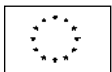


50 years of the ECSC Treaty

Coal and Steel Statistics

Data 1952-2002



EUROPEAN
COMMISSION



THEME 4
Industrie,
trade and
services

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The ECSC Treaty was the first European Community Treaty ever ratified. Concluded for a period of fifty years the Treaty expires on 23rd July 2002.

The European Coal and Steel Community: origins and motives

The Heads of State of the six Member States Germany, Belgium, France, Italy, Luxembourg and the Netherlands.

'RESOLVED to substitute for age-old rivalries the merging of their essential interests; to create, by establishing an economic community, the basis for a broader and deeper community among peoples long divided by bloody conflicts; and to lay the foundations for institutions which will give direction to a destiny henceforward shared,

HAVE DECIDED to create a European Coal and Steel Community ...' This Community ... 'founded upon a common market, common objectives and common institutions,' ... 'shall have as its task to contribute, ..., to economic expansion, growth of employment and a rising standard of living in the member States.'

**ECSC Treaty,
signed in Paris on 18 April 1951**

Why coal and steel?

Up to the two World Wars and for some time afterwards, these were the two major dominant large industries; they were closely dependent; as heavy industries they represented the key to economic development.

The political impetus for a specific Community was guided by the vision of a new motor for Western Europe, aiming at both greater European cohesion, and at the economic level, security of supply. The economic measures of this treaty, formulated in 1950 and 1951, were strongly influenced by the predominant policy of this time: active government intervention in systems of supply and distribution for the important industries in the form of indicative planning. Over the life of the Treaty, this was replaced by reliance on free market mechanisms, accompanied by privatisation of publicly held coal and steel companies. It was therefore logical that at the end of the Treaty, the Council of Ministers did not extend its life, so that the ECSC industries would henceforth be treated like any other EU industry.

The institutions of the European Coal and Steel Community

In order to make the Community operational, the following institutions were created:

- a High Authority, assisted by a Consultative Committee,
- a Common Assembly,
- a Special Council of Ministers,
- a Court of Justice.

The High Authority and the information system based on Article 47 of the ECSC Treaty

The High Authority, as an executive body, was charged with ensuring that the objectives set by the treaty were carried out. It was empowered to collect the information necessary for the achievement of its mission; nevertheless it was required not to reveal information relating to professional secrecy. To this end, the High Authority created a Statistical Division, which was the predecessor of the Statistical Office of the European Communities, Eurostat.

For the steel sector, a very extensive information system was developed due to the needs for economic analysis at the time. Supply shortages encouraged an extremely detailed data collection programme for all stages of production, from raw materials upstream to steel consumers.

For policy purposes, this statistical data was not considered later as outmoded. Especially during the later steel crisis, there was a strong need for detailed statistical data.

The task of developing useable statistics for the Community was not easy. After the war, information was only rudimentary, with the definitions and the collection procedures varying widely according to Member State. A long harmonisation process led to integration and the comparability of the statistical data.

Important applications of ECSC coal statistics

From the beginning of the 1960s the crisis in the coal industry became more and more apparent. Statistics took on an ever-greater importance to ensure the transparency of the market. In 1965 a system of Community state aid for the industry was introduced, which remained in place until the expiry of the Treaty. Comparative analysis of reliable statistical data on production, prices, yields and investment allowed distortions due to competition to be eliminated. Such analyses led to restructuring of the sector and to effective accompanying social and regional policies in many areas dominated by this single industry.

Important applications of ECSC steel statistics

A *The quota system for production in the event of a manifest crisis according to Article 58 of the ECSC Treaty*

In the event of crisis where the measures generally provided for in the treaty were proving insufficient, the High Authority/the European Commission could, based on the expected demand, introduce a production quota system with the agreement of the Council and after consultation with the Consultative Committee.

This radical measure was applied to the steel market in 1980 following a marked decline in orders and resulting overcapacity, and remained in force until 1988. Such an economic situation resulted from a jump in costs at a time of falling prices. The introduction of the quotas was made to stabilise prices.

The fixing of quotas generated disputes: which choice of the products and what quotas should be allocated to each company? The European Commission, the governments and the industries of the Member States had need in particular for statistics on the number of production installations, their maximum capacity, the investments planned for new facilities or expansion of existing ones, as well as statistics on the production of a broad panoply of the iron and steel products. It was only in this way that they could have an idea of the importance of the various products as such and within the different Member States so that they could establish production quotas on the basis of the capacity/production of the iron and steel companies.

This measure, so urgent at that time, would have failed if the Commission and the iron and steel associations had not had this harmonised and official statistical data to hand.

B System of aid for redundant employees of ECSC industries according to Article 56.2(b) of the ECSC Treaty

This non refundable system of financial aid, integrated later into the ECSC Treaty, covered a number of individual measures such as: encouragement for re-employment, supplements to wages in the event of less well paid work, aid for retraining, and aids for early retirement. These individual measures complemented the national social security benefits, which are still different today in the Member States. The authorisation of the European Commission for this ECSC aid depended on the provision of national financial contributions of an equal amount.

These measures proved positive for providing aid to those affected by the great structural difficulties of the coal sector in the 1960s and steel sector in the 1970s. These ECSC measures were based on ECSC employee statistics by production process. This aid was granted to the employees directly concerned by works closures or production cutbacks.

Meticulous prior checking by the governments of the Member States and an agreement of the European Commission were essential; this more especially as during the decades, substantial financial resources had been given to companies and employees. Without the aid of detailed official statistics (employees, capacities and production), these important structural measures could not have been carried out objectively.

C Specific uses of the ECSC statistical data and international obligations

Across the years and especially during the long years of crisis, there were continuously new requests concerning detailed studies, specific uses, or methodological questions. Among them were counted apparent steel consumption in general, and by branches, the raw materials balance sheets, and the study of appropriate methods for the calculation of productivity.

All this would not have been made possible without the results of the extensive ECSC programme of statistical data gathering. These kinds of special actions provided policy makers with the necessary statistical tools.

The broad panoply of the ECSC statistical results also were useful for meeting international obligations in the OECD Steel Committee and the OECD and ECE Working Parties. Collaboration with these groups was necessary because the coal and steel crises were not limited exclusively to Western Europe.

Dissemination of information: developments in the field of ECSC statistics

At every stage – at the level of the statistical data collection, checking, treatment, and publication – there were changes due to the rapid evolution of information and communication technologies.

In the early years, the gathering of data, checking and treatment were carried out manually on paper. By the 1980s, procedures had changed, due to the creation of a data bank and questionnaires adapted to computerised processing. Initially, the data in the questionnaires was added manually to the data bank; on the other hand further treatment and the checks were computerised. During the 1990s, electronic data transmission was introduced, progress which greatly reduced the amount of manual updating.

For many years, publications appeared exclusively in printed form. At the beginning, people worked using manuscripts, to pass later to the printing by computers. Today, DTP procedures (desktop publishing) are used. Publications continue to be available in printed form, but to these have been added publication via data bank and CD-ROM.

The legal bases for the collections of information of statistics

For many years, the legal framework of the ECSC Treaty (Article 47) was sufficient for the collection of statistics.

Coal

The statistical system on coal was based for a long period on a voluntary agreement with the Member States. In 1991, the Commission decided to consolidate and rationalise this system by creating legal obligations (Decision 612/91/ECSC and Recommendation 91/141/ECSC). Thereafter, and in order to harmonise the collection of information with other international authorities, Recommendation 2393/96/ECSC was created by using the Eurostat/IEA/UN common questionnaire as a basis for providing statistical data.

On the one hand, this questionnaire will be the basis for collection of information after the end of the ECSC Treaty. On the other hand, the legal basis for PRODCOM was extended to cover the production of solid fuel products.

Steel

As a result of the crisis of the 1980s, a new system of questionnaires were drawn up, which were the subject of ECSC Commission Decision 1566/86 of 24 February 1986. Other subsequent Commission Decisions amended or annulled questionnaires, or added new ones.

The expiry of the ECSC Treaty in mid 2002 required new legal bases to enable the continuation of iron and steel statistics. In order not to stop certain important series mid year, a draft regulation foresees the continuation of collection of iron and steel statistics up to the end of 2002.

As from 2003, statistics on iron and steel products will be transferred to the PRODCOM statistical system. Certain annual statistics (the scrap balance sheet, fuel and energy consumption, the electric energy balance sheet, investment and capacity) not being able to be incorporated into existing statistical systems, will be collected under a new draft regulation for a seven-year transitional period.

At the policy level, the industries covered by the ECSC Treaty have become an integral part of the EU Treaties; at the statistical level the aim has been to transfer coal and steel statistics to existing Community statistical systems.

Yves Franchet,
Director-General, Eurostat

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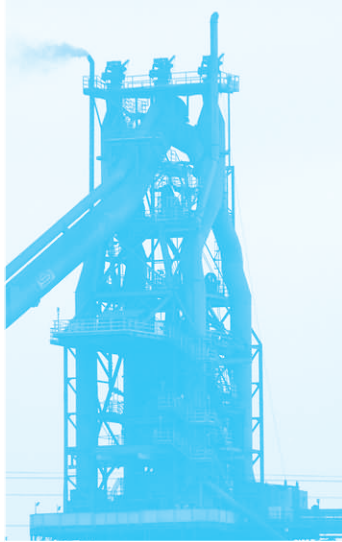
The data in this publication come from Eurostat's ECSC statistics systems and from that of the Directorate-General for Economic and Financial Affairs – DG ECFIN.

The publication presents in two separate parts coal and steel statistics from 1952 onwards, when available. The data is presented in approximately 5-year sections but does also take into account the years of enlargement of the EU.

The information is provided in tables, texts and graphs. Harmonised statistics for Member States before they joined the European Union are often not available. For this reason, the EU totals in the tables refer to the members of the EU at specific dates.

The text is not drafted along one unique scheme. In some cases it refers to the information presented in the tables or graphs, in others to data not integrated into the publication, or any other related background information.

In order to be able to look at trends across the whole time period, most of the graphs present indexes which show the growth at the EU level in each time period, using a chaining technique. For example, the 1977 index is calculated by multiplying the 1973 EU-6 index by the growth between 1973 and 1977 of the EU-9 countries.



STEEL

Table 1.1.1 Apparent consumption of ECSC steel in crude steel equivalent

1 000 t		EU	D	F	I	NL	B + L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	33 462	15 578	9 469	4 190	1 737	2 488	← Not part of the ECSC Treaty →								
	1957	48 330	22 971	13 201	6 738	2 418	3 002									
	1962	63 759	29 598	15 181	12 720	2 846	3 414									
	1967	72 907	30 583	17 962	16 992	3 308	4 062									
EU-9	1973	135 204	45 821	26 064	24 627	4 466	5 949	25 895	425	1 957						
	1977	118 338	39 793	21 953	24 561	3 862	5 159	21 058	355	1 597						
EU-10	1981	118 327	41 771	21 085	27 034	3 639	4 950	16 203	459	1 520	1 666					
EU-12	1986	111 655	34 560	15 149	24 756	3 645	4 513	14 444	267	1 499	1 842						9 818	1 162
	1990	125 732	36 801	16 916	29 130	4 004	4 870	16 048	385	1 527	2 244	12 017	1 790			
EU-15 (1)	1995	143 991	39 894	16 595	31 410	5 284	4 274	15 805	555	1 776	2 177	13 807	2 462	3 207	2 566	4 179
	1998	157 631	41 187	18 716	33 839	6 250	4 980	16 101	724	1 881	2 860	17 462	2 877	3 585	2 989	4 180
	2000	163 717	42 614	20 133	34 893	6 060	5 020	14 860	827	1 800	3 588	19 563	3 248	3 646	3 120	4 345

(1) From 1995 on: new calculation method.

Italic: partly estimated.

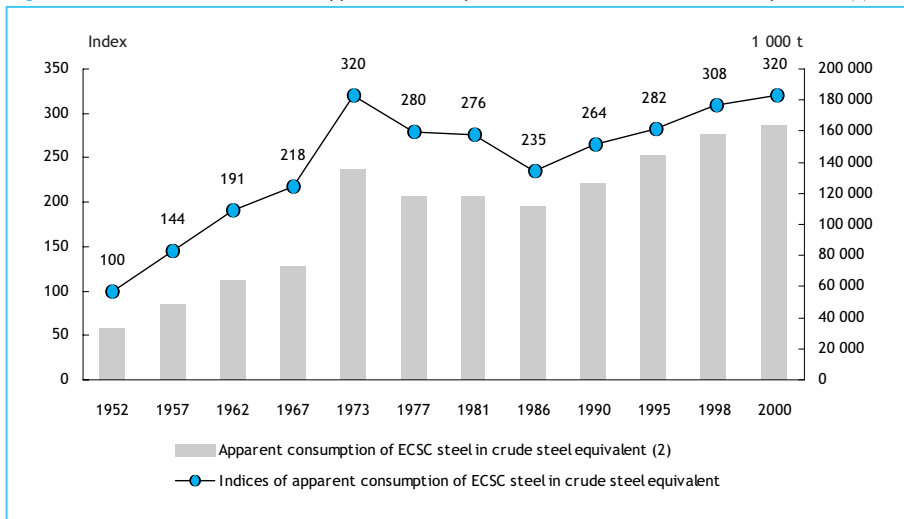
Source: Eurostat.

The apparent consumption of ECSC steel is a measure of the size of a country's steel processing industry. The economic sectors most geared to steel are the car industry, building and public works, along with the manufacture of machinery.

Apparent steel consumption almost doubled between 1952 and 1962, and continued to grow rapidly until 1973. The oil price shocks of 1973 and 1979 reduced the demand for steel. Modest growth resumed in the late 1980's

In the last five years apparent consumption in the EU has reached about 155 Mio tonnes per year, with Germany accounting for 26 % of the total, Italy 21 %, France 12 %, Spain 11 %, the United Kingdom 8 % and the other ten Member States for the remaining 22 %.

Figure 1.1.1 Indices and values of apparent consumption of ECSC steel in crude steel equivalent (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

1.1. SUMMARY TABLES

Table 1.1.2 Gross domestic product in 1995 constant prices

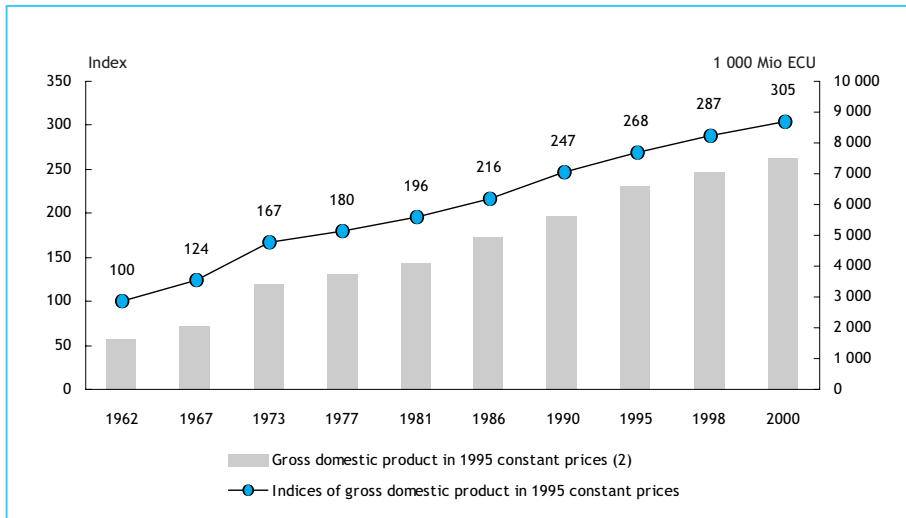
1 000 Mio ECU		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	:	:	:	:	:	:	:									
	1962	1 642.6	739.1	418.0	291.0	111.6	78.7	4.3									
	1967	2 032.5	875.7	541.1	370.8	142.5	97.4	4.9									
EU-9	1973	3 430.6	1 175.3	736.0	494.1	193.1	133.3	6.8	573.0	20.7	98.3						
	1977	3 713.3	1 258.2	813.6	556.0	215.9	145.8	6.9	589.3	25.0	102.5						
EU-10	1981	4 102.5	1 365.2	893.5	634.6	227.5	160.1	7.4	602.3	29.4	104.7	77.7					
EU-12	1986	4 931.8	1 477.4	982.6	701.2	250.1	171.4	9.0	702.3	32.4	122.0	79.9	343.7	59.9			
	1990	5 646.6	1 702.8	1 126.3	787.6	285.8	197.0	11.4	795.3	40.4	124.9	84.5	414.6	75.8			
EU-15	1995	6 588.3	1 880.2	1 188.1	839.0	317.3	211.7	13.8	867.7	50.9	137.8	89.9	446.9	82.6	179.8	98.9	183.6
	1998	7 059.5	1 960.2	1 265.6	880.8	353.8	226.8	16.5	948.1	66.0	149.1	98.6	496.4	93.1	192.9	115.1	196.3
	2000	7 483.4	2 055.4	1 342.7	920.8	379.8	243.0	18.8	997.1	81.6	157.1	106.3	537.9	99.5	204.2	126.6	212.6

Sources: Eurostat, DG ECFIN.

The first twenty years of the life of the ECSC Treaty was marked by years of strong economic growth in the European Community countries.

For example, in the five years to 1967, the growth of GDP in 1995 constant prices averaged 4.4 % per year in the EU-6 countries, and this accelerated to an average of 5.1 % per year in the six years to 1973. Such high rates of growth proved not to be sustainable. There was a marked slowdown after 1973, triggered by a sudden fourfold increase in crude oil prices. GDP grew at an average annual rate of 2.0 % per year between 1973 and 1986. Economic growth recovered to an average of 3.4 % per year for the 12 EU Member States in the four years to 1990, but then fell back to an average of 1.6 % per year between 1990 and 1995. Since then growth picked up for the 15 EU countries, averaging 2.3 % per year between 1995 and 1998, and 3.0 % per year between 1998 and 2000.

Figure 1.1.2 Indices and values of gross domestic product in 1995 constant prices (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Sources: Eurostat, DG ECFIN.

Table 1.1.3 Ratios of steel consumption to the gross domestic product in 1995 constant prices

1 000 t/1 000 Mio ECU		EU	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	:	:	:	:	:	:									
	1962	38.8	40.0	36.3	43.7	25.5	41.1									
	1967	35.9	34.9	33.2	45.8	23.2	39.7									
EU-9	1973	39.4	39.0	35.4	49.8	23.1	42.5	45.2	20.5	19.9						
	1977	31.9	31.6	27.0	44.2	17.9	33.8	35.7	14.2	15.6						
EU-10	1981	28.8	30.6	23.6	42.6	16.0	29.6	26.9	15.6	14.5	21.4					
EU-12	1986	22.6	23.4	15.4	35.3	14.6	25.0	20.6	8.2	12.3	23.1						28.6	19.4
	1990	22.3	21.6	15.0	37.0	14.0	23.4	20.2	9.5	12.2	26.6	29.0	23.6			
EU-15	1995	21.9	21.2	14.0	37.4	16.7	19.0	18.2	10.9	12.9	24.2	30.9	29.8	17.8	25.9	22.8
	1998	22.3	21.0	14.8	38.4	17.7	20.5	17.0	11.0	12.6	29.0	35.2	30.9	18.6	26.0	21.3
	2000	21.9	20.7	15.0	37.9	16.0	19.2	14.9	10.1	11.5	33.7	36.4	32.6	17.9	24.7	20.4

Sources: Eurostat, DG ECFIN.

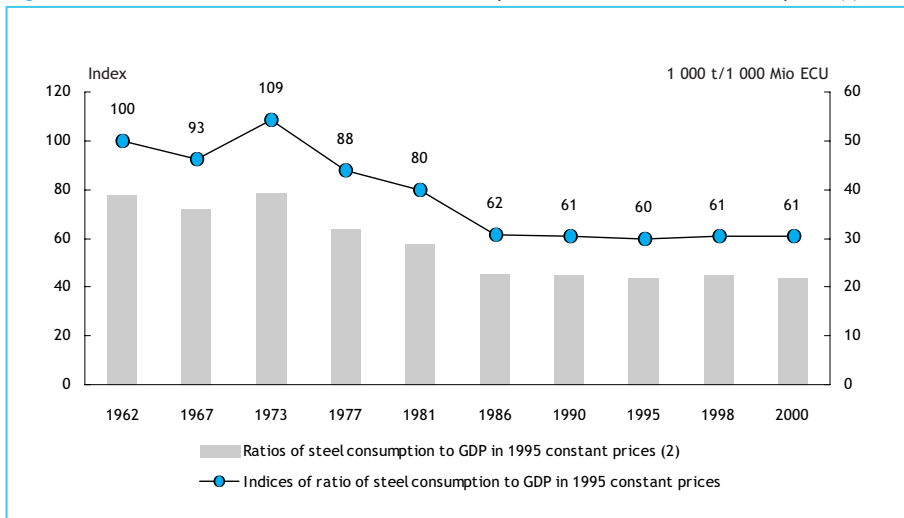
Consumption is expressed in terms of crude steel equivalent and calculated using the following formula:

Production of crude steel

- + consumption of scrap in rolling mills
- + imports from non-member countries and arrivals from other EU Member States (external trade),
- exports to non-member countries and dispatches to other EU Member States (external trade),
- +/- variations in stocks of factories and merchants.

External trade data and variations in stocks are converted to crude steel equivalent using the following coefficients: ingots – 1.00; semi-finished – 1.17; rolled blanks – 1.20; hot rolling – 1.25; track equipment – 1.38; thick and medium plate – 1.35; thin and wide sheet – 1.31 ; other ECSC Treaty products – 1.27.

Figure 1.1.3 Indices and values of ratios of steel consumption to the GDP in 1995 constant prices (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Sources: Eurostat, DG ECFIN.

1.2. PRODUCTION BASES

Table 1.2.1 Total employees in the iron and steel industry – situation at end of year

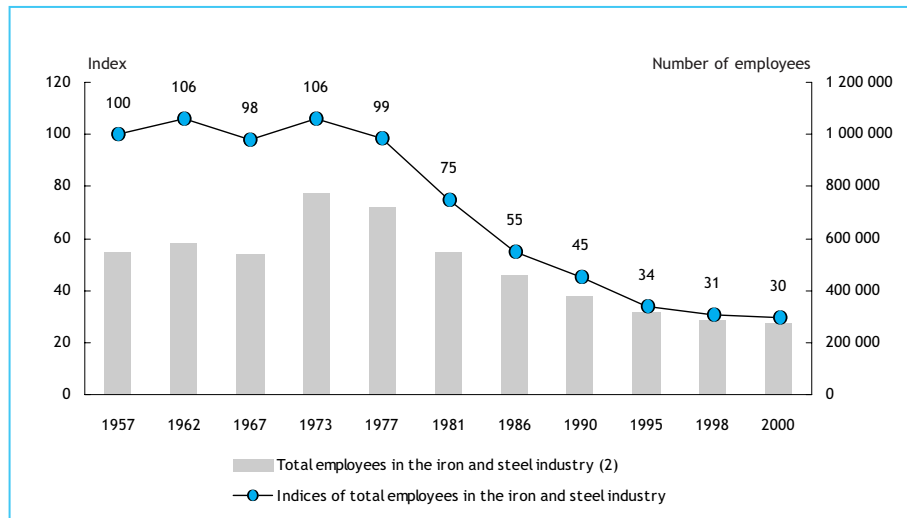
		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	546 700	:	:	:	:	:	:									
	1962	580 336	:	:	:	:	:	:									
	1967	536 349	:	:	:	:	:	:									
EU-9	1973	774 885	228 402	151 740	89 666	23 299	62 417	23 203	196 158	:	:						
	1977	721 619	209 465	142 992	96 593	23 293	49 752	17 437	178 874	704	2 509						
EU-10	1981	548 717	186 685	97 305	95 651	20 911	44 106	13 419	88 247	650	1 743	:					
EU-12	1986	456 901	142 713	68 400	66 368	18 933	30 535	12 274	55 872	580	1 739	4 239						49 617	5 631
	1990	376 838	125 194	46 431	55 955	16 993	26 286	9 302	50 675	659	1 467	3 373	36 448	4 055			
EU-15	1995	314 059	89 138	38 578	40 979	12 508	23 295	5 955	37 948	395	1 148	2 452	24 617	2 570	13 224	7 006	14 246
	1998	286 482	79 651	37 957	38 542	11 898	20 255	4 272	32 487	358	1 239	1 988	22 526	1 790	12 165	8 012	13 342
	2000	276 667	77 311	37 316	39 325	11 440	20 590	4 243	25 465	358	1 060	2 134	22 178	1 433	11 692	9 010	13 112

Source: Eurostat.

