

Statistics in focus

TRANSPORT

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Author

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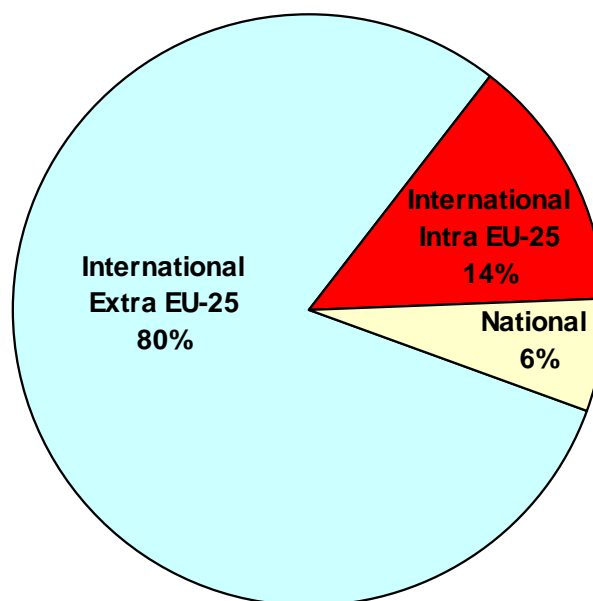
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Freight and mail transport by air in the EU in 2005

USA: 21% of all freight and mail transport
handled at EU airports

Highlights

Graph 1: Freight and mail transport by air in EU-25 in 2005: share by type of transport



The total number of tonnes of air freight and mail transported to, from or within the EU-25 Member States in 2005 was almost 11.0 million. It is estimated that this represents a growth of 3.5% when compared to 2004.

The three Member States handling the greatest tonnage are Germany with more than 3 million tonnes followed by the UK with 2.5 million tonnes and the Netherlands with 1.6 million tonnes.

The top ranked airport in 2005 was Frankfurt/Main which handled almost 2 million tonnes of air freight and mail. Amsterdam/Schiphol was in second position, handling 1.5 million tonnes, followed by London Heathrow with 1.4 million tonnes.

80% of air freight and mail was carried on international extra-EU 25 air services. Of the remainder, 14% was carried on intra-EU 25 air services and 6% was carried on national routes.

The most significant partner country was the USA with almost 2.4 million tonnes of air freight and mail. This accounted for more than 21% of all air freight and mail handled at EU airports. The next largest extra-EU 25 partner country was the United Arab Emirates with 666 thousand tonnes followed by Hong Kong with 548 thousand tonnes.

Within the EU-25 countries the largest country pair was Germany – UK with 123 thousand tonnes, followed by Germany-France with 75 thousand tonnes and Belgium – UK with 69 thousand tonnes.

General overview

Table 1: Overview of EU-27 freight and mail transport by Member State in 2005 (in tonnes)

	Total transport	National transport	International intra-EU-25			International extra-EU-25		
			Total	Inbound	Outbound	Total	Inbound	Outbound
BELGIUM	694 523	178	250 327	114 449	135 878	444 018	227 136	216 882
CZECH REPUBLIC	56 259	1 235	33 339	17 468	15 871	21 685	9 885	11 800
DENMARK*	7 465	886	4 767	2 181	2 586	1 812	162	1 650
GERMANY	3 005 967	103 951	609 299	268 643	340 655	2 292 717	1 178 566	1 114 151
ESTONIA	9 739	-	5 333	3 945	1 388	4 406	3 712	694
IRELAND	89 356	10 516	40 118	16 568	23 551	38 722	25 879	12 843
GREECE	105 502	16 389	61 926	39 916	22 011	27 187	16 363	10 825
SPAIN	526 125	129 919	181 437	101 794	79 643	214 769	121 477	93 292
FRANCE*	1 476 721	172 176	215 614	114 293	101 321	1 088 931	537 856	551 075
ITALY	754 302	71 581	268 667	129 065	139 602	414 054	210 765	203 289
CYPRUS	39 220	2	31 062	16 590	14 472	8 156	3 706	4 450
LATVIA	15 428	-	4 252	3 030	1 222	11 176	10 512	664
LITHUANIA	9 580	2	6 011	3 853	2 158	3 567	3 259	308
LUXEMBOURG	624 803	-	70 317	53 611	16 706	554 486	277 719	276 767
HUNGARY	55 472	-	33 522	15 789	17 734	21 950	14 341	7 609
MALTA	16 891	-	12 324	6 875	5 448	4 567	1 482	3 085
NETHERLANDS	1 550 736	0	53 818	22 020	31 798	1 496 918	819 049	677 869
AUSTRIA	181 533	1 004	54 622	27 589	27 033	125 907	69 249	56 658
POLAND*	31 130	3 469	14 701	7 889	6 812	12 960	5 641	7 319
PORTUGAL	129 516	25 514	60 307	32 701	27 606	43 695	21 459	22 236
SLOVENIA	4 549	5	3 001	1 928	1 073	1 543	304	1 239
SLOVAKIA	4 069	22	1 220	871	349	2 827	1 469	1 358
FINLAND	119 569	4 948	60 826	27 393	33 432	53 795	28 386	25 409
SWEDEN*	:	:	:	:	:	:	:	:
UNITED KINGDOM	2 450 838	133 961	447 817	232 462	215 355	1 869 060	1 025 243	843 817
EU-25	10 953 661	675 758	1 518 996	1 260 923	1 263 704	8 758 907	4 613 619	4 145 288
ROMANIA	17 980	215	13 601	9 202	4 399	4 164	3 329	835
BULGARIA	16 845	:	:	:	:	:	:	:

