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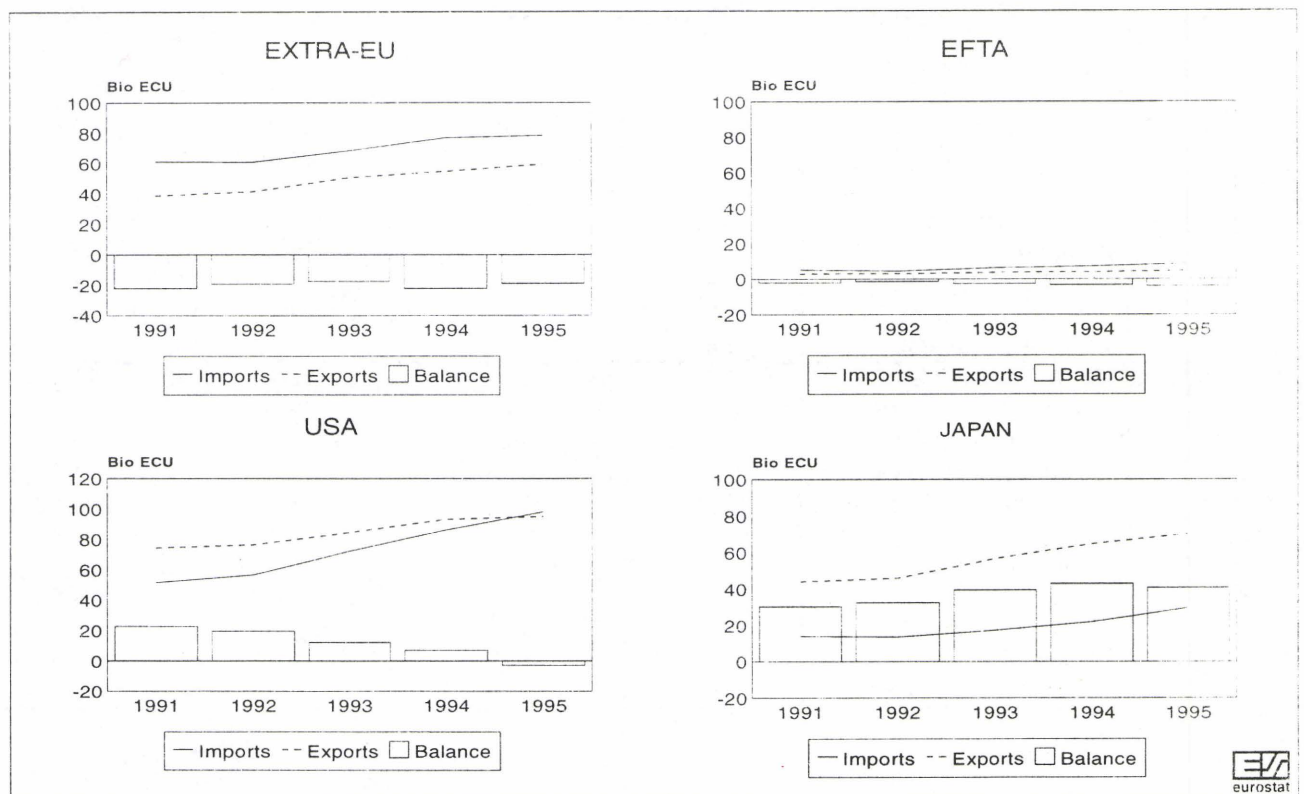
EU TRADE IN HIGH-TECHNOLOGY PRODUCTS (*) - Results until 1995 -

INTRODUCTION

The aim of this report is to examine trends of trade in high-tech products of the European Union in 1995 and make a comparison with the performances of its main partners (USA, Japan and EFTA countries). The analysis is based on the products selected after a process of discussion and coordination between EUROSTAT and other

international organisations in the context of the study "EU trade in High-Technology products, 1989-1993" published in 1996.

This report provides an updated version of the above mentioned study, showing also the data for the 3 new Member States that joined the Union in 1995.



(*) For a definition of high-tech products, see last page.

Sources: Eurostat, Comext for the EU; UN, Comtrade for USA, Japan, EFTA.

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For further information please contact: M.De March / R.Quarto
Eurostat, L-2920 Luxembourg, tel. 4301-33207/33128 Fax: 4301-33879/34762

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2. Imports

2.1 Geographical breakdown

Table 1. Regional structure of high-technology imports in 1995 by main groups of countries and branches (%)

Reporting countries		Partner countries							World****
		EU	EFTA*	USA	JAPAN	NICs6**	NICs9***	Others	
EU	TOTAL (High-tech)	50.3	1.9	19.2	8.4	11.7	2.6	5.9	100
	Aircraft and Spacecraft	45.8	2.6	29.6	0.5	1.3	3.0	17.2	100
	Chemical products	58.3	4.8	15.0	2.5	8.7	7.1	3.5	100
	Computers, office equipment	54.3	0.7	16.6	8.6	15.6	2.9	1.4	100
	Consumption electronics	58.0	2.3	13.9	17.3	4.7	1.7	2.1	100
	Machinery	37.3	13.9	31.3	8.9	2.9	0.9	4.7	100
	General electronics	45.5	1.2	14.1	13.0	17.4	2.3	6.4	100
	Nuclear energy	50.9	0.0	11.0	0.0	0.0	0.0	38.0	100
	Scientific instruments	52.1	6.5	27.7	7.9	1.7	1.1	3.0	100
	Telecommunications	40.4	3.1	30.1	10.4	11.4	2.3	2.4	100
	Weapons and ammunition	74.4	0.4	8.8	0.0	0.1	0.2	16.0	100
EFTA	TOTAL (High-tech)	64.9	0.3	18.5	5.4	6.4	1.5	3.0	100
	Aircraft and Spacecraft	74.2	0.1	14.5	0.4	0.1	1.9	8.9	100
	Chemical products	75.5	0.1	11.6	0.5	2.9	2.7	6.6	100
	Computers, office equipment	62.1	0.2	20.5	5.8	8.8	0.8	1.8	100
	Consumption electronics	73.4	0.4	13.5	8.3	1.4	0.9	2.0	100
	Machinery	71.2	0.4	19.7	4.9	1.2	0.1	2.5	100
	General electronics	59.2	0.3	16.3	8.1	12.1	1.4	2.5	100
	Nuclear energy	91.0	0.0	8.6	0.0	0.0	0.0	0.4	100
	Scientific instruments	60.8	1.8	26.7	7.0	1.1	0.7	1.9	100
	Telecommunications	55.4	0.4	21.7	9.0	7.2	3.7	2.6	100
	Weapons and ammunition	62.6	0.1	19.7	0.0	0.2	15.5	2.0	100
USA	TOTAL (High-tech)	14.1	0.4	-	27.3	31.5	9.0	17.7	100
	Aircraft and Spacecraft	65.0	0.9	-	2.3	2.7	4.5	24.7	100
	Chemical products	42.1	6.7	-	7.9	0.8	21.9	20.6	100
	Computers, office equipment	8.1	0.2	-	27.9	41.0	9.2	13.6	100
	Consumption electronics	7.3	0.1	-	60.4	14.5	8.8	8.9	100
	Machinery	30.3	7.7	-	43.7	4.2	5.4	8.8	100
	General electronics	9.3	0.2	-	27.2	31.3	9.7	22.3	100
	Nuclear energy	30.4	0.0	-	0.3	0.0	0.1	69.2	100
	Scientific instruments	49.3	2.3	-	32.3	2.2	7.0	6.9	100
	Telecommunications	8.5	0.2	-	30.0	22.1	15.3	23.9	100
	Weapons and ammunition	59.8	0.1	-	0.0	0.2	15.1	24.7	100
JAPAN	TOTAL (High-tech)	12.7	0.3	44.9	-	26.4	4.8	10.9	100
	Aircraft and Spacecraft	20.2	0.1	75.7	-	2.2	1.1	0.8	100
	Chemical products	33.8	0.4	36.5	-	2.1	18.6	8.7	100
	Computers, office equipment	12.1	0.1	31.5	-	44.0	7.6	4.7	100
	Consumption electronics	26.4	0.3	48.7	-	16.1	5.0	3.5	100
	Machinery	11.7	3.1	82.0	-	1.7	0.5	1.0	100
	General electronics	4.5	0.1	45.5	-	21.4	2.6	25.9	100
	Nuclear energy	25.8	0.0	73.5	-	0.0	0.0	0.8	100
	Scientific instruments	33.8	2.7	55.5	-	4.5	1.9	1.6	100
	Telecommunications	16.8	0.0	53.5	-	24.4	4.6	0.8	100
	Weapons and ammunition	27.6	0.0	72.4	-	0.0	0.0	0.0	100