Employment in the steel industry grew in the first decade of the ECSC Treaty, but has since steadily declined. At the end of the year 2000, some 277 thousand people were employed in the steel industry.

Germany had the largest national steel production and the most people employed – 77 thousand, followed by Italy – 39 thousand employees, France – 37 thousand, the United Kingdom – 25 thousand, Spain – 22 thousand and Belgium – 21 thousand.

Figure 1.2.1 Indices and values of total employees in the iron and steel industry
Situation at end of year (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

1.2. PRODUCTION BASES

Table 1.2.2 Total registered workers in the iron and steel industry – situation at end of year

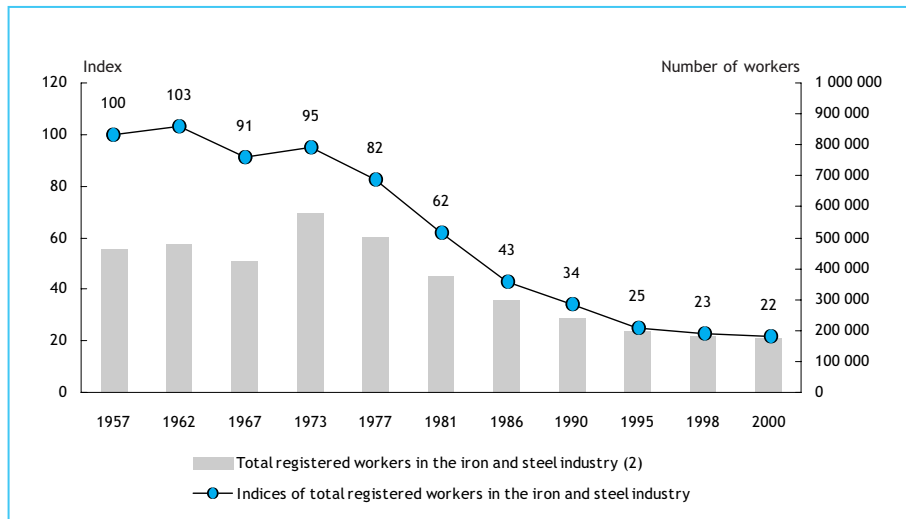
		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	463 701	201 897	127 963	54 929	7 587	52 538	18 787									
	1962	479 466	208 926	129 081	59 713	9 875	52 695	19 176									
	1967	423 984	177 822	111 036	56 433	11 910	47 497	19 286									
EU-9	1973	579 112	171 688	107 872	72 795	14 911	52 512	19 733	139 601	:	:						
	1977	502 721	153 969	93 844	77 280	:	40 672	13 525	120 850	565	2 016						
EU-10	1981	376 553	135 061	59 987	76 052	:	35 856	9 807	57 949	528	1 313	:					
EU-12	1986	299 230	99 639	35 832	50 541	:	24 059	9 050	36 799	434	1 287	3 278						34 449	3 862
	1990	239 365	86 688	20 113	42 359	:	20 019	6 542	32 820	505	1 070	2 529	24 042	2 678			
EU-15	1995	198 869	62 577	14 705	31 029	:	17 422	4 130	23 900	290	864	1 798	15 821	1 580	9 274	4 906	10 573
	1998	181 304	56 044	14 379	30 261	:	14 776	2 857	20 996	266	908	1 424	14 693	1 059	8 376	5 432	9 833
	2000	175 310	53 946	13 703	31 341	:	14 913	2 755	16 781	266	782	1 521	14 501	826	7 951	6 330	9 694

Source: Eurostat.

Since the end of the 1950's, the number of workers in the ECSC steel industry has continually declined. By the end of 2000 the number of manual workers in the steel industry had fallen to about 175 000 as a result of advances in automation, mergers and restructuring measures.

Fifty years ago there were nearly half a million people working in the steel industry in the six original Member countries. The most dramatic declines have occurred in France – down by 90.3 % since 1957, Luxembourg (- 88 %) and Germany (- 73.3 %), in spite of increased capacity after unification in 1990. In 2000 the workforce in the United Kingdom was only 12 % of the figure at the end of 1973.

Figure 1.2.2 Indices and values of total registered workers in the iron and steel industry
Situation at end of year (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 1.2.3 Size of iron and steel works – EU

Mio t of crude steel per work per year	EU-6								EU-9				EU-10		EU-12		EU-15			
	1955		1960		1965		1970		1975		1980		1985		1990		1995		1999	
	n (1)	1 000 t	n	1 000 t	n	1 000 t	n	1 000 t	n	1 000 t	n	1 000 t	n	1 000 t	n	1 000 t	n	1 000 t	n	1 000 t
<1	221	36 211	243	38 711	248	44 602	212	36 743	285	48 827	233	40 178	151	37 649	189	43 612	177	53 169	126	42 962
1<2	10	13 643	14	20 546	13	18 421	22	29 853	18	27 051	17	24 022	11	16 922	16	22 422	17	23 411	12	16 691
2<3	1	2 284	3	6 717	7	17 481	4	10 470	7	16 518	7	18 904	6	15 765	8	18 634	6	13 775	6	14 228
>=3	-	-	2	6 396	1	4 744	7	31 067	6	33 164	7	43 164	10	50 317	11	52 027	14	65 470	12	58 585
Sum	232	52 138	262	72 370	269	85 248	245	108 133	316	125 560	264	126 268	178	120 653	224	136 695	214	155 825	156	132 466

(1) n = Number of works.

Source: DG ECFIN.

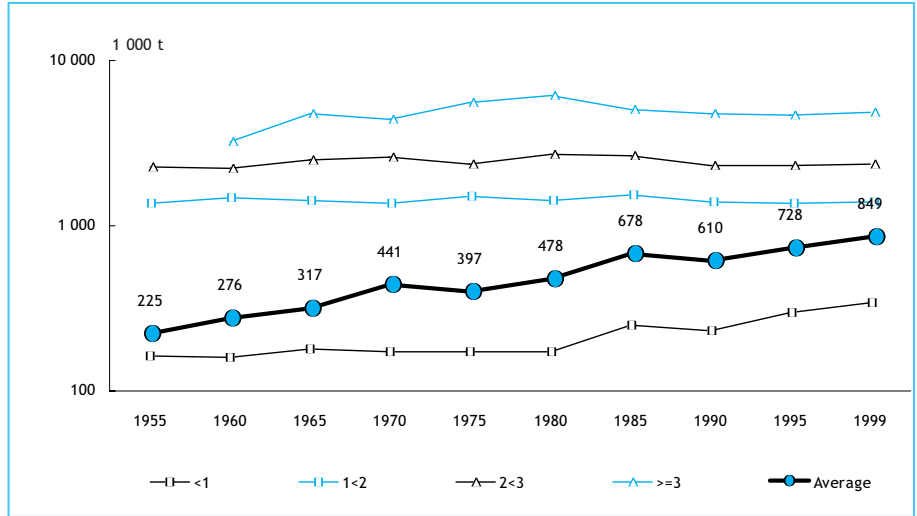
The breakdown by size of ECSC steel factories clearly reveals the mergers that have occurred in the sector.

In 1955 in EU-6 there were 221 works in the lowest production category – maximum of one million tonnes per year, with an average output of 164 thousand tonnes of crude steel. In 1999 there were 126 works in this category in EU-15, producing an average of 341 thousand tonnes.

In the combined output categories 'one million tonnes or more per year', there were 11 works in EU-6, producing an average of 1 448 thousand tonnes of crude steel in 1955. In 1999 in EU-15 the figures were 30 works and an average of 2 983 thousand tonnes.

Overall, in EU-6 in 1955 there were 232 works that produced on average 225 thousand tonnes of crude steel. In 1999 there were 156 works, producing on average 849 thousand tonnes.

Figure 1.2.3 Average capacity of steel works – EU



Source: DG ECFIN.

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Table 1.2.4 Consumption of iron ore in the iron and steel industry

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	101 033	38 925	34 577	3 334	1 163	11 472	11 562									
	1962	117 564	42 146	39 722	5 646	2 316	15 168	12 566									
	1967	124 705	40 839	39 715	10 860	3 790	16 326	13 175									
EU-9	1973	189 905	55 901	47 065	15 401	7 004	21 374	14 670	28 490	-	-						
	1977	150 718	43 042	39 418	17 572	5 610	15 039	10 039	19 998	-	-						
EU-10	1981	139 590	46 737	32 387	18 449	6 799	14 908	6 194	14 116	-	-	-					
EU-12	1986	132 627	41 477	24 311	18 225	7 047	12 257	6 115	14 384	-	-	-					
	1990	141 447	43 174	23 785	19 688	7 787	14 577	5 727	18 012	-	-	-	8 179	518			
EU-15	1995	147 788	43 769	19 589	18 868	8 772	13 777	2 110	18 772	-	-	-	8 598	664	6 699	2 472	3 698
	1998	146 348	44 629	21 624	17 351	8 649	12 885	0	19 587	-	-	-	6 232	682	7 088	3 210	4 411
	2000	141 954	45 374	20 050	14 969	7 926	12 837	-	17 837	-	-	-	7 256	682	7 385	3 278	4 360

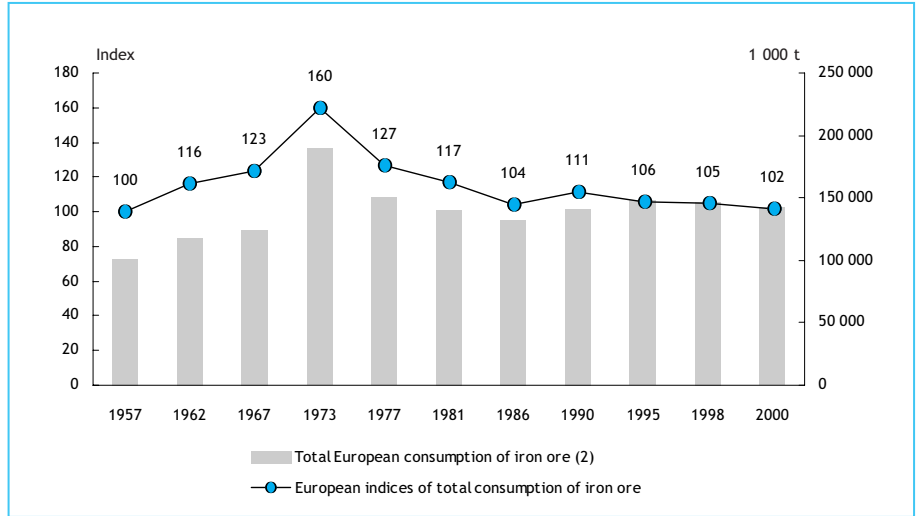
Source: Eurostat.

Iron ore is the most important basic raw material for the production of pig iron and steel. In order to increase the level of iron contained, major impurities are separated from the ores. The ores are then sent to agglomeration and pelletising plants and then to installations for the production of pig iron, blast furnaces or direct reduction plants, for processing into pig iron or sponge iron.

As the world leading consumer of iron ore, the EU uses ores with a high iron content coming almost exclusively from non-member countries. Because of the low iron content – 25 to 30 % – of the ores found in the EU, mining operations have generally been suspended, except in Sweden and Austria where ores with a reasonable iron content continue to be mined.

In 1957 the six Member States used 2 240 kg of iron ore to produce 1 000 kg of pig iron. In 2000, however, the amount of ore needed to produce one tonne of pig iron had fallen to 1 495 kg thanks to the use of ores with a high iron content.

Figure 1.2.4 Indices and values of consumption of iron ore in the iron and steel industry (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 1.2.5 Consumption of pig iron, spiegel and high-carbon ferromanganese in the iron and steel industry

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	41 210	19 075	10 410	2 176	462	5 590	3 497									
	1962	50 202	22 026	12 662	3 733	1 232	6 793	3 756									
	1967	61 753	24 812	14 629	7 252	2 236	8 799	4 025									
EU-9	1973	101 385	33 956	18 884	10 084	4 486	12 708	5 102	16 078	25	62						
	1977	83 911	27 283	17 073	11 167	3 903	9 029	3 539	11 901	1	15						
EU-10	1981	84 826	30 185	16 262	11 586	4 425	9 831	2 907	9 595	-	35	-					
EU-12	1986	82 303	27 647	13 144	11 329	4 547	8 085	2 678	9 693	-	53	-						4 703	424
	1990	89 096	28 924	13 367	11 425	4 946	9 438	2 616	12 449	-	101	-	5 497	333			
EU-15	1995	96 075	29 291	12 335	11 745	5 659	9 246	1 024	12 210	-	82	5	5 037	410	3 846	2 264	2 921
	1998	94 720	29 250	12 720	11 405	5 580	8 442	1	12 700	-	115	2	4 077	423	4 021	2 950	3 034
	2000	93 889	30 880	12 962	10 889	4 979	8 257	0	11 022	-	147	2	4 031	421	4 366	2 899	3 034

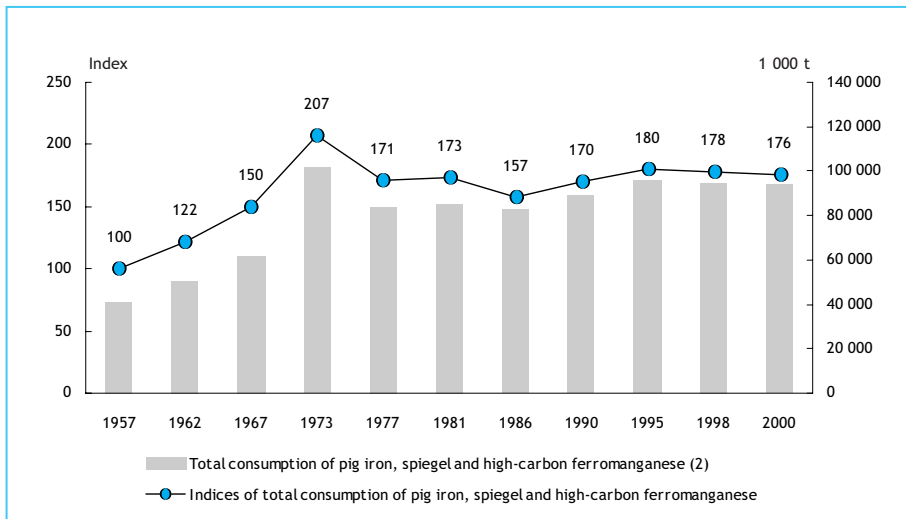
Source: Eurostat.

After casting and possible sulphur removal, the hot metal for the manufacture of steel is immediately sent to the steelworks in special blast furnace holders.

Pig iron is used primarily in oxygen steelworks. In EU-15 in 2000 the production of one tonne of O₂ steel required 950 kg of pig iron.

When the ECSC was set up, i.e. in the case of the six original member countries, pig iron was used for *Bessemer*, *Thomas* or *Siemens-Martin* types of steel process. The use of these processes has now been abandoned.

Figure 1.2.5 Indices and values of consumption of pig iron, spiegel and high-carbon ferromanganese in the iron and steel industry (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

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Table 1.2.6 Consumption of scrap in the iron and steel industry

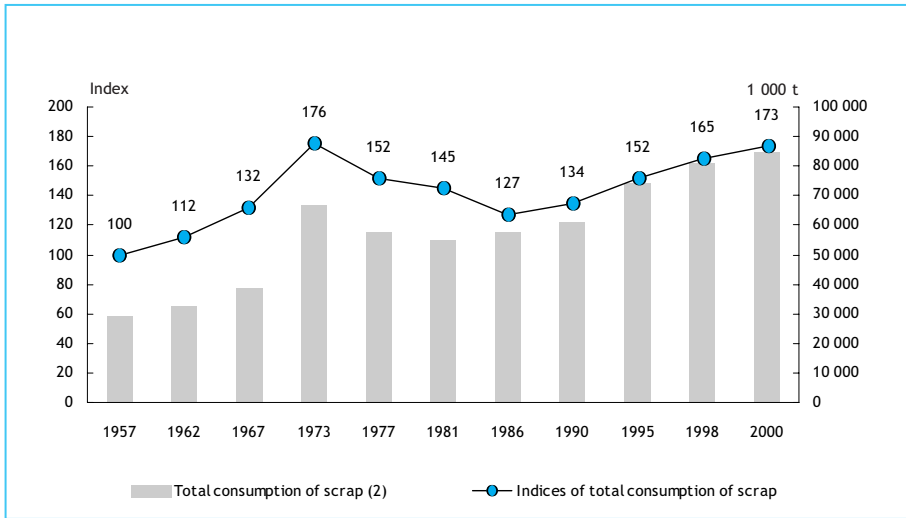
1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	29 251	12 968	6 671	5 624	839	2 464	685									
	1962	32 701	14 375	7 362	7 264	1 068	1 825	807									
	1967	38 652	15 819	7 627	10 391	1 543	2 214	1 058									
EU-9	1973	67 051	20 642	9 413	13 202	1 850	4 590	1 718	15 106	110	420						
	1977	58 011	16 003	7 889	15 092	1 511	3 356	1 379	11 944	55	782						
EU-10	1981	55 145	15 658	7 639	16 163	1 656	3 750	1 303	8 262	37	677	:					
EU-12	1986	57 748	12 952	6 588	14 756	1 306	2 677	1 468	6 661	232	704	1 106						8 916	382
	1990	61 137	12 535	7 396	16 700	1 010	3 136	1 373	7 268	363	608	1 095	9 096	557			
EU-15	1995	74 280	16 007	8 022	18 109	1 345	3 545	1 958	7 025	338	653	1 070	10 313	528	1 680	1 147	2 540
	1998	80 982	18 234	9 907	17 263	1 372	3 813	2 808	6 292	411	796	1 255	12 563	678	1 795	1 022	2 773
	2000	84 939	19 486	10 555	18 952	1 246	4 040	2 929	5 629	:	765	1 254	13 145	788	1 952	1 439	2 759

Source: Eurostat.

Along-side iron ore, scrap – rolling mill waste, other waste from the processing industry and recycled products – is the other major raw material for the production of steel.

In 1957 this accounted for 48 % of steel manufacture in EU-6, whereas the figure for EU-15 was 52 % in 2000. The percentage varies greatly depending on the manufacturing process used, ranging from 20 % in the case of the O₂ process to 100 % for the production of electric steel.

Figure 1.2.6 Indices and values of consumption of scrap in the iron and steel industry (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

1.2. PRODUCTION BASES

Table 1.2.7 Consumption of coke in the iron and steel industry

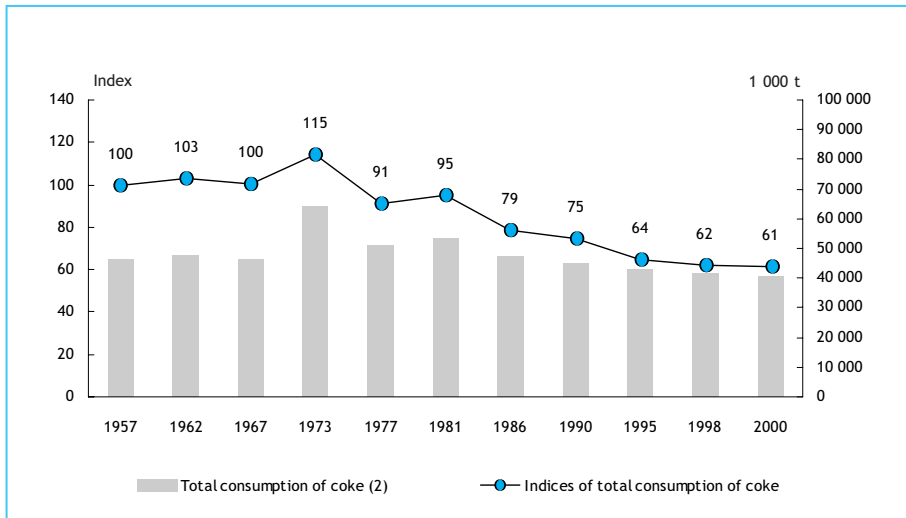
1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	46 071	22 017	12 799	1 770	662	5 081	3 742									
	1962	47 485	20 344	13 725	2 629	1 150	5 761	3 876									
	1967	46 244	18 821	12 135	4 416	1 491	6 067	3 314									
EU-9	1973	64 257	21 075	12 208	5 817	2 445	7 937	3 294	11 459	-	22						
	1977	50 989	16 424	10 197	6 310	1 936	5 456	1 952	8 687	-	27						
EU-10	1981	53 181	19 493	10 471	6 679	2 396	6 146	1 846	6 150	-	-	:					
EU-12	1986	47 251	15 694	7 619	6 238	2 243	4 877	1 766	5 755	-	-	-	2 814	245			
	1990	44 772	14 087	6 665	5 758	2 052	5 192	1 448	6 373	-	-	-	2 991	206			
EU-15	1995	42 867	12 986	5 036	4 438	2 297	4 468	521	5 867	-	-	-	2 806	256	1 925	991	1 276
	1998	41 474	12 483	5 154	5 225	2 017	4 017	-	6 119	-	-	-	1 786	254	1 965	1 214	1 240
	2000	40 759	13 224	4 934	4 947	1 825	3 687	-	5 865	-	-	-	1 716	254	1 798	1 256	1 253

Source: Eurostat.

The ores are mainly iron oxide compounds containing impurities. For the production of pig iron, the iron and the oxygen need to be separated. This process is called reduction. The most important reduction material is coke, which is loaded with the ore in a blast furnace. When the coke allows the necessary temperature to be attained, the oxygen combustion results in the reduction of the ore.

At the beginning of the ECSC more than 1 000 kg of coke was needed to produce 1 tonne of pig iron. The use of high-grade iron ores, together with improved ore treatments have reduced the quantity of coke required to the present level of around 450 kg.

Figure 1.2.7 Indices and values of consumption of coke in the iron and steel industry (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 1.2.8 Consumption and deliveries of power in the iron and steel industry – EU

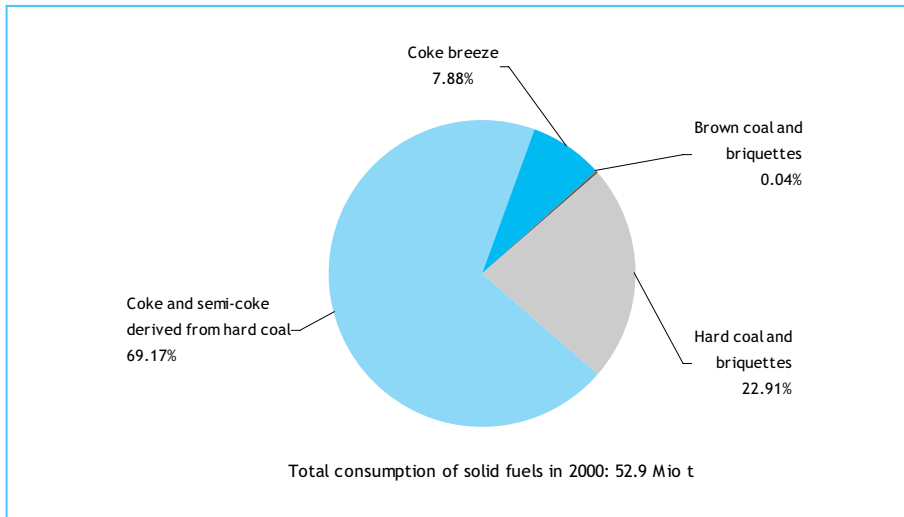
		Solid fuels					Liquid fuels			Gas				Electricity	
		Coke and semi-coke derived from hard coal	Coke breeze	Hard coal and briquettes	Brown coal and briquettes	Sum	Fuel oil and gas oil	Tar and pitch	Sum	Own blast-furnace gas	Own coke-oven gas	Other sources	Sum	Consumption	Deliveries
		1 000 t								GJ				Mio kWh	
EU-6	1952	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	1957	44 555	1 512	3 870	849	50 786	1 789	133	1 922	574 777	71 302	130 383	776 462	20 925	:
	1962	44 383	2 980	3 993	543	51 899	3 861	66	3 927	606 497	69 349	94 059	769 906	27 459	5 512
	1967	41 765	4 340	4 073	221	50 399	6 945	160	7 105	473 315	73 971	132 985	680 271	34 662	7 094
EU-9	1973	57 750	6 419	3 966	128	68 263	13 610	:	13 610	599 912	202 142	317 257	1 119 315	59 945	16 279
	1977	46 114	5 936	3 543	4	55 596	9 323	:	9 323	449 020	197 194	331 811	978 030	60 197	14 961
EU-10	1981	47 896	5 284	1 582	19	54 781	3 463	:	3 463	448 437	183 803	263 211	895 452	58 624	13 017
EU-12	1986	40 172	4 268	1 817	3	46 260	2 694	:	2 694	317 096	176 274	255 011	748 381	56 233	11 663
	1990	40 732	4 039	5 465	19	50 255	3 379	:	3 379	348 765	194 828	275 637	819 230	68 575	7 836
EU-15	1995	38 517	4 349	9 811	52	52 729	4 052	:	4 052	340 345	172 939	312 523	825 807	77 503	6 866
	1998	37 107	4 367	10 701	18	52 193	3 746	:	3 746	302 804	144 811	327 346	774 961	:	:
	2000	36 569	4 165	12 110	21	52 869	3 407	:	3 407	349 445	151 075	393 181	885 050	:	:

Source: Eurostat.

