

After the liberation of Czechoslovakia, in May 1945, heavy industry, banking and the most important consumer goods and light industry enterprise were nationalized and thus the conditions for the development of productive forces in industry formed. The renewal and expansion of factories plundered by the occupants and the renewal of regions destroyed by war activities required increased investments into all branches of the national economy. The construction industry was not however able to fulfil these tasks, -because it was scattered into a number small firms; for all practical purposes in the post-war it was necessary to form the industry anew. The nationalization decrees of October 1945 covered only a very small part of the capacity of the construction industry.

During the Two-year plan, private construction firms concentrated, in the majority of cases, upon construction of unauthorized constructions for the private sector. Thus for instance in 1947, the plan of construction of buildings for industrial purposes was fulfilled only by 50%; the situation was similar in other fields, for instance in transportation construction and in dwelling construction.

This development demonstrated that it is impossible to carry out large scale investment activities in the nationalized industry, while the construction industry is based on obsolete technology, as was the case up to 1948; it was scattered into thousands of small-scale, artisan type firms. As late as the end of 1947, there were still 8 470 firms in operation in the construction industry, which in this form was becoming a barrier to the development of the Czechoslovakian economy.

For this reason on April 27th 1948 law no.121/48 of the Collection of Laws of the Czechoslovak Republic was issued, concerning the nationalization of the construction industry. According to this law, as of January 1st 1948, all enterprises which on the basis of a licence to carry out a trade or on the basis of a licence issued according to regulations concerning civic technicians /civic engineers and civic land surveyors/ carried out construction work of any kind and where the number of employees working or active within the firm at any time since January 1st 1946 exceeded 50 persons, were nationalized.

Nationalization in construction took place gradually, during a longer period of time. Thus on October 31st 1948, 480 construction enterprises were nationalized; eventually a total of approximately 1 200 enterprises were nationalized.

At the same time concentrated state enterprises were formed, under the name "Československé stavební závody, národní podnik"

/Czechoslovak Construction Works, national enterprise/. Their task was to fulfil the aims and targets of investment construction in Czechoslovakia, to carry out construction work, services and deliveries.

The development of prefabrication deserves special attention; in Czechoslovakia it achieved exceptional development and influenced the growth of productivity of labour. Its rapid development took place only after 1948, when the prerequisites for the wide-spread use of prefabricated, reinforced concrete came into existence. The 1949 plan required the production of 100 000 tons of prefabricates, but after twenty years, in 1969, more than 5 million tons of prefabricates were produced, excluding concrete products and masonry material.

The whole process of nationalization and the formation of a socialist sector in construction can be illustrated by the following figures:

	Shares of the total volume of work carried out in construction in %		
	at end of 1948	during 1950	during 1953
National enterprises and other state organisation	77	80	83
Communal enterprises	2	13	15
Cooperatives	1	2	2
Private firms	20	5	0
Total	100	100	100

Czechoslovak Construction Works, national enterprise, was gradually divided into a number of national enterprises, which specialized in construction for industrial purposes, dwelling construction, engineering networks and special constructions. The organisational principle according to which specialization was strengthened was even more stressed by grouping all enterprises with the same specialization into a single managing center within the framework of the Ministry of Construction. The following managing centres were formed within this Ministry:
 industrial constructions, the construction of industrial combines, dwelling constructions and engineering constructions.

