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## ECONOMIC POLICY AND THE MOVEMENT OF FACTORIES IN THE GERMAN SPHERE OF INFLUENCE DURING WORLD WAR II (1943/44) – THE ROLE OF LOWER SILESIA AND THE EASTERN GERMAN TERRITORIES

The relocation of factories important to the armaments industry during the so-called Speer era (1943/44) is a little explored episode of German economic history.<sup>1</sup> During World War II, many factories were transferred to regions where they were supposedly safe from American and British air raids. The scale and economic effects of the new factories on the regions of relocation have hardly been analyzed, although various publications address this industrial relocation.<sup>2</sup> Many questions remain unanswered. One of them concerns the motives that influenced decisions related to the new locations for certain factories, another addresses economic impact on the new location.

The eastern territories of Germany were one of the regions of factory relocation — exactly those regions that became part of the People's Republic of Poland following the so-called Potsdam Agreement. And yet, Polish historiography virtually ignores the industrial relocation, with one noteworthy exception. The Polish historian Alfred Konieczny dedicated a short chapter of his monograph “Śląsk a wojna powietrzna lat 1940-1944” (“Silesia and Aerial Warfare 1940-1944”) to this subject.<sup>3</sup> German publica-

1 Albert Speer (born March 19<sup>th</sup> 1905, deceased September 1<sup>st</sup> 1981) was a member of the NSDAP and held many offices until the end of the war. In 1941 he represented the Berlin-West district in the German Reichstag. In February 1942 he succeeded Fritz Todt as Minister for Armaments and War Production. Speer was a member of Hitler's inner circle. He was responsible for the increase in armaments production in 1944; R.S. Wistrich, *Who's who in Nazi German*, London 1995, p. 237-239.

2 David Gilgen and Bruno Gleitze mention relocation, as well as Rolf-Dieter Müller and Olaf Groehler: see W. Werner, *Luftangriffe auf die deutsche Industrie 1942-45* [Air Raids on German Industry 1942-45], Munich 1985, p. 125 nn.; D. Gilgen, *DDR und BRD im Vergleich. Ausgangslage und Wachstumsbedingungen nach dem Zweiten Weltkrieg* [GDR and BRD in Comparison. Background and Conditions for Growth after World War II], [in:] *Vom Sozialismus zur Marktwirtschaft. Wandlungsprozesse, Erlebnisse und Perspektiven* [From Socialism to a Market Economy. Transformation Processes, Experience and Perspectives], ed. K. von Delhaes, W. Quaisser, Munich 2009, p. 117-135; O. Groehler, *Bombenkrieg gegen Deutschland* [Bomb Raids in Germany], Berlin 1990, p. 285 nn.; R.D. Müller, *Albert Speer und die Rüstungspolitik im Totalen Krieg* [Albert Speer and Armament Policy during the Total War], [in:] *Das Deutsche Reich und der Zweite Weltkrieg 5/2. Organisation und Mobilisierung des deutschen Machtbereichs* [The German Reich and World War II 5/2. Organisation and Mobilization of the German Sphere of Influence], ed. B.R. Kroener, Munich 1999, p. 356-365.

3 A. Konieczny, *Śląsk a wojna powietrzna lat 1940-1944* [Silesia and Aerial Warfare 1940-1944], Wrocław 1998, p. 48-55.

tions that shed some light on this topic are also very limited. Andreas Ruppert published a regional study of the German district “Lippe”.<sup>4</sup> Though limited to a specific region, the analysis helps clarify the motives that influenced factory relocation. Numerous publications cover Saxony, another region of factory relocation.<sup>5</sup> Olaf Groehler also offers a chapter that deals with the factory movements.<sup>6</sup>

This list already covers the most important publications on factory relocation during World War II. There are only a few, and they seldom refer to each other. That is surprising, considering that careful analysis might help to realistically estimate the economic potential of the later “Recovered Territories” of Poland.

One reason for the lack of proper research on this subject may be the fact that the sources are spread amongst several archives. The Federal Archive in Berlin-Lichterfelde houses maps depicting the most important transferred factories, arranged according to branch of industry.<sup>7</sup> Unfortunately, the maps do not come with documents with quantitative data or further information regarding the factories. The war journals provide more information on the German regions such as Lower Silesia (“Armaments district/Reichsrüstungsinspektion VIII a”). The journals were produced quarterly and include data pertaining to the number and size of the relocated factories.<sup>8</sup> At least for Lower Silesia, information on relocations ends in September 1944. The analysis by the Lower Silesian Institute for Economic Research (“Niederschlesisches Institut für Wirtschaftsforschung”) in Wrocław offers a list of all factories moved to Lower Silesia up to October 1<sup>st</sup> 1943.<sup>9</sup>

Another important document was produced in December 1944 as part of the “Studies of Aerial Warfare” for the chief of the general staff. The study is entitled “Consequences of Economic Structure based on Previous Aerial Warfare Experience”.<sup>10</sup>

4 A. Ruppert, H. Riechert, *Herrschaft und Akzeptanz. Der Nationalsozialismus in Lippe während der Kriegsjahre. Analyse und Dokumentation* [Reign and Acceptance. National Socialism in Lippe during the War. Analysis and Documentation], Opladen 1998, p. 106-114; see also H. Riechert, A. Ruppert, H.F.W. Gringmuth, *Militär und Rüstung in der Region Lippe 1914 bis 1945* [Military and Armament in Lippe 1914-1945], Bielefeld 2001, p. 203-225.

