THE GEOGRAPHY OF INDUSTRY IN THE SUMY REGION IN THE 20TH CENTURY: RETROSPECTIVE, STRUCTURE, TRANSFORMATIONS

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INTRODUCTION

Industry is one of the leading sectors of the Sumy region's economy, making a significant contribution to the region's socio-economic development. It is a core type of economic activity that serves as a foundation for the development of other sectors. The historical and geographical study of the industry allows us to see how space has changed under the influence of production, how labour resources have been formed, how landscapes have been transformed and what factors have enabled or hindered development. Structural changes constantly occurring in the industry cause the transformation of other regional socio-geosystem structures. The study of industry in the regional context allows the identification of patterns of territorial organization of production and assessing opportunities and risks for sustainable development. Historical retrospective allows us to trace how industrial priorities have changed due to socio-political transformations, resource base and geopolitical situations. The geographical approach allows us to analyse spatial connections, transport accessibility, natural resource factors, and the economic and geographical location of the region. Therefore, studying the history of industrial development in the region is a necessary tool for formulating a sound regional policy, assessing the competitiveness of territories, developing spatial development strategies, and adapting to modern challenges in the context of European integration processes and post-industrial transition.

1. Industry of the Ukrainian SSR districts that became part of the Sumy region in the first half of the twentieth century

It is worth studying the historical aspects of Sumy region's industry development from the beginning of the twentieth century. At that time, the food industry, especially the sugar industry, developed significantly in the territories that later became part of the Sumy region, which was formed in 1939. The share of the food industry in all industrial output in 1913 was 96%. As of 1925, there were more than 20 sugar refineries in the region, 17 of them

in the Sumy district. The largest were the refinery in Sumy, which employed 1,120 workers; the sugar factory in the village of Kiyanitsa in the former Khotyn' district, which employed 648 workers, and the Duboviazivka sugar factory in Konotop district, employing 588 workers¹.

The *alcohol industry* was also a long-standing area of specialisation in the Sumy region. By the end of 1925, there were nine distilleries in the Sumy district, of which three were operating (in Sumy, Trostianets, and Stetskivka); in the Konotop district, there was one operating distillery (Popivka village). There was also brewing and malt production. Two breweries operated in Sumy, the Krasovytskyi brewery in Hlukhiv, the Gerner brewery in Konotop, and the Okrmiskhosp brewery in Romny. Other branches and industries of the food industry were also widely represented: milling, cereal, terry and oil.

The energy sector was also developed. The first municipal power plant on the territory of the present-day Sumy region was built in 1902 in the city of Sumy². In 1903, a power plant was built in Okhtyrka, and in 1904 – in Shostka. In the cities of Hlukhiv, Romny, and Konotop, the first power plants were built in 1912-1914. By 1925, power plants were operating in seven regional cities³.

Machine-building and metallurgical enterprises began to appear in the Sumy region in the late nineteenth century. In 1870, an iron foundry and mechanical plant were founded in Svesa (Neplyuev's plant); an agricultural machinery plant (founded in 1891), the Vulcan foundry (1893), and the Belgian joint-stock company Sumy Machine-Building Workshops (1896) started operating in Sumy. In addition, as of 1915, there were mechanical factories in Sumy and its environs owned by A. Rosenquist (125 workers), T. Hetenko (16 workers), Z. Plaksa-Zhdanovych (46 workers), I. Holbert (21 workers), I. Varaksin (25 workers), Bilopillia, the factory of M. Halushkin (19 workers), and others. In addition to relatively large enterprises, there were many forges, workshops for producing agricultural implements and tools, and locksmith and turner workshops; there were even 24 small enterprises producing carriages.

The chemical industry in Sumy region has been known since 1739, when the gunpowder plant (now the state-owned Zirka plant) began producing in Shostka.

The building materials industry has long been a prominent part of the region's economy. The most widespread production was tile and brick. For

¹ Корнус А.О., Корнус О. Г. Промисловість Сумської області (економіко-географічне дослідження): монографія. Суми: СумДПУ імені А. С. Макаренка, 2017. 136 с.

² Заставний Ф. Д. Економічна і соціальна географія України. К.: Форум, 2001. 240 с.

³ Матеріяли до опису округ УСРР. Глухівська округа. Харків, ЦСУ УСРР, 1964. 58 с.; Матеріяли до опису округ УСРР. Конотіпська округа. Харків, ЦСУ УСРР, 1964. 64 с.; Матеріяли до опису округ УСРР. Роменська округа. Харків, ЦСУ УСРР, 1926. 58 с.; Матеріяли до опису округ УСРР. Сумська округа. Харків, ЦСУ УСРР, 1964. 58 с.

example, in 1883, there were 16 brick factories in the Okhtyrka district alone, 23 in the Lebedyn district, and 46 in the Sumy district. Smaller brick factories existed in Konotop, Hlukhiv, Krolevets and Romny districts⁴. As of 1925, there were seven registered (or licensed) brickworks in the Sumy district: two each in Sumy and Trostianets and one each in Rohizne, Vorozhba and Lebedyn; in the rest of the districts, there was one such enterprise each in Romny, Shatryshche village (Hlukhiv district) and Konotop.

The forestry and woodworking industry included the Ukrlispal parquet factory in Trostianets (formerly the Koenig factory) and large enterprises in Sumy, Trostianets, Mykhailivskyi Khutor, Stara Huta, Pyrohivka, Svesa and Shostka.

Light industry. Among the main enterprises was L. Chornobylskyi's woollen production enterprise in Sumy, which began its work in 1916. In addition, there were two other small "cloth mills" in Sumy, Beneman's and Stangel's. According to the "Materials for the description of the Sumy district"⁵. In addition to the woollen factory, there were six large leather enterprises and many small leather workshops and leather shoe workshops in the region.

Peat-cutting enterprises represented the extractive industry, chalk mining and lime production at the Zarutske deposit and kaolin mining and primary processing in Poloshky village, Hlukhiv district.

On the eve of the Second World War, Sumy region had a relatively well-developed economic complex. It included 8946 enterprises that employed 140 thousand workers and employees. In 1940, there were 511 large industrial enterprises in the region, the largest of which were the Frunze plant in Sumy, the Chervonyi Metalist plant in Konotop, the foundry and mechanical plant in Okhtyrka, the mechanical plant in Svesa and the film factory in Shostka. The Sumy region was one of the centres of sugar production, with 17 sugar factories. The region ranked 3rd in sugar production after Vinnytsia and Kyiv regions. The third part of the refined sugar produced by all Ukrainian factories belonged to three refineries in Sumy region (in Sumy, Buryna and Khutor-Mykhailivskyi)⁶.

In the postwar years, Sumy region became a significant industrial region of the Ukrainian SSR with highly developed chemical, machine-building, metalworking, food, and light industries. The oil industry also developed significantly. The creation of such an important industry as machine building in Sumy region made it possible to provide modern machinery to food and

216

 $^{^4}$ Історія Сумської області. Розвиток промисловості. URL : http://istoriya.sumy.ua/index.php/Sumy/

⁵ Матеріяли до опису округ УСРР. Сумська округа. Харків, ЦСУ УСРР, 1964. 58 с.

