Competing for Dollars and Technology: The United States and the Modernization of the French and German Steel Industries after World War II

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After 1945, Western Europe recovered remarkably fast from the economic consequences of the war and soon entered a period of sustained growth so unparalleled in its history that it was to be called an "economic miracle", (*Wirtschaftswunder*), in Germany and "the thirty glorious years" (*les trente glorieuses*), in France.

Historical research has identified two major sources for the pace of reconstruction and growth: the American aid available to the Western European countries, especially with the Marshall Plan of 1947, and the inherent dynamics in these countries. In the French case, historians could not question the importance of US funds. Discussions therefore focused on the question whether the Americans used their economic power to influence political decisions in France [20; 21; 12; 40] and whether they—regardless of appearances—did not give priority to German recovery [20; 21]. In the academic debate about German reconstruction, those who saw the Marshall Plan as key for the rapid post-war growth [11] were opposed to others for whom most of the success factors had been in place earlier [1; 19]. According to the British historian Alan Milward, the German economy actually worked as an engine for the whole of Western Europe by providing a market for production from the other countries [27; 28].

Analyzing the case of the French and German steel industries in detail, this paper proposes a supplementary explanation that so far has found only little attention: the fact that competition for funds and modern technology between the countries and among the producers speeded up recovery and modernization. Contrary to most of the previous research on European reconstruction, but following a recent example given by Volker Berghahn [10], more emphasis will

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[1]The research for this paper was completed within the framework of my doctorate dissertation (University of Munich, July 1993) [18]. This thesis focuses mainly on the relationship between steel producers and users in France, the discussion about the best form of market organization, and the decision making process between the different governmental and industrial interest groups. The paper puts more emphasis on the steel industries in a European context. I would like to thank Professor Patrick Fridenson for his helpful comments for both the thesis and the paper.

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be put on the industry and the businessmen themselves and less on the macroeconomic level or international politics.

The Need for Modernization and the Role of the United States

Even though steel production in France and Germany had virtually collapsed by 1945, facilities in both countries emerged relatively intact from the war. Restarting and rapidly increasing output had immediate priority, but modernization was also urgent.[2] Western European industry as a whole lacked the capacity and technology to produce flat-rolled steel. Continuous strip mills, first built in the United States in the 1920s, made steel sheets available in large quantities, at high quality and low prices.[3] Compared to the previous manual operations, they constituted a major technological breakthrough. In 1948, 29 of these mills were operational in the US. In Europe, only two mills had been installed before the war, one at Ebbw Vale in the United Kingdom, the other at Dinslaken in Germany. Immediately after the war, the latter was dismantled and handed over to the Russians [6, 11512, 2/22/1949].

The Americans therefore seemed to play a determining role in the evolution of the French and German steel industries after 1945. Only they could provide the modern strip mill technology. In terms of the necessary financing, the European Recovery Program, announced by US Secretary of State, George Marshall, in June 1947 and approved by Congress in the summer of 1948 made substantial funds available for the modernization of production facilities. In addition, the Americans largely influenced occupation policy in Germany. After the merger of the British and American zones in 1947, they actually controlled 75% of pre-war German steel capacity, predominantly located in the Ruhr area.[4]

The decisions of the US Administration could thus potentially shape the future competitive position of the French and German steel industries. Companies and governments in both countries had to take this into account and adapt their strategies and policies accordingly.

French Industry: Impetus from Initiative

In France, the steel industry had already recognized the need for the installation of modern rolling mills during the war and established a commission to investigate the question. In 1945, the Trade Association (*Chambre Syndicale de la Sidérurgie Française*) suggested the installation of two semi-continuous strip mills [30, pp. 599-602], but made it clear that the choice of technology

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[2]The British steel industry was in a different position. It had suffered relatively little from the war and was nationalized by the Labour government in 1948 [33].

[3]In a first step, raw steel was rolled by a hot mill into coils, which were then transformed into sheets in a cold rolling process.

[4]They also controlled the crucial supply of (coking) coal from the Ruhr to France. This important aspect will not be developed any further here, see [27; 32].

depended to a large extent on the evolution of the competitive environment: "If the peace treaties (*l'organisation de la paix*) guarantee large enough markets [for the French steel industry], the installation of a continuous mill could be envisaged, leading to an increase in its production capacity" [8, 70671, 5/11/1945]. This position also reflects the deeply rooted cartel-thinking in French and European industrial circles, where market shares resulted from agreement, not competition [9; 17; 18].

