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Integrating and disintegrating factors for the economy of Silesia in the interwar period

Abstract:

Identifying factors coalescing and disrupting the Silesian economy in the period 1918-1945 is not an easy task. After the region was partitioned into Czechoslovakian, German and Polish parts, such factors can be observed in each of the three areas. They lead to economic self-sufficiency in the different parts of Silesia, which in turn led to the dissolution of traditional economic relations within the region. Autarky proved impossible in only a few areas, such as energy distribution and transportation, yet even in these areas cooperation was minimal. Many integrative factors had limited territorial reach, such as delivery of water and gas in German Lower and Upper Silesia. The greatest number of contradictions can be discerned in German Silesia, where the key internal disruptive factor was the existence of two industrialised coal mining districts (the Upper Silesian and Wałbrzych-Nowa Ruda Industrial Districts). Coalescing and disruptive factors were no longer relevant during World War II, when all of Silesia was once again under the administration of one state, and its economy and industry was yoked to the military juggernaut of the Third Reich.

Keywords:

Silesia, economy, interwar period, transport, railways, waterways, coal, gas industry

Capturing and characterizing integrating or disintegrating factors for the interwar Silesian economy is extremely complex, and it must be noted at the outset that such phenomena are difficult to study in the context of economy in general, regardless of region. It is impossible to ignore the fact that in a free market economy, and such – regardless of certain forms of statism or economic interventionism – was the entire economy interwar Silesia, the main factors determining the functioning of that economic and commercial body were competition and the ensuing struggle for markets for manufactured goods, produced crops and acquired natural resources[1]. What also needs to be considered are political conditions, resulting from the post-war division of the

[1] For more on interventionism in the economy of Silesia see Bogusław Olszewski, *Miejsce Śląska w interwencjonizmie gospodarczym Republiki Weimarskiej,* 'Studia Śląskie', Seria Nowa, 15 (1969), pp. 281-313; *idem*, *Interwencja państwa niemieckiego w rolnictwie śląskim w okresie międzywojennym*, 'Studia Śląskie', Seria Nowa, 9 (1965), pp. 63-130; Karol Fiedor, 'Charakter pomocy państwa niemieckiego dla Wschodu w latach 1919-1933', '*Ś*ląski Kwartalnik Historyczny Sobótka', 25 (1971), issue 4, pp. 587-619; Jerzy Jedlicki, *Nieudana próba kapitalistycznej industrializacji*, Warszawa 1964; Tadeusz Grabowski, *Rola państwa w gospodarce Polski 1918-1928*, Warszawa 1967.

former Province of Silesia (*Provinz Schlesien*) between Czechoslovakia, Germany and Poland, and thus the change of the national status of different parts of the region, as well as the great world crisis of the early 1930s[2].

Therefore, adopting the above perspective and considering the above-mentioned factors, it seems quite obvious that after the First World War the economic organism of the largest German part of Silesia, whose foundations were created during the 19th century, was in a deep crisis. On the one hand, it lost its historically shaped markets, which now belonged to the new States, such as Poland and Czechoslovakia; on the other hand, the whole industry and economy of Silesia, previously focused on the easy sale of products in the vast Prussian East, the Kingdom of Poland and in Austria-Hungary, was characterized by outdated technology, and thus a limited degree of competitiveness[3]. This is evidenced, for instance, by the fact that in the area of the Żagań (Sagan, Zaháň) Chamber of Commerce and Industry (*Industrie- und Handelskammer für das nördliche Niederschlesien*) at the end of the 1920s, as many as 251 out of 477 various types of companies and enterprises were more than 50 years old[4]. Moreover, in the sugar industry, technologies were already outdated by the beginning of the 20th century, when in 1905 the average daily beetroot processing in 1 of 20 sugar factories in the Province of Poznań (*Provinz Posen*) was 1,022 tonnes, and each of the 53 sugar factories in Silesia processed on average only 500 tonnes[5]. Furthermore, the German part of Silesia included two highly industrialized coal basins: Wałbrzych – Nowa Ruda (Waldenburg, Valdenburk, Valbřich – Neurode, Nová Ruda) and Upper Silesia, which, due to hampered or zero access to existing markets, had to compete with each other, thereby splitting the economic fabric of the region. It seems that it may well be argued that the operation of those two industrial zones in the new political realities was a major internal factor disintegrating the economy of German Silesia. The fact is also that although the economy of *Schlesien* experienced an abrupt and painful collapse, the industry of those parts of Silesia which were incorporated into economic organisms of the Second Republic of Poland and the Republic of Czechoslovakia – regardless of the broken economic and technological ties with industries on the German side of the border-thrived without much difficulty. To a vast extent this

[2] For more information Marek Czapliński, *Śląsk od pierwszej po koniec drugiej wojny światowej* [in:] *Historia Śląska*, pp. 349-424.

[3] For more information see Krzysztof Jeżowski, *Rozwój i rozmieszczenie przemysłu na Dolnym Śląsku w okresie kapitalizmu*, Wrocław 1961, pp. 171-174; Hermann Freymark, *Schlesiens Wirtschaft – eine deutsche Lebensfrage*, Breslau 1927, p. 49, *passim*.

[4] Hans Elsner von Gronow, *Grenzmark Nord-Niederschlesien. 50 Jahre Industrie- und Handelskammer für das nördliche Niederschlesien. Sitz Sagan*, Glogau 1929, p. 36.

[5] Paul Krische, *Die Provinz Posen*, Stassfurt 1907, p. 235.

resulted in ripe domestic markets-those parts of the region lost to the German part-as well as in favourable opportunities for foreign export[6].

The situation was no better in agriculture and in the agri-food industry, although in that case the post-war crisis and the impoverishment of the population had spread more evenly among the Czech, German and Polish parts of Silesia. After all, not only German burghers and workers, but also the Polish and Czech ones replaced the more expensive butter with margarine[7]. The border division negatively influenced not only the distilling industry of Greater Poland but also rectified spirit distillery plants in German Silesia, the milling industry and the grain market or the sugar factories in the Poznań Region and sugar refineries in Silesia[8]. Without going into further detail of the economic problems of the fragmented Silesia mentioned in the introduction, one of the key factors of disintegration should be indicated, namely border division and the creation of new nation-states, in particular, Poland and Czechoslovakia. It is clear that those are external factors, but they seem fundamental to the economic problems and trends disrupting the harmony of the Silesian economy in the 1920s and 1930s.

Following the First World War, the Treaty of Versailles, the Silesian Uprisings, the Plebiscite and the decisions of the Council of the Ambassadors, the Prussian provinces of Lower Silesia, with the capital in Wrocław, and Upper Silesia, with its seat in Opole (Oppeln, Opolí) – *Provinz Niederschlesien* and *Oberschlesien* were divided between Czechoslovakia, Germany and Poland. As a result of several-year-long divisions, Czechoslovakia gained a significant part of Cieszyn Silesia (Czech: Těšínské Slezsko, Polish: Śląsk Cieszyński, German: Teschener Schlesien), an area of 1,273 km^2 including the economically valuable Basin of Ostrawa (Ostrau, Ostrava) – Karwin (Karwin, Karviná) and an important railway junction in Bogumin (Oderberg, Bohumin)[9]. With regard to the area's economic potential, which thus became part of the young Republic of Czechoslovakia, it suffices to mention only

[6] Teresa Kulak, *Propaganda antypolska dolnośląskich władz prowincjonalnych w latach 1922-1933*, Wrocław 1981, pp. 14-17; Zbigniew Miłobędzki, *Przemysł w województwie śląskim*, Katowice 1938, p. 18.

[7] Franz Ehrhardt, Allgemeiner *Überblick Oberschlesien nach den Diktaten von Versailles und Genf*', 'Die Provinz Oberschlesien', *1 (*1931), p. 4.

[8] H. Freymark, *Schlesiens Wirtschaft*, pp. 53-60, *passim*; Jan Majewski, *Wieś wielkopolska w okresie międzywoejnnym (1919-1939)*, [in:] *Dzieje wsi wielkopolskiej*, ed. Władysław Rusiński, Poznań 1959, pp. 294, 332, *passim*; Erhard Hartstock, *Wirtschaftsgeschichte der Oberlausitz 1547-1945*, Bautzen 2007, pp. 369-403.

[9] M. Czapliński, *Śląsk od pierwszej po koniec drugiej*, pp. 350-351; Dan Gawrecki, *Śląsk Cieszyński w okresie międzywojennym (1918-1938)*, [in:] *Zarys dziejów Śląska Cieszyńskiego*, Ostrava-Praga 1992, p. 85, 87; Janusz Ignaszewski, *Śląsk Zaolziański w życiu gospodarczym Polski*, Katowice 1938, p. 10, 12; Krzysztof Nowak, *Śląsk czechosłowacki (1918-1920-1938-1939)*, [in:] *Historia Górnego Śląska*, pp. 251-254.

industrial concerns: 1) *Báñská a hutni společnost* (Mining and Metallurgical Society plc) owning five mines, two coking plants, one briquette plant and huge metallurgical plants in Trzyniec (Trzynietz, Třinec), 2) the concern of Count Larisch-Mönnich of Karwin (5 mines, 1 coking plant), 3) the Miner's guild of Orłów (Orlov) – Łazy (Lazy) (3 mines, 1 coking plant), 4) *Vitkovické horni a hutni težirstwo* (Vítkovice Mining and Metallurgical Plants plc) which, within the area of the Basin, operated the 'Dąbrowa' mine consolidated with the 'Bettina' and 'Eleonora' mines, and also a vast, modern metallurgical and manufacturing complex. Precisely how large the potential was is proved by the fact that coal mining in the Ostrawa-Karwin District in 1936 amounted to almost 9 million tonnes, thus representing about 75% of the total production of that mineral in Czechoslovakia[10]. In addition to Cieszyn Silesia the Czechs also received the small Hlučín Region (Czech: Hlučínsko, German: Hultschiner Ländchen, Polish: Kraik Hulczyński) with an area of 316 km^2, located south of Racibórz (Ratibor, Ratiboř), not only with highly developed agriculture but also economically connected with Racibórz[11].

Poland, on the other hand, maintained its administration over the remaining part of Cieszyn Silesia with Bielsko (*Bielitz*), rich in textile factories, with a total of 1,012 km^2, and also received the eastern part of the Upper Silesian Industrial District (*Oberschlesischer Industriebezirk*)[12]. The area granted to the Poland by the Council of Ambassadors, amounted to 3,214 km^2 with a population of about 1 million. Territorially, it paled in comparison to the whole of Silesia, but economically it was a huge blow to the potential of German Silesia. It suffices to say that in Poland there were 53 of 67 coal mines, all 9 iron ore mines, 10 out of 15 mines of precious zinc and lead ores, 5 out of 9 iron mills, all 18 mills of zinc, silver and lead, and finally 9 out of 12 rolling mills and the same number of steel mills. Within the German part of the Upper Silesian Industrial District, there remained only – according to German estimations – 10-15% of the coal deposits of the Upper Silesian Coal Basin (*Oberschlesischer Steinkohlenbecken*)[13]. In addition to the eastern part of Upper Silesia,

[10] J. Ignaszewski, *Śląsk Zaolziański*, pp. 11-12 *et al*.