⁶ Покидченко Л. А. Історична довідка до 70-річчя утворення Сумської області. Державний архів Сумської області. URL : http:// daso.sumy.ua/index.php?option=com_content&task=view&id=136

chemical companies and supply agriculture with several important machines and tools. By the mid-1950s, machine building had become the main heavy industry in the region. Thus, in 1955, the gross output of the entire industry of the region increased by 27.3 times compared to 1913 and machine building by 84 times⁷.

The region's industry location is characterized by some peculiarities that have developed due to the socio-historical conditions of its development. For example, machine building, in particular electrical engineering, operates on imported raw materials; food processing industries are consumer-oriented and located in cities and urban-type settlements; enterprises related to the use of local agricultural raw materials (sugar and alcohol, fruit and vegetable canning plants) are located mainly in settlements and villages.

As of 1964, 314 enterprises in the region were on an independent balance sheet; significant structural changes had taken place in industry (as well as in agriculture). While in 1913, the share of metalworking in all industrial production was 3%, and food processing -96%, in 1964, the share of food processing in the structure of industrial production was 38.3%, machine-building and metalworking -21.6%, and light industry -13%.

The pre-war energy industry in Sumy Oblast operated on local resources and imported coal from Donetsk. The primary local fuel in the region was peat. Among the numerous peat bogs in the northern part of the region, the Shostka-Esman, Retytsia and Hlukhiv-Esman peat bogs stood out. In 1951-1955, 20 enterprises extracted peat in the region.

Railroad and industrial power plants in Sumy, Okhtyrka, Trostianets, and Lebedyn began using Donetsk coal. The region's energy sector was characterised by the fact that most towns had several small power plants. For example, in Romny in 1956, there were 25 of them⁹. In 1957, a thermal power plant with a capacity of 24 mW was built in Sumy. The region's main energy resources were electricity from Sumy, Okhtyrka, other thermal power plants and Zmiivska District State Power Plant (Kharkiv region).

Between 1946 and 1950, small hydraulic power plants (HPPs) were built: Obtovska and Reutynska HPPs on the Ret River in Krolevets district, Lushnykivska HPP on the Osota River in Shostka district, Skelska HPP on the Vorskla River in Okhtyrka district, Popivka and Poznyanka HPPs on the Vorskla River and Velyka Pysarivska HPP on the Vorskla River in Velyka Pysarivska district, Boromlia HPP on the Boromlia River in Trostianets district¹⁰. The construction of small hydropower plants at the initial stage of

⁷ Гудзенко П. А. Сумська область: географічний нарис. К.: Рад. школа, 1958. 121 с.

⁸ Бондаренко Ф. Ф., Іщенко О. І., Козирев П. В. та ін. Сумська область. Українська Радянська Соціалістичні Республіка. К.: Головна редакція УРЕ АН УРСР, 1965. С. 714-715.

⁹ ПАТ «Сумиобленерго». Про компанію. URL : https://www.soe.com.ua/

¹⁰ See above.

rural electricity development played an important role, as electricity from them was supplied to consumers throughout the day, while from diesel power plants – only in the evening. However, the dams of these power plants were very unreliable structures that were subsequently accidentally damaged.

More reliable hydroelectric power plants were built on the Psel River: Nizivska, with a capacity of 480 kW (in 1953), Malovorobianska, with a capacity of 350 kW (in 1959), Mykhailivska, with a capacity of 190 kW (in 1957) and Bobrivska, with a capacity of 250 kW (in 1955). With the arrival of large state-owned power generation in agriculture, HPPs as electricity producers lost their energy importance in the 1960s.

Wind power was also introduced in the region. At the beginning of 1955, 176 wind power engines were operating on collective farms in the region, and by the end of 1966, their number had increased to 400¹¹.

The discovery of oil in the Romny district marked the beginning of the exploration and exploitation of one of Ukraine's largest oil provinces, the Dnipro-Donetsk. Since then, Sumy region has produced about 50% of Ukraine's oil.

Although the first oil deposits in Sumy region were discovered in the Romny district, Okhtyrka became the center of the oil industry in the midtwentieth century. In 1957, the Kachanivka oil and gas field was discovered.

In 1963, the plant "Centrolit" was launched. It specializes in producing complex castings for pumps, compressors, valves, machine tools, tractors, etc.

In the machine-building and metalworking industry of the region, the leading place was occupied by the Sumy Machine-Building Plant named after M.V.Frunze, which produced chemical equipment (centrifuges, columns and heat exchange equipment) and powerful piston gas compressors. This plant was of all-Union importance: in the first Soviet Five-Year Plan (1928-1933), 10% of capital investments in the chemical engineering of the USSR were allocated to the Frunze plant. In the second Five-Year Plan, this plant ranked first among the chemical engineering enterprises of the USSR regarding fixed assets. It concentrated about half of the production assets of all chemical and sugar engineering plants in the country. The region produced almost 25% of all chemical equipment produced in the republic 12.

The pump industry stood out in the machine-building industry. The Svesa and Sumy (founded in 1949) pumping plants mastered the production of new brands of powerful pumps.

¹¹ Бондаренко Ф. Ф., Іщенко О. І., Козирєв П. В. та ін. Сумська область. *Українська Радянська Соціалістична Республіка*. К.: Головна редакція УРЕ АН УРСР, 1965. С. 714-715; Гудзенко П. А. Сумська область: географічний нарис. К.: Рад. школа, 1958. 121 с.

¹² Бондаренко Ф. Ф., Іщенко О. І., Козирєв П. В. та ін. Сумська область. *Українська Радянська Соціалістичні Республіка*. К.: Головна редакція УРЕ АН УРСР, 1965. С.714-715.

In the regional center, there was a plant of electronic microscopes and electric automatics (established in 1956), a spare parts plant; there was also the Konotop plant "Chervonyi metallist" that produced equipment for automation in the mining industry; Bilopil Machine-Building Plant produced equipment for distilleries, wineries, breweries, bread factories, and other food processing plants. Mechanical engineering and metalworking were also represented by the locomotive and carriage repair plant in Konotop; the Romny Printing Machine Plant, which was the only enterprise in the USSR to produce paper-cutting machines; and the plant of electrical communications equipment (Okhtyrka); the plant of metallurgical equipment and metal structures (Seredyna-Buda), which produced 50-ton tanks, electrolysis baths for aluminium and copper smelters, containers for transportation of nonferrous metal ores, boilers and other equipment. The Pivnenkivskyi (Trostianets) plant produced beet-loading "tractor shovels". The Sumy and Lebedyn auto-engine repair plants and the Hlukhiv carriage plant worked for automobile and horse-drawn transport.