In July 1945, a French steel delegation went to the United Kingdom to study the modern strip mill there [26, p. 52]. But opinions among French producers about the extent and speed of modernization were not uniform. By February 1946, the two major companies situated in the North of France presented a detailed project to the French Administration, including the purchase of a continuous hot and cold strip mill in the United States and their merger to form Usinor (= *Union Sidérurgique du Nord de la France*). Initially, the financing was entirely private, comprising a large increase in capital, a bond issue and medium-term bank loans. Usinor only needed government help to obtain the necessary hard currency [26, pp. 53-54; 6, 11512, 2/22/1949]. Other firms did not see the need for a continuous strip mill. François de Wendel, head of the largest steel company in France, actually said to a government official "that the people in the North were crazy and that such a machine was not adapted to the conditions of the French market" [6, 11512, 2/22/1949].[5]

Discussions about the rationalization and modernization of the French steel industry continued. Steel became one of the six key branches chosen for the Modernization and Equipment Plan launched by Jean Monnet in 1946. The corresponding Modernization Commission, composed of representatives from industry, labor and the Administration, identified the need for further concentration and a second continuous strip mill, to be built in Lorraine (Eastern France) where two thirds of French raw steel was produced. Most of the companies there seemed reluctant to invest the considerable sums necessary and to proceed with the required rationalization of production, partially for fear of too much government involvement and control [30, pp. 590-609].

Only outside pressure finally led to the purchase of a second mill. Since 1945, the new President and CEO of the nationalized automobile producer Renault, Pierre Lefaucheux, had claimed a strip mill for the company's steel firm (*Société des Aciers Fins de l'Est* = SAFE), in order to secure the supply of high-quality and low-price body sheets. The relevant ministries, however, refused their authorization, mainly because of insufficient capacity at SAFE. But Lefaucheux's insistence together with the determination of Usinor forced the major Lorraine steel companies to "get down from their high horses (*réserve hautaine*)". They formed a technical cooperative, later transformed into Sollac (= *Société Lorraine de Laminage Continu*), which sought permission to install the mill in October 1947 [26, p. 53; 30, p. 603-608; 6, 11512, 2/22/1949; 5, 11026].

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[5]There was probably also a technical reason for his position, because the quality of Thomas steel mainly produced in Lorraine was at the time insufficient for transformation on the modern strip mills. This is, however, never mentioned in the archival documents. I would like to thank Professor Wengenroth from the Technical University of Munich for pointing this out to me.

In France, efforts to modernize the production facilities were thus underway long before the announcement of the Marshall Plan in 1947 and even before the Monnet Plan was launched in 1946. And it was mainly internal competition for the installation of the strip mills that gave the necessary "impetus" to the Lorraine steel producers.

French Government: Obsessed with German Competition

Already in 1945, a US report mentioned that plans to rationalize and modernize production facilities were "strongly supported by officials in the Ministry of Industrial Production who point out that they are necessary...to permit France to compete effectively in post-war international markets" [36, 3303, 7/17/1945, pp. 19-20]. In subsequent years, German competition became one of their main concerns [18]. In its report for 1948, the Ministry's *Direction de la Sidérurgie* underlined that "an increase in production and market share was assured [for the French steel industry], if the considerable reduction in the activities of the Ruhr could be maintained" [5, 10940, 1/11/1949]. The Foreign Ministry shared these views, mainly for political and military reasons. In October 1948, its Economic Affairs Department had addressed a secret memorandum to the Ministry of Industry, calling "the idea that Ruhr production should in no case increase faster than French [steel] output...a principle which we consider to constitute one of the vital elements of our security" [29, 368, 10/22/1948].