5 See also U. Heß, *Sachsens Industrie in der Zeit des Nationalsozialismus: Ausgangspunkte, struktureller Wandel, Bilanz* [The Saxony's Industry during National Socialism: Background, Structural Change, Consequences], [in:] *Wirtschaft und Gesellschaft in Sachsen im 20. Jahrhundert* [Economy and Society in Saxony during the 20<sup>th</sup> century], ed. W. Bramke, Leipzig 1998, p. 78 nn.

6 O. Groehler, *op. cit.*, p. 284-293.

7 Cf. BA R 3/4112.

8 Cf. BA-MA RW 20-8/23-29.

9 BA Ost-Dok. 10/682, p. 119 nn.

10 BA-MA RL 2-IV/155; „Folgerungen für die Struktur des Wirtschaftslebens aus den bisherigen Luftkriegserfahrungen” [Consequences of Economic Structure based on Previous Aerial Warfare Experience].

## The practice of relocation

With few exceptions of relocations that took place in 1939<sup>11</sup>, transfer began at the end of 1942. At first, they were limited to factories that produce irreplaceable or intermediate goods. By then, only 26 factories applied for relocation to a safer region.<sup>12</sup> From the beginning of relocation, one problem was remained constant: a lack of sufficiently qualified personnel.<sup>13</sup> The firm “Hagenuk” in Reichenbach (today: Dzierżonów) for instance demanded 1000 skilled workers, 150 from Cologne. Hence, company management sought contact with local employment offices, the local SS-representative for the “employment” of Jews, the so-called “Schmelt-organisation”.<sup>14</sup> In a few cases, they even built satellite concentration camps that served as a workers-reservoir. Several factories made use of them.<sup>15</sup> In the case of Lower Silesia, the satellite concentration camp in Gross-Rosen (today: Rogoźnica) served that purpose.<sup>16</sup>

On January 26<sup>th</sup> 1943 the armaments-district VIII informed the Wehrmacht defense office of about 200 suitable and empty facilities that were at their disposal. Twenty still had to be emptied.<sup>17</sup> In theory, companies that wished to relocate were required to submit an application once they had found a factory willing to take them in. Yet, this was only true for small and medium-sized businesses, while large firms were provided official support. One telling example is *Gauleiter* of Lower Silesia Karl Hanke’s visit on April 14<sup>th</sup> 1943 in Landeshut (today: Kamienna Góra). He inspected a textile factory for its suitability to house the firm “Kugelfischer” from Schweinfurt.<sup>18</sup>

Between July and September 1943, factory relocations increased significantly. In autumn 1942, factories were only moved when they were indispensable for the continuation of production.<sup>19</sup> About a year later, Albert Speer ordered Hanke to make available 500,000 m<sup>2</sup> of operational surface space within the Lower Silesian textile industry.<sup>20</sup> During the following months, the factory relocations were still linked to the closure

11 According to the Lower Silesian Institute for Economic Research, the movements were a consequence of the fact that Lower Silesia was in the center of the German Reich after the occupation of Poland; cf. BA Ost-Dok. 10/682, p. 115.

12 A. Konieczny, *op. cit.*, p. 49.

13 *Ibidem*, p. 49.

14 *Ibidem*, p. 43; the “Organisation Schmelt”—named after Albrecht Schmelt—was responsible for recruiting Jewish workers in Silesia; cf. R. Hilberg, *Die Vernichtung der europäischen Juden. Die Gesamtgeschichte des Holocaust* [The Annihilation of the Jews in Europe. The Complete History of the Holocaust], Berlin 1982, p. 367.

15 O. Groehler, *op. cit.*, p. 290.

16 A. Konieczny, *op. cit.*, p. 24; for further information see B. Cybulski, *Obozy podporządkowane KL Gross-Rosen (stan badań)* [The Satellite Concentration Camp Gross-Rosen (State of Research)], Rogoźnica 1987.

17 A. Konieczny, *op. cit.*, p. 49.

18 *Ibidem*, p. 50.

19 R.D. Müller, *Albert Speer and...*, p. 356.

20 A. Konieczny, *op. cit.* p. 50.

of unimportant companies. The following table shows the development of factory relocation in 1943 and 1944<sup>21</sup>:

NUMBER AND OVERALL SURFACE SPACE OF TRANSFERRED FACTORIES

	Number of relocated fabrics	Overall operational surface space (in 1000)
1 <sup>st</sup> quarter 1943	31	
2 <sup>nd</sup> quarter 1943	24	410,0 m <sup>2</sup>
3 <sup>rd</sup> quarter 1943	122	426,6 m <sup>2</sup>
4 <sup>th</sup> quarter 1943	26	88,5 m <sup>2</sup>
1 <sup>st</sup> quarter 1944	57	72,9 m <sup>2</sup>
2 <sup>nd</sup> quarter 1944	63	91,5 m <sup>2</sup>
3 <sup>rd</sup> quarter 1944	50	80,4 m <sup>2</sup>
Total:	373	1169,9 m <sup>2</sup>