The chemical industry in the region achieved significant development. The most important chemical enterprises were located in Shostka; in addition to the above-mentioned gunpowder and chemical plant, the Shostka Film Factory was put into operation in 1931. In 1947, the factory began to produce film for colour movies, and in 1948, the first batch of them was produced. It was the only enterprise in Ukraine and the largest in the Soviet Union that produced colour and black-and-white film and tapes for magnetic recording, computing, and flaw detection. There was also a chemical reagents plant and the state-owned Zirka plant, an enterprise that produced explosives, electrical insulation, paints and varnishes, building materials, and medical ether.

The Sumy Chemical Plant began its history in 1947 (production of phosphate mineral fertilizers, sulfuric acid, granular fertilizers, consumer chemicals and toxic substances to control agricultural plant pests, etc.)

In 1956, a regenerate plant (later the Gumotekhnika plant), a major enterprise in the Ukrainian rubber industry, started operating in Sumy. Based on imported raw materials, the plant started production of regenerate products from the processing of worn-out tyres, which is used to manufacture new tires, brizol, a rolled rubber-bitumen material used for waterproofing oil and gas pipelines, reline, a rubber linoleum, rubber parts for many machines, mechanisms and devices: cuffs, couplings, rubber gaskets, shock absorbers and other rubber products and construction materials, including synthetic substitutes for linoleum, including synthetic linoleum substitutes, insulation boards and parquet.

The Svesa Dubitel plant produced tanning agents for tanneries. At that time, chemical industry enterprises in the region also produced various medical products, such as mint oil (Romny), animal and plant medicinal extracts (Sumy) and medical chemicals (Lebedyn).

In the mid-twentieth century, building materials in the region were produced from local mineral raw materials. The growth of construction led to an increase in the production of bricks and other building materials. To meet the growing demand for bricks, brick factories were built in Sumy, Okhtyrka, Trostianets, Lebedyn, Konotop, Shostka and other cities.

The Zarutsk plant (Hlukhiv district) continued to produce lime in large quantities. In the villages of Banichi and Budyshche in the same district, strong sandstones were mined as building materials for road construction. To support road construction, the Sumy plant began producing asphalt.

The Mykhailivka plant (Krasnopillia district) currently produces tiles and other building materials based on local clay. Tile production has also been established in Okhtyrka, Sinne village (Krasnopillia district), Pryvillia village (Hlukhiv district) and other locations.

Woodbuilding materials were produced at Shostka, Yampil, Seredyno-Buda woodworking plants and other districts.

The region's light industry has long been closely linked to hemp fibre crops. In the northern and near-Seima parts of the region, many hemp factories were located quite evenly. In the forest-steppe part of the region, hemp plants were found in Yamne village (Velyka Pysarivska district) and Birky village (Lypova Dolyna district). The existing 10 hemp factories could not cope with the processing of hemp delivered by collective farms, so there was a need to increase the capacity of existing plants and build factories not only for primary but also for further processing of hemp fibre.

Other light industry sub-sectors (leather, footwear, fine cloth, haberdashery and knitwear, etc.), except the Sumy Fine Cloth Factory, were established in Soviet times. In addition to fine cloth, cotton, footwear and garment production were concentrated in Sumy. Romny had tanneries, shoes, haberdashery, knitwear, clothing and furniture factories. Okhtyrka became the center of artistic embroidery, shoe production and ready-to-wear. The enterprises of Hlukhiv also produced folk embroidery, felted shoes, pottery, and wooden utensils: a weaving factory and other enterprises operated in Krolevets.

2. Industry of Sumy region in the last years of the Soviet Union

In the late 1980s, industry was the leading sector of the region's economy. The territorial and sectoral structure of industry was quite diversified. The food and light industries occupied an important place in the industry structure. The construction materials and fuel-energy industries were also important sectors of the industrial complex. Three energy production cycles were combined in the region: agro-industrial, manufacturing (machine building and

metal processing, textile, leather and footwear) and chemical industry (mining, petroleum and gas chemicals and chemicals).

The oil, gas and peat industries represent the region's fuel and energy complex. Traditionally, the Sumy region was one of the first in the Ukrainian SSR in peat extraction, where 10 large enterprises carried out this activity.

The leading field in the oil and gas industry was the Okhtyrka oil field, which in 1987 had 260 operating wells, including 201 oil wells and 59 gas wells. By 1990, over 2.1 million tons of oil and over 1.2 billion m³ of natural gas were produced. However, the peat industry in the region was winding down. 1990 only 42 thousand tons of peat were extracted, 12 times less than in 1970.

The power sector is represented by three large thermal power plants in Sumy, Okhtyrka and Shostka. Several small power plants operated at sugar factories. The region's energy balance is generally tense; hydropower has not been developed and wind power has been curtailed.

Metallurgy. The last metallurgical enterprise built during the Soviet era was a plant for producing weighted drill and lead pipes, which was built in Sumy by the Italian company Danieli in 1988. The plant's design capacity is 25 thousand tons of drill pipes, 81 thousand tons of liquid steel, 67 thousand tons of continuously cast billets, 9 thousand tons of ingots and 37 thousand tons of forgings. In 1991, the company produced 18,000 tons of drill pipes, 30,000 tons of forgings, 40,000 tons of steel and 5,000 tons of ingots. In terms of technical equipment, it was a modern enterprise for those times. A closed technological cycle and circular water circulation ensured the high environmental friendliness of production.

Machine building. In 1990, the share of machine building in the gross industrial output reached 35.6%, and thus it began to occupy a leading position in the territorial and industrial complex of Sumy region. The region's machine-building and metalworking industry was represented by 10 subsectors and industries, including the production of technological equipment and machinery for the food and feed industry (Sumy, Bilopillia, Trostianets), printing industry (Romny), non-ferrous metallurgy (Seredyna-Buda), railway transport and equipment for automation of coal mining and processing (Konotop) and rebar production (Krolevets).

At that time, the largest enterprise in the industry was OJSC Sumy Machine-Building Research and Production Association, named after M. V. Frunze. The association produced equipment for the oil and gas industry, complex technological equipment for the production of mineral fertilisers, sets of gas distribution facilities for ethylene and propylene production, natural gas separation and helium production, automatic centrifuges of all types, complex high-pressure piston compressors, gas pumping units and other equipment.

Electrical engineering was represented by the Sumy PA "Electron" for the production of electron microscopes of two types – transmission and scanning (in addition to microscopes, the plant produced almost 50 types of complex and precise instruments: spectrometers of several types, equipment for electron beam welding in vacuum, dissection instruments, attachments to electron microscopes, and other products; gas cylinders, gift sets, gas and household lighters, etc. were produced here from consumer goods¹³), Hlukhiv's Elektropanel, which began operating in September 1960 (it was one of the leading enterprises in the low-voltage electrical equipment market; the products manufactured by the plant were used in metallurgy, mining, etc.), Trostianets' Elektropobutprylad and Okhtyrka's Promzvjazok.

Machine-tool enterprises operated in Sumy (Remvertat plant), Hlukhiv, and Lebedyn. Okhtyrka became a major center of agricultural machinery in the region (Okhtyrkasilhospmash plant, Metiz agricultural machinery plant); production of spare parts for agricultural machinery was established in Sumy (Sumsilmash plant), Lebedyn, Konotop, Romny, and Bilopillia.