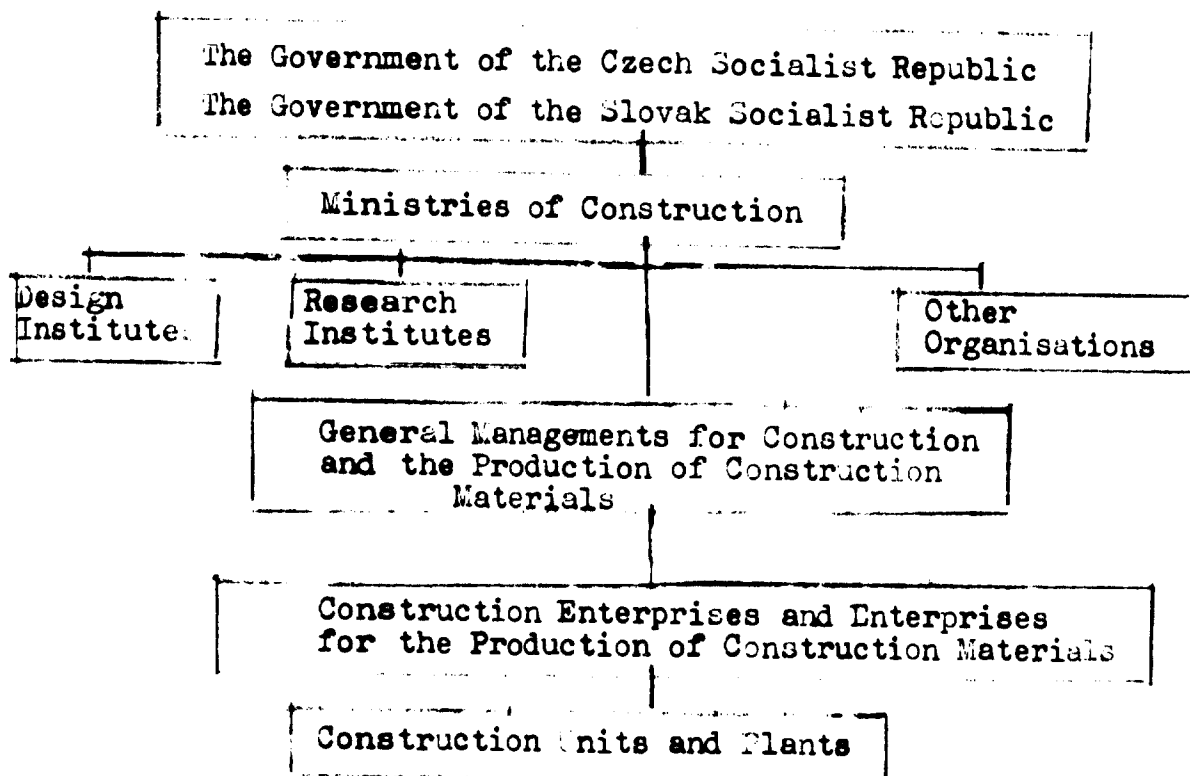
Specialized construction enterprises were also formed from the existing construction departments of various industrial enterprises, which in some cases were however subordinated to special bodies in various Ministries /for instance the managing center for the construction of mines and the managing center for the construction of power plants were under the Ministry of Fuel and Power, the manag-

ing center for agricultural construction under the Ministry of Agriculture, the managing centre of railway construction under the Ministry of Transportation, etc./.

All these measures doubtlessly contributed to the fact that construction fulfilled all its main tasks the first five-year plan. In 1953 and at the beginning of 1954, an number of important new constructions were commissioned.

During the following years, construction was developed at dynamic rates, and as has already been mentioned, made an important contribution to the economic growth of Czechoslovakia.

At present the construction industry in Czechoslovakia is organised in the following manner:



In 1970 the construction industry in the whole of Czechoslovakia achieved the following results:

Value of basic construction output in millions Kčs	Number of employees	Annual productivity of labour in Kčs
48 583	478 605	101 521
Rate of growth /1948 = 100%/		
720,4	211,4	340,8

The figures show marked dynamics both in growth and in the growth of productivity of labour. The construction industry completed many new industrial plants, dams, airports, agricultural buildings, communications, engineering networks, etc. The following are examples which can serve as illustrations of these successes.

Until 1918 the territory of the present Czechoslovak Republic had 17 dams, which hold 40 million cubic meters of water. Between 1918 and 1945 a total of 18 dams were built, which hold 216 million cubic meters of water. Between 1945 and 1965 a total of 41 dams were built, which hold a total of 2 billion cubic meters of water. Of this number, 11 were built in Slovakia, with a capacity to hold 440 million cubic meters of water, which in itself is more than the total capacity of all dams built before 1945 on the whole territory of Czechoslovakia. The largest dams are at Orlik, Lipno, Ústie-Orava and Slapy.

The construction of large aquatic constructions had a very specific impact upon the period during which they are built. The large-scale concentration and mobilization of the means of production made themselves felt in all all branches of the national economy. Sufficient amounts of water are one of the main conditions for the development of both production and the environment. In the recent past also dozens of important factories and plants have been built. Let us mention some of them: the Klement Gottwald New Iron and Steel Mill, the Chemical Works at Záluží u Mostu, the Automobile Plant at Mladá Boleslav, Slovnaft at Bratislava, the Družba gas pipeline, the Research Institute at Běchovice, the Thermal Plant at Kladno, the Aluminum Works at Ždiar nad Hronom, the Nitrates Plant at Šala, the Nickel Mill at Sereď, the Iron and Steel Mill at Mokraď, the Machine Plant and Foundry at Ždiar nad Sázavou, the Ball Bearings Factory at Přerov, the Jawa Works at Brodce nad Sázavou, Tesla at Liptovský Hrádek, Jablonex at Jablonec nad Nisou, the Chemical Works at Lovosice, the Cement Mill at Lochkov, the Superquarry at Čertovy schody, the Brewery at Topolčany, the Central Bohemian Machine Works, the Paper Mill at Štětí, the Lenin Works at Ostrov nad Ohří, Chemko at Strážáké, the Cement Mill at Banská Bystrica and other many other industrial constructions.