[11] M. Czapliński, *Śląsk od pierwszej po koniec drugiej*, p. 365; Helmut Neubach, *Provinz Schlesien*, [in:] *Verwaltungsgeschichte Ostdeutschlands 1815-1945. Organisation – Aufgaben – Leistungen der Verwaltung*, eds Gerd Heinrich, Friedrich Wilhelm Henning, Kurt G. A. Jeserich, Stuttgart-Berlin-Köln 1993, p. 908; Walter Stöphasius, *Die Industrie- und Handelskammer für die Provinz Oberschlesien 1882-1932*, [in:] *Die Industrie- und Handelskammer für die Provinz Oberschlesien 1882-1932*, ed. Walter Stöphasius, Oppeln 1932, p. 110.

[12] On industrial infrastructure of Bielsko see Ewa Janoszek, *Architektura przemysłowa Bielska i Białej w latach 1806-1939*, Bielsko-Biała 2008.

[13] M. Czapliński, *Śląsk od pierwszej po koniec drugiej*, p. 351, 365; Erwin Siegmund, *Entwicklung und Stand der oberschlesischen Industrie*, 'Die Provinz Oberschlesien', 12 (1932), p. 238; Krystian Heffner, Wiesław Lesiuk, *Ekonomiczne i społeczne skutki podziału Górnego Śląska w 1922 roku*, [in:] *Podział Śląska w 1922 roku*, p. 141, 143; Piotr Greiner, *Historia gospodarcza Górnego Śląska*

the Poles – by the Treaty of Versailles – received also small parts of the districts (*powiats*, *Kreise*) of Góra (Guhrau), Namysłów (Namslau) and Syców (Gross Wartenberg) from the Province of Lower Silesia. In total, it was 511 km^2, which in the sphere of economic potential could have gone unnoticed, but they complicated conditions of communication (e.g., in the district of Syców the border disrupted two railway lines and six roads, including the extremely important road connecting Upper Silesia via Syców and Międzybórz (Neumittelwalde) with Góra and Głogów (Glogau, Hlohov), which was another factor of tremendous importance for integration or disintegration[14].

As mentioned earlier, one of the key elements of an irredentist character was the creation of new states at the borders of the divided Silesia. This led quickly to noticeable turbulences in the economy of the entire region, and above all, to its major weakening and the crisis in the German part. Taking the Upper Silesian Industrial District into account, the division of that living economic organism meant separating enterprises of 11 mining and metallurgical cartels, the division of assets of 120 mines and shafts, as well as 55 fields of coal mining and 43 fields of zinc and lead ore mining. It led to such peculiar situations, as in the case of a mine in Radzionków (Radzionkau), where the above ground infrastructure of the plant belonged to Poland, but the airshafts and excavation pits were in Germany. Moreover, the property of a giant mining and metallurgical company *Oberschlesische Eisenbahnbedarf A.-G.-Oberbedarf* (Upper Silesia Rail Need Company plc) was divided in such a way that in Poland lay a foundry with a mine, and in Germany, steel processing plants. As if that was not enough, communication suffered drastically. In total, 15 standard gauge railways were divided, while others, including the double-track main rail from Bytom (Beuthen) to Kluczbork (*Kreutzburg*) significantly lost importance, as well as 9 narrow-gauge tracks, 7 tram lines and 45 different types of roads. Networks of technical infrastructure were cut, including, among others, 8 water mains, 12 high voltage (HV) power lines and numerous pipelines[15].

On top of that there was the previously mentioned loss of markets, e.g. the heavy industry sector of the western part of the Upper Silesian Industrial District. Exports of goods and raw materials of mining and metallurgy to the north and the east were blocked mainly by lower prices of identical materials from the Polish Upper Silesian

(XVI-XX wiek), [in:] *Historia Górnego Śląska. Polityka, gospodarka*, Gliwice 2011, p. 330; G. Behaghel, *Der Aufbau Industrie Oberschlesiens im Wechsel der Zeiten und Wirtschaftsräume*, 'Stahl und Eisen', 5 (1940), pp. 92-98.

[14] H. Neubach, *Provinz Schlesien*, p. 917; H. Freymark, *Schlesiens Wirtschaft*, p. 68.

[15] K. Heffner, W. Lesiuk, *op. cit.*, p. 142; F. Ehrhardt, *op. cit.*, p. 6; Konrad Rasch, *Die Teilung Oberschlesiens und ihre Bedeutung für die Kohlen-, Eisen- und Zinkindustrie*, Berlin 1926, pp. 24-25; E. Siegmund, *op. cit.*, p. 236.

Industrial District, resulting, among other things, in lower (by about 40%) labour costs, significantly lower freight rates of the Polish State Railways (PKP) in relation to the Association of German Reich Railway (*Deutsche Reichsbahngesellschaft-DRG*), and, finally, government export incentives. Additionally, the demand from Czechoslovakia, territories of the former Habsburg Empire and the Balkan states, largely satisfied the District of Ostrawa-Karwin operating in Cieszyn Silesia, which produced goods and extracted coal at much lower prices as well. As a result, heavy industry, including mining in the western part of Upper Silesia, had to explore markets in the north-west – that is in central Germany – which was dominated by products and coal from the western Ruhr industrial region (*Ruhr Industriegebiet*), or in the nearby Lower Silesia, at the same time colliding with a much weaker Industrial District of Wałbrzych (*Waldenburger Industriebezirk*)[16].

The latter was in an equally critical position, as was the entire economy of Lower Silesia, since the supply of the Silesian industry was based mainly on the demand of the area of the contemporary Polish state, Czechoslovakia and the USSR. Close and ready markets, in which, until the end of the First World War, it was difficult to find competition against southwestern German industrial districts, disappeared instantaneously. I shall only mention that the export of goods from Lower Silesia to Poland in 1932 reached less than 2% of those from 1913, and the export of coal and coke to Czechoslovakia, the main recipient of these fuels before the war, in the 1920s did not exceed even 10% of the pre-1914 amount[17]. As a result, the mining of the Wałbrzych and Nowa Ruda basins was devastated and its condition was far worse than that of Upper Silesian mining, whereby the signs of the crisis were evident as early as the threshold of the First World War, and they were characterized by three main factors: 1) geological conditions of coal beds of small thickness, which were difficult and costly in operation, 2) the unfortunate position in the east of Germany, and the resulting high costs of shipping goods to markets, 3) increasing competition in products and raw materials from the Upper Silesian Coal Basin, where coal was of better quality and cheaper to extract[18]. The same problems existed in other branches of Lower and Upper Silesian industry. In 1929 it was estimated that as a result of the border division with Poland, the bridge and railcar construction factories of Beuchelt in Zielona Góra (Grünberg, Zelená Hora) lost up to 50% of their market opportunities, much like the brick factories operating

[16] E. Siegmund, *op. cit.*, pp. 236-237.
[17] K. Jeżowski, *op. cit.*, pp. 171-174.
[18] Ernst Tittler, *Das niederschlesische Industrierevier in der Nachkriegszeit*, Berlin 1927, p. 12; Adrian Gaertner, *Die Notlage des niederschlesischen Bergbaues, ihre Ursachen, Folgen und Beseitigung*, Waldenburg 1913, pp. 4-14.

in the Żagań Chamber of Industry and Commerce, and in the case of the famous Weiss clock tower factory in Głogów the loss was up to 80%. Another problem was the customs war with Poland, ongoing since 1925, that struck, among others, the production of spirit in Głogów, not to mention the trade[19].

The entire Lower Silesian textiles and wood industry suffered greatly, particularly the industry at the Sudetian Foothills, which not only lost markets but at the same time experienced huge problems with the acquisition of cheap raw materials from Poland and the USSR for production. It will suffice to note that in 1913 the areas of contemporary Poland, Ukraine and Russia provided the Lower Silesian industry with 23,400 tonnes of flax and 101,800 tonnes of wood, while in 1924 it provided only 1,400 tonnes of flax and hemp, while domestic crops were extremely modest, amounting in 1928 only to 3,160 ha[20]. The turmoil and trouble with finding new markets, and thus faint possibility of normal functioning, was recorded even in the cement factories in Opole (Oppeln) which before the war, sold one third of production in the eastern Upper Silesia, in the Poznań Region and West Prussia. Now the in Polish Silesia fell from 11% of total exports in 1922 to 0.1% in 1926, while exports to the Poznań Region and West Prussia fell from 20.6% in 1913 to 3.7% in 1926[21]. In total, therefore, it was estimated that the acquisition of the Poznań Region, a part of Upper and Lower Silesia, and West and East Prussia, by Poland led to market shrinking for German Silesia on average by 34%[22].

Export of goods and parallel import of raw materials necessary for production collapsed almost completely, thus definitely breaking ties between the economy of German and Polish Silesia and the Polish-German customs war which had lasted since 1925[23]. The project, prepared largely to save German mining in Wałbrzych-Nowa Ruda and Upper Silesia from the competition of 0.5 million tonnes of coal annually imported duty-free from Poland to Germany, was aimed at paralyzing the mining industry in Polish Upper Silesia. However it backfired, seriously affecting the import of raw materials for other industries and export of their production to the east. As a result, the customs war caused temporary disruptions in the Polish mining industry, which, due to limited demand for coal in a poorly industrialized country, had to deal with the sudden surplus of unsold goods. Nevertheless, thanks to the

[19] E. von Gronow, *op. cit.*, p. 35.
[20] K. Jeżowski, *op. cit.*, p. 174, 180.
[21] *75 Jahre Oppelner Portland Zement*, Oppeln 1933, pp. 24-26.
[22] Georg Keil, *Das niederschlesische Industriegebievol. Seine Entwicklung und Notlage*, Berlin 1935, p. 135.
[23] For more information on the customs war see Bertold Puchert, *Der Wirtschaftskrieg des deutschen Imperialismus gegen Polen 1925-1934*, Berlin 1963; Barbara Ratyńska, *Stosunki polsko-niemieckie w okresie wojny gospodarczej 1919-1930*, Warszawa 1928.

strike of British miners in 1926, it was possible to gain ready markets in Scandinavia and Italy, which from then on imported Polish coal. Thus, the industry and the economy of Polish Silesia triumphed over the Weimar Republic, yet at the price of virtually total disruption of the already fragile economic ties with German *Schlesien.* After nearly a decade (1925-1934) of the customs war it was difficult to recover lost markets, manufacturers and suppliers[24].