(*) EFTA: Iceland, Norway, Switzerland

(**) NICs 6: Malaysia, Thailand, Singapore, Hong Kong, Taiwan, South Korea

(***) NICs 9: Philippines, Indonesia, China, India, Israel, Turkey, Argentina, Brazil, Mexico

(****) World: Intra-EU + extra-EU

Discrepancies can appear due to methodological differences between reporting countries.

The global figure for EU imports in high-tech products amounted to 158 billion ECU in 1995, which corresponds to almost 10.4% of total intra + extra EU imports.

Intra-EU trade accounted for 50% of the flows, with 80 billion ECU. Meanwhile, the most important individual supplier was the USA, with 30.3 billion ECU (a share of 19.2%). The NICs 6 followed with 18.5 billion ECU, representing 11.7%.

The three EFTA countries recorded 8.6 billion ECU in imports of high-tech, showing a high concentration in their imports from the European Union, with 5.6 billion ECU accounting for 65%.

EFTA countries also acquired an important share of their high-tech imports (18.5%) from the USA, registering 1.6 billion ECU. In the case of the USA, the total of its high-tech product imports was 98.2 billion ECU (16.6% of total USA imports), of which 31.5% came from the NICs6 (31 billion ECU), 27.3% from Japan (26.7 billion ECU) and 14.1% from the EU (13.8 billion ECU).

Japanese imports of high-tech products totalled 29.5 billion ECU (accounting for 11.5% of the total imports). Japan imported mostly from the USA covering a share of 45% (13.2 billion ECU) and around 26.4% from the NICs6 (7.8 billion ECU).

Table 2. Regional structure of high-technology imports in 1995 by main groups of countries and branches (Mio ECU)

Reporting countries		Partner countries							World****
		EU	EFTA*	USA	JAPAN	NICs6**	NICs9***	Others	
EU	TOTAL (High-tech)	79 418	3 005	30 316	13 271	18 521	4 114	9 351	157 997
	Aircraft and Spacecraft	12 250	696	7 925	131	360	802	4 605	26 769
	Chemical products	1 514	125	388	64	227	185	92	2 596
	Computers, office equipment	37 651	455	11 503	5 943	10 848	1 998	984	69 383
	Consumption electronics	4 580	185	1 101	1 367	367	132	162	7 895
	Machinery	1 592	594	1 333	381	124	40	201	4 266
	General electronics	15 690	419	4 865	4 466	6 013	790	2 223	34 466
	Nuclear energy	998	1	216	0	0	0	746	1 961
	Scientific instruments	3 191	397	1 693	483	103	69	184	6 121
	Telecommunications	1 696	131	1 261	435	477	97	100	4 197
	Weapons and ammunition	255	1	30	0	0	1	55	343
EFTA	TOTAL (High-tech)	5 560	25	1 584	466	545	128	258	8 564
	Aircraft and Spacecraft	846	1	164	4	0	21	101	1 136
	Chemical products	134	0	21	1	5	5	12	177
	Computers, office equipment	2 459	7	810	228	350	32	71	3 957
	Consumption electronics	529	3	97	60	10	7	14	720
	Machinery	256	1	71	17	4	0	9	359
	General electronics	703	4	194	96	144	16	30	1 187
	Nuclear energy	83	0	8	0	0	0	0	91
	Scientific instruments	242	7	106	28	4	3	7	398
	Telecommunications	191	1	75	31	25	13	9	345
	Weapons and ammunition	121	0	38	0	0	30	4	193
USA	TOTAL (High-tech)	13 853	421	-	26 765	30 908	8 852	17 384	98 183
	Aircraft and Spacecraft	4 297	57	-	151	175	295	1 634	6 609
	Chemical products	220	35	-	41	4	114	108	522
	Computers, office equipment	3 698	79	-	12 788	18 765	4 209	6 239	45 780
	Consumption electronics	274	5	-	2 260	542	327	332	3 740
	Machinery	543	138	-	783	74	96	158	1 792
	General electronics	3 234	52	-	9 495	10 921	3 370	7 782	34 854
	Nuclear energy	236	0	-	3	0	0	537	775
	Scientific instruments	1 126	52	-	737	51	160	156	2 282
	Telecommunications	144	3	-	508	373	259	404	1 691
	Weapons and ammunition	83	0	-	0	0	21	34	139
JAPAN	TOTAL (High-tech)	3 751	91	13 233	-	7 796	1 402	3 215	29 488
	Aircraft and Spacecraft	502	3	1 884	-	55	26	19	2 490
	Chemical products	198	2	214	-	12	109	51	587
	Computers, office equipment	1 446	12	3 765	-	5 258	905	566	11 954
	Consumption electronics	233	3	430	-	142	44	31	883
	Machinery	85	23	595	-	12	4	7	726
	General electronics	435	12	4 409	-	2 068	254	2 505	9 683
	Nuclear energy	260	0	742	-	0	0	8	1 010
	Scientific instruments	439	35	720	-	59	24	21	1 298
	Telecommunications	130	0	414	-	188	35	6	774
	Weapons and ammunition	23	0	60	-	0	0	0	83

(*) EFTA: Iceland, Norway, Switzerland

(**) NICs 6: Malaysia, Thailand, Singapore, Hong Kong, Taiwan, South Korea

(***) NICs 9: Philippines, Indonesia, China, India, Israel, Turkey, Argentina, Brazil, Mexico

(****) World: Intra-EU + extra-EU

Discrepancies can appear due to methodological differences between reporting countries.