Coke is used as an essential element in the chemical reaction to convert iron oxide to iron in blast furnaces. Thus solid fuels are the principal energy inputs to pig iron production. Over 36 Mio tonnes of coke was used in 2000. Use of hard coal and briquettes has grown considerably since the mid 1980s, with some 12 Mio tonnes being consumed in 2000. Use is also made of gas and liquid fuels.

Consumption of solid fuels was static between 1995 and 2000, even though steel production rose. This was because of the continuing growth in the importance of electric furnaces, where steel scrap is melted and reprocessed. The ratio of electricity consumption to solid and liquid fuel consumption in the steel industry more than tripled between 1957 and 1995.

Figure 1.2.8 Share of solid fuels in total consumption of solid fuels – 2000



Source: Eurostat.

Table 1.3.1 Production of pig iron

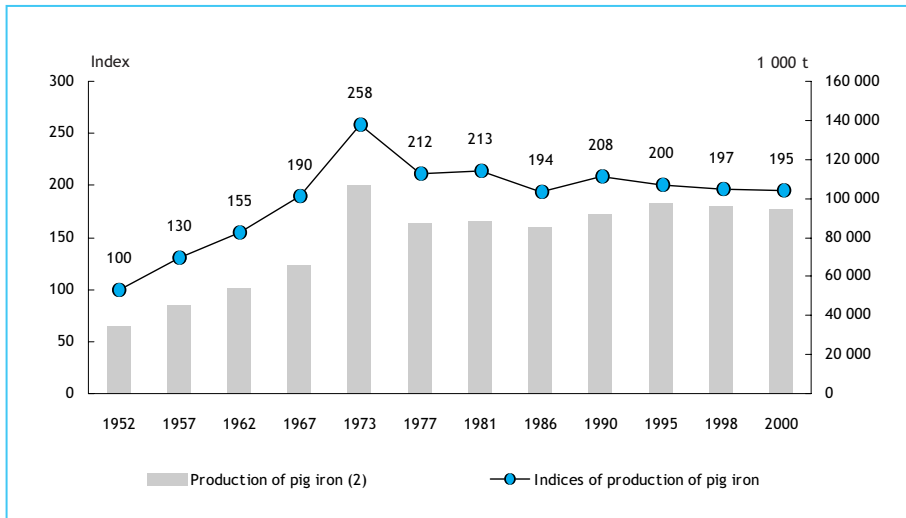
1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	34 738	15 427	9 772	1 143	539	4 781	3 076	← Not part of the ECSC Treaty →								
	1957	45 114	21 483	11 884	2 138	701	5 579	3 329									
	1962	53 716	24 251	13 952	3 584	1 571	6 773	3 585									
	1967	65 903	27 366	15 692	7 312	2 579	8 994	3 960									
EU-9	1973	106 858	36 828	20 302	10 098	4 707	12 767	5 089	17 067	-	-						
	1977	87 564	28 965	18 257	11 474	3 922	8 979	3 568	12 399	-	-						
EU-10	1981	88 228	31 876	17 274	12 319	4 600	9 809	2 889	9 461	-	-	-					
EU-12	1986	85 404	29 018	13 982	11 966	4 628	8 074	2 650	9 812	-	-	-					
	1990	91 776	30 097	14 415	11 883	4 960	9 459	2 645	12 496	-	-	-	5 482	339			
EU-15	1995	97 380	30 012	12 860	11 684	5 530	9 199	1 028	12 269	-	-	-	5 106	415	3 878	2 365	3 034
	1998	95 963	30 162	13 603	10 803	5 562	8 618	-	12 540	-	-	-	4 236	355	4 021	2 914	3 149
	2000	94 951	30 845	13 622	11 220	4 970	8 471	-	10 949	-	-	-	4 059	380	4 318	2 971	3 146

Source: Eurostat.

In the countries making up the present EU-15, 48.7 Mio tonnes of pig iron were produced in 1952, which represented 33 % of global production at the time.

Production increased significantly over the following 20 years, reaching a peak of 120 Mio tonnes in 1973, after which it declined again due to the steel crisis. In the last 10 years it has stabilised at a little under 100 Mio tonnes. In 2000, the 95 Mio tonnes produced represented 15.6 % of the global production of 608.1 Mio tonnes, second only to China (CN) with 131 Mio tonnes, or 21.5 %.

Figure 1.3.1 Indices and values of production of pig iron (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

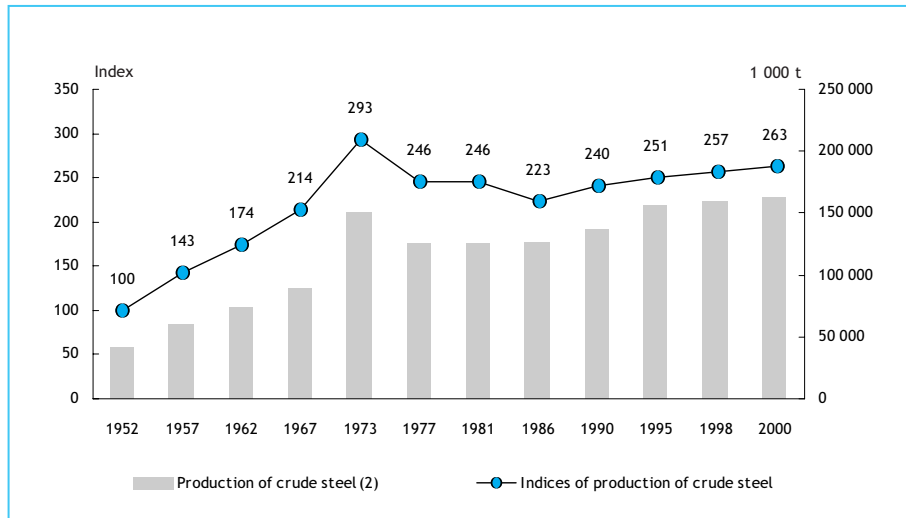
Table 1.3.2 Production of crude steel

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	41 996	18 629	10 867	3 635	693	5 170	3 002	← Not part of the ECSC Treaty →								
	1957	59 997	27 973	14 100	6 979	1 185	6 267	3 493									
	1962	73 011	32 563	17 234	9 757	2 096	7 351	4 010									
	1967	89 886	36 744	19 658	15 890	3 401	9 712	4 481									
EU-9	1973	150 073	49 521	25 270	20 995	5 623	15 522	5 924	26 649	116	453						
	1977	126 121	38 985	22 089	23 333	4 923	11 256	4 329	20 474	47	685						
EU-10	1981	126 053	41 610	21 245	24 778	5 472	12 283	3 790	15 321	33	612	909					
EU-12	1986	126 899	37 134	17 865	22 985	5 286	9 713	3 705	15 766	208	632	1 009						11 882	714
	1990	136 854	38 434	19 016	25 467	5 412	11 453	3 560	17 895	326	610	999	12 936	746			
EU-15	1995	155 745	42 051	18 107	27 766	6 409	11 558	2 613	17 655	310	654	939	13 802	828	5 003	3 152	4 898
	1998	159 525	44 046	20 153	25 642	6 377	11 426	2 477	17 034	359	792	1 108	14 827	936	5 298	3 928	5 122
	2000	163 410	46 376	21 001	26 728	5 666	11 637	2 571	15 252	359	800	1 088	15 840	1 088	5 723	4 091	5 190

Source: Eurostat.

In 1952, crude steel production in the present EU-15 countries amounted to 62.7 Mio tonnes, or 29.1 % of the global total – 215.7 Mio tonnes. Production rapidly increased – reaching 173.6 Mio tonnes in 1973 – until the beginning of 1974, when the steel crisis forced a restructuring of the industry. This led amongst other things to the reduction of the overcapacity caused by a drop in demand following the introduction of alternative raw materials; production consequently fell. Production in the EU has since varied between 150 and 160 Mio tonnes/year. In the year 2000 it reached 163.4 Mio tonnes, or 19.3 % of global production, putting the EU at the head of steel producing countries, followed by China (CN), with 15 %, and Japan at 12.6 %. World steel production, which was 215.7 Mio tonnes in 1952, reached 847.2 Mio tonnes in 2000. This increase is not only due to the growth of the steel industry in the traditional producer countries, but also largely to the building of new plants in many developing countries.

Figure 1.3.2 Indices and values of production of crude steel (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 1.3.3 Production of ingots

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	58 756	27 337	13 785	6 833	1 166	6 147	3 488									
	1962	71 624	31 893	16 870	9 560	2 068	7 228	4 005									
	1967	88 672	36 218	19 309	15 649	3 384	9 635	4 477									
EU-9	1973	133 887	40 867	22 880	17 374	5 591	15 440	5 920	25 275	116	424						
	1977	92 366	25 200	16 494	14 106	4 919	9 568	4 325	17 382	47	325						
EU-10	1981	67 365	18 777	9 973	11 988	4 305	8 478	3 525	10 306	-	13	:					
EU-12	1986	28 786	5 333	1 538	3 469	3 022	2 587	2 424	5 573	-	-	-	4 454	386			
	1990	12 758	2 964	815	1 167	347	891	2 345	2 699	-	-	-	1 200	330			
EU-15	1995	8 667	1 601	801	858	262	254	1 406	2 179	-	-	-	506	-	167	-	633
	1998	5 707	1 565	837	851	152	48	273	772	-	-	-	432	-	183	-	594
	2000	5 121	1 407	834	840	159	2	63	542	-	-	-	424	-	203	-	647

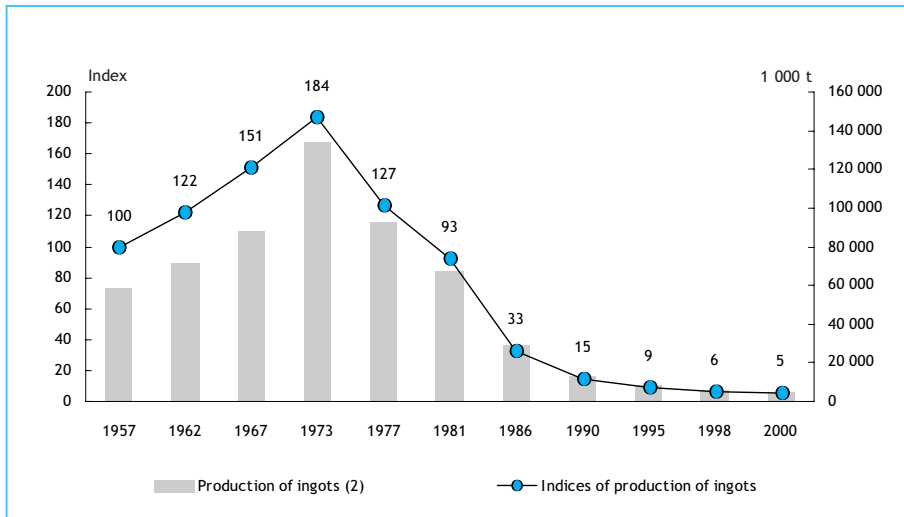
Source: Eurostat.

After production, crude steel has to be transformed. In the past, it was mainly cast in moulds of various shapes and sizes, square, rectangular, round or oval in cross-section, depending on the type of transformation to be performed. In the steel works the ingot is rolled to make semi-finished or finished products.

At the beginning of the ECSC, 98 % of the crude steel produced was cast into ingots. The high rejection rate when processing ingots in the works, amongst other reasons, led to a rethink and subsequent improvement of casting procedures (continuous casting). These procedures were implemented in the early 1970s and gradually supplanted traditional ingot casting.

In 2000 only 3 % of the EU crude steel production was cast into ingots.

Figure 1.3.3 Indices and values of production of ingots (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 1.3.4 Production of continuously cast products

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:									
	1957	:	:	:	:	:	:	:									
	1962	:	:	:	:	:	:	:									
	1967	:	:	:	:	:	:	:									
EU-9	1973	14 210	8 057	1 958	3 375	-	11	-	809	-	-						
	1977	32 058	13 272	5 244	8 986	-	1 655	-	2 554	-	347						
EU-10	1981	57 517	22 319	10 921	12 578	1 159	3 789	265	4 958	33	586	909					
EU-12	1986	95 448	31 404	15 899	19 227	2 258	7 036	1 281	8 903	208	632	1 009	7 267	324			
	1990	122 733	35 091	17 940	24 120	5 060	10 469	1 215	14 949	326	610	999	11 567	387			
EU-15	1995	145 996	40 131	17 062	26 772	6 147	11 286	1 208	15 291	310	654	939	13 175	797	4 807	3 152	4 265
	1998	152 749	42 158	19 059	24 689	6 225	11 356	2 204	16 081	359	792	1 108	14 266	907	5 088	3 928	4 529
	2000	157 236	44 669	19 904	25 782	5 507	11 613	2 508	14 548	359	800	1 088	15 277	1 055	5 491	4 091	4 544

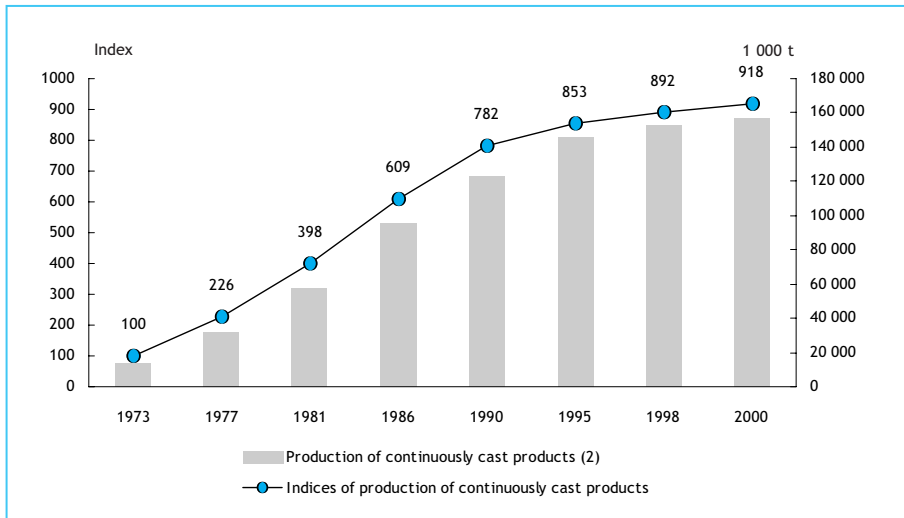
← Not part of the ECSC Treaty →

Source: Eurostat.

The first experiments on continuous casting as an alternative to ingots were carried out in the 1930s.

The advantages of the new process – a continuous strand cast, fast pouring, less wastage with only one head and tail scrapped per strand, uniform solidification, economies due to fewer operations – were such that its application in steel production grew from 9 % of total production in 1973 to 96 % in 2000.

Figure 1.3.4 Indices and values of production of continuously cast products (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

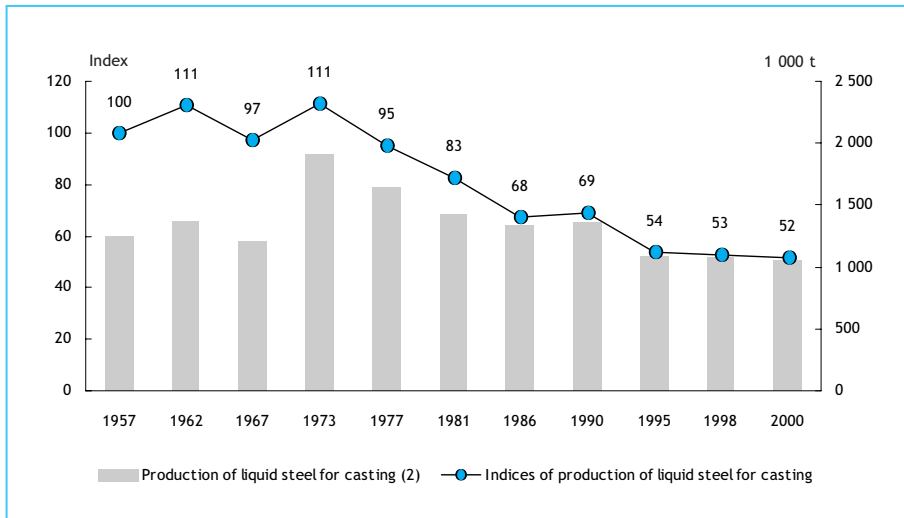
Table 1.3.5 Production of liquid steel for casting

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	1 240	636	314	146	19	120	5									
	1962	1 374	670	364	198	18	119	5									
	1967	1 207	526	349	235	17	76	4									
EU-9	1973	1 916	597	430	247	32	71	4	507	-	28						
	1977	1 639	512	351	241	4	33	4	481	-	13						
EU-10	1981	1 421	514	351	211	8	16	-	308	-	13	:					
EU-12	1986	1 335	397	233	187	3	90	-	252	-	-	-					
	1990	1 360	378	260	180	4	93	-	247	-	-	-	169	29			
EU-15	1995	1 091	319	244	136	-	18	-	192	-	-	-	121	31	30	-	-
	1998	1 073	323	257	103	-	22	-	181	-	-	-	130	29	28	-	-
	2000	1 053	300	263	106	-	22	-	162	-	-	-	139	33	28	-	-

Source: Eurostat.

Apart from casting, either continuous or into ingots, small amounts of steel are still supplied as liquid steel directly to foundries for the production of cast steel. In 1957, 2 % of crude steel went into cast steel; in 2000 it was just 0.5 %.

Figure 1.3.5 Indices and values of production of liquid steel for casting (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 1.3.6 Production of crude steel by process – EU

1 000 t		Sum	Electric	O ₂	Other
EU-6	1952	41 996	3 441	-	38 555
	1957	59 995	5 926	54	54 015
	1962	73 011	8 768	3 483	60 760
	1967	89 885	11 681	24 937	53 268
EU-9	1973	150 015	22 793	88 226	38 996
	1977	126 064	27 052	86 174	12 838
EU-10	1981	125 395	29 696	93 967	1 732
EU-12	1986	125 556	36 787	88 769	-
	1990	136 853	42 464	94 389	-
EU-15	1995	155 745	54 346	101 399	-
	1998	159 556	60 904	98 652	-
	2000	163 410	64 976	98 434	-

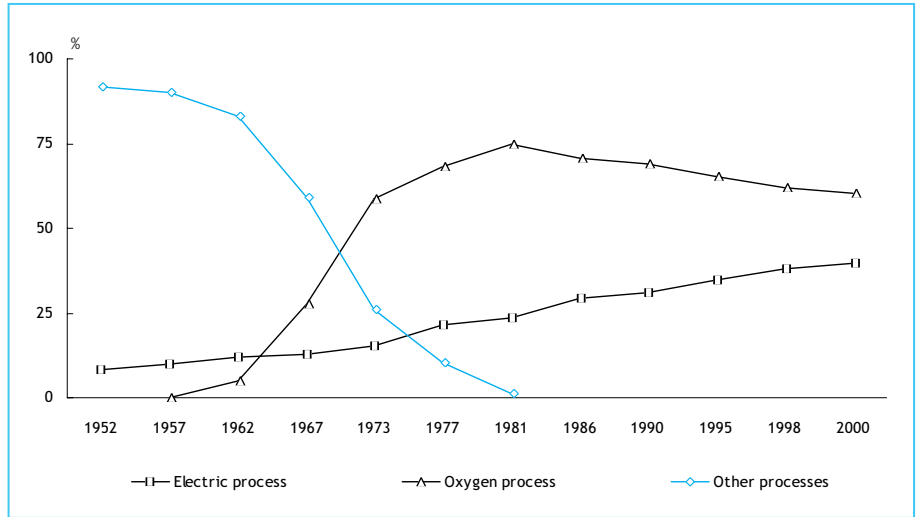
Source: Eurostat.

The breakdown of steel production by method shows that today only two methods are used: electrical production and pure oxygen production – including LD, LD/AC, *Rotor*, *Kaldo*, OBM, LWS, LBE.

In 2000 these two methods accounted for 39.8 and 60.2 % of total EU production respectively. They were introduced in the early respectively in the late 1950s and are noted for the quality of the steel they produce. Earlier procedures, such as the *Thomas*, *Bessemer* or *Siemens-Martin* processes fall into the category 'Other processes' in the table.

The performance of these methods was such that they could not compete with electrical or oxygen production, and they were abandoned by the early 1980s.

Figure 1.3.6 Share of processes in crude steel production – EU



Source: Eurostat.

Table 1.3.7 Production of hot rolled steel products – EU

1 000 t		Railway track material	Heavy sections	Universal plates	Hot rolled plate and sheet	Coils (not for re-rolling in the EU)	Coils (gross production)	Wire rod	Concrete reinforcing bars	Other merchants bars
EU-6	1952	1 432	2 723	352	7 009	2	:	2 844	:	10 033
	1957	1 634	3 846	457	9 567	224	:	3 896	:	12 351
	1962	1 358	4 496	508	9 402	855	:	5 223	5 523	8 761
	1967	1 025	4 951	500	9 575	3 155	:	6 969	6 488	9 585
EU-9	1973	1 389	9 139	816	15 237	7 989	:	12 017	10 213	13 929
	1977	1 320	7 424	537	11 950	10 017	:	10 243	7 741	11 270
EU-10	1981	1 349	7 146	396	12 570	14 143	:	10 521	7 433	9 528
EU-12	1986	1 226	7 011	335	10 195	15 023	:	12 292	9 656	9 761
	1990	1 062	8 666	363	9 923	19 182	:	12 926	12 471	10 437
EU-15	1995	1 384	11 535	496	9 732	:	70 728	18 126	11 610	9 397
	1998	1 411	12 256	478	9 791	:	74 923	18 182	11 926	9 577
	2000	1 350	12 864	447	9 184	:	76 317	19 495	12 700	10 227

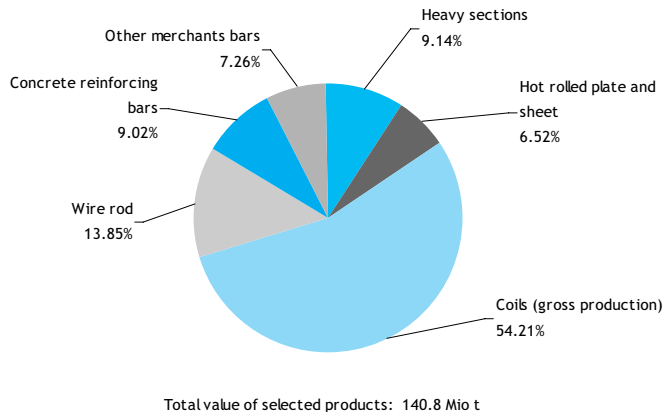
Source: Eurostat.

More than 90 % of crude steel produced in factories is transformed afterwards in mills into finished products by hot rolling.

These products fall into two groups: long products and flat products.

- Long products include railway track and fittings, heavy and lightweight steel section, girders, wire rod, bars and reinforcing for concrete.
- Flat products include steel strip, sheet and bands.

Figure 1.3.7 Share of selected products in total production of finished products – 2000



Source: Eurostat.