Fear of German competition also drove French government policy with respect to the purchase of a second strip mill, especially after the announcement of the Marshall Plan. In March 1948, the US Embassy reported from Paris that "they are anxious to order another strip mill in the U.S." [38, 866.1, 3/19/1948]. In December, the *Direction de la Sidérurgie*, still hesitant in the spring because of the "extremely important financial sacrifice" required by Sollac, now advised to go ahead quickly: "Our failure to act in this area would prompt the Germans to challenge the limitation of Ruhr production. At the same time, they would hasten to ask the Americans for the necessary dollars to reconstruct the continuous strip mill which was there before the war..." [5, 11026, March 1948 and 12/31/1948]. As a consequence, the Department yielded to the steel industry's point of view on two contentious issues: the presence of government commissioners in Sollac and the rationalization of the Lorraine steel works. Both demands were abandoned [6, 11512, 2/22/1949].

But now that consensus on the second mill was reached, the French authorities had the impression that since the end of 1948 the American steel industrialists and officials were less keen on the project: "Some of them started to show reluctance with respect to the European equipment plans, finding them somewhat excessive" [6, 11512, 2/22/1949]. It can indeed not be excluded that the recession beginning in the fall of 1948 in the United States led to such a reaction from US business circles [27, pp. 345-347].[6] The relevant American authorities, i.e. the State Department and the Marshall Plan's Economic

[6]Only sources from US steel companies and the Department of Commerce could probably clarify this point.

Cooperation Administration (ECA), however, continued to favor the modernization of the French steel industry.

In April 1949, France finally submitted the Sollac project to the Organisation of European Economic Cooperation (OEEC) where all the countries participating in the Marshall Plan were represented. When the Belgian delegation refused to agree, the ECA recommended approval without waiting for a decision from the OEEC. Sollac became the largest single Marshall Plan project. The ECA provided $49.4 million in direct funding and authorized the use of $83.7 million in counterpart funds [39a, 6/1/1950]. Apparently, one of the reasons for US support was the hope "that the establishment of two strip mills would reduce the danger of monopolistic practices likely to prevail if only one were erected" [39c, Usinor, 1/28/1950].

The financing of Sollac indicates quite clearly that the Americans placed great importance on the modernization of the French steel industry.[7] US Ambassador David Bruce confirmed this position in December 1949, when construction of the second continuous strip mill began with a public—and highly publicized—ceremony. In the presence of French Foreign Minister, Robert Schuman, and the Minister of Industry, Robert Lacoste, he expressed the hope that the "French iron-steel industry will shortly be the first in Europe" [39c, Sollac, 12/28/1949]. By that time, however, French production had already been overtaken by German output (without the Saar), confirming apprehensions in France about the "real" objectives of American policy.

Germany: Avoiding Dismantling and Deconcentration

Before the Second World War, Germany was the largest European steel producer with over 20 million metric tons in 1938 (exluding the Saar), compared to 9.7 for France in 1929, the best pre-war year. In 1945 the British army occupied the Ruhr area, where most of the German coal mines and steel works were located. At the Potsdam Conference in August 1945 and at the following quadripartite talks, the United States, the Soviet Union and Great Britain, later joined by France, agreed to deconcentrate and decartelize German industry, to limit steel production (initially to 5.8 million tons per year) and to dismantle the excess capacity [19, pp. 33-70 and 246-52]. Following rationalization in the inter-war years, the German steel industry was indeed highly concentrated. The *Vereinigte Stahlwerke* (United Steelworks), formed in 1926, alone accounted for 40% of crude steel production. In August 1946, the British seized all steel property, placed them under their authority and started to split up the large integrated firms into small operating unit companies [43; 41].

The German steel industry firmly opposed deconcentration and dismantling. One of their major aims was to preserve the vertical integration of coal and steel (*Verbundwirtschaft*) and to keep the modern production facilities within Germany. In their efforts the industrialists were joined by workers and politicians [13]. They could also count on support from influential circles within

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[7]The ECA also took over some of the initial and the additional financing for Usinor, $13 million ECA and $29.5 million counterpart funds [39a, 6/1/1950].

the US occupation authorities who had become more important in the Ruhr after the merger of the British and American zones in 1947.

William H. Draper seems to have played a crucial role in this respect, initially as Economic Advisor to the US Military Governor, General Lucius D. Clay, then (as of mid-1947) in Washington as Under-Secretary of the Army. Before the war, Draper had worked at Dillon Read. In the 1920s and 1930s, this New York banking house had underwritten loans aggregating over $100 million for the modernization and rationalization of the *Vereinigte Stahlwerke* [14, pp. 550-61]. More radical decartelizers in the occupation authorities were evicted, and subsequently publicly denounced the "sabotage" of US decartelization and deconcentration efforts [25].

