

## PROCESS OF INDUSTRIALIZATION OF SLOVAKIA

Industrial activity in Slovakia goes back to the oldest period of settlement in the course of which man made use of the mineral riches found on our territory. Slovak mining of precious metals, copper and iron as well as the processing of metals became well known especially at the time of feudalism when the mining regions of Kremnica, Banská Štiavnica, Smolník, Banská Bystrica and others held a leading position in the economy of feudal Hungary. Even as late as the first half of the 19th century, Slovakia then being part of Hungary, it produced 73 % of gold, 73 % of silver, 72 % of copper and about 68 % of iron mined in that country. In the production of some metals Hungary held an outstanding place among European countries (e. g. in the production of copper it was second only to England, on a European scale and, on a world scale, held the fourth place, next to America and Russia). Apart from mineral raw material Slovakia disposed of rich forests which supplied the wood necessary as fuel for mining and foundry enterprises; on the other hand, it had enough rapid water courses which drove water wheels, then the chief source of industrial energy.

At the time of the transition from feudalism to capitalism, i. e. at the end of the 18th and in the first half of the 19th century a remarkable development was achieved in the field of metallurgy. Iron industry was concentrated in some regions (1). That of *Gemer* was the most important. Here iron industry was localized mostly in the valleys of the rivers Štítnik, Muráň, Rimava and Rimavica, with iron works at Betliar, Vlachov, Gočov, Henckovce, Vidová, Gombasek and other places.

Another such region was *Spiš*, especially its southern part which formed a compact area passing on to the Abov region in south-eastern Slovakia (present district of Košice). Iron works were localized here in the valley of the Hnilec (Nálepkovo, Stará Voda, Mníšek, Krompachy), in that of the Hornád (Stratená, Dobšiná, Mlynky, Smižany, Hrabušice) and in the northern part of the Abov region, the southern and south-eastern part of the Spiš and Gemer Ore mountains, gravitating in the direction of Košice (Košické Hámre, Myslava, Jasov, Hýlov, Bukovec).

An important iron producing region was the upper valley of the Hron river, where, thanks to extensive forests and to the abundance of water in the Hron river, iron works prospered even at the time when in other regions, as a consequence of rapid wood consumption, a want of this raw material was beginning to be felt. Iron works were to be found here at Červená Skala, Zlatno, Švabolka, Pohorelá, Závadka, Podbrezová, Hronec, Ošibie and others.

In individual cases, expressly aiming at local market, there were iron works also in other places besides those we have mentioned, as, for example, in the region of Orava and that of Zemplín.

The localization of glass industry was ruled by principles similar to those that

influenced foundries and metallurgy. The main region where there were glass manufactures lay in the west outspurs of the Slovak Ore mountains, where within a radius of some 30 kilometers there were about twenty glass manufactures (region between the Detva, Kokava and Lučenec). Apart from the necessary wood, quarts and lime stone, there were also at Poltár refractory clays which helped in the maintenance of the furnaces.

Paper industry also deserves attention. It follows from the results of studies of economic historians that in the first half of the 19th century there were nearly seventy paper manufactures in Slovakia, the method of work being manual. The region of Gemer again had the largest number (15), the regions of Spiš and Šariš and that of Trenčín having nine each. At this period 85 % of all paper mills of Hungary were centered in Slovakia. In the localization of paper mills, apart from the need of water energy and the production of potassium in the forests, the possibility of obtaining textile waste material also played an important rôle as it was then the chief raw material required; nor was the proximity of markets to be neglected. We note that paper mills were situated mostly in the economically more prosperous regions of Spiš and Gemer, these being mining districts. In the forties of the 19th century, the first machinery equipped paper mills were established in Harmanec and in Slavošovce. These mills kept on developing in the years that followed and have been prospering until the present time.

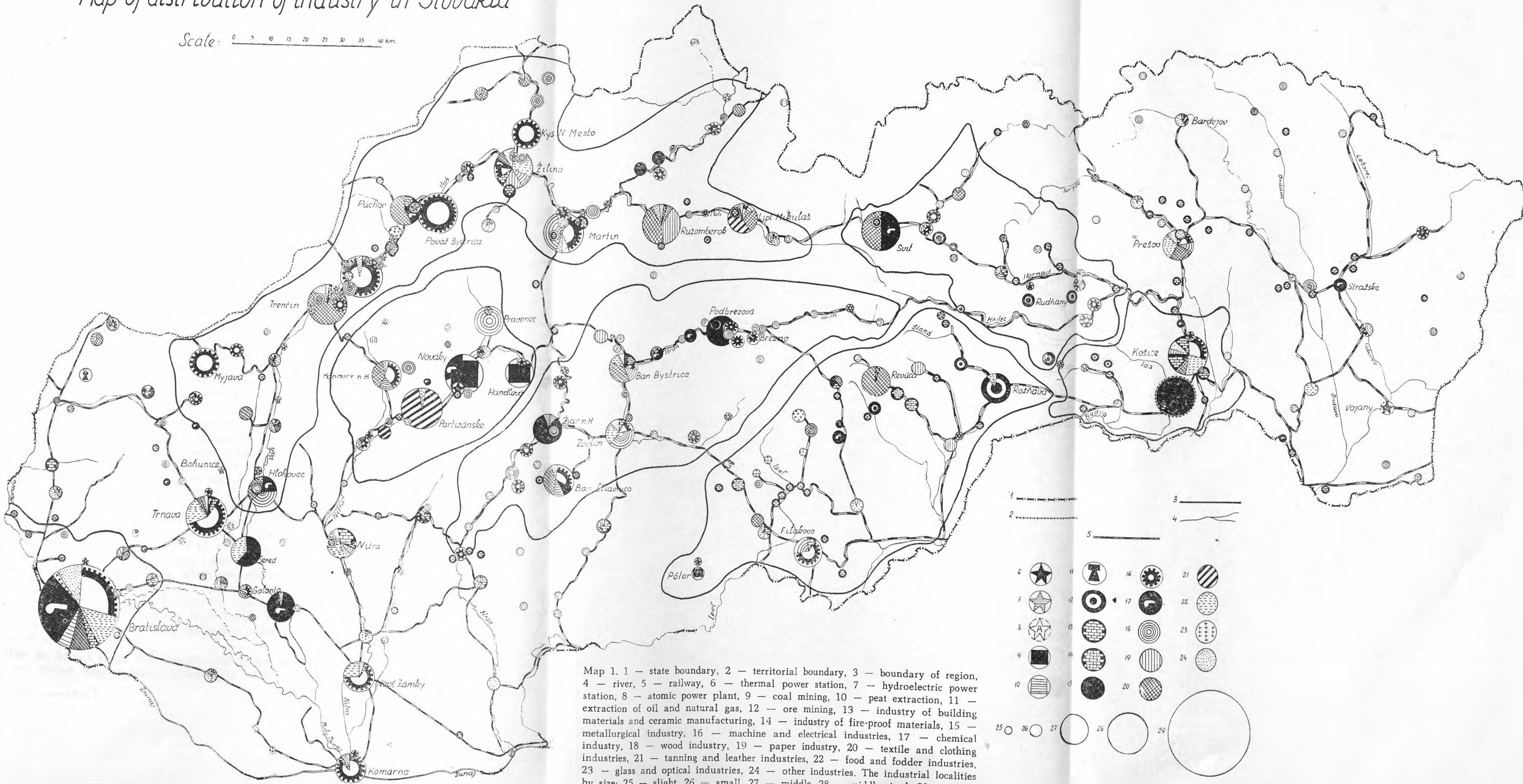
In some regions there were favourable conditions for the growth of flax and hemp, with good supply of labour. This led to the development of home spinning and weaving in the countries of Spiš, Orava, Šariš and north Gemer. Products of this cottage industry found their way into the neighbouring regions. In the mining regions of Kremnica, Banská Štiavnica and Banská Bystrica, at the time of the gradual deterioration of gold, silver and copper mining, some other means of living were sought. This gave birth to the lace industry, also carried on as a cottage industry. Conditions were also favourable for the development of cloth manufacture (possibility of obtaining wood from local sources). However, after the deterioration of this trade, these favourable conditions failed to be made use of.