Table 1.3.8 Production ratios of iron ore to pig iron

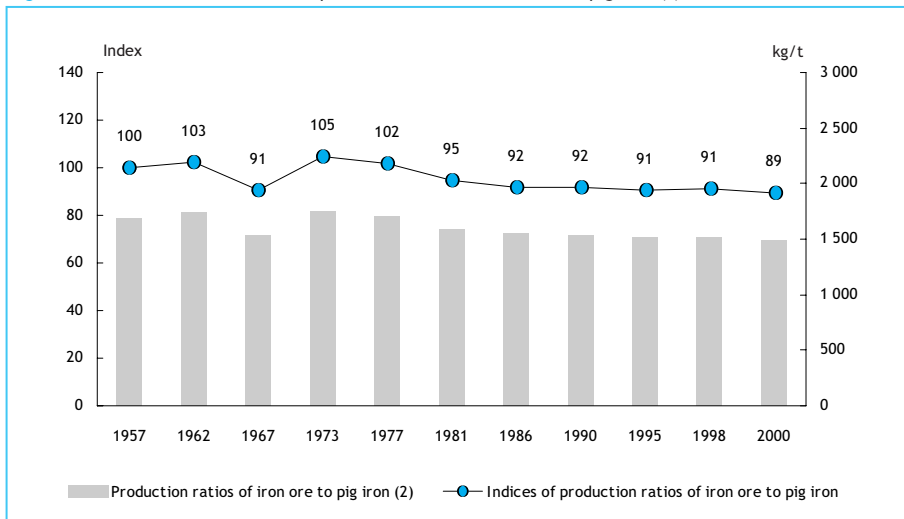
kg/t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	1 694	1 812	2 910	1 559	1 659	2 056	3 473									
	1962	1 738	1 738	2 847	1 575	1 474	2 239	3 505									
	1967	1 534	1 492	2 531	1 485	1 470	1 815	3 327									
EU-9	1973	1 756	1 491	2 299	1 508	1 471	1 666	2 876	1 645	-	-						
	1977	1 700	1 648	2 147	1 516	1 410	1 586	2 793	1 607	-	-						
EU-10	1981	1 590	1 466	1 875	1 498	1 478	1 520	2 144	1 492	-	-	-					
EU-12	1986	1 545	1 429	1 739	1 533	1 523	1 518	2 308	1 466	-	-	-					
	1990	1 542	1 435	1 650	1 657	1 570	1 548	2 165	1 441	-	-	-	1 492	1 528			
EU-15	1995	1 508	1 453	1 506	1 604	1 574	1 477	2 052	1 522	-	-	-	1 684	1 598	1 727	1 045	1 218
	1998	1 514	1 473	1 571	1 599	1 542	1 485	-	1 556	-	-	-	1 471	1 919	1 707	1 097	1 391
	2000	1 486	1 464	1 454	1 321	1 581	1 507	-	1 625	-	-	-	1 787	1 792	1 710	1 099	1 376

Source: Eurostat.

The gross consumption of iron ore per tonne of pig iron produced clearly show the structural changes in the iron and steel industry in the Member States. These changes are particularly evident in countries in which mining was important before mines were forced to close down over the years due to the poor iron content of the ores extracted.

In France for example, the ore input for each tonne of pig iron was 2 910 kg in 1957; the iron ore ratio dropped progressively over the years, to just 1 454 kg/tonne in 2000. In Luxembourg the trend was even more pronounced: from an ore input of 3 473 kg/tonne in 1957 the level fell continuously until 1998, when no ore at all was used – steel production was entirely electrical. Over the EU as a whole, as in Germany, Italy and Belgium, the reduction in the iron ore ratio was less marked, while in countries such as the Netherlands, the United Kingdom, Spain, Austria, Finland and Sweden it changed little over the years. Only in Portugal has there been an increase in iron ore consumption since joining the EU. Ireland, Denmark and Greece produce steel only electrically, and therefore use no ore.

Figure 1.3.8 Indices and values of production ratios of iron ore to pig iron (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 1.3.9 Production ratios of pig iron to crude steel

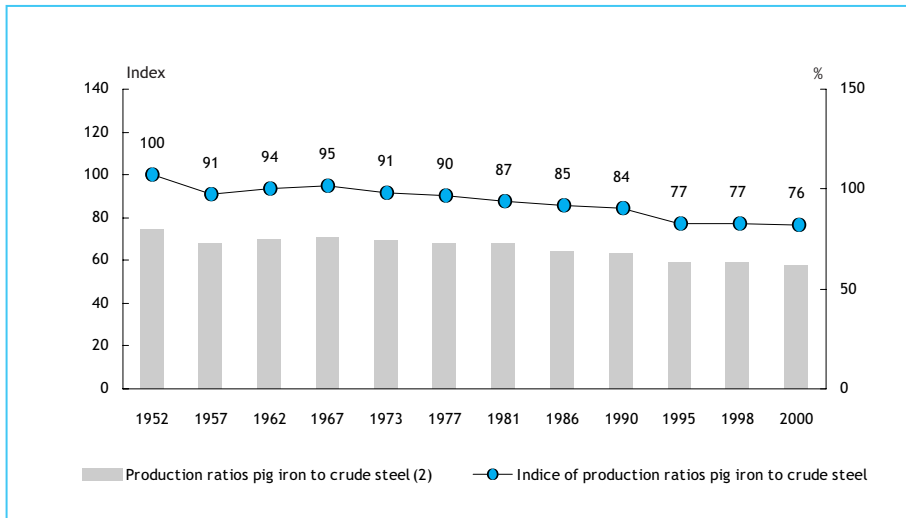
%		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	80	83	90	32	78	93	103	← Not part of the ECSC Treaty →								
	1957	73	77	84	32	59	89	95									
	1962	75	75	81	38	75	92	89									
	1967	76	75	80	46	76	93	88									
EU-9	1973	74	74	80	48	84	82	86	64	-	-						
	1977	73	74	83	49	80	80	82	61	-	-						
EU-10	1981	73	77	81	50	84	80	76	62	-	-	-					
EU-12	1986	69	78	79	52	88	83	72	66	-	-	-					
	1990	68	78	76	47	92	83	74	70	-	-	-	44	46			
EU-15	1995	63	71	71	42	86	80	39	70	-	-	-	37	50	76	75	62
	1998	63	69	68	42	87	75	-	74	-	-	-	29	38	76	74	62
	2000	62	67	65	42	88	73	-	72	-	-	-	26	35	76	73	61

Source: Eurostat.

Between 1952 and 2000, the ratio of pig iron to crude steel production in the EU as a whole fell from 80 % to 62 %, owing to an increase in the output of electric steel.

Very similar trends were observed in Germany, France, Belgium, Spain and Portugal. In Italy, the Netherlands and the United Kingdom, by contrast, the share of crude steel production accounted for by pig iron increased slightly. In Austria, Finland and Sweden, the percentages have remained stable since those countries joined the EU. In Luxembourg, the ratio of pig iron to crude steel in 1952 was 103 %. By 1998, pig iron production in that country had ceased altogether.

Figure 1.3.9 Indices and values of production ratios of pig iron to crude steel (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

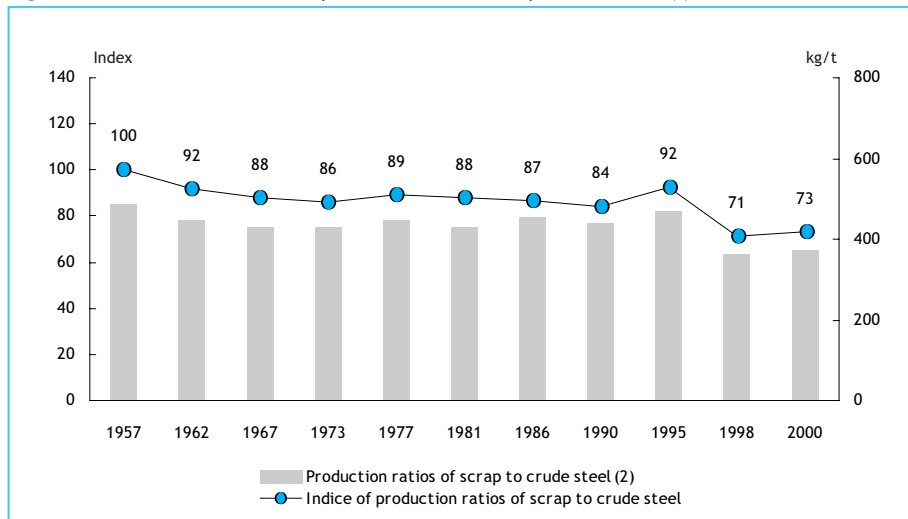
Table 1.3.10 Production ratios of scrap to crude steel

kg/t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	488	464	473	806	708	393	196									
	1962	448	441	427	744	510	248	201									
	1967	430	431	388	654	454	228	236									
EU-9	1973	429	403	360	623	328	284	264	522	927	922						
	1977	447	395	351	642	309	296	301	550	1 319	1 142						
EU-10	1981	430	365	352	645	303	305	343	533	1 121	1 106	:					
EU-12	1986	454	339	366	636	247	276	395	451	1 115	1 114	1 096	747	528			
	1990	441	326	389	656	187	274	386	375	1 116	997	1 096	686	712			
EU-15	1995	471	375	435	653	199	302	749	391	1 089	999	1 140	738	625	330	351	495
	1998	363	410	472	670	210	329	1 134	363	1 146	1 005	1 132	846	716	335	235	516
	2000	373	421	485	707	209	345	1 139	373	:	957	1 152	837	747	341	327	529

Source: Eurostat.

The amount of scrap used per tonne of steel in the EU declined from 488 kg in 1957 to 373 kg in 2000. The level of scrap consumption was practically unchanged over that period in Germany, France, Italy and Belgium. Whereas consumption in the Netherlands declined from 708 kg in 1957 to 209 kg in 2000, in Luxembourg it rose from 196 kg in 1957 to 1 139 kg in 2000. In the United Kingdom, the use of scrap decreased from 522 kg in 1973 to 373 kg in 2000. Ireland, Denmark, Greece and, since 1998, Luxembourg, consume large amounts of scrap – 1 000 kg or more per tonne of crude steel. These countries produce exclusively electric steel. In Spain, the amount of scrap used per tonne of steel rose from 747 kg in 1986 to 837 kg in 2000, while that in Portugal increased from 528 kg to 747 kg. Since joining the EU in 1995, Austria, Finland and Sweden have had stable levels of scrap consumption at, on average, 335 kg/t (Austria), 300 kg/t (Finland) and 510 kg/t (Sweden).

Figure 1.3.10 Indices and values of production ratios of scrap to crude steel (1)



- (1) Indices and values for EU.
 (2) Exact values, see table.

Source: Eurostat.

Table 1.3.11 Production ratios of continuously cast products to crude steel

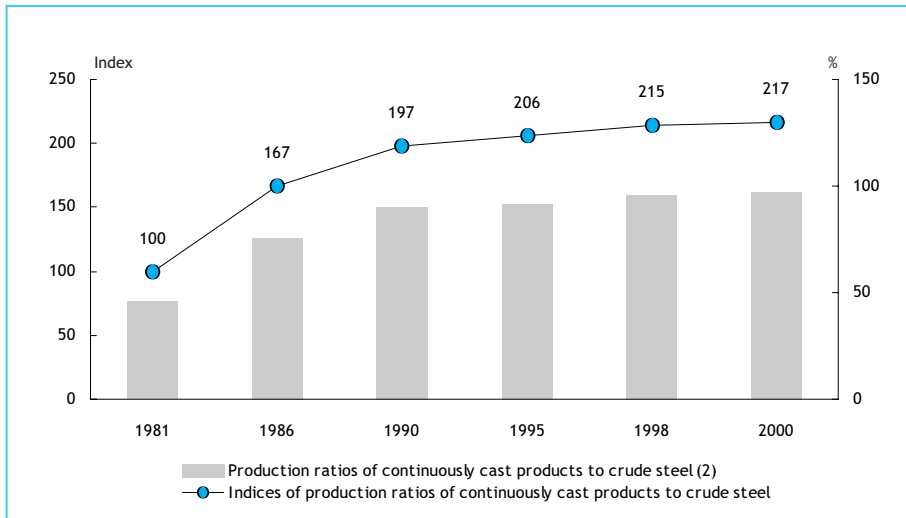
%		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	:	:	:	:	:	:	:									
	1962	:	:	:	:	:	:	:									
	1967	:	:	:	:	:	:	:									
EU-9	1973	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	1977	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
EU-10	1981	46	54	51	51	21	31	7	32	100	96	100					
EU-12	1986	76	85	90	84	43	72	35	60	100	100	100	61	46			
	1990	90	91	94	95	94	91	34	84	100	100	100	89	52			
EU-15	1995	92	95	94	96	96	98	46	87	100	100	100	96	96	96	100	87
	1998	96	96	95	96	98	99	89	94	100	100	100	96	97	96	100	88
	2000	97	96	95	97	97	100	98	95	100	100	100	96	96	97	100	88

Source: Eurostat.

Since its introduction, there has been a spectacular increase in the percentage of continuously cast products. Whereas the Member States produced 46 % of their products by continuous casting in 1981, that share had risen to 97 % by 2000.

It is the only method now used to produce steel in Ireland, Denmark, Greece and Finland; in Sweden, the share is 88 %, and more than 95 % of steel is produced by this method in the other Member States.

Figure 1.3.11 Indices and values of production ratios of continuously cast products to crude steel (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Table 1.4.1 Direct exports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S		
EU-6	1952	:	1 594	2 761	28	114	5 847	← Not part of the ECSC Treaty →										
	1957	:	4 822	4 817	697	676	7 145											
	1962	12 136	8 129	5 820	729	1 243	8 869											
	1967	18 647	12 619	7 346	1 895	2 780	11 764											
EU-9	1974	34 277	21 801	11 398	4 156	5 685	19 794	3 194	47	325								
	1977	27 701	14 637	10 911	6 021	4 605	14 216	4 684	28	534								
EU-10	1981	30 272	17 498	11 944	6 867	5 288	14 780	4 083	32	622	305							
EU-12	1986	26 123	14 504	10 268	5 222	5 133	12 149	5 174	207	532	680	5 132	312					
	1990	21 500	15 224	10 410	6 278	5 425	14 775	6 649	330	526	404	4 110	150					
EU-15 (2)	1995	23 512	19 339	12 442	7 893	6 228	15 525	8 246	276	688	607	4 709	332	3 262	2 391	3 132		
	1998	20 322	20 135	14 243	7 028	5 830	17 299	7 873	342	733	416	4 739	436	3 795	2 179	3 485		
	2000	22 997	23 119	16 683	8 679	5 491	22 382	7 358	330	864	446	5 362	733	4 112	2 282	3 674		

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

The table shows the evolution of total direct exports from European Union countries – exports to third countries + deliveries to other Community countries – of iron and steel products covered by the ECSC Treaty; quantities are expressed in crude steel equivalent.

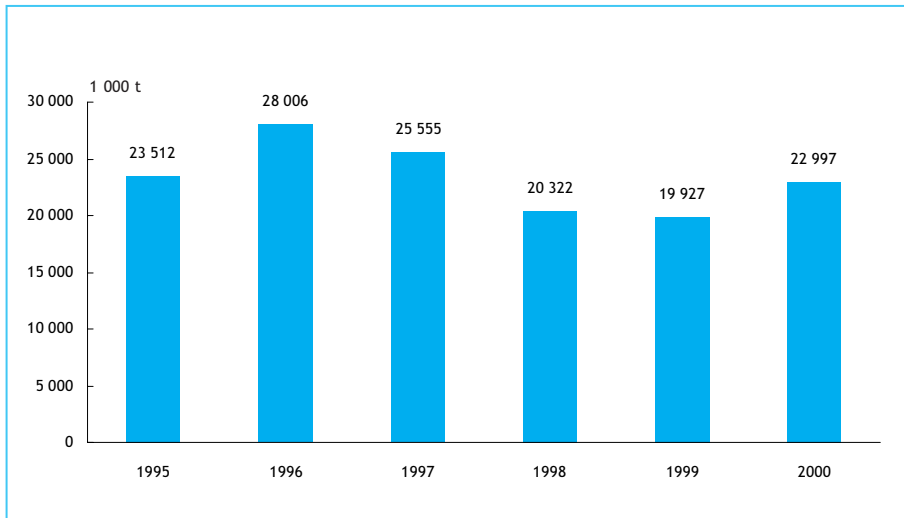
At the time the ECSC Treaty was ratified in 1952, the Belgo-Luxembourg Economic Union – BLEU – was by far the most important exporter of finished products, accounting for more than half of the total for the founding members.

Today the top three positions are occupied by Germany, the BLEU and France. The volume of deliveries to third countries from Germany is 30 % of total exports, from the BLEU it is 12 % of the total and from France it is 20 %.

Around 60 % of German exports are flat products and about 28 % are long products; for France the corresponding figures are 70 % and 16 %, and for the BLEU they are 73 % and 22 %.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Figure 1.4.1 Direct exports from EU-15 – 1995-2000



Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Table 1.4.2 Indirect exports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	:	6 210	2 416	978	616	1 249									
	1962	10 782	7 356	2 831	1 798	964	1 967									
	1967	13 376	9 984	3 783	3 412	1 370	2 618									
EU-9	1974	29 898	18 452	9 026	6 578	3 257	4 618	8 301	157	1 139						
	1977	36 256	20 067	11 730	9 254	3 408	5 116	8 353	281	1 728						
EU-10	1981	30 058	19 165	9 255	9 520	2 720	4 756	5 383	208	1 003	287					
EU-12	1986	23 721	18 063	8 126	8 838	2 602	4 617	4 227	304	920	178						2 962	269
	1990	20 086	15 462	7 401	9 279	3 371	4 413	4 810	249	1 507	371	2 884	406			
EU-15 (2)	1995	23 648	15 619	8 281	12 807	3 531	4 918	7 566	349	1 176	230	4 147	578	3 764	1 211	2 761
	1998	28 174	17 280	9 838	13 316	5 381	4 843	6 711	280	1 704	410	4 865	700	3 418	1 511	2 563
	2000	28 430	18 709	10 625	14 181	4 566	5 592	5 956	331	1 464	445	6 277	833	4 002	1 420	2 838

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

Over the last 50 years, indirect EU exports to third countries as a share of total trade is 54 % – quantities are expressed in crude steel equivalent. Three large sectors predominate: the construction of non-electric machinery, automobiles and other vehicles and the steel tube industry.

Amongst the 15 EU Member States, Germany is ahead of Italy, France and the UK in terms of the volume of goods containing steel exported, the same three sectors leading the way.

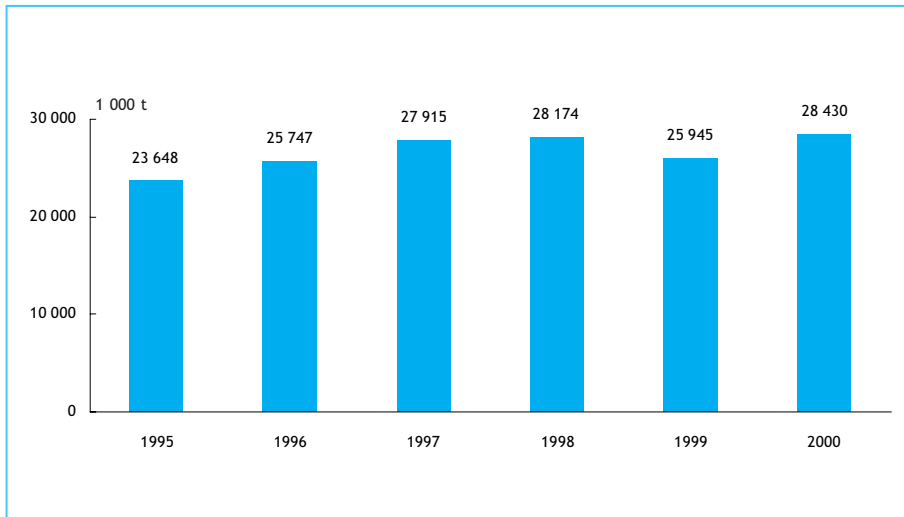
Between 1995 and 2000, 14 Member States – the exception being the UK – increased their indirect exports of products containing steel.

Note that indirect exchanges of steel are included in the calculation of 'final' steel consumption:

Final consumption = apparent consumption
 + indirect imports
 - indirect exports.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Figure 1.4.2 Indirect exports from EU-15 – 1995-2000



Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Table 1.4.3 Direct imports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	1 082	110	593	1 226	90	← Not part of the ECSC Treaty →								
	1957	:	2 926	1 447	875	2 153	399									
	1962	3 166	5 261	3 898	3 652	2 090	919									
	1967	3 304	6 596	6 016	3 689	2 823	1 937									
EU-9	1974	7 421	9 916	9 853	5 488	4 460	3 531	4 090	370	1 836						
	1977	12 569	12 498	9 137	6 092	3 408	3 472	4 195	336	1 366						
EU-10	1981	8 360	12 554	8 987	5 610	3 076	2 959	3 579	452	1 387	903					
EU-12	1986	10 573	11 642	7 532	7 041	3 448	3 443	4 030	266	1 404	1 513						2 712	742
	1990	12 860	13 920	9 013	10 529	3 998	4 679	4 789	389	1 478	1 558	3 295	1 137			
EU-15 (2)	1995	16 834	18 763	11 202	12 925	5 304	6 797	6 381	522	1 872	2 007	5 349	2 032	1 474	1 287	2 472
	1998	21 446	18 317	13 174	15 745	5 817	9 048	6 885	706	1 931	2 150	7 750	2 386	1 924	1 212	2 612
	2000	25 118	19 989	15 788	16 782	5 719	12 802	6 974	798	1 859	3 020	9 375	2 945	2 249	1 362	2 818

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

During the first decade following the creation of the Treaty establishing the European Coal and Steel Community, Germany was the largest ECSC importer of iron and steel products, with more than 31 Mio tonnes – expressed as crude steel equivalent, followed by the Netherlands with 18 Mio tonnes and France with 15 Mio tonnes.

Today the order is Germany, Italy, France. Among the new countries to sign up to the Treaty Spain is ahead of the UK as a steel importer.

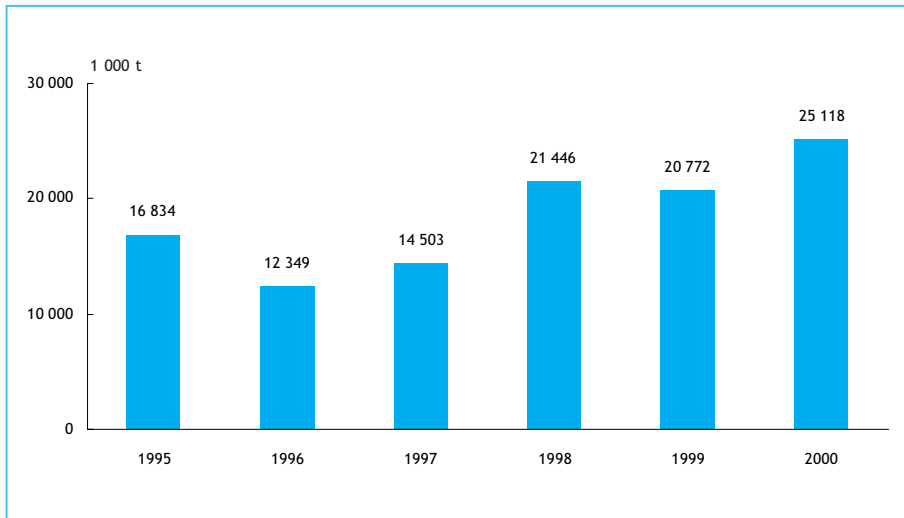
The main imports of finished products are of course not the same for all the 15 Member States:

- France, Italy and Spain: coils for re-rolling,
- Netherlands: wire rod,
- Germany, UK, Sweden and Austria: coated sheet,
- Ireland and Portugal: bars,
- Denmark: plate 3 mm and more,
- Belgium, Greece, Finland, Luxembourg: semi-finished products.

Since 1998, imports into EU-15 of ECSC iron and steel products from third countries have exceeded exports.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Figure 1.4.3 Direct imports into EU-15 – 1995-2000



Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Table 1.4.4 Indirect imports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	:	678	509	443	1 161	726									
	1962	1 757	1 268	1 223	870	1 510	848									
	1967	2 168	2 029	2 282	1 066	2 762	1 631									
EU-9	1974	7 863	4 857	6 580	2 766	4 776	3 509	4 221	870	1 440						
	1977	8 870	7 235	7 212	2 769	4 653	3 998	3 402	720	1 737						
EU-10	1981	8 259	7 048	6 934	3 073	3 740	3 884	4 535	697	1 107	544					
EU-12	1986	9 402	8 406	6 613	3 181	4 546	4 134	5 189	547	1 514	489					
	1990	12 613	10 300	7 993	4 203	5 039	4 056	5 214	683	1 605	925	2 442	1 056			
EU-15 (2)	1995	15 372	13 521	8 398	4 496	4 265	4 719	7 421	891	1 506	1 894	5 183	1 876	3 288	815	2 326
	1998	18 119	13 439	8 351	5 023	4 144	5 340	8 999	776	1 756	2 140	4 323	1 298	2 697	964	2 223
	2000	23 020	15 864	10 385	7 105	4 903	5 776	9 863	964	2 193	2 851	5 489	1 470	3 065	946	2 447

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

For the last ten years or so, the EU's direct and indirect imports from third countries have more or less balanced out (in crude steel equivalent).

