



Central Region

3.5%

Northeast Region

Statistical Bulletin of Civil Aviation Industry Development in 2015

In 2015, China's civil aviation industry, adhering to the fundamental principles of "Flight Safety, Integrity and Passenger Services", made steady progress, deepened reform and scored remarkable achievements in various aspects.

I. Transport Aviation

In 2015, despite the slowing global economic growth and growing pressure on the domestic economic downturn, China's civil aviation industry maintained steady, rapid growth in the performance of key transport indicators.

1. Transport Turnover

In 2015, the whole industry recorded a total transport turnover of 85.165 billion ton-km, up by 13.8% from 2014, a passenger turnover of 728.255 billion person-km, up by 15.0%, and a cargo and mail turnover of 20.807 billion ton-km, up by 10.8%. (refer to Figure 1)

In 2015, the total transport turnover on the domestic routes reached 55.904 billion ton-km, up by 10.0% from 2014, of which 1.622 billion ton-km was attributable to Hong Kong, Macao and Taiwan routes, up by 0.3%; the

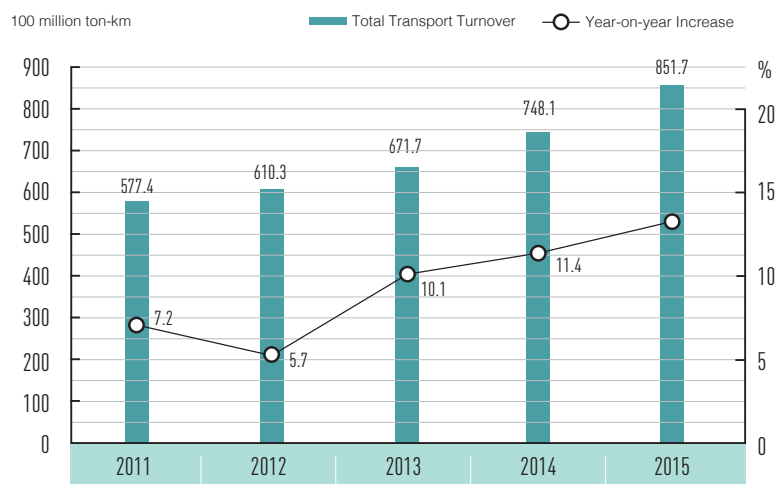


Figure 1 Total Transport Turnover of Civil Aviation 2011-2015

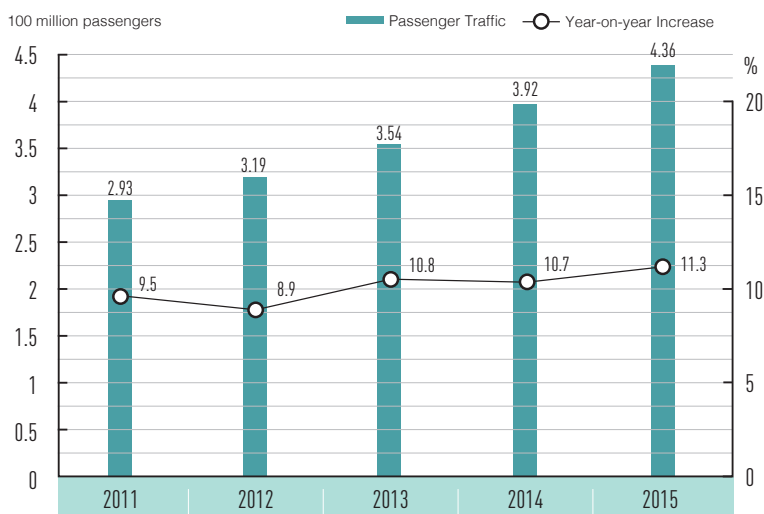


Figure 2 Passenger Traffic of Civil Aviation 2011-2015

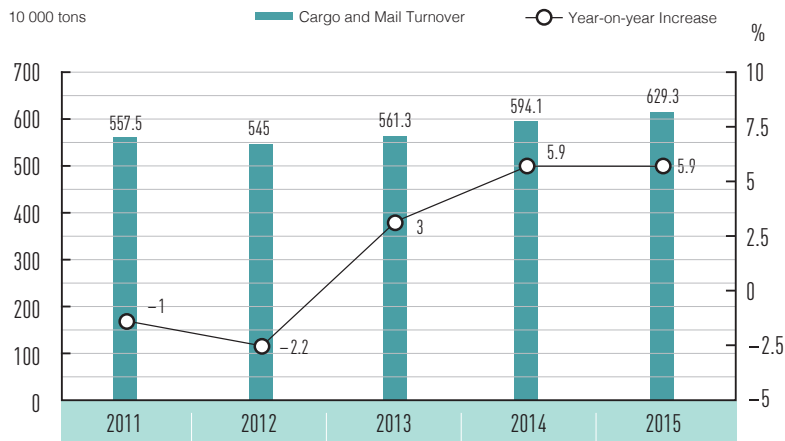


Figure 3 Cargo and Mail Turnover of Civil Aviation 2011-2015

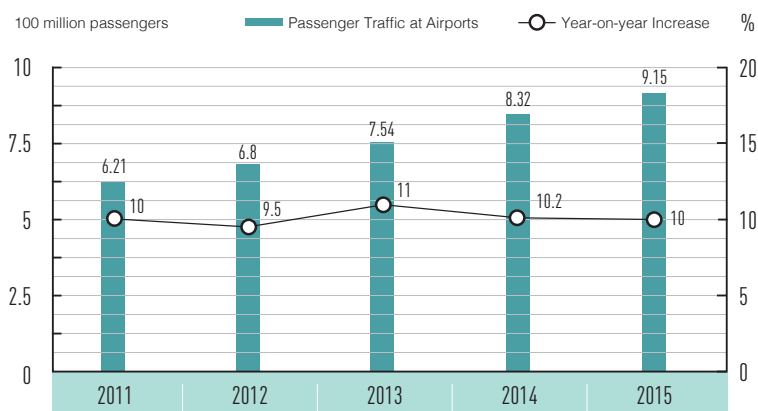


Figure 4 Passenger Traffic at Civil Aviation Transport Airports 2011-2015