Quite different is the picture presented by the localization of textile, leather, spirits and other manufactures. In contrast with the preceding branches of industry, west Slovakia plays a leading rôle here, especially Bratislava (11). This shows that market facilities were the decisive factor in the localization of these industries. And market was best developed in the western regions of the Austro-Hungarian monarchy, Vienna enjoying the leading position. Moreover, manufacture as a higher form of work organization compared with guild trade, penetrated first into west Slovakia, as it came from the adjoining Bohemian and Austrian lands.

The factory system proper to the development of capitalism develops in Slovakia later than in the other countries of western Europe. Within the Austro-Hungarian monarchy the Czech-speaking lands and Austria came to the fore, while within Hungary itself Budapest gained precedence. Feudal traditions which kept on living in Hungary even in the 19th century, slowed down the development of the factory system at its very start and, later, the competitive spirit of a better developed industry in Bohemia was also a great disadvantage. After the Austro-Hungarian (dual monarchy) agreement, the factory system of industry began to receive some support which brought a certain acceleration in the industrializing process. Slovakia boasted of old traditions in industry. And so we see that in the period 1881 — 1914, in spite of the fact that the population of Slovakia represented only 17 % of the total number of inhabitants of Hungary of which it was part, it received 33 % of the government's financial help granted for the development of industry. In 1910 the number of concerns having over 20 employees

# Map of distribution of industry in Slovakia

Scale: 0 5 10 15 20 25 30 35 40 km.



Map 1. 1 — state boundary, 2 — territorial boundary, 3 — boundary of region, 4 — river, 5 — railway, 6 — thermal power station, 7 — hydroelectric power station, 8 — atomic power plant, 9 — coal mining, 10 — peat extraction, 11 — extraction of oil and natural gas, 12 — ore mining, 13 — industry of building materials and ceramic manufacturing, 14 — industry of fire-proof materials, 15 — metallurgical industry, 16 — machine and electrical industries, 17 — chemical industry, 18 — wood industry, 19 — paper industry, 20 — textile and clothing industries, 21 — tanning and leather industries, 22 — food and fodder industries, 23 — glass and optical industries, 24 — other industries. The industrial localities by size: 25 — slight, 26 — small, 27 — middle, 28 — middle sized, 29 — large (Compiled by K. Ivanička, drawn H. Grossová.)

grew to 600. By 1914 this number was even greater. From among the industrial branches we note the development of coal mining in Handlová, that of the magnesium industry, of furniture manufacture, of match factories; a plant for the making of cables was built in Bratislava, in Dolné Hámry a silver-ware manufacturing factory was established, etc.

In spite of all that, only 18 % of the total population was engaged in industry which shows that the region under study, with the exception of some of its parts, was agricultural in character.

The birth of the first Czechoslovak republic in 1918 brought quite a different development. While from the nationalist, cultural and political point of view Slovakia began to breathe more easily, its economic life began to feel the crushing competition of the more mature Czech industry. From the point of view of localization, the period of the 1st republic may be divided into two phases. In the first phase — till about 1933 — we witness the suppression of industrial concerns in Slovakia while in the second the absurdity of such an economic policy begins to appear and several modern industrial concerns are beginning to be built.

In the first decade of the existence of the common state of Slovaks and Czechs, the Czech monopolists then in power make Slovakia into an agrarian complement of the western regions of the country. Discriminating transport tariffs were introduced, loans were suppressed, the export of some products into Hungary and USSR was forbidden. This, together with the fact that some of the concerns had old types of equipment or lacked railway connections — having been built prior to the building of railways — led to the closing of some of the factories. An important rôle was played here also by the slowness in the construction of railways which made it difficult for plants using charcoal as fuel to pass on to coal. Many plants closed down at this time, as the iron works at Krompachy, Likier and Pohorelá, metal works in Bratislava and Košice, glass manufactures in Zliechovo-Gápel, Rimavská Kokava, Dobrý Potok and Vlčovo, woodworks at Velké Uherce, Kežmarok and Banská Bystrica etc. The result is great unemployment in Slovakia (over 200 000 persons in 1933) and seasonal as well as permanent emigration (10).