In the 1960s the countries at the head of the group of largest importers of goods containing steel were the Netherlands, France and Germany.

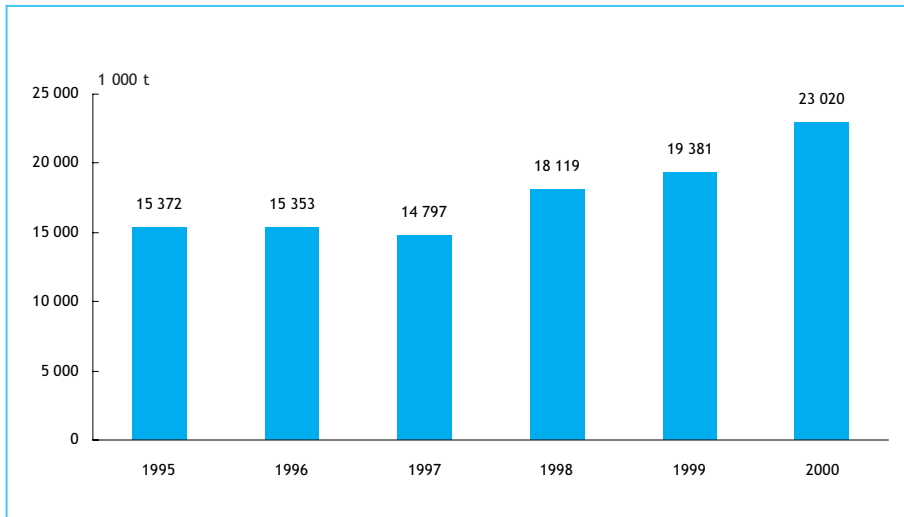
Within Europe 15, Germany, the United Kingdom and France are the largest importers – from third countries together with other Member States.

The main areas of consumption are the car industry, non-electric machinery, steel tubes and, to a lesser extent, ironmongery.

Between 1995 and 2000 most of the Member States have increased their indirect imports of goods containing steel: Italy (+ 58 %), United Kingdom (+ 33 %), France (+ 24 %) and Germany (+ 17 %).

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Figure 1.4.4 Indirect imports into EU-15 – 1995-2000



Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Table 1.4.5 Direct net trade – exports minus imports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S		
EU-6	1952	:	512	2 651	-565	-1 112	5 757	← Not part of the ECSC Treaty →										
	1957	:	1 896	3 370	-178	-1 477	6 746											
	1962	8 970	2 868	1 922	-2 923	-847	7 950											
	1967	15 343	6 023	1 330	-1 794	-43	9 827											
EU-9	1974	26 856	11 885	1 545	-1 332	1 225	16 263	-896	-323	-1 511								
	1977	15 132	2 139	1 774	-71	1 197	10 744	489	-308	-832								
EU-10	1981	21 912	4 944	2 957	1 257	2 212	11 821	504	-420	-765	-598							
EU-12	1986	15 550	2 862	2 736	-1 819	1 685	8 706	1 144	-59	-872	-833	2 420	-430					
	1990	8 640	1 304	1 397	-4 251	1 427	10 096	1 860	-59	-952	-1 154	815	-987					
EU-15 (2)	1995	6 678	576	1 240	-5 032	924	8 728	1 865	-246	-1 184	-1 400	-640	-1 700	1 788	1 104	660		
	1998	-1 124	1 818	1 069	-8 717	13	8 251	988	-364	-1 198	-1 734	-3 011	-1 950	1 871	967	873		
	2000	-2 121	3 130	895	-8 103	-228	9 580	384	-468	-995	-2 574	-4 013	-2 212	1 863	920	856		

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT
Table 1.4.6 Indirect net trade – exports minus imports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:									
	1957	:	5 532	1 907	535	-545	523									
	1962	9 025	6 088	1 608	928	-546	1 119									
	1967	11 208	7 955	1 501	2 346	-1 392	987									
EU-9	1974	22 035	13 595	2 446	3 812	-1 519	1 109	4 080	-713	-301						
	1977	27 386	12 832	4 518	6 485	-1 245	1 118	4 951	-439	-9						
EU-10	1981	21 799	12 117	2 321	6 447	-1 020	872	848	-489	-104	-257					
EU-12	1986	14 319	9 657	1 513	5 657	-1 944	483	-962	-243	-594	-311					
	1990	7 473	5 162	-592	5 076	-1 668	357	-404	-434	-98	-554	442	-650			
EU-15 (2)	1995	8 276	2 098	-117	8 311	-734	199	145	-542	-330	-1 664	-1 036	-1 298	476	396	435
	1998	10 055	3 841	1 487	8 293	1 237	-497	-2 288	-496	-52	-1 730	542	-598	721	547	340
	2000	5 410	2 845	240	7 076	-337	-184	-3 907	-633	-729	-2 406	788	-637	937	474	391

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Table 1.4.7 Total exports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	:	11 032	7 233	1 675	1 292	8 394									
	1962	22 918	15 485	8 651	2 527	2 207	10 836									
	1967	32 023	22 603	11 129	5 307	4 150	14 382									
EU-9	1974	64 175	40 253	20 424	10 734	8 942	24 412	11 495	204	1 464						
	1977	63 957	34 704	22 641	15 275	8 013	19 332	13 037	309	2 262						
EU-10	1981	60 330	36 663	21 199	16 387	8 008	19 536	9 466	240	1 625	592					
EU-12	1986	49 844	32 567	18 394	14 060	7 735	16 766	9 401	511	1 452	858						8 094	592
	1990	41 586	30 686	17 811	15 557	8 796	19 188	11 459	579	2 033	775	6 994	556			
EU-15 (2)	1995	47 160	34 958	20 723	20 700	9 759	20 443	15 812	625	1 864	837	8 856	910	7 026	3 602	5 893
	1998	48 496	37 415	24 081	20 344	11 211	22 142	14 584	622	2 437	826	9 604	1 136	7 213	3 690	6 048
	2000	51 427	41 828	27 308	22 860	10 057	27 974	13 314	661	2 328	891	11 639	1 566	8 114	3 702	6 512

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Table 1.4.8 Total imports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	:	3 604	1 956	1 318	3 314	1 125									
	1962	4 923	6 529	5 121	4 522	3 600	1 767									
	1967	5 472	8 625	8 298	4 755	5 585	3 568									
EU-9	1974	15 284	14 773	16 433	8 254	9 236	7 040	8 311	1 240	3 276						
	1977	21 439	19 733	16 349	8 861	8 061	7 470	7 597	1 056	3 103						
EU-10	1981	16 619	19 602	15 921	8 683	6 816	6 843	8 114	1 149	2 494	1 447					
EU-12	1986	19 975	20 048	14 145	10 222	7 994	7 577	9 219	813	2 918	2 002						4 496	1 211
	1990	25 473	24 220	17 006	14 732	9 037	8 735	10 003	1 072	3 083	2 483	5 737	2 193			
EU-15 (2)	1995	32 206	32 284	19 600	17 421	9 569	11 516	13 802	1 413	3 378	3 901	10 532	3 908	4 762	2 102	4 798
	1998	39 565	31 756	21 525	20 768	9 961	14 388	15 884	1 482	3 687	4 290	12 073	3 684	4 621	2 176	4 835
	2000	48 138	35 853	26 173	23 887	10 622	18 578	16 837	1 762	4 052	5 871	14 864	4 415	5 314	2 308	5 265

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

DIRECT AND INDIRECT EXTERNAL TRADE OF STEEL IN CRUDE STEEL EQUIVALENT

Table 1.4.9 Total net trade – exports minus imports

1 000 t		EU (1)	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S		
EU-6	1952	:	:	:	:	:	:	← Not part of the ECSC Treaty →										
	1957	:	7 428	5 277	357	-2 022	7 269											
	1962	17 995	8 956	3 530	-1 995	-1 393	9 069											
	1967	26 551	13 978	2 831	552	-1 435	10 814											
EU-9	1974	48 891	25 480	3 991	2 480	-294	17 372	3 184	-1 036	-1 812								
	1977	42 518	14 971	6 292	6 414	-48	11 862	5 440	-747	-841								
EU-10	1981	43 711	17 061	5 278	7 704	1 192	12 693	1 352	-909	-869	-855							
EU-12	1986	29 869	12 519	4 249	3 838	-259	9 189	182	-302	-1 466	-1 144	3 598	-630					
	1990	16 113	6 466	805	825	-241	10 453	1 456	-493	-1 050	-1 708	1 257	-1 637					
EU-15 (2)	1995	14 954	2 674	1 123	3 279	190	8 927	2 010	-788	-1 514	-3 064	-1 676	-2 998	2 264	1 500	1 095		
	1998	8 931	5 659	2 556	-424	1 250	7 754	-1 300	-860	-1 250	-3 464	-2 469	-2 548	2 592	1 514	1 213		
	2000	3 289	5 975	1 135	-1 027	-565	9 396	-3 523	-1 101	-1 724	-4 980	-3 225	-2 849	2 800	1 394	1 247		

(1) For EU, only trade with third countries.

(2) From 1995 on: new calculation method.

Source: Eurostat.

The method of calculating 'Indirect External Trade in Steel' depends on the exploitation of data on the external trade in goods containing steel and on the estimation of a set of coefficients to transform the weight of these products into crude steel equivalents.

Experts from Member States defined the products to consider in a systematic way – for more than 2000 goods – and have estimated the corresponding Community average transformation coefficients.

These transformation coefficients convert the actual weights of different and heterogeneous goods into the weight of the steel contained in the products.

Finally, taking into account the forms of steel used to make the product, and the wastage occurring between the stages of ingots and rolled products, transformation coefficients to crude steel equivalents have been calculated and applied.

The effect of the substitution of steel by other materials led Eurostat to revise the coefficients after 10 years.

Based on figures for the latest available five years, the share of the total European Union imports in crude steel consumption has risen to 24.1 %, whilst the share of exports has reached 33.0 %.

- Direct imports/Consumption = 12.2 %
- Indirect imports/Consumption = 11.9 %
- Direct exports/Consumption = 15.2 %
- Indirect exports/Consumption = 17.8 %

'Indirect Trade in Steel' is subdivided into 21 sectors covering more than 2000 products of Eurostat's Combined Nomenclature (CN); each product containing steel has its conversion coefficient to crude steel equivalent.

The branches taken into account are the following:

Steel foundries; forging and pressing; steel tube industry; wire drawing; bright drawing; cold-rolled narrow strip manufacture; manufacture of cold formed sections, deep drawing; manufacture of non electrical machinery; manufacture of electrical machinery; shipbuilding; locomotives and wagons; cars, cycles and other vehicles; structural steelwork; rail tracks; metal furniture; cane and metal boxes; screws, nuts and bolts; hardware; cans and metal boxes; boilers; and precision engineering.

In line with the founding treaty of the EC a regulation has been introduced for the classification of goods known as the CN. The CN is the official goods classification for European Community external trade. It fulfils at one and the same time the requirements of the Common Customs Tariff, statistics on external trade, and other Community policies concerning imports and exports of goods.

All the tables in chapter 4 of this pocketbook are based on the CN. This nomenclature is kept up-to-date, taking into account modifications to the 'harmonised system' (the basis of the CN) to the combined nomenclature. It has also been influenced by the work undertaken in the framework of the SLIM – Simpler Legislation for the Internal Market – initiative, in close collaboration with the representatives of the Member States and the Professional Associations.

The total number of CN 2002 codes is around 10 400. The CN is a collection of subdivisions representing products classified hierarchically in 21 sectors, 99 chapters, and 33 sub-chapters.

A precisely defined classification of countries – GEONOM – is used for Community external trade statistics. This identifies the parties undertaking external trade.

EXTERNAL AND INTERNAL TRADE OF ECSC IRON AND STEEL PRODUCTS

Table 1.4.10 Receipts from the EU

1 000 t		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Pig iron and ferro-alloys	Semis	Coils for re-rolling	Wire rod	Bars	Sections of 80 mm or more	Other sections	Hot rolled strip and hoop	Universal plates	Electrical sheets	Plates and sheets not coated, 3 mm and more	Plates and sheets not coated, less than 3 mm	Tinplates and other tinned sheets	Other coated plates, clad plates and sheets	New rails and sheet piling	Total finished products (col.2-15)
EU-6	1952	273	275	17	132	556	121	124	84	9	3	204	177	20	11	61	1 794
	1957	641	566	375	343	1 049	427	304	437	52	47	632	466	123	70	105	4 996
	1962	1 050	1 183	639	729	1 484	819	587	641	79	85	1 332	1 638	229	167	119	9 731
	1967	910	1 630	1 689	1 094	1 966	1 093	577	674	92	77	1 854	2 349	310	243	125	13 773
EU-9	1973	1 239	2 395	3 274	1 536	3 200	1 648	821	941	141	112	2 018	3 525	424	663	161	20 859
	1977	891	1 981	3 379	1 579	3 102	1 359	907	715	93	128	2 590	4 110	722	975	172	21 812
EU-10	1981	890	2 025	4 573	1 978	2 980	1 702	890	672	75	126	2 914	3 993	848	1 305	242	24 323
EU-12	1986	866	3 233	6 640	2 223	3 145	1 832	901	744	88	150	2 466	4 588	998	2 110	229	29 347
	1990	733	3 600	8 220	3 315	3 867	2 895	1 067	953	108	238	3 416	5 489	1 192	3 305	237	37 902
EU-15	1995	623	5 142	10 187	4 556	5 718	3 239	1 132	1 402	183	635	4 672	7 114	1 491	8 151	464	54 086
	1998	797	6 189	12 323	4 993	5 336	3 409	1 153	1 187	240	691	4 836	7 695	1 681	10 359	573	60 665
	2000	659	7 526	12 645	5 585	6 004	4 013	1 204	1 248	339	832	4 836	7 695	1 681	10 359	504	64 471

Source: Eurostat.

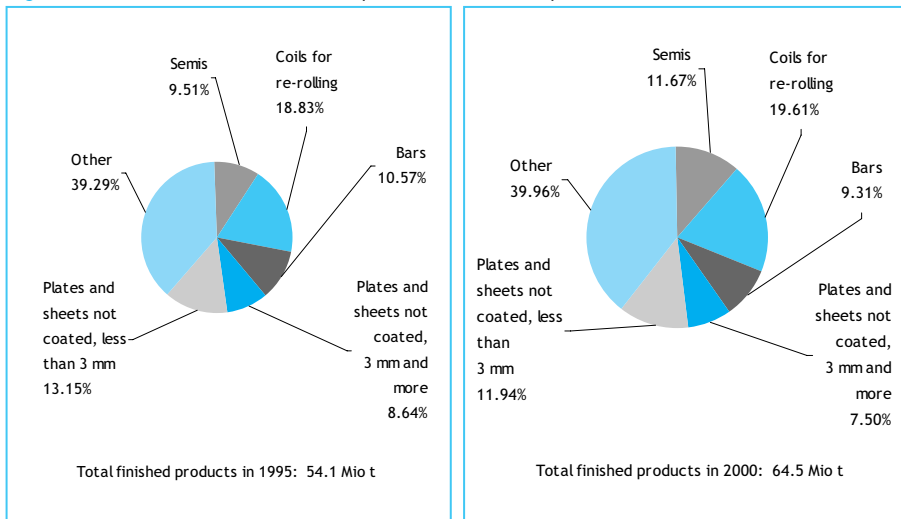
Intra-community trade of iron and steel products in the ECSC Treaty, calculated on the basis of receipts, has grown continuously over the years.

However, figures of 1993 and onwards cannot easily be compared with those before, as the completion of the single market led to a new method of measuring intra-EU trade: before 1993 movements were recorded by customs authorities, while since this date intra-EU trade statistics have been compiled on the basis of questionnaires filled in by enterprises.

Taking the growth of the EU into account, the proportion of intra-community trade in total imports has varied between 81 % in 1952 and 74 % in 2000. The countries with the largest receipts are France, Germany and Italy. France and Italy buy mainly coils for re-rolling, while in Germany coated sheets are the most important products.

EXTERNAL AND INTERNAL TRADE OF ECSC IRON AND STEEL PRODUCTS

Figure 1.4.10 Share of selected finished products in total receipts from EU – 1995 and 2000



Source: Eurostat.

EXTERNAL AND INTERNAL TRADE OF ECSC IRON AND STEEL PRODUCTS

Table 1.4.11 Imports from third countries

1 000 t		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Pig iron and ferro-alloys	Semis	Coils for re-rolling	Wire rod	Bars	Sections of 80 mm or more	Other sections	Hot rolled strip and hoop	Universal plates	Electrical sheets	Plates and sheets not coated, 3 mm and more	Plates and sheets not coated, less than 3 mm	Tinplates and other tinned sheets	Other coated plates, clad plates and sheets	New rails and sheet piling	Total finished products (col.2-15)
EU-6	1952	314	32	24	17	34	3	29	8	0	3	69	79	110	2	1	411
	1957	506	312	264	15	66	8	28	7	7	11	130	106	122	14	2	1 092
	1962	1 185	313	955	63	166	53	44	22	15	14	460	237	93	23	2	2 460
	1967	936	603	810	116	151	84	84	19	25	14	367	267	34	49	3	2 626
EU-9	1973	1 114	1 123	1 417	240	358	178	176	81	31	47	1 166	940	46	232	8	6 043
	1977	1 338	1 699	1 905	765	940	373	405	122	27	63	1 700	1 495	89	357	7	9 947
EU-10	1981	623	962	808	496	920	595	243	89	58	34	1 068	852	133	276	30	6 564
EU-12	1986	998	1 108	1 731	626	1 210	697	136	110	108	28	1 626	1 182	91	587	39	9 279
	1990	1 994	1 898	1 654	1 561	1 422	619	189	199	138	63	1 668	1 208	113	810	83	11 625
EU-15	1995	3 508	4 052	3 807	1 336	970	791	288	184	125	207	2 111	796	221	454	178	15 520
	1998	4 342	3 599	4 925	1 247	1 368	806	308	138	133	199	2 741	1 668	336	1 962	127	19 557
	2000	2 882	5 656	4 906	1 750	2 011	873	267	305	108	211	1 674	2 241	389	2 520	140	23 051

Source: Eurostat.

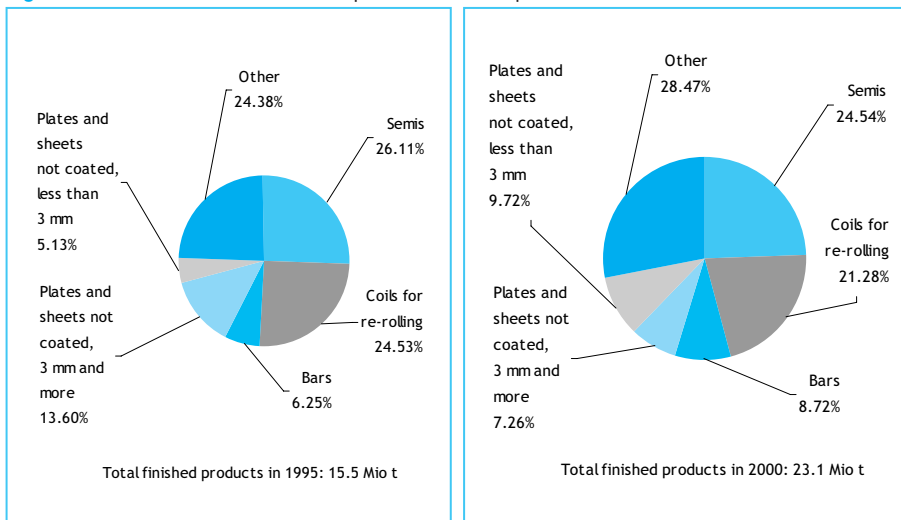
In the middle of the 1950s most of the market was taken up by plate (35 %), followed by semi-finished products (29 %) and coils (24 %). Today the division looks like this: plates 31 %, semi-finished products 25 %, coils 21 %, bars 9 % and wire rod 8 %.

Plates as finished rolled products are principally imported from South Korea, Slovakia, Bulgaria, Russia, Poland and Turkey, while the main partners for semi-finished products are Russia, Brazil, Poland and Ukraine.

Within the EU, the hierarchy of the main importing countries is the following: Italy, Germany, Belgium, Spain and the United Kingdom.

EXTERNAL AND INTERNAL TRADE OF ECSC IRON AND STEEL PRODUCTS

Figure 1.4.11 Share of selected finished products in total imports from third countries – 1995 and 2000



Source: Eurostat.

EXTERNAL AND INTERNAL TRADE OF ECSC IRON AND STEEL PRODUCTS

Table 1.4.12 Exports to third countries

1 000 t		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Pig iron and ferro-alloys	Semis	Coils for re-rolling	Wire rod	Bars	Sections of 80 mm or more	Other sections	Hot rolled strip and hoop	Universal plates	Electrical sheets	Plates and sheets not coated, 3 mm and more	Plates and sheets not coated, less than 3 mm	Tinplates and other tinned sheets	Other coated plates, clad plates and sheets	New rails and sheet piling	Total finished products (col.2-15)
EU-6	1952	650	510	3	328	1 897	550	612	226	31	0	555	565	63	160	372	5 872
	1957	393	865	14	347	2 284	756	805	262	43	92	1 207	1 028	208	403	513	8 827
	1962	602	710	157	623	2 224	712	921	438	65	144	860	1 326	429	321	333	9 263
	1967	1 115	1 436	993	1 055	2 191	1 014	1 233	432	86	172	1 556	2 560	615	659	264	14 266
EU-9	1973	725	723	1 391	1 462	2 589	1 830	1 225	451	123	205	1 981	3 957	843	1 088	384	18 252
	1977	420	804	3 183	1 365	2 387	1 875	1 108	472	78	246	2 296	4 898	1 137	1 001	598	21 448
EU-10	1981	505	1 428	4 073	1 183	2 565	1 999	736	626	100	195	2 909	4 754	929	1 361	595	23 453
EU-12	1986	121	2 935	2 940	1 538	2 572	1 931	825	393	65	207	1 983	4 335	1 055	1 718	508	23 005
	1990	94	2 275	3 138	917	1 594	1 939	428	393	60	140	1 986	3 569	941	1 394	464	19 238
EU-15	1995	32	2 547	3 434	1 695	1 427	1 294	521	399	44	267	2 470	2 976	873	2 455	572	20 974
	1998	56	1 445	2 651	1 439	1 237	1 439	498	366	48	279	2 173	2 473	770	2 402	684	17 904
	2000	50	1 963	2 395	1 764	1 420	1 791	448	483	88	328	2 106	2 735	835	3 357	492	20 205

Source: Eurostat.

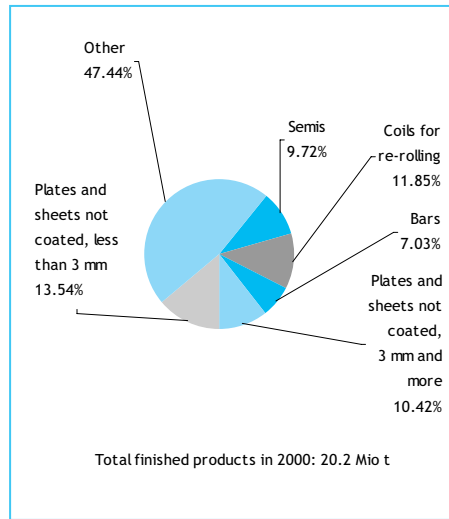
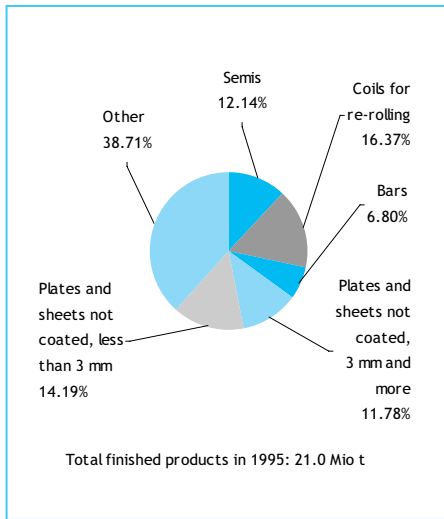
The collapse in demand in Eastern Europe at the beginning of the 1990s had a significant impact on trade in iron and steel goods in the EU: steel exports to third countries fell while imports from the same countries rose. More recently the decline in Asian economies noted during the second half of 1997 also affected the EU's balance of trade in iron and steel goods to the extent that for the first time the EU became a net importer in 1998.