The chemical industry has been developing rapidly. Its enterprises are mainly concentrated in two cities: Shostka and Sumy.

At that time, Shostka produced about 70% of all chemical products in the region (100% of the republic's production of film, magnetic tape, chemicals and other products). The Sumy Production Association Khimprom produced about 25 types of chemical products, including granular superphosphate, pesticides, oil paints and varnishes, medicines, titanium dioxide, detergents and other chemicals. The Sumy Bioprocessing Plant produced highly effective therapeutic and prophylactic biological products used in livestock farming. The Sumy Rubber Products Plant, which produced more than 20 types of products, became a major chemical industry enterprise. There were also chemical industry enterprises in Romny, Lebedyn and Konotop.

Construction materials industry. The location of construction materials industry enterprises in the region is connected with the places of raw materials extraction (brick factories, lime production plants, etc.) and with the places of consumption of finished products (production of reinforced concrete structures and parts). The largest center of construction materials production is the city of Sumy. Sumy; other major centers are the cities of Shostka and Konotop.

Brick factories operated in Sumy, Konotop, Romny, Bilopillia, Shostka and others. Tile production facilities operated in Okhtyrka, in the villages of Sine in the Krasnopil district and Pryvillia in the Hlukhiv district. In Sumy, a plant produced silicate bricks to construct high-rise buildings that did not require cladding.

¹³ Корнус А. О., Удовиченко І. В., Леонтьєва Г. Г., Корнус О. Г. Географія Сумської області: природа, населення, господарство. Суми: ФОП Наталуха А.С., 2010. 184 с.

The industry of precast concrete structures and parts was represented by Sumzalizobeton, which specialized in producing large-sized and bulky reinforced concrete structures and elements.

The production of reinforced concrete structures was also established in Shostka and reinforced concrete products in Konotop, etc. Reinforced concrete products were also produced at the Sumy House Building Plant.

The Seredina-Buda plant and the Zarutsky limestone plant in the Hlukhiv district represent the production of binding materials and products made of them. Production of various construction materials (ready-mixed concrete, asphalt concrete, mortar) is concentrated in Sumy, Shostka, Hlukhiv, Romny, Konotop, Okhtyrka, Lebedyn, Buryn, and several urban-type settlements. A large plant "Buddetal" operated in Konotop.

Food industry. The sugar industry occupied a special place in the structure of the food industry. In the 1990s, there were 17 sugar factories and two refineries in Sumy region. The Sumy Chervonozorianyi Sugar Refinery, founded in 1869, produced 290-300 thousand tons of pressed sugar and refined sugar annually¹⁴.

The dairy processing industry included 19 large enterprises, the main ones being: Romny Dairy Plant, Lebedyn Butter Plant, Vasylivka Cheese Plant, Trostianets Butter Plant, Sumy City Dairy Plant, Krolevets Butter Plant, Velyka Pysarivska Butter Plant, Putivl Milk Plant, and Krasnopillia Butter and Cheese Plant.

There were nine meat processing plants in the Sumy region ¹⁵.

In the past, the fruit and vegetable canning industry was a field of specialisation in Sumy region. This industry's industrial centers and locations included settlements such as Sumy, Putivl, Hlukhiv, Romny, Buryn, Nedryhailiv and Ulianivka. In Sumy, there was an enterprise called Sumy Fruit and Vegetable Canning and Drying Plant, which specialized in producing fruit and vegetable products, canned fruit, bakery and pasta products¹⁶. The Buryn Canning and Drying Plant produced canned vegetables in jars and tubs.

A wide range of enterprises represented the confectionery industry in the region. One of the largest is the Trostianets Chocolate Factory "Ukraine"; the company began its work in 1974¹⁷. Another enterprise in the industry is the Buryn Food Product Plant.

15 Історія Сумської області. Розвиток промисловості. URL : http://istoriya.sumy.ua/index.php/Sumy/

 16 Леонтьєва Г. Г. Сумський промисловий вузол : навч. посібник. Суми: Слобожанщина, 1996. 64 с.

 $^{^{14}}$ Леонтьєва Г. Г. Сумський промисловий вузол : навч. посібник. Суми: Слобожанщина, 1996. 64 с.

¹⁷ Леонтьєва Г. Г. Економічна і соціальна географія Сумської області : навч. посібник. Вид. 2. Суми: РВВ СДПУ ім. А.С. Макаренка, 1999. 88 с.

Other important food industry enterprises include the Trostianets Mineral Water Plant (launched in the 1970s), which bottled water from two mineral springs on the plant's premises.

The starch and molasses industry in Sumy region was represented by Lukashivka (Velyka Pysarivska district) and Novomoskovske (Didivshchyna village, Krolevets district) plants.

Alcohol production was carried out at Naumivka (Krasnopillia district), Stetskivka, Novosukhanivka (Sumy district), Dubovyazivka, Popivka (Konotop district) and Budylka (Lebedyn district) distilleries, mainly from grain and potatoes.

Flour and bakery products were produced in all districts of the region. The cities of Sumy, Okhtyrka, Konotop, Romny, Trostyanets and Krolevets stood out in this regard, with bakery plants.

Industrial zoning. In the functional and territorial structure of the region's industry, there were three industrial sub-districts: Central, Northern, and Western¹⁸. The largest industrial subdistrict, the Central, had 119 industrial enterprises. Most enterprises were concentrated in diversified industrial centers: Sumy, Lebedyn, Okhtyrka, Trostianets, Bilopillia and Vorozhba.

The Sumy industrial hub included Sumy, the industrial centers of Nyzy, Stepanivka, Bezdryk and others. The industrial centers of Lebedyn and Trostianets, as well as many other industrial centers located within a 30-60 km radius, which processed agricultural products and formed a suburban-type agro-industrial complex, gravitated to the Sumy hub. The leading sectors of the industrial complex of the hub were machine building and metalworking; chemical, food, and light industries; forestry and woodworking industries; and the production of building materials etc. were developed. Several enterprises processing agricultural raw materials were located here: a meat processing plant, a bakery, a brewery, etc.

Among other elements of the Central Subdistrict's industrial structure, the growing Okhtyrka Multisectoral Center stood out. It housed one of the region's three largest thermal power plants, the large Promzvjazok and Silhospmash plants, a garment factory, and 12 other industrial enterprises in the fuel and energy industry, machine building, light and food processing, and local industries. The industrial centre's most promising mechanical engineering industry developed rapidly ¹⁹.

The northern industrial sub-region specialized in chemicals, machine building, and agricultural processing. Over half of the industrial enterprises

¹⁸ Голиков А. П., Панасенко Л. Г., Сонько С. П., Шульженко Л. С. Сумская область (экономико-географическая характеристика). Экономическая география. 1987. Вып. 39. С. 107-121.