The suppression of industry soon brought its negative results. A strong separatist political movement on the part of the Slovak bourgeoisie was set on foot threatening the republic with disintegration. When voices are heard in Germany demanding the annexation of the borderland in Bohemia where some important branches of Czechoslovak economy are located, the eyes of those in power turn towards the securer eastern part of the republic where, as a result of an abundant supply of labour, the wages are much lower, thus giving hopes of higher gains for enterprizes. Thus, after 1933 Slovakia becomes an attractive proposition for the placement of industry. The valley of the Vah, favourably placed as to metallurgical basis — the region of Ostrava — becomes the emplacement of heavy industry concerns, important for the defence of the country. The company for chemical and iron industry in Ústí nad Labem undertakes the construction of electrochemical concerns on the upper Nitra, which also enables the development of coal mining and the extension and reconstruction of the electric power station. Baťa builds a modern shoe factory in Baťovany (to-day Partizánske) some wood processing plants and a modern chemical factory in Svit under the High Tatras. The construction of several strategically important railways is being undertaken improving the position and communication of some of the regions.

After the Second World War industrialization goes on in the shape of the transfer of some smaller concerns from Czechspeaking lands to Slovakia and from 1948 the

socialist industrialization of Slovakia is undertaken with the active participation of the Czech people; in this the leading rôle is played by the working class. This mutual cooperation and help is a new feature in Czech-Slovak economic relations. The new industry draws its origin from the needs of the unified Czechoslovak economy.

From the point of view of localization, socialist industrialization is marked by a number of special features.

A. a) As a result of a new economic orientation of Czechoslovakia towards the Soviet Union and other socialist countries, the position of Slovakia changes. Instead of being a far-away border land it becomes the immediate neighbour of those countries with which Czechoslovakia has the most extensive economic connections. Slovakia becomes suited for the localization of branches of industry which process the raw materials imported from USSR, from the Danube basin countries and from Poland, or eventually aim at exporting finished goods into these countries. New possibilities arise for cooperation among various concerns. A typical expression of the economic activation of eastern Slovakia, of the territory east of the line Košice—Prešov which, in the past, most acutely suffered from its extreme border position. Near Košice, first and foremost, in dependence on Soviet ore, an enormous metallurgical concern is being built which will enable the development of related branches of industry — machinery, eventually chemical concerns. At Vojany, near the Soviet frontier a huge power plant has been built; it uses Soviet coal as fuel. A pipe-line leads to western Slovakia — Bratislava — bringing crude mineral oil from the Tatar ASSR and for the processing of which a huge modern petrochemical concern has been built. Imported bauxite from Hungary is processed for the production of aluminium at Žiar nad Hronom, not far from the centre of electric energy on the Upper Nitra. New shipyards specialize in ships exported mostly to the Soviet Union. A new shoe factory at Bardejov deserves mention among other new plants.

b) The advantageous position of the Vah valley is being still made use of in connection with the metallurgic basis at Ostrava. This, together with abundance of local labour influenced the establishment of machinery works at Martin, of the plant for ball bearings at Kysucké Nové Mesto, of the factory for motor spare parts at Bánovce nad Bebravou etc.

B. The abundance of labour was a decisive moment in this development, especially considering the fact that a decrease in population took place in Bohemia and all labour has been practically utilized. This consideration will be decisive also in the coming decades. In spite of the fact that only 32,3 % of the inhabitants of Czechoslovakia live in Slovakia, in the coming two decades Slovakia will contribute 68 % of people in productive age, from the national standpoint. This means that a promising future is expected for those branches of industry that need more labour and in the case of which the transport cost of raw material does not very much differ from that of the transport of finished goods.

C. A specific feature of the socialist industrialization of Slovakia is the localization of plants producing new kinds of products, those that are connected with new scientific and technical discoveries, eventually those that have not been produced in ČSSR so far. The invention of distant picture transmission appeared in the production of television apparatus at Nižná na Orave, the increasing use of chemical filaments found its expression in the newly built factories at Nováky (polyvinylchlorid), Bratislava and Humenné (kapron), the „chemification“ of agriculture brought the construction of the factory for nitrate manures at Šala nad Váhom, the ever spreading and more widely used refrigeration was dependent on the production of household refrigerators at 2 new plants,

The wonderful invention of penicillin is being applied in the modern plant at Slovenská Lupča; other various kinds of medicaments are being produced at the Slovakoľarma in Hlohovec, while the production of veterinary medicines is localized in Michalany. Cultural development and the spread of films and cinemas in Slovakia demanded the establishment of film industry in Bratislava. The possibility of gaining electric current from atomic power stations led to the laying of the foundations of a nuclear electric plant in gaining electric current from atomic power stations led to the laying of the foundations of a nuclear electric plant in Bohunice. These and other concerns give a new character to industry in Slovakia and on a national scale.

D. Local supply of raw material and increased consumption became important factors in the localization of modern woodprocessing plants — Smrečina in Banská Bystrica, Bučina in Zvolen and the extension of the veneering plant at Žarnovica which was put up in the course of the Second World War. To provide supplies to rapidly growing towns and to make better use of local raw materials, a number of foodstuffs producing plants have been built. Thus, out of 36 new dairies built in Czechoslovakia, 30 are in Slovakia; 5 slaughter houses have been put up, 3 freezing plants, a modern brewery in Topoľčany, a number of bakeries etc. To help the extensive building program, building material concerns have been established in places where local raw material can be used. Apart from cement works of long standing at Ladce, Horné Srnie, Stupava and Lietavská Lúčka, cement works have been established at Banská Bystrica and at Bystré. To this category belong also plants producing pre-fabs and erected in western Slovakia and on the Rye Island south-east of Bratislava. Of extraordinary significance for the improvement of lignite mining in the Nováky basin and the construction of Váhostroj — a system of dams and power stations on the Vah river and on some other smaller ones. A special position is held here by the Danube on which a dam is to be built at Gabčíkovo in cooperation with the People's Republic of Hungary; when finished, this dam and power station will improve considerably the supply of electric energy to south-west Slovakia. The latter represents to-day the most promising region for the development of industry including the point of view of water supply. While in Czech-speaking regions the upper courses of the various rivers mark the limit of development of chemical industry, the Danube, Nitra, Vah and other Slovak rivers represent still many possibilities even in their lower courses. This fact is the basis of a project of erecting a cellulose and paper plant in Štúrovo. On the other hand, by 1967 a large diameter gas pipe-line is to be led from the Lvov region in the USSR which, together with the supply of water, will represent further possibilities for the development of Slovak chemical industry.

