CHINA AIR CARGO PROFILE

ICAO - ECONOMIC DEVELOPMENT - 2025

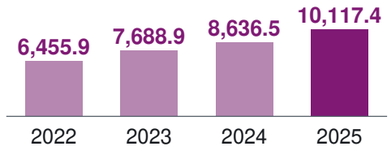
AIRLINES AIR CARGO INDICATORS, 2025

10,117.4	40,656.6	567.0	61,872.1	66.6%
FREIGHT (thousand tonnes)	FREIGHT TONNE-KM (million)	MAIL TONNE-KM (million)	CARGO AVAILABLE (million tonne-km)	CARGO LOAD FACTOR (percent)

Source: ICAO Forms A and A-S, 2025.

FREIGHT EVOLUTION

Freight tonnes (thousand tonnes).



Source: ICAO COMP_MASTER, 2022-2024; ICAO Form A, 2025. 2025 preliminary.

DOMESTIC vs INTERNATIONAL

DOMESTIC
56.6%
5,729.3 freight
8,238.4 FTK

INTERNATIONAL
43.4%
4,388.1 freight
32,418.2 FTK

Source: ICAO Forms A and A-S, 2025. Freight in thousands of tonnes. FTK in million.

SERVICE TYPE

Scheduled	95.8%
Non-scheduled	4.2%

Source: ICAO Forms A and A-S, 2025.

AVERAGE FREIGHT DISTANCE

DOMESTIC	1,437.9 km
INTERNATIONAL	7,387.7 km

Source: ICAO Forms A and A-S, 2025.

FREIGHT INTENSITY

Freight tonnes per departure

ALL INTERNATIONAL AIRLINES	8.3
DOMESTIC CARRIERS	7.4

Source: ICAO Form C, 2025.

CARGO OPERATING MODEL

FREIGHTER	60.9%
PASSENGER BELLY	39.1%

Source: ICAO Form C, 2025. Share of reported freight tonnes. All international airlines to/from China.

DIFFERENT AIRCRAFT, DIFFERENT CARGO ROLES

FREIGHTER AIRCRAFT		PASSENGER BELLY CARGO	
MCDONNELL DOUGLAS MD11 F	74.6%	BOEING 747 8	79.8%
BOEING 767 200F	73.1%	BOEING 777 200	69.3%
AIRBUS A330 200F	72.8%	BOEING 787 10	63.7%

Source: ICAO Form C, 2025. Ranked by CLF within each cargo role. Leading aircraft types on international services to/from China.

INTERNATIONAL NETWORK - FREIGHT

Top five round-trip routes; reported in thousands of tonnes.

ALL INTERNATIONAL CARRIERS		DOMESTIC CARRIERS	
SHA-TYO	267.5	SHA-CHI	231.0
SHA-CHI	263.6	SHA-AMS	209.1
SHA-FRA	262.7	SHA-FRA	166.7
SHA-AMS	226.0	SHA-LAX	140.3
SHA-SEL	211.7	SHA-TYO	79.7

Source: ICAO Form B, 2025. Both directions combined.

ROUTE CARGO LOAD FACTORS

International routes ranked by reported cargo load factor.

ALL INTERNATIONAL CARRIERS		DOMESTIC CARRIERS	
SHA-MCT	100.0%	EZH-KGF	100.0%
EZH-KGF	100.0%	CKG-KGF	99.8%
CGO-FRU	99.9%	CGO-KGF	98.7%
CKG-KGF	99.8%	SHA-STO	98.4%
SZX-FRU	99.6%	CAN-ANC	98.2%

Source: ICAO Form C, 2025.

SHARE OF INTERNATIONAL FTK BY REGION



49.7%
EUROPE

NORTH AMERICA	ASIA/PACIFIC	OTHER REGIONS
24.2%	17.1%	8.9%

Source: ICAO Form C, 2025. Share of reported FTK. All international airlines to/from China.