The consequence of the aforementioned disintegrating factors was the increasing competition within German Silesia, and the deterioration of economic conditions across the region, regardless of national affiliations, which indeed coincided with the post-war economic troubles of the whole of Europe, and finally with the global financial crisis of 1929. The natural result of these problems was a self-defence reaction by the economy of the entire region, aiming in the opposite direction; that is towards integration, yet integration not necessarily understood through geography, but rather through specific industries. Indeed it was a phenomenon typical of a free market economy, although it must be stated that the huge economic problems of Silesia also motivated individual countries and various types of institutions to help in various fields. In general, they provided financial and legislative assistance, as well as assistance in the area of communication facilities, which shall be expanded further.

Thus, the beginning was cartelisation and creation of various types of industrial unions, rationalization of factory operation and administration, and, finally, modernization of production lines and related capital injections, according to the simple rule that only the strong survive. This type of phenomena occurred simultaneously in Czechoslovakia, and the German and Polish parts of Silesia. I have already mentioned a number of large concerns in Czech Cieszyn Silesia, so at this point I am only going to draw attention to the aforementioned Mining and Metallurgical Society plc with management in Prague, co-creating one entity with Vítkovice Mining and Metallurgical Plants plc. Following the inter-war concentration and rationalization of operation of both companies, besides the previously mentioned mines, coking and briquetting factories, the assets of the former also included: a steel mill with 4 blast furnaces, a steel plant with 13 open hearth furnaces and 1 electric furnace, a rolling mill with 8 rolling stands, a wire factory in Bogumin, a chain factory in Mala Morávka (Klein Mohrau), an iron ore mine, lime kilns and a power plant. On the other hand, Vítkovice Mining and Metallurgical Plants plc jointly with the 'Karol' foundry (*Karlova huta*) in Liskowiec in the late 1930s already

[24] P. Greiner, *op. cit.*, pp. 330-331; Karl Heidrich, *Ausbau der deutsch-polnischen Wirtschaftsbeziehungen*, [in:] *Niederschlesiens Industrie baut auf*, Breslau 1934 (without pagination).

included: 7 coal mines, 1 briquette plant, 2 coking plants, an iron ore mine in Slovakia and Sweden, limestone quarries, 5 blast furnaces, a cast iron foundry, a steel mill with 8 furnaces, a steel foundry with 4 open heat furnaces and 3 electric furnaces, a rolling mill with 18 rolling stands, a pipe factory, a factory of steam and electrical hoists, a boiler factory, a factory of bolts and rivets, a bridge factory, and, on top of all that, 6 factory power plants. What is more, it is worth noting again that the whole entity belonged to the French capital group Schneider-Creusot[25].

A similar concentration of heavy industry was progressing in German and Polish Upper Silesia, although it was accompanied by a significant reorganization of the administrative structure, resulting in separating several management boards from the operating companies with a border. On the basis of the Geneva Convention of the 15th May 1922[26], also known as The Upper Silesian Convention, on the one hand a huge industrial asset of the Prussian tax authorities – incidentally, the holder of the largest coal deposits in Upper Silesia – was divided, but on the other hand automatically a joint-stock *Preussische Bergwerks- und Hütten-A.-G.-Preussag* (Prussian Mine and Foundry Company) company was created in Germany and *Polskie Kopalnie Skarbowe na Górnym Śląsku, Spółka Dzierżawna S.A*. (*Skarboferm*, Polish Treasure Mines plc in Upper Silesia) in Poland. Converting the former Prussian state property into joint stock companies made it possible to gather vast funds for the modernization and restructuring of both companies, whereby in the case of the Polish company its shareholders were divided fifty-fifty between the Polish state and French capitalists. A similar situation was that of the aforementioned *Oberbedarf,* whose factories in Poland were merged into a single company named *Huta Pokój S.A*. in Nowy Bytom, which agglomerated, among others, a 'Pokój' coal mine, 'Pokój' ironworks, iron ore mines in Tarnowskie Góry (Tarnowitz, Tarnovské Hory) and the plants belonging to other companies including: 2 mines: 'Wolfgang' and 'Hrabia Franciszek von Ballestrem' from the Industrial Board of the Ballestrem Counts (*Gräfl. Ballestremsche Industrieverwaltung*), a steel mill Baildon S.A. from *Caro Hegenscheidt* (*Oberschlesische Drahtindustrie Caro Hegenscheidt A.-G.*)), 1 steel mill and 1 rolling mill, Ferrum S.A., from *Oberbedarf,* a power plant of the *Mikołaj* Mining Plant in Ruda (Ruda) from the Industrial Board of the Ballestrem Counts. Due to those transactions, the share capital of the entity automatically grew to 70 million zloty. In Germany, on the other hand, the legacy of *Oberbedarf* was divided into several large companies. What is more, the pre-war

[25] J. Ignaszewski, *op. cit.*, p. 25.

[26] *Polsko-Niemiecka Konwencja Górno-Śląska zawarta w Genewie 15-go maja 1922 r. (Polish-German Upper Silesian Convention of the 15th of May, 1992, Geneva).*

Industrial Board of the Ballestrem Counts owning, among others, 4 mines, of which 3 fell to Poland, was used to establish *Wschodniogórnośląski Zarząd Przemysłowy Hrabiów Ballestermów* (East-Upper Silesian Industrial Board of the Ballesterm Counts) in the Silesian Voivodeship with a seat in Ruda, agglomerating not only 3 mines, but also a coking plant, a chamotte factory and a large lumber mill. Another major entity, *Hohenlohewerke A.-G.* (Hohenlohe Plants plc), located mostly in Poland, created a company Wełnowiec Hohelohe Plants S.A., while the two mines remaining in Germany, *Oehringen* and *Sosnitza,* merged into a new company: *Oehringen Bergbau A-G.* in Gliwice (Gleiwitz)[27]. Finally, as a result of the unification processes in various heavy industries of Polish and German Upper Silesia, shortly before the outbreak of the Second World War, in the German part there were a total of 10 entities (5 coal, 1 iron and steel, 1 lead, 1 coal and steel and 2 coal and zinc concerns), and in the Polish part there were 18 entities (10 carbon, 2 iron and steel, 1 lead, 1 coal and steel, 3 coal and zinc concerns and 1 carbon, zinc and lead concern)[28].

It is impossible to list here all changes in ownership, administration and transformations aiming at concentration of the plants separated by territorial division. Nevertheless, the trend is clear on three sides of the border. What is more important is the fact that the new entities created after the division began to unite further, or at least to form cartel agreements and syndicates. In this way, in 1925 in German Upper Silesia, in accordance with the will of the Reich Minister of Economics, a voluntary carbon syndicate (*Oberschlesisches Steinkohlensyndikat*) was founded in Gliwice, joined by all coal mines, which gave the whole sales of the extracted mineral to two large commercial companies. The coal industry followed suit, which combined to form a joint commercial company for the sale of coke and by-products. On the other hand, the steel industry turned out to be too weak to establish a separate union. Therefore, it joined the nationwide *Deutsche Rohstahlgemeinschaft,* (German Unification of Raw Steel), which was the production cartel designating to individual steel mills quotas for the production of pig iron and metal products. Worth mentioning here is the merger – extremely interesting from an economic point of view – of the two entities most harmed by the border division, namely *Oberbedarf* from Gliwice and *Oberschlesische Eisenindustrie A.-G.-Obereisen* (Upper Silesian Steel Industry plc) from Zabrze (Hindenburg). From May 1925 both entities were involved in the creation of one strong company, as they were perfectly complementary. *Oberbedarf* kept its steel processing plants in

[27] K. Rasch, *op. cit.*, pp. 21-31; Karl Albach, *Oberschlesiens heutige Gestalt. Kohlen und Eisen in Wiederaufbau und Wirtschaftskampf*, Siegen 1929, pp. 34-35.

[28] G. Behaghel, *op. cit.*, p. 93.

Germany, and *Obereisen*-the iron mines and steel mills. The only missing element were coal mines, but because the German Industrial Board of the Ballestrem Counts was a shareholder of *Oberbedarf*, there was a real chance to incorporate its 'Castellengo' mine owned by the new company. What is more, *Oberbedarf* was a majority shareholder of *Donnersmarckhütte A.-G.* (Donnersmarck Foundries plc) in Zabrze, which made the company the next element of the planned union. Initially, general assemblies of the companies concerned spoke against the merger, but the idea of production rationalization and concentration was so tempting that financial aid in the creation of the Upper Silesian tycoon was offered even by Prussia. As a result, in September 1925, three aforementioned companies merged and created *Vereinigte Oberschlesische Hüttenwerke A.-G.-Oberhütten* (United Silesian Metallurgical Plants plc) based in Gliwice. In September 1931, to save the famous *Gleiwitzerhütte* (Gliwice Foundry) and steel works *Malapanerwerke* ('Małapanew') in Ozimek (Malapane) from bankruptcy, they were also incorporated into the Gliwice holding. Thus, the whole iron and steel industry, and in large parts also the machine industry of western Upper Silesia were created only by two giant companies: *Oberhütten* and *Borsigwerke A.-G.* (Borsig Plants plc)[29].

As in the German part of Upper Silesia, the same actions were also performed in the Polish part. As a result, in 1925, *Ogólnopolska Konwencja Węglowa* (National Coal Convention) was created, and in 1931 transformed into *Polska Konwencja Węglowa* (Polish Coal Convention), a syndicate combining all mines of the eastern part of Upper Silesia. and also the mines in the Kraków and Dąbrowa districts, which in 1938 accounted for 99% of coal extraction in Poland. Additionally, the metallurgical industry created *Syndykat Polskich Hut Żelaznych Sp. z o.o.* (Syndicate of Polish Iron Foundries Ltd.) with its seat in Katowice, one of the most powerful monopolistic organizations in Poland, concentrating foundries and metal plants of not only Upper Silesia, but also Warsaw, Dąbrowa and Starachowice[30].

The advantage of the activity of syndicates and cartels was the possibility to impose a quota on factory production and thus rationalize their operations. What is more, it enabled monopolistic pricing, as well as facilitated the sale of goods abroad, thus gaining coveted markets. However, for the German Upper Silesian steel industry, concentration carried out in this way turned out to be another factor disintegrating the economy of *Schlesien.* It transpired that the metallurgical cartel

[29] K. Rasch, *op. cit.*, pp. 46-49; E. Siegmund, *op. cit.*, p. 239.