*See Methodological Notes for relevant remarks on countries data coverage.

Table 1 above presents the absolute tonnage of air freight and mail handled within each of the EU-27 Member States in 2005. The figures for national transport are reported excluding the double counting between national partner airports. In parallel, the aggregate EU figures shown under international intra-EU-25 transport and total transport also exclude the double counting between EU partner airports. In addition, the EU aggregates do not include freight data reported by Sweden, as this information is not available for 2005.

According to Table 1, the three Member States handling the greatest tonnage are Germany with more than 3 million tonnes followed by the UK with 2.5 million tonnes and the Netherlands with 1.6 million tonnes.

The market is dominated by international extra-EU-25 air services. These routes together account for 80% of all air freight and mail handled at EU-25 airports. International intra-EU-25 air services accounted for a further 14% of traffic whilst national routes made up only 6%. This distribution is to be expected given the relative distances

involved and the competition offered by surface means of transport within Europe.

Within the International extra-EU-25 market Germany reported the largest volume of tonnage handled, 2.3 million tonnes, followed by the United Kingdom with 1.9 million tonnes and the Netherlands with 1.5 million tonnes.

Germany also handled the greatest tonnage within the intra-EU-25 market, almost 610 thousand tonnes. The United Kingdom reported the second greatest tonnage with 448 thousand tonnes followed by Italy with 269 thousand tonnes.

In terms of national transport, France reported the greatest tonnage. This was followed by the United Kingdom and Spain.

Table 1 also compares the inbound and outbound cargo flows. Because of the way that air freight may be transferred between aircraft at hubs it is not possible to comment with certainty on the relative levels of imports and exports nor to attribute them to the reporting state. The greatest disparity is observable on the extra-EU-25 routes.

Table 4: Top-10 intra-EU airport pairs in 2005

Rank	Airport pairs		Freight and mail (tonnes)	Growth 2004-2005	Number of freight flights	Growth 2004-2005
1	NOTTINGHAM EAST MIDLANDS	KÖLN/BONN	47 601	5.9%	2 147	4.7%
2	PARIS-CHARLES DE GAULLE	FRANKFURT/MAIN	34 725	7.0%	1 051	-2.8%
3	BERGAMO/ORIO AL SERIO	KÖLN/BONN	33 758	4.4%	1 331	7.3%
4	BERGAMO/ORIO AL SERIO	BRUSSELS-NATIONAL	29 430	-2.3%	1 271	46.6%
5	NOTTINGHAM EAST MIDLANDS	BRUSSELS-NATIONAL	28 800	1.7%	1 724	5.0%
6	MALMÖ	KÖLN/BONN	27 810	1.5%	1 023	-0.5%
7	LONDON HEATHROW	FRANKFURT/MAIN	26 876	5.2%	:	:
8	KÖLN/BONN	BRUSSELS-NATIONAL	19 063	18.2%	1 320	6.3%
9	LONDON STANSTED	KÖLN/BONN	18 100	10.5%	587	-1.8%
10	MILANO/MALPENSA	LUXEMBOURG	16 029	45.7%	417	15.8%

Table 3 on the previous page presents the intra-EU-25 country-to-country flows in 2005. The largest flow was that between the United Kingdom and Germany with more than 123 thousand tonnes. This was followed by Germany-France with 75 thousand tonnes and Belgium – UK with 69 thousand tonnes. Top-10 country-to-country flows are highlighted in bold.