TOP AIRLINES BY REPORTED FTK

International services to/from China

1	CHINA ALL AIRLINES	26,328.9m FTK
2	CARGOLUX	1,883.3m FTK
3	LUFTHANSA	1,586.3m FTK
4	ETHIOPIAN	1,409.2m FTK
5	THY	1,205.8m FTK

Source: ICAO Form C, 2025.

NETWORK STRUCTURE

International freight, 2025.

HERFINDAHL-HIRSCHMAN INDEX (HHI)
108.7
HIGHLY DIVERSIFIED
Freight is spread across many routes.
Range: >0 to 10,000; higher values indicate greater route concentration.

DIRECTIONAL ASYMMETRY
47.5%
MODERATELY IMBALANCED
Freight volumes differ noticeably between opposite directions.
Lower percentages indicate more balanced two-way flows; higher percentages indicate greater directional imbalance.

FLOW ORIENTATION
72.8%
Outbound
OUTBOUND-ORIENTED
More freight moves from China than to China.

Source: ICAO Form B, 2025.

KEY TAKEAWAYS

1. **Domestic market focus.** 56.6% of freight reported by China airlines is carried on domestic services.
2. **Diversified network.** Freight is spread across a broad set of routes; the leading route is SHA-TYO.
3. **Outbound-oriented flows.** A stronger export-oriented than import-oriented pattern is observed in terms of freight tonnage transported (72.8% outbound).
4. **Key strengths.** Among individually reported airlines, CARGOLUX leads international FTK, and Europe accounts for 49.7% of international FTK to/from China.
5. **Freight evolution.** Over 2015-2024, freight grew at a compound annual growth rate of 3.5%, while preliminary 2025 freight is higher than 2024 by 17.1%.

Sources: ICAO COMP_MASTER, 2015-2024; ICAO Forms A and A-S and Form B, 2025.

Methodology: round-trip routes combine both directions; cargo ATK = max(ATK - 0.1 x ASK, 0) per observation. Figures may not reconcile across forms because reporting scope and carrier coverage differ.

ICAO - ECONOMIC DEVELOPMENT - 2025

ATR DATA STATUS - 2025

ATR Form	Status	Records used
ICAO Forms A/A-S	**REPORTED**	1,399
ICAO Form B	**MIXED**	12,925
ICAO Form C	**MIXED**	5,022

DATA STATUS DEFINITIONS AND REPORTING NOTE

Reported: source records used are classified as Reported in DATA_TYPE. **Provided**: source records used are classified as Provided in DATA_TYPE; a provenance label from the ICAO source dataset that does not imply a new estimate by the renderer. **Mixed**: both Reported and Provided records are present in the eligible source universe. **Unavailable**: no eligible records from the ATR enter the profile after the approved filters.

Member States are encouraged to submit their Air Transport Reporting (ATR) Forms to the ICAO Secretariat in a timely and complete manner.