The table shows that the number of transfers varied over the two years. During the first half of 1943, only 55 factories were relocated; their number grew almost threefold by the end of the year. In 1944, the number of transfers remained fairly constant. A significant increase occurred after an order from Hitler (“*Führererlass*”) from June 28<sup>th</sup> 1943. He ordered Speer, the Minister of Armaments and War Production, to relocate essential armament factories in danger of being destroyed in an air raid as quickly as possible. If necessary, Speer was authorized to confiscate or close companies.<sup>22</sup> In November 1943, so many applications for transfer were submitted that the Speer ministry was not able to process them.<sup>23</sup>

According to the war journals, about 1.13 million m<sup>2</sup> of operational surface space had been reserved for the relocated factories in Lower Silesia. Other studies confirm these findings, estimating the amount of space required by September 1<sup>st</sup> 1944 at about 1.117 million m<sup>2</sup>.<sup>24</sup> Originally, their surface space amounted to about 1.3 million m<sup>2</sup>.<sup>25</sup> Yet the number of factories that were relocated to Lower Silesia is still unclear. While the war journals listed 373 factories that were transferred to Lower Silesia, the above-mentioned study counted only 170.<sup>26</sup> This contradiction cannot be entirely resolved. It is possible that the study only takes into account those factories that cover at least 500 m<sup>2</sup>.<sup>27</sup> Companies in the electrical industry, for instance, were often significantly smaller.<sup>28</sup>

21 Source: *ibidem*, p. 52; BA-MA RW 20-8/23-29.

22 Cf. BA R 3101, p. 122.

23 O. Groehler, *op. cit.*, p. 286.

24 Cf. BA-MA RW 20-8/28, p. 83; BA-MA RL 2-IV/155, Supplements.

25 BA-MA RL 2-IV/155, Supplements.

26 BA-MA RL 2-IV/155, Supplements.

27 BA-MA RL 2-IV/155, Preface, p. 2.

28 For this industry branch, the appropriate sources are available; cf. BA R 3/250-264.

Documentation in the war journals ended in September 1944. Little is known about whether further relocations took place. Several documents imply that they were supposed to continue beyond 1944. In a letter dated October 18<sup>th</sup> 1944, the Reich Minister for Economic Affairs Walther Funk reminds the general mining office (“Oberbergbauamt”) in Wrocław, that Speer ordered the mining company “Waldenburgische Bergbau AG” to reserve 3,000 m<sup>2</sup> of operational surface space for a front repair workshop.<sup>29</sup> Further sources also indicate that relocation did not end in September 1944. As part of the so-called Brandt-plan, pharmaceutical factories were supposed to be transferred by the end of the year.<sup>30</sup> Kolb, the chief representative for special matters on chemical production, sent a letter dated September 14<sup>th</sup> 1944 to Hans Kehrl, chief of the planning office of the “Four Year Plan” and of the raw material office in the Ministry for Economic Affairs.<sup>31</sup> He also sent a list of factories that were still to be relocated, most of them pharmaceutical factories.<sup>32</sup> The list was created in August 1944, yet it also included factories that were to be relocated later. It is highly unlikely that these plans were ever realized. A remarkable example is the relocation of the chemical conglomerate “IG Farben” in Leverkusen that was to be transferred to Prochowice (Lower Silesia). It was scheduled to take place between July and December 1945; it is thus safe to assume that it never happened. It is even unclear whether IG Farben’s Atebrine production had really been transferred from Leverkusen to Prochowice as planned in December 1944.

The information given by the “Studies of Aerial Warfare” is also limited.<sup>33</sup> It includes a list of all transfers completed by September 1<sup>st</sup> 1944 and anticipates relocations by the end of 1944. Based on this analysis, factories of 2.2 million m<sup>2</sup> still had to be relocated. The reserved operational surface space would have grown from 13 to 15.3 million m<sup>2</sup>.<sup>34</sup> Yet it is highly doubtful that these transfers ever took place. After the end of the war, members of the political elite of the former eastern German territories were interviewed upon their arrival in western Germany.<sup>35</sup> Some of the questions aimed at collecting information on relocated factories, including their exact location and names. This indicates that they literally lost track of the transferred factories. Not even the ministries of the Federal Republic of Germany had a complete list.

On January 25<sup>th</sup> 1945, Speer ordered a complete stop of factory transfers. Relocations that had not begun yet were cancelled.<sup>36</sup> Although that was the official end of relocation, there are indications that Lower Silesia had already run out of suitable space in

29 Cf. BA R 3101/31184.

30 Prof. Brandt was commissioner general of the German public health department.

31 BA R 3/1955, p. 352 nn.

32 BA R 3/1955, p. 358.

33 BA-MA RL 2-IV/155.

34 BA-MA RL 2-IV/155; Share of the offices of the Ministry for Armament and War Production of the above ground relocations.

