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Regional labour markets and international labour migration in twentieth-century Europe: the cases of coal mining in Liège (B) and Limburg (NL) compared

International labour migration

In discussing international labour migration in twentieth-century Europe, historians generally refer to the creation of the European Coal and Steel Community (ECSC) and the Common Market. A free movement of miners and steelworkers was among the first aims of the ECSC. Article 69 of the Treaty of Paris (1951) presented guidelines for the free movement of workers between the mines and steel plants of ESCS member states. It took until the autumn of 1957 for these guidelines to develop into an actual working system, however, national states held on to separate recruitment agreements, especially with Italy.[1] In the 1960s labour shortages could not be met by internal EC migration anymore: Northwest European countries each started to recruit their own 'guest workers' from countries outside the EC (Spain, Yugoslavia, Greece, Turkey, and Morocco).

In a somewhat speculative article Carl Strikwerda traced the origins of European economic integration back to international labour migration from the beginning of the last century.[2] These movements concerned mostly miners and – to a lesser extent – steelworkers. Polish (as national or ethnic group) and Italian miners were most prominent in twentieth-century European international migration history, but many other nationalities or ethnic groups were involved.[3] From the 1920s onwards, migrants were increasingly recruited by means of bi-national arrangements.[4] In the 1950s even an international competition among coal-producing states developed for the recruitment of coal workers, especially in Italy.

1 Simone A. W. Goedings: Labor Migration in an Integrating Europe. National Migration Policies and the Free Movement of Workers, 1950–1968, The Hague 2005.

2 Carl Strikwerda: The Troubled Origins of European Economic Integration: International Iron and Steel and Labor Migration in the Era of World War I, in: American Historical Review 98 (1993), pp. 1106–1129.

3 Christoph Kleßmann: Polnische Bergarbeiter im Ruhrgebiet 1870–1945. Soziale Integration und nationale Subkultur einer Minderheit in der deutschen Industriegesellschaft, Göttingen 1978; Janine Ponty: Polonais méconnus. Histoire des travailleurs immigrés en France dans l'entre-deux-guerres, Paris 1988; Philip H. Slaby: Industry, the state, and immigrant Poles in industrial France, 1919–1939, Ann Arbor 2005. On Italian migration in the Lorraine iron mines: Gérard Noiriel: Longwy. Immigrés et prolétaires, 1880–1980, Paris 1984. For the less prominent British case Stephen Catterall/Keith Gildart: Outsiders: Trade Union Responses to Polish and Italian Coal Miners in Two British Coalfields, 1945–54, in: Stefan Berger et al. (eds.): Towards a Comparative History of Coalfield Societies, Aldershot 2005, pp. 164–176.

4 Frank Caestecker: Alien Policy in Belgium, 1840–1940. The Creation of Guest Workers, Refugees and Illegal Aliens, New York/Oxford 2000.

Historically, there were many other forms and varieties of international labour migration, independent from state intervention and recruitment agreements. The origins of the European migration system can be traced back to the nineteenth century. Twentieth-century bi-national recruitment agreements followed upon pre-first World War, more or less spontaneous migration flows from neighbouring states or ethnic groups, like the Italians and Belgians to France, the Poles to Germany, and the Irish to Britain. Nineteenth-century migratory movements were not regulated by national state agreements. State intervention in the international migration process started after World War I, and developed in the interwar years. In this period, a cross-border international migration system developed in Northwest Europe, more and more based on state regulation, but also on the flux and mobility of migrants, both between coalfield and industrial regions, and between these and their home countries. Before World War II, the migration of Poles to and fro the coalfields in the Ruhr area and Northern France, and those in Belgium and the Netherlands in between, is the best example. Between these coalfields, a kind of transnational migration system developed.

In the 1940s and early 1950s, miners from Italy were recruited on a massive scale for the so-called *bataille du charbon* ('battle for coal') in the Northwest European countries.[5] After the coal crisis of 1958 and subsequent decline of the coal market in the 1960s, mining companies kept a need for a flexible and adaptable workforce, as regional labour supply increasingly left the mines for alternative job opportunities, for which the industrial boom in other sectors in these years gave them ample opportunity. The recruitment of migrants disguised a continuous flight out of the mines by local labour, which took on a forced character after the successive closing of the mines from the late 1960s.[6] The paradox of this development is that migrants, mostly Moroccans, had to be recruited on short term contracts to bring the declining mines to a close.[7]

Labour migration and coalfield histories

The history of labour migration in Europe has been studied almost invariably from a national perspective. There are strong arguments, however, to develop a transnational approach from a comparative coalfield or heavy industrial perspective. International regulations and recruitment policies were mainly aimed at the recruitment of workers for precisely these sectors and areas. The need to apply for foreign workers at increasing distance and scale originated from

5 The pursuit of the highest possible coal production in the years after World War Two in order to provide enough energy for fast economic recovery.

6 Cf. M. Bruwier: Que sont devenu les mineurs des charbonnages belges? Une première approche: problématique et méthodologie, in: Belgisch Tijdschrift voor Nieuwste Geschiedenis (further BTNG) XIX (1988), pp. 173–203.

7 Marie Cegarra: La mémoire confisquée. Les mineurs marocains dans le Nord de la France, Villeneuve-d'Ascq 1999; Tanja Cranssen: Marokkaanse mijnwerkers in Limburg, 1963–1975, in: Studies over de sociaal-economische geschiedenis van Limburg/Jaarboek van het Sociaal Historisch Centrum voor Limburg (further SSEGL) XLVIII (2003), pp. 121–148; Karim Azzouzi: Les Marocains dans l'industrie charbonnière belge, in: Brood en Rozen. Tijdschrift voor de geschiedenis van sociale bewegingen 4 (2004), pp. 35–53.

problems of labour supply in mining regions. In a sense, this was nothing new. By nature, mining is place-bound, but labour-intensive, so, in general, mining companies could only start and develop exploitation by attracting workers from outside the region where pits were located. As coal was often mined in remote, originally rural or semi-rural areas where local labour supply was scarce or unwilling, migration was at the heart of the formation of coalfield communities and societies. At first, labour was recruited from the surrounding countryside at a growing distance. In older mining regions, a tradition of mine work thus developed, which was transmitted from father to son, and in some areas (in Belgium and France into the twentieth century) from mother to daughter.[8] But even in areas where a traditional labour force was well-established, as, for example, in the Liège coalfield, labour shortages made supra-regional and foreign recruitment inevitable at an early stage. Already in the nineteenth century, international labour migration was common in most mining areas in Northwest Europe.[9] This applies *a fortiori* at the exploitation of new fields discovered or developed during the late nineteenth and early twentieth century, like those in the Dutch and Belgian provinces of Limburg. To get an understanding of the growing need for foreign workers and of the way international labour migration became inserted into other sources of labour supply, comparative regional research can be very revealing.

