



**An
Phríomh-Oifig
Staidrimh**

Central
Statistics
Office

Standard Report on Methods and Quality for Aviation Statistics

Standard Report
on
Methods and Quality
for
AVIATION STATISTICS

This documentation applies to the reporting period:
2014 to 2019

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Table of contents

1 Overview

2 General information

- 2.1 Statistical category
- 2.2 Area of activity
- 2.3 Organisational unit responsible, persons to contact
- 2.4 Objectives and purpose; history
- 2.5 Periodicity
- 2.6 Client
- 2.7 Users
- 2.8 Legal basis

3 Statistical concepts, methods

- 3.1 Subject of the statistics
- 3.2 Units of observation/collection units/units of presentation
- 3.3 Data sources
- 3.4 Reporting unit/respondents
- 3.5 Type of survey/process
- 3.6 Characteristics of the sample/process
 - 3.6.1 Population and sampling frame
 - 3.6.2 Sampling design
- 3.7 Survey technique/data transfer
- 3.8 Questionnaire (including explanations)
- 3.9 Participation in the survey
- 3.10 Characteristics of the survey/process and its results
- 3.11 Classifications used
- 3.12 Regional breakdown of results

4 Production of the statistics, data processing, quality assurance

- 4.1 Data capture
- 4.2 Coding
- 4.3 Data editing
- 4.4 Imputation (for non-response or incomplete data sets)
- 4.5 Grossing and weighting
- 4.6 Computation of outputs, estimation methods used
- 4.7 Other quality assurance techniques used

5 Quality

- 5.1 Relevance
- 5.2 Accuracy and reliability
 - 5.2.1. Sampling effects, representativity
 - 5.2.2. Non-sampling effects
 - 5.2.2.1 Quality of the data sources used
 - 5.2.2.2 Register coverage
 - 5.2.2.3 Non-response (unit and item)
 - 5.2.2.4 Measurement errors
 - 5.2.2.5 Processing errors
 - 5.2.2.6 Model-related effects
- 5.3 Timeliness and punctuality
 - 5.3.1 Provisional results
 - 5.3.2 Final results
- 5.4 Coherence
- 5.5 Comparability
- 5.6 Accessibility and clarity
 - 5.6.1 Assistance to users, special analyses
 - 5.6.2 Revisions
 - 5.6.3 Publications
 - 5.6.3.1 Releases, regular publications
 - 5.6.3.2 Statistical reports
 - 5.6.3.3 Internet
 - 5.6.4 Confidentiality

6 Additional documentation and publications

1. Overview

Data on Aviation Statistics dating back to 1961 is available on CSO StatBank. The current series of Aviation Statistics was first collected in 2004. The data is collected from all Irish airports and transmitted to Eurostat. An Aviation release was first published in 2014 to make the data more accessible to users.

The aviation statistics release provides information on the number of passengers and freight/mail handled by all Irish airports categorised as follows:

- Airport
- Arrivals and departures for both passengers and freight/mail
- Type of travel and traffic (i.e. national or international) for both passengers and freight/mail
- Scheduled and non-scheduled flights for both passengers and freight/mail
- Country of flight stage origin and destination
- Top 10 airports for arrivals and departures of passengers for the five main Irish airports

In addition, details of the numbers of flights handled by all airports classified by arrivals/departures, national and international traffic and scheduled and unscheduled are provided. Data freight/mail carried is given for the five main airports classified by arrivals and departures and national and international flights.

2. General information

2.1 Statistical Category

Statistical compilation based on administrative data.

2.2 Area of Activity

Transport statistics.

2.3 Organisational unit responsible, persons to contact

Transport Section, Agriculture, Transport and Tourism Division

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2.4 Objectives and purpose; history

The aviation statistics release was introduced to provide detailed official information on the volume of activity at Irish airports. The data is supplied by all Irish airports (without whose co-operation the initiation of this series would not have been possible). The aviation statistics release was published for the first time in 2014 and provided annual and monthly information on the number of passengers handled by all Irish airports categorised as follows:

- Airport
- Arrivals and departures
- National and international traffic
- Country of flight stage origin and destination
- Top 10 airports for arrivals and departures of passengers for the five main Irish airports

In addition, details of the numbers of flights handled by all airports classified by arrivals/departures, national and international traffic and scheduled and unscheduled are provided. Data on freight carried is also included for the five main airports classified by arrivals and departures and national and international flights.