35 Cf. BA Ost-Dok. 8/721-735.

36 A. Ruppert, *op. cit.*, p. 98; O. Groehler, *op. cit.*, p. 286.

the middle of 1944.<sup>37</sup> According to Groehler, the commissioners responsible for the defense of the Reich considered their regions “totally overfilled” and fought every further factory transfer.<sup>38</sup> One reason for the limited capacity was that the overall success of the factory closures was rather moderate. For instance, about 13 percent of the 22,000 Lower Silesian retailers, excluding department stores, had been closed, yet that was still insufficient.<sup>39</sup> The Lower Silesian Institute for Economic Research considered the potential gains of further closures to be small.<sup>40</sup>

The “Studies of Aerial Warfare” confirm that impression and encourage understanding the transfers to Lower Silesia within a broader context. According to its author, transfer capacities are reduced to one fourth of their original size.<sup>41</sup> The study lists the operational surface space occupied in their original locations as well as in their new ones. On September 1<sup>st</sup> 1944, relocated factories used approximately 13 million m<sup>2</sup>, whereas they occupied more than 16 million m<sup>2</sup> at their original sites. The tables show how they are divided amongst the armament districts:

SHARE OF THE ARMAMENT DISTRICTS OF THE ABOVE GROUND RELOCATIONS  
(COMPLETE SURFACE AREA)

	Armament district	Surface in m <sup>2</sup>	Share in %
XVII	Vienna	1,885,761	11.21
IVa	Dresden	1,865,838	11.09
	Upper Rhine	1,777,058	10.57
VIIIa	Wrocław	1,324,947	7.87
III	Berlin	1,321,865	7.87
	Prague	1,086,228	6.46
IX	Kassel	1,013,290	5.39
XIII	Nuremberg	906,279	5.39
XIIa	Wiesbaden	844,300	5.02
IVb	Liberec	822,912	4.89
XIb	Magdeburg	627,999	3.73
VII	Munich	561,495	3.33
V	Stuttgart	550,496	3.27
II	Szczecin	504,785	3.00
X	Hamburg	443,765	2.63
XXI	Poznań	319,083	1.89
XI	Münster	300,069	1.78
VIIIb	Katowice	252,649	1.50

37 A. Konieczny, *op. cit.*, p. 53.

38 O. Groehler, *op. cit.*, p. 286.

39 BA Ost-Dok. 10/682, p. 199.

40 BA Ost-Dok. 10/682, p. 207.

41 BA-MA RL 2-IV/155, p. 11.

XIa	Hanover	176,552	1.05
XVIII	Salzburg	164,059	0.97
XX	Sopot	55,244	0.33
I	Königsberg	21,605	0.13

SHARE OF THE ARMAMENT DISTRICTS OF THE ABOVE GROUND RELOCATIONS  
(PRODUCTION SURFACE AREA)

	Armament district	Surface in m <sup>2</sup>	Share in %
IVa	Dresden	1,409,935	13.30
	Upper-Rhine	1,317,880	12.45
XVII	Vienna	854,598	8.07
III	Berlin	827,550	7.81
	Prague	737,635	6.96
VIIIa	Wrocław	717,393	6.77
XIII	Nuremberg	597,429	5.64
IX	Kassel	549,162	5.28
XIIa	Wiesbaden	534,300	5.04
XIb	Magdeburg	469,915	4.44
IVb	Liberec	450,910	4.27
V	Stuttgart	431,742	3.96
VII	Munich	336,930	3.18
II	Szczecin	289,570	2.74
XI	Münster	235,530	2.22
X	Hamburg	217,583	2.06
XXI	Poznań	203,914	1.92
VIIIb	Katowice	161,819	1.55
XIa	Hanover	106,059	1.01
XVIII	Salzburg	99,246	0.94
XX	Sopot	31,443	0.29
I	Königsberg	14,400	0.14

### Motives, scale and effects of relocation

What were the reasons and driving force behind relocating the factories? At first, they seem clear: escape from aerial warfare. This explanation, however, is insufficient. Before the aerial warfare began, there were plans to restructure the industry of the German Reich. Various motives for transfer were discussed and were of great significance.

#### “Air-raid shelter”

The main purpose of relocating armament factories was to avoid air raids. The eastern German territories, and especially Lower Silesia, were considered an “air raid shelter”,

as these regions were furthest away from any allied military airfield.<sup>42</sup> Therefore, it played an important role in the decision-making process. The significant increase of the number of workers over the two years from 240,000 to 340,000 proves that assertion.<sup>43</sup> The Krupp Company in Essen, for example, explicitly moved and built factories in Lower Silesia near Wrocław in order to avoid air raids.<sup>44</sup>

The focus on the former eastern German territories clouds the fact that it was not these territories that profited most from relocation. The armament districts Katowice, Szczecin, Poznań, Sopot and Königsberg received “only” 14.72 percent of all relocations. This figure is reduced to 13.41 percent when operational surface space is considered. The transfers to Austria (armament district Vienna and Salzburg) amounted to 12.18 percent and 9.01 percent respectively, to today’s Czech Republic (armament districts Prague and Liberec) 11.35 percent and 11.23 percent respectively, to the former GDR (armament districts Dresden and Berlin) 18.96 and 21.11 percent respectively.<sup>45</sup> Thus the eastern German territories were only one “place of refuge” among others. For the Federal Republic of Germany, the loss was considerable: 57.84 percent and 54.76 percent respectively were located beyond the Iron Curtain and in Austria and thus not available.