2.2 Product breakdown

Table 3. Structure of the high-technology imports by reporting countries and branches (%)

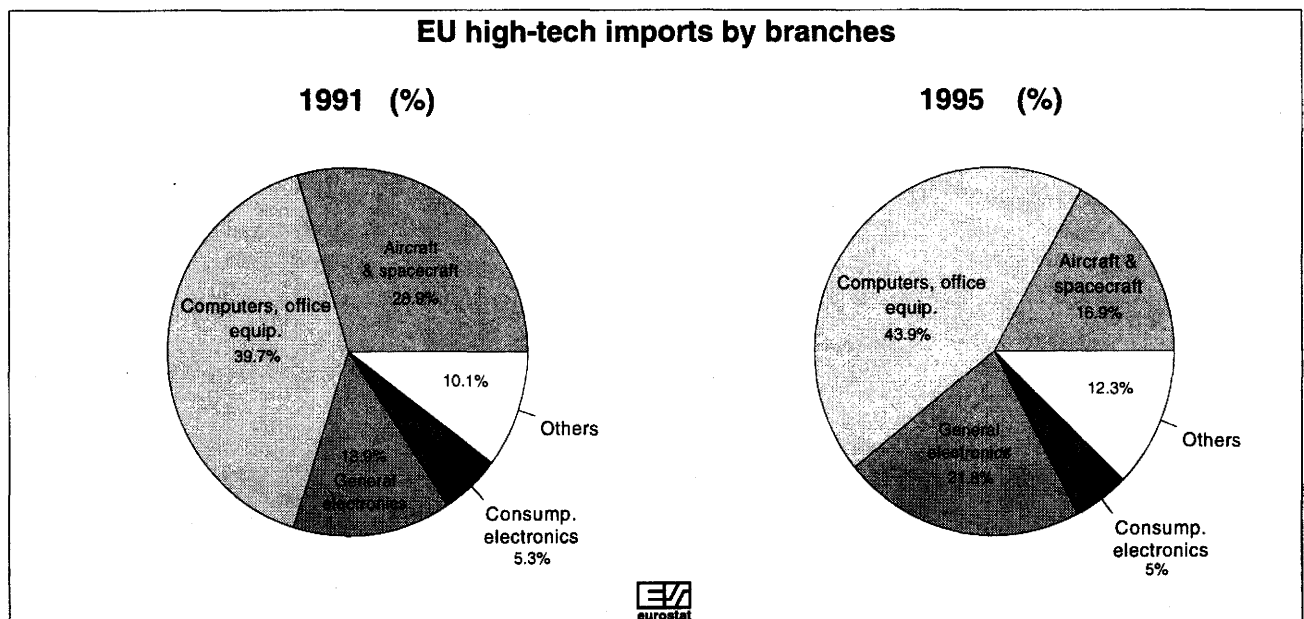
Branches	Reporting countries							
	EU		EFTA		USA		JAPAN	
	1991	1995	1991	1995	1991	1995	1991	1995
Aircraft and Spacecraft	28.9	16.9	22.6	13.3	13.3	6.7	21.3	8.4
Chemical products	1.4	1.6	3.2	2.1	0.5	0.5	2.9	2.0
Computers, office equipment	39.7	43.9	40.6	46.2	43.4	46.6	31.1	40.5
Consumption electronics	5.3	5.0	7.1	8.4	5.6	3.8	1.7	3.0
Machinery	2.7	2.7	3.5	4.2	2.2	1.8	2.8	2.5
General electronics	13.8	21.8	10.9	13.9	26.7	35.5	25.0	32.8
Nuclear energy	2.1	1.2	1.1	1.1	1.6	0.8	7.2	3.4
Scientific instruments	3.7	3.9	5.2	4.7	3.7	2.3	5.0	4.4
Telecommunications	1.7	2.7	2.8	4.0	2.6	1.7	2.0	2.6
Weapons and ammunition	0.5	0.2	3.1	2.3	0.4	0.1	0.9	0.3
TOTAL (High-tech) %	100	100	100	100	100	100	100	100
Bio ECU	134.4	158.0	5.0	8.6	51.8	98.2	13.9	29.5

EU imports were highly concentrated in computers and office machinery (44% of the total high-tech imports in 1995), followed by general electronics (22%) and aircraft and spacecraft (17%).

Imports of general electronics increased compared to 1991, while those of aircraft and spacecraft fell slightly compared to the same period.

The same three branches also accounted for the main imports of the EFTA countries, USA and Japan. The share of Japanese, American and EFTA imports on computers and office machinery was relatively large (more than 40%), showing increases between 1991-95.

Imports of general electronics also increased during the same period; while the share of imports on aircraft and spacecraft shrank considerably during the same period.



3. Exports

3.1 Geographical breakdown

Table 4. Regional structure of high-technology exports in 1995 by main groups of countries and branches (%)

Reporting countries	Partner countries								World****
	EU	EFTA*	USA	JAPAN	NICs6 **	NICs9 ***	Others		
EU	TOTAL (High-tech)	59.9	3.9	11.2	2.1	6.5	3.7	12.7	100
	Aircraft and Spacecraft	41.3	4.6	17.8	1.2	9.6	4.6	21.0	100
	Chemical products	65.5	5.8	6.8	3.8	2.3	6.0	9.8	100
	Computers, office equipment	74.8	4.2	8.5	2.5	2.0	1.4	6.7	100
	Consumption electronics	75.9	6.0	3.3	2.4	2.0	1.7	8.7	100
	Machinery	41.3	4.3	15.1	1.1	6.3	9.0	22.9	100
	General electronics	61.4	1.9	9.5	1.3	13.4	3.4	9.1	100
	Nuclear energy	57.0	3.9	11.3	13.0	5.4	1.7	7.6	100
	Scientific instruments	47.8	3.2	15.9	5.9	3.9	5.7	17.6	100
	Telecommunications	41.5	2.8	6.0	1.0	5.5	16.0	27.2	100
	Weapons and ammunition	56.7	5.2	2.0	0.4	5.9	4.4	25.4	100
EFTA	TOTAL (High-tech)	61.7	0.7	12.7	2.6	6.2	4.9	11.2	100
	Aircraft and Spacecraft	49.9	0.3	24.9	5.3	0.4	1.9	17.2	100
	Chemical products	62.6	0.0	27.8	0.2	0.6	5.7	3.1	100
	Computers, office equipment	76.3	1.2	10.3	2.2	2.8	1.3	5.9	100
	Consumption electronics	81.9	0.8	2.1	0.8	5.4	3.2	5.7	100
	Machinery	46.1	0.1	14.5	2.0	12.5	9.5	15.3	100
	General electronics	62.2	0.6	13.7	1.0	10.6	3.3	8.5	100
	Nuclear energy	94.0	0.2	1.7	0.0	0.5	0.2	3.5	100
	Scientific instruments	69.6	1.3	7.1	6.3	2.1	3.5	10.0	100
	Telecommunications	58.6	0.6	1.7	0.1	4.9	14.7	19.4	100
	Weapons and ammunition	60.2	0.2	14.5	0.0	0.0	1.6	23.5	100
USA	TOTAL (High-tech)	28.8	1.1	-	11.6	18.9	11.4	28.3	100
	Aircraft and Spacecraft	36.9	0.9	-	9.5	14.6	12.3	25.8	100
	Chemical products	37.2	2.6	-	16.4	6.6	12.5	24.6	100
	Computers, office equipment	36.0	1.5	-	11.3	12.4	10.8	27.9	100
	Consumption electronics	26.3	1.5	-	13.5	8.2	9.6	41.0	100
	Machinery	27.7	1.8	-	13.9	13.0	9.8	33.8	100
	General electronics	16.0	0.4	-	10.1	34.4	12.5	26.6	100
	Nuclear energy	23.2	0.1	-	67.2	0.9	1.6	7.0	100
	Scientific instruments	40.0	2.1	-	17.9	7.5	10.5	22.0	100
	Telecommunications	30.0	1.4	-	13.3	8.8	10.7	35.7	100
	Weapons and ammunition	18.9	0.5	-	8.7	7.7	7.5	56.7	100
JAPAN	TOTAL (High-tech)	20.1	0.4	35.3	-	28.7	6.8	8.7	100
	Aircraft and Spacecraft	30.5	0.6	36.6	-	12.2	5.2	14.9	100
	Chemical products	18.9	0.3	12.5	-	39.7	16.2	12.3	100
	Computers, office equipment	28.6	0.3	47.4	-	13.8	3.5	6.4	100
	Consumption electronics	27.2	0.8	41.3	-	19.4	2.0	9.2	100
	Machinery	16.8	0.9	31.1	-	18.6	13.6	19.0	100
	General electronics	11.9	0.2	26.1	-	44.6	8.8	8.6	100
	Nuclear energy	23.8	0.0	22.7	-	0.0	0.0	53.6	100
	Scientific instruments	28.4	1.3	27.6	-	18.9	9.1	14.7	100
	Telecommunications	18.7	0.7	34.3	-	15.7	15.0	15.6	100
	Weapons and ammunition	0.0	0.0	100.0	-	0.0	0.0	0.0	100