These accusations are only partially true. Decartelization was actually carried out quite rapidly and effectively [19, p. 115]. The dismantling of steel plants and the deconcentration of the industry, however, did not necessarily make economic sense in the eyes of the American authorities in Germany. Their major preoccupation was a significant improvement in coal output and steel production in order to increase German exports and correspondingly decrease occupation costs (financed by the American taxpayer). The Marshall Plan furthered the need to use German resources in the interest of European recovery [23]. In May 1948, probably at Draper's initiative, the Army, the ECA and the Congressional Committee on Foreign Economic Cooperation asked the US Steel Corporation to send experts to Germany "to aid Military Government in finding ways and means to increase steel production in the interest of European recovery and to minimize the requirements for steel from U.S. in view of present shortage here" [37, 862.6511/6-1748]. At that time, the undercapitalized steel unit companies were nearly all bankrupt and steel production averaged less than half of the 10.7 million metric tons per year authorized in the revised Industry Plan of August 29, 1947.

A mission led by the CEO of the US Steel Export Company, George W. Wolf, visited the Anglo-American occupation zone in the summer of 1948 and also met representatives from the Ruhr, in the presence of Draper [34, Exhibit C]. In their final report, the American steel experts made detailed suggestions concerning raw material supply, incentives for labor, improvements in transportation, etc.. But they also concluded that "when the present dismantlement program is implemented...it cannot fail to inordinately lengthen the period of Germany's industrial regeneration". And they criticized the split up of integrated plants "capable of surviving in a competitive market": "Integration, when not carried to excess, is a basis for maximum efficiency and low costs, while disintegration (decartelization) is exactly that which the word connotes" [34, pp. 78-79].

The discussion about the publication of the Wolf report revealed significant differences of opinion about the future of the West German steel industry within the US Administration and among the Western Allies. General Clay actually opposed its distribution beyond the Military Government and the Army Department for fear of adverse reactions from the British [37, 862.6511/8-448]. For the State Department's Central European Affairs Division "the Wolf report presents a sound position, reflecting U.S. interests". But they expected it "to meet with a good deal of opposition from the French, on political grounds,

commercial competitive grounds, and a combination of the two" [37, 862.6511/9-2248].

As a result, the Wolf report was only released after the Allies had agreed on a final dismantling list in the spring of 1949, following another mission concerning the whole German industry and long negotiations. Deconcentration efforts also reached a new stage in 1949, when a German steel trustee association was formed to make recommendations to the occupation authorities regarding the restructuring of the industry [31; 41].

Concerning the steel industry, it therefore seems unjustified to conclude that the Americans gave priority to German reconstruction. Financial considerations and the Marshall Plan led the occupation authorities to favor a production increase up to the authorized limit, but differences among US officials and the Western Allies precluded a complete stop of dismantling and deconcentration.

German Steel: The Unsuccessful Quest for US Capital

Concerning the production equipment of the Ruhr industry, the Wolf report had pointed out that "Germany's strip capacity was never in keeping with industrial progress or with trends in other countries" [34, p. 61]. German steel experts had already raised the question of a modern strip mill at a meeting with British and American representatives in November 1947, receiving, however, a relatively cold reception: "The construction of additional capacities will be given due consideration at the appropriate time" [37, 862.6511/12-2247].

At the same time, Robert Pferdmenges, a Cologne banker, personal friend of the future Chancellor Konrad Adenauer and close to the German steel industry, seems to have proposed to the French firm De Wendel a 50% stake in the *Vereinigte Stahlwerke* concern [22, pp. 170-173, 181-182; 16, p. 219]. The news "disturbed" the State Department which therefore asked for further investigation [37, 862.6511/12-147]. According to German sources, the "impetus for the Pferdmenges offer probably derived largely from Dr. Adenauer" and aimed to address the French "security psychosis".[8] The proposal was, however, not authorized by the Ruhr industrialists who did not intend "to peddle stock control of German basic industry to the French". An additional consideration, shared by the German steel producers, was apparently the hope to obtain US capital. Pferdmenges himself said that "he would welcome American participation in any form, but especially if that participation came with and through the French" [37, 862.6511/12-2447, 2-648, 3-2548].