The process of socialistic industrialization of Slovakia is not yet completed. The results obtained so far, however, are remarkable. Slovakia has acquired a more important share in national production. In comparison with the year 1937 its participation in the industrial production of Czechoslovakia grew from 7,2 % to 18,2 % in 1961. About 200 new plants have been erected since 1948 while some 150 have been reconstructed. Stress was laid on plants producing the means of production and this invests Slovakia with a new feature as compared with the period between the two World Wars.

#### INDUSTRIALIZED REGIONS

The development described above led to a certain grouping of industrial concerns and to the formation of geographical regions, in which industry is an important and, in some cases, a prevailing economic branch.

I. The most extensive industrialized region is the *middle and upper Váh valley* to

which may be added the region of Orava, Kysuce, Martin and the hilly district of Myjava. It has its own basis of electric energy supplied by the system of power stations on the Vah, there is a sufficient supply of industrial water and, what is more, apart from an advantageous geographical position it has an adequate system of communications.

The neighbouring mountain groups supply wood as an important raw material for wood-processing plants. Wood-cutting and log floating on the Vah belong to the most ancient occupations in those parts. Nowadays wood is processed in a number of saw-mills, in the furniture plant at Martin and in cellulose and match factories (Ružomberok, Žilina, Bytča). The thickly populated Vah valley supplied sufficient labour that comes handy in the textile and clothing industries (Trenčín, Žilina, Púchov, Ružomberok, Trstená, Čadca, Turzovka). Machinery industry was started here in the thirties and represents now the most important industrial branch of this region. The latter specializes in heavy machinery (Dubnica, Martin), in the production of small types of motorcycles (Považská Bystrica), of lathes (Trenčín-Kubra), of telephone apparatus (Liptovský Hrádok), of television sets (Nižná na Orave) and other machinery products (Myjava, Stará Turá). Important — in connection with the machinery industry — are the smelting works at Istebné and Mokrď. Building and construction is served by the cement works at Ladce, Horné Srnie and Lietavská Lúčka. Economic development is connected with the establishment of a rubber factory for the production of car tyres at Púchov and quite a number of other plants (see map).

II. The next industrialized region is the *middle and upper valley of the Hron*; we include in it also the old mining regions of Kremnica and Banská Štiavnica. The territory is rich in forests which, in the Banská Bystrica district, represent as much as 60 % of the land. Wood-cutting and wood processing in a number of mills (Podbrezová, Polomka, Čierny Balog, Ondrej, Šášovské Podhradie and many others, in Smrečina of Banská Bystrica, in Bučina of Zvolen, in veneering works at Žarnovica, in the paper mills of Harmanec) represent an important source of employment for the population and form also a certain specialization on a national scale. Sufficient wood was one of the most important factors in the past in the development of iron industry in the upper Hron and in the surroundings of Brezno. Continuity was preserved at Podbrezová, where the iron works are under reconstruction, being re-made into a modern plant for special steel production. At Vajsková there are smelting works for antimony. The complex of metallurgical concerns is completed heavy machinery plants at Hronec and Piesok and the smaller plants at Závadka and Pohorelá. More modest in this region is chemical industry represented by the oil refining plant at Dubová and the modern penicillin plant at Slovenská Lupča. Among the new concerns is also the unsuitably placed cement plant at Banská Bystrica.

A special under-section is formed by the territory of the Žiar depression and the chain of mountains of Kremnica and Štiavnica. The old gold and silver mines are practically reaching extinction and even from the 18th century attempts are being made at establishing branches of industry here that would replace gold and silver mining. At Banská Štiavnica and Hodruša some lead-and-copper mining is still being carried on, on a small scale, and gold ore is somewhat exploited at Kremnica. The small smelting works at Banská Štiavnica is but a historical souvenir. The old mint at Kremnica is still keeping prosperous as well as the plant for the production of cutlery at Dolné Háme; both of these, have, of course, technical sections oriented at newer machinery products. Old-time industry has been replaced by textile works, cigarette factories and machinery works. Next to the older plant for the production of mining equipment at Vyhne, a smaller plant with similar production program was established at Hliník nad Hronom and Electropraga at Kremnica. In Nová Baňa the processing of basalt was introduced to



replace extinct industry. A substantial change took place when an alluminium factory was built at Žiar nad Hronom; it has become an economic, administrative and population centre. It is so located as to use advantageously the electric power plants in the upper Nitra region, the waters of the Hron river and the abundance of local labour as well as the advantageous proximity of bauxite in Hungary.

III. *Upper and Middle Nitra* has its core in the mining, electrical energy and chemical complexes of Handlová and Nováky. The mining of brown coal and lignite enabled the localization of steam electric plant closely connected with electro-chemistry (production of carbide and of PVC). Ashes from power producing plants are used in the plant for production of building material. In the northern part of the region Bata's firm had put up a wood-processing concern which collaborated very closely with the largest Slovak shoe factory at Partizánske. The latter was located here again on account of cheap labour. The Partizánske factory is closely connected with the tanneries at Bošany and the rubber factory at Dolné Vestenice. The administrative centres of Prievidza and Topoľčany are engaged in foodstuffs industries (canning and brewery), wood and textile industry, while Bánovce nad Bebravou, apart from long standing furniture industry, have opened clothing and automobile factories, the latter being in close cooperation with the head concern of Tatra.

IV. *The region of Spiš* is occupied mainly by the south of the territory of the same name. Here there are old traditions of copper and iron ore processing close to the towns of Spišská Nová Ves and Gelnica; precious metal ores were worked at Smolník. At present, of greatest significance are the syderite and baryte ores at Rudňany, where a new mining and processing plant has been built; of somewhat less importance is the mining of managanese at Švábovce and Kýšovce, of copper ore at Slovinky and Smolník and iron ore at Mlynky. At Krompachy old smelting traditions are used for the smelting of copper. At Smolník, like at Banská Štiavnica, cigarette industry replaced the former mining and smelting industries. Metal processing is still carried on at Prakovce (a 200 years old tradition) and a new plant at Krompachy. Metal processing has been established also at Poprad and Spišské Matejovce (railway carriage production and enamel works) and lately established screw plant at Stará Lubovňa. Textile industry in Kežmarok and Levoča but continues longstanding traditions in this line; the same as the cigarette factory at Spišská Belá these plants provide employment for the local inhabitants. The largest industrial centre, similarly located, is Svit which has an important industry of man made fibres and textile production.