[30] Franciszek Biały, *Polska Konwencja Węglowa*, [in:] *Encyklopedia historii gospodarczej Polski do 1945 roku*, Warszawa 1981, vol. 2, p. 106; Zbigniew Pustuła, Syndykat *Polskich Hut Żelaznych Sp. z o.o.*, [in:] *Encyklopedia historii gospodarczej Polski*, vol. 2, p. 352; K. Rasch, *op. cit.*, pp. 49-53; Z. Miłobędzki, *op. cit.*, pp. 77-78.

introduced not only uniform prices for rolled products, but also a uniform method of calculating the cost of transport from the agreed freight base. Thus, the customer – regardless of the distance from the foundry – paid the so-called parity costs – that is the cost of transport from the freight base. The problem, however, was that the choice of those freight bases was made only between the towns/places in the west of Germany, such as Oberhausen, Duisburg and Essen. As a result, the Lower Silesian machinery industry, buying rolled steel from the steel mills of Upper Silesia, instead of paying the actual costs of transport had to pay conventional costs, equal to the distance, e.g., from Oberhausen. The result was the severing of economic ties between the Lower Silesian machinery industry and Upper Silesian metallurgy, because the transport charges from the foundries in Upper Silesia were identical with those of the foundries in the Ruhr district, whereas the quality of the wire rod, and, above all, range diversity, were significantly lower than in the steel industry of western Germany. Thus, the machinery industry began to supply the Ruhr foundries, abandoning supplies from Upper Silesian plants (in 1929 the share of the steel industry of Upper Silesia in the supply of the Lower Silesian machinery industry was only 35%), thus contributing to the deepening of the crisis in heavy industry of the region[31].

However, as mentioned earlier, the situation in the Wałbrzych Industrial District was even worse, because several small mines, faced with increasing external competition, were forced to compete directly with each another. The fact is that just after the First World War, due to the lessening of competition of Upper Silesian coal, the situation of Wałbrzych mining improved, although this only lasted until 1924, when the mines of western Upper Silesia seriously increased extraction, and thus began to re-flood traditional coal markets for the mines from Wałbrzych-Nowa Ruda with cheaper coal[32]. A remedy for the deteriorating situation was also a policy of consolidation, albeit coupled with a thorough rationalization of production, as well as with the modernization and expansion of the technical infrastructure of the plants. Help came from Prussia and the Reich, which gave the restructuring companies a loan of 11 million marks, which, in fact, was a subsidy. As a result, the Lower Silesian shareholders of the company of *Oberschlesische Kokswerke und Chemische Fabriken A.-G.,* (Upper Silesian Coke and Chemical Plants plc), that is the *Fuchsgrube, Davidgrube, Seegen-Gottes-Grube, Viktor-* and *Gustavgrube* mines*,* along with the *Glückhilf-Friedenshöffnung-Grube* miner's guild and *Rütgerswerke A.-G.* company with its 'Kulmiz' mine, combined to form *Niederschlesischen*

[31] K. Jeżowski, *op. cit.*, pp. 189-191.
[32] G. Keil, *op. cit.*, p. 137, 152.

Bergbau A.-G., concern (Lower Silesian Mining plc) in 1928, whose capital soon after the formation rose from 36 to 40 million marks. What remained outside of the consolidation were the mining plants of the Nowa Ruda district and the mining property of the dukes of Pszczyna (Pless), which was transformed and consolidated, however, in 1930 as *Waldenburger Bergwerks A.-G.* (Wałbrzych Mining Plants plc). The consolidation was followed by highly important rationalization programmes and investments. The key seems to be the construction of a modern coking plant in the area of *Glückhilf-Friedenshöffnung-Grube* (mining plant and the 'Victoria' coking plant), which led not only to the exclusion of old and inefficient coking plants from operation, but, above all, development of a programme of building a long-distance gas pipeline network for coke-oven gas, based on sound foundations, which constituted another integrating element for the economy of Lower Silesia, which shall be discussed further[33].

Consolidation and unification simultaneously progressed in all branches of industry, becoming the simplest means of defence against the crisis, and a primary integrating factor for the economy. However, it shall be stated that it often occurred as a result of stronger companies taking over smaller and weaker companies, often from outside Silesia. In this way, Gustav Becker's factories from Świebodzice (Freiburg), supplying the entire former East Germany with clocks, were taken over by the magnate in the German clock market, Jungans complex, while two large porcelain factories from Wałbrzych were within Hutschenreuther and Rosenthal concerns, and the third one – an electrical and technical porcelain factory – was absorbed into *Gesellschaft für elektrische Unternehmungen – Gesfürel* (Society for Electrical Investment). In addition, *Deutsche Maschinenbau A.-G.-Demag*) (German Machine Building Plant plc) from Duisburg absorbed both machine factories and iron casting houses in Wałbrzych. The Silesian tycoon in the cotton industry, *Dierig A.-G.,* with the parent plant in Bielawa (Langenbielau) merged with the *Hammersen A.-G.* concern in 1930, thus creating Germany's largest company dedicated to the manufacturing of cotton products[34]. It was no different in the agri-food industry either, and a good example here was the sugar industry, operating since the late 19th century in two cartels which implemented quotas on the production of sugar: *Schlesische Zuckerkonvention* (Silesian Sugar Convention) and *Vereinigte Schlesische Zuckerfabriken* (United Silesian Sugar Factories). The first union united 18 factories, the other – 8 factories, and the remaining 13 sugar mills operated independently. Also, the Silesian spirit industry did not succeed as it was developed

[33] *Ibidem*, pp. 152-153; K. Jeżowski, *op. cit.*, p. 192.
[34] G. Keil, *op. cit.*, p. 159; K. Jeżowski, *op. cit.*, p. 188.

particularly in the north-eastern part of the region, and was based on a simple and low-cost supply of potatoes from the Poznań Region. With the outbreak of the customs war, the supply of raw material stopped and imports from greater distances were not profitable due to high freight charges. The result was that some of the distilleries and husking mills had to stop operations, and the rest had to be completely eliminated[35].

Water, gas and electric pipelines divided by the border, as well as the Wałbrzych programme for building trunk gas pipelines, have already been briefly mentioned. It appears that problems in securing supplies of water and energy were other integrating factors for the Silesian economy, although, like the previous ones, their character was rather local, or at least their range was strictly defined. That was the case, e.g., with water supply for the Upper Silesian Industrial District, where the concepts of centralizing the water supply for the region had been known since the late 19th century. Two huge state-owned, multi-commune waterworks were created at that time, powered from the *Adolfschacht* in intakes Tarnowskie Góry and 'Zawada' in Karchowice (Karchowitz/Gutenquell) as well as the County of Katowice Waterworks (*Kreiswasserleitung des Kreises Kattowitz*), supplied with water from the closed mine 'Rosalie' (*Rosaliegrube*) in Dąbrówka Wielka (Gross Dombrowka)[36]. Due to the general lack of water in the entire industrial district, caused by mining activities, until the moment of its division the water supply network of all these factories densely entwined urban and rural clusters of people all over the Upper Silesian Industrial District. With the border division the water mains were cut, regardless of the towns supplied by individual companies, and, what is worse, the only waterworks company left for the whole German part of the Upper Silesian Industrial District was 'Zawada'. Other water intakes were in Poland. Water proved to be such an invaluable commodity that the Upper Silesian Convention provisioned a 15-year moratorium on the supply of water from the waterworks companies located in Poland and Germany to towns and industry, and it also formed a joint, though short-lived (1922-1924), German-Polish board of *Staatliche Wasserversorgungsanlage* (State Waterworks Company)[37].

[35] *Schlesien. Bodenschätze und Industrie*, Breslau 1936, p. 256; H. Freymark, *op. cit.*, pp. 59-60.

[36] See Paul Geisenheimer, *Die Wasserversorgung des oberschlesischen Industriebezirks*, Kattowitz 1913; Ernst Grahn, *Die städtische Wasserversorgung im Deutschen Reiche, sowie in einigen Nachbarländern*, München-Leipzig, vol. 1, pp. 134-138; Kazimierz Nowakowski, *Zaopatrzenie w wodę Górnośląskiego Okręgu Przemysłowego*, Katowice 1938; Miron Urbaniak, *Zakład Produkcji Wody „Zawada" w epoce ruchu parowego*, Katowice 2004; Johannes Ziekursch, *Die Entwicklung der staatlichen Wasserversorgungsanlage im oberschlesischen Industriebezirk*, 'Zeitschrift des Oberschlesischen Berg- und Hüttenmännischen Vereins', 1911, pp. 521-542.

[37] *Polsko-Niemiecka Konwencja Górno-Śląska*, pp. 78-82.

For 15 years both sides were involved in the total decoupling of their parts of the Upper Silesian Industrial District from the supplies of water from the opposite side of the border. Germany undertook a wide-ranging expansion of 'Zawada' waterworks plants and the construction of a new deep well 'Jelina' and the intake of groundwater Dzierżno (Sersno), thanks to which they increased pipeline capacity fourfold. In addition, they launched a few mine intakes of drinking water, including *Donnersmarckhüttegrube* mine and *Karsten-Centrumgrube* mine in Bytom, and owing to the implementation of the main line from 'Zawada' to Bytom and, thus making the city independent of the supply of water from Poland, they managed to introduce the supply of their entire Industrial District using only their own water intakes. Those investments were led by *Wasserwerk Deutsch-Oberschlesien GmbH* (German Upper Silesia Waterworks Ltd.) located in Zabrze, and founded in 1924. Its creation was necessary in order to raise funds for the works, collected quickly by participating in the Upper Silesian industrial venture with the state *Preussag* at the forefront[38].

In 1924 the Poles established the *Państwowe Zakłady Wodociągowe* (National Waterworks Plant) in Upper Silesia (PZW), which carried out the expansion and modernization of the water plant 'Staszic Shaft' (formerly 'Adolf Schacht'), supplying water to 20 communes and 2 cities in 3 districts, and also started the construction of a brand new water company 'Maczki' on the Biała Przemsza river (*Weisse Przemsa*), supplying water to major cities of Dąbrowa Górnicza and Upper Silesia Basins. The first stage of this project, carried out from 1929 to 1931, cost 15 million zlotys, and ultimately 'Maczki' was used by such cities as Będzin (Bendzin), Dąbrowa Górnicza (Dombrowa), Chorzów (Königshütte, Chořov), Katowice, Sosnowiec (Sosnowitz) and Szczakowa[39].

The existence of the national multi-commune waterworks system in the German and Polish parts of the Upper Silesian Industrial District was unique both in Poland and in Germany, due to historical reasons, yet it was obviously an integrating element, allowing the functioning of communities, and in large part enabling

[38] M. Urbaniak, *Zakład Produkcji Wody „Zawada"*, pp. 27-37; D. Schwantke, *Die Wasserversorgung des deutsch-oberschlesischen Industriebezirkes*, 'Das Gas- und Wasserfach', 1931, issue 19, pp. 421-427; D. Hache, *Die Wasserversorgung in Oberschlesien und deren Zukunft*, 'Das Gas- und Wasserfach', 1922, issue 4 and 5, pp. 49-51 and 67-71; Tytus Laskiewicz, Felicja Rymowicz, *Gliwice – Zabrze – Bytom w okresie lat 1921-1939 pod względem gospodarczym i przemysłowym*, Katowice 1947, p. 25; Franz Rompe, *Aus Verwaltung und Wirtschaft des oberschlesischen Industriegebiets*, Breslau 1934, pp. 121-122; K. Albach, *op. cit.*, pp. 73-74; W. Stöphasius, *op. cit.*, p. 121.