Deliveries of goods to the most important customer – the USA – amount to around 23 % of coils for re-rolling, 15 % of thin plate, 12 % of semi-finished products and 11 % of coated sheet. Switzerland, another of the EU's important customers, buys mostly plate and coils for re-rolling. For Turkey, a single product predominates: sheet over than 3 mm – more than 40 %.

Germany and France remain the largest exporters of finished products, accounting for 45 % between them.

EXTERNAL AND INTERNAL TRADE OF ECSC IRON AND STEEL PRODUCTS

Figure 1.4.12 Share of selected finished products in total exports to third countries – 1995 and 2000



Source: Eurostat.

EXTERNAL TRADE OF ECSC STEEL BY MARKETS

Table 1.4.13 Imports from third countries

1 000 t		Europe			Africa	America		Asia		Oceania	Total third countries
		Total	Western Europe	Eastern Europe		Total	of which US	Total	of which Japan		
EU-6	1952	:	:	:	:	:	:	:	:	:	:
	1957	785	676	109	0	290	278	8	8	1	1 084
	1962	2 093	1 386	707	49	170	114	147	141	2	2 461
	1967	2 247	1 594	653	43	150	83	161	158	25	2 626
EU-9	1973	4 062	2 593	1 469	117	537	277	1 088	979	223	6 027
	1977	6 863	4 086	2 777	446	297	109	1 830	1 669	512	9 949
EU-10	1981	5 961	3 930	2 031	89	311	125	179	164	27	6 566
EU-12	1986	6 917	4 674	2 243	482	1 282	116	573	393	26	9 281
	1990	9 081	5 966	3 115	361	1 732	174	407	127	18	11 624
EU-15	1995	11 208	1 713	9 495	810	2 514	797	921	144	11	15 521
	1998	12 365	3 476	8 889	835	1 831	205	4 141	281	442	19 654
	2000	14 999	3 909	11 089	1 214	2 822	267	3 731	462	259	23 073

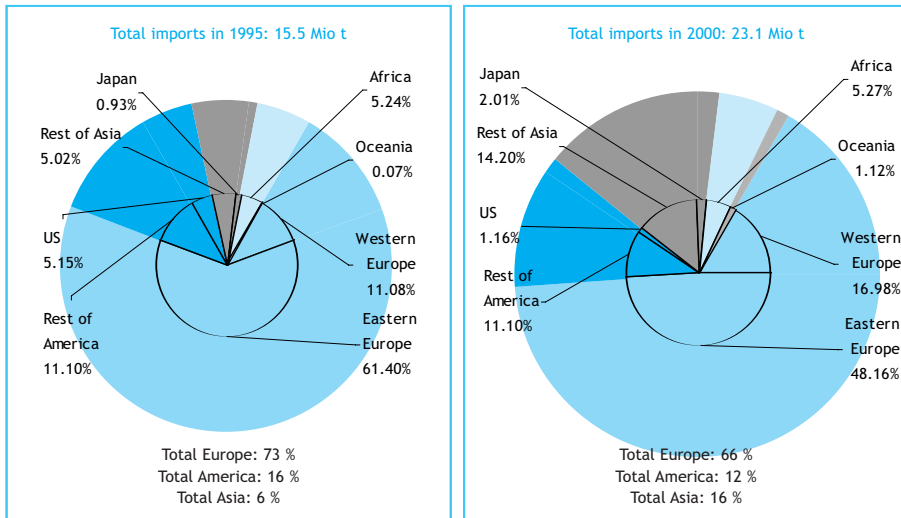
Source: Eurostat.

Although imports of iron and steel products covered by the ECSC Treaty have risen fairly smoothly over the years, a strong rise in imports from third countries is noticeable since 1998. A record 23 Mio tonnes was imported in 2000, an increase of 20 % on the previous year.

In the 1950s, plate was a very important part of the market. Nowadays semi-finished products and coils for re-rolling, together with plate, are the dominant products. Besides Turkey it is the Eastern European countries – Russia, Poland, Czech Republic – that are the major suppliers with a market share of more than 45 %.

EXTERNAL TRADE OF ECSC STEEL BY MARKETS

Figure 1.4.13 Imports from third countries



Source: Eurostat.

EXTERNAL TRADE OF ECSC STEEL BY MARKETS

Table 1.4.14 Exports to third countries

1 000 t		Europe			Africa	America		Asia		Oceania	Total third countries
		Total	Western Europe	Eastern Europe		Total	Of which US	Total	Of which Japan		
EU-6	1952	:	:	:	:	:	:	:	:	:	:
	1957	3 793	3 004	789	1 058	2 065	438	1 058	209	34	9 020
	1962	4 953	4 023	930	845	2 376	1 281	845	6	17	9 354
	1967	6 214	5 288	926	958	5 140	3 814	958	95	29	14 321
EU-9	1973	8 079	5 432	2 647	1 882	5 785	4 349	1 882	3	59	18 294
	1977	8 385	5 697	2 688	2 538	7 781	6 213	2 538	5	43	21 497
EU-10	1981	8 529	5 979	2 550	2 851	7 473	4 338	2 851	24	55	23 499
EU-12	1986	7 369	4 885	2 484	2 376	7 428	4 900	5 784	120	62	23 025
	1990	6 442	5 467	975	1 979	6 010	4 488	4 627	267	90	19 261
EU-15	1995	5 180	3 993	1 187	1 816	6 788	4 511	6 423	155	145	20 986
	1998	5 580	3 724	1 856	1 743	7 390	5 117	3 115	49	128	18 269
	2000	7 016	4 263	2 753	1 654	7 554	5 489	3 822	59	138	20 444

Source: Eurostat.

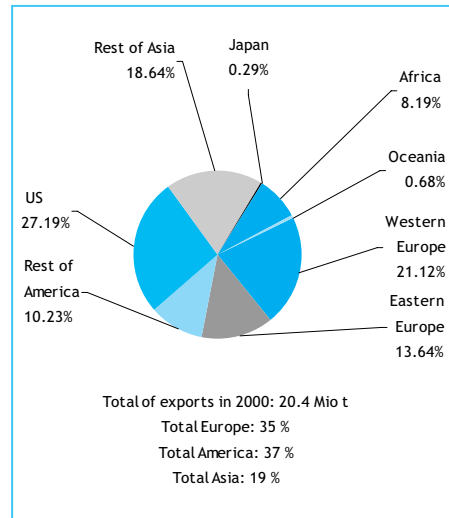
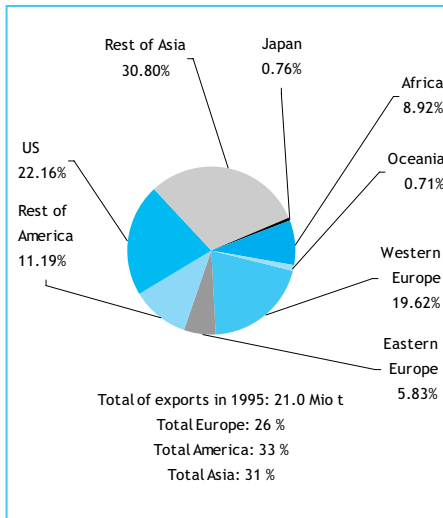
Taking into account the development of the EU from 6 to 15 members, it can be seen that exports of iron and steel products listed in the ECSC Treaty have grown consistently, though with some fluctuations caused by specific phenomena such as the crisis in the iron and steel sector at the beginning of the 1980's. The EU is not only the largest producer of steel in the world, it is also the largest exporter.

Nevertheless, there has been an important change since 1998: the EU is no longer a net exporter; the balance has swung towards imports.

The North American continent is still the major market, the USA being the largest customer with more than 20 %. The main products are semi-finished products, coils for re-rolling and thick and medium plate. The USA, Switzerland, Turkey and Canada together account today for no less than 45 % of the market.

EXTERNAL TRADE OF ECSC STEEL BY MARKETS

Figure 1.4.14 Exports to third countries



Source: Eurostat.

1.5. INVESTMENT AND CAPACITY

Table 1.5.1 Investment in the ECSC iron and steel industry

Mio ECU/EUR (1)		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S	
EU-6	1952	544.7	182.0	188.0	105.0	20.8	28.7	20.2	← Not part of the ECSC Treaty →									
	1957	709.7	314.2	194.9	75.2	33.9	60.6	30.9										
	1962	1 218.1	415.4	413.4	158.8	52.5	138.6	39.4										
	1967	749.6	225.4	178.4	128.6	94.8	106.6	15.8										
EU-9	1973	3 038.1	509.5	956.7	876.7	49.2	169.7	61.4	401.4	13.49 (2)								
	1977	2 378.4	533.4	367.2	509.4	45.4	137.8	68.3	710.6	5.6	0.7							
EU-10	1981	2 467.5	763.9	380.9	568.9	91.7	263.7	99.2	296.3	2.9	25.0		:					
EU-12	1986	3 930.9	958.1	419.4	947.1	354.1	319.2	71.8	356.1	5.9	0.49		11.2	471.5	16.5			
	1990	4 561.9	1 033.2	621.0	1 079.3	244.4	407.8	74.9	564.6	12.8	0.89		15.1	426.4	82.4			
EU-15	1995	3 220.4	890.0	353.4	357.2	79.6	257.1	81.5	263.5	15.7	1.15		8.8	373.5	5.5	177.9	111.8	245.0
	1998	4 065.2	1 194.6	528.1	565.9	193.3	188.3	43.3	269.7	9.7	4.53		36.9	456.3	17.0	250.6	149.5	161.9
	2000	4 630.8	1 124.9	564.1	980.2	177.7	460.2	41.5	119.8	6.4	:		61.2	480.0	6.5	273.3	117.3	217.7

(1) Up to 1998 in ECU, from 1.1.1999 in EUR.

(2) Denmark and Ireland together.

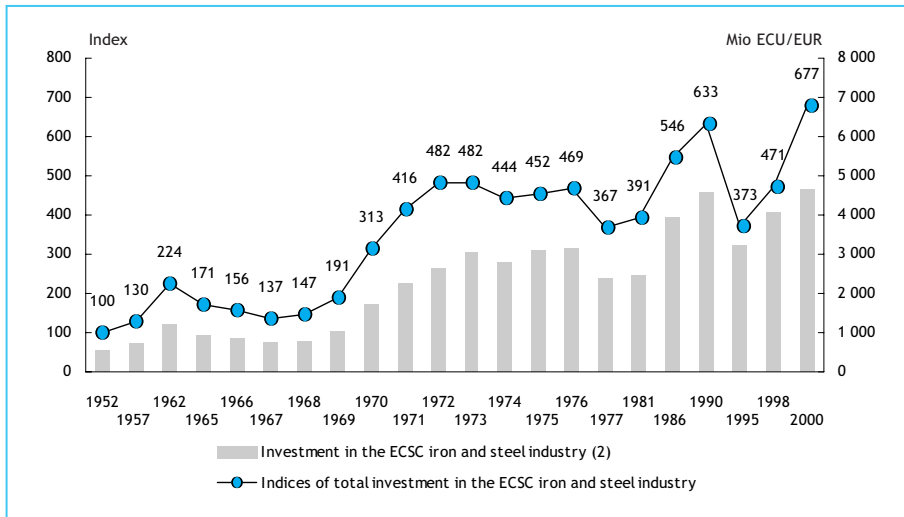
Source: DG ECFIN.

The table refers to all expenditures shown as capital or fixed assets in the balance sheet of the steel producing or transforming companies for the year under review, aggregated to national level.

The figures are based on the information received directly from the steel companies concerning their investment programmes, covering all types of installations of production, from sinter plants and blast furnaces up to cold mills and coating plants, including auxiliary plants for waste treatment.

The table reflects important investments in the years 1985-91 for the modernisation of the sector. By the end of 1990, more than 90 % of the European steel was produced by continuous casting.

Figure 1.5.1 Indices and values of investment in the ECSC iron and steel industry (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: DG ECFIN.

1.5. INVESTMENT AND CAPACITY

Table 1.5.2 Ratios of investment to crude steel production

ECU/EUR /t (1)		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	11.8	11.2	13.8	11.1	28.5	9.7	8.9									
	1962	16.7	12.7	24.0	16.7	25.1	19.0	9.8									
	1967	8.3	6.1	9.1	8.1	27.9	11.0	3.5									
EU-9	1973	20.2	10.3	38.0	41.7	8.6	11.0	10.4	15.1	22.5 (2)							
	1977	18.9	13.7	16.6	21.9	9.3	12.2	15.9	34.7	:	8.0						
EU-10	1981	19.6	19.4	17.9	23.0	16.7	21.4	26.1	19.0	:	4.8	:					
EU-12	1986	31.0	25.7	23.5	41.2	67.0	32.9	19.4	24.1	2.4	9.5	10.7	39.5	23.1			
	1990	33.3	23.7	32.7	42.3	45.1	35.7	21.0	31.7	2.7	20.9	15.1	33.0	114.9			
EU-15	1995	20.7	21.3	19.5	12.9	12.4	22.6	31.2	15.0	4.1	24.2	9.4	27.0	6.9	35.7	34.9	49.5
	1998	25.5	27.1	26.2	22.0	30.3	16.6	17.5	15.7	12.8	12.2	33.3	31.1	19.7	47.3	38.1	30.8
	2000	28.3	24.4	27.2	36.6	31.5	41.0	16.1	8.0	0.0	8.0	55.5	30.4	5.9	47.9	28.6	40.6

(1) Up to 1998 in ECU, from 1.1.1999 in EUR.

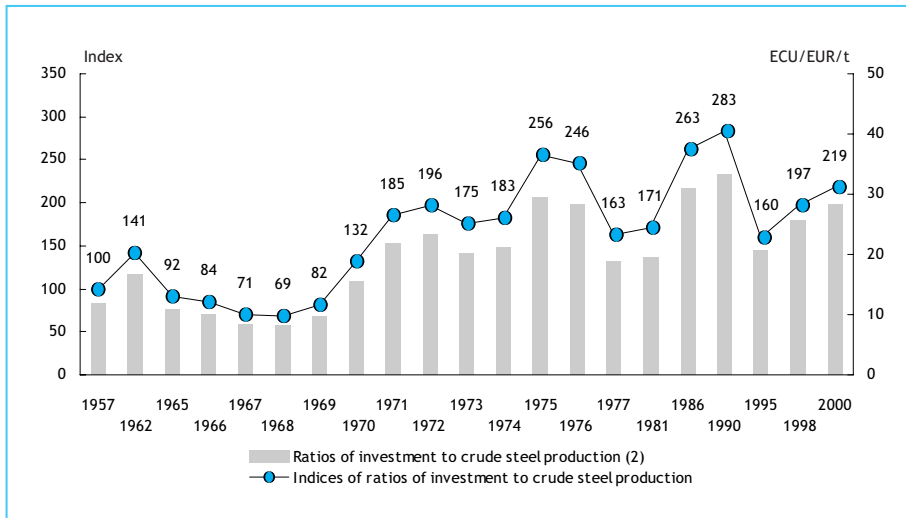
(2) Denmark and Ireland together

Sources: Eurostat, DG ECFIN.

The ratio of invested Euro per tonne of produced steel is a good benchmark indicator of the financial effort of the steel companies in order to modernise their production processes, providing the situation of the market allows for the necessary cash flow.

It was high in the late eighties coinciding with projects for new steel plants and continuous casting installations, and is been higher lately in the most competitive European steel companies.

Figure 1.5.2 Indices and values of ratios of investment to crude steel production (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Sources: Eurostat, DG ECFIN.

1.5. INVESTMENT AND CAPACITY

Table 1.5.3 Maximum capacity of crude steel production plants

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	:	:	:	:	:	:	:	← Not part of the ECSC Treaty →								
	1957	63 550	29 320	14 800	7 440	1 260	7 130	3 600									
	1962	83 400	38 100	19 800	10 400	2 500	8 300	4 300									
	1967	112 000	47 700	23 900	18 800	3 500	12 400	5 700									
EU-9	1973	174 500	58 800	28 100	28 100	6 100	17 300	6 500	28 900	700 (1)							
	1977	200 800	67 700	33 300	34 000	8 200	19 200	8 200	28 900	100	1 200						
EU-10	1981	198 000	67 800	29 700	41 000	8 600	17 900	6 400	25 400	300	900	:					
EU-12	1986	189 018	47 496	28 191	35 388	7 965	13 556	5 450	22 591	345	850	4 421	21 999	766			
	1990	197 904	56 416	25 361	40 015	7 600	13 780	5 150	23 925	345	850	3 696	19 997	769			
EU-15	1995	205 084	51 298	22 961	42 220	6 790	14 395	4 500	21 097	500	850	3 812	20 835	910	5 555	4 120	5 241
	1998	200 218	52 366	24 935	35 506	6 890	14 007	4 500	21 051	500	850	4 412	18 644	970	5 637	4 330	5 620
	2000	200 535	52 559	23 883	36 337	6 600	13 205	4 500	20 526	500	850	4 412	19 531	1 120	5 893	4 350	6 269

(1) Denmark and Ireland together.

Source: DG ECFIN.

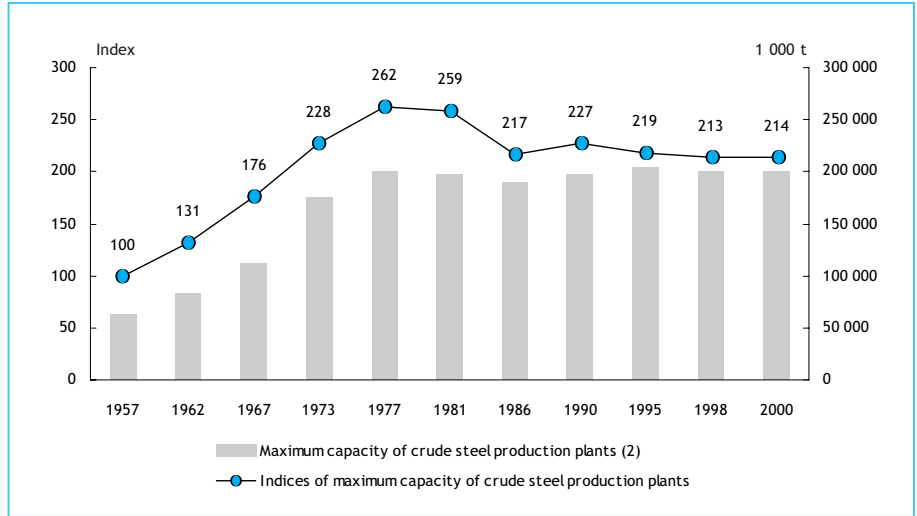
Steel capacity, more specifically designated as 'maximum production potential' – MPP – is measured in tonnes per year. It is the maximum achievable during one year under normal conditions, including normal repairs, maintenance and holidays. It takes into consideration all the sections of the plant, allowing for possible bottlenecks in one section holding up all the others. In the case of rolling mills, it also takes into account the availability of semi-finished materials from external suppliers and the product mix.

Most European producers reached their highest MPP between 1977 and 1981, coinciding with a sharp fall in the demand in 1980. The utilisation rate – production versus MPP – fell below 60 %, which led the whole sector to a situation of crisis.

The sector was drastically restructured in the 80's by reducing capacities in some steelworks and closing 29 Mio tonnes of rolling mill capacities. A further restructuring effort took place in 1995.

The MPP figures are based on individual information received from companies as part of the annual survey on investments and capacities.

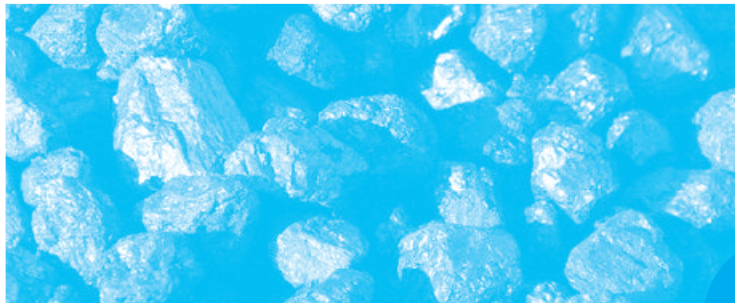
Figure 1.5.3 Indices and values of maximum capacity of crude steel production plants (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: DG ECFIN.



COAL

Table 2.1.1 Gross inland consumption of hard coal

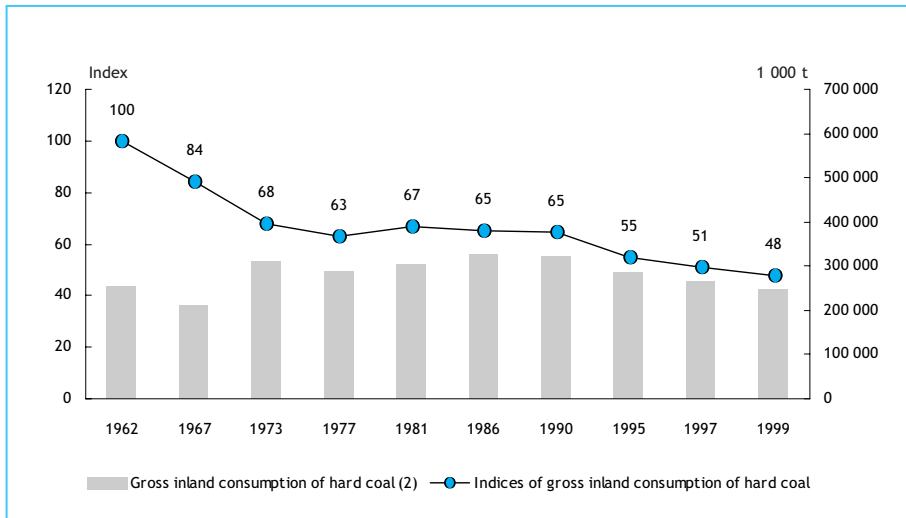
1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	253 744	137 747	61 921	11 296	18 259	24 317	204									
	1967	213 413	107 031	58 603	12 417	13 405	21 886	71									
EU-9	1973	310 389	98 515	40 300	11 571	4 822	16 955	305	133 553	856	3 512						
	1977	287 031	81 231	41 892	12 619	4 663	15 595	538	124 342	796	5 355						
EU-10	1981	304 059	92 455	42 817	18 382	5 349	17 410	320	117 725	1 291	8 083	227					
EU-12	1986	324 882	94 617	30 556	20 716	10 406	13 808	183	112 489	2 307	11 725	1 755	24 459	1 861			
	1990	322 574	86 965	29 230	21 327	14 235	16 112	197	104 962	3 263	9 992	1 380	30 514	4 397			
EU-15	1995	284 968	74 224	22 611	17 446	14 660	12 394	217	77 307	2 689	10 918	1 480	32 168	5 522	3 297	6 540	3 495
	1997	266 116	72 236	20 675	16 006	14 794	11 682	194	63 129	2 831	11 138	1 153	32 494	5 555	4 072	6 995	3 162
	1999	248 259	67 485	22 146	17 069	12 089	10 021	153	55 450	2 488	7 672	1 032	34 800	6 126	3 432	5 255	3 041

← Not part of the ECSC Treaty →

Gross inland consumption is the key aggregate of an energy balance sheet. It represents for the reference period the quantity of hard coal necessary to satisfy inland consumption of the geographical entity under consideration.

It is a calculated aggregate and corresponds to the sum of the primary production of hard coal plus imports and variations in stocks, minus exports and bunkers. The reduced production of hard coal in the EU is partially compensated by increased imports.