METHODOLOGY BY PANEL

Panel	Source	Statistical universe, calculation and ranking/aggregation rule
1. Airlines Air Cargo Indicators	Forms A/A-S	Freight = sum(FRT) / 1,000; FTK = sum(TKF) / 1,000,000; MTK = sum(TKM) / 1,000,000. Cargo ATK is calculated per observation as max(ATK - 0.1 x ASK, 0), then aggregated and displayed in millions. Cargo Load Factor = [sum(FTK) + sum(MTK)] / sum(cargo ATK) x 100. SERVICE_TYPE = All Services; scheduled and non-scheduled flights.
2. Freight Evolution	ICAO Compfile Master + Form A	ICAO COMP_MASTER freight tonnes for 2022, 2023 and 2024 (carrier-level rows for the State; aggregate 'ALL AIRLINES' rows are used only when no carrier rows exist, to avoid double counting) and preliminary Form A freight tonnes for 2025, each in thousand tonnes. CAGR 2015-2024 = [(F2024/F2015)^(1/9)-1] x 100 and Growth 2024-2025 = [(F2025/F2024)-1] x 100 are analytical fields used in Key Takeaways Point 5 and are not rendered in the panel. 2025 is never estimated.
3. Domestic vs International	Forms A/A-S	Within the national-airline universe, aggregate freight tonnes and FTK by FLIGHT_STAGE_TYPE. Freight shares are calculated from domestic and international freight tonnes and reconcile to 100.0% within rounding tolerance. Freight displayed in thousands of tonnes and FTK in millions.
4. Service Type	Forms A/A-S	Aggregate freight tonnes by Scheduled flight and Non-scheduled flight within SERVICE_TYPE = All Services. Each share equals category freight / total scheduled plus non-scheduled freight x 100.
5. Average Freight Distance	Forms A/A-S	Calculated separately for Domestic and International operations: average freight distance = sum(FTK) / sum(freight tonnes). If the freight denominator is zero or unavailable, N/A is published.
6. Freight Intensity	Form C	Freight tonnes per departure = sum(FREIGHT) / sum(NB_OF_FLIGHT) for all international airlines serving the State (records with exactly one endpoint in the State) and for domestic carriers (airlines of the State) within the same universe.
7. Cargo Operating Model	Form C + aircraft lookup	Each aircraft type is classified from AIRCRAFT_TYPE -> PAX/FRT in the registered aircraft master (regiones_and_cuerpos.xlsx, 'cuerpos'). FREIGHTER maps to Freighter; PASSENGER maps to Passenger Belly. Role share = role freight / total international freight x 100. PASSENGER_SEATS is not used. Unmapped types are excluded and flagged in QC.
8. Different Aircraft, Different Cargo Roles	Form C + aircraft lookup	Aggregate FTK, MTK and cargo ATK by aircraft type within each cargo role. Aircraft CLF = [sum(FTK) + sum(MTK)] / sum(cargo ATK) x 100. Only 0.0%-100.0% values are retained; Top 3 ranked by CLF with FTK as deterministic secondary tie-breaker.
9. International Network - Freight	Form B	International records with exactly one endpoint in the State; both directions of each city pair are combined into one round-trip route key (State endpoint first); freight tonnes are aggregated and the Top 5 routes ranked. Right column: airlines of the State (displayed as DOMESTIC CARRIERS).
10. Route Cargo Load Factors	Form C	Both directions of each route combined. FTK, MTK and cargo ATK aggregated before calculating route CLF = [sum(FTK) + sum(MTK)] / sum(cargo ATK) x 100. Only valid 0.0%-100.0% routes are published, ranked by CLF with FTK as secondary tie-breaker; no traffic threshold applied.
11. Share of International FTK by Region	Form C	Each eligible international observation is assigned to the geographic region of the partner (non-State) endpoint using Form C region fields harmonised to the approved six-region taxonomy. Regional share = region FTK / total eligible international FTK x 100; leading, second and third regions shown; the remainder aggregated as OTHER REGIONS.
12. Top Airlines by Reported FTK	Form C	Aggregate eligible international FTK by reporting airline and rank the Top 5 within the State's international universe. Entities are shown exactly as reported in Form C.
13. Network Structure	Form B	From all valid round-trip routes in the Form B universe: HHI = sum[(100 x route freight share)^2]; Directional Asymmetry = sum|Outbound - Inbound| / sum(Outbound + Inbound) x 100; Flow Orientation shows the dominant outbound/inbound share. Route pairs with no reporting in the opposite direction are excluded from asymmetry and orientation and flagged.
14. Key Takeaways	Validated analytical object	Source-supported executive statements generated only from validated profile indicators. Point 2 does not repeat the numerical HHI. Point 3 translates Flow Orientation into freight-direction language and is not a customs trade statistic. Point 4 uses only profile indicators (leading airline and leading partner region); no external evidence. Point 5 translates CAGR 2015-2024 and Growth 2024-2025.