[39] K. Nowakowski, *Zaopatrzenie w wodę*, p. 43-52; *idem*, *Zagadnienie zaopatrzenia w wodę Górnego Śląska i Zagłębia Dąbrowskiego*, 'Przegląd Techniczny', 1927, issue 4 and 5, p. 51-54 and 78-81; *idem*, *Zarys projektu i budowy państwowego wodociągu z Maczek dla Zagłębia dąbrowskiego i górnośląskiego*, 'Przegląd Techniczny', 1932, issues 4-5, pp. 45-48.

operation of industry, which is completely forgotten in the literature on that subject. Similar examples are difficult to find in Lower Silesia, but at least two projects of multi-commune water supply are worth noting. The first one was a unique gravitational multi-commune waterworks in Nowa Ruda, realised during the interwar period, based on water intakes located on the slopes of the Sowie and Stołowe Mountains (Eulen- and Heuscheuergebirge, Owls and Tables Mountains), supplying water to two cities and several rural communes[40]. The second one, the construction of a multi-commune waterworks for the Piława (Peile) area, was planned and designed between 1938 and 1939 as part of the water management programme already developed for the whole of Silesia. The outbreak of the war prevented the realization of this truly risky venture, but its scale is a classic example of Nazi technical ideas. Waterworks were supposed to supply water to a total of about 20 locations along the Sowie Mountains range, among them, to the highly industrialized centres of the Dzierżoniów Industrial District (*Reichenbacher Industriebezirk*): Bielawa, Dzierżoniów (Reichenbach), Piława Górna (Gnadenfrei) and Pieszyce (Peterswaldau). The water intake was to be utilized in three large storage reservoirs connected via pipelines: 1) one near Lutomia (Leutmannsdorf) with a capacity of 1.45 million m^3 2) another above Bielawa – 0.66 million m^3 and 3) the last one above Pieszyce – 0,44 million m^3. The whole cost was estimated at 6 million marks, yet it would still supply water only to the residents, as the supply for industrial plants was to be provided by a separate reservoir[41].

A factor which integrated the economy more thoroughly than the supply of water was the gas industry and energy production. Particular progress and new quality was evident in the area of the former, because of the continuation or emergence of concepts of centralized and long-distance gas transmission, and also the trend towards replacing traditional coal gas with coke-oven gas. New ideas are already evident in the aforementioned Dzierżoniów Industrial District, where in 1922 *Gaszentrale unter Eule GmbH* (Under Owl Mountain District Gasworks Ltd.) was formed, whose shareholders were the city of Dzierżoniów and the rural communes of Bielawa and Pieszyce. All these centres used old town gasworks from the 1860s, completely unsuited to their needs. Therefore, in order not to build three new gasworks, they decided to set up a company and raise a common gasworks in Dzierżoniów. After its start in 1922, the old plants were out of operation and converted into substations, while the entire gas supply for three localities was

[40] Zygmunt Król, *Wodociąg grupowy 'Nowa Ruda'* [in:] *Zabytki techniki wodociągowej Polski*, ed. Stanisław Januszewski, Wrocław 1989, pp. 123-126.

[41] *Schaffung eines Gruppenwasserwerkes im Peilegebiet in Schlesien*, 'Ostdeutsche Bauzeitung', 1938, issue 27, p. XI.

taken over by *Gaszentrale unter Eule*. Despite these efforts, the supply of the district gasworks excluded Piława Górna and Ząbkowice Śląskie (Frankenstein, Frankenštejn), but undoubtedly a great step was made towards the integration of the energy base for Dzierżoniów Industrial District[42]. In addition to investment in Dzierżoniów, the district range in Lower Silesia had also, among others, gasworks in Bolesławiec (Bunzlau, Boleslav/Slezská Boleslav), Duszniki Zdrój (Bad Reinerz), Kłodzko (Glatz, Kladsko) and Zgorzelec (Görlitz, Zhořelec). In total, there were 7 district manufactured gas plants, supplying gas to 45 localities, and also 5 district gasworks distributing coke-oven gas to another 49 localities[43]. The latter arose from the implementation of a construction programme for trunk gas pipelines, based on coke-oven gas, which was produced in the Wałbrzych District.

I have already mentioned the construction of a modern central coking plant ('Wiktoria') in Wałbrzych, which began to sell manufactured coke-oven gas to *Gaszentrale Niederschlesien GmbH.* (Lower Silesia District Gasworks Ltd.), set up in 1926 and based in Wałbrzych. This company took over supplying gas, among others, to 30 localities of the pre-war *Gaszentrale Altwasser* (Stary Zdrój District Gasworks) in Wałbrzych, and it also took over the operation of the trunk pipelines to Świdnica (Schweidnitz, Svídnice) and Świebodzice, which had been in operation from a similar time. To make even better use of the opportunities created by coking plants in Wałbrzych, the board of the Lower Silesia province decided to create in 1929 a company *Ferngas Niederschlesien A.-G.-Ferngas* (Lower Silesia Trunk Gas Pipelines plc) transformed in 1938 into *Ferngas Schlesien A.-G.* (Silesia Trunk Gas Pipelines plc). In 1930, this company started the construction of a one of a kind long trunk pipeline from Wałbrzych via Jelenia Góra (Hirschberg, Hiršberk/Jeleni Hora) to Cieplice Zdrój (Bad Warmbrunn), and entrusted its operation to *Gaszentrale Niederschlesien G.m.b.H*. In the following years, including the Second World War, *Ferngas* built subsequent parts of high-pressure trunk gas pipelines, reaching e.g. Legnica (Liegnitz, Lehnice), Lubawka (Liebau, Libava), Zgorzelec and Wrocław. As a result, a 370-kilometre *Ferngas'* gas network system cooperating with coal gasworks placed German Lower Silesia among the regions with the most logical and economical gas supply systems in Germany. It is also an example of how the energy sector was an integrating factor for the province of Lower Silesia, because coke-oven gas was used not only by the people but also the industry, as exemplified at least by: chemical and ceramic factories in the Stary Zdrój

[42] Oscar Vaupel, *75 Jahre Gasversorgung im Kreise Reichenbach 1863-1938*, Reichenbach 1938, p. 15, 17, 24.

[43] Romuald Rzeszoś, *Gazownictwo Dolnego Śląska a problem gazownictwa polskiego*, 'Gaz, Woda i Technika Sanitarna', 1946, issue 7, p. 189.

(Altwasser), porcelain factory in Jaworzyna Śląska (Königszelt), 'Karol' steelworks (*Carlshütte*) in Stary Zdrój, glassworks in Pieńsk (Penzig OL), or factories of clay and firebrick in Strzegom (Striegau, Střihom)[44].

Similar possibilities in the construction of a gas network, based on coke-oven gas, also existed in the Upper Silesian Industrial District, therefore – in the German part of the District – a programme of a centralized system of coke-oven gas supply was implemented. Its manifestation was, although not limited to, establishment of a limited liability company which served a combined gas infrastructure of Bytom, Gliwice and Zabrze (*Verbandsgaswerk Beuthen-Hindenburg OS GmbH.*). The company bought coke-oven gas, among others, from the following coke plants: *Gleiwitzer Grube, Skalley* and *Dellbrückschacht,* treated it in Zabrze gasworks, and then distributed it to consumers through the shared pipeline network. It must also be mentioned that as early as in 1931, technical plans and economic calculations were developed to build – within *Ferngas* – a trunk gas pipeline network from Zabrze to Wrocław via Brzeg (Brieg, Břeh) and Opole, and thus to connect the Upper Silesian and Wałbrzych Industrial Districts through the trunk gas pipeline. Ultimately, however, the idea remained in the design stage[45].

In contrast to Germany and the increasingly widespread use of coke-oven gas, in the Polish part of Upper Silesia, where coal was abundant, the base was solely traditional light gas. However, the Polish Upper Silesian District did not escape centralizing tendencies, a sign of which was the functioning of the Upper Silesian Gas Headquarters plc in Hajduki Wielkie (Bismarckhütte), which in the mid-1920s supplied gas to 17 communes of the Silesian Voivodeship, including Katowice, Kochłowice (Kochlowitz), Lipiny (Lipin), Świętochłowice (Schwentochlowitz), and also the industrial firms functioning in these places. Self-generating communal gasworks usually existed only in the more remote centres of the Upper Silesian Industrial District, namely in Bielsko, Królewska Huta (currently: Chorzów), Mikołów (Nikolai, Mikulov), Mysłowice (Myslowitz), Pszczyna, Rybnik and Tarnowskie Góry, whereas the Polish part of Cieszyn (Teschen, Těšín) did not have its gasworks and was forced to buy gas from the plant on the Czech side of the border[46].

[44] *Ibidem*, p. 189-191; Wilhelm Ferbers, *Kokereigasversorgung im niederschlesischen Industriegebiet durch die Gaszentrale Niederschlesien G.m.b.H., Waldenburg, Schlep*, 'Das Gas- und Wasserfach. Journal für Gasbeleuchtung und Wasserversorgung', 74 (1931), issue 23, pp. 333-340; Kazimierz Smoluchowski, *Dolnośląskie gazociągi dalekosiężne*, 'Gaz, Woda i Technika Sanitarna', 1947, issue 1, pp. 1-2; G. Keil, *op. cit.*, pp. 153-154.

[45] T. Laskiewicz, F. Rymowicz, *op. cit.*, pp. 24-25.

[46] Józef Konopka, *Gazownictwo polskie i jego rozwój w świetle liczb i wykresów*, Warszawa 1928, pp. 19, 80-89; *Statystyka gazowni w Polsce za rok 1936/37*, Warszawa 1938, pp. 1-15.