V. *Region of Gemer and Novohrad*. This is an old industrialized territory, but its development suffered when black metallurgy began to be shifted nearer to coal-mining centres. At the time of the first republic, its function was taken over by the region of the middle Vah where machinery industry developed thanks to advantages that were lost by the territory in question, i. e. an advantageous position with regard to metallurgical basis. Nowadays, when a new metallurgical centre is being built in east Slovakia, the hopes of this region are also rising.

At present iron ore is mined at Rožňava, Nižná Slaná and Železník, local raw material enabled the localization of the magnezium industry at Lubeník and Lovinobaňa, old traditions are being kept up in the glass works of Utekáč, Malinec, Katarinská Huta and Zlatno. With the suppression of iron works at Likier, chemical works were established here, using wood as basic raw material; this factory is prospering up to the present day. From among the other factories and plants the textile concern at Lučenec, Revúca and Tisovec, and enamel works at Filakovo are of some importance. In the west of the region the coal mining at Pôtor can be grouped with what has been said so far.



VI. Rather different as to localization is the industry of *Bratislava and its close surroundings*. There are several groups of industrial concerns here. Among these an important group is formed by those branches of industry that were originally orientated at raw materials unloaded in the Danube port. Here belongs the old oil refinery which is being dismantled at present. Production traditions as well as sufficiency of industrial cooling water are made use of at the new modern petro-chemical concern which processes Soviet mineral oil brought here with the help of a pipe-line direct from the Soviet Union. The industrial concern of Matador was dependent on imported raw rubber (to-day it uses also, as raw material, artificial rubber from the USSR and from the German Democratic Republic), two textile plants depend on imported Egyptian cotton. Vegetable oil factories and other smaller ones also belong to this group. The Danube, apart from the fact that it fulfills an important rôle in water transport, gives also sufficient amounts of water which attracts chemical industries. Apart from a rather old concern a new factory has been built for the production of plastics (its localization, strictly speaking has not been a happy one, it being too close to residential areas).

The second group of factories and plants aimed mostly at skilled labour or, perhaps, sales. The Bratislava electrotechnical concern producing transformers, welding apparatus and other produce belongs to this group, as does also the factory producing electric cables, Tesla manufacturing radio receivers, the plant for the production of optical instruments, that producing technical glass and so on.

The next rather typical branches of this economic and cultural centre are polygraphy, film production, fashionable clothing production and furniture making. The need of providing for increasing population called for the establishment of concerns such as mills, breweries, bakeries, meat processing and freezing works, sweets manufacturing plants and wine cellars. The latter are closely connected also with the neighbouring productive region of the Small Carpathian mountains.

Not far from the town we find plants for the production of building material, such as Stupava with its cement works, brickworks at Pezinok and a plant for the production of prefabricates at Štefánikovec.

#### VII. *Closer surroundings of the Iron Works of east Slovakia.*

It is a new type of localization of industry in Slovakia. This metallurgical concern which, when finished, will have a large annual production of steel, will process iron ore imported from Krivoy Rog and use Ostrava coal fit to be made into coke. The concern is located on the meeting point of the routes over which fuel and iron ore are to be brought. Part of the latter is supposed to be taken further to Ostrava on the railway trucks that will bring coal intended to be made into coke. To help the system of transport. a new broad gauge railway is to be built from the Soviet frontier to Košice, because at present even the newly built and electrified railway — the so-called Railway of Friendship — is not able to cope with the ever increasing exchange of goods between Czechoslovakia and the Soviet Union.

Not far from the place where the iron works are being built there are supplies of practically unlimited quantities of limestone and a sufficient quantity of magnesite which are being mined and processed in newly built plants. The emplacement of such a gigantic concern close to Košice, the second largest town in Slovakia, enables the employment of available labour, the development of specialized high and secondary schools, of scientific research institutions as well as of city and cultural services. In connection with the construction of this concern, building material industry has developed, some concerns closely connected with the iron works — such as the Machinery Works of Eastern Slovakia — have been built, not to speak of the smaller machinery concern

at Snina and the chemical factory at Strážske. After the completion of this iron works concern an extensive program of processing plants is to be accomplished; these will make up for further specialization in ČSSR as a machinery producing country within the framework of the Mutual Help Council and will further the economic activization of east Slovakia.

The other regions of Slovakia do not represent continuous industrialized areas and industry is rather dispersed, or centered in larger towns.

*The plain of the Danube* with the adjoining lowlands of the districts of Trnava, Nitra, Žitava, Hron and Ipel gave space to a number of foodstuffs producing plants. We find here sugar refineries at Trnava, Vlčkovce, Sered', Šurany, Pohronský Ruskov and Nitra, tinning industry at Dunajská Streda and Galanta, corn mills, distilleries, dairies and other food producing concerns. Machinery industry is localized in some towns, namely in Trnava, with a large production of enamel goods, laundry machines, with works for the repair and construction of railway carriages, while Nové Zámky and Zlaté Moravce produce refrigerators. The shipyards at Komárno make the best possible use of their position on the Danube. On the border of the industrialized middle Vah valley and of the Danube plain a new plant has been placed at Tlmače, producing agricultural machines. The latest years have witnessed the construction of a nickel smelting plant at Sered' (processing ore imported from Albania), the development of chemical works with the building of a pharmaceutical concern at Hlohovec, of a plant for the production of plastics at Nitra, of a complex for the production and processing of cellulose at Štúrovo and of a factory for the production of nitrogen-based artificial manures at Šala on the Vah. The localization of the latter was influenced also — apart from advantageous water conditions — by the possibility of disposing of the finished products in the agricultural Danube plain and relatively close region of Záhorie, from which natural gas is being brought by pipe-line; abundance of labour, of course, was not a negligible factor. At present the building of another pipe-line is under preparation: it is to lead from the Lvov region of the USSR; this will have a favourable influence on the supply of gas to south-west Slovakia, as natural gas represents an important raw material for chemical industry and a supply of energy.

The construction of a dam on the Danube is under consideration. It is to be performed in cooperation between Hungary and Czechoslovakia. The dam will be at Gabčíkovo and will represent a further increase in the energy supply of this region. Abundance of water, advantageous transport system, the construction of water power stations on the Danube the leading of the oil pipe-line and of the gas pipe-line as well as reserves of labour make south-west Slovakia together with Bratislava one of the most promising regions of Czechoslovakia for the development of industry.