(*) EFTA: Iceland, Norway, Switzerland

(**) NICs 6: Malaysia, Thailand, Singapore, Hong Kong, Taiwan, South Korea

(***) NICs 9: Philippines, Indonesia, China, India, Israel, Turkey, Argentina, Brazil, Mexico

(****) World: Intra-EU + extra-EU

Discrepancies can appear due to methodological differences between reporting countries.

The 15 EU Member States' exports of high-tech products amounted to 148.6 billion ECU in 1995, which represented a share of almost 9.2% of total intra+extra exports. The intra-EU share was greater than the import side, with 60% of the total flows. The EU most important outlet was the USA, with a share of 11.2% amounting to 16.6 billion ECU. The NICs 6 followed with 6.5%, i.e. 9.6 billion ECU.

The total amount of EFTA exports was 4.6 billion ECU in 1995. The EU was definitely the most important buyer from these countries. It acquired 62% of EFTA's high-tech exports, for a value of

2.8 billion ECU. Another important destination of EFTA products was the USA with 12.7%, representing more than half a million ECU.

In the case of the USA, the total of its exports in high-tech products was 95.2 billion ECU (21.3% of total USA exports). The USA exported 28.8% to the EU (27.3 billion ECU) followed by 11.6% to Japan (11 billion ECU). Japan exported 70.3 billion ECU of high-tech products in 1995, which represented 20.8% of its total exports. More than 35% of its sales went to the USA (24.86 billion ECU), followed by 28.7% to the NICs6 (20.2 billion ECU) and 20.1% to EU (14.2 billion ECU).

Table 5. Regional structure of high-technology exports in 1995 by main groups of countries and branches (Mio ECU)

Reporting countries		Partner countries							World****
		EU	EFTA*	USA	JAPAN	NICs6**	NICs9***	Others	
EU	TOTAL (High-tech)	89 029	5 741	16 637	3 184	9 606	5 499	18 908	148 604
	Aircraft and Spacecraft	14 773	1 658	6 360	414	3 418	1 633	7 503	35 758
	Chemical products	1 552	137	161	89	56	143	232	2 370
	Computers, office equipment	40 395	2 250	4 583	1 332	1 090	729	3 592	53 971
	Consumption electronics	5 214	415	230	166	138	116	595	6 874
	Machinery	2 185	230	799	58	332	479	1 211	5 293
	General electronics	17 544	555	2 708	370	3 832	959	2 585	28 553
	Nuclear energy	1 050	72	209	240	100	32	140	1 842
	Scientific instruments	3 680	244	1 223	457	298	437	1 355	7 694
	Telecommunications	2 483	166	360	57	328	959	1 625	5 978
Weapons and ammunition	154	14	5	1	16	12	69	272	
EFTA	TOTAL (High-tech)	2 830	30	582	119	287	226	515	4 589
	Aircraft and Spacecraft	250	2	125	27	2	10	86	500
	Chemical products	88	0	39	0	1	8	4	140
	Computers, office equipment	649	11	88	18	24	11	50	851
	Consumption electronics	225	2	6	2	15	9	16	275
	Machinery	509	1	160	22	138	105	168	1 102
	General electronics	480	5	106	7	82	26	65	770
	Nuclear energy	1	0	0	0	0	0	0	1
	Scientific instruments	459	9	47	41	14	23	66	659
	Telecommunications	136	1	4	0	12	34	45	233
Weapons and ammunition	34	0	8	0	0	1	13	57	
USA	TOTAL (High-tech)	27 369	1 014	-	11 020	18 017	10 812	26 911	95 143
	Aircraft and Spacecraft	6 226	160	-	1 595	2 456	2 083	4 358	16 877
	Chemical products	347	24	-	153	62	117	229	931
	Computers, office equipment	11 043	463	-	3 474	3 794	3 312	8 566	30 652
	Consumption electronics	734	41	-	376	230	267	1 146	2 795
	Machinery	945	61	-	474	443	335	1 152	3 411
	General electronics	4 771	120	-	2 995	10 243	3 726	7 913	29 768
	Nuclear energy	191	1	-	555	8	13	58	825
	Scientific instruments	1 812	95	-	811	341	473	997	4 530
	Telecommunications	777	35	-	345	228	277	925	2 588
Weapons and ammunition	523	14	-	241	213	208	1 568	2 767	
JAPAN	TOTAL (High-tech)	14 150	250	24 832	-	20 145	4 751	6 140	70 268
	Aircraft and Spacecraft	151	3	180	-	60	26	73	493
	Chemical products	62	1	41	-	130	53	40	328
	Computers, office equipment	7 137	81	11 839	-	3 447	873	1 598	24 974
	Consumption electronics	1 470	44	2 232	-	1 050	106	496	5 398
	Machinery	423	22	784	-	467	344	480	2 519
	General electronics	3 779	51	8 291	-	14 170	2 784	2 726	19
	Nuclear energy	5	0	4	-	0	0	10	2 445
	Scientific instruments	695	33	676	-	462	222	358	2 291
	Telecommunications	430	16	785	-	360	344	357	0
Weapons and ammunition	0	0	0	-	0	0	0	100	

(*) EFTA: Iceland, Norway, Switzerland

(**) NICs 6: Malaysia, Thailand, Singapore, Hong Kong, Taiwan, South Korea

(***) NICs 9: Philippines, Indonesia, China, India, Israel, Turkey, Argentina, Brazil, Mexico

(****) World: Intra-EU + extra-EU

Discrepancies can appear due to methodological differences between reporting countries.



