



الهيئة العامة للإحصاء
General Authority for Statistics

Methodology and Quality Report for Air Transport Statistics

V-3.2

Quality Management



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1. Contact

1.1. Contact organization	General Authority for Statistics
1.2. Contact organization unit	Traffic and Transportation Statistics Department
1.3. Contact person function	Director of Traffic and Transportation Statistics Department
1.4. Contact mail address	P.O. Box: 3735 Riyadh, 11481 Kingdom of Saudi Arabia
1.5. Contact email address	info@stats.gov.sa
1.6. Contact phone number	199009

2. Methodology and Quality Update

2.1. Latest Update on Methodology and Quality	06/05/2025
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3. Statistical Presentation

3.1. Data description
<p>The air transport statistics publication in the Kingdom of Saudi Arabia presents recent data on flight movements and passenger traffic at the Kingdom's airports in the air transport sector. Air transport statistics publication is a statistical product that collects data through administrative records about key characteristics as follows:</p>

- Domestic and international air traffic of flights and passengers at the Kingdom's airports.
- Air traffic through Saudi and foreign airlines.
- Cargo volumes at the Kingdom's airports.
- Number of countries travelled to through international airports at the Kingdom by airport.
- Destinations reached through international airports.
- Commercial and general airplanes at the Kingdom's airports.
- Capacity at the Kingdom's airports.
- Number of cargo facilities at the Kingdom's airports.
- Air transport licenses.

3.2. Classification system

The following classifications are applied in the air transport publication:

National Code of Countries and Nationalities (3166 ISO - codes Country):

A statistical classification based on the international standard (ISO 3166_Country codes), which is a standard issued by the International Organization for Standardization (ISO of the UN), and this classification gives numeric and literal codes for the world's (248) countries, based on the classification of countries. The classification is used in the Air Transport Publication to classify Saudi or non-Saudi individuals.

Classifications are available on the GASTAT website: www.stats.gov.sa

3.3. Sector coverage

Air transport statistics cover all air transportation activities.

3.4. Statistical concepts and definitions

Terminologies and concepts of the air transport statistics publication:

- Airports:

It is the place where all aircraft, such as helicopters, etc., are located, or that carry passengers and cargo.

- International airports:



The airport is equipped to serve external civil lines, can receive all types of aircraft, and can receive more than one aircraft at a time due to the presence of several corridors and offers all kinds of services.

- Domestic airport:

An airport equipped to serve domestic civil airlines (between cities of one country) and often single-aisle with limited services.

- Flight:

The distance traveled by the aircraft from one airport to another airport and from one country to another.

- International flights:

It means the movement of aircraft between the airports of the Kingdom of Saudi Arabia and all the countries of the world.

- Domestic flights:

It means the movement of aircraft between the airports of the Kingdom of Saudi Arabia.

- Airplane traffic:

Total number of arriving and departing flights to and from the airport per day and across all airlines.

- Arriving airplanes:

The number of aircraft that landed at all airports within the Kingdom of Saudi Arabia for different (Saudi and foreign) airlines.

- Departing airplanes:

The number of aircraft that took off from all airports within Saudi Arabia.

- Commercial aviation:

It is a part of civil aviation that involves operating airplanes for hire or lease, as opposed to general aviation.

- Passenger on board:

He is a person who travels on an airplane but does not fly it or work on it.

- Departing passengers:



The term refers to a passenger who is departing from an airport on a flight but excludes a passenger who arrives at and departs from the airport on the same airplane as part of the same flight.

- Arriving passengers:

All passengers departing the airplane at the notified airport, including connecting passengers who disembark and board another airplane to continue their flight.

- kilogram:

It is the basic unit of mass in the International System of Units (SI), and its symbol is kg.

- Tons:

A ton, or megagram, is a unit of measurement equal to 1,000 kilograms. It is primarily used as a unit of mass but can also be used as a unit of volume in certain contexts.

- Private airport:

An airport is used by public and general aviation but is not eligible for use by regular airlines.

- General aviation:

It is a luxury aircraft designed to give passengers total comfort as they travel to their destination, where they don't have to share the plane with dozens or hundreds of passengers.

- Private Flight:

A "private" flight is when an aircraft owner (or a friend or family member) uses the aircraft for private use.

- Airspace:

A term in aviation that means the area of a country's airspace.

- Capacity:

It is the maximum number of aircraft or passengers that can be accommodated in a given period.

- Air route:

The term refers to imaginary lines on which airplanes travel, varying in altitude to avoid accidents, with airplanes directed by the control tower at different altitudes.

- Cargo facilities:

A cargo terminal within the airport.

- Airplane age:

The number of years since the airplane was first registered.

- Aviation fleet:

Includes all airplanes used for commercial purposes, including those temporarily out of service due to major accidents, modifications, or grounding by government regulatory authorities.