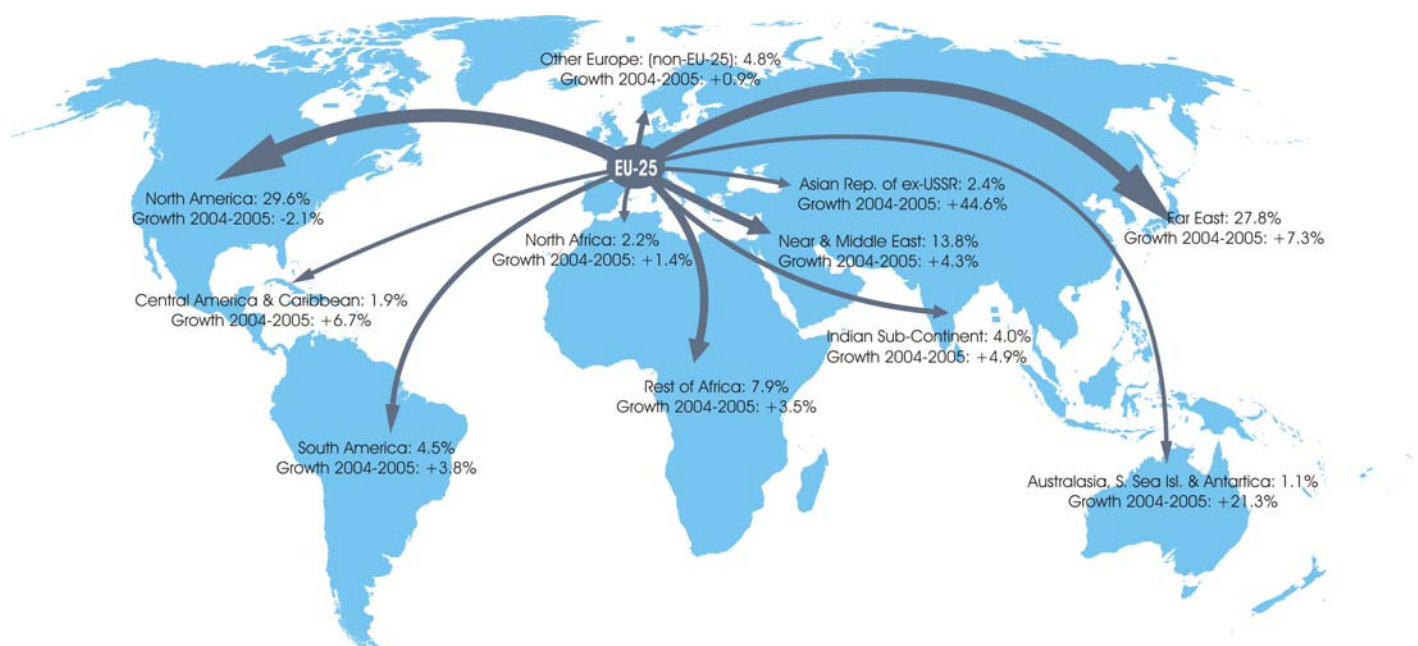
As shown in table 4 above, listing the top ten intra-EU airport pairs, airports with cargo hubs, such as Nottingham East Midlands, featured prominently. Germany, which is the country reporting the greatest tonnage of air freight and mail in 2005 has a partner airport in seven out of ten of the most heavily used routes.

Double-digit growth in tonnage carried was recorded on three routes. The main increase was registered on Milano/Malpensa – Luxembourg, with a growth of 45.7% between 2004 and 2005. The two other routes are Köln/Bonn – Brussels-National with more than 18% growth compared to the previous year and London Stansted – Köln/Bonn with 10.5% growth.

Only the tonnage of freight and mail loaded/unloaded on the route Bergamo/Orio Al Serio – Brussels National recorded a fall of 2.3%.