The so-called *Záhorie* (lit. territory beyond the hills) with some mineral oil mining and natural gas supply, with the production of artificial silk at Senica, with textile industry at Holič, Skalica and Kúty, with several wood-processing plants using as raw material the pines growing on some of the sandy land of this region, is foremost an agricultural region, similar to the *region of Šariš*, where only Prešov with its old salt works, its new plant for the production of electro-meters, with clothing and foodstuffs industry, forms an exception.

The whole of east Slovakia, east of the line Košice—Prešov, but more especially the north-east part of the East Slovakian region is an insufficiently industrialized region with ever growing reserves of labour. The activization of this region will be one of the complicated problems of the economic development of Slovakia.

## LITERATURE

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### PROCES INDUSTRIALIZÁCIE SLOVENSKA

Priemyselná činnosť na Slovensku najmä zásluhou baníctva a spracovania kovov nadobudla už v období feudalizmu veľký význam. Banské oblasti Kremnice, Banskej Štiavnice, Spiša, Gemera, železiarska oblasť horného Pohronia sa vyznačovali vlastnou špecializáciou v rámci Uhorska. Ešte v prvej polovici 19. stor. sa na Slovensku ťažilo 73 % zlata, 73 % striebra, 72 % medi a asi 68 % surového železa v rámci Uhorska. Rozhodujúcimi lokalizačnými činiteľmi popri výskyte nerastných surovín boli bohaté lesy a horské potoky, ktoré poháňali vodné kolesá, hlavný energetický zdroj vtedajšej dobe. Tieto faktory pôsobili aj v sklárskom a papiernickom priemysle.

Priemyselná revolúcia podmienená zavedením parného stroja znamená odsunutie Slovenska do úzadia. Nedostatok uhlia, silné feudálne prežitky a nedostatok národného investičného kapitálu znamenajú zabrzdenie rozvoja v období nástupu priemyselného kapitalizmu a ďalej už pôsobila lepšia konkurenčná schopnosť rozvinutejšieho priemyslu Čiech a Rakúska. Napriek tomu v rokoch 1880—1914 sa buduje na Slovensku rad banských a priemyselných závodov. Rástla ťažba uhlia v Handlovej, prosperoval drevársky a papiernický priemysel, zápalkárne, magnezitky, ťažba železnej rudy v Gemeri, bolo vybudovaných niekoľko strojárskych a elektrotechnických závodov, rafinéria nafty a iné závody. Zamestnanosť v priemysle však predstavovala iba 18 % z celkového počtu obyvateľstva.

Prvé desaťročie Československej republiky sa stalo známym dezindustrializáciou Slovenska a jeho premeny na agrárny doplnok západnej časti štátu. V tridsiatych rokoch v dôsledku veľkého vzrastu nezamestnanosti, existencie nižších miezd a novej strategickej situácie, ktorá vznikla po nástupe fašizmu v Nemecku, pristupuje sa na Slovensku k výstavbe viacerých moderných priemyselných závodov najmä na strednom Považí, na hornej Nitre, vo Svite a viaceré staršie závody sa rekonštruujú.

Po druhej svetovej vojne pokračuje spriemyselnovanie premiestňovaním viacerých menších závodov z českých krajov a od roku 1948 sa pristupuje k socialistickej industrializácii Slovenska za aktívnej účasti českého národa, v ktorom politické vedenie prevzala robotnícka trieda. Táto vzájomná spolupráca a pomoc je novou črtou v československých ekonomických vzťahoch. Nový priemysel vychádza z potrieb jednotnej československej ekonomiky.

Z lokalizačného hľadiska sa socialistická industrializácia vyznačuje niekoľkými osobitnými črtami.

A. a) V dôsledku novej hospodárskej orientácie ČSSR na Sovietsky sväz a iné socialistické štáty nastupuje zmena polohy Slovenska. Bývalé okrajové územie sa stáva bezprostredným susedom štátov, s ktorými má ČSSR najrozsiahlejšie hospodárske styky. Slovensko sa stáva vhodným pre lokalizáciu odvetví, ktoré spracávajú suroviny dovážané z SSSR, z podunajských štátov a Poľska, prípadne sa orientujú na vývoz hotových výrobkov do týchto štátov. Nové možnosti vznikajú pre kooperáciu závodov. Typickým výrazom novej situácie je hospodárska aktivizácia východného Slovenska, ktoré v minulosti najviac trpelo okrajovou polohou. Pri Košiciach sa predovšetkým na báze sovietskej rudy buduje mohutný metalurgický kombinát, ktorý umožňuje rozvoj nadväzujúcich odvetví strojárenského, prípadne chemického priemyslu. Vo Vojanoch v blízkosti sovietskych hraníc sa vybuďovala veľkoelektrárň, ktorá spaľuje sovietske uhlie. Na západnom Slovensku — do Bratislavy bol vybudovaný ropovod, ktorým sa dopravuje ropa z Tatárskej ASSR, ktorá umožnila výstavbu moderného petrochemického kombinátu.

Dovoz bauxitov z Maďarska využíva kombinát na výrobu kovového hliníka v Žiari nad Hronom, v blízkosti energetického strediska na hornej Nitre. Predovšetkým na vývoz lodí do SSSR sa orientujú nové lodenice v Komárne, obuvnícky závod v Bardejove a i.

b) Využíva sa maďalej výhodná poloha Považia vzhľadom na metalurgickú základňu Ostravska, čo spolu s dostatkom pracovných síl vplývalo na lokalizáciu strojární v Martine, závodu na výrobu guľičkových ložísk v Kysuckom Novom Meste, závodu na výrobu automobilových súčiastok v Bánovciach nad Bebravou a iných závodov.

B. Veľmi prítiažlivým momentom sa stali rezervy pracovných síl, najmä v súvislosti so skutočnosťou, že v českých krajoch nastal veľký pokles populácie a pracovné sily sú tam prakticky využit. Tento moment bude pôsobiť i v budúci desaťročiach. Napriek tomu, že na Slovensku žije asi 32,3 % obyvateľstva, v budúci dvoch desaťročiach sa bude Slovensko zúčastňovať na celoštátnom prírastku obyvateľstva v produktívnom veku 68 %. To znamená, že tu majú veľmi dobré predpoklady odvetvia, ktoré vyžadujú väčšie množstvo pracovných síl a pri ktorých náklady na dovoz surovín a paliva sa podstatnejšie nelíšia od nákladov na dopravu hotových výrobkov.