The integrating factors of the widest range were definitely the energy networks and their importance for the unity of the economy in Silesia, which was clear even before the First World War. As a result, a sound foundation for the rational energy economy of the region was created long before the division. Conducive to this were undoubtedly natural conditions created by a dense network of water flows, which provided a relatively easy opportunity to build hydroelectric power plants, as well as easy access to coal as a fuel, and what that entails-economical construction of thermal power plants. Another factor which facilitated planning and carrying out electrification work and expansion of electricity infrastructure over the entire interwar Silesia was the activity of several financially strong electric companies, already well-established before the First World War. That was, for instance, the case with *Elektrizitätswerk Schlesien A.-G.* (Silesia Power Plant plc) founded in 1909 in Wrocław, combined in 1922 with the *Niederschlesischen Elektrizitäts- und Kleinbahn A.-G.* (Lower Silesian Electrical and Narrow-Gauge Railways plc) in Wałbrzych. The electric tycoon in the Silesian energy market in the mid-1920s had already had an HV network of 2,500 km in length, supplying the area of 8,500 km^{2,} consisting of 18 districts (Kreise), including 25 cities and 900 other localities[47]. On the other hand, *Überlandzentrale Mittelschlesien GmbH.-ZÜM* (District Power Plant Middle Silesia Ltd), established in 1911 and based in Strzegom, transformed in 1920 into an union of the districts of Dzierżoniów, Jawor), Strzegom, Środa Śląska (Neumarkt in Schl., Slezská Středa) and Świdnica. After 25 years of operation they had a high-voltage network of a length of 885 km, supplying electricity to the area of 1,800 km^2 including 4 cities, 300 licensed local networks and 100 electric cooperative networks[48]. Since 1923, *Überlandwerk Oberschlesien A.-G.-ÜWO* (District Electric Power Plant Upper Silesia plc) operated in the Opole Region based in Nysa (Neisse), a company whose shareholders were the province of Upper Silesia, the Prussian state and the German Reich. Its stunning development in the 1920s, including sales exceeding 50 million kWh in 1928 was largely – just like in the case of the aforementioned *ZÜM* – the result of comprehensive electrification of the countryside. It suffices to say that in 1921-1926 the number of electricity consumers of *ÜWO* increased fivefold, while the increase in generating electricity of an identical amount occurred between 1924 and 1928[49].

[47] *Elektrizitätswerk Schlesien Aktiengesellschaft Breslau* [in:] *Breslau*, ed. G. Halama, Berlin 1924, pp. 116-119; *Historia elektroenergetyki dolnośląskiej*, Wrocław 1989, pp. 16-17.

[48] *25 Jahre Überlandzentrale Mittelschlesien in Striegau 1911-1936*, [Striegau 1936], pp. 8-12.

[49] K. Albach, *op. cit.*, pp. 74-75; Bogdan Cimała, Wiesław Lesiuk, *Rozwój elektroenergetyki w rejencji opolskiej* [in:] *Monografia Zakładu Energetycznego Opole P.A.*, eds Stanisław Senft, Ewa Dawidejt-Jastrzębska, Opole 2002, pp. 16-28.

Überlandwerk Oberschlesien A.-G. was a company involved in the construction and operation of the energetic network and the sale of electricity, but the energy was produced by *Oberschlesische Elektrizitätswerk A.-G.-OEW* (Upper Silesian District Power Plant plc) in Gliwice. In their case, along with the division of Upper Silesia, there was already severe turbulence, resulting from the loss of the most powerful power plant of the Upper Silesian Industrial District, namely the plant in Chorzów, covering two thirds of the electricity demand in the German part of Upper Silesia. Although also on this area the Upper Silesian Convention introduced a moratorium on mutual supply of electricity to the whole Upper Silesian Industrial District, which lasted only three years. This led to an immediate expansion and modernization of a large thermal power plant 'Zaborze', and to intensified work on the expansion of a huge thermal power plant in Szombierki (Schomberg) near Bytom built in 1917-1920 on the initiative of the Schaffgotsch counts. These investments, largely, yet by no means completely, enabled them to make German Upper Silesia independent from the supply of electricity from Poland[50].

In turn, in the Polish part of the Upper Silesian Industrial District, to administer the distribution of the wealth of *OEW,* a separate company called *Oberschlesisches Kraftwerk SA Katowice-OKW* (Upper Silesian Power Plant plc) was created, which in 1933 was transformed into Katowice Silesian Electric Plant plc (*Ślązel*), and which exploited the power plant in Chorzów. In the meantime, the high-voltage-line 60-and-20-kW-system was built, allowing the power plant in Chorzów to work, e.g. with mine power plants 'Donnersmarck' and 'Jankowice' of the concern of the Donnersmarck princes, 'Emma', 'Charlotte' and 'Anna' of the Rybnik Coal Miner's Guild, as well as a huge and modern power plant belonging to the company Elektro Plants Ltd. in Łaziska Góne (Ober Lazisk, Horní Lazyska). As a result, the total installed power of 7 power plants was 240 MW, and annual production in the 1930s reached 550 million kWh. Incidentally, this enormous power and production was periodically used by the industry of the German part of the Upper Silesian Industrial District, as their own power plants were not sufficient to meet demand. Therefore, in 1931 the power plants in the Polish Upper Silesian Industrial District sold to the western part of the District 24.8 million kWh and up 28.4 million kWh in 1932, while in 1935 the Polish Upper Silesian Industrial District bought from the German part 8.4 million kWh. Without going into further details of the energy cooperation between both parts of Upper Silesia, I shall recall once again that the Czech part of Cieszyn until 1926 also drew energy from the power plant located in the Polish

[50] K. Albach, *op. cit.*, pp. 74-75; *Zespół Elektrociepłowni Bytom P.A. Moc energii w zdjęciach, dokumentach, faktach*, Katowice 2003, pp. 11-16; W. Stöphasius, *op. cit.*, p. 121.

section of the city. That year it ended cooperation with the Polish local government, and the supply of electricity was taken over by the Moravian – Silesian power plant from Ostrava – Karvina District which was operating in Cieszyn Silesia[51].

Undoubtedly, the key problems influencing integration or disintegration were transport conditions, generally understood through the network of rail and inland waterways. The programme of construction of German motorways (*Reichsautobahnen*) within Silesia, carried out ostentatiously after Adolf Hitler came to power, was no longer such a fundamental matter. In fact, it meant only the 231-kilometre stretch from Forst via Legnica and Wrocław to Brzeg and the short (31-kilometre) Łany (Lohnia)-Gliwice-Bytom was built. The aforementioned 262 kilometres of motorway surface, which was supposed to connect Berlin with the Upper Silesian Industrial District, with a total of 3,171 kilometres of motorway built by the end of September 1939, accounted for only 8% of the whole motorway network of the Third Reich[52]. However, the other roads for motor vehicles in Silesia were important only for the local transport, and for longer routes they were generally too few[53]. Meanwhile, communication problems in the area of rail and inland waterways were the most important both integrating and disintegrating factors for the entire Silesia, although they were particularly acute probably in *Schlesien*.

With the rise of Poland and the division of Upper Silesia, the border cut across tens of railway lines and countless roads, and within the province of Lower Silesia alone there were 10 railways and 30 roads disrupted[54]. Well-known was the example of Bytom, where out of 9 access roads to the city, only one whole road remained in Germany, or the example of the aforementioned road from the Upper Silesian Industrial District to Głogów, 8 kilometres of which in the district of Syców was left in Poland. On the other hand, out of the three major marshalling yards, which served before the First World War to send most of products and raw materials from the Upper Silesian Industrial District outside, were Tarnowskie Góry in Poland, and Gliwice and Pyskowice (Peiskretscham) in Germany[55]. However, railway communication was of such great integrating importance that the Upper Silesian Convention in this regard also provisioned a 15-year moratorium on the privileged rail transit (without customs) for a few standard gauge and two narrow gauge railway routes, appointed jointly by the Polish and German sides[56].

[51] Aleksander Groza, *Zagadnienie elektryfikacji na Śląsku*, Katowice 1937, pp. 30-31, 40, 50-51.
[52] Andrzej Brożek, *Były pruski Wschód w sieci Reichsautobahnen*, 'Przegląd Zachodni', 1 (1969), issues 1-2, pp. 113-114.
[53] H. Koernig, *op. cit.*, p. 11.
[54] E. von Gronow, *op. cit.*, pp. 50-51.
[55] H. Koernig, *op. cit.*, p. 17; H. Freymark, *op. cit.*, p. 68.
[56] Michał Jerczyński, Stanisław Koziarski, *150 lat kolei na Śląsku*, Opole-Wrocław 1992, p. 107.

The division of the border, however, inevitably distorted this very important bonding element of the Silesian economy. Therefore, the first and most important task for the Germans in the field of railway transport was to create a well functioning administration within the Upper Silesian district of Opole. The former Prussian *Königliche Eisenbahndirektion – KED* (Directorate of Railways) was from that moment located in the Polish town of Katowice (Directorate of State Railways, later the Regional Directorate of State Railways – DOKP), while the inclusion of the railway network remaining on the German side under the administration of *Reichsbahndirektion-RBD* (Reich Directorate of Railways) in Wrocław would mean its catastrophic overload. Therefore, in 1922 the Germans set up a new *RBD* in Opole[57], which was responsible for the administration and operation of the railway traffic in Opole Silesia and in the western part of the Upper Silesian Industrial District with 16 mines and 18 railway crossings with Czechoslovakia and Poland[58]. That directorate also conducted major railway investments aimed at creating a coherent frame of rail within German Upper Silesia. In the first phase in 1928, to bypass Tarnowskie Góry junction located in Poland, a single-lane section of Zabrze-Mikulczyce (Mikultschütz)-Tworóg/Brynek (Tworog/Bryneck) was built, and parallel to that was the extensive development of junctions and stations in Bytom, Gliwice (with a daily shunting capacity of 5,000 cars!), Racibórz and Kędzierzyn (Kandrzin/Heydebreck), in 1925 leading from the latter new collision-free rail links to Koźle (Kosel, Kozlí) – one of the largest inland handling river ports belonging to the *DRG*. At the same time, thanks to the funding granted to, among other things, build necessary railways in the eastern parts of Germany, the so-called 'Act to help the East' (*Osthilfegesetz*) of 1931[59], *RBD Oppeln* in 1934-1936 built a single-lane line Koźle-Leśnica (Leschnitz) – Strzelce Opolskie (Gross Strehlitz). A 30-kilometers trail was a significant trade short-cut, which also provided widespread access to the famous St. Annaberg (St. Anne's Mountain)[60]. On the other hand, *RBD Breslau* together with the newly formed *RBD Osten* (East) in Frankfurt an der Oder, whose administration in the south reached up to Lubsko (Sommerfeld), Żagań, Głogów and Góra, concentrated on the facilitation of rail traffic to the north-west[61]. This was to make the transport of coal and products from the entire German Silesia towards Brandenburg

[57] For more information on the activities of *RBD Oppeln* see Hans Wolfgang Scharf, *Eisenbahnen zwischen Oder und Weichsel*, Freiburg 1981, pp. 340-394.
[58] *Oberschlesien. Verkehr, Wirtschaft und Volkstum*, Berlin 1935, p. 19.
[59] See *Gesetz über Hilfsmassnahmen für die notleidenden Gebiete des Ostens (Osthilfegesetz)*, 'Reichsgesetzblatt', 1931, part I, no. 14.
[60] M. Jerczyński, P. Koziarski, *op. cit.*, pp. 111-113; *Oberschlesien. Verkehr, Wirtschaft*, p. 19.
[61] For more on the activities of *RBD Breslau* and *RBD Osten* see H. W. Scharf, *op. cit.*, pp. 253-283, 394-404.