3.2 Product breakdown

Table 6. Structure of the high-technology exports by reporting countries and branches (%)

Branches	Reporting countries							
	EU		EFTA		USA		JAPAN	
	1991	1995	1991	1995	1991	1995	1991	1995
Aircraft and Spacecraft	35.8	24.1	10.0	10.9	35.6	17.7	0.9	0.7
Chemical products	1.2	1.6	3.0	3.1	1.0	1.0	0.4	0.5
Computers, office equipment	31.9	36.3	14.1	18.6	30.0	32.2	42.7	35.5
Consumption electronics	3.8	4.6	5.1	6.0	1.9	2.9	14.6	7.7
Machinery	3.6	3.6	27.3	24.0	2.3	3.6	3.4	3.6
General electronics	13.0	19.2	18.2	16.8	19.2	31.3	28.1	45.3
Nuclear energy	2.6	1.2	0.0	0.0	1.2	0.9	0.0	0.0
Scientific instruments	5.0	5.2	16.7	14.4	4.4	4.8	4.4	3.5
Telecommunications	2.7	4.0	3.0	5.1	1.5	2.7	5.5	3.3
Weapons and ammunition	0.4	0.2	2.6	1.2	2.9	2.9	0.0	0.0
TOTAL (High-tech) %	100	100	100	100	100	100	100	100
Bio ECU	110.3	148.6	2.8	4.6	74.5	95.1	44.0	70.3

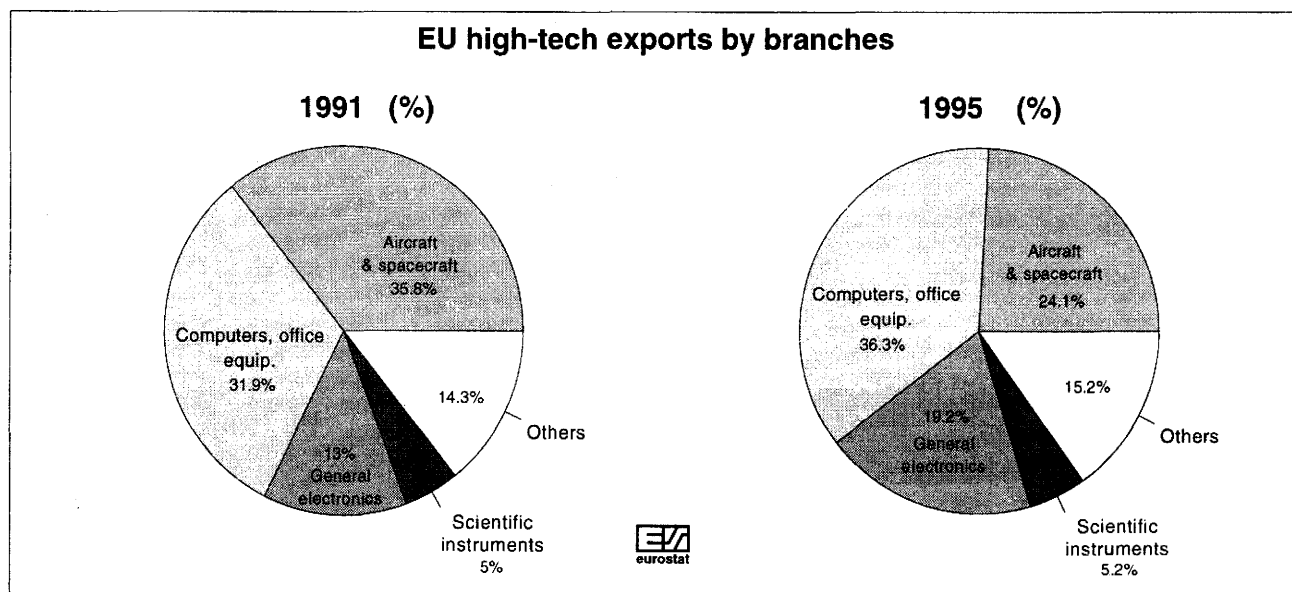


The European Union exported the most in the same three branches as in the case of imports. These were computers and office machinery, with a share of 36.3% of total EU high-tech exports in 1995; aircraft and spacecraft followed with a share of 24.1%, down on 1991, and general electronics with 19.2%, up on 1991.

The sales in all high-tech branches were highly concentrated in the EU markets. However, remarkable shares of EU exports in aircraft and spacecraft (17.8%) and in scientific instruments (15.9%) were carried out by the USA in 1995.

The most important branch for EFTA's high-tech exports was the machinery sector with 24%, and computers and office machinery with 18.6%. In the case of the USA, the main exports were in the computers and office machinery branch (32.2%) followed by general electronics (31.3%) showing a sharp increase since 1991. Aircraft and spacecraft was still important for the USA, even if its share decreased dramatically since 1991.

Japanese exports were also concentrated in both general electronics (45.3%) and computers and office machinery (35.5%). The former branch showed a dramatic increase while the latter decreased in the period from 1991 to 1995.



4. Trade balances

**Table 7. Regional structure of high-technology trade balances in 1995
by main groups of countries and branches (Mio ECU)**

Reporting countries		Partner countries								
		EU	Extra-EU	EFTA*	USA	JAPAN	NICs6 **	NICs9 ***	Others	World****
EU	TOTAL (High-tech)	9 611	-19 004	2 736	-13 679	-10 086	-8 915	1 385	9 556	-9 392
	Aircraft and Spacecraft	2 523	6 466	962	-1 565	283	3 057	831	2 898	8 989
	Chemical products	38	- 264	13	- 228	25	- 171	- 43	140	- 226
	Computers, office equipment	2 744	-18 156	1 795	-6 921	-4 612	-9 758	-1 269	2 608	-15 412
	Consumption electronics	634	-1 655	230	- 872	-1 201	- 230	- 15	433	-1 021
	Machinery	592	435	- 365	- 534	- 323	208	439	1 010	1 027
	General electronics	1 854	-7 767	136	-2 157	-4 096	-2 182	169	362	-5 913
	Nuclear energy	52	- 171	71	- 7	240	100	32	- 606	- 119
	Scientific instruments	488	1 084	- 153	- 470	- 26	194	368	1 171	1 573
	Telecommunications	787	994	35	- 901	- 378	- 150	863	1 526	1 781
Weapons and ammunition	- 101	30	13	- 25	1	16	11	14	- 71	
EFTA	TOTAL (High-tech)	-2 729	-1 246	5	-1 002	- 347	- 258	99	257	-3 975
	Aircraft and Spacecraft	- 593	- 43	1	- 40	22	1	- 12	- 15	- 636
	Chemical products	- 46	9	0	18	- 1	- 4	3	- 7	- 37
	Computers, office equipment	-1 809	-1 296	3	- 722	- 210	- 326	- 21	- 21	-3 106
	Consumption electronics	- 303	- 142	- 1	- 92	- 57	5	2	1	- 445
	Machinery	253	490	0	89	5	133	104	159	743
	General electronics	- 223	- 193	1	- 88	- 89	- 62	9	36	- 417
	Nuclear energy	- 82	- 8	0	- 8	0	0	0	0	- 90
	Scientific instruments	217	44	1	- 60	13	9	20	59	260
	Telecommunications	- 55	- 57	0	- 71	- 31	- 13	21	36	- 112
Weapons and ammunition	- 86	- 49	0	- 30	0	0	- 29	10	- 136	
USA	TOTAL (High-tech)	13 516	-16 557	593	-	-15 745	-12 891	1 959	9 527	-3 040
	Aircraft and Spacecraft	1 929	8 338	103	-	1 444	2 280	1 788	2 723	10 268
	Chemical products	127	282	- 11	-	112	57	2	121	409
	Computers, office equipment	7 345	-22 473	383	-	-9 314	-14 971	- 897	2 326	-15 128
	Consumption electronics	461	-1 405	36	-	-1 883	- 312	- 60	814	- 945
	Machinery	402	1 217	- 77	-	- 309	368	239	994	1 619
	General electronics	1 537	-6 623	68	-	-6 500	- 679	356	131	-5 086
	Nuclear energy	- 45	94	1	-	552	8	13	- 479	50
	Scientific instruments	686	1 562	43	-	74	290	314	840	2 248
	Telecommunications	633	264	33	-	- 162	- 146	18	521	897
Weapons and ammunition	440	2 188	14	-	241	213	187	1 533	2 629	
JAPAN	TOTAL (High-tech)	10 399	30 381	159	11 600	-	12 349	3 349	2 925	40 781
	Aircraft and Spacecraft	- 351	-1 645	0	-1 704	-	5	- 1	55	-1 997
	Chemical products	- 136	- 123	- 1	- 173	-	118	- 56	- 10	- 259
	Computers, office equipment	5 691	7 330	68	8 074	-	-1 812	- 33	1 032	13 020
	Consumption electronics	1 237	3 279	41	1 803	-	908	63	465	4 516
	Machinery	338	1 455	- 1	188	-	455	340	472	1 793
	General electronics	3 345	18 773	38	3 882	-	12 101	2 530	221	22 117
	Nuclear energy	- 256	- 735	0	- 738	-	0	0	3	- 991
	Scientific instruments	256	891	- 2	- 44	-	403	197	337	1 147
	Telecommunications	300	1 218	16	372	-	171	308	351	1 518
Weapons and ammunition	- 23	- 60	0	- 60	-	0	0	0	- 83	