 $^{^{19}}$ Голиков А. П., Панасенко Л. Г., Сонько С. П., Шульженко Л. С. Сумская область (экономико-географическая характеристика) // Экономическая география. 1987. Вып. 39. С. 107-121.

are located in four industrial centers: Shostka, Hlukhiv, Krolevets and Svesa. Together, they formed an industrial hub, with sectoral industrial centres (Seredyna-Buda, Znob-Novgorodske, Druzhba) and six industrial centres gravitating towards it. The main industry of the sub-district was the chemical industry, and the woodworking industry, production of building materials, light industry and food industry were also developed²⁰.

The Western Industrial Subdistrict is less developed in terms of industrial development. However, it is not inferior to the Northern Subdistrict in terms of the number of enterprises and people employed in industrial production. The basis of the territorial structure of the industry is formed by two diversified centres that produce 4/5 of the sub-rayon's industrial output – Konotop and Romny. Buryń and Putivl are the branch centres of the food industry. Most of the small industrial enterprises were located in the industrial centres of the district. These points were part of the sub-rayon's agroindustrial complex and were poorly connected to the industry of the diversified centres. Konotop's leading industry is transport engineering. The food industry (meat, oil, alcohol, flour and cereals) was vital.

The machine-building, light industry, food processing, and building materials industries were developed in Romny. The largest enterprises of the town were printing machinery plants, automatic telephone exchanges, and tractor spare parts. The light industry occupied the second place in the sectoral structure: a tulle spinning factory and shoe and garment production²¹.

3. Industry of Sumy region in the late 20th century: the emergence of negative trends

In the mid- to late 1990s, industry remained the backbone of Sumy region's economic complex, accounting for 52.9% of the gross output of all material production sectors. The total volume of industrial production in the region in 1996 amounted to 1776.9 million UAH; 144.2 thousand people were employed in the region's industry, 24.9% of all employed²². In 1996, there were 312 industrial enterprises in the region. In addition, 194 small enterprises operated in the region's industry²³ and industrial cooperatives also operated.

The 1990s marked the beginning of negative trends in the industrial complex of Sumy region, including a significant decline in industrial output in general and individual industries. The total volume of industrial output in 1996 was 44.2% of the 1990 level; a particularly sharp decline was observed in the chemical and petrochemical industry (27.1% of the 1990 level), food

²¹ See above.

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²⁰ See above.

 $^{^{22}}$ Леонтьєва Г. Г. Економічна і соціальна географія Сумської області : навч. посібник. Вид. 2. Суми: РВВ СДПУ ім. А.С. Макаренка, 1999. 88 с.

(38.2%), light (36.6%), electric power (85.7%), and machine building and metalworking (51.1% of the 1990 level).), although machine building and metalworking and chemical and petrochemical industries continued to have the most significant shares of their products in total industrial production – 19.1% and 15.6%, respectively. At the same time, a significant increase in production was observed in the region's fuel industry – 247.5% compared to 1990, somewhat less in the forestry and woodworking industry – 164.4% and the construction materials industry – 121.5%²⁴.

At the end of the twentieth century, the industrial complex of Sumy region was based on eight traditional industries, with the food industry, machine building and metalworking, chemical and petrochemical industries, and the fuel industry taking priority.

Fuel and energy complex. At the end of the twentieth century, the fuel industry of Sumy region included oil, gas and peat. The fuel industry's share in the region's total industrial output in 1996 was 18.1%. It was the most profitable industry – in 1996, the profitability of oil production (including gas condensate) was 292.5% and gas production was 52.3%. At the same time, even then, there was a slight decline in the production of the main fuel types in the region.

At that time, oil and gas enterprises were located in only two districts of the region: Okhtyrka and Romny. The bulk of the industry's production was attributed to the Okhtyrka Oil and Gas Production Division (OGPD), the leading one in Sumy region.

At the end of the twentieth century, the Okhtyrka gas and oil production facility had 477 wells and the total length of industrial pipelines reached 780 km. 36 drilling rigs and nearly 1,000 other facilities and structures were in operation to ensure the production, gathering, treatment, transportation and supply of oil and gas to consumers.

Natural gas was supplied to the Kachanivka (Okhtyrka district) and Hnidyntsivka (Chernihiv region) gas processing plants (GPPs). The gas processing plants receive about 460 million cubic m³ of gas annually. In addition, gas was supplied via gas pipelines to local consumers (140.2 million m³). The region is characterised by high oil and gas utilisation (95.4%)²⁵.

Instead, the peat industry in Sumy region was gradually being phased out. At the end of the century, industrial peat extraction was carried out in Putivl, Shostka, Hlukhiv, Seredyno-Buda, Krolevets and Konotop districts, as well as in a small amount in Romny and Krasnopillia districts. As of the early 1990s, a total of 53 peat deposits were under development by the peat

²⁴ Корнус А. О., Корнус О. Г. Промисловість Сумської області (економіко-географічне дослідження): моно-графія/ Суми: СумДПУ імені А. С. Макаренка, 2017. 136 с.

 $^{^{25}}$ Леонтьєва Г. Г. Економічна і соціальна географія Сумської області : навч. посібник. Вид. 2. Суми: РВВ СДПУ ім. А.С. Макаренка, 1999. 88 с.

extraction enterprises of the Sumitorf Production Association, which was subsequently reorganized into the state-owned enterprise "Sumitorf", which included five subsidiaries (SE): SE "Glukhivtorf", SE "Konotoptorf", SE "Krolevetstorf", SE "Shostkatorf" and SE "Putivltorf".

Electricity. Despite the industrialisation of the Soviet era, the Sumy region did not acquire significant electricity generation capacity. Sumy region's share in electricity production in Ukraine at the end of the twentieth century was only 0.2%. The region's electricity accounted for only 1/5 of all energy consumed and its production was declining.

The main power plants in the region are thermal. The largest thermal power plants (power centres) are located in Sumy, Okhtyrka and Shostka. They used coal from Donbas, local and imported gas as a source of energy.

The four operational hydroelectric power stations located on the Psel River (Nyzivska, Malovorozhbianska, Mykhailivska and Bobrivska) are low-capacity facilities, and their share in the region's electricity production amounted to less than 0.1%.

Metallurgy. Ferrous metallurgy is not among the main industries in the region. It is represented by two associations concentrated in Sumy. These include the Centrolit Plant and JSC "Sumyvtormet". In addition, this sector also included the production of heavyweight pipes, as well as casting (iron, steel, and non-ferrous) at JSC "Sumy Frunze Machine-Building Science and Production Association" and JSC "Nasosenergomash" (steel and non-ferrous), at the Svesa Pump Plant (iron and non-ferrous), and at other machine-building plants in the region.