Since 2017, the aviation statistical data is published every quarter and provides quarterly data on the variables above. Annual data is included in the quarter 4 release.

2.5 Periodicity

Quarterly

2.6 Client

The data is collected to meet an EU requirement: Regulation (EC) N°1358/2003, implementing Regulation N°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, requires all EU Member States to collect and compile statistics of aviation.

The data also satisfies a general national requirement.

2.7 Users

- Aviation Industry
- Eurostat
- Researchers
- General public
- Government departments and agencies – to monitor the economic and environmental impact of the aviation industry

2.8 Legal basis

EU level:

Statistics on aviation are collected under Regulation (EC) No. 437/2003 the European Parliament and of the Council of 27 February 2003 on statistical returns in respect of the carriage of passengers, freight and mail by air. This regulation was further amended by Commission Regulation (EC) No. 1358/2003 of 31 July 2003.

National level:

Statistics on Aviation are collected under Statutory Instrument S.I. No. 91/2014 - Statistics (Carriage of Passengers, Freight and Mail by Air) Order 2013.

3. Statistical concepts, methods

3.1 Subject of the statistics

The subject of the statistics is activity at Irish airports. This is measured in terms of number of arrivals and departures by airport and freight/mail loaded and unloaded at each airport.

3.2 Units of observation/collection units/units of presentation

The survey population is all Irish airports. The collection units are individual airports.

The main units of presentation are

- passenger numbers
- number of flights
- tonnes of mail/freight

3.3 Data sources

Administrative Data is received monthly from the Irish airports.

3.4 Reporting unit/respondents

The respondents are as follows:

Dublin Airport Authority (DAA)

Shannon Airport

Kerry Airport

Knock Airport

Donegal Airport

Connemara Airport

Inishmore Aerodrome Airport

3.5 Type of survey/Process

Compilation is based on administrative data.

3.6 Characteristics of the sample

3.6.1 Population and Sampling Frame

The population is all Irish airports. The results are based on a full census, i.e. all variables are fully reported by each airport to the Central Statistics Office.

3.6.2 Sampling design

The results are based on a full census; therefore no sampling takes place.

3.7 Survey technique/data transfer

The data is emailed by each airport to a specific email account in the CSO each month.

3.8 Questionnaire (including explanations)

Not relevant

3.9 Participation in the survey

All airport and airport authorities are legally obliged to participate in the survey

3.10 Characteristics of the survey/Process and its Results

The data file that is received quarterly contains the following variables for each airport:

- Reporting airport
- Partner airport
- Direction
- Scheduled or non-scheduled
- Passenger or Freight/mail flight
- Airline
- Aircraft
- Passenger numbers
- Freight/mail loaded and unloaded
- Number of commercial flights
- Seat numbers
- Total number of aircraft movements.

A simple aggregation is then carried out on the data and the following classification variables are reported on in the publication:

- Number of passengers by airport by direction, by national and international and whether the flight is scheduled or non-scheduled
- Tonnage of freight/mail carried by airport by direction by national and international and whether the flight is scheduled or non-scheduled
- Number of flights by airport by direction by national and international and whether scheduled or non-scheduled
- Top ten routes for the five main Irish airports
- Passenger numbers by continent by flight stage and by direction

3.11 Classifications used

EU classifications are in use for the following characteristics

- Airport
- Direction of Traffic
- Category of Traffic

3.12 Regional breakdown of results

There is no regional breakdown of results

4. Production of the statistics, data processing, quality assurance

4.1 Data capture

Data is received monthly from the five main Irish airports via email. The data is received in Excel or flat file format. In some cases, this data must be manually formatted. Once formatted, the data is processed using the statistical software tool SAS. This processing essentially involves writing the data to data (.DAT) files in the format required by Eurostat.

4.2 Coding

Coding is based on Eurostat list of classifications compiled for all EU Member States. The data are pre-coded by the airports when they are compiling the data, so no actual coding occurs when the data is being processed by CSO.