(*) EFTA: Iceland, Norway, Switzerland

(**) NICs 6: Malaysia, Thailand, Singapore, Hong Kong, Taiwan, South Korea

(***) NICs 9: Philippines, Indonesia, China, India, Israel, Turkey, Argentina, Brazil, Mexico

(****) World: Intra-EU + extra-EU

Discrepancies can appear due to methodological differences between reporting countries.

In 1995, the EU showed a deficit in high-tech products with third countries (extra-EU)⁽¹⁾ of around 20 billion ECU. This was mainly due to the large deficits with the USA (13.7 billion), Japan (10 billion) and NICs6 (9 billion). On the other hand, the Union recorded surpluses with the EFTA countries (2.7 billion ECU), the NICs9 (1.4 billion) and the rest of the world (9.6 billion).

By products, computers and office machinery registered the highest external deficit of 18.2 billion ECU, followed by general electronics, with a deficit of 7.8 billion ECU. Except for aircraft and spacecraft, which showed a significant extra-EU surplus of 6.5 billion ECU, the other products were almost in balance.

Japan was the only one of the four analysed economies to register a surplus in 1995 (40.8 billion ECU). This was mainly due to its positive trade balances in computers and office machinery

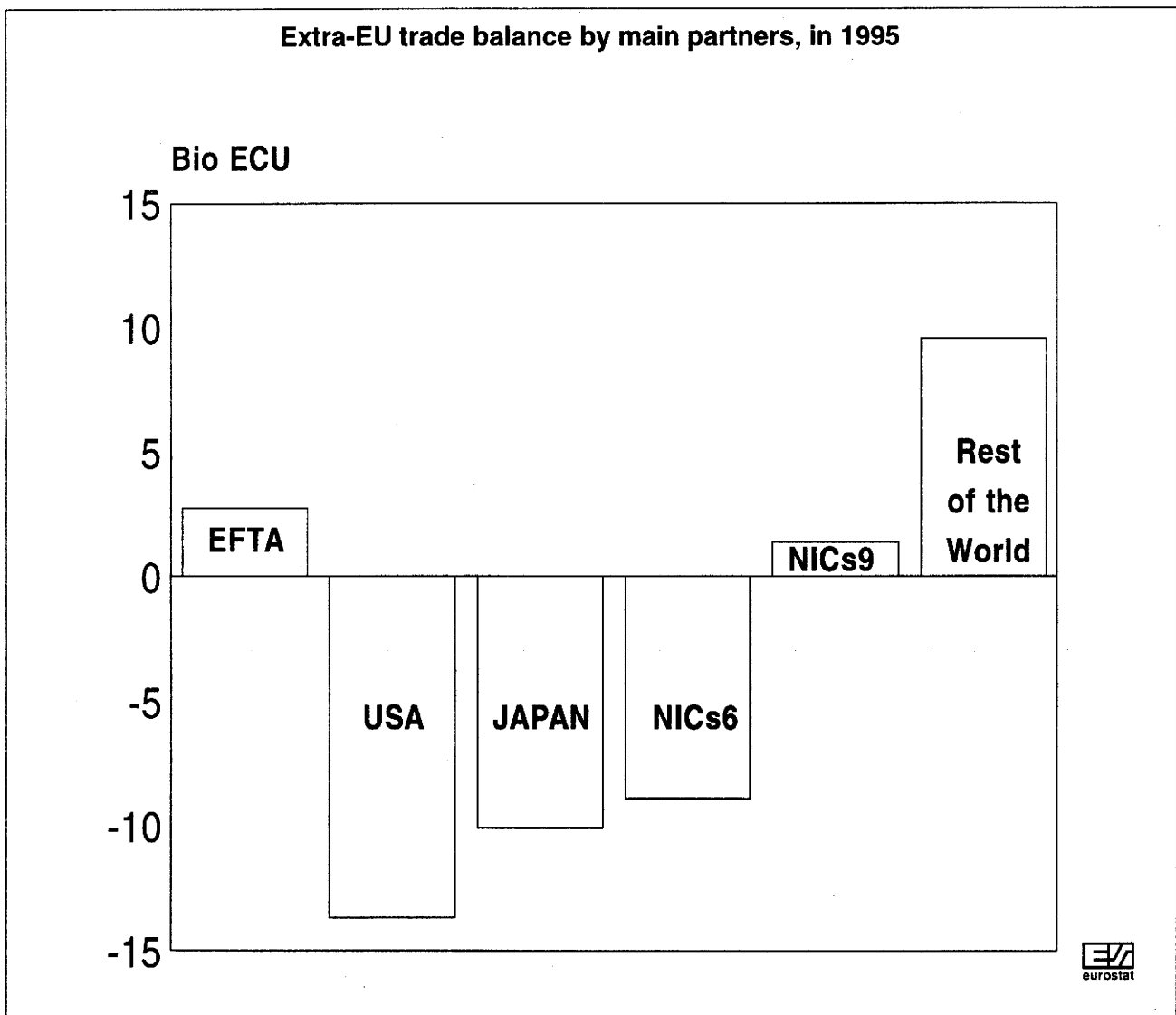
(13 billion ECU) and general electronics (22.1 billion ECU). Japan kept important balances with the USA and EU, with more than 10 billion ECU in each case.

The USA showed a small trade deficit in high-tech products of 3 billion ECU. This was almost entirely due to the deficit in computers and office machinery (15 billion ECU).

This branch was also the main cause of the deficit of the EFTA countries in high-tech products (4 billion ECU).

Germany, the UK and France showed the highest figures in both extra and intra-EU imports in 1995.

As far as imports from third countries are concerned, Germany bought the most important share, accounting for 18.3 billion ECU. The UK and France followed with an amount of 17.7 billion and 14.9 billion ECU respectively.