Preventive action was fairly rare when it came to factory transfers. In most cases the factories were relocated after they were attacked during an air raid. In the case of the Krupp Company, only the Widia production facility was relocated to Langenbielau (Lower Silesia) as a precaution in November 1942.<sup>46</sup> Hans Rudolph confirmed in a letter dated February 14<sup>th</sup> 1948, that to his knowledge, “preventive relocation” seldom took place as far as Krupp was concerned.<sup>47</sup> Groehler also emphasizes that the industrials and armament managers mostly had a change of heart once their factories were attacked.<sup>48</sup> Therefore, Lower Silesia seemed like a perfect place of refuge, not only for the population<sup>49</sup>, but also for the armament industry.<sup>50</sup>

42 BA Ost-Dok. 10/682, p. 115; that was also true for the other eastern German territories.

43 Cf. BA R/11, p. 67 nn.

44 W. Abelshauser, *Rüstungsschmiede der Nation? Der Kruppkonzern im Dritten Reich und in der Nachkriegszeit 1933 bis 1951* [National Armament Factory? The Krupp Company in the Third Reich and the Postwar Period], [in:] *Krupp im 20. Jahrhundert. Die Geschichte des Unternehmens vom Ersten Weltkrieg bis zur Gründung der Stiftung* [Krupp in the 20<sup>th</sup> Century. The History of the Company from World War I until the Establishment of the Foundation], ed. L. Gall, Berlin 2002, p. 376.

45 It must be considered, that the Berlin armament district III covered 40 percent of an area that was later administrated by Poland.

46 W. Abelshauser, *op. cit.*, p. 438.

47 Letter from Hans Rudolph to Klaus Henning, 14<sup>th</sup> February 1948; property of the chair in social and economic history, University of Bielefeld.

48 O. Groehler, *op. cit.*, p. 285.

49 Cf. illustration R.D. Müller, *Albert Speer and...*, p. 362.

50 Other industries were transferred into regions that were considered safe. In numerous cases, they were relocated in caves or bunkers; cf. L. Budraß, *Flugzeugindustrie und Luftrüstung in Deutschland 1918-1945* [Aviation industry and air armament in Germany 1918-1945], Düsseldorf 1998, p. 857.



The situation changed when Upper Silesia came under attack on May 12<sup>th</sup> 1944. Among the targets were the hydrogenation plants and synthesis facilities in Blechhammer, Przywor and Kandzrin. In June 1944, the Allies occupied the military airfields north of Rome. It was then that Silesia was no longer out of reach. The 15<sup>th</sup> American fleet proved by their attacks, that even the “air raid shelter” was not safe.<sup>51</sup> The industry, however, was still intact.<sup>52</sup>

### “Loosening” of industry structure

Another recurring motive points to the industrial structure. There were plans in which German industrial structure was to be altered, once the war had been won. That was far from ridiculous. The agrarian structure of the economy in the eastern German territories had been subject of many discussions.<sup>53</sup> They were, therefore, to play a key role in restructuring the economy of the entire Reich. Part of this plan was to “loosen” the dense industrial structure of some areas of the German Reich and simultaneously stimulate and support the industry of the eastern territories.<sup>54</sup> The Lower Silesian industry was likely to take a leading role. In a memorandum from 1937, Dr. Saath writes that the Lower Silesian industry was by and large decentralized, with the exception of few regions where industry held a major presence. He argued that from a military point of view decentralization had disadvantages, but the advantage was that targeting them in wartime was much harder for an enemy than vast industrial plants.<sup>55</sup> During the second half of the 1930s, armament policy aimed at developing other highly industrialized regions than Upper Silesia, the Ruhr or Saxony.<sup>56</sup>

By placing factories more strategically, armament managers wanted to reduce the risk of damage to the factories. Groehler emphasizes that already after 1933, there were plans to reshape the armament industry in order to minimize the risk of being hit during an air raid. However, this plan failed. On the contrary, new armament factories often were built in close proximity to already existing ones. In the end, the risk of

51 K. Fuchs, *Vom deutschen Krieg zur deutschen Katastrophe (1866-1945)* [From the German war to the German catastrophe], [in:] *Silesia*, ed. N. Conrads, Berlin 1994, p. 678 nn.

52 *Ibidem*, p. 681.

53 BA Ost-Dok. 10/682, p. 102.

54 R.D. Müller, *Hitlers Ostkrieg und die deutsche Siedlungspolitik. Die Zusammenarbeit von Wehrmacht, Wirtschaft und SS* [Hitler's Eastern War and the German Settlement Policy. Cooperation between the Wehrmacht, the Economy and the SS], Frankfurt am Main 1991, p. 356. In one case, Me262 production facilities were relocated to a Bavarian forest; cf. C. Gödecke, *Hitlers geheime Flugzeugfabriken. Düsenjäger im Dickicht* [Hitler's Secret Aircraft Plants. Jet Fighter in the Thicket], online available under [einestages.spiegel.de/static/topicalbumbackground/18081/hightech\\_im\\_wald.html](http://einestages.spiegel.de/static/topicalbumbackground/18081/hightech_im_wald.html) [last visited: 30.11.2010].

55 „Memorandum on the province Lower Silesia with special consideration of its military significance”, ca. 1937, BA MA, RW 20-8/36, p. 24.