- Airport runway:

A designated rectangular area at an airport prepared for airplane landing and takeoff, with characteristics supporting the takeoff process. The declared runway length available and suitable for the ground operation of the departing airplane, and the landing distance available within the declared runway length, are both suitable for the ground operation of the arriving airplane.

- Economic licensing of ground handling service providers in air transport:

A document issued by the General Authority of Civil Aviation to entities wishing to provide one or more ground handling services at airports in the Kingdom, such as ramp handling services, passenger services, baggage handling services, etc.

- Economic licensing of air cargo service providers:

A document issued by the General Authority of Civil Aviation to the entity wishing to provide one or more air cargo services at airports in the Kingdom, such as cargo agent services, express cargo services, etc.

3.5. Statistical unit

Not applicable.

3.6. Statistical population

The targeted statistical population consists of all airports in the Kingdom of Saudi Arabia.

3.7. Reference area

Air transport statistics cover airports in all 13 administrative regions of the Kingdom.

3.8. Time coverage

Data is available annually from 2019 to 2024.

3.9. Base period

Not applicable.

4. Unit of measure

- Most results are measured by numbers (such as: Number of flights - number of passengers - number of airports) (in thousands - millions).
- Some indicators are calculated as rates (in tons and kilograms), such as: Cargo Quantities).
- Some results are calculated as percentages (e.g., The rate of change between 2023 and 2024 for flights, passengers, cargo volumes, average international and domestic flights, or capacity utilization rate.

5. Reference period

The data from the administrative records is based on the last day of the reference year, which is received from the General Authority of Civil Aviation.

6. Confidentiality

6.1. Confidentiality - policy

According to the Royal Decree No. 23 dated 07-12-1397, data must always be kept confidential and must be used by GASTAT only for statistical purposes.

Therefore, the data is protected in the data servers of the Authority.

6.2. Confidentiality - data treatment

Data were displayed in appropriate tables to facilitate its summarization, comprehension, and results extraction. Also, to compare data with other data and extract statistical meanings for the study community. It is also easier to check tables without the need to see any sensitive or confidential data, which violates data confidentiality of statistical data.

7. Release policy

7.1. Release calendar

The air transport statistics publication is included in the statistical calendar.

7.2. Release calendar access

The release calendar is available at: <https://www.stats.gov.sa/statistical-calendar-releases>

7.3. User access

One of GASTAT's objectives is to better meet its clients' needs by immediately providing them with the results of the publication once the air transport statistics publication is released.

It also receives questions and inquiries from clients about the publication and its results through various communication channels, such as:

- GASTAT official website: www.stats.gov.sa
- GASTAT official e-mail address: info@stats.gov.sa
- Client support e-mail address: info@stats.gov.sa
- Official visits to GASTAT's official head office in Riyadh or one of its branches in Saudi Arabia.
- Official letters.
- Statistical telephone: (199009).

8. Frequency of dissemination

Annual

9. Accessibility and clarity

9.1. News release

The announcements of each publication are available on the release calendar as mentioned in 7.2. Release calendar access. The news release can be viewed on the website of GASTAT through the following link:

<https://www.stats.gov.sa/en/news>

9.2. Publications

GASTAT issues the air transport statistics Publication on a regular basis within a pre-prepared dissemination plan and are published on GASTAT's website. GASTAT is keen to publish its publications in a way that serves all users of different types, including publications in different formats that contain (publication tables, data graphs, indicators, and metadata) in both English and Arabic.

The results of the air transport statistics publication are available at:

<https://www.stats.gov.sa/statistics>

9.3. On-line database

Not applicable.

9.4. Micro-data access

Not available.

9.5. Other

Not available.

9.6. Documentation on methodology

Framework of the air transport statistics publication:

The concepts and definitions are based on international standards in the ICAO Statistics Program Reference Manual, issued by the International Civil Aviation Organization (ICAO). The manual aims to provide appropriate guidance and standards for government officials, airlines, and airports involved in preparing statistical data for submission to ICAO. This manual contributes to understanding the basic definitions and terms used in air transport statistics, the purpose being that all data reported for the same entity is homogeneous and can be used for international comparative purposes.

[Reference Manual on the ICAO Statistics Programme](#)

In addition to the Dictionary of Transport Statistics, a document prepared by the Inter-secretariat Working Group of the European Statistical Organization (Eurostat), the International Transport Union and the United Nations Economic Commission for Europe "Fourth Edition".

[Glossary for Transport Statistics](#)

9.7. Quality documentation

Quality documentation covers documentation on methods and standards for assessing, measuring, and monitoring the quality of statistical process and output. It is based on standard quality criteria such as relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, comparability, and coherence.

10. Quality management

10.1. Quality assurance

GASTAT declares that it considers the following principles: impartiality, user orientated, quality of processes and output, effectiveness of statistical processes, reducing the workload for respondents.

Quality controls and validation of data are actions carried out throughout the process in different stages such as the data input and data collection and other final controls.