A traditional explanation for the employment of migrants is that they acted as a buffer to adapt the labour force to cyclical fluctuations.[10] Labour migrants were recruited on short term contracts to provide for temporal shortages in labour supply. In the downturn of the cycle it was easy to get rid of them and send them back. In this model migration flows depended on short time fluctuations in demand.[11] For coal workers, René Leboutte concludes: 'clearly foreign manpower was regarded as a reserve army'.[12] Government policies facilitated the mobilization of foreign temporary workers by negotiating contracts and setting up recruitment agencies in supplying countries. This analysis relates to the existence of 'dual labour markets': each labour market can be divided in at least two segments: a primary internal segment with a steady, regular labour force, and a secondary segment with flexible, irregular workers. Applied to mining labour markets, this model presupposes that a steady

8 Leen Roels: "In Belgium, women do all the work". De arbeid van vrouwen in de Luikse mijnen, negentiende-begin twintigste eeuw', in: BTNG XXXVIII (2008) 45–86.

9 René Leboutte: Vie et mort des bassins industriels en Europe 1750–2000, Paris 1997; René Leboutte: Des „travaillers étrangers" aux „citoyens européens". Mobilité et migrations dans les bassins industriels en Europe aux 19ème - 20ème siècles, in: Espace, Populations, Sociétés 3 (2001), pp. 243–258.

10 Klaus J. Bade: Europa in Bewegung. Migration vom späten 18. Jahrhundert bis zur Gegenwart, München 2000, pp. 111–112.

11 For Belgium A. Martens: 25 jaar wegwerparbeiders: het Belgisch immigratiebeleid na 1945, Leuven 1973; P. Grimmeau: De immigratiegolven en de spreiding van de vreemdelingen in België, in: A. Morelli (ed.): Geschiedenis van het eigen volk: de vreemdeling in België van prehistorie tot nu, Leuven (1993), pp. 115–125, 115–117; P. Hullebroeck: Het algemene migrantenbeleid en de wetgeving over de vreemdelingen, in: Morelli, pp. 133–137.

12 R. Leboutte: Coal mining, foreign workers and mine safety. Steps towards European integration, 1946–85, in: Berger et al., pp. 219–237, 222.

supply of local labour provided for a reliable core of mineworkers from the region itself, and that migrants were just supplementary workers.

One conclusion of our research in the Liège and Limburg coalfields is that this concept is much too simple to explain the need to attract migrants in different periods and regions. Although mining companies did generally prefer labour from local families, because they expected them to be the most reliable in the long run, this does not mean that their preferences invariably resulted in a 'dual labour market', restricting migrants to a secondary market segment only. Migrants were recruited for a variety of reasons, depending on the phase in the life cycle of exploitation in a specific basin. At the start of the exploitation, skilled migrants were needed to implement the industry itself, as was the case in Dutch Limburg in the 1920s; in the declining phases, mining became less and less attractive for local workers and their children, who aspired for a better future outside the mining industry. When alternative employment opportunities were there, shortages became structural, and labour migrants had to be recruited on a permanent and family basis. Especially in Liège from an early date, but most definite after World War II, long term decline of the mining industry at the one hand, and demographic behaviour of the regional mining population at the other, forced mining companies to look elsewhere to attract sufficient miners. In Limburg, a contrasting development occurred after the War: there a permanent core could be formed out of local supply, and migrants were recruited as additional labour only.

Mining labour markets in Liège and Dutch Limburg

The fact that the Limburg and Liège mining districts, of which we provide case studies here, were situated close to the border gives an opportunity to incorporate cross-border labour in our research. The increasing reliance on 'guest workers' in the twentieth century should not divert our attention from cross-border migratory movements into neighbouring coalfields in Northwest-European border regions. Territorial states do not reckon with geological formations, and coal deposits often stretch into other countries. In the Belgian-Dutch-German borderland there were several bordering coalfields. The eastern part of the Dutch Limburg mining district was a continuation of the German Aachen district. At a somewhat greater distance, the Ruhr area was only 150 km away. At the western (Belgian-Dutch) border of Limburg, mining in the Belgian province also called Limburg, touched the western part of the Dutch Limburg's mining district. South of the Liège coalfield, the Belgian mining areas in the Walloon province of Hainaut bordered the French district of Nord/Pas-de-Calais. Before World War I, and to a lesser extent also between the Wars, labour markets in these mining areas were more or less closely connected. Belgian miners worked in Northern France, Dutch miners worked in Germany or Belgium, as in other periods Germans went to the Netherlands. Flemish workers crossed the Belgian language border to be employed in the Walloon mines in Belgium.

In the 1930s, and especially after World War II, cross-border migratory labour and migration became less common. In some notable cases, there was an inverse relationship between cross-border and long distance migration: when the flow of cross-border migrants or com-

muters for whatever reasons dried up, recruitment from other countries had to be extended to fill in the gaps. In this article we want to show how regional, cross-border and migrant labour in the Limburg and Liège mining districts were recruited as complementary and substitute sources of supply in different national and regional contexts.

Although geographically at close distance the Liège area in present-day Belgium and the Dutch province of Limburg had a completely different history. The history of coal mining in both areas dates back with certainty to the Middle Ages,[13] but coal exploitation in Liège took full advantage of the Industrial Revolution, which turned the newly established Belgian state (after 1830) into one of the leading industrial countries of the European Continent. The two to three mines in the Dutch province of Limburg, on the other hand, stagnated for almost a century.[14] Only with the opening in 1899 of the Oranje-Nassau Mine in Heerlen the Dutch mining industry embarked upon a period of fast expansion. By then, the Liège mining industry was already firmly established. In 1899 the mines of Liège produced 5.849.000 tons of coal; 30.700 mineworkers were responsible for this.[15] The net production of the Dutch coalmines, located only 50 kilometres up north, contrasted sharply: 212.972 tons. The number of mine workers amounted to 813 only.[16]

In the course of the twentieth century the proportions completely turned around. In 1924 for the first time, the Dutch mines reached a higher production than the mines of Liège. Five years later the number of personnel of the Dutch mining companies surpassed these of their southern neighbours also. From 1939 onwards that situation became permanent.

After the Second World War, both mining regions profited from post-war recovery. The Liège mines reached their highest post-war production a couple of years earlier than the Dutch mines. In 1953 five million tons of coal were extracted from the mines of Liège. In the years thereafter, production steadily decreased. The highest post-war production in the Dutch mines was attained in 1960 with a maximum of 12,5 million tons of coal. We can see a comparable development in the labour force: the peak in Liège occurred in 1948, when all the Liège mines together employed 33.000 mine workers. The number of labourers in the Dutch mines increased for another decade. In 1958 they reached a high point of 56.000 people, the biggest number of personnel in their history. The coal crisis of that same year, which affected the mining industry all over Europe, meant a turning point for the Dutch mining industry. In Liège the crisis accelerated a process of decline, which already had begun a decade before. In December 1965 the Dutch government announced a gradual closing of the mining industry. The actual closing of the Dutch coalmines took nine years. On December 31st 1974 the last Dutch coal was brought to the surface. The last mine in the Liège basin closed in 1980.