56 R. Wagenführ, *Die deutsche Industrie im Kriege 1939-1945* [German Industry during the War], Berlin 1963, p. 16, 19.

destruction was higher than it was before.<sup>57</sup> Meanwhile, Silesia profited from the fact that it was more than 1200 km away from the nearest allied military airfield, while the regions to the west of the Oder-Neisse line were at least 200 km closer.<sup>58</sup> The British bomber command assembled a list of German cities, potential targets. With Wrocław and Görlitz, only two of them were in Lower Silesia. Even after the Allies landed in Italy, the distance between the Southern Italian Foggia and Silesia still amounted to between 1000 and 1100 km.<sup>59</sup> At the beginning of 1944, the American air force was under growing pressure to act more efficiently and with fewer losses.<sup>60</sup> That is why the prospect of having to cross more than 1000 km was a deterrent.

Speer's directive from June 1<sup>st</sup> 1943 proves the assertion that factories were mainly relocated after an air raid. He emphasized that relocating damaged armament factories was a priority, since they are often a consequence of their close proximity to each other. He therefore strongly recommended "loosening" the structure of the armament industry and transferring them to regions less vulnerable to air raids.<sup>61</sup>

The goal of "scattering" the factories also helps explain why even regions like Lippe, that were remote from industrial and armament centers, became a regional center for aircraft construction.<sup>62</sup> Lippe was characterized by craft, the woodworking and the furniture industry, and was still considered suitable to host relocated factories. The eastern German territories had similar characteristics, which suggests that they were not just an emergency solution.

Decentralizing German armament production did not only bring advantages. They also caused a labor shortage as well as a growing influx of evacuated people, which put a strain on the electricity supply.<sup>63</sup> The population of Silesia also grew after numerous offices that relocated to the east of Berlin were attacked at the beginning of 1943. For example, the population of Wrocław grew from 626,000 to over a million until the end of the war.<sup>64</sup>

57 O. Groehler, *op. cit.*, p. 284.

58 Cf. W. Wolf, *Air raids*, p. 22 nn.

59 Cf. *ibidem*, p. 22 nn.

60 O. Groehler, *op. cit.*, p. 210.

61 „Die Verlagerung bombenbeschädigter Betriebe ist besonders dringlich. Die schweren Luftangriffe und Fertigungsausfälle sind vornehmlich darauf zurückzuführen, dass ein großer Teil der Rüstungsindustrie in Großstädten massiert ist. Die Rüstungsindustrie muss daher weitgehend aufgelockert werden und in die weniger luftgefährdeten Gebiete verlagert werden.“; ZStA Potsdam, Reichsminister für Rüstung und Kriegsproduktion [Reich Minister for Armament and War Production], no. 77, p. 33, quoted in: O. Groehler, *op. cit.*, p. 285.

62 A. Ruppert, *op. cit.*, p. 99.

63 *Ibidem*, p. 114; the population growth and attacks against energy producers in Lippe in the second half of 1944, that the „Wesertalzentrale“, a local energy provider, was forced to shut down every factory that was not essential to armament production January 31<sup>st</sup> 1945, cf. *ibidem*, p. 115-116.

64 J. Kaps, *Die Tragödie Schlesiens 1945/46 in Dokumenten* [The Silesian Tragedy 1945/46 in Documents], Munich 1962, p. 11.

## Establishment of industrial clusters?

Abelshausen formulated the thesis that there was hope that relocating companies could be realized in a way that could exert synergetic effects, i.e. to increase productivity and efficiency in the armament industry.<sup>65</sup> This thesis is, in a way, continuation of the argument mentioned earlier in this paper, but there is a potential contradiction as well. Following this hypothesis, the underlying goal of relocation was not merely to avoid the air raids, which had the “positive side-effect” of loosening German industry, but to strategically restructure the industry. The term “cluster” may be anachronistic in this context. It comes from Michael Porter and denotes a group of factories and companies that cooperate in a complementary way in order to cut costs and improve information exchange.<sup>66</sup> The term “cluster” may have been unknown; the idea behind it certainly was not. Theoretically, the goal to shape such a cluster can undermine the attempt to reduce potential military targets since clusters form dense production facilities.

Yet, the assumption that such a cluster had been successfully established is highly unlikely. Most companies that requested relocation were required to find a factory willing to house them. Only then was it possible to submit an application to the Ministry for Armament and War production. The Speer ministry attached great importance to playing a key role in factory relocations.<sup>67</sup> It is safe to assume that finding appropriate buildings to house factories was top-priority and that questioning the effect on local industry was less important and seldom impacted the final decision. Large firms often had problems finding a new location, and the host firm was not always their first choice. The company “Patin” from Berlin, for instance, wanted to be transferred to the Pomeranian Żaganie. For unknown reasons, that was not possible, and in the end it was relocated to Ścinawka Średnia in Lower Silesia.<sup>68</sup> Against the background of this practice, it is doubtful that the establishment of industrial clusters would have been successful.

Speer’s above-mentioned directive from June 1<sup>st</sup> 1943 confirms this assumption:

“Relocating of damaged factories is of particularly important. The heavy air raids and production losses were mainly caused by the fact that many armament factories are located in proximity to large cities. The armament industry must therefore be loosened and relocated to areas that are less likely to be attacked by air raids. Arguments as to whether the economic structure of a region allows taking in new industries cannot be taken into consideration and must be rejected. All suitable facilities must be emptied

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65 W. Abelshausen, *op. cit.*, p. 440 nn.