Machine building and metalworking. At that time, machine building and metalworking were the most important industries in the industrial structure of Sumy region. Both heavy metal-intensive and precision science-intensive machine building, including electrical engineering and electronics, computer manufacturing, etc. were developed here. The region has also developed machine tool building, production of technological equipment, transport and agricultural machinery. Several factors contributed to the location of machine-building enterprises in Sumy region: 1) the proximity of the coal and metallurgical base; 2) a developed railway network, in particular the presence of a major transport hub in Konotop, where freight and passenger transportation were carried out in 7 directions: Kyiv, Kharkiv, Moscow, Gomel, Kursk, Poltava and Vitebsk, which provides ample opportunities for sales; 3) the availability of qualified personnel.

There were 62 machine-building industrial enterprises (associations) in the region, 18 of which were state-owned and 44 were collectively owned²⁶. The bulk (88.7%) of products (by value) were manufactured at collectively owned

227

²⁶ Леонтьєва Г. Г. Економічна і соціальна географія Сумської області : навч. посібник. Вид. 2. Суми: РВВ СДПУ ім. А.С. Макаренка, 1999. 88 с.

enterprises (associations), including 88.4% in joint stock companies. The most important products of the machine-building industry include machinery for livestock and feed production, agricultural machinery, process equipment for the oil, gas, chemical and food industries, automation devices and means, compressors, pumps, printing equipment, etc.

The region's most important machine-building center is the city of Sumy. It is home to 3 significant machine-building associations: JSC "Frunze Machine-Building Plant", JSC "Selmi", JSC "Nasosenergomash". In addition to the regional center, there are other centers and points of machine building in the region, such as Okhtyrka, Romny, Trostianets, Putivl, Konotop, Hlukhiv, Bilopillia, Krolevets and Svesa.

At that time, the largest enterprise in the sector remained the JSC "Sumy Frunze Machine-Building Science and Production Association". However, it significantly reduced both its production volumes and product range, primarily focusing on the manufacturing of equipment for the oil and gas industries. Although the association had the capacity to produce up to 600 types of products, its output was once widely recognized both in Ukraine and abroad. Another machine-building enterprise, JSC "Selmi" (formerly the "Electron" association, and earlier "Tochprylad"), also experienced a sharp decline in production. For example, in 1996, only five electron microscopes were manufactured at this plant, compared to over one hundred units annually during 1985-1990.

In addition to these enterprises, there was the Computer Engineering Plant in Hlukhiv, the Svesa Pump Plant, the Romny Polygraphmash Plant and others. The machine-building enterprises of the region had extensive economic ties in the supply of components and sales of finished products. However, in the 1990s, they were forced to supplement or change their specialization to some extent. For example, JSC "Nasooenergomash", which produced pumping equipment for nuclear and thermal power plants, oil pipelines, equipment for industrial, municipal, and rural water supply, etc., also began to produce pumps for the sugar industry. In 1994, the Okhtyrka plant Promzvjazok (later JSC "Naftoprommash") switched to manufacturing equipment for the oil and oil refining industries. It also started producing minibakeries, mini-breweries, and equipment for sausage and smoke shops²⁷.

Chemical and petrochemical industry. At the end of the twentieth century, the chemical industry was one of the most important industries in the region, accounting for 15.6% of total industrial output and 17.4% of industrial and production personnel. The industry was represented by seven enterprises (associations).

²⁷ Леонтьєва Г. Г. Економічна і соціальна географія Сумської області : навч. посібник. Вид. 2. Суми: РВВ СДПУ ім. А.С. Макаренка, 1999. 88 с.

The region's chemical industry was largely focused on imported raw materials (apatite concentrate, oil, natural gas). The impossibility of receiving it regularly from the CIS countries, primarily from Russia, led to disruptions in the industry's operations. Certain types of products were no longer in demand on the market. New capacities and production facilities were no longer commissioned and existing production capacities were not fully utilized. For example, in 1996, only 14% of production capacities were used for film production and 21.9% for mineral fertilizer production²⁸.

The chemical industry's sectoral structure includes basic chemicals, organic synthesis chemicals, paint production, household and low-tonnage chemicals. Among the most important products are mineral fertilizers, sulfuric acid, titanium dioxide, regenerate, rubber linoleum, synthetic resins, film, magnetic tape and synthetic detergents. The location of chemical production in the region is mainly explained by the well-known factors of chemical industry location, including customer orientation, availability of free construction sites, etc. It is also important that the chemical industry, particularly in Sumy, was created in a relatively environmentally friendly region.

The leading chemical industry enterprises in the region are JSC Sumykhimprom and JSC "Gumotekhnika" in Sumy, PA " Svema" in Shostka and JSC "Chemical Reagents Plant" and others. JSC "Sumykhimprom" was one of the largest enterprises in Ukraine's industry. It produced mineral fertilizers (phosphate and nitrogen), sulfuric acid, feed-grade fluorinated phosphates, titanium dioxide, aluminium sulfate, amorphous, aluminium fluoride, cryolite, liquid sodium glass, lime, etc. The company also produced "Landysh" detergent paste, paint and varnish products, enamels based on condensation resins, plastic products (plastic bags, wrappers) and other household chemicals.

Production association "Svema" in Shostka has virtually stopped producing magnetic tape for sound recording, computers, flaw detection, and film, as these products proved unprofitable. Another large chemical industry enterprise in Shostka, JSC "Plant of Chemical Reagents", produced up to 1300 chemical reagents and drug names. This plant also mastered the production of feed additives for caged fur farming. However, in general, the chemical industry, as well as the machine-building industry, experienced a decline in production.

Forestry and wood processing industry. The forestry and woodworking industry in Sumy region was focused on processing local and imported wood. The industry was represented by 24 enterprises, 13 of which are state-owned and 11 are collectively owned. Most of the products (in current prices) were produced at state-owned enterprises. The main industries are logging and woodworking, and the main logging area is the Polissia part of the region.

²⁸ See above.

There were 12 forestry enterprises in the region, with the most significant timber harvesting operations in Okhtyrka, Hlukhiv, Krasnopillia, Krolevets, Konotop, Trostianets, Lebedyn, Romny, Sumy, Seredina-Buda and Yampil (Svisa forestry enterprise) districts. The total volume of timber harvested is 287 thousand m³ annually. Most of the industry's marketable products are produced by the woodworking industry. These include lumber, building blocks and furniture.

Furniture production had a vast geography and was represented by furniture enterprises in Sumy, Romny, Shostka, Bilopillia, Okhtyrka, and Trostianets. Privatized enterprises included furniture factories in Sumy, Bilopillia, Romny, as well as the Voskhod enterprise in Krolevets, the Voskhod company in Shostka; the above-mentioned Medfurniture plant in Okhtyrka and the Boromlya vine furniture factory Iva in the Trostianets district also operated.

Construction materials industry. The construction materials industry remained one of the most important industries at the end of the twentieth century, but its share in the total industrial output of Sumy region was constantly declining. In the 1990s, 17 collectively owned enterprises in this industry (5 of them were joint stock companies). The region has a sufficient raw material base for the development of this industry. The latter is represented by enterprises that produce reinforced concrete products and structures, silicate bricks, building materials and other products.