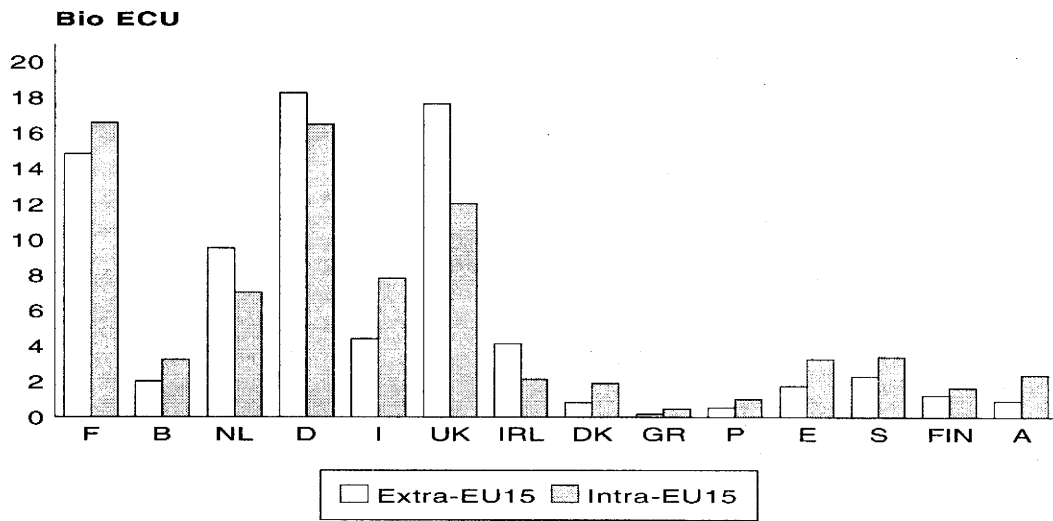


(1) Due to statistical asymmetries the intra-EU balance showed a surplus of around 10 bio ECU. This is, of course, a pure statistical bias because in principle all the mirror imports and exports flows should match. However this phenomenon still exists even if its relevance is decreasing since the introduction of the INTRASTAT system in 1993.

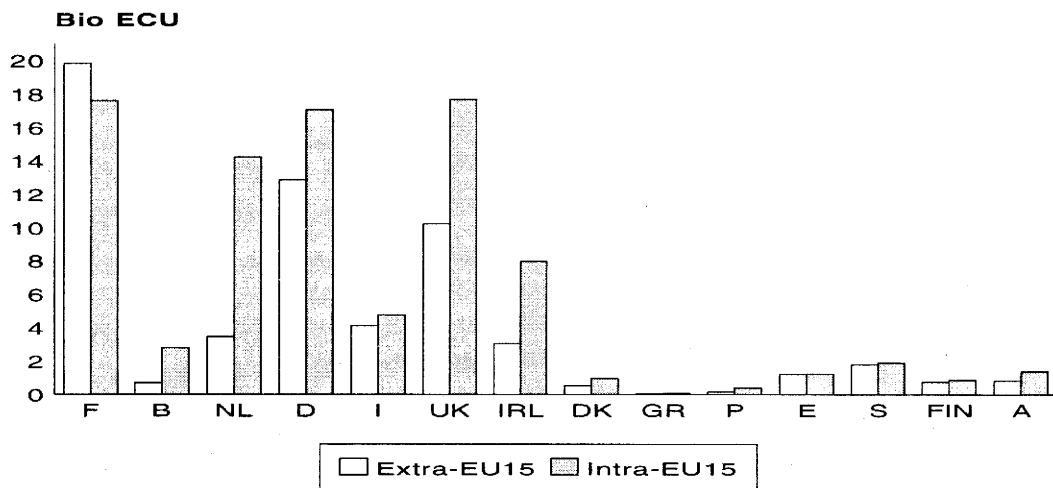
5. EU Member States trade of high-technology products, in 1995



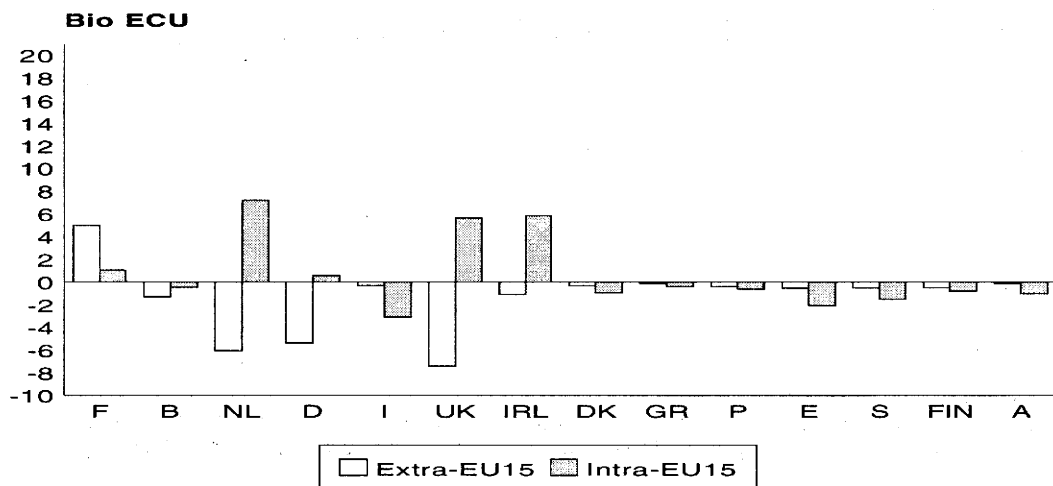
Imports



Exports



Trade balance



However, if we consider the purchases from EU countries, the ranking was quite different. France and Germany were the most important outlets with 16.6 and 16.5 billion ECU respectively, while UK totalled only 12 billion ECU.

France was also the most important extra-EU exporter with an amount of 19.8 billion ECU in 1995. Germany and the UK came next with 12.9 and 10.3 billion ECU respectively.

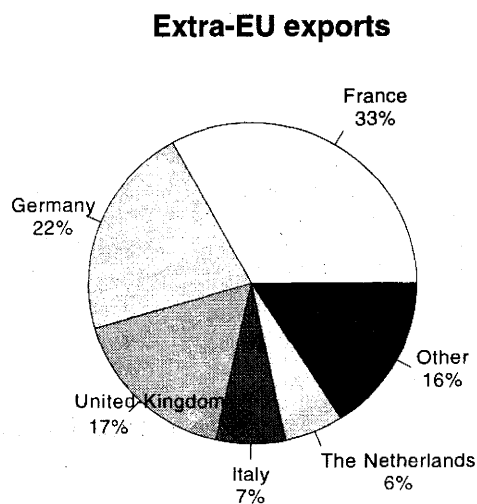
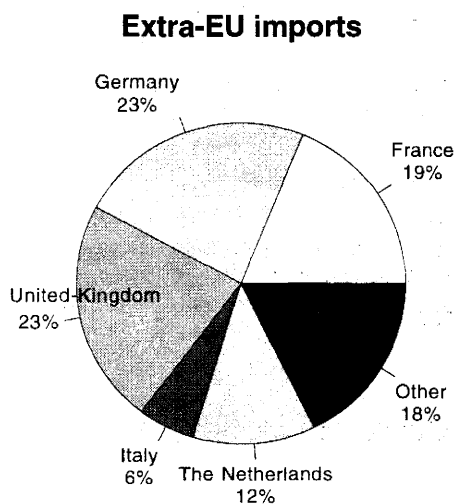
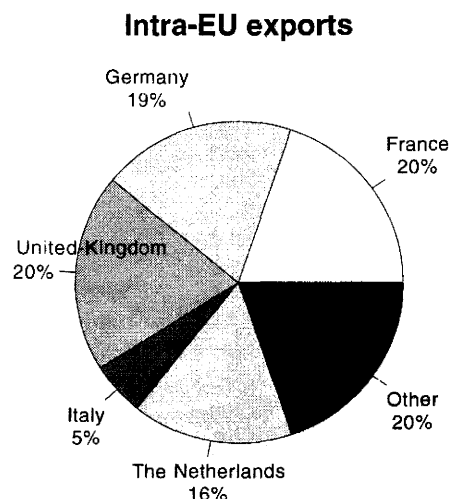
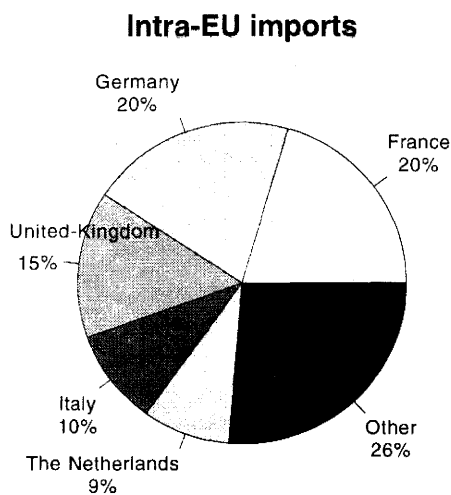
As for dispatches to EU countries are concerned the UK took the lions share with an amount of 17.7 billion ECU. France and Germany came very close totalling 17.6 and 17.1 billion respectively. It is important to note the relevant performance of the