Also a number of thermal power stations have been built, for instance at Nováky, Hodonín, Opatovice, Mělník, Tušimice, Počeradý, Prácheň, etc. A number of these electric power stations have power blocks of 100 MW and 200 MW capacity.

Also transportation and the railways have grown, thanks to the effort of the construction industry in recent years, when a number of interesting and from the point of view of the national economy important projects have been completed.

In ground construction, efforts were concentrated to dwelling construction. The economic and technical parameters achieved in this type of construction are considered to be fundamental for evaluation of the development of the construction industry. New technologies of construction in this field /panels, block panels and assembled skeletons/, represent a realization of the aims of industrialization by limiting the amount of live labour directly at the construction site and transferring this labour to permanent plants with multi-shift work

and organisation as in any manufacturing plant. By the multiple use of elements which are assembled, the speed of construction work increases.

Solving the housing problem in Czechoslovakia has been one of the priorities of political and economic bodies for a number of years. Since 1945, 1 685 197 dwelling units have been built in Czechoslovakia.

Needless to say, housing units in Czechoslovakia are not only constructed by delivery enterprises, i.e. by national enterprises dealing with construction. Both cooperatives and individuals who build on the basis of self-help, have made important contributions to housing construction.

During the last twenty-six years of existence of the Czechoslovak Socialist Republic also a number of polyclinics, Regional Institutes of National Health, hospitals, schools, district centres and other institutions which directly serve the population have been built.

Construction has played an important role in this whole process; it could fulfill its tasks only because it developed as a state sector, in a highly concentrated and specialized manner, with the most progressive technology at its disposal.

In the context of past developments, as well as future tasks, the targets of the Czechoslovak construction industry during the 5th five-year plan are important:

The capacity of the industry, according to the directives of central political and economic bodies will concentrate upon the following tasks:

- the fuel and power industries
- the production of the construction materials
- complex dwelling construction
- other constructions for industrial purposes
- the development of the capital of Prague
- the development of specific districts in the North Bohemian region.

These basic tasks in investments, which express government policy and which aim at the proportional development of the whole economy, as well as individual regions of the country, should be clarified in greater detail, so that the scope of tasks before the construction industry is made clear.

An important aspect of investments in the fifth five-year plan is the concentration of tasks into certain regions, which are especially important for the development of society. This concerns especially the North Bohemian region, the capital of the country and the capital of the Slovak Socialist Republic, Bratislava.

The fifth five-year plan assumes that the growth of construction work done on the basis of contracts concerning deliveries, for Czechoslovakia as whole, will be 37,1% in comparison to 1970, with the more rapid growth of this indicator in Slovakia /42,8%/, in comparison to the Czech Socialist Republic /34,3%/. At the same time it is also assumed by the fifth five-year plan that the growth of construction work dealing with repairs and maintenance will be somewhat higher than the growth of new investment construction /38% for the former, 36,9% for the latter .

Also the production of raw materials for construction will undergo rapid development. The fifth five-year plan assumes a growth in the production of cement by 34,4%, masonry materials by 45% and construction components by 55,1%. In some other types of materials, production is to double by 1975 in comparison to 1970. These increments are to be achieved on the basis of modernisation and the construction of new capacities, with progressive parameters, based on accepted concepts concerning the accelerated development of the material foundation of construction.

In recent years increased allocations of investments have been devoted to the development of the construction raw materials industry and of machines used in construction, including light prefabrication, as fundamental for the construction industry. This was made imperative by the tasks of increasing the output of construction materials and products.

The construction industry and the production of construction raw materials had, has and will in the future a decisive influence upon the development of the whole national economy of the Czechoslovak Socialist Republic. Upon the completion of constructions, as the basic part of all investments , depends the development almost all branches of the national economy.

Since construction influences all productive and non-productive spheres of the national economy it also has an important influence upon the development of living standards in Czechoslovakia.