C. Špecifickou črtou socialistickej industrializácie Slovenska je lokalizácia závodov produkujúcich nové druhy výrobkov, ktoré súvisia s novými vedeckými a technickými objavmi, resp. ktoré sa v ČSSR doteraz nevyrábali. Vynález prenášania obrazov na diaľku sa prejavil vo výrobe televízorov v Nižnej nad Oravou, prenikanie chemických umelých hmôt a vlákien našlo uplatnenie v novopostavených závodoch v Novákoch (polyvinylchlorid), v Bratislave, Humennom (kapron), chemizácia poľnohospodárstva vo výstavbe závodu na dusíkaté hnojivo v Šali nad Váhom, rozšírenie a bežné používanie chladiarstva bolo závislé od výstavby závodov na výrobu domácich chladničiek v Zlatých Moravciach a Nových Zámkoch. Vynikajúci vynález penicilínu sa uplatňuje v modernom závode v Slovenskej Lupči, rôzne iné liečivá sa vyrábajú v Slovakofarme v Hlohovci, výroba veterinárnych liekov sa lokalizuje v Michalovciach. Kultúrny rozvoj a kinifikácia Slovenska si vymohla vznik filmového priemyslu v Bratislave a vynález získavania elektrického prúdu v atómovej elektrárni viedol k položeniu základov jadernej elektrárne v Bohuniciach. Tieto a iné podobné závody dávajú priemyslu na Slovensku nový charakter i v celoštátnom meradle.

D. Miestna surovínová báza a zvýšená spotreba sa stali dôležitým činiteľom pri lokalizácii moderných drevospracujúcich závodov — Smrečiny v Banskej Bystrici, Bučiny vo Zvolene a rozšírenia Preglejky v Žarnovici, ktorá bola vybudovaná počas druhej svetovej vojny. Pre lepšie

zásobovanie rýchle rastúcich miest a lepšie využitie surovinovej základne bol postavený rad závodov potravinárskeho priemyslu. Napríklad z 36 nových mliekárni, postavených v ČSSR, pripadlo na Slovensko 30, bolo vybudovaných 5 bitúnkov, 3 chladiarne, moderný pivovar v Topoľčanoch, viacero pekární a pod. Rozvíjal sa tiež priemysel uspokojujúci rozsiahlu výstavbu, ktorý má dobré predpoklady v miestnej surovinovej základni. Popri starších cementárňach v Ladcoch, Hornom Slni, Stupave a v Lietavskej Lúčke boli vybudované cementárne v Banskej Bystrici a Bystrom. Toho istého typu je i výroba stavebných prefabrikátov na Záhorí a na Žitnom ostrove. Neobyčajne veľký význam pre zlepšenie energetiky Slovenska mal rozvoj ťažby lignitu v Nováckej panve a výstavba Váhostroja — systému priehrad a elektrární na rieke Váh, ako aj na niektorých iných riekach. Osobitné postavenie tu má Dunaj, na ktorom sa pristupuje spolu s MLR k výstavbe vodného diela v Gabčíkove, ktoré podstatne zlepší energetickú situáciu juhozápadného Slovenska. Dnes juhozápadné Slovensko predstavuje najperspektívnejšiu oblasť rozvoja priemyslu i z hľadiska vodných zásob. Kým v českých krajoch vodné zásoby prakticky stavajú hornú hranicu rozvoja chemického priemyslu, Dunaj, Váh, Nitra a iné slovenské rieky vo svojej dolnej časti predstavujú ešte veľké možnosti. Túto skutočnosť využíva v projektoch závod na výrobu celulózy a papiera v Štúrove a na juhozápadné Slovensko sa má do roku 1967 vybudovať plynovod o širokom priemere z Lovskej oblasti SSSR, ktorý spolu s vodou bude predstavovať ďalšie možnosti pre rozvoj chemického priemyslu.

Proces industrializácie Slovenska nie je ešte skončený. Dosiahnuté výsledky sú však už pozoruhodné. Slovensko sa výraznejšie zúčastňuje na celoštátnej výrobe. V porovnaní s rokom 1937 jeho podiel na priemyselnej výrobe ČSSR vzrástol r. 1961 zo 7,2 % na 18,2 %. Od roku 1949 sa vybuďovalo takmer 200 nových závodov a vyše 150 sa zrekonštruovalo. Ťažisko bolo pritom v skupine závodov výrobných prostriedkov, čo dalo Slovensku novú črtu v porovnaní s medzivojnovým obdobím.

### Industrializované oblasti

Uvedený vývoj viedol k určitým zoskupeniam priemyslu a vytvoreniu geografických oblastí, v ktorých je priemysel dôležitým a v niektorých dominujúcim hospodárskym odvetvím.

I. Stredné a horné Považie, ku ktorému môžeme pričleniť tiež Oravu, Kysuce a Myjavskú pahorkatinu, má vlastnú energetickú základňu, ktorá predstavuje systém vážskych elektrární a výhodnú polohu vzhľadom na metalurgickú základňu Ostravska, čo umožnilo špecializáciu v strojárskom priemysle. Najstarším odvetvím je ťažba a spracovanie dreva, dostatok pracovných síl využíva rozsiahly textilný priemysel. Potrebám výstavby slúžia cementárne a iné závody stavebného priemyslu. Potrebám strojárstva slúži novolokalizovaný hutnícky priemysel.

II. Stredné a horné Pohronie spolu so starým banským územím Kremnice a Ban. Štiavnice má veľké lesné komplexy, využívané radom píl a drevospracujúcich závodov, staré železiarske tradície vyústili do vytvorenia menšieho, ale v hospodárskej štruktúre výrazného železiarskeho a strojárkeho komplexu okolo Podbrezovej. Blizkosť k hornej Nitre ako energetickému stredisku, možnosť získania chladiarenskej vody z Hrona, dostatok pracovných síl a pomerne výhodná poloha vzhľadom na náleziská bauxitov v Maďarsku vytvorili predpoklady pre lokalizáciu moderného kombinátu na výrobu alumínia v Žiari nad Hronom. Kremnica a Ban. Štiavnica s okolím predstavujú svojrázne komplexy ustupujúceho baníctva a náhradných priemyselných odvetví.