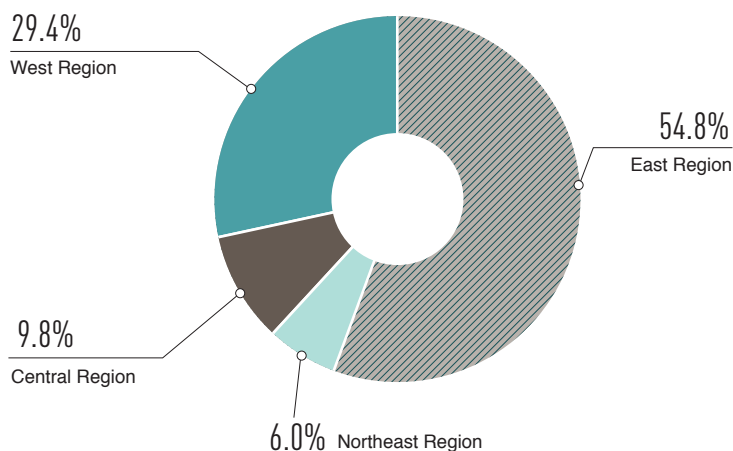


Figure 5 Distribution of Passengers Traffic at Airports by Region in 2015

international routes saw a total transport turnover of 29.261 billion ton-km, up by 21.9%.

2. Passenger Traffic

In 2015, the whole industry transported 436.18 million passengers, up by 11.3% from a year earlier. 394.11 million passengers were transported on domestic routes, up by 9.4%, including 10.2 million on Hong Kong, Macao and Taiwan routes, up by 1.4%; the international routes saw a passenger traffic of 42.07 million, up by 33.3% from 2014. (refer to Figure 2)

3. Cargo and Mail Turnover

In 2015, the whole industry transported 6.293 million tons of cargo and mail, up by 5.9% from a year earlier. 4.424 million tons of cargo and mail was transported on domestic routes, up by 3.9%, including 221 thousand tons on Hong Kong, Macao and Taiwan routes, down by 1.0%; the international routes saw a mail and cargo traffic of 1.868 million tons, up by 10.9% from 2014. (refer to Figure 3)

4. Airport Turnover

In 2015, the civil aviation transport airports nationwide realized a passenger throughput of 915 million, up by 10.0% from 2014. (refer to Figure 4)

Specifically, in 2015, the passenger traffic in East China stood at 502 million, in Northeast China, 55 million, in Central China, 90 million and in West China, 269 million. (refer to Figure 5)

In 2015, the civil aviation transport airports nationwide realized a cargo