66 M.E. Porter, *Locations, Clusters and Company Strategy*, [in:] *The Oxford Handbook of Economic Geography*, ed. G.L. Clark, M.S. Gertler, M.P. Feldman, New York 2000, p. 254 n.

67 Por. BA-MA RL 2-IV/155, Supplements.

68 A. Konieczny, *op. cit.*, p. 51.

and used.”<sup>69</sup> It is uncertain whether the directive defined a general relocation-strategy or a lesson gained from experience. In any case, the economic actors were interested in economically advantageous new locations. The quotation shows that avoiding air raids was considered top-priority.

An additional problem was that factory closures only met limited success. It can be assumed, that the choice of the host factory strongly depended on how much operational surface space was available. As already mentioned, most of the factories were moved after they were attacked. This contradicts the argument that establishing industrial clusters was a major goal.

In the end, the establishment of industrial clusters failed. Instead of profiting from synergetic effects, the relocated firms contended with longer delivery times.<sup>70</sup> That proves Müller’s thesis that air raids caused problems for the German armament economy and that they had an indirect effect on the Reich’s war production.<sup>71</sup>

### **Economic interests in hosting factories**

An additional motive that influenced relocation did not affect economic policy, but hosting factories. As already mentioned, companies that sought transfer had to find a suitable company that agreed to take in the factory or part of it.<sup>72</sup> These factories did not always consider the “guests” a burden. It is an interesting detail that many factories gladly accepted the relocated company, as they hoped that they would remain after the end of the war.<sup>73</sup> Heß emphasizes this using the example of Saxony: “Small and medium-sized businesses considered the new factories a gateway to a new branch and, therefore, as the only possibility of maintaining the enterprise.”<sup>74</sup> Equally, cities and important offices tried to win over relocating factories and welcomed the increased

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69 „Die Verlagerung bombenbeschädigter Betriebe ist besonders dringlich. Die schweren Luftangriffe und Fertigungsausfälle sind vornehmlich darauf zurückzuführen, dass ein großer Teil der Rüstungsindustrie in Großstädten massiert ist. Die Rüstungsindustrie muss daher weitgehends aufgelockert werden und in die weniger luftgefährdeten Gebiete verlagert werden. Überlegungen, ob die Wirtschaftsstruktur eines Gebietes die Aufnahme neuer Industrien zulässt, können jetzt nicht mehr ausschlaggebend sein und müssen zurücktreten. Alle geeigneten und frei zu machenden Gebäude und Räumlichkeiten müssen für diesen Zweck herangezogen werden”; ZStA Potsdam, Reichsminister für Rüstung und Kriegsproduktion [Reich Minister for Armament and War Production], no. 77, p. 33, quoted in: O. Groehler, *op. cit.*, p. 285.

70 *Ibidem*, p. 290.

71 Cf. R.D. Müller, *Albert Speer and...*, p. 356.

72 Cf. H. Riechert, *op. cit.*, p. 205.

73 S. Siebel-Achenbach, *Lower Silesia from Nazi Germany to communist Poland 1942-49*, New York 1994, p. 22.

74 U. Heß, *op. cit.*, p. 79.

production potential. Textile factories considered housing relocated companies a good possibility to exploit the potential of the factory.<sup>75</sup>

The host factory did, therefore, not necessarily have to belong to the same branch of industry. On the contrary, textile factories were particularly suitable to house sections of aircraft plants.<sup>76</sup> In Lower Silesia, there was also a traditional textile industry. The number of workers employed in the aviation industry grew from about 3,500 to almost 30,000, which proves Heß' hypothesis for Lower Silesia.<sup>77</sup>

In numerous cases, relocation also had negative effects on the host factory. As part of relocation, factories were closed for the benefit of guest factories. In some cases, the owner's absence was used to take over the factory, for instance when they were serving as soldiers or deceased.<sup>78</sup> The presence of the relocated factory was therefore often seen critically, especially then, when they prepared to stay permanently. Trade was particularly concerned about destroying historically built economic structures.<sup>79</sup>

## Results

A variety of motives influenced factory relocation, and they were highly individual. Although it was aerial warfare that finally put things in motion, plans to restructure German industry went back at least ten years earlier. These arguments must be considered when factory relocations are analyzed.

Another result is that the former eastern German territories were not the regions that profited most from relocation. The lack of empirical research caused exaggerations in the estimation of how many relocated factories were lost in the Polish "Recovered Territories". When from a West German point of view more than half of all relocated factories were lost, it was not Poland that absorbed them. Specific regional investigations might help find some of the factories and, more importantly, find out what happened to them after the war ended. This is a question that remains open for future historical research.

Taking stock of the predominant reasons for relocating factories, the result is clear: "At least two-thirds of all relocations served the purpose of protecting armament production."<sup>80</sup> At first, most companies were reluctant to be transferred, as they did not consider the matter urgent. Once they were attacked during an air raid, taking

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75 R. Peter, *Rüstungspolitik in Baden. Kriegswirtschaft und Arbeitseinsatz in einer Grenzregion im Zweiten Weltkrieg* [Armament Policy in Baden. War Economy and Employment of Labor in a Border Region during World War II], Munich 1995, p. 267.