Figure 2.1.1 Indices and values of gross inland consumption of hard coal (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

2.1. SUMMARY TABLES

Table 2.1.2 Contribution of hard coal to the total primary energy production

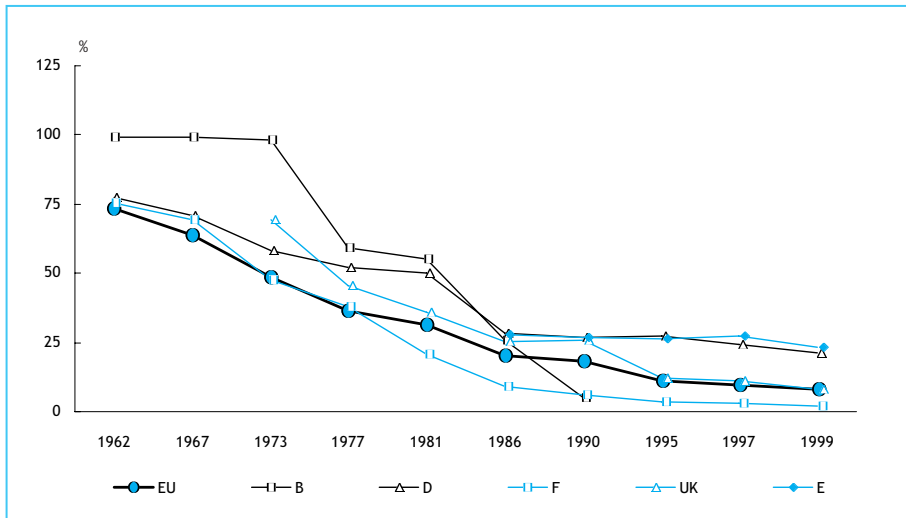
%		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	73.4	77.3	75.4	2.7	75.2	99.0	-	← Not part of the ECSC Treaty →								
	1967	64.0	70.8	69.2	1.1	42.0	99.0	-									
EU-9	1973	48.7	58.2	47.3	-	2.1	98.0	-	69.5	4.4	-						
	1977	36.2	52.3	38.2	-	-	59.0	-	45.5	2.8	-						
EU-10	1981	31.4	50.3	20.6	-	-	55.0	-	35.8	1.6	-	-					
EU-12	1986	20.0	28.3	8.9	-	-	26.0	-	25.1	1.0	-	-	28.1	2.9			
	1990	18.1	26.9	6.0	-	-	5.0	-	25.7	0.7	-	-	26.8	4.3			
EU-15	1995	11.0	27.2	3.4	-	-	-	-	12.2	-	-	-	26.5	-	-	-	-
	1997	9.7	24.1	2.8	-	-	-	-	11.0	-	-	-	27.4	-	-	-	-
	1999	7.9	21.1	2.2	-	-	-	-	8.2	-	-	-	23.1	-	-	-	-

Source: Eurostat.

The contribution of hard coal to total primary energy production is an indication of the relative importance of coal amongst the indigenous fuels produced in a country.

The significant decrease from 73 % in EU-6 in 1962 to 8 % in 1999 was a consequence of the decreased economic viability of extracted coal and the shift to cleaner fuels and more energy efficient technologies developed in the main coal-consuming sectors, industry and households.

Figure 2.1.2 Contribution of hard coal to the total primary energy production



Source: Eurostat.

Table 2.1.3 Contribution of hard coal to the total gross inland consumption

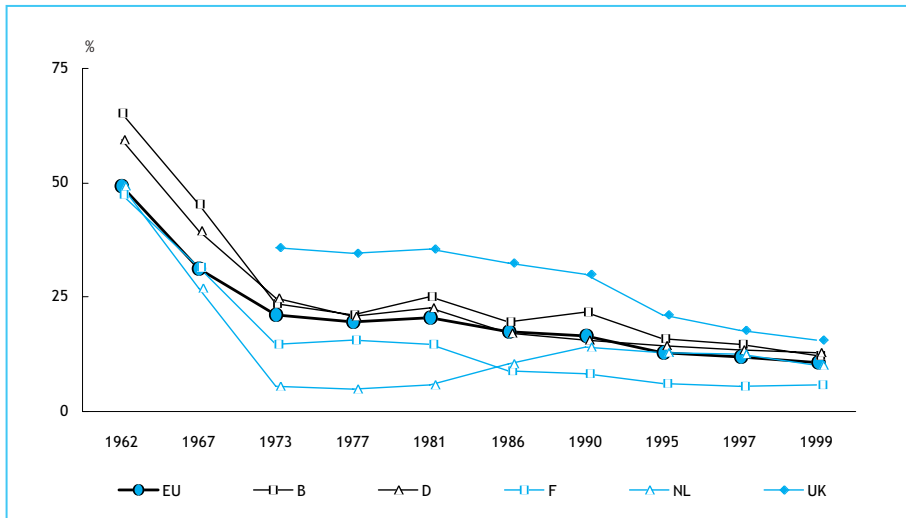
%		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	49.3	59.5	47.6	15.2	49.3	65.2	4.3	← Not part of the ECSC Treaty →								
	1967	31.2	39.6	31.5	10.1	26.9	45.4	1.4									
EU-9	1973	21.2	24.8	14.7	6.5	5.4	23.5	5.0	35.9	8.4	11.5						
	1977	19.7	20.7	15.7	6.8	5.0	21.2	10.4	34.6	7.8	17.0						
EU-10	1981	20.5	22.5	14.8	9.6	5.8	25.1	10.2	35.4	11.0	28.8	1.1					
EU-12	1986	17.4	17.0	9.0	10.2	10.4	19.5	4.1	32.6	16.8	36.3	6.3	18.5	8.1			
	1990	16.4	15.7	8.4	9.3	14.0	21.7	3.9	29.9	21.1	33.4	4.3	17.9	15.4			
EU-15	1995	13.0	14.4	6.0	7.3	12.8	16.1	4.6	21.2	15.4	31.2	4.0	16.9	17.9	8.2	14.0	4.7
	1997	11.8	13.5	5.4	6.5	12.7	14.6	4.1	17.7	14.6	30.7	2.9	16.1	16.9	9.4	13.3	4.2
	1999	10.9	12.8	5.7	6.6	10.2	12.2	3.1	15.6	11.3	22.6	2.5	15.9	15.9	8.0	10.1	3.8

Source: Eurostat.

This percentage expresses the portion of the overall energy demand of a geographical entity which is covered with the use of hard coal.

A rapidly decreasing contribution of coal to the overall fuel mix is the consequence of the shift to cleaner fuels such as natural gas, the increased use of nuclear energy, more energy-efficient technologies developed in the main coal-consuming sectors, industry and households as well as structural changes of the economy.

Figure 2.1.3 Contribution of hard coal to the total gross inland consumption



Source: Eurostat.

2.2. PRODUCTION BASES

Table 2.2.1 Underground output per man-hour

kg per man-hour		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	-	-	-	-	-	-	-									
	1967	-	-	-	-	-	-	-									
EU-9	1973	-	-	-	-	-	-	-	-	-	-						
	1977	-	-	-	-	-	-	-	-	-	-						
EU-10	1981	485	531	376	-	-	267	-	392	-	-	-					
EU-12	1986	563	602	427	-	-	321	-	512	-	-	-	286	-			
	1990	665	673	634	-	-	361	-	704	-	-	-	341	-			
EU-15	1995	713	749	649	-	-	-	-	1 422	-	-	-	292	-	-	-	-
	1997	804	777	626	-	-	-	-	1 225	-	-	-	529	-	-	-	-
	1999	704	788	625	-	-	-	-	1 221	-	-	-	331	-	-	-	-

← Not part of the ECSC Treaty →

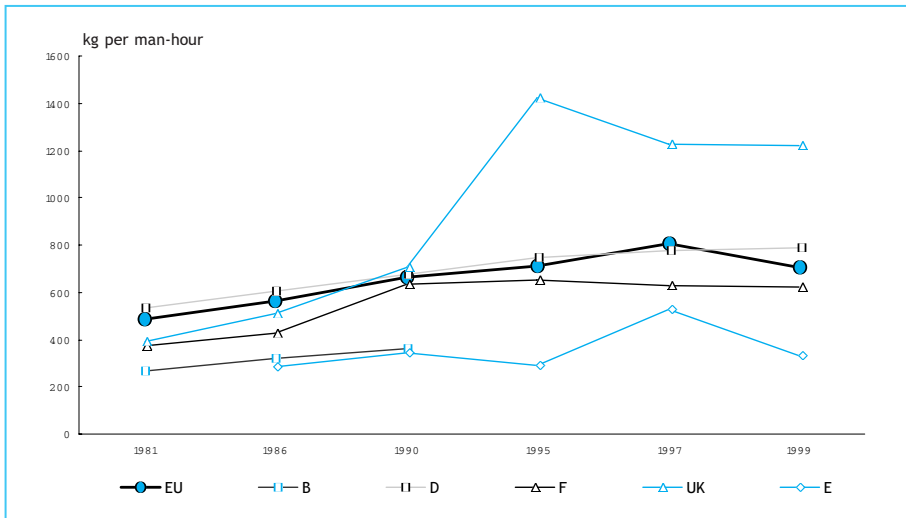
COAL

Source: Eurostat.

This refers to underground output per man and hour, i.e. productivity is calculated as the net output divided by the number of hours worked. Underground productivity covers only coal mining in the strict sense. Output and shifts of small mines, open-cast mining, coal recovered from tips, capital working are therefore excluded.

Increased productivity has been observed from the early Eighties to the late Nineties in the EU. It should be noted, however, that data since 1995 for the UK show increased productivity, due to the inclusion of only permanently employed mining personnel and the non-inclusion of hired manpower.

Figure 2.2.1 Underground output per man-hour



Source: Eurostat.

2.2. PRODUCTION BASES

Table 2.2.2 Personnel employed underground – yearly average

1 000 persons		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	-	-	-	-	-	-	-									
	1967	-	-	-	-	-	-	-									
EU-9	1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EU-10	1981	347	124	29	-	-	16	-	178	-	-	-	-	-	-	-	-
EU-12	1986	286	107	19	-	-	13	-	108	-	-	-	37	1	-	-	-
	1990	187	89	10	-	-	2	-	53	-	-	-	33	1	-	-	-
EU-15	1995	94	55	7	-	-	-	-	10	-	-	-	21	-	-	-	-
	1997	81	50	5	-	-	-	-	8	-	-	-	18	-	-	-	-
	1999	70	42	5	-	-	-	-	6	-	-	-	17	-	-	-	-

← Not part of the ECSC Treaty →

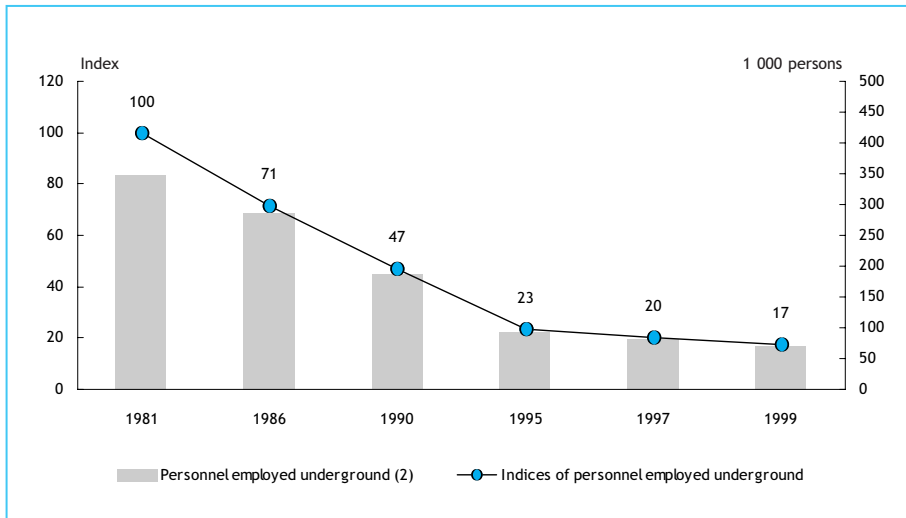
COAL

Source: Eurostat.

This information refers to workers directly engaged in mining activity. When a worker spends time both underground and on the surface, account is taken of where he spends most of his working time.

A drop in underground employment was recorded since the early Eighties in the EU due to reduced mining activity. Data for the UK do not include hired personnel.

Figure 2.2.2 Indices and values of personnel employed underground – yearly average (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 2.3.1 Production of hard coal

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	233 223	147 114	52 359	691	11 833	21 226	-									
	1967	189 484	116 750	47 624	410	8 265	16 435	-									
EU-9	1973	270 230	103 654	25 682	5	1 829	8 842	-	130 154	64	-						
	1977	240 401	91 310	21 294	1	-	7 068	-	120 674	54	-						
EU-10	1981	245 640	95 545	18 589	-	-	6 136	-	125 301	69	-	-					
EU-12	1986	227 969	87 125	14 394	29	-	5 625	-	104 635	54	-	-	15 895	212			
	1990	197 201	76 553	10 487	58	-	1 036	-	89 301	45	-	-	19 440	281			
EU-15	1995	136 129	58 858	7 014	-	-	-	-	52 630	-	-	-	17 627	-	-	-	-
	1997	121 850	51 212	5 779	-	-	-	-	46 981	-	-	-	17 878	-	-	-	-
	1999	99 983	43 848	4 532	-	-	-	-	36 168	-	-	-	15 435	-	-	-	-

← Not part of the ECSC Treaty →

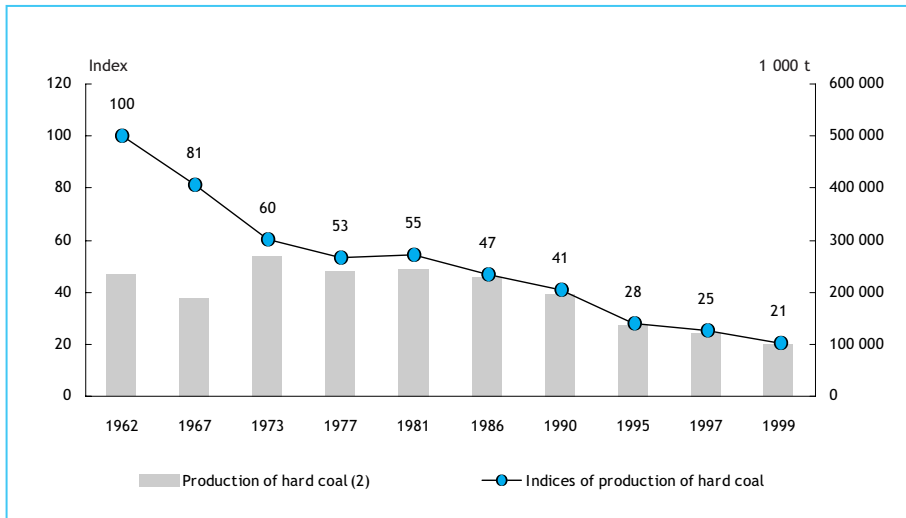
COAL

Source: Eurostat.

The production of hard coal comprises quantities of fuels extracted or produced, calculated after any operation for removal of inert matter. In general, production includes the quantities consumed by the producer in the production process – e.g. for heating or operation of equipment and auxiliaries – as well as supplies to other on-site producers of energy for transformation or other uses. As of 1990 coal figures for Spain include lignito negro.

There is a decreasing trend in coal production in the EU, as quantities produced in 1999 in EU-15 are 40 % of those produced in the early sixties by EU-6. The two most important producers – Germany and the UK – reduced their production in the early Nineties to one-third of the level of the Sixties. The reason for this declining trend is the use of substitution fuels in industry and households and the cheaper prices of imported coal.

Figure 2.3.1 Indices and values of production of hard coal (1)



(1) Indices and values for EU.
 (2) Exact values, see table.

Source: Eurostat.

Table 2.3.2 Production of coke

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	72 144	42 863	13 482	4 330	4 274	7 195	-									
	1967	64 088	35 245	12 432	6 240	3 314	6 857	-									
EU-9	1973	81 838	33 997	11 881	7 668	2 655	7 774	-	17 863	-	-						
	1977	68 266	27 557	10 769	7 676	2 501	5 569	-	14 194	-	-						
EU-10	1981	64 401	28 256	10 723	8 071	2 242	6 004	-	9 060	-	-	45					
EU-12	1986	65 891	30 159	8 258	7 193	2 849	5 130	-	8 929	-	-	-	3 093	280			
	1990	55 810	22 306	7 196	6 356	2 736	5 420	-	8 355	-	-	-	3 211	230			
EU-15	1995	40 750	11 102	5 566	5 185	2 895	3 696	-	6 020	-	-	-	2 438	331	1 448	920	1 149
	1997	40 532	10 744	5 439	5 219	2 905	3 401	-	6 233	-	-	-	2 646	340	1 566	879	1 160
	1999	36 658	8 569	5 418	4 990	2 327	3 137	-	5 870	-	-	-	2 331	363	1 608	900	1 145

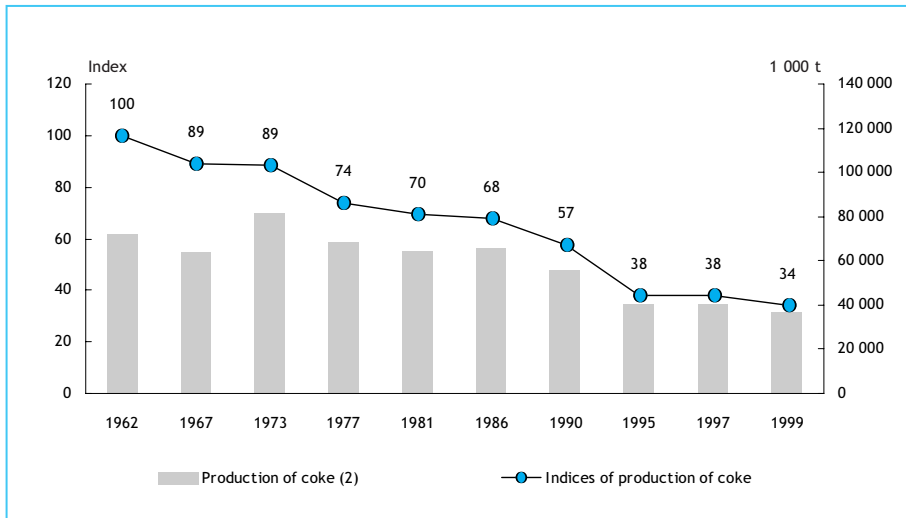
← Not part of the ECSC Treaty →

Source: Eurostat.

The production of coke is derived from the distillation of coal in coke-oven plants. Data comprise coke-oven coke and gas works coke.

There is a decreasing trend in coke production in the EU, as quantities produced in 1999 in EU-15 are half of those produced in the early sixties by EU-6. The coke production in 1999 in Germany, the major EU coke producer, was 20 % of the 1962 levels. The main reason for this reduction is the reduced consumption of coke in the iron and steel industry which shifted towards more efficient technologies for steel production – electric furnaces.

Figure 2.3.2 Indices and values of production of coke (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 2.3.3 Production of patent fuels

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	15 786	5 939	6 936	59	1 250	1 602	-									
	1967	10 484	3 578	4 839	108	1 090	869	-									
EU-9	1973	7 444	2 271	3 233	47	251	456	-	1 186	-	-						
	1977	4 726	1 305	2 211	11	-	126	-	1 073	-	-						
EU-10	1981	3 968	1 332	1 596	10	-	54	-	976	-	-						
EU-12	1986	3 245	1 235	1 173	-	-	18	-	809	-	-		10	-			
	1990	1 810	773	546	-	-	1	-	485	-	-		5	-			
EU-15	1995	1 197	379	287	-	-	21	-	510	-	-		-	-	-	-	-
	1997	1 406	318	231	-	-	12	-	814	31	-		-	-	-	-	-
	1999	1 005	169	163	-	-	7	-	635	31	-		-	-	-	-	-

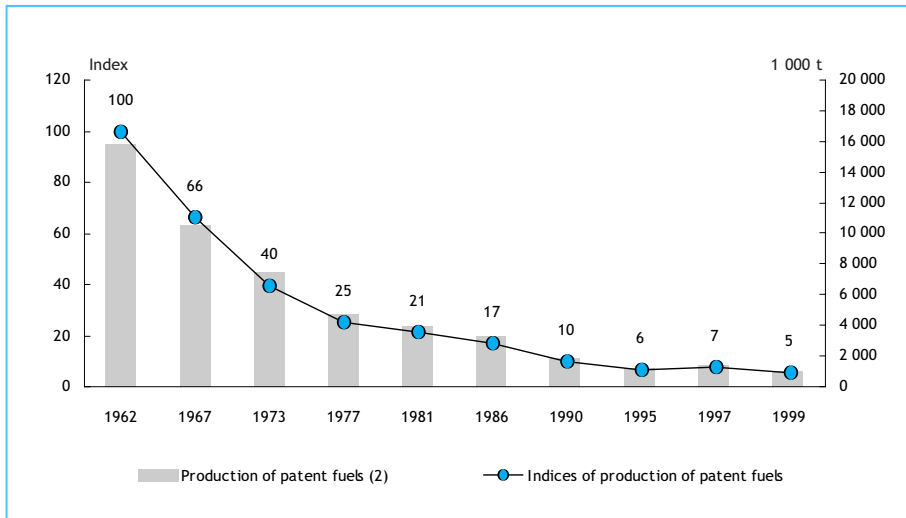
← Not part of the ECSC Treaty →

Source: Eurostat.

Data cover the production of composition fuels manufactured from coal fines by shaping with the addition of a binding agent – pitch. These fuels are the output of transformation of patent fuel and briquetting plants.

The production of patent fuels in the EU-15 is fading out, with just over 1 Mio tonnes produced in 1999, of which more than half – 635 kt – was produced in the UK. There is almost no use of patent fuels in the industry any more and the small quantities available in the market are burned in the households sector for space heating.

Figure 2.3.3 Indices and values of production of patent fuels (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 2.4.1 Consumption of hard coal in power stations

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	64 505	34 007	15 987	1 167	6 043	7 301	-									
	1967	65 892	34 046	18 250	1 820	5 498	6 278	-									
EU-9	1973	140 004	41 042	12 369	649	689	2 763	-	79 483	50	2 959						
	1977	151 528	36 842	20 194	1 563	1 473	4 356	2	82 520	35	4 543						
EU-10	1981	179 274	46 626	20 967	5 924	2 666	6 139	28	89 611	31	7 282	-					
EU 12	1986	197 011	51 454	11 750	9 270	5 375	4 803	3	84 493	633	11 002	356	16 617	1 255			
	1990	211 531	51 904	11 454	10 724	8 934	6 637		84 555	1 977	9 165	-	22 922	3 259			
EU-15	1995	194 347	55 079	8 844	8 216	9 292	6 233		60 135	2 312	10 340	114	23 272	4 614	1 057	4 011	828
	1997	177 555	49 008	8 324	7 078	8 799	5 145		46 987	2 268	10 552	100	27 470	4 501	1 320	5 307	696
	1999	170 091	49 024	10 430	8 378	7 884	3 759		41 068	2 014	7 406	5	29 979	5 263	909	3 372	600

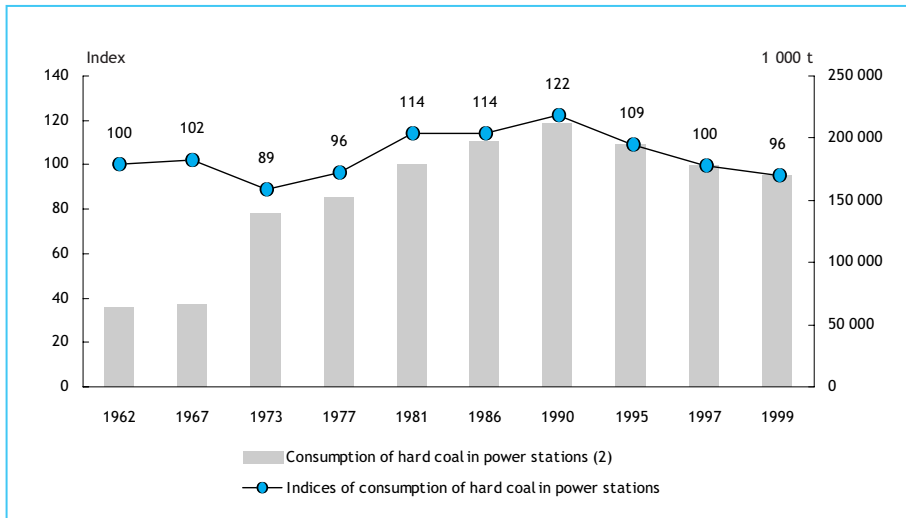
← Not part of the ECSC Treaty →

Source: Eurostat.

Data refer to quantities of hard coal transformed in conventional public utility power stations for the production of electricity and heat, as well as in industry producers' power stations for the generation of electricity and heat sold to third parties.

Over the last few years there has been a decreasing use of hard coal for electricity generation in EU-15 substituted mainly by natural gas. The longer-term trend – since 1962 – however, differs from country to country as the use of cleaner fuels is counterbalanced by the increased demand for electricity.