In addition, the construction industry produced carpentry, parquet, linoleum, heating appliances, and paving slabs. Among them were the Krolevets Silicate Brick Plant, Sheremetiv Brick Plant (Bilopil district), Seredyno-Bud Brick Plant, Shatryshche Brick Plant (Yampil district), Okhtyrka Building Materials Plant, and Banitsky Asphalt Plant (Hlukhiv district). The largest privatised enterprises in the industry are the Wall Materials Plant, JSC "Buddetail", JSC "Sumzalizobeton" in Sumy, Konotop Building Materials Production in Konotop, JSC "ZBK-7" in Shostka, and others.

Light industry. The main components of the industry included textile, knitwear, clothing, leather and footwear industries. At the end of the twentieth century, the industry had a fairly wide geography and was represented by 31 enterprises, of which four were state-owned and 27 were collectively owned. The needs of the region determined the development of this industry, so the location of enterprises was consumer-oriented. Among all the light industry sectors, the textile industry stands out, producing woollen fabrics (Sumy, Hlukhiv), cotton fabrics (Krolevets), and tulle curtain products (Romny). However, the production volumes of the textile industry were declining. A particularly significant decline in production occurred in the textile and clothing industries, where the production level in 1996 was 20.3% and 30.6% of the 1990 level, respectively.

Among the major enterprises were the woollen production enterprise in Sumy (formerly the L. Chornobyl' cloth factory), which produced woollen fabrics and woollen yarn, and JSC "Sumycomvol", which specialised in the production of semi-woollen yarn and was designed for 50 thousand spinning wheels. Cotton fabric production was represented by the Krolevets Factory of artistic weaving, which was founded in 1960. The products of this factory have always been very popular, including decorative fabrics, towels, tablecloths and bedspreads.

The primary processing of flax and hemp occupied a specific place in the region's textile industry. Among the enterprises of this industry were the Krolevets Flax Mill, the Yampil Flax Mill, the Buniakino Flax Mill (Putivl district), the Banitchy Flax Mill (Hlukhiv district) and the Znob-Novgorod Flax Mill (Seredina-Buda district). The region had two twine factories, Vozdvyzhenka and Marchykhino-Buda in the Yampil district. The flax mill products were exported outside the region to the Kirovohrad Twine Factory, Zhytomyr Flax Mill, Kakhovka Flax Spinning and Weaving Factory. Hemp was also processed in the region, particularly at hemp factories in Hlukhiv and Korovyntsi (Nedryhailiv district).

The garment industry in the region specializes in the production of various garments. The garment factories, which were mostly privatised, operated in Sumy, Lebedyn, Okhtyrka, Konotop, Romny and Trostianets. Among these enterprises, a special place was occupied by the Sumy factory "Spetsodezhda", which produced special-purpose products. Among other products, "Prolisok" in Romny garment factory manufactured children's garments, such as coats, half-coats and others. The knitwear industry was most developed in Sumy.

The leather and footwear industry were represented by three enterprises: Sumy, Okhtyrka and Romny shoe factories. Sumy shoe factory produced children's and adult shoes. JSC "Okhtyrka Footwear Enterprise" specialises in sewing children's leather footwear: boots, half-boots, shoes, sandals for children and preschoolers, leather boots, and house shoes. The factory received raw materials from Kharkiv and Kyiv tanneries. The shoe factory "Talan" (Romny) produced army and special footwear.

The porcelain and earthenware industry, represented in the region by JSC "Sumy Porcelain Plant", which began operations in 1965 using imported raw materials, can also be classified as light. The plant produced a variety of porcelain tableware (plates, cups, teapots, coffee sets, souvenirs, salad bowls, and tea sets). In 1995 the company produced more than 15 million pieces of porcelain and in 1996 – only 9.2 million pieces²⁹.

Food industry. At the end of the twentieth century, the food industry occupied a special place in the region's industrial production structure. It accounted for 33.2% of the total industrial output and 16.2% of the industrial and production staff. It united the most significant number of enterprises –

 $^{^{29}}$ Леонтьєва Г. Г. Економічна і соціальна географія Сумської області : навч. посібник. Вид. 2. Суми: РВВ СДПУ ім. А.С. Макаренка, 1999. 88 с.

128. Of these, 31 were state-owned and 97 were collectively owned. The latter accounted for 81.6% of the industry's total volume (in current prices) of industrial output.

The sugar industry occupied a special place in the structure of the food industry, represented by 17 sugar factories, the Chervonozoryansky refinery in Sumy and the sugar refinery in Druzhba, Yampil district. Most plants in the industry have become joint stock companies or open joint stock companies.

Sugar industry enterprises were located in areas where sugar beets are grown, except for JSC "Voronezh Sugar Plant" (Voronezh, Shostka district). Some of the raw materials for sugar factories came from neighbouring districts of the Chernihiv, Poltava and Kharkiv regions.

The use of sugar industry waste, such as pulp, diffusion water, and chalk mass, was essential. For example, pulp is a valuable feed for cattle, used as fresh sour fodder and dry fodder produced in pulp drying facilities. The chalk mass was used to produce alcohol (Budyla Distillery in Lebedyn district), citric acid, yeast and mixed fodder.

The region was dominated by small and medium-sized sugar enterprises: 0.71-1.5 thousand tons of sugar per day -31%; 1.5-2 thousand tons per day -53%; more than 2.5 thousand tons per day -6% (Zhovtnevyi Sugar Plant), but even these production capacities were not fully utilized in the 1990s (71.1%) and the volume of granulated sugar production was declining despite the constant demand of the population for finished products.

One sad example is the story of one of the oldest enterprises in the industry, the Sumy Chervonozorvany Sugar Refinery, one of the largest enterprises of its kind in Europe. The raw materials for the production of pressed refined sugar, pressed cubes in small packaging (road) sugar and refined sugar sand came not only from Sumy region (Buryn, Nyzy, Pershotravneve, Terny, Ugroydy, Chupakhivka, Shalygino, Zhovtneve, Kyianytsia), but also from Kharkiv, Poltava, Cherkasy, Chernihiv, Kirovohrad, Odesa and Kyiv regions. Liquid sugar was supplied by the Stepaniyka and Hriaznyane factories (Sumy region) and the Lokhvytsia sugar factory (Poltava region). The company had its own railroad, depot, thermal power plant, warehouses with an area of 25.4 thousand square m², auxiliary shops: a mechanical workshop, a turning shop, a model shop, a casting shop, a repair and construction shop, a motor vehicle shop, a wooden packaging shop, a corrugated cardboard packaging shop, and greenhouses. After a series of renamings (in March 1998, it was transformed into an open joint-stock company through privatisation, and in October 1999, it was renamed OJSC "Sumy Refinery"), the enterprise was shut down in 2008 and subsequently destroyed.

The dairy industry continued to play an important role in the region. In each district of the region, the production of whole milk products, animal butter, cheese, and milk powder was established.

In 1998, JSC "Sumy Food Product Plant" started producing condensed milk and JSC "Shostka Dairy Plant" started producing yogurt. This industry

was represented by 19 leading enterprises, most of which became open joint stock companies.