VI. PLANNING IN CONSTRUCTION

Construction makes an important contribution to the realization of the state's economic policy. The government manages and controls, from a material point of view, the development of the national economy and its individual branches. It does so within the framework of the aims of society as a whole, and is concerned primarily with the volume, structure and mutual proportions within the economy. The basic tool used by the government to ensure the fulfilment of these aims, is economic planning for the economy as a whole. By issuing directives concerning the elaboration of the plan, the government is able to influence its concrete content at lower management levels, i.e. at ministries, general managements and enterprises.

The informal managing role of the government in the development of the economy is to a great extent realized through construction work and processes, whose volume and structure form the content of the plan for this branch of the economy. For this reason the construction plan in Czechoslovakia is very closely interconnected with the plan for investments and also with the plans of other branches, which provide machines and material for construction and with the plan for labour power, which provides the construction industry with sufficient numbers of employees, with the necessary structure of skills.

The draft of the plan for construction is elaborated by individual enterprises and general managements and summarized by the central agency, in this case also by the Regional National Committees, for all enterprises providing construction work and services. The Ministry of Construction of the Czech Socialist Republic and the Ministry of Construction of the Slovak Socialist Republic are the main central agencies in this context; they draw up summarized plans for all enterprises on the territory of their Republic. Also other ministries do so, for the construction enterprises subordinated to them, for instance the Federal Ministry of Fuel and power, etc.

Before the plan itself is drawn up, directives are issued, by which the government orientates enterprises towards specific fields of activity upon which they should concentrate in the elaboration of their own plans; includes above all specific construction projects, as well as general trends in construction, which are to have priority.

Within the framework of the construction plan, certain specific indicators concerning the work of construction enterprises working for other branches are followed. The following are among the most important:

Construction work undertaken by employees of enterprises;

number of employees in total;
wages and salaries;
premium funds;
volume of work and deliveries for investment projects undertaken within enterprise;
- share of construction work in preceding indicator;
budget costs of newly begun constructions having more than 1,5 million Kčs budget costs;;
- share of construction work in preceding indicator;
fixed assets as of 31st December, in original costs;
total output;
consumption of materials, power and other production inputs;
depreciation of fixed assets;
total costs and expenditures;
profits, losses;
specific subsidies for investments - through state budget;;
subsidies for investments from government funds;
long-term bank drawings for investment purposes;
repayment of long-term bank credit and loans;
long-term extended investment credits and loans from bank at end of year.
stocks minus unfinished production, which has not yet been invoiced;
some other indicators.

The plan for construction also includes summarized indicators from construction enterprises, concerning construction work according to contracts for deliveries, repairs and other work and complex dwelling construction which is to be carried out in the planned period. These are all itemized according to territorial criteria.

The plan for construction also includes a classification of construction work for investments and an itemized list of specific constructions /which are approved by the government/, and have been included into the production program of construction enterprises. These tasks are planned individual investors, according years to in which they are to start, years in which they are to be completed and according to the deliverer of the finished construction. The plan also including the budget costs concerning only construction. Besides this, construction projects with costs higher than 1,5 million Kčs are itemized individually, and according to territorial region if they are found if they are found in the capital of Prague, in the North Bohemian Region or in Bratislava; also the construction of the highway network is specified.

Subsequent parts of the plan of construction enterprises contain chosen indicators concerning complex housing construction. This includes the number of started and completed dwelling units in various years on the territory of Czechoslovakia, classified according to the ministries and Regional National Committees making the investment.

Finally the plan for construction deals with the utilization of construction capacities in various enterprises, from the point of view of the number of constructions undertaken, their budget costs, construction components, the volume of current uncompleted construction, the number of constructions begun and finished at a certain date, etc.

The inclusion of a construction project into the plan of construction by an investor and into the production program of a construction enterprise is the result of preparations made for investment construction. The investor's plans for investment construction, as well as the plan of the construction enterprise, must give priority to those requirements which are included in the project documentation, especially in the plan of organisation of construction which deal with the sequence of work in time, gives the dates of beginning and finishing a various stages of work, the budget value of the construction and others. The volume of documented constructions, i.e. those which have preparatory and project documentation and which are to be completed during a certain period of time, must also be in accord with the capacities available to the deliverers of the investment project, i.e. the construction and machine building enterprises involved, must be balanced with their capacities.

Preparatory and project documentation, which in Czechoslovakia is part of the decision-making process in investments, represents basic background material for the realization of the intended construction. Decisive are those parts where the designer and investor list their demands as far as technological, construction, operational, cost and other limits are concerned.