Dutch intra-EU sales in 1995 that has to be interpreted in connection with the role of this country as a transit place for the EU's trade.

France was the only EU member to register surpluses in the high-tech sector in both the intra and extra-EU trade (1 and 5 billion ECU respectively). This result was entirely due to the aerospace branch that showed positive balances amounting to 1.8 and 6.7 billion ECU respectively.

Intra-EU surpluses were also registered by The Netherlands (7.2 billion ECU), the UK and Ireland (around 6 billion each), and Germany (0.6 billion). However the same countries showed remarkable deficits in the trade with third countries.

EU-MEMBER STATES SHARES (%) IN HIGH-TECHNOLOGY PRODUCTS, 1995



6. List of high-tech products and branches

(Between brackets, the code refers to the Harmonised System HS)

Aerospace

Turbojets <= 25kN (841111)
Turbojets >25kN (841112)
Turbopropellers <= 1100 kW (841121)
Turbopropellers >1100 kW (841122)
Parts of turbojets or turbo propellers (841191)
Reaction engines other than turbojets (841210)
Radar app., radio navigational aid app., etc. (8526)
Helicopters <= 2000 kg (unladen weight) (880211)
Helicopters >2000 kg (unladen weight) (880212)
Airplanes <= 2000 kg (unladen weight) (880220)
Airplanes >2000<15000 k (unladen weight) (880230)
Airplanes >15000 kg (unladen weight) (880240)
Spacecraft, satellites, etc. (880250)
Propellers, rotors, parts thereof (880310)
Ground flying trainers, parts thereof (880520)
Instruments for aeronautical navigation (901420)

Telecommunication

Telephonic or telegraphic switching appar. (851730)
Apparatus for carriercurrent line systems (851740)
Telegraphic apparatus (851782)
Optical fibre cables telecommunication (854470)
Apparatus for checking elec. quantities (903040)

Computers, office machines

Wordprocessing ; automatic typewriters (846910)
Analogue or hybrid computers (847110)
PCs (847120)
Processing units (847191)
Input or output units (847192)
Storage units (847193)
Other computer units (847199)
Parts of computers and computer units(847330)
Photocopying apparatus , electrostatic, (900912)
Photocopying apparatus , other (900921)

Electronics

LCD and LED indicator panels (853120)
Fixed capacitors, tantalum (853221)
Fixed capacitors, aluminium electrolytic (853222)
Fixed capacitors, ceramic diel. single layer (853223)
Fixed capacitors, ceramic diel. multilayer (853224)
Printed circuits (8534)
Boards, panels, etc <= 1000 V (853710)
Other microwave tubes (e.g. carcinotrons) (854049)
Other valves and tubes of heading 8540 (854089)
Diodes (854110)
Transistors < 1W (854121)
Other transistors (854129)
Thyristors, diacs, triacs (854130)
Photosensitive semiconductors (854140)
Other semiconductors (854150)
Mounted piezoelectric crystals (854160)
Parts of semiconductors (854190)
Electronic integrated circuits (8542)
Signal generators (854320)
Xray tubes (902230)
Automatic regulating apparatus (903289)

Consumer electronics

Sound reproducing apparatus, CDplayers (851999)
Video recording or reproducing app.(852190)
Other recorded media (CDs, CDROMs) (852490)
Television cameras (including camcorders) (852530)

Scientific, medical, optical apparatus; prostheses

Particle accelerators (854310)
Optical fibres and cables, not f. telecommunication (900110)
Monoculars, telescopes, astron. instruments (900580)
Other than optical microscopes (901210)
Parts and accessories of 901210 (901290)
Lasers (901320)
Other optical instruments of chapter 90 (e.g. LCDs) (901380)
Electrocardiographs (901811)
Electrodiagnostic apparatus (901819)
Artificial joints (902111)
Artificial parts of the body (other than artif. joints) (902130)
Hearing aids (902140)
Pacemakers (902150)
Xray apparatus for medical use (902211)
Xray apparatus for other use (902219)
Alpha, beta gamma ray apparatus for medical use (902221)
Alpha, beta gamma ray appar. for not medical use (902229)
Other products of 9022 (e.g. xray screens, parts) (902290)
Spectrometers, spectrophotometers, spectrographs (902730)
Apparatus using optical radiations (902750)
Apparatus for measuring ionizing radiations (903010)
Cathoderay oscilloscopes and oscillographs (903020)

Machinery

Gasturbines <= 5000 kW (841181)
Gasturbines > 5000 kW (841182)
Parts of gasturbines (841199)
Machinetools, operated by laser, ultrasonic proc., etc. (8456)
Multifunction transfer machines (845710)
Flatsurface grinding mach. accur. 0,01 mm, num. control (846011)
Other grinding mach. accur. 0,01 mm, num. control (846021)
Sharpening machines, numerically controlled (846031)
Honing or lapping machines (846040)
Automatic machines for resistance welding (851521)
Automatic machines arc welding (851531)

Nuclear power; radioactive elements and isotopes

Natural uranium (284410)
Enriched uranium, plutonium (284420)
Depleted uranium, thorium (284430)
Spent fuel elements of nuclear reactors (284450)
Heavy water (deuterium oxide) (284510)
Nuclear reactors (840110)
Apparatus for isotopic separation (840120)
Fuel elements, nonirradiated (840130)
Parts of nuclear reactors (840140)

Chemicals

Pure silicon (280461)
Selenium (280490)
Rareearth metals, scandium, yttrium (280530)
Germanium oxides, zirconium dioxide (282560)
Radioactive elem. and isotopes (other than U,Th,PL) (284440)
Nonradioactive isotopes (other than heavy water) (284590)
Compounds of rareearth metals, of yttrium, of scandium (2846)
Hormones (2937)
Polyethylene terephthalate (390760)

Weapons

Tanks and other armoured fighting vehicles (8710)
Military weapons (9301)
Bombs, grenades, torpedos, mines, missiles, and similar (930690)

For more information, please contact R.Quarto, tel: 4301-33128