As you can see, there were dairy processing enterprises in each district, and there were two in Lebedyn: JSC "Lebedyn Butter Plant" and JSC "Vasylivsky Cheese Plant". The location of dairies is mainly consumer-oriented, and it is no coincidence that the largest dairies are located in the cities of Sumy and Shostka. Even then, the existing production capacities are not fully utilised.

The meat industry was represented by eight operating meat processing plants in the cities of Sumy, Shostka, Konotop, Hlukhiv, Vorozhba, Lebedyn, Okhtyrka, and Romny, which produced meat and sausage products. Some of them supplied products outside the region. For example, the "Okhtyrka Meat Processing Plant" exported meat to Kharkiv and Kyiv, and sent leather to tanneries in Kharkiv and Kremenchuk. Many farms in the region had slaughterhouses and processing plants, but 90% of the meat industry enterprises were located in the cities of regional subordination. The region is characterized by small-scale enterprises (the capacity of refrigerators ranges from 12-15 to 50 tons per day), but in 1996, they were used by only 37.9%. Dry meat and bone feed was produced from meat industry waste ("Romny Vetsanutil plant"). The total production of the meat industry in the late twentieth century was constantly declining.

The fruit and vegetable canning industry had a fairly wide geography, with its largest centres in the cities of Sumy, Putivl, Hlukhiv, Romny, Buryn, Nedryhailiv, and Ulyanovka. However, in the 1990s, the output of this subsector decreased by almost 15 times compared to 1990.

The region was also home to flour milling (Sumy, Okhtyrka, Konotop, Romny, Trostianets, Krolevets), pasta, bakery, confectionery, fish, alcohol, starch and molasses, oil and other food industries. The former Trostianets Chocolate Factory was the largest confectionery enterprise, which became Kraft Jacobs Sushard Ukraine. The Trostyanets Mineral Water Plant continued to operate.

The largest sunflower oil production was at food processing plants in Velyka Pysarivka, Vilshana village of Nedryhailo district, Lebedyn, Bilopillia, and Buryn. Many collective agricultural enterprises also produced oil (in oil mills).

Industrial hubs. At the end of the twentieth century, four industrial hubs were formed in the region: Sumy, Shostka, Konotop, and Vorozhba-Bilopillia, where more than 30% of the gross output of the regional industrial complex and 12 separate sectoral and multisectoral industrial centers were produced.

The Sumy industrial hub occupied the northeastern part of the region. In addition to the regional center, where 58 industrial enterprises operated, it included the villages of Stepanivka and Nyzy and some rural settlements of the Sumy district. It was the largest industrial hub in the region in terms of output, number of enterprises, and number of industrial and production

personnel. Its industries of specialisation are mechanical engineering (38.2% of total industrial output), chemical industry (23.5%), and food processing (20.4%). In addition, the hub included enterprises of ferrous metallurgy, light industry (12.2%), construction materials industry (2.9%), woodworking (0.5%) and other industries (1.3%).

The commodity structure of industrial products included powerful compressors for oil and gas production and transportation, pumps for thermal power plants, oil and gas pipelines, gas pumping units, weighting drill and lead pipes, centrifuges, column equipment and integrated production lines for chemical production, electron microscopes, mass spectrometers, agricultural equipment, mineral fertilizers, cloth fabrics and yarn, footwear, porcelain tableware, food and many other consumer goods. The city of Sumy was the main center in the production of chemical equipment (83.5% of the regional output), compressors (100%), automation devices and means (70.3%), refined sugar (59.9%), mineral fertilizers (100%), and porcelain and earthenware (100%).

The Shostka Industrial Hub was formed in the northern part of the region, and includes the city of Shostka and the town of Voronezh. The node specialises in the chemical and food industries, and it is supplemented by the woodworking, light industry, and construction materials industries. However, in terms of gross output, it was inferior to the Sumy industrial node. Major enterprises: "Svema", "Shostka Chemical Reagents Plant", "Desna", plant "Impulse", as well as a butter plant, meat processing plant, bakery, furniture factory, brewery, sugar plant (Voronezh).

The Konotop industrial hub consists of enterprises located in Konotop and Dubovyazivka. It was formed due to the favourable transport and geographical location of Konotop, the largest transport hub in the region.) Areas of specialisation include machine building and metalworking (electromechanical, rebar, aircraft repair, and carriage repair plants), production of building materials, and food and chemical industries (flour and cereal, meat, alcohol and butter). The main enterprises of the food industry include a meat processing plant, a distillery, a feed mill and a bakery.

The Vorozhba-Bilopil industrial hub is located in the central part of the region. The industrial hub specialises in machine building and food processing. The favourable economic and geographical location favoured its development. The main enterprises were the machine-building plant in Bilopillia, which produced equipment for the food industry, a butter and cheese factory, a bakery, a furniture factory and a meat processing plant, and a machine-building plant in Vorozhba.

CONCLUSIONS

The historical and geographical analysis of the development of industry in Sumy region in the twentieth century has made it possible to identify the key stages of transformation of the region's economic complex and to determine the factors that facilitated or hindered its industrialisation. The industrial potential of Sumy region was formed against the background of complex socio-political changes: revolutions, wars, industrialisation, reconstruction, and European integration. Over a century, the region transformed from agrarian-dominated into a powerful, diversified industrial centre.

The leading industries were mechanical engineering, chemical, food, and light, which determined the region's specialisation. Natural resource factors (availability of raw materials for the sugar, alcohol, woodworking, and chemical industries), transport infrastructure, and technogenic and labour mobility significantly impacted the formation of the industry structure. Regional industrial hubs (Sumy, Shostka, Okhtyrka, Konotop, Romny, Trostianets and Hlukhiv) were the engines of economic growth and drivers of the spatial organisation of production.

At the same time, the analysis identified negative trends of the late twentieth century, such as a decline in production, a decline in technological potential, a decline in competitiveness, and a weak adaptation to market conditions. The industries that relied on imported raw materials and a planned management model were particularly vulnerable.

The study of spatial changes in the Sumy region's industry has shown that despite limited resources, the region retained the ability to innovate, diversify and restore production. The findings are important for forming regional development strategies, spatial planning and preserving industrial heritage, an important cultural and socioeconomic resource.

SUMMARY

The study focuses on the historical and geographical aspects of industrial development in Sumy region. It examines industry at various historical stages, namely the geographical features of the formation of industry in Sumy district in the first half of the 20th century, industry in Sumy region in the last years of the Soviet Union, and industry in the Sumy region at the end of the century. The structure and spatial distribution of key industries are outlined, including fuel and energy, machine building, metallurgy, chemical, building materials, food and light industries. The study analyses industrialisation, post-war reconstruction and post-Soviet decline.

It describes the formation of regional industrial centres (Sumy, Shostka, Konotop, Okhtyrka, etc.) and their role in spatial production systems. The results can serve as a basis for spatial planning strategies, economic revival and heritage preservation. The study contributes to the understanding of industrial geography in post-socialist territories.

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