The project itself is a set of technical, economic and architectural solutions concerning the construction, which simultaneously serve as the basis for the approval of the construction and the definite signing of delivery contracts. The project also serves as the basic document according to which actual construction takes place. It specially determines the purpose, function, size and impact of the construction and as has already been mentioned, the organisation of the construction, total budget costs of the project, the efficiency of the construction and it contains provisions to ensure harmony and the necessary links between all other constructions and various deliveries.

The plans of productive economic units and enterprises form the basis directive for the work of these socialist organisations and represent the fulfilment of the proportions set by the plan of development of the national economy, of which they are a part. Together with these plans they are classified in the following manner:

- long-term /10-15 years/ plans;
- medium-term /5 years/ plans;
- annual plans;
- operational plans - elaborated at the enterprise level.

The system of long-term plans, whose basic part is a long-term forecast for a period of 10 to 15 years, is the basic tool for the planned management of branches and enterprises. Its main task is the formulation of decisive aims, the formulation of decisive aims, the formulation and preparation of structural changes and the formation of long-term prerequisites for equilibrium growth.

Five-year plans, which represent medium-term plans, make the relevant part of the long-term forecasts more precise and in turn the foundation for annual plans.

Annual plans are elaborated for the period of one year, but with a view to development is one or two subsequent years. Its function is to make more concrete and precise the tasks of the five-year plan, in a more complex manner and to form the basis for the day-to-day management of the enterprise.

The five-year plan and the annual plans derived from it deal especially with economic relations and economic aspects; economic manners of expression predominate. These plans can thus be considered as belonging to the category of economic plans. The tasks of annual plans are divided into plans for individual plants or units within the enterprise and into shorter periods of time /quarterly and monthly plans/.

The main sources for the elaboration of enterprise plans are the following:

- government directives for the elaboration of the plan;
- basic directives concerning the activities of the enterprise, according to which its function within the system of social reproduction is defined;
- concrete demands made by clients;
- resources, which the enterprise has at its disposal;
- a set of binding tasks and limits, determined by the state, economic rules and tools which are to be used;
- planning indicators and standards.

By fulfilling the tasks of the plan, the enterprise is in fact fulfilling its own operational plan; economic plans are transformed into operational plans at the plant or unit level. Operational plans are a part of intra-enterprise planning and in this function they translate the plan into detailed and concrete terms and into

very short-term stages /quarter, months, 10 day periods/. Operational plans are based on operational standards which have been variously summarized.

Economic plans for the duration of several years for a construction enterprise have the following tasks:

- to determine the main aspects of the reproduction program and within the framework of existing possibilities to optimize this program;
- to balance, from a quantitative point of view, the resources and needs of the enterprise, both from a material and financial point of view, with the production program of the enterprise /this may have a retroactive influence upon the production program itself/;
- to determine the development and localization of productive capacities of the enterprise and its subdivision into intra-enterprise units.

Planning activities make it possible to ensure the requirements of the national economy by the concentrated efforts of construction enterprises, while at the same time to develop in a proportional manner construction enterprises themselves and to ensure their functioning as far as raw materials, cooperation, etc. are concerned. Planning activities also draw upon a whole system of material and financial reserves.

VII. CONCLUSIONS

From the point of view of its function, construction belongs among the final branches of the national economy and therefore reflects the level of development of other branches. On the other hand construction as a participant of investments influences the technical and economic level of development of other branches. Construction at the same time realizes architectural and urbanistic plans, as far as the construction of various building units and important individual buildings is concerned, as well as the construction of whole agglomerations. In this sense construction strongly influences the whole environment. Within the national economy construction has an important role to play especially in the realization of structural changes, which are determined by the economic plan and concern both the sphere of production and consumption.

In Czechoslovakia, construction has made and makes an important contribution to the development and industrialization of Slovakia and to the concentrated development of specific regions within the country, as was the case in the construction of large industrial agglomerations at Ostrava and in Eastern Slovakia. It thus also participated in carry out the regional policy of the government.

