

REGIONAL SYSTEMS OF INFRASTRUCTURE

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Regional hierarchy of infrastructural systems

It is an up-to-date task to examine the development of infrastructure from many aspects; regional aspects must play an important part in the course of the examination. Since many elements of infrastructure are restricted to a certain region, their regional effects are peculiar. The back or backwardness of infrastructure emerges as a complex regional problem; at the same time decisions concerning regional development have consequences arising from questions of the development of infrastructure. This is the reason why it is understandable that experts who deal with such regional problems are interested in this spatial approach.

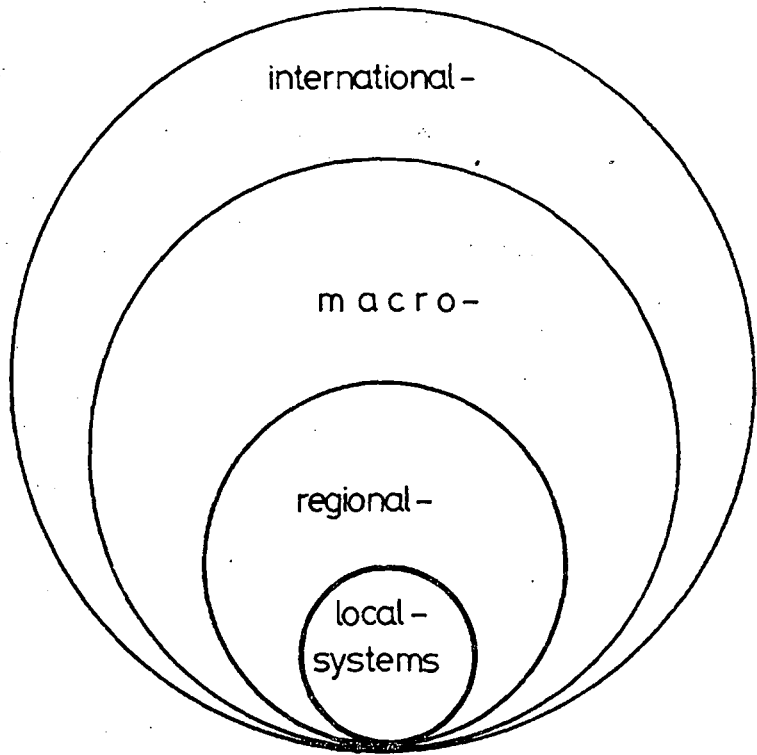
Since infrastructure has a peculiar role in the location and activity of certain branches of the productive sphere as well as in the direct supply of the population the entirety of elements which belong to this phenomenon is sometimes called infrastructural background. This infrastructural background — which has a complex existence in a certain regional unit is expected (in its development-level and structure alike) to correspond with the regional structure as a whole and to guarantee the continual increase of the standard of living of the population who live in the given region.

Different branches of infrastructure serve to fulfil national, regional, urban and local claims. (see fig.) Thus *national* (macro), *regional* and *local* (eg. urban) systems can be distinguished. The latter consists of further so-called sub-systems. Such a sub-system is, for example, the infrastructural supply of one district of a town. These regional systems of the infrastructure can be characterized by a manifold and complicated network of activities on each level of the hierarchy.

The evaluation of the accomplishment-level of the regional system of the infrastructure must be carried out from the point of view of regional effectiveness. At the same time mention must be made of the fact that a reliable, exact demonstration of the state of this effectiveness is very difficult even in the case of some given fields of the productive sphere — the difficulties multiply when assessing the capacity of the infrastructure.

There are branches of infrastructure the effectiveness of which occur only on a macro level. These are mainly the linear infrastructural branches, such as transmission lines, waterways, public roads, railway lines, pipelines etc. Other occur on a regional level. At the same time there are some elements of infrastructure (nurseries, nursery school, primary and secondary school, local public transport, museums, libraries, aircleaning devices etc.) which are important on a settlement level. Unity is built up by a closer circle of the above factors in the complex supply of one district of a town.

TERRITORIAL SYSTEMS OF INFRASTRUCTURE



In accordance with the above-mentioned characteristics it is understood that while analysing the effect of the infrastructure on the development of the producing sphere a macro and a micro-economical form of the infrastructure must be distinguished.