International extra-EU-25 freight transport

Map 1: Extra-EU-25 freight transport by destination in 2005



Map 1 examines the flow of international extra-EU-25 air freight and mail by world region. The most important

region was North America which accounted for almost 30% of all freight and mail in this market during 2005.

This was followed by the Far East with almost 28% and the Near and Middle East with almost 14%. The strongest

Table 5: Top 20 extra-EU-25 partner countries in terms of total freight and mail transport in 2005

Rank	Partner country	Freight and mail in tonnes		
		Unloaded	Loaded	Total
1	USA	1 106 254	1 246 376	2 352 630
2	UNITED ARAB EMIRATES	383 260	282 475	665 735
3	HONG KONG	337 620	210 474	548 094
4	CHINA	320 814	177 900	498 714
5	JAPAN	207 629	195 721	403 349
6	REPUBLIC OF KOREA	173 528	138 972	312 501
7	INDIA	163 417	113 308	276 725
8	SINGAPORE	117 108	123 177	240 285
9	CANADA	116 281	119 168	235 448
10	SOUTH AFRICA	95 180	98 921	194 100
11	BRAZIL	94 198	94 699	188 897
12	KENYA	126 096	30 813	156 909
13	TURKEY	80 187	71 437	151 624
14	ISRAEL	86 852	63 484	150 336
15	TAIWAN	79 370	65 951	145 322
16	THAILAND	87 290	40 751	128 041
17	MALAYSIA	71 681	46 509	118 189
18	AZERBAIJAN	86 918	31 223	118 142
19	RUSSIAN FEDERATION	57 962	59 808	117 770
20	EGYPT	50 657	37 659	88 316

Table 5 presents the top 20 Extra-EU-25 partner countries. The most important partner country was the USA with more than 2.3 million tonnes of air freight and mail, followed by the United Arab Emirates with 0.7 million tonnes and Hong Kong (Special administrative region of China) with 0.5 million tonnes.

This table also shows the balance between freight loaded and unloaded. Care should be taken when drawing conclusions regarding imports and exports because of the hub nature of air freight transport. The partner countries with the greatest proportion of freight unloaded were Kenya with 80% and Azerbaijan with 74%. These were followed by Thailand (68%), China and Hong Kong (64% and 62% respectively).

growth was observed for the Asian Republic of the ex-USSR (+45%) followed by Australasia (+21%).

Table 6 lists the top 20 country pairs in terms of total air freight and mail. Given the predominance of the USA market four of the top five country pairs are with this partner. The largest country pair was United Kingdom – USA with 747 thousand tonnes. This was followed by Germany - USA with 539 thousand tonnes. Country pairs where China, Hong Kong or Azerbaijan were one of the partners record significantly greater tonnage of freight unloaded.

Table 7 below provides an analysis by airport pair. Despite the predominance of the USA at a country pair level, the largest flow was recorded on Frankfurt/Main – Seoul/Gimpo International with 127 thousand tonnes of air freight and mail. This was followed by London Heathrow – New York/JFK with 117 thousand tonnes and Frankfurt/ Main – Hong Kong/International with 116 thousand tonnes.

Table 6: Main extra-EU country pairs in terms of total freight and mail transport in 2005

Rank	Country pairs	Freight and mail in tonnes			Share on EU-25 Partner country
		Unloaded	Loaded	Total	
1	UNITED KINGDOM - USA	361 706	384 903	746 610	31.7%
2	GERMANY - USA	239 273	299 248	538 521	22.9%
3	FRANCE - USA*	138 628	162 166	300 794	12.8%
4	NETHERLANDS - USA	124 260	164 591	288 851	12.3%
5	GERMANY - UNITED ARAB EMIRATES	115 659	80 793	196 453	29.5%
6	GERMANY - CHINA	123 601	70 089	193 690	38.8%
7	GERMANY - HONG KONG	98 234	70 512	168 746	30.8%
8	UNITED KINGDOM - UNITED ARAB EMIRATES	80 000	61 793	141 793	21.3%
9	BELGIUM - USA	80 256	51 389	131 645	5.6%
10	GERMANY - REPUBLIC OF KOREA	69 525	58 005	127 530	40.8%
11	GERMANY - JAPAN	67 346	57 682	125 028	31.0%
12	NETHERLANDS - CHINA	82 991	40 207	123 198	24.7%
13	UNITED KINGDOM - HONG KONG	82 801	38 884	121 685	22.2%
14	LUXEMBOURG - USA	43 303	71 662	114 965	4.9%
15	GERMANY - INDIA	58 252	53 702	111 954	40.5%
16	LUXEMBOURG - UNITED ARAB EMIRATES	71 874	36 466	108 340	16.3%
17	NETHERLANDS - HONG KONG	64 393	36 935	101 328	18.5%
18	NETHERLANDS - UNITED ARAB EMIRATES	45 835	54 927	100 761	15.1%
19	NETHERLANDS - JAPAN	52 126	44 961	97 087	24.1%
20	LUXEMBOURG - AZERBAIJAN	73 991	20 968	94 959	80.4%