III. Horná a stredná Nitra má vo svojom jadre bansko-energeticko-chemický komplex v Handlovej a Nováckej hnedouhoľnej a lignitovej panve, s dôležitou výrobou umelých hmôt a elektriny. Na nadbytku pracovných síl a starých tradíciách sa rozvinul komplex kožiarskeho a obuvníckeho priemyslu. V Bánovciach nad Bebravou sa rozvíja automobilový priemysel, ktorý v určitom zmysle nadväzuje na Považskú oblasť.

IV. Odlišné lokalizačné faktory pôsobili pri vzniku priemyslu Bratislavy a blízkeho zázemia. Je tu niekoľko skupín priemyselných závodov. Významnú skupinu tvoria závody, ktoré sa orientovali na dovážané suroviny vykladané v bratislavskom prístave a dostatok priemyselnej vody (chemický, textilný, gumársky a potravinársky priemysel).

Druhá skupina závodov sa orientovala predovšetkým na kvalifikovanú pracovnú silu, prípadne odbyt (elektrotechnický, strojársky, optický priemysel a iné závody).

Typickými odvetviami hospodárskeho a kultúrneho centra je polygrafický, filmový, módný

odevný a nábytkársky priemysel. Potreby zoskupeného obyvateľstva sa stali činiteľom lokalizácie mlynov, pivovarov, mraziarní, pekární a iných závodov potravinárskeho priemyslu. V blízkom zázemí sú lokalizované závody stavebného priemyslu, zamerané na uspokojenie potrieb vlastnej výstavby mesta.

Na východnom Slovensku sledujeme vytváranie nového rajónu, ktorý pravdepodobne v blízkej budúcnosti nadobudne ucelený charakter a zahrnie užší rajón Východoslovenských železiarní, Spiš, Gemer, rajón Strážskeho a ďalšie nové priemyselné stanovišťa na území Košického kraja. V súčasnom období vyčleňujeme nasledujúce spriemyslené územia.

V. Užší rajón Východoslovenských železiarní predstavuje nový typ priemyselnej lokalizácie. Metalurgický kombinát s produkciou vyše 3 mil. ton ocele sa orientuje na dovoz železnej rudy z Krivého Rogu a koksovateľného uhlia z Ostravy. Za účelom zlepšenia komunikačného postavenia sa pristúpilo k výstavbe širokorozchodnej železnice od hraníc SSSR do Košíc. Vlastné územie poskytuje dostatok vápenca, magnezitov, pracovných síl a po potrebných úpravách a výstavbe zariadení i priemyselnú vodu. Hutnícky kombinát s radom nadväzujúcich strojárskych a chemických závodov má umožniť rozvoj špecializácie Československa v rámci RVHP, ktorá spočíva v strojárskych výrobkoch.

VI. Spišská oblasť má staré tradície ťažby a spracovania medenej a železnej rudy. V súčasnom období najväčší význam majú sideritovo-barytové rudy, menší mangánové a medené rudy. Zo spracovateľských odvetví najvýznamnejším je kovospracujúci priemysel, výroba umelých vlákien vo Svite, textilný a odevný priemysel.

VII. Gemersko-novohradská oblasť, prechádzajúca do Stredoslovenského kraja, je starým industrializovaným územím, ktorého rozvoj v období presunu čiernej metalurgie ku ložiskám čierneho uhlia zaostal. Jeho bývalú funkciu ako kovospracujúceho územia prevzalo v súčasnom období Považie. Výstavbou Východoslovenských železiarní sa predpoklady pre ďalšiu industrializáciu zlepšujú.

V súčasnom období sa ťažia železné rudy, ťaží a spracúva sa magnezit, na staré tradície nadväzuje textilný, kovospracujúci a sklársky priemysel.

Ostatné územia Slovenska nepredstavujú súvislejšie zindustrializované areály a priemysel sa vyskytuje rozptýlene, prípadne sa sústreďuje v niekoľkých strediskách.

*Podunajská rovina* s priľahlými časťami tabúl poskytla stanovište cukrovarníckym, mlynárskym, konzervárenským, liehovarníckym, mliekárenským a iným závodom potravinárskeho priemyslu. V posledných desaťročiach vzostupnú tendenciu má strojársky a najmä chemický priemysel. Popri dostatku pracovných síl tu pôsobí najmä priaznivá vodná bilancia, výhodné dopravné pomery, možnosti odbytu. Veľké zlepšenie podmienok znamená tiež výstavba ropovodu z SSSR do Bratislavy, plynovodu o širokom priemere z Lvovskej oblasti a výstavba vodného diela s elektrárnami v Gabčíkove na Dunaji. Uvedené faktory spolu s výrobnými tradíciami vytvárajú z juhozápadného Slovenska spolu s Bratislavou najperspektívnejšiu oblasť rozvoja chemického priemyslu v ČSSR.

*Záhorie* s malou ťažbou nafty a zemných plynov, s výrobou umelého hodvábu, textilným a drevárskym priemyslom je prevažne poľnohospodárskym územím podobne ako územie východného Slovenska na východ od čiar Košice—Prešov, kde len Prešov s novým závodom na výrobu elektromerov, odevným priemyslom a starým solivarom, rajón Strážskeho s chemickým priemyslom a niektoré iné mestá predstavujú určitú koncentráciu obyvateľstva žijúceho z priemyslu.

Mapa 1. Rozmiestenie priemyslu na Slovensku: 1 — štátna hranica, 2 — zemská hranica, 3 — hranica rajónu, — 4 rieky, 5 — železnice, 6 — tepelná elektráreň, 7 — hydroelektráreň, 8 — atómová elektráreň, 9 — ťažba uhlia, 10 — ťažba rašeliny, 11 — ťažba nafty a zemného plynu, 12 — ťažba rúd, 13 — priemysel stavebných hmôt a keramický priemysel, 14 — priemysel ohňovzdorných látok, 15 — hutnícky priemysel, 16 — strojnicky a elektrotechnický priemysel, 17 — chemický priemysel, 18 — drevársky priemysel, 19 — papiernický priemysel, 20 — textilný a odevnícky priemysel, 21 — kožiarsky priemysel, 22 — potravinársky priemysel a priemysel krmovín, 23 — sklársky a optický priemysel, 24 nerozlišený priemysel. Priemyselné lokality podľa veľkosti: 25 — drobné, 26 — malé, 27 — stredné, 28 — stredne veľké, 29 — veľké. (Zostavil K. Ivanička, kreslila H. Grossová.)