A peculiar form of the former are the international infrastructural systems.

International systems of infrastructure

(The role of infrastructure in the Socialist International Economic Integration)

The level of the infrastructural supply in a given country has a direct and an indirect effect on the situation of international division of labour. Elements of infrastructure (such as transport-network, international communication and information systems etc.) have a direct effect on international relationships since they provide the conditions for the establishment and development of manifold international relationships, and further, elements which form part of international trade and cooperation as infrastructural products or services such as the export-import of energy water, products of intellectual life (licences, know-how) etc. Indirect effect must be understood as an element which provides harmony in the cooperation of the elements of certain people's economies which then has a favourable effect on the economies as well as on the economic growth of the whole socialist integration.

V. I. LENIN emphasized even in his early works that a complex approach of the elements of the productive and non-productive spheres is an important factor — within a country — in the reasonable regional location of the forces of labour. Nowadays this statement is extended to the whole of the socialist countries by the Complex Program which says that *"COMECON-countries declare that the up-to-dateness of the tasks resulting from the great structural changes in the spheres of production and consumption, the level achieved in the forces of labour, the aggravation of the effectiveness of social production and the increase of the welfare of the population, the character of the socialist production and the demands of class-struggle make it extremely important that economic, technical-scientific co-operation among the member countries should continually be deepened and perfected, socialist economic integration should be developed..."**

The direct effect of the infrastructure on the development of integration is evident in the development of transport-infrastructure of integration importance. This has special importance in regions near the border. The significance of a deep and perfect cooperation — every transport-branch is included — is of great importance, too, as regards the whole territory of the country. The fact that this was recognised is proved by a statement in the Complex Program when it states that *"mutual and manifold consultations should be held about main trends in transport-policy; longterm plans for the development of transport referring to certain problems should be co-ordinated"****

The Complex Program declares, that a 10–20 year prognosis should be worked out for the expected volume of passengers and goods in international traffic, for the technical development of transport vehicles and devices, for the rationalization of transport technology, for the development of the network of the main international lines of transport, for the demands and supply of technical devices, energy and materials of transport. It also emphasizes that in the field of railway transport complex resolutions must be worked out and realized, which would help the development of the permeability of the main international railway lines, would increase the transport-capacity, would aggravate and improve the processing capacity of the present

* Complex Program of the economic integration of COMECON-countries (Kossuth Könyvkiadó, 1971. p. 6.)

** Complex Program of the economic integration of COMECON-countries (Kossuth Könyvkiadó, 1971. p. 105.)

devices at border stations where products are or are not to be re-packed, would modernize complete the stock of railway-carriages and would improve international passenger transport.

According to the Complex Program, co-operation in navigation also has an important role. In order to improve the co-operation it suggests that cargo space could be used mutually in the case of foreign trade transport and service-stations in the member countries should be located to fulfil the demands. It emphasizes that it is really important to increase the volume of goods transported on the river Danube. It denotes special importance to the development of pipelines in the COMECON countries.

Another important field in the development of infrastructure which results in the increase in the integration of the socialist countries is energy economy. As concerns this matter, the 25th assembly of COMECON declared that

"...the main tendencies of the long-term development of the energy-system of the COMECON-countries should be revised and propositions should be worked out for the extension and deepening of this kind of co-operation. On this basis ... the propositions of the involved COMECON-countries for a possible development of new inter-systematic connections should be examined..."

*"Propositions should be worked out in order that the COMECON-countries can make hard efforts to create productional and systematic conditions for the industrial development and effective exploitation of atomic energy in the people's economies."**

An important field in international co-operation is water-economy.

Despite the rational and favourable aims enumerated above, mention must be made that *"in the system of COMECON-countries no theoretical evaluations has taken place concerning practical decisions in connection with regional economic integration. Thus an important condition in the direction of this new and useful way of regional economic investigation would be the organization of mutual scientific investigations, regular meetings and conferences; and further to unite the hard efforts of scientists who deal with regional investigations in order to study the problems of regional integration."** Only in this way is it possible — through co-ordination — to approach the planning of economic systems and infrastructural branches gradually and mutually.