76 U. Heß, *op. cit.* p. 79.

77 Cf. BA R/11, p. 67 nn.

78 A. Ruppert, *op. cit.*, p. 111.

79 *Ibidem.*

80 O. Groehler, *op. cit.*, p. 287.

shelter suddenly became top priority, so that considerations of which location was economically beneficial, how a more efficient industrial cluster might look like, or what interests the host factories could have, were seldom taken into account. Fleeing the air raids was essential.

Yaman Kouli

**ECONOMIC POLICY AND THE MOVEMENT OF FACTORIES IN THE GERMAN SPHERE OF INFLUENCE DURING WORLD WAR II (1943/44) – THE ROLE OF LOWER SILESIA AND THE EASTERN GERMAN TERRITORIES**

**S u m m a r y**

Relocation of industrial plants, which were significant for the production of armaments during the war, is a subject of economic history of Germany that received little research coverage so far. After the war claims would often arise that most of the plants were moved to the east of the Reich, mostly to the terrains of Lower Silesia, to protect them from the air raids. That interpretation is partially true, but it is also incomplete. Given the fact that there is a lack of studies which would cover this subject, the number of publications related to it is very small.

During WWII, in 1943 and 1944, many plants were moved to the different regions of the German Reich. Among them, 373 were moved to the terrains of Lower Silesia. Most of the enterprises were moved in 1943. The participation of this region in the dislocation of all the factories was about 7 percent. The whole of the so-called „Recovered territories” received about 14% of all the industrial plants that were being transferred. Many more plants were moved to other regions, e.g. 20% were moved to Saxony. This fact is a proof that the participation of the former terrains of the Reich in the dislocation of the armaments industry is significantly smaller than what was claimed by some historians. The companies were moved not only to the regions that later became part of Poland, but to the whole sphere of influence of the Third Reich.

There were many reasons for the dislocation. The most important was “escaping” the air war, but it was not the only one. Many plans for restructuring the industry and economic development of certain regions of the country also influenced the dislocation policy. Additionally, the interests of the companies themselves were of significant meaning, as they wanted to merge their plants into a more homogenous and effective economic structure.

This article presents a thesis that the air war was the main reason for the relocation of the industrial plants during the war. However, in order to understand the above-mentioned issue better, the steps, plans and interests of the economic decision-makers, based on the example of one of the relocated plants, should be taken into account.

Yaman Kouli

**POLITYKA GOSPODARCZA I ZMIANA LOKALIZACJI ZAKŁADÓW W NIEMIECKIEJ SFERZE WPŁYWÓW PODCZAS DRUGIEJ WOJNY ŚWIATOWEJ – ROLA DOLNEGO ŚLĄSKA I BYŁYCH WSCHODNICH TERENÓW RZESZY NIEMIECKIEJ**

**S t r e s z c z e n i e**

Przeniesienie zakładów przemysłowych, które były ważne dla produkcji zbrojeniowej podczas wojny, jest mało zbadanym tematem historii gospodarczej Niemiec. Po wojnie często twierdzono, że przesunięto większość zakładów na wschód Rzeszy, przede wszystkim na Dolny Śląsk, żeby uchronić się przed nalotami lotnictwa. Ta interpretacja jest częściowo poprawna, ale niekompletna. W związku z tym, że brakuje badań naukowych, które zajmują się tym tematem, liczba odnośnych publikacji jest bardzo mała.

Podczas wojny w 1943 i 1944 r. przesunięto liczne zakłady do różnych regionów niemieckiej Rzeszy, m.in. 373 na Dolny Śląsk. Większość przedsiębiorstw przeniesiono w 1943 r. Udział tego regionu w dyslokacji wszystkich zakładów wynosił około 7 proc. Całe tzw. Ziemie Odzyskane dostały około 14 proc. wszystkich przeniesionych zakładów przemysłowych. Do innych regionów dyslokowano znacznie więcej przedsiębiorstw, np. do Saksonii około 20 proc. Jest to dowodem na to, że udział byłych wschodnich terenów Rzeszy w ramach dyslokacji przemysłu zbrojeniowego jest znacznie mniejszy niż sądzili różni historycy. Przenoszono firmy nie tylko do regionów później polskich, ale do całej sfery wpływów Trzeciej Rzeszy.

Motywy dyslokacji były rozmaite. Najważniejszym była „ucieczka” od wojny powietrznej, ale nie jest to jedyny powód. Zarówno różne plany restrukturyzacji przemysłu, jak i rozwinięcie gospodarcze pewnych regionów kraju miały wpływ na politykę dyslokacyjną. Dodatkowo zasadnicze znaczenie miały interesy przedsiębiorstw, które próbowały scalać swoje przeniesione zakłady w bardziej jednolite i efektywne struktury gospodarcze.

W artykule postawiono tezę, że wojna powietrzna była głównym powodem przenoszenia zakładów przemysłowych podczas wojny. Jednak, aby lepiej zrozumieć wyżej wymienioną problematykę, należy uwzględnić kroki, plany i interesy decydentów gospodarczych na podstawie przykładowego przesuniętego zakładu przemysłowego.