During 1948 and 1949, other German steel industrialists and politicians proposed similar schemes, mainly intended to stop dismantling and deconcentration by a transfer of property rights [13]. In October 1949, Adenauer himself, elected Chancellor of the newly formed Federal Republic, brought up the participation idea in a meeting with the Allied High Commissioners [3, pp. 434-35]. And again, he intended to kill two birds with one stone: appease French fears of economic, military and political domination by the Ruhr and obtain the

[8] Adenauer had already launched a similar idea in the 1920s [22, pp. 20-24].

necessary funds for the modernization of the production facilities. So far, the West German steel industry had indeed not benefited from direct Marshall Plan aid [4, B 8894, 8/1/1951]. The three Western allies did, however, not follow up on Adenauer's proposal.

Apparently already in late 1948 the *Vereinigte Stahlwerke* had started negotiating with financial and business interests in the US about private financing for a continuous strip mill. A representative of the American group presented the project to Langdon Simons, Chief of the ECA's iron and steel section, in October 1949 [39b, Germany, 10/4/1949]. But the Marshall Plan Administration was not willing to authorize a hot strip mill for Germany in the short term. In accordance with the French, they would only agree "to install a cold strip mill and to import the coils" [39c, cartels, 3/6/1950].

The ECSC: American Style Competition in Europe

The modernization of German steel production became more urgent as a result of the trade liberalization in Western Europe. In April 1950, the President of the Trade Association (*Wirtschaftsvereinigung der Eisen- und Stahlindustrie*) had already underlined, "the weak position of our industry compared to the competing countries" [42, 4/17/1950]. At that time, producers were still largely protected from foreign competition. Only a few weeks later, however, on May 9, the French Foreign Minister, Robert Schuman, suggested the establishment of a Franco-German coal and steel pool, eventually leading to the European Coal and Steel Community (ECSC) [18].

It soon became clear that the initiators and advocates of the "Schuman Plan" (led by the French Planning Commissioner Jean Monnet) did not intend to re-establish the pre-war International Steel Cartel under a new name. The ECSC and its independent "High Authority" were not supposed to fix production quota and prices, but to ensure competition in a common market. To this end, articles inspired by American anti-trust legislation were introduced in the treaty which effectively prohibited cartels and made concentration subject to approval [9, 17, 18].

Subsequently, in France the treaty and its ratification met very strong opposition from the Trade Association, afraid of losing some of its power based on the internal cartel (*Comptoir des Produits Sidérurgiques*), and the more conservatively-minded producers (i.e. De Wendel). Other Lorraine firms, however, saw it as an opportunity to extend their markets, especially into the nearby Southern part of Germany. Usinor also opposed the Schuman Plan for fear of competition from Belgium. Not only were the Belgian steelworks just across the border, they also did not have a significant home market but relied for most of their production on exports.[9]

The Ruhr industry also fought the Plan (less openly than their French colleagues), even though the ECSC brought an end to the unilateral discrimination and the production limit imposed on Germany. But the French

[9]The split among French steel firms does not follow an owner - manager pattern, Usinor's CEO René Damien being a "typical" manager, de Wendel a family owned enterprise.

negotiators insisted on completion of the allied deconcentration efforts before the opening of the common market. Their main concern was to break up the large concerns and to severely limit the coal-steel link. To put an end to the coal sales monopoly (DKV = *Deutscher Kohlenverkauf*) was another objective, mainly pursued by the Americans. Originally, Federal Chancellor Adenauer defended the German steel industry's position and resisted these demands. But finally he yielded to the combined pressure from Jean Monnet, now leader of the international Schuman Plan negotiations, and the US High Commissioner John J. McCloy [16; 9; 18; 41].

Not only did the German steel producers have to give in on the deconcentration issue, they also could not obtain a continuous hot strip mill during the bargaining process. Already at the Steel Trade Association's board meeting in August 1950, the representative of the companies producing flat-rolled steel had voiced his opposition against an opening of the German market to foreign competition until "the necessary modernization of the German plants has been carried out and West Germany disposes of a continuous hot strip mill" [42, 8/12/1950]. Apparently, the German delegation at the Schuman Plan negotiations tried to obtain import protection for Germany, "coming into effect when the French hot strip mills start production and ending only once the German mill is operational", but without success [42, 9/30/1950 and 3/30/1951].

This disappointing result seems even more astonishing, given that conditions for the German demands had improved in the summer of 1950. The outbreak of the Korean War led to a rearmament boom and increased the need for steel products significantly. Germany was to play a major role in the Western efforts. An American steel mission visited the Federal Republic in September 1950, identified spare capacity, but also a clear lack in modern equipment to produce sheets [39b, Germany, 9/19/1950]. The US High Commission agreed with the need to modernize the "extensively obsolete" German steel industry.

But the Marshall Plan Administration, in agreement with the French, continued to advocate a solution where "the first move was to put in modern continuous cold rolling equipment and obtain the hot rolled coils...by importing them from any one of several countries" [39b, Germany, 10/30/1950]. In the summer of 1951, the ECA therefore refused the request of August-Thyssen-Hütte at Hamborn to receive a continuous mill originally ordered in the US by Czechoslovakia but never delivered [39b, Germany, 6/20/1951].

Funding Modernization in Germany: Inter-Industry Solidarity

The German steel industry not only faced continued refusal from the American authorities concerning modern production technology, but also did not receive any direct Marshall Plan aid. Only counterpart funds were authorized, proving, however, insufficient to finance the necessary modernization which was made even more urgent by the prospect of a common and competitive European steel market. The response to this major challenge was both innovative and different from the French case. It provides a good example for the "cooperative" model of capitalism prevalent in Germany [14].

Table 1. US funds allocated to the European Steel Industries as of April 1953

	Number of projects	Total cost estimate (MUSD)	US financing approved (MUSD)	Percentage of total US funds
France	6	241.0	79.0	34.7%
West Germany	0	0	0	0%
United Kingdom	2	303.2	29.7	13.1%
Total	29	872.1	227.5	100%

Source: Mutual Security Agency (= successor of the ECA) [7, 490]

In March 1951, the peak Trade Association (*Bundesverband der Deutschen Industrie*) issued a memorandum asking for more investments in the basic industries including a modern continuous strip mill [2, pp. 128-132]. Following the rearmament boom caused by the Korean War, industries using steel, especially automobile producers, suffered from shortages in sheets and complained about the restrictions still imposed on the German steel industry [35, pp. 91-93].

The Federal Government had also recognized the need to finance the modernization of coal and steel production and improvements in infrastructure. After extended discussions with all interested groups, it submitted an "Investment Aid Law (*Investitionshilfegesetz*)" which was adopted by parliament on January 7, 1952 [2]. This German equivalent of the French Monnet Plan of 1946 authorized accelerated depreciation and imposed a levy on the using industries. Despite some resistance from the smaller consumers, this approach proved to be quite successful. Until March 1955, the West German steel producers invested a total of 1,264 million DM (about $300 million) [2, p. 270]. In the meantime, the French producers benefited from their advance in modernization. After the opening of the common steel market, they actually supplied the German automobile industry with body sheets [27, p. 413; 16, p. 357].

Conclusion

The preceding results tend to modify at least for the steel industry the view according to which the Marshall Plan aid was crucial for the rapid German recovery after the Second World War. Its impact seems at best to have been "moral" rather than material. Regardless of German resistance, dismantling continued until 1950. Deconcentration was effectively carried out in 1951/52 within the framework of the Schuman Plan negotiations. Only the Investment Aid Law of 1952 made large-scale funding available to the Ruhr.

The United States has not given priority to the reconstruction of the German steel industry. On the contrary, American policy with respect to the

purchase of modern continuous strip mills favored French steel producers, giving them a temporary competitive edge.

Overall, competition played a major role in the modernization of the French and German steel industries. Without internal pressure from Usinor and Renault or the threat of German application for US funds, France might not have ordered a second mill. With the Schuman Plan of 1950, Western European steel producers faced the opening of their home markets to foreign competition. Subsequently, the Germans increased their modernization efforts. In France, where modernization was already well underway, the prospect of the ECSC led to the first serious restructuring and concentration after the war [15]. In sum, this study illustrates how important the detailed analyses of each industry is in order to understand the drivers and the outcome of the reconstruction efforts in Europe after World War II.

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