* See Methodological Notes for France

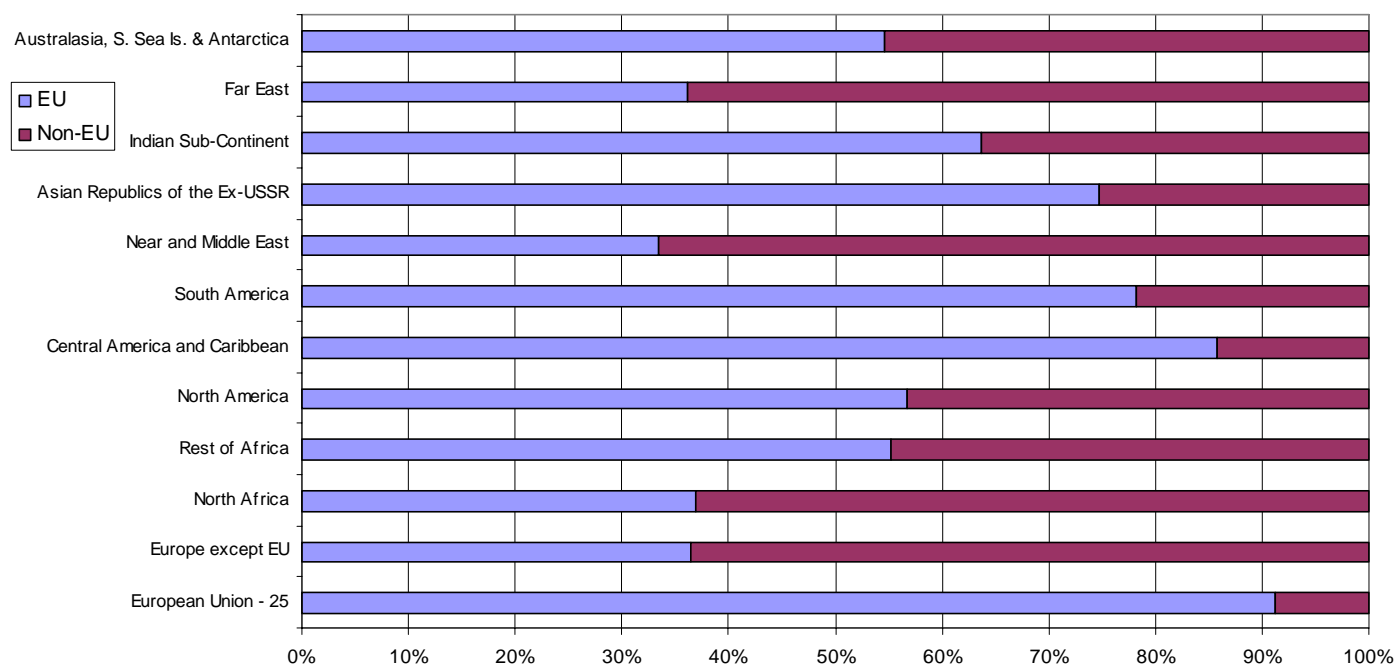
Table 7: Top-20 extra-EU airport pairs* in terms of total freight and mail transport in 2005