10.2. Quality assessment

GASTAT performs all statistical activities according to a national model (Generic Statistical Business Process Model - GSBPM). According to the GSBPM, the final phase of statistical activities is overall evaluation using information gathered in each phase or sub-process. This information is used to prepare the evaluation report which outlines all the quality issues related to the specific statistical activity and serves as input for improvement actions.

11. Relevance

11.1. User needs

Internal users in the GASTAT for air transport statistics Publication data:

- National accounts statistics.
- Tourism, Hajj, and Umrah Statistics.
- The statistical book.

- Price statistics.
- International indicators.

Some several external users and beneficiaries greatly benefit from Air Transport Statistics Publication data, including:

- Government entities.
- Regional and international organizations.
- Research institutions.
- Media.
- Individuals.

The disseminated key variables used by external users:

Indicators of Sustainable Development.	Number of passengers and number of Cargo.
General Authority of Civil Aviation.	Air traffic at the Kingdom's airports.

11.2. User satisfaction

Not available.

11.3. Completeness

Air transport statistics publication data are based on the main source of registered data at the General Authority of Civil Aviation in order to provide comprehensive information on air transport as well as government and private entities associated with transport and storage activities, and data in complete status.

12. Accuracy and reliability

12.1. Overall accuracy

- Data is checked with previous years to identify any significant changes in the data.
- The internal consistency of the data is checked before it is finalized.
- The links between variables are checked and coherence between different data series is confirmed.

13. Timeliness and punctuality

13.1. Timeliness

GASTAT uses the Special Data Dissemination Standard (SDDS) issued by the International Monetary Fund. According to this Standard, all statistics agencies are required to publish data on an annual basis, and with a delay of not more than mid of year (180 days) after the end of the reference period. If the data are from different source, they may be published in a different frequency.

13.2. Punctuality

The publication takes place according to the published release dates on the statistical calendar for air transport statistics publication on the website of the General Authority for Statistics.

The data are available at the expected time, as scheduled in the statistical release calendar, If the publication is delayed, reasons shall be provided.

14. Coherence and comparability

14.1. Comparability - geographical

Data are fully comparable.

14.2. Comparability - over time

The air transport statistics publication started in 2021 as annual administrative records.

14.3. Coherence- cross domain

Not applicable.

14.3.1. Coherence - sub annual and annual statistics

Not applicable.

14.3.2. Coherence- National Accounts
Not applicable.
14.4. Coherence - internal
The air transport statistics data have complete internal consistency.

15. Data revision

15.1. Data revision - policy
Not applicable, only final results will be published.
15.2. data revision- practice
Not applicable, only final results will be published.

16. Statistical processing

16.1. Source data
<p>The publication is based on data from the General Authority of Civil Aviation (GACA) and Air Connectivity Program (ACP).</p> <p>The main published variables from the administrative data source are:</p> <ul style="list-style-type: none"> • Domestic and international air traffic for flights and passengers at the Kingdom's airports. • Air traffic through Saudi and foreign airlines. • Cargo volumes at the Kingdom's airports.

- Number of countries reached through the international airports in the Kingdom.
- Number of destinations reached through international airports.
- Number of commercial and general airplanes at the Kingdom's airports.
- Capacity at the Kingdom's airports
- Number of cargo facilities at the Kingdom's airports.
- Number of air transport licenses.
- Air Connectivity Index

16.2. Frequency of data collection

Annual.

16.3. Data collection

Data collection from administrative records:

In coordination with the Authority's departments related to data management and collection, the administrative records of the air transport statistics publication are obtained from the General Authority of Civil Aviation - Air Connectivity Program (ACP), which includes data on the number of flights, passengers, number of airports, airplanes, cargo volumes in the Kingdom's airports and the air connectivity index of the Kingdom.

The data is stored in the authority's databases after undergoing auditing and review processes following approved statistical methods and recognized quality standards. If errors or discrepancies are discovered, the data is cross-referenced with the data source for correction or clarification.

16.4. Data validation

Data are reviewed and matched to ensure their accuracy and precision in a way that suits their nature with the aim of giving the presented statistics quality and accuracy.

The data for the current year publication is compared with the data of the previous year to ensure their integrity and consistency in preparation for processing data and extracting and reviewing results.

In addition to the data processing and tabulation to check their accuracy, all the outputs are stored and uploaded to the database after being calculated by GASTAT to be reviewed and processed by specialists in Traffic and Transportation Statistics through modern technologies and software designed for this purpose.



16.5. Data compilation

Data editing:

Specialists of the Traffic and Transportation Statistics Department have processed and analyzed data in this stage, and this step was based on the following measures:

- Sorting and arranging data in groups or different categories in a serial order.
- Summarizing detailed data into key points or data.
- Combining many data segments and ensuring their interconnection.
- Converting data into statistically significant data.
- Arranging, presenting, and interpreting data.

16.6. Adjustment

Not applicable, only final results will be published.

17. Comment

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