with Berlin and towards Pomerania with Szczecin (Stettin) easier and more efficient and thus to create transport corridors to Silesian markets. Therefore, already in the mid-1920s, a double-lane bypass of Legnica junction to Miłkowice (Arnsdorf) was built, which thus became an important marshalling yard, and Wrocław gained collision-free exits from rail freight bypass to Legnica and Głogów, and also significantly extended and modernized a railway junction. At the same time, a stretch from Lubiąż (Leubus, Lubuš) to Malczyce (Maltsch) with its rail handling harbour on the Odra river was completed, which was particularly important for the mines of the Wałbrzych Industrial District, although in Malczyce handled only 1/30-1/70 of coal that was reloaded on barges at the port in Koźle. In addition, the second track was laid on the Opole-Brochów (Bockau) and Nowa Sól (Neusalz a.O.)-Czerwieńsk (Rothenburg), stretches, so the transport of Upper Silesian coal was facilitated to Szczecin and Piła (Schneidemühl) in the Frontier March of Poznań-West Prussia (*Grenzmark Posen-Westpreussen*), and further – through the so-called Polish corridor to the sea – to East Prussia. Finally, also in 1928, a fully electrified main line Wrocław-Wałbrzych-Jelenia Góra was put into service, and it was of the utmost importance for the cargo transport from the Wałbrzych-Nowa Ruda District[62]. Here it should be mentioned that the rail, which united the entire region, at the same time facilitated competition of Upper Silesian coal on the Lower Silesian market with that extractet at the Wałbrzych-Nowa Ruda mines and thus was a disintegrating factor. This fact had long been observed, because, according to Dr. A. Gaertner, when the train connection from Kędzierzyn via Kamieniec Ząbkowicki (Kamenz) and Kłodzko to Wałbrzych Podgórze (Waldenburg Dittersbach) was opened in October 1880, in all major stations on this line there were forwarding points for Upper Silesian coal. In this way, the prosperity of Wałbrzych-Nowa Ruda mines caused by the opening of the sales market around Wielka Sowa Mountain (Big Owl, *Hohe Eule*) thanks to new railway connections did not last long. Just over the decade of 1881-1891 weak mines in Nowa Ruda lost over one million marks due to Upper Silesian coal competition[63].

It is difficult to discuss all railway undertakings of an integrating nature for the economy of German Silesia, however, rail initiatives are highly important, as they concerned not only the economy, but also various types of local government, businesses, and even state institutions of both German provinces. It involves a concept created in the 1920s in the neighbouring Frontier March of Poznań-West Prussia of creating the so-called Frontier Rail or the Frontier March Rail (*Grenzlandbahn/*

[62] M. Jerczyński, P. Koziarski, *op. cit.*, pp. 93-94, 111-113; A. Gaertner, *op. cit.*, pp. 17-18.
[63] A. Gaertner, *op. cit.*, pp. 14-15.

Grenzmarkbahn). The idea behind this concept was to create the shortest transport corridor – especially for Upper Silesian coal – to East Prussia (*Ostpreussen*) along the Polish border. The planned line was to run from Oleśnica (Oels) on the main Rail of the Right Bank of the Odra River (*ROUE*), forming the north rail freight bypass of Wrocław and to connect near Oborniki Śląskie (Obernigk) with the main Wrocław-Poznań rail line. Then the rail would lead to Żmigród (Trachenberg, Trachenberk), where the branch was to lead to Wąsosz (Herrnstadt) and Góra. From the latter, the line was intended to lead towards Wschowa (Fraustadt), and then to Sława Śląska (Schlawe) and continue to Zbąszynek (Neu Bentschen), Międzyrzecz (Meseritz) and up to Skwierzyna (Schwerin a.W.), where via Drezdenko (Driesen) it would reach Stare Bielice (Altbeelitz) on the main Eastern Railway (*Ostbahn*) leading west to Berlin and east via Piła up to Königsberg in East Prussia. Thanks to this risky idea, the shortcut between the German Upper Silesian Industrial District and Krzyż Wielkopolski (Kreuz) on *Ostbahn* was to reach nearly 90 km in relation to the currently used railway connections. The idea, above all, promised tangible financial benefits for the Silesian economy and it was so inspiring that it was supported not only by economic self-government bodies, such as the Chamber for Industry and Commerce of Opole or Żagań, but also by a powerful *Oberschlesischer Berg-und Hüttenmännischer Verein* (Upper Silesian Association of Mining and Metallurgy) and the authorities of the *Regierungsbezirk* of Opole. It was interesting for Wrocław, for which the proposed bypass would mean reducing the load for its own junction and its facilitation for wide passenger traffic, allowing for the development of satellite settlements, and thus the development of the city. Ultimately, however, the great idea of the Frontier Railway did not receive the approval of the *Reichstag,* and as a result there was only the Skwierzyna-Stare Bielice stretch[64].

Remaining still within the issues of communication conditions of the German part of Silesia, it seems impossible not to mention the huge integrating role of inland waterways, including in particular the Odra river), called by the Germans ‘a life nerve of Silesia’ (*Lebensnerv Schlesiens*). For the economy of the whole of Silesia – Upper Silesia in particular, though – the Odra river was, above all, a much cheaper transport alternative than the monopolistic rail transport, so much that the competitive sale of coal to central Germany and Brandenburg with Berlin was, in fact, possible only through the Odra Waterway (*Oder Schifffahrtsstrasse*). Therefore, throughout the interwar period, all the political, economic, and industrial factors of both provinces focused their attention on regulating the Odra river and

[64] For more information M. Urbaniak, *Kolej Skwierzyna-Stare Bielice. Kolejowy modernizm w Polsce*, Łódź 2013.

facilitating its traffic, from the Upper Silesian Industrial District up to Szczecin. Suffice it to say that even shortly after the First World War, the Odra Waterway was the crucial argument for maintaining economic and administrative unity of the former province of Silesia, becoming a starting point for the idea of a 'great economic union of Silesia' (*Grosswirtschaftsverband Schlesiens*)[65].

Although the river was navigable from Racibórz up to its mouth, below Wrocław it was too shallow, and below the mouth of the Warta river there was its sharp gradient, which in total made it more difficult to navigate barges of increasing tonnage. Meanwhile, the construction of the already famous *Mittellandkanal* (Midland Canal), a waterway connecting the western industrial districts of Germany with Brandenburg and the Odra river in the east, started and the canal would allow free and, above all, cheap transport of coal and goods from the Ruhr Industrial District towards eastern provinces of the state. As a result, mines and factories from the western Germany would successfully compete with Silesian enterprises on last open and available for the economy of the whole Silesia markets[66].

Therefore, since the turn of the 1920s and 1930s, there was a number of significant investments to improve the functioning of the Odra Waterway. Most of them – like the construction of motorways – were carried out as part of the great Nazi program of public works (*Öffentliche Arbeiten-ÖFFA*). As a result, a storage reservoir in Otmuchów (Ottmachau) on the Nysa Kłodzka river, under construction from 1928, was already completed in 1933 and then, after a 3-year test operation, it began to be used. It could collect 126 million m^3 of water used for recharging the Odra river during drought. At the same time the construction of the Mała Panew (Malapane) river reservoir in Turawa (Turawa) started, cooperating with Otmuchów, with a capacity of 90 million m^3, completed in 1938. Similar was the situation with another, third storage reservoir near Dzierżno (Sersno, Stauwerder) on the Kłodnica (Klodnitz) river, which was opened also in 1938 and was of great importance (recharging the canal) for another hydrological investment, namely the 41-kilometre Adolf Hitler Canal, today Gliwicki Canal from Gliwice to Koźle built between 1934 and 1939. Due to the construction of the modern canal with 6 locks, the only major inland waterway canal in interwar Poland, 140-tonne barges which used to sail on the old Kłodnicki Canal (Klodnitzkanal) could be replaced with barges of 1,000 tonnes. However, due to the standardized shipping type 'new *plauerka'* (*Neue*

[65] T. Kulak, *Propaganda antypolska*, pp. 24-26.

[66] *Oberschlesien. Verkehr, Wirtschaft*, p. 23; H. Koernig, *op. cit.*, pp. 11-17; H. Freymark, *op. cit.*, pp. 44-46; A. Gaertner, *op. cit.*, pp. 17-19.

Plauener-Masskahn) commonly used in the inland navigation on the Odra river, the channel was sailed by vessels of up to 760 tonnes[67].

It is difficult to estimate the significance of the aforementioned Adolf Hitler-Kanal for the economy of Upper Silesia, and the Odra Waterway for the economy of the entire German Silesia. It is certain, however, that the inland waterway combined with a dense railway network were among the most important factors that integrated the economic organism of German Silesia, not to mention the fact that every large industrial plant, in particular mines or foundries, had its own railway sidings.

Meanwhile, in the Polish part of Silesia such an investment as the Adolf Hitler Canal could only be dreamt of, due to the lack of technical conditions. However, in 1936 Zbigniew Wasilewski wrote about the inland waterway transport used on the Biała Przemsza river: 'The only means of transport used to floating coal, is a 'Cracow' wooden scow, which can take the full load of 50 tonnes (...), sensitive to wind and wave, an object used only in our waters'. What is more, this 'floating' was carried by horses because the Przemsza river was too shallow for tugboats. Thus, even though the river from Mysłowice to its mouth was densely strewn with ship's holds, water transport for the Polish part of the Upper Silesian Industrial District was in fact not significant[68]. State authorities and the authorities of the Silesian Voivodeship could only focus attention on the rail network, especially given that railway junctions in Bytom, Gliwice and Kluczbork, important for transport to the north-south, were located in Germany[69].

In the first place it was necessary to bypass the junction stations situated in Germany, which was done by the construction of a single-track rail link Zabrze Makoszowy (Hindenburg Makoschau)-Mizerów (Miserau) for Gliwice junction (1923-1924) and a double-track main line Chorzów Stary-Brzeziny Śląskie (Birkenhain)-Szarlej Piekary (Scharley Deutsch Piekar), bypassing the junction in Bytom (1925). On the south of the Upper Silesian Industrial District between 1923 and 1925 a single-track line Bluszczów (Bluschau)-Brzezie (Hohenbirken) at the Odra river was built, as well as the Pawłowice Śląskie (Pawlowitz OS, Slezské Pavlovice)-Chybie (Chybi) line, bypassing the German junction in Chałupki

[67] *Oberschlesien. Verkehr, Wirtschaft*, p. 24; H. Koernig, *op. cit.*, p. 13; Walter Bubeck, *Der Adolf-Hitler-Kanal und seine Bedeutung für die schlesische Wirtschaft*, Breslau 1935, pp. 5-27; P. Greiner, *op. cit.*, pp. 332-333; Adam Szewczyk, Stanisław Januszewski, *Śluzy Kanału Gliwickiego*, [in:] *Zabytki przemysłu i techniki w Polsce*, ed. Stanisław Januszewski, Wrocław 2002, vol. 6, pp. 127-128; T. Laskiewicz, F. Rymowicz, *op. cit.*, p. 23; Gustav Königs, *Die Oder. Lebensnerv Schlesiens*, [in:] *Niederschlesiens Industrie baut auf*; Konrad Fuchs, *Schlesiens Industrie*, München 1968, p. 44.