Figure 2.4.1 Indices and values of consumption of hard coal in power stations (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 2.4.2 Consumption of hard coal in industry

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	29 256	13 737	11 107	1 274	1 200	1 890	48									
	1967	16 758	7 168	7 794	413	646	709	28									
EU-9	1973	18 848	2 810	4 400	222	53	1 194	294	9 447	50	378						
	1977	16 349	3 247	2 794	406	65	2 240	529	6 370	34	664						
EU-10	1981	16 854	4 475	3 520	1 136	219	1 872	280	4 658	191	376	127					
EU-12	1986	26 905	7 306	4 677	1 312	1 000	780	177	6 398	423	342	1 405	2 746	339			
	1990	29 542	8 262	5 711	1 853	1 223	1 603	196	5 366	349	454	1 379	2 328	818			
EU-15	1995	25 770	6 053	4 805	2 181	913	1 582	217	4 886	109	488	1 364	585	639	194	764	990
	1997	25 326	6 531	4 644	1 738	1 334	2 371	194	3 779	139	490	1 203	820	573	429	318	763
	1999	22 663	5 212	4 703	1 869	1 288	1 926	153	3 198	100	395	1 027	1 069	380	196	491	656

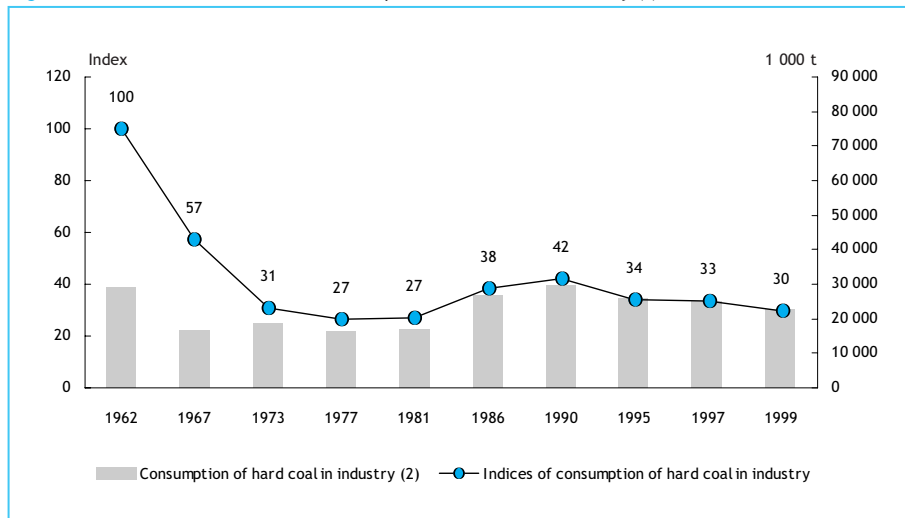
← Not part of the ECSC Treaty →

Source: Eurostat.

The consumption of hard coal in industry reflects quantities burned in all industrial branches with the exception of the energy sector, to support primary activities of industrial undertakings.

Iron and steel as well as the glass, pottery and building materials' industries were the most intensive coal consumers in 1999. The consumption of hard coal in industry since 1962 has decreased mainly due to the use of substitution fuels.

Figure 2.4.2 Indices and values of consumption of hard coal in industry (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 2.4.3 Consumption of coke in the iron and steel industry – including transformations input to blast furnaces

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	56 041	24 975	15 720	3 571	1 447	6 463	3 865									
	1967	52 918	22 130	13 979	5 205	1 666	6 684	3 254									
EU-9	1973	70 856	23 073	13 841	6 723	2 655	8 334	3 229	12 910	13	78						
	1977	55 744	17 945	11 483	6 881	2 176	5 610	1 925	9 647	10	67						
EU-10	1981	57 541	21 184	11 448	7 329	2 432	6 249	1 847	6 909	5	44	94					
EU-12	1986	55 404	21 122	8 448	6 784	2 445	5 004	1 690	6 247	5	37	30	3 252	340			
	1990	50 924	17 442	7 434	6 341	2 207	5 308	1 447	7 046	29	37	41	3 352	240			
EU-15	1995	46 599	13 685	5 910	5 509	2 324	4 260	521	6 429	6	42	11	3 131	295	1 817	1 192	1 467
	1997	45 400	13 092	6 140	5 565	2 147	3 718	248	6 652	-	42	20	2 646	263	2 082	1 326	1 459
	1999	42 783	12 353	5 830	5 049	1 994	3 768		6 584	-	48	-	2 083	320	1 932	1 380	1 442

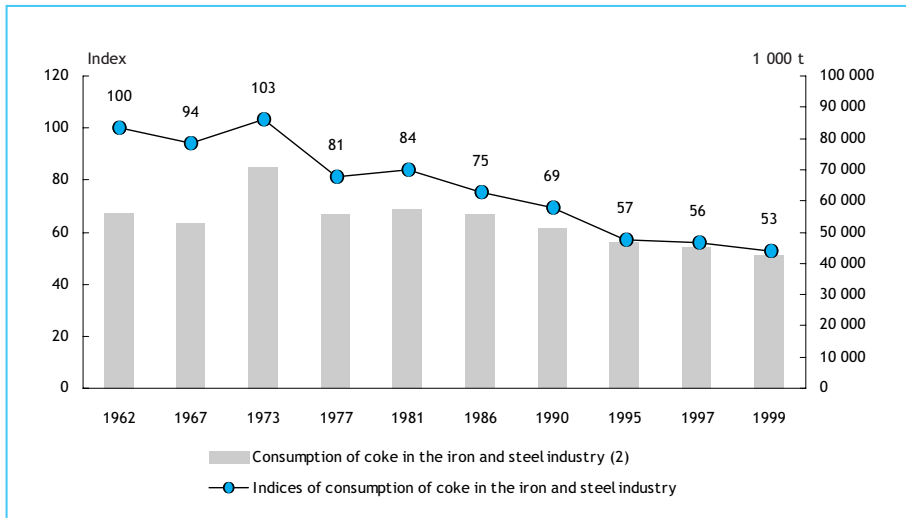
← Not part of the ECSC Treaty →

Source: Eurostat.

Transformation input to blast furnaces is included in the consumption of coke in the iron and steel industry.

There is a decreasing trend in coke consumption in the iron and steel industry in the EU since 1962, due to the use of more efficient technologies in the sector and the increased use of electric furnaces.

Figure 2.4.3 Indices and values of consumption of coke in the iron and steel industry including transformations input to blast furnaces (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 2.4.4 Consumption of hard coal in households and services

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	31 537	9 240	10 526	1 481	4 072	6 122	96									
	1967	22 901	5 942	8 320	1 272	2 483	4 840	44									
EU-9	1973	29 142	3 364	4 672	157	458	2 715	11	16 991	700	74						
	1977	21 265	2 396	3 031	247	98	1 611	7	13 144	680	51						
EU-10	1981	17 585	2 181	2 288	200	81	1 159	6	10 400	1 069	186	15					
EU-12	1986	18 778	2 284	2 365	120	36	1 349	3	10 024	1 251	728	2	616	-			
	1990	10 934	993	1 735	59	24	704	1	5 756	745	337	-	578	2			
EU-15	1995	6 717	941	954	83	37	458		3 399	268	82	1	420	-	71	3	-
	1997	7 038	1 007	1 139	83	43	446		3 237	408	52	6	420	-	191	4	2
	1999	5 127	383	752	3	50	270		2 879	339	30	-	274	-	143	4	-

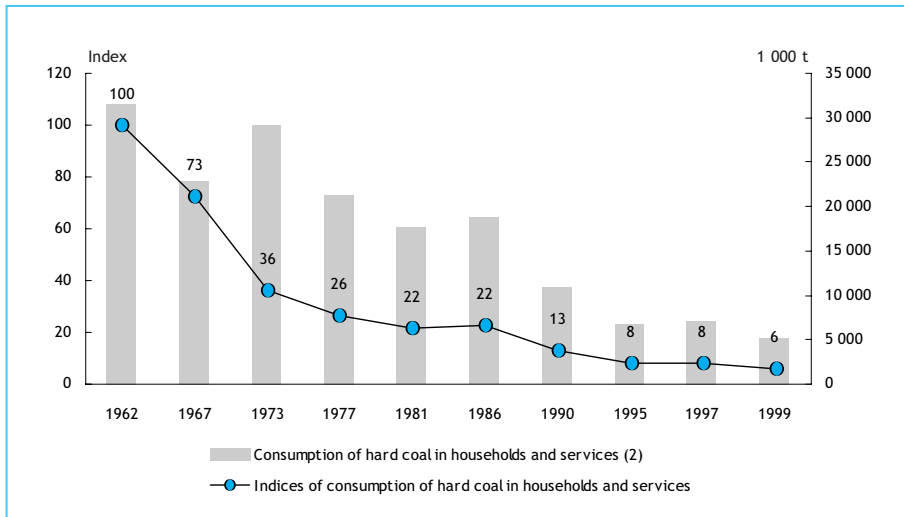
← Not part of the ECSC Treaty →

Source: Eurostat.

This refers to consumption by private households, small-scale industry, crafts, commerce, administrative bodies and services, with the exception of transportation. The main use of hard coal in this sector is for space heating.

In the early Sixties significant quantities of hard coal were consumed in EU-6. In the late Nineties, however, the consumption in EU-15 was reduced by a factor of six and it is only in the UK that significant quantities of hard coal are still used in households. This trend is due to the increased use of cleaner fuel such as natural gas.

Figure 2.4.4 Indices and values of consumption of hard coal in households and services (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 2.4.5 Consumption of patent fuels in households and services

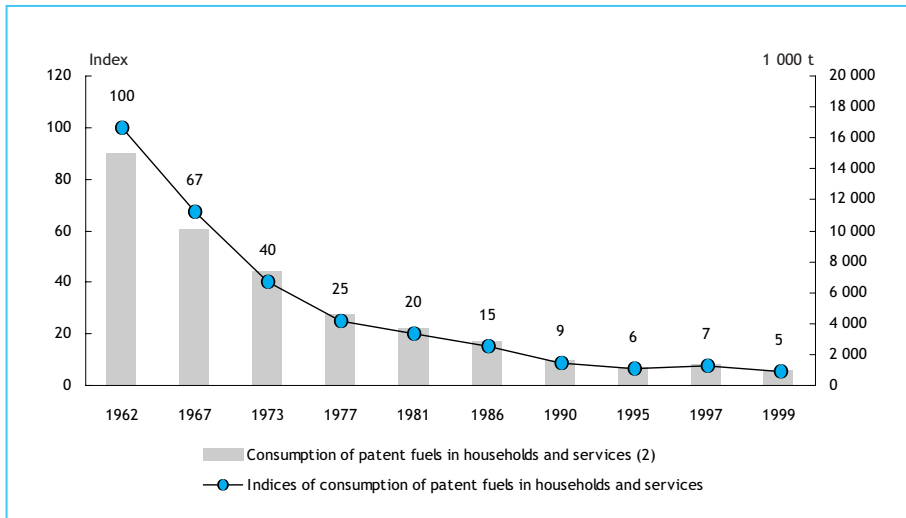
1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	15 044	5 676	7 098	217	745	1 301	7									
	1967	10 132	3 648	4 899	182	365	1 035	3									
EU-9	1973	7 459	2 123	3 270	52	44	558	1	1 411	-	-						
	1977	4 648	1 057	2 279	15	5	224	1	1 067	-	-						
EU-10	1981	3 714	955	1 698	7	1	130	2	915	-	6	-					
EU-12	1986	2 876	767	1 219	-	2	101	1	775	-	-	-	11	-			
	1990	1 625	465	640	-	5	30		480	-	-	-	5	-			
EU-15	1995	1 193	293	387	-	-	18		493	2	-	-	-	-	-	-	-
	1997	1 367	286	359	-	2	12		677	31	-	-	-	-	-	-	-
	1999	987	143	248	-	-	8		554	24	-	-	-	-	10	-	-

← Not part of the ECSC Treaty →

Source: Eurostat.

In the early Sixties significant use of patent fuels in households was recorded in EU-6, particularly in France and Germany. Since the early Nineties patent fuels represent just a fraction of a percent – 0.2 % – of the total consumption of households and services. Very few households in the UK, France and Germany still rely on this fuel as it is incompatible with modern central-heating systems.

Figure 2.4.5 Indices and values of consumption of patent fuels in households and services (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

Table 2.5.1 Total imports of hard coal

1 000 t		EU	D	F	I	NL	B	L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-	-									
	1957	-	-	-	-	-	-	-									
	1962	43 408	8 291	10 807	10 618	8 735	4 753	204									
	1967	44 398	7 813	11 570	12 007	7 078	5 859	71									
EU-9	1973	48 566	7 614	12 510	11 468	3 990	7 178	305	1 676	811	3 014						
	1977	61 210	6 677	21 385	12 525	4 781	6 475	525	2 414	868	5 560						
EU-10	1981	91 082	10 829	27 500	18 924	6 945	10 051	297	4 298	1 289	10 662	287					
EU-12	1986	113 337	17 165	16 859	20 570	12 444	8 550	183	10 626	2 622	12 147	1 756	8 715	1 700			
	1990	130 287	13 580	19 391	20 445	17 303	14 759	197	14 721	3 131	10 255	1 380	10 456	4 669			
EU-15	1995	143 455	15 052	13 190	18 485	17 170	14 099	217	15 895	2 858	13 009	1 409	13 889	6 003	2 859	5 821	3 499
	1997	150 959	20 031	13 604	15 297	20 317	12 796	194	19 756	3 070	13 474	1 214	11 340	5 758	3 797	7 033	3 278
	1999	154 404	22 280	17 491	17 309	19 002	10 836	153	20 293	2 384	7 117	1 203	20 198	6 080	3 349	3 597	3 112

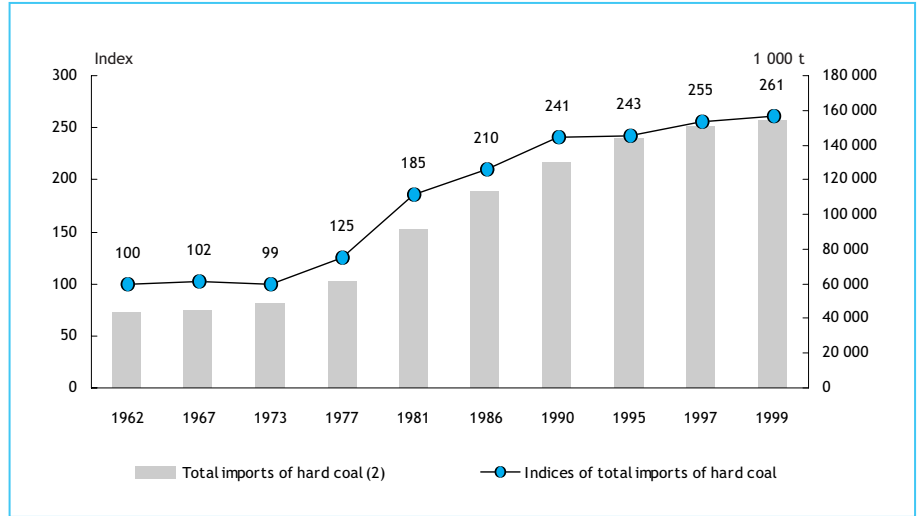
← Not part of the ECSC Treaty →

Source: Eurostat.

Imports represent all entries into the national territory excluding transit quantities. Data on imports are generally taken from importers' declarations; accordingly, they may differ from the data collected by the customs' authorities and included in foreign-trade statistics.

A tendency towards an increase in hard coal imports has been observed in almost all Member States over the period 1962-99. South Africa (35 Mio t), Australia (25 Mio t) and the USA (20 Mio t) were the main countries from which the EU imported hard coal in 1999.

Figure 2.5.1 Indices and values of total imports of hard coal (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: Eurostat.

2.6. INVESTMENT AND CAPACITY

Table 2.6.1 Total investment in the ECSC coal industry

Mio ECU/EUR (1)		EU	D	F	I	NL	B	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952	-	-	-	-	-	-									
	1957	-	-	-	-	-	-									
	1962	225.2	152.0	38.7	1.1	17.2	16.3									
	1967	140.2	91.4	30.8	4.7	2.1	11.2									
EU-9	1973	289.3	87.8	16.1	-	0.3	6.3	178.8	:	:						
	1977	743.7	236.2	49.2	-	-	13.0	445.3	:	:						
EU-10	1981	1 750.7	420.6	58.4	-	-	29.4	1 242.3	:	:	:					
EU-12	1986	1 595.6	418.8	56.8	20.5	-	37.6	910.9	:	:	:	150.3	0.7			
	1990	1 037.9	274.4	42.8	54.8	-	2.0	451.7	:	:	:	211.5	0.6			
EU-15	1995	633.8	296.3	23.6		-	-	91.4	:	:	:	222.5	-	:	:	:
	1997	516.3	202.9	14.6		-	-	172.6	:	:	:	126.2	-	:	:	:
	1999	469.3	239.7	13.0		-	-	104.1	:	:	:	112.5	-	:	:	:

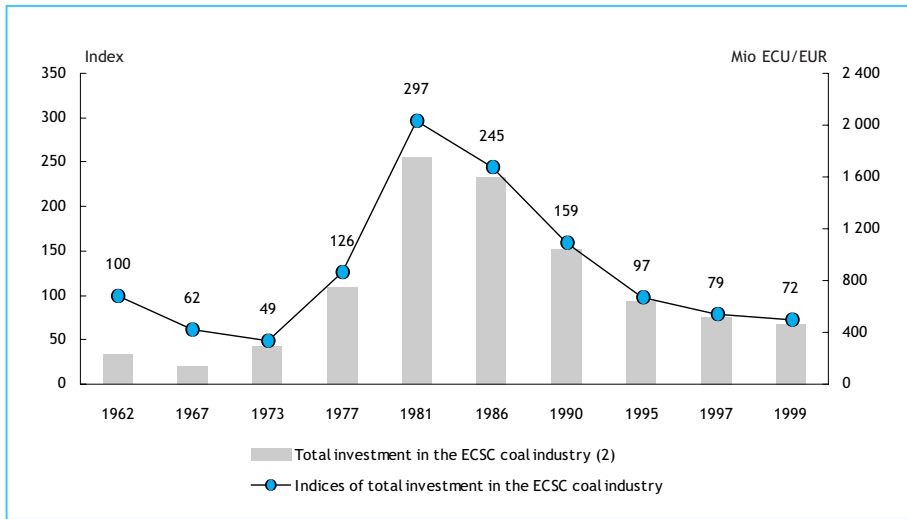
← Not part of the ECSC Treaty →

(1) Up to 1998 in ECU, from 1.1.1999 in EUR.

Source: DG ECFIN.

The table refers to expenditures in underground, workings or surface projects which are accounted in the balance-sheet of the coal mining companies as capital or fixed assets. The figures shown are based on the information received directly from the companies in annual questionnaires on investments and capacities in the coal sector, aggregated to national levels.

Figure 2.6.1 Indices and values of total investment in the ECSC coal industry (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: DG ECFIN.

2.6. INVESTMENT AND CAPACITY

Table 2.6.2 Maximum capacity of coal mines

Mio t		EU	D	F	I	NL	B+L	UK	IRL	DK	EL	E	P	A	FIN	S
EU-6	1952															
	1957															
	1962	246.0	152.3	55.4	0.8	12.8	24.7									
	1967	210.5	133.4	48.7	0.7	9.3	18.4									
EU-9	1973	154.9	112.4	27.9	-	2.2	12.4	-	-	-						
	1977	255.9	98.5	21.7	-	-	7.5	128.2	-	-						
EU-10	1981	244.2	96.4	18.7	-	-	6.4	122.7	-	-						
EU-12	1986	239.0	89.3	14.4	-	-	6.5	105.8	-	-		22.8	0.2			
	1990	207.4	82.1	10.4	0.1	-	1.5	93.6	-	-		19.5	0.3			
EU-15	1995	140.5	59.9	7.4	-	-	-	55.0	-	-		18.2	-	-	-	-
	1997	126.6	52.7	7.5	-	-	-	48.4	-	-		18.0	-	-	-	-
	1999	101.5	43.6	4.6	-	-	-	36.5	-	-		16.8	-	-	-	-

← Not part of the ECSC Treaty →

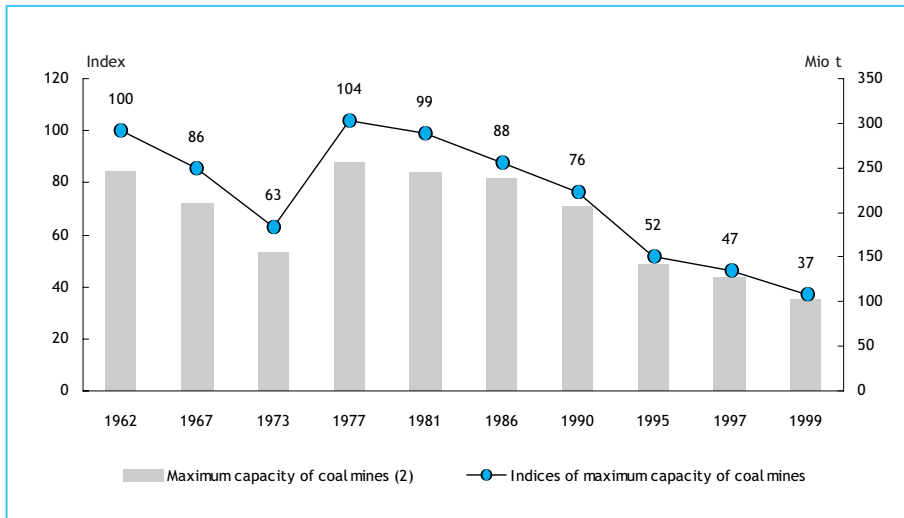
Source: DG ECFIN.

The capacity or extraction potential of each mining company represents the net maximum output of hard coal technically achievable with the existing installations (underground, surface, washeries), taking into consideration bottlenecks and assuming that production would not be cut back because of difficulties in distribution, strikes or manpower shortages.

The figures shown are the results of annual surveys. The information received from the individual mines have been aggregated to national level.

The table reflects the continued reduction of production capacities as a consequence of the closure of the least profitable mines all along the last fifty years. At present there are only four coal producing countries in the European Union: Germany, Spain, France and the United Kingdom.

Figure 2.6.2 Indices and values of maximum capacity of coal mines (1)



(1) Indices and values for EU.

(2) Exact values, see table.

Source: DG ECFIN.

ABBREVIATIONS

BLEU	.....	.Belgo-Luxembourg Economic Union
CN	.....	.Combined Nomenclature
DG ECFIN	..	.Directorate General for Economic and Financial Affairs
EC	.....	.European Community/Communities
ECE	.....	.Economic Commission for Europe (UN)
ECSC	.....	.European Coal and Steel Community
EU	.....	.European Union
EU-6	.....	.European Community until 1972 including Belgium, .Germany, France, Italy, Luxembourg and the Netherlands.
EU-9	.....	.European Community from 1973 to 1980 including .EU-6 plus Denmark, Ireland and the UK.
EU-10	.....	.European Community from 1981 to 1985 .including EU-9 plus Greece.
EU-12	.....	.European Community from 1986 to 1994 .including EU-10 plus Portugal and Spain.
EU-15	.....	.European Union from 1995 onwards .including EU-12 plus Austria, Finland and Sweden.
Eurostat	.....	.Statistical Office of the European Communities
GDP	.....	.gross domestic product
GEONOM	..	.Country Nomenclature for the External Trade Statistics .of the Community and Statistics of Trade .between Member States.
IEA	.....	.International Energy Agency (OECD)
MPP	.....	.Maximum Production Potential
O2	.....	.oxygen
OECD	..	.Organisation for Economic Cooperation and Development
PRODCOM	.....	.PRODucts of the European COMMunity
SLIM	.....	.Simpler Legislation for the Internal Market
UN	.....	.United Nations
Units		
GJ	.....	.gigajoule
kg	.....	.kilogram
kWh	.....	.kilowatt-hour
Mio	.....	.million
mm	.....	.millimetre
t	.....	.tonne

EU COUNTRIES

B	.....	.Belgium
DK	.....	.Denmark
D	.....	.Germany
EL	.....	.Greece
E	.....	.Spain
F	.....	.France
IRL	.....	.Ireland
I	.....	.Italy
L	.....	.Luxembourg
NL	.....	.Netherlands
A	.....	.Austria
P	.....	.Portugal
FIN	.....	.Finland
S	.....	.Sweden
UK	.....	.United Kingdom

OTHER COUNTRIES

CN	.....	.China
US/USA	.....	.United States of America

CURRENCIES

ECU	.....	.ecu (European currency unit – up to 1998)
EUR	.....	.euro (European currency unit – from 1999)
USD	.....	.US dollar

STATISTICAL SYMBOLS

%	.....	.Percentage
:	.....	.data not available
-	.....	.nil
>	.....	.greater than
<=	.....	.less than or equal to