4.3 Data editing

Data editing and validation is carried out using SAS to ensure that all codes used are valid and that there is consistency in the data. Any queries that arise are forwarded to airports for clarification and amendment if necessary.

4.4 Imputation (for non-response or incomplete data sets)

Non-response does not apply as the response rate is 100%.

4.5 Grossing and weighting

Not applicable.

4.6 Computation of outputs, estimation methods used

Outputs are compiled by simple aggregation using SAS (a statistical software package).

4.7 Other quality assurance techniques used

For each annual transmission, Eurostat carries out quality checks where comparisons for the Irish data are made with partner airports. Mirror checks and missing routes are highlighted for re-check.

5. Quality

5.1 Relevance

The airport data is of major relevance for the Government and Department of Transport as an indicator of how the sector is performing, and also to implement and monitor policies for aviation transport.

5.2 Accuracy and Reliability

5.2.1 Sampling effects, representativity

Not applicable.

5.2.2 Non-Sampling effects

5.2.2.1 Quality of the data sources used

There are no concerns on the quality of the data sources. The majority of the variables supplied by the airports are already collected for their own purposes.

5.2.2.2 Register Coverage

Not applicable.

5.2.2.3 Non response (unit and item)

Not applicable

5.2.2.4 Measurement errors

The scope for measurement error is limited given that there is little room for ambiguity in the standard reporting template. Furthermore, the potential for measurement errors arising as a result of coding errors is all but eliminated as there are a limited number of codes and the coding is done by the airports.

5.2.2.5 Processing errors

The scope for processing errors is limited, in that the data is not processed manually. In any case, edit checks are done on the data files received from airports to ensure that all codes used are valid and that there is consistency in the data from the previous quarter. Any issues highlighted as a result of the edit checks carried out on the data are forwarded to airports for clarification and amended.

5.2.2.6 Model-related effects

Not applicable.

5.3 Timeliness and punctuality

5.3.1 Provisional results

Provisional results are not published.

5.3.2 Final results

Monthly data is transmitted to Eurostat within t+6 months. Quarterly data is published within t+3 months after the end of the reference quarter except for Quarter 4 which is published along with annual data within t+4 months after the end of the reference year.

5.4 Coherence

The data for international flights is compared by Eurostat against returns from partner airports. Any discrepancies highlighted by this process are investigated and corrected if necessary. This process is completed in advance of the publication of the release.

The scope for coherence checks on national data is limited by the lack of auxiliary sources of information.

5.5. Comparability

The data is comparable across different periods as no changes have been made to the variables or the reporting basis since the series began in 2004

5.6 Accessibility and Clarity

5.6.1 Assistance to users, special analyses

A detailed time series of aviation statistical data is available on the CSO's StatBank.

5.6.2 Revisions

Revisions are updated as they arise.

5.6.3 Publications

5.6.3.1 Releases, Regular Publications

Aviation statistics – Quarterly and the quarter 4 also contains annual data

5.6.3.2 Statistical Reports

CSO Annual Yearbook:

<http://www.cso.ie/en/statistics/statisticalyearbookofireland/>

CSO Annual Transport Omnibus:

<http://www.cso.ie/en/statistics/transport/>

5.6.3.3 Internet

Most recent annual release

<http://www.cso.ie/en/statistics/transport/>

Archived releases

<http://www.cso.ie/en/statistics/transport/archive/>

StatBank

http://www.cso.ie/px/pxeirestat/Database/eirestat/Aviation%20Statistics/Aviation%20Statistics_statbank.asp?SP=Aviation%20Statistics&Planguage=0

Methodology

<http://www.cso.ie/en/surveysandmethodology/transport/aviationstatistics/> .

5.6.4 Confidentiality

All data is treated as strictly confidential in accordance with Part V of the Statistics Act, 1993.

6. Additional documentation and publications

Additional information on the survey, including the differing data fields collected and the codification used, can be found in the Eurostat aviation manual.

http://ec.europa.eu/eurostat/cache/metadata/Annexes/avia_pa_esms_an3.pdf