[68] Zbigniew Wasilewski, *Znaczenie dróg wodnych dla przemysłu śląskiego*, Katowice 1936, p. 27 (the quoation and information above).

[69] M. Jerczyński, P. Koziarski, *op. cit.*, p. 107.

(Annaberg), and thus directing the Polish coal cargo to southern markets. In addition, several junctions, e.g. in Tarnowskie Góry, Katowice Ligota (Ligota), Wodzisław Śląski (Löslau) and Rybnik were modernized and extended to adapt them to increased traffic to the north-east. On the other hand, to get around restrictive transport tariffs prevailing in the German Kluczbork transport corridor and to allow unfettered coal transportation to Greater Poland, between 1925 and 1926 at a high-speed – more than a 100-mile single-lane trail Kalety (Kalety)-Herby Nowe-Wieluń Podzamcze near the Polish Kępno – was built. As a result the problematic German Kluczbork junction was bypassed, which facilitated transport of coal to Greater Poland and to Polish Pomerania. In order to gain foreign markets for the Polish Upper Silesian Industrial District, the construction of a famous Coal Main Line (Polish Upper Silesia-Ports in Gdynia and Gdańsk) started, connecting the 508 km stretch between Tarnowskie Góry with the newly built port of Gdynia and the existing port in Gdańsk. This risky investment was undertaken at the turn of the 1920s and 1930s by PKP (State Polish Railways) in cooperation with the French and Polish Railway Society. Thus, the Polish project on the scale of the German *Grenzlandbahn*, unlike the latter came to effect and its consequence was the construction of a huge marshalling yard at Tarnowskie Góry, of the estimated daily shunting capacity of 4,500 cars. What is also worth mentioning at this point is modernization of border stations in Cieszyn and Zebrzydowice (Seibersdorf, Žibřidovice) carried out in agreement with Czechoslovakia, and also the building of the iron route from Rybnik via Żory (Sohrau, Žáry/Žárov) to Pszczyna in 1934-1938, financed not by the PKP, but by the Treasury of Silesia[70]. At the turn of the 1920s and 1930 two impressive modernist rail stations in Będzin and Szarlej-Piekary were also built and the new rolling stock repair workshops were erected in Katowice Ligota[71].

It is difficult to list here all transport investments related to the economic unity of Silesia, but the fact is that in the Silesian Voivodeship a lot was done in this regard, indeed. Suffice it to say that out of the 745 km of standard gauge railways of the Silesian Voivodeship in 1938, over 200 km were already built after the division of the Upper Silesian Industrial District. At the same time, rail transport traffic

[70] *Ibidem*, p. 107-111; Eugenia Brzosko, *Rozwój transportu w Polsce w latach 1918-1939,* Szczecin 1982, p. 93, *passim*; Grzegorz Kotlarz, Henryk Dąbrowski, Edward Wieczorek, *Magistrala węglowa*, Rybnik 2008, pp. 155-157; Bogumił Hummel, *Odbudowa i utrzymanie kolei*, [in:] *Dwudziestolecie komunikacji w Polsce Odrodzonej,* Kraków 1939, p. 156; *Dziesięciolecie Polskich Kolei Państwowych 1918-1928,* Warszawa 1928, p. 16.

[71] See Ewa Perlińska, *W służbie Polskich Kolei Państwowych. Dworce w Szarleju-Piekarach i Będzinie*, [in:] *Oblicza sztuki 20-lecia międzywojennego na obszarze obecnego województwa śląskiego*, ed. Teresa Dudek Bujarek, Katowice 2011, pp. 63-71.

of the voivodeship was approximately 42% of the whole of Poland, and in tonnage it was 50% of the whole country! Polish Silesia also had the best and most modern network of roads for motor vehicles in Poland, which consisted of 2,348 km (1938), out of which 251 km of motorways, mostly asphalt ones, had been built, and 1,299 km had been modernized since 1922. What is more, 76 km of tram networks were operating, and on the Silesian roads there were 27 bus lines. It took an hour to fly from Katowice airport to Warsaw, and from the airport in German Gliwice it was possible to connect with the network of airports in the Reich[72].

In conclusion, I shall mention one more important factor uniting the economically disintegrated interwar Silesia, although not of material importance, namely different types of economic and vocational institutions operating in Silesia. First of all, we should mention chambers of commerce and industry operating throughout all of German and Polish Silesia since the 19th century (in the Polish part there was only one Chamber of Industry and Commerce in Katowice). Covering vast and heavily industrialized regions of Silesia, concentrated on trade and rich in craftsmanship, economic government institutions were in a privileged position because they did not have to follow standardized administrative procedures, thus they could reach the government directly with their memorials, petitions and various requests of economic and commercial nature. Chambers, therefore, submitted memorials and engaged primarily in improving not only rail transportation but also bus communication carried out by private carriers and by a state-owned postal carrier. They suggested changes to the train timetables, supported the construction of certain rail connections, and also pushed the government authorities and railway managements to grant special freight rates to the Silesian industry. What is more, they gave opinions on social, customs and tax legislation and fought for the creation of economic ties with neighbouring regions. In a word, they engaged in all types of actions of an economic and commercial nature, which aimed to support the economy of the region[73]. It may also be reminded that the chambers of German Silesia played a big part in preparing in 1938 the famous memorial 'Die Not der preussischen Ostprovinzen' (The Poverty of Prussian Eastern Provinces), the consequence of which was, among others, the aforementioned *Osthilfegesetz*[74]. What is more, in order to

[72] Z. Miłobędzki, *op. cit.*, pp. 53-55.

[73] For more on the activities of commercial and industrial chambers in Silesia see *Die Industrie- und Handelskammer zu Schweidnitz und Landeshut i. Schles. 1849-1924*, Schweidnitz [1924]; E. von Gronow, *op. cit.*; Z. Miłobędzki, *op. cit.*, p. 79; *75 Jahre Industrie- und Handelskammer Liegnitz 1851-1926*, Liegnitz [1926]; W. Stöphasius, *op. cit.*

[74] For more information on the memorial and its creation, see Andrzej Brożek, *Udział niemieckich czynników oficjalnych na Śląsku w przygotowaniu memoriału Die Not der preussischen Ostprovinzen*, 'Studia Śląskie. Seria Nowa', 15 (1969), pp. 11-31.

facilitate economic cooperation between German and Polish Silesia, in the interwar period in Wrocław a Polish-German Chamber of Commerce[75] operated.

Separate chambers represented agriculture and sometimes crafts, as exemplified by *Śląska Izba Rolnicza* (Silesian Chamber of Agriculture) in Katowice, *Izba Rzemieślnicza* (Chamber of Crafts) in Katowice or *Handwerkskammer* (Chamber of Crafts) in Wrocław. Those institutions were engaged, e.g., in production and education related to agriculture or crafts[76]. What is more, there were also different types of associations, societies or trade unions, to mention only the aforesaid German Upper Silesia Association of Mining and Metallurgy in Gliwice with its Polish counterpart – *Unia Polskiego Przemysłu Górniczo-Hutniczego* (Polish Union of Mining and Metallurgical Industry) in Katowice, both dealing mainly with the issues of economic, communication and social policy, and also, e.g., *Polski Związek Towarzystw Kupieckich w Katowicach* (Polish Union of Trade Associations in Katowice, in 1938 it had 1,800 members) or German: *Bund Schlesischer Industrieller* (Silesian Union of Industrialists) and the Silesian branch of *Schlesischer Zweigverein der deutsche Zuckerindustrie-SZDZ* (German Sugar Industry Association)[77]. While mentioning these institutions it should, however, be noted that while acting as a unifying factor for the Silesian economy they performed this role, in fact, in a specific economic matter, except maybe for the chambers for industry and commerce, and, above all, their territorial scope was limited. In general, therefore, they minded the interests of a well-defined branch of industry or trade and industry within the activities of the relevant chambers of industry and commerce. Rare ventures included such projects as the *Adolf Hitler-Kanal*, *Grenzlandbahn* or the Main line Upper Silesia-Porty Gdynia-Gdańsk, which stimulated the activity of all self-government bodies, industry associations and unions or trade unions.

From this brief outline it is evident that finding integrating or disintegrating factors for the interwar Silesian economy is extremely difficult. It should also be clear that political divisions proved to be so strong that all of those factors autonomously occurred on the three sides of the border, essentially aiming at economic self-sufficiency of individual parts of Silesia in the new political reality. Therefore, they did not integrate the whole of the former Silesia; on the contrary, they led to disintegration and the final cutting of historical economic and financial ties.

[75] K. Jeżowski, *op. cit.*, p. 173.

[76] See *Festschrift der Handwerkskammer zu Breslau aus Anlass ihres 25 jährigen Bestehens*, Breslau 1925; Z. Miłobędzki, *op. cit.*, p. 79.

[77] T. Laskiewicz, F. Rymowicz, *op. cit.*, pp. 11-12; Wioletta Maksylewicz-Przybylska, *Elity gospodarcze śląskiego cukrownictwa (1802-1945)*, Słubice 2011, p. 229; Z. Miłobędzki, *op. cit.*, pp. 74-75; K. Rasch, *op. cit.*, p. 49; Otto Reier, *Der organisatorische Gedanke in der zwanzigjährigen Arbeit des Bundes Schlesischer Industriellen*, Liegnitz 1929.

Another fact is that in the case of some areas, such as energy and transport, the total autarky of Czechoslovakian, German and Polish Silesia proved impossible, but it is obvious at a glance that cooperation in this field between the pieces of the region divided by the borders was carried out to a limited, if not forced, extent. What is more, it is also clear that many integrating factors were of a defined territorial scope, not covering even the whole Silesia in the given country, a perfect example of which is the German Silesia. There were also such elements as the railway system, which apparently were an obvious unifying element, but on the other hand, through facilitating the transport of goods they contributed to the growth of competition in the area, and thus they had a negative impact on the economy of the region. Clearly, however, most contradictions of this kind occurred in Silesia, where the fundamental internal disintegrating factors included the coexistence of two highly industrialized districts, and also probably the conflict of interest arising from different economic nature of the provinces of Lower Silesia and Upper Silesia. However, from the point of view of the entire Silesia external disintegrating factors proved to be crucial, namely the border divisions and the creation of new states, mainly Poland and the Czechoslovak Republic.