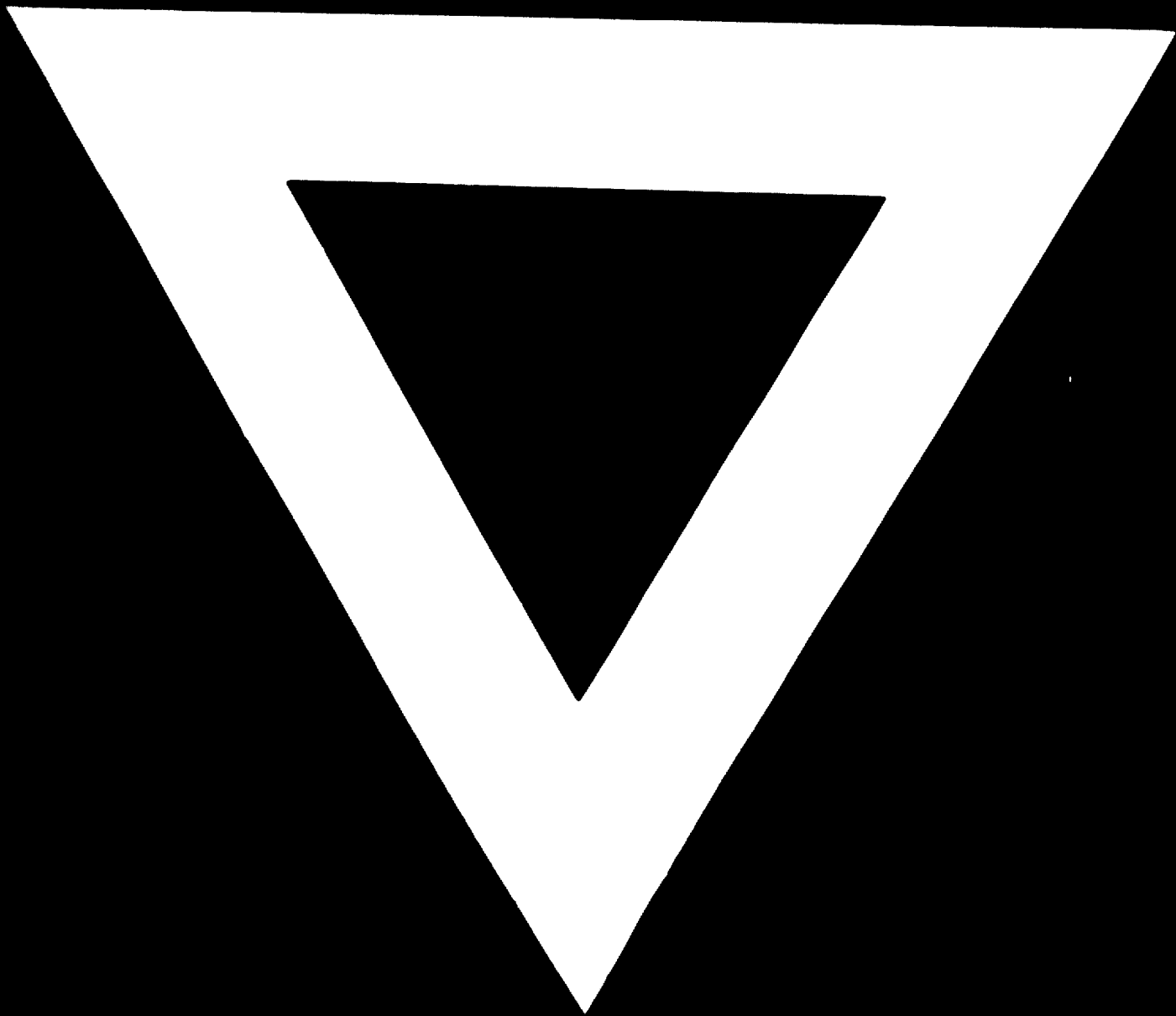
Construction is the decisive factor in investments. For instance in the sphere of productive investments, the share of construction represents approximately 55%, and in the sphere of non-productive investments as much as 90% of the total volume of work. Thus only through the existence of a strong state sector in the construction industry was and is it possible to realize government directives concerning growth, both in the productive and non-productive spheres and in the process of industrialization of the country.

According to forecasts concerning the Czechoslovak economy, during the sixth five-year plan and in subsequent years, the importance of construction as a key branch of the economy will constantly increase. The task will be not only to increase investments, but to ensure maintenance, repairs and the reconstruction of existing building assets, the worth of which in the Czechoslovakian national economy at present is over 1 billion Kčs.

For these reasons construction is preparing, in a planned manner, to increase its technological and economic level, which assumes not only the further development of productive capacities and the production of construction materials, but also important changes in specialization, cooperation and especially the territorial localization of productive capacities.

Fulfilling these tasks and requirements of society will be a very exacting task, not only for production, but also from the organisational and managerial aspect; they can be fulfilled only in the mutual cooperation with all other branches of the national economy, especially metallurgy, machine production, and on the basis of the economic plan.





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