Rank	Airport pairs	Freight and mail in tonnes		
		Unloaded	Loaded	Total
1	FRANKFURT/MAIN SEOUL/GIMPO INTL	69 457	57 924	127 381
2	LONDON HEATHROW NEW YORK/JFK	50 003	67 285	117 288
3	FRANKFURT/MAIN HONG KONG/INTL	73 500	42 951	116 451
4	FRANKFURT/MAIN SHANGHAI CITY	75 761	40 210	115 971
5	FRANKFURT/MAIN TOKYO/NARITA INTL	59 841	50 601	110 442
6	AMSTERDAM/SCHIPHOL HONG KONG/INTL	64 393	36 935	101 328
7	LUXEMBOURG BAKU/INTL	73 991	20 968	94 959
8	FRANKFURT/MAIN CHICAGO - O'HARE INTL.	40 109	46 896	87 005
9	AMSTERDAM/SCHIPHOL DUBAI INTL	41 441	43 923	85 364
10	LUXEMBOURG ABU DHABI INTL	65 031	20 036	85 067
11	AMSTERDAM/SCHIPHOL SINGAPORE/CHANGI	42 577	33 471	76 048
12	LONDON HEATHROW CHICAGO - O'HARE INTL	37 222	37 621	74 843
13	FRANKFURT/MAIN DUBAI INTL	33 205	36 756	69 961
14	AMSTERDAM/SCHIPHOL SHANGHAI/PUDONG	45 218	23 077	68 295
15	AMSTERDAM/SCHIPHOL NAIROBI	46 196	20 652	66 848
16	BRUSSELS-NATIONAL NEW YORK/JFK	33 540	28 259	61 799
17	LONDON HEATHROW TOKYO/NARITA INTL	31 946	29 409	61 355
18	LONDON HEATHROW DUBAI INTL	35 185	25 827	61 012
19	AMSTERDAM/SCHIPHOL TOKYO/NARITA INTL	31 295	28 915	60 210
20	LONDON HEATHROW LOS ANGELES INTL	32 661	24 195	56 856

* Airport pairs involving a French airport are not included.

Freight transport by airline and aircraft types

Graph 2: Share of EU-non EU airlines by partner region in terms of freight and mail transport in 2005



Graph 2 indicates the respective shares of EU and Non-EU airlines on each world region. This graph has been produced with the information provided by 16 Member States (see the Methodological Notes for more details).

Airlines of the EU-25 Member States carried more than half of the traffic in eight of the twelve world regions. As expected more than 90% of air freight and mail transported within the EU-25 area was carried on EU airlines.

Airlines of the EU-25 Member States carried more than 85% of the traffic to and from Central America and the Caribbean, almost 80% of the South American market and some 75% on the Asian Republics of the ex-USSR market.

In contrast, airlines of the EU-25 Member States carried less than 40% of the traffic in the Near and Middle East, Far East, Europe except EU and North African markets.

Table 8 below presents the proportion of total air freight and mail transported by the top ten aircraft types used. This graph has been produced with the information provided by 22 Member States (see the Methodological Notes for more details). The aircraft types listed on this table accounted for 89% of all freight and mail handled at EU-25 reporting airports in 2005.

Almost half of all traffic was carried on Boeing 747 and Boeing MD-11 aircraft. These two types form the majority of high capacity all-freight aircraft presently in service.

The Boeing 777 was the third most heavily used aircraft type with 9% of the total followed by the Airbus A-300 and Boeing 767 with 7% each.

In total, Boeing aircraft accounted for 71% of all air freight carried. Airbus aircraft carried the majority of the remaining air freight and mail.

Table 8: Top 10 aircraft types in terms of freight and mail transport in EU-25 in 2005

Rank	Aircraft Category	Volume of freight (tonnes)	Share in total transport
1	BOEING - 747 (All models)	3 944 248	34.8%
2	BOEING - MD-11	1 320 093	11.6%
3	BOEING - 777 (All models)	975 804	8.6%
4	AIRBUS - A-300 (All models)	795 064	7.0%
5	BOEING - 767 (All models)	751 073	6.6%
6	AIRBUS - A-340 (All models)	659 368	5.8%
7	AIRBUS - A-330 (All models)	567 979	5.0%
8	BOEING - 757 (All models)	512 175	4.5%
9	BOEING - 737 (All models)	373 221	3.3%
10	DC-10 (All models)	248 728	2.2%

➤ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

Data sources

All figures presented in this publication have been extracted from the Eurostat aviation database. The database is available online from the Eurostat web page.

Data shown in this publication refer to airports registering over 150 000 passenger units annually.

Main Definitions

The definitions used on air transport statistics are included in the Commission Regulation (EC) 1358/2003 implementing Regulation (EC) 437/2003 of the European Parliament and of the Council on statistical returns in respect of the carriage of passengers, freight and mail by air. The main definitions used are the following:

Flight stage (FS): The operation of an aircraft from take-off to its next landing.