Industrial parks

It is known that productional infrastructure has the most obvious effect on the location and development of industry which has made it necessary to investigate the question of industrial parks.

The main source of the industry-locating effect of the infrastructure is the fact that up-to-date industry cannot exist without water — drainage — gas and electricity supply. Besides, the conditions for the transport of basic and secondary materials, the half-ready and finished products and of course, people are required. Thus it is understandable why infrastructural basis is called "the indispensable basis" of the location

* Complex program of economic integration of COMECON-countries (Kossuth Könyvkiadó 1971. p. 77.)

* I. M. PAVLOV: Methodical problems of studying the regional aspect of the economic integration of COMECON-countries. From the lecture given at the 4th conference of scientists dealing with regional problems of socialist countries. Székesfehérvár, 1974.

of industry in technical literature. The above enumerated factors provide necessary but not completely satisfactory gramels for undisturbed industrial activity. Other kinds of demands of those who work in industry should also be fulfilled — if possible locally — these demands are: trade, education, lodging and communal helath etc.

Although it is bourgeois technical literature that has the priority of using the phenomenon "industrial park" and the first industrial parks came into existence under capitalist conditions (a method for regulating private capital) these days the are becoming more and more popular in socialist countries, too. Hungary cannot boast of providing sufficient execution in this field since even on a socialist scale — apart from the Soviet Union — the phenomenon has already been introduced in Czechoslovakia and in the German Democratic Republic. Even if it was a bit late — with the significance recognised (its role in urging the pace of development in a given region; orientating the regional location of forces of production) investigations in connection with this phenomenon had started and after a theoretical conclusion practical realization began in Hungary, too.

Industrial parks mean a widely applied industryorganizing and locating factor. They came into existence in the United States and in the economically developed West European countries. Indisividual capitalists or a company of shareholders bought pieces of land and made them capable suitable for the sitting of industrial plants. In these areas they had the ground arranged, built up various networks (roads, railway lines, drainage etc.) and sometimes industrial buildings were built in advance. The workshops which were equipped by external means of operation were made into separate sites and were sold or let to industrial entrepreneurs. Thus it was possible that the single expenditure of the investment of developing the infrastructure and building the workshops could be changed into expenditures of operation.

Since, generally, when an industrial park is being established it is not known what kind of workshop or factory will operate there, the time of location and the character of the industrial companies could vary. But the time of the actual location — owing to the previous development of infrastructural objects could be extremely short.

By a closer examination of the advantages of industrial parks which were not introduced in the above definition, the following can be enumerated:

- savings in expenditure in the course of the investment
- the start of productive activity at the factory in a shorter period of time
- favourable operation expenditures
- supporting success of the aims of regional and industrial development as well as those of the conception of settlement-development
- the development of backward areas; rational utilization of labour resources
- the improvement of the economic structure of regions
- rational increase of regional industrial concentration
- the success of aims of different types of towndevlopment and town-arrangement
- decrease in the size of land that is necessary for productive activity
- better utilization of planning and realizing capacities.*

* BARTKE: Some international experiences in regional industry-locating. January 1968. OT. Tervgazdasági Intézet.

On the basis of the above there is no doubt that they have a favourable effect on the social-economic development of Hungary. This is why their application in this country became well-known for theoretical and practical experts alike. It is enough if mention is made of the theoretical works referring to Záhony, Szeghalom, Baja, Cegléd, Pécs etc. as a result of extremely prudent planning and analysis. With our extensive sources becoming gradually used up, practical propagation of industrial parks is now in spite of the fact that their reason for existence is recognised. It is true that the way of industrial development is mainly the increase of effectiveness therefore the necessity of newly developed industrial work-places decreases. However, this must not mean that the knowledge about the advantages of the establishment of industrial parks should not change our minds. The advantages of establishing industrial parks do not only mean the enjoyment of new working places, but lie also in the course of selective industrial development and establishing new premises. Without overemphasizing the role of industrial parks in the course of industrial development, their favourable effect on economic development must be recognised and they should be used as a sort of means — together with other means — to promote a constant, dynamic economic growth in our country.