13 C. E.P.M. Raedts: De opkomst, de ontwikkeling en de neergang van de steenkolenmijnbouw in Limburg, Assen 1974; Claude Gaier: Huit siècles de houillerie Liégeoise. Histoire des hommes et du charbon à Liège, Liège 1988.

14 B. P.A. Gales: Delven en slepen. Steenkolenmijnbouw in Limburg: techniek, winning en markt gedurende de achttiende en negentiende eeuw, Hilversum 2004, pp. 53–54.

15 Annales des Mines de Belgique (1900), pp. 605, 608

16 Verslag van den ingenieur der mijnen, betreffende de exploitatie der mijnen en steengroeven in Limburg over het jaar 1899, p.1

Foreign workers

During their production period in the twentieth century the mines in both regions were confronted with labour shortages. Pit work was not very appealing and the mining companies had a hard time recruiting enough qualified personnel. Mining companies preferred a stable labour force and low labour turnover. They had a preference for local workers who would inspire their sons to become miners too. Creating a tradition of mining labour in the region was the ultimate goal of the mining companies. But local workers often didn't want this less desirable work. Mining companies were regularly forced to look for labourers outside their region. Empircial material shows the development of the number of foreign workers in both mining regions.[17] A sudden turn in the middle of the thirties is striking. At that time, the Liège mines employed less foreign workers than the mines in the Netherlands, but especially after the Second World War the ratio between both basins drastically changed. Research questions in this paper consider the explanation of this switch and the origin of labour migrants in both regions. The analyses of developments in both mining areas are divided into two periods: before and after 1935.

The Dutch Limburg case: construction of a tradition of mining labour

The number of foreigners in the Dutch mines increased from 429 (17 percent of the total labour force) in 1905 to 11.969 (32 percent) in 1930. This strong absolute and relative growth reflects shortages on the regional labour market for mine workers. At the turn of the century, the mines were established in a rural area with hardly if any industrial traditions. In the new mining areas in Southern Limburg underground work was unknown and unpopular.[18] From the outset mine management had to attract labour migrants from outside Limburg to maintain an adequate staff in quantity and quality. Especially skilled and experienced mine workers proved to be scarce. They were indispensable for the recently opened mines, but on the Dutch labour market they were hard to find.

1900–1935: Germans and other foreign workers

Before the First World War, there were attempts to attract experienced Dutch miners working in the Ruhr area or in the basin of Aachen, but initially the mining companies succeeded only partially. In this period wages in Germany were on average almost twenty percent higher than those in Limburg.[19] This situation changed because of the First World War and the subsequent economic and monetary chaos in Germany. A career as mineworker in one of the German mines suddenly became unattractive for Dutch workers. Dutch mine work-

17 Unfortunately figures on the Liège mines before 1930 are rare. Only for the year 1923 reliable figures are available in Annales des Mines de Belgique (1928), pp. 246–247.

18 Serge Langeweg: Trekarbeiders en pendelaars; grensarbeid in oostelijk Zuid-Limburg, 1875–1914, in: Zestig jaar vorsen in de geschiedenis: Jubileumboek Het Land van Herle 1945–2005, Heerlen 2006, pp. 295–308.

19 Staatscommissie over de Werkloosheid Deel IX Eindverslag, 's Gravenhage 1914, pp. 543–547.

ers thus applied for occupations in a Limburg mine. However, the national supply still was hardly sufficient to meet the rising demand. The hiring of experienced hewers from abroad remained necessary. Because foreign mine workers were particularly engaged as skilled underground workers they also acted as instructors for the indigenous work force.[20] In due time, the Limburg mines built up a core of skilled Dutch miners in this way. In 1920, the Limburgers amounted to approximately half of the employed miners. The other half was more or less equally divided into Dutch miners born outside the province of Limburg, and foreigners.[21] Ten years later, the percentage of Limburg born miners had decreased to 43,3 percent; the percentage of Dutch born miners only decreased a little, to 24,7 percent. The percentage of foreigners, on the other hand, had risen to 31,9 percent.[22]

Table 1: Foreign nationalities employed by the Dutch and Liège mines in 1923

	Liège		**Netherlands**	
	N	**%**	**N**	**%**
Dutch	176	7,0	–	–
Belgians	–		351	5,4
Germans	74	2,9	5.342	82,9
Austrians	3	0,1	375	5,8
Poles	764	30,5	135	2,1
Italians	755	30,1	74	1,1
Yugoslavs	81	3,2	18	0,3
North-Africans	418	16,6	–	–
French	75	3,0	–	–
Others	166	6,6	152	2,4
Total	**2.512**	**100,0**	**6.447**	**100,0**

Sources: Annales des Mines de Belgique (1928), pp. 246–247; Verslag van den Hoofd-Ingenieur der Mijnen over 1923.

Table 1 gives an impression of the origin of the migrants. It shows a very high percentage of Germans. The figure on 1923 is chosen because only for that year a comparison with the situation in Liège is possible. From 1905 onwards, yearly data for the Dutch mines on the composition of the labour force by nationality are available.[23] Until the thirties, more than

20 Versteegh, pp. 225–227.
21 Jaarverslag: Algemeen Mijnwerkersfonds van de steenkolenmijnen in Limburg (AMF) over 1920, p. 22.
22 Idem over 1930, p.14.
23 Published in: Verslagen van den (Hoofd)-Ingenieur, resp. Inspecteur-Generaal der Mijnen en in de Jaarverslagen van het AMF.

half of the foreign mine workers in Limburg was of German nationality. The majority originated from neighbouring mining regions in the Ruhr area and the area around Aachen.[24]

In the course of the twenties, the number of Poles, Yugoslavs and Italians, groups who were already present in 1923, increased both absolutely and relatively. In 1930 there were 1257 Poles (10,5 percent of the foreign labour force), 1155 Yugoslavs (9,6 percent) and 216 Italians (1,8 percent).[25] In addition, a few hundred Czechs and Hungarians had arrived by then. This diversification of foreign nationalities reflects a more structured recruitment policy adopted by the mining companies after 1920.[26]

In 1931, the worldwide economic crisis hit the mining industry. The mining companies responded with mechanisation and rationalisation. This reduced employment figures. Especially foreign mine workers were affected by a wave of redundancies, carried out by the mining companies. By the end of 1930, the Dutch mines employed 11.969 non-Dutch workers. Five years later, this number had decreased to 4.564, a decline of 62 percent. In that same period, the number of Dutch mine workers decreased with 5,3 percent only. The decline of the number of Limburg born mine workers was even lower, only 2,7 percent.[27] The redundancy policy of the mining management and the employment policy of the Dutch government were aimed at protecting Dutch workers as much as possible.[28] In the thirties, the mining directories were confronted with an easy labour market for the first time, and they were able to select the most preferred group of labourers: young local workers who had their roots in the area. They continued this policy after the crisis: a regional tradition of mining labour had come into existence.

1936–1970: a core of professional Limburg miners

Economic revival in the second half of the thirties did not result in the recruitment of new groups of foreigners in the Dutch mines. The growing demand for miners was almost entirely satisfied by young local workers who went through the technical training of the mining companies directly after primary education.[29] Also, the war years did not cause any drastic changes in the number of foreign mine workers. The employment in the Dutch mines strongly increased by 20.000 workers between 1946 and 1958, but only 14,4 percent of that increase was caused by mine workers from non-Dutch nationality. By the end of 1957, when the Dutch mines employed post-war's largest number of foreign workers, their share was

24 Remigius Dieteren, De migratie in de Mijnstreek 1900–1935: Een sociaal-historische studie, Maastricht 1959, pp. 46–48.
25 Verslag Hoofd-Ingenieur der Mijnen over 1930.
26 Dieteren, p. 131.
27 Jaarverslag AMF over 1930 en 1935.
28 G.C.M. Vromen, Personeelsbeleid bij de Nederlandse mijnen tijdens de jaren dertig, in: SSEGL XXXII (1987), pp. 27–79, p. 54.
29 L.H.M. Kreukels, Mijnarbeid: volgzaamheid en strijdbaarheid. Geschiedenis van de arbeidsverhoudingen in de Nederlandse steenkolenmijnen, Assen/Maastricht 1986, pp. 419–420.

only 11 percent (5.883 men).[30] These figures indicate that the mines in the post-war years were better able to recruit on the Dutch labour market than before. That development can be explained by the expansion of a system of internal company training, the relatively attractive labour conditions in the Dutch mines for workers of Dutch origin, and the high costs of recruitment abroad, in comparison with the pre-war period.

Professional training within the mining companies was mainly aimed at boys who chose to become a miner right after primary school. In 1945 the existing training for hewers of the mining companies was converted into the Miner's training schools, *Ondergrondse Vakschool* (*OVS*).[31] With the *OVS* the companies provided training in mining skills that became increasingly specialised because of advanced mechanisation. They hoped that the internal training would guarantee that the workers were going to stay.[32] After a hesitant start, the mining companies succeeded in a rapid rise of the number of pupils at the *OVS* by using inventive recruitment strategies. Thousands of young Limburg boys made their way to the underground mining work via the *OVS*. Between 1945 and 1969 a total of 11.168 former *OVS* students started their underground work in the Dutch mines; 764 others obtained an above ground function.[33] The *OVS* had positive effects on the attachment of workers to the mining companies. Those who went underground after their training were less inclined to leave the mine than their fellow workers who didn't get this specific training.[34]

A second reason for the low post-war percentage of foreign workers in the Dutch mines is the attractiveness of mining work for Dutch labourers from outside the region. Mining companies were able to recruit Dutch personnel from outside the mining area with the help of intensive recruitment actions, first in Mid- and Northern- Limburg, later on also in the Northeast part of the Netherlands. [35] The recruitment of workers for the underground from Mid- and Northern- Limburg was more successful than from other parts of the Netherlands. Miners from the Limburg areas could use shuttle bus services provided by the mining companies. This enabled them to stay in their own villages.

Finally, a third reason seemed to play a role: weighing the costs of the recruitment. In 1949 the Dutch and Italian governments came to an agreement about the recruitment of Italian workers. With this agreement the government ensured itself an important role in determining the employment of foreign workers.[36] For the employers those new rules meant that recruitment campaigns would cost more time. Before starting underground a thorough introduction and basic training was necessary. This meant that all kinds of information and

30 Verslag van de Inspecteur-Generaal der Mijnen over 1957, p. 111.
31 Rob Wolf, Mijnbouw, techniek en onderwijs: De ondergrondse vakscholen van de Staatsmijnen, MA thesis, Nijmegen 1978, p. III 21.
32 H.C.W. Roemen et al, Verkenning omtrent het huidige en toekomstige personeelsvraagstuk van de mijnbouw in Nederlands Limburg, Regionale Studies Werkgelegenheid, Luxemburg 1957, p. 77.
33 SHCL, Archief GSL, Statistiek.
34 J.H.G. Segers, Het personeelsverloop in het ondergronds mijnbedrijf: methoden en resultaten, Tilburg 1968, pp. 92–93, 101.
35 Roemen et al, pp. 71–74.
36 Will Tinnemans, Een gouden armband. Een geschiedenis van mediterrane immigranten in Nederland (1945–1994), Utrecht 1994, p. 11.

educational material had to be translated in the native language of the migrant and interpreters had to be appointed. It's not unlikely that the costs of recruitment of foreign workers in the post-war period were higher than before 1930, when the mining companies could rely on German miners, who usually presented themselves spontaneously. This cross-border reservoir of miners disappeared almost completely after the Second World War.

In the post-war years, only when the regional, provincial and national supply was insufficient, recruitment offices of the mines fell back on the employment of workers from abroad.[37] Foreign miners were recruited in a larger degree in the years just after the liberation of the Netherlands. Because of voluntary or forced discharge and enrolment or call up to military services, the number of miners had decreased severely by the end of 1944.[38] A second period of shortage started in 1955 and lasted until the second half of 1957. There was an enormous deficit of workers at that time, not only in the mines, but also in industry in general.[39] By the end of 1957 the situation changed. The labour market became less tense and the mining management could put the recruitment of foreign miners on hold.[40]

Table 2 shows the origin of the foreign miners in some post-war years. Germans had been very prominent in the construction phase of the Dutch mining industry until 1930, but in the post-war period most migrants came from further abroad. In 1954 Poles turned out to be the largest group among the foreign work force. There were two kinds of Polish migrants. Poles who already arrived in Limburg in the twenties and had survived the years of crisis as a mine worker, and so-called 'displaced persons' (mostly East-Europeans who had to flee their place of residence because of war and its consequences), who right after the Second World War were recruited by the mining companies in the German refugee camps and among demobilized soldiers.[41]

37 H. Römkens, Problemen bij tewerkstelling van buitenlandse arbeiders, thesis Sociale Academie, Sittard 1965, pp. 16–26.

38 Jaarverslag van de Inspecteur-Generaal der Mijnen over 1946, 1947 en 1948, p. 9.

39 Verslag van de Inspecteur-Generaal der Mijnen over 1956, p. 16.

40 Idem over 1957, p. 68.

41 Paul Brassé en Willem van Schelven: Assimilatie van vooroorlogse immigranten. Drie generaties Polen, Slovenen en Italianen in Heerlen, 's Gravenhage 1980, pp. 70–71.

Table 2: Foreign underground labour force employed by the Dutch and Liège mines in 1954, 1958 and 1965

	1954				1958				1965			
	Liège		Nether-lands		Liège		Nether-lands		Liège		Nether-lands	
	N	%	N	%	N	%	N	%	N	%	N	%
Dutch	1.468	10,6	–	–	1.097	7,8	–	–	185	2,4	–	–
Belgians	–	–	175	6,3	–	–	141	4,0			83	2,1
Germans	603	4,3	725	26,0	447	3,2	530	15,0	155	2,0	294	7,5
Austrians	–	–	32	1,1	–	–	186	5,3			62	1,6
Poles	1.786	12,8	793	28,5	1.264	9,0	585	16,6	490	6,2	320	8,1
Italians	8.880	63,9	93	3,3	8.958	63,8	1.245	35,2	2.907	37,0	371	9,4
Yugoslavs	193	1,4	117	4,2	158	1,1	85	2,4	60	0,8	633	16,1
French	83	0,6	–	–	71	0,5	–	–	37	0,5	–	–
Moroccans	97	0,7	–	–	–	–	–	–	490	6,2	1.368	34,9
Turks	–	–	–	–	–	–	–	–	1.807	23,0	–	–
Spaniards	–	–	–	–	753	5,4	–	–	968	12,3	286	7,3
Greeks	–	–	–	–	583	4,2	–	–	444	5,6	–	–
Others	793	5,7	854	30,6	704	5,0	762	21,5	323	4,0	511	13,0
Total	**13.903**	**100**	**2.789**	**100**	**14.035**	**100**	**3.534**	**100**	**7.866**	**100**	**3.928**	**100**

Sources: Annales des Mines de Belgique, 1956, pp. 93–94; Technische kenmerken van de Belgische steenkolenontginning in 1958, in: Extrait des Annales des Mines de Belgique, Brussel 1959, p. 826; Technische kenmerken van de Belgische steenkolenontginning in 1965, in: Extrait des Annales des Mines de Belgique Brussel 1966, p. 1210; Verslag van de Inspecteur-Generaal der Mijnen over 1954, resp 1958 en 1965.

In 1958 the Italians held the leading position among foreign workers in the Dutch mines. After the first post-war groups of Italians who were already recruited in 1949 as part of the Dutch-Italian agreement,[42] the acute shortage of miners in 1955 caused once again a recruitment of Italian workers. Those campaigns provided the Dutch mines with more than 3.000 labourers.[43] The turnover among those Italians was large.[44] This was the main reason why their share decreased strongly during the sixties. They were the main victims of the 1958–1960 coal crisis.

The mining management had to appeal again for workers from non-Dutch origin in the years 1961–1965. The coal crisis of 1958 had made clear that the role of coal on the international energy market was on the wane. Many Limburgers lost their confidence in the future employment opportunities in the mines. Especially young miners left underground work and took advantage of opportunities in other sectors to pursue a career elsewhere. From the

42 Tinnemans, p. 17.

43 Verslag van de Inspecteur-Generaal der Mijnen over 1955, p. 15 and Idem over 1956, p. 16; Verslag GSL aan MIR 1957, p. 25.

44 Segers, *75*.

end of the fifties, the German labour market, where workers received up to 35 percent more wage, started to attract Limburg workers.[45] In these same years the lead of wages in the mining industry above other industrial sectors began to disappear.[46] Labour scarcity in the Dutch mines thus became more critical. Mining management decided to recruit again foreign miners in 1961.[47] In the four years until the announcement of the closing of the mines in December 1965, the number of mine workers from foreign origin, especially for the underground work, strongly increased.

In the years after 1965 the labour market for miners stagnated even further. From that year on the coalmining industry gradually came to an end. Recruitment policies were replaced by redundancies, replacement and retraining. The gradual reduction of the employment also meant a decline of the number of foreigners. The percentage of foreign workers in the total work force nonetheless stayed quite stable until the end of 1969, between 12 and 13 percent. In the beginning of the seventies, however, the young local miners left the mines much quicker than was anticipated. In a new recruitment campaign in 1970 the Dutch mining companies attracted a group of approximately 700 foreign miners.[48] This group was responsible for the growth in the number of foreigners that year.

In the beginning of the sixties, the Dutch mines started to recruit Spaniards and Yugoslavs. However, in the sixties and seventies, Moroccans were the most prominent group of foreigners. The first Moroccans arrived in Limburg by the end of 1963. They came from the coalmines in Northern France. The mining companies did not actively recruit these groups. The Moroccan miners applied spontaneously.[49] By the end of 1965 one out of three foreign mine workers in the Netherlands had the Moroccan nationality, five years later this share had already risen to half of the foreign labour force. From 1970 onwards the Dutch mines recruited directly in Morocco. These campaigns also provided skilled miners, experienced by previous stays in Western European mining regions.[50]

The Liège mines: disappearance of a tradition of mine work

Contrary to the Dutch companies, who in the construction phase of mining in Limburg until approximately 1930, had to convince the local labour force to engage in mining, the management of the Liège mines had difficulties to maintain the traditional supply from miners families, which had developed in the course of the nineteenth century.[51] From about

45 F.A.M. Messing, Geschiedenis van de mijnsluiting in Limburg. Noodzaak en lotgevallen van een regionale herstructurering 1955–1975, Leiden 1988, p. 180.
46 Ibid., 12.
47 Verslag van de Inspecteur-Generaal der Mijnen over 1961, p. 76.
48 Idem over 1970, p. 55.
49 H. Moritz: Marokkaanse gastarbeiders bij mijnen Laura en Julia, thesis Sociale Akademie Sittard z. j., pp. 7–10.
50 Cranssen, pp. 132–135.
51 Frank Caestecker: Vervanging of verdringing van de buitenlandse mijnwerkers in Limburg. De emancipatie van de Limburgse mijnwerkers. Migratie naar het Limburgse mijnbekken. Een vergelijking met

1890 onwards the demand for miners rose fast. The market for domestic coal became much larger, due to changing heating habits. In Liège, where a lot of domestic coal was produced, the employment of mine workers increased spectacular. Between 1880 (22.305 workers) and 1913 (38.432 mine workers) the number of mine workers in the Liège mines almost doubled.[52]

1900–1935: Flemish commuters and foreign workers

The recruitment of miners became more difficult because of developments on the supply side. Towards the end of the nineteenth century, the traditional mining families developed an ambition to keep their children out of the mines and more often choose alternative employment for their children, supported by the development of technical and professional education.[53] Miners choose to limit the number of births, so they could provide their children with more opportunities.[54] The tradition of both father and son going down the shaft slowly started to disappear. The lack of sufficient supply from the beginning of the twentieth century on, lead to a fast expansion of the labour market for miners to the rest of Belgium. Especially after the agrarian crisis of 1885, Flemish workers were attracted by the Liège mines. The introduction of cheap rail passes, as a strategy of the Catholic government to fill the gap of workers in the industry with the surplus from the agrarian sector, enabled Flemings to come to the industrial basins of the Walloon provinces.[55] Some of them commuted daily or weekly to the industrial centres and many eventually settled in Liège.[56] The industrial censuses of 1910 show that 3.506 Flemish commuters were working in Liège. That added up to more than four percent of the total employment. They particularly originated from the districts of Hasselt, Tongeren and Leuven in the nearby Belgian provinces of Limburg and Brabant.[57]

The flood of Flemish migrants towards Liège diminished with the outbreak of the First World War in 1914. After the war, new alternatives presented themselves. The ones who chose to become a mineworker could now find a job closer to home, in the newly exploited

de migratie naar de Waalse mijnen (1920–1940), in: Limburg-Het Oude Land van Loon 77 (1998), pp. 309–325, p. 323.

52 L'industrie en Belgique. Exposé d'après le recensement de 1880 de l'état des principales industries, Brussel 1887.

53 Frank Caestecker: Centraaleuropese mijnwerkers in België, in: Morelli, p. 165.

54 Caestecker: Vervanging of verdringing, p. 313.

55 The birth rate in rural Flanders was higher than in the industrialised Walloon part. C. Vandenbroeke: Sociale geschiedenis van het Vlaamse volk, Beveren/Nijmegen 1981, pp. 94–108. Also Caestecker: Vervanging of verdringing, 310; Pascal Verbeken: Arm Wallonië: een reis door het beloofde land, Amsterdam/Antwerpen 2007, passim.

56 M. Poulain en M. Foulon: L'immigration flamande en Wallonie: évaluation à l'aide d'un indicateur anthroponymique, in: BTNG 12 (1981), p. 226.

57 Y. Quairiaux: Les stéréotypes du Flamand en Wallonie (1857–1914): images et réalités. Essai au départ des sources dialectales wallonnes, explications politiques et sociales, Louvain-la-Neuve 2003, pp. 8–12.

Belgian Limburg basin.[58] Many Flemish miners, however, continued to work in the Walloon basins, because of unsafe working conditions, the intensity of labour and the authoritarian social relations in the recently opened Belgian Limburg mines. The development in the steel and building industries at the end of the twenties offered nevertheless new opportunities for the Flemings and they increasingly left the Walloon mines.[59]

The arrival of the Flemish work force was not enough to cover shortages in the local labour force. The exodus of the Walloons out of the mines turned out to be permanent. Like mining companies in most other basins, the management of the Liège mines had to appeal for miners from abroad. Still, this was a gradual process. In 1923 the number of mine workers with a non-Belgian nationality in the Liège mines was still limited. The 2.512 foreigners made up only 5,7 percent of the total labour force.[60] This points out that the mines in Liège at that time could still find a sufficient number of workers on the national labour market. In 1930, the last normal year before the Great Depression, the number of foreign mineworkers had risen in comparison with seven years before, but the percentage of 16,3 was only half of that in the Dutch mining industry. At that time there were still mines in Liège where virtually no foreigners were employed.[61]

Table 1 shows another remarkable difference. While the Dutch mining companies were able to draw from the German hinterland for their employment, Liège mines had to rely on foreigners from further abroad. Two nationalities were relatively well presented in 1923: Poles (33 percent) and Italians (31 percent). Also North Africans, the so-called Maghrib,[62] constituted a part of the foreign miners. The Poles were generally skilled workers, originating directly from the mining region of Silesia, or so-called Ruhr-Poles, who had a past as miner in the German Ruhr area. The North African migration towards Belgium at that time resulted from a migration flow that was originally directed to France. Allured by better wages for the same work, these Maghrib migrated from the French to the Belgian coalmines.[63] Apart from spontaneous migration, the presence of Italian workers in Liège resulted from specific recruitment campaigns by *Fédéchar* (*Fédération des Charbonnages de Belgique*, the employer's organisation of the Belgian mines) that started immediately after the First World War in the period of post-war reconstruction. *Fédéchar* signed a first agreement with the Italian authorities in 1922.[64]

58 Frank Caestecker: Vakbonden en etnische minderheid, een ambigue verhouding. Immigratie in de Belgische mijnbekkens, 1900–1940, in: Brood en Rozen. Tijdschrift voor de Geschiedenis van Sociale Bewegingen I (1997), pp. 51–63, p 60.

59 Caestecker: Vervanging of verdringing, 312–313.

60 Annales des Mines de Belgique (1928), pp. 246–247.

61 RAH, archief Fédéchar, inventarisnummers 1579–1581, personeelsstatistieken. Also in the Netherlands existed differences according to mining company. State mines had in 1930 only 22 percent foreigners employed, less than half of the percentage employed foreigners in the private mines (46 percent foreigners) Figures: Verslag Hoofd-Ingenieur der Mijnen over 1930; Jaarverslag Staatsmijnen 1930.

62 Migrants originating from the Maghrib: Algeria, Morocco and Tunisia.

63 R. Attar: De geschiedenis van de Maghrebijnse immigratie naar België, in: Morelli, p. 298.

64 A. Morelli: De immigratie van Italianen in België in de 19de en 20ste eeuw, in: ibid, pp. 197–200.

The decrease in employment during the crisis of the thirties did not in the first place affect the foreign labourers in the Liège mines, as had been the case in the Netherlands. In Liège, the number of Belgian miners declined between 1930 and 1935 with 22,7 percent, the number of foreigners with 16,2 percent only. This indicates that, in spite of the crisis, the exodus from both regional Walloon and Flemish miners from the Liège mines continued. The traditional mining families kept abandoning the pit if possible. The Flemings from the south of Belgian Limburg often choose to continue their career as miner in the new mines in the region itself.[65] Whereas the crisis of the thirties caused the creation of a core of local workers in the Dutch mines, the opposite happened in Liège. Walloon and Flemish miners turned their backs on the Liège mines for good. A regional tradition of pit work disappeared: from now on the Liège mines would become strongly dependent on workers from abroad.

1936–1970: a foreign legion of miners

Contrary to the situation in the Netherlands, the Liège mines were obliged to recruit miners abroad to fill the gap already in the second half of the thirties. Between the end of 1935 and the end of 1939, the number of jobs in the mines of Liège increased with 698. In that same period, the number of foreigners in coal mining grew with well over 1.800: the process of replacement of Belgian by foreign workers thus continued after the crisis.

In the years directly after the war there was an explosive growth in the number of foreign miners. Between the end of 1944 and the end of 1952 the number of miners with a non-Belgian nationality became six times larger. In those years the number of Belgians in the Liège mining industry decreased with more than 3.000 workers. It was clear that Belgians did not want to work any longer in the Liège mines. The aversion of the local population to become a miner was very strong, certainly concerning underground work.[66] For the Belgian workers the old-fashioned Walloon mining industry had obtained a pitch-black reputation.[67] Thanks to the economic revival, enough job opportunities were available elsewhere. Dangerous and unhealthy underground labour was no longer considered as a serious option.

The employment of German prisoners of war offered temporary relief. By the end of 1945, 8.469 of them worked underground in the mines of Liège. A year later there were still 7.795 prisoners of war at work.[68] Because of growing international pressure, those prisoners of war had to be discharged in 1947. Their departures lead to new efforts from the mining management to recruit a substitute labour force. This was mainly found abroad. The enormous rise in the number of non-Belgians in the Liège mines in 1947 indicates this.

Because Belgians abandoned the mines *en masse*, the 'battle for coal' declared by Prime Minister Achille van Acker in 1945, was fought in the Liège mines by a foreign legion. Table 2 shows where these 'fighters' on the coalface came from. In 1954 the foreign group existed

65 Caestecker: Vervanging of verdringing, pp. 315–316.
66 Demeure de Lespaul: L'Avenir de notre production de houille, p. 18.
67 Leboutte: 'Coal mining', p. 220.
68 Annales des Mines (1946–1947).

for almost two thirds of Italians. As soon as June 20th 1946 *Fédéchar* had reached an agreement with the Italian authorities to organise a mass migration of Italian workers, in exchange for the delivery of Belgian coal, necessary for the recovery of the Italian economy after Second World War.[69] Approximately 12.300 among them began to work in the Liège coalmines between 1946 and 1949.[70]

The Italians in the mines of Liège outnumbered the Poles, the second largest group of foreigners in the Liège mines. The first post-war group of Polish migrants came to Belgium in 1945.[71] Just like the Poles who were employed in the Dutch mines, they belonged to the group of 'displaced persons'. In the spring of 1947, a second group of Poles came over from refugee camps in Germany. An estimated thousand among them were employed in the Liège mines.[72]

A third group of foreigners in the Liège mines were the Dutch. In most cases these were commuters, who were recruited in South Limburg. Often the mining companies provided transport by bus. The Dutch cross-border workers were attracted by the higher wages they could earn in the Liège mines. For hundreds of Dutch workers these financial benefits compensated for the poor reputation of the Liège mines. In the first half of the fifties, ten to thirteen percent of the underground labour force of the mines in Blegny-Trembleur, Cheratte and Queue-du-Bois (all three located relatively close to the Dutch border) consisted of Dutch commuters.[73]

In the second half of the fifties the presence of non-Belgians in the mines of Liège continued to be very important. The portion of foreign miners increased between 1952 and 1958 from 53 to 58 percent. Nonetheless, fluctuations in the absolute number of foreigners can not be overseen. Leboutte demonstrated that these fluctuations correlated with the yearly coal stocks of the mines. The size of these stocks can serve as indication for the situation on the coal market. In the fifties an increase in the coal stocks seemed to be accompanied by a decline in the recruitment of foreign workers.[74] This happened in 1949–1950, 1953–1954 and 1958–1961. In those years the number of foreign miners decreased faster than the number of Belgian miners. A part of the foreign workforce was definitely seen as stand-by, they could be laid off whenever they weren't needed anymore.[75] Then again, in times of rising markets (1951, 1955–1957 and 1962–1964), there was an increase in the number of foreigners. Indeed the same mechanism as in the Netherlands occurred: a recovery of the economic situation provided more job opportunities outside the mining industry, and many took advantage of

69 Morelli: De immigratie van Italianen, p. 202.

70 Gaier: p. 163.

71 Idesbald Goddeeris: De Poolse migratie in België, 1945–1950: politieke mobilisatie en sociale differentiatie, Amsterdam 2005, p. 141.

72 In total 3.917 'displaced persons' were employed in the Liège basin during 1947. Most of them worked in the coal mines. Almost half of the 'displaced persons' who arrived in Belgium in 1947 and 1948 had the Polish nationality. The other half consisted of twenty other, mainly East European, nationalities. Goddeeris, pp. 156–159

73 Willibrord Rutten: Werken over de grens, in: Weet je nog koempel? De mijnen in Limburg, Zwolle 2005, pp. 441–464, pp. 447–451.

74 Leboutte: Coal mining, p. 222.

75 Ibid.

this situation to exchange underground labour for a more pleasant occupation elsewhere. Those workers had to be replaced by foreigners.

The composition of the foreign work force in 1958 (table 2) does not show much difference with the situation four years earlier. Italians still formed the biggest group, Poles and Dutch followed, but with a significant lower number. For the first time also Spaniards and Greeks were mentioned in the statistics. The arrival of these new nationalities was connected to the loss of the traditional Italian labour force. After the mining disaster of Bois-du-Cazier in Marcinelle (close to Charleroi) in 1956, which made 263 victims, including 136 Italians, the Italian government put the official migration towards the Belgian mines to a stop. This did not mean that the spontaneous migration came to an end, but *Fédéchar* and the Belgian government felt nonetheless the need to make recruitment agreements with other countries, like Spain (in November 1956) and Greece (in August 1957).

The coal crisis of 1958 was the final blow for the lingering mining industry in Liège. Employment plummeted and also the number of foreigners declined. Since the Belgian labour force decreased even faster, the percentage of foreign workers further increased: in 1963 it added up to 64 percent, in 1968 to 68 percent and in 1971 to 70 percent. Mid-seventies there were mines in the Liège region that even did not employ any Belgians for underground work.[76]

In the sixties the field of recruitment was once again extended: also Turks and Moroccans were now systematically recruited.[77] In July 1964 a bilateral treaty between Belgium and Turkey was signed, on August 17 a treaty with Morocco followed.[78] In table 2 we can see that these groups were already employed in the Liège mines in 1965. The Turks even took up the second place after the Italians. Also the Spaniards were better represented than in 1958. The Dutch remarkably stayed away. With only a 2,4 percent share in the foreign employment, they had become marginal.

The structural decay of the Liège mining industry caused a fast decline in the appeal of this labour market, also for foreigners. Nonetheless the demand for underground miners continued to be big. In 1969 a recruitment agreement was reached with Tunisia; a year later a similar deal with Algeria was made. These countries delivered the last batch for the foreign legion, which kept the mining industry in Liège alive until 1980.

Conclusion

In the twentieth century, the coal mines in the neighbouring regions of the Dutch province of Limburg and the basin around the Belgian city of Liège had to fall back regularly on labour migrants from abroad. The extent to which employers had to make an appeal for foreign workers, gives an indication of the situation on the regional and national labour market. The contrasting developments of foreign labour recruitment in the Liège and Dutch

76 Gaier p. 165.
77 Grimmeau, p. 125.
78 A. Bayar (m. m.v. L. Ertorun): 'Een economisch overzicht van de Turkse inwijking', in: Morelli, p. 318.

coalfields did reflect both regional and national differences. Before World War I and in the Interwar years until the 1930s, both mining districts attracted most migrant labour from other nearby regions: Liège from the Flemish speaking provinces in Belgium itself; Dutch Limburg from the adjacent German mining regions. For that reason the recruitment of foreign miners was considerably larger in the Netherlands than in Liège. In the older mining basin of Liège a solid core of local families had transferred the occupation of miner from generation to generation from the nineteenth century. In the period until ca 1935 this tradition started to disappear slowly but surely, but the mines in Liège could still find reasonable quantities of workers on the inner-Belgian labour market. Labourers from other parts of Belgium, especially from Flanders, replaced the Walloon miners.

The Dutch mines found themselves in a totally different phase in their development. Only just before the turn of the century the, until then, marginal Dutch mining industry entered a new period, characterized by the quick development of large-scale and modern mining pits. In the construction phase until the beginning of the thirties, the regional and national labour supply was not, or barely, familiar with the occupation of coal miner, and was not able to meet the demand. Especially for skilled underground miners the employers had to rely on foreign countries. The German hinterland provided the majority of those experienced miners. Together with migrant groups from East and Central European countries, who were mainly recruited in the second half of the twenties, they played an important role in the extraction of coal. They also provided practical training for their fellow workers underground from Limburg and the rest of the Netherlands to the extent that these could replace migrants. In the 1930s this enabled the mining companies to follow Dutch national labour market policies to dismiss foreign workers before miners of Dutch origin.

While the Dutch mines succeeded in setting up a mining tradition in their region, this tradition disappeared in Liège. There the exodus of traditional Walloon miners continued during the years of crisis. Also the Flemings stopped coming, when they found an alternative in the new mines of Belgian Limburg closer to home. Already in the 1930s the Liège mines had to rely on migrant labour more than ever before.

After the Second World War developments accelerated. Demographic and labour market conditions in the – nationally speaking – rather isolated province of Limburg enabled the Dutch mines to interest young Limburgers for a career in the mine with the help of a system of internal professional training. In post-war Netherlands foreign recruitment acted as a buffer to absorb cyclical fluctuations. Dutch workers formed the core of employment. The mines in Liège, on the other hand, were much more dependent on labour migrants. The presence of foreign workers in the underground became structural, as Belgians were hardly willing to work in the mines of Liège that had a notorious reputation of being dangerous.

Net coal production, total labour force and foreign labour force in the coal mines of Liège and Dutch Limburg, 1900–1974

	net coal production (× 1.000 tons)		Total labour force		Foreign labour force	
	Liège	Limburg	Liège	Limburg	Liège	Limburg
1900	6.191	320				
1901	5.784	311				
1902	6.236	391				
1903	6.444	458				
1904	5.887	447	34.815	1.948		
1905	5.874	486	33.719	2.579		429
1906	6.014	549	34.553	3.013		493
1907	5.779	723	34.505	4.694		922
1908	5.917	908	36.505	5.374		1.074
1909	5.987	1.121	36.792	6.448		1.408
1910	6.141	1.292	37.210	7.238	5.045	1.664
1911	5.763	1.477	36.718	7.991		1.879
1912	6.184	1.725	37.878	9.228		2.036
1913	5.998	1.873	38.432	10.728		2.567
1914	4.135	1.937		10.429		1.997
1915	4.008	2.260		11.718		2.598
1916	4.223	2.586		14.300		3.321
1917	3.156	3.017		17.676		4.178
1918	3.113	3.414		20.196		3.196
1919	4.406	3.421	34.006	23.045		3.765
1920	5.439	3.961	39.216	27.058		6.324
1921	5.016	3.941	41.166	26.556		6.050
1922	5.164	4.602	38.888	27.538		6.406
1923	5.413	5.327	43.776	29.519	2.512	6.447
1924	5.516	5.924	41.019	30.492		5.559
1925	5.199	6.892	38.192	31.322		6.495
1926	5.538	8.702	38.112	33.350		7.944
1927	5.835	9.374	40.675	34.763		9.151
1928	5.799	10.749	36.845	34.681		9.366
1929	5.477	11.581	32.857	37.585		11.705
1930	5.487	12.211	39.034	37.504	6.232	11.969
1931	5.495	12.901	38.290	37.946	6.424	11.863
1932	4.442	12.756	35.953	35.170	5.814	9.708
1933	5.101	12.574	34.051	32.771	5.601	7.743
1934	5.238	12.341	30.679	29.907	4.997	5.693
1935	5.188	11.878	30.579	28.736	5.220	4.564
1936	5.224	12.803	30.872	29.288	5.457	3.987
1937	5.400	14.321	32.871	31.960	7.507	4.169

	net coal production (× 1.000 tons)		Total labour force		Foreign labour force	
	Liège	Limburg	Liège	Limburg	Liège	Limburg
1938	5.514	13.488	33.230	32.119	7.152	3.766
1939	5.516	12.861	31.277	34.034	7.032	3.476
1940	4.596	12.145	29.939	37.118	4.850	3.443
1941		13.356	28.886	40.585	3.824	3.591
1942		12.330	26.898	42.382	3.621	3.645
1943		12.497	27.824	42.233	4.520	3.587
1944		8.313	20.651	37.002	2.921	1.599
1945	2.317	5.097	21.529	33.117	3.753	1.447
1946	3.609	8.314	25.584	36.149	8.950	1.957
1947	3.912	10.104	31.910	38.817	14.843	3.333
1948	4.062	11.032	33.315	40.918	16.509	3.754
1949	4.494	11.705	31.156	45.354	14.520	4.519
1950	4.465	12.247	29.724	47.230	13.667	4.285
1951	4.784	12.424	31.731	50.679	16.741	3.970
1952	4.956	12.532	31.311	53.881	16.747	3.888
1953	5.003	12.297	30.268	54.260	15.975	3.680
1954	4.962	12.071	28.886	55.696	14.746	3.610
1955	4.818	11.895	28.722	54.984	15.537	3.781
1956	4.531	11.836	27.185	55.330	14.964	4.855
1957	4.322	11.376	27.981	55.707	16.297	5.883
1958	4.068	11.880	25.665	56.426	14.853	4.868
1959	3.823	11.978	21.897	54.017	12.722	3.731
1960	3.537	12.498	17.962	51.503	10.539	3.513
1961	3.069	12.621	16.117	49.613	9.442	3.339
1962	3.080	11.573	15.435	49.408	9.534	4.104
1963	3.081	11.509	15.783	47.678	10.126	4.495
1964	3.076	11.480	16.076	47.157	10.939	5.654
1965	2.693	11.446	12.711	45.251	8.685	5.818
1966	2.261	10.052	10.123	39.272	6.841	4.896
1967	1.880	8.065	8.533	31.909	5.757	3.582
1968		6.663	7.485	26.708	5.049	2.947
1969		5.564	5.717	22.325	3.929	2.539
1970	1.300	4.334	5.356	19.696	3.699	2.776
1971		3.609	4.549	16.874	3.182	2.464
1972		2.812	4.210	14.803	2.993	1.975
1973		1.722	3.588	11.674	2.541	1.307
1974	602	758				

Sources: Annales des Mines de Belgique; Verslag van den (Hoofd-)Ingenieur/Inspecteur-Generaal der Mijnen