On Flight Origin and Destination (OFOD): Traffic on a commercial air service identified by a unique flight number subdivided by airport pairs in accordance with the point of embarkation and point of disembarkation on that flight.

Freight and mail on board: All freight and mail on board of the aircraft upon landing at the reporting airport or at taking off from the reporting airport. Includes direct transit freight and mail and excludes passenger baggage.

Freight and mail loaded or unloaded: All freight and mail loaded onto or unloaded from an aircraft. This excludes passenger baggage and direct transit freight and mail.

The difference between On Flight Origin/Destination and Flight Stage data can be illustrated by the following example: a flight is operated on a route New York-London-Paris. The freight and mail traffic consists of 18 tonnes transported from New York to London, 13 from New York to Paris and 7 from London to Paris. Then:

- In terms of OFOD data, the figures recorded are 18 tonnes New York-London, 13 tonnes New York-Paris and 7 tonnes London-Paris. New York would record the figures for New York-London and New York-Paris; London would record New York-London and London-Paris; and Paris would record New York-Paris and London-Paris.
- In terms of FS data, there are two flight stages and the figures recorded are; New York-London 31=(18+13) tonnes; London-Paris 20=(13+7) tonnes.

On Flight Origin/Destination and Flight Stage - Reporting Countries

In principle, information provided in this publication is based on On Flight Origin/Destination data rather than Flight Stage data. OFOD data have been used where available, but FS data have been used for those countries where no OFOD data were reported. The exceptions are data for flights and for the table on aircraft, for which the Flight Stage approach has to be taken into account.

Bulgaria: Bulgaria provided only airport declarations.

Denmark: Freight and mail data reported do not include figures from Kobenhavn/Kastrup airport.

Estonia: Estonian data refer to Tallinn/Ülemiste airport only.

France: Due to data collection problems, the aggregated figures for France maybe under estimated and should be taken carefully. Also, due to this problem, this publication does not show any data at airport level reported by France.

Latvia: Latvian data refer to Riga airport only.

Luxembourg: Luxembourg only provided Flight Stage data. Luxembourgish data refer to Luxembourg airport only.

Hungary: Hungarian data refer to Budapest/Ferihegy airport only.

Malta: Maltese data refer to Malta/Luqa airport only.

Poland: Because of derogations granted to other airports, Polish 2005 data refer to Warszawa/Okecie airport only.

Slovenia: Slovenian data refer to Ljubljana airport only.

Slovakia: Slovakia provided data at country level only.

Sweden: In 2005 Sweden did not report freight and mail data and this country is thus not included in the EU aggregates.

Table 1

The national aggregates and the total intra-EU aggregates have been calculated excluding double counting.

Table 2

Freight and mail figures are based on On Flight Origin Destination while the freight flights figures come from the Flight Stage dataset.

Table 3

The total freight and mail figures for the countries flows have been calculated by adding the "Departure" declarations at country level of the two countries concerned. For Denmark and Sweden only the partner declarations have been taken into account.

Table 4

The total figures for each pair of airports have been calculated by adding the "Departure" of the two airports concerned. However, for the routes Paris/Charles de Gaulle – Frankfurt/Main and Malmö – Köln/Bönn, only the German declarations have been taken into account.

Map 1 and Graph 2

The component countries comprising the world regions as defined for Map 1 and Graph 2 are based on the geonomenclature used by Eurostat for the external trade statistics. The components of each world region can be extracted from the Aviation domain of the Eurostat on-line database or obtained upon request.

Graph 2

The graph is based on the 16 Member States having provided details on the airline nationality. The following countries have not provided this information: Belgium, Czech Republic, Germany, France, Cyprus, the Netherlands, Slovenia, Slovakia and Sweden.

Table 8

The figures are based on the 22 EU-25 Member States having provided the aircraft type information in 2005. The following countries have not provided this information: Hungary, Slovakia and Sweden.

In this publication











":" means "not available"

"-" means "not applicable" or "real zero"

This publication was prepared with the assistance of Marion Biré, Mathieu Erzar (data), Virginie Attivissimo (layout) and Philip Osler (commentary).

Further information:

Data: [EUROSTAT Website/Home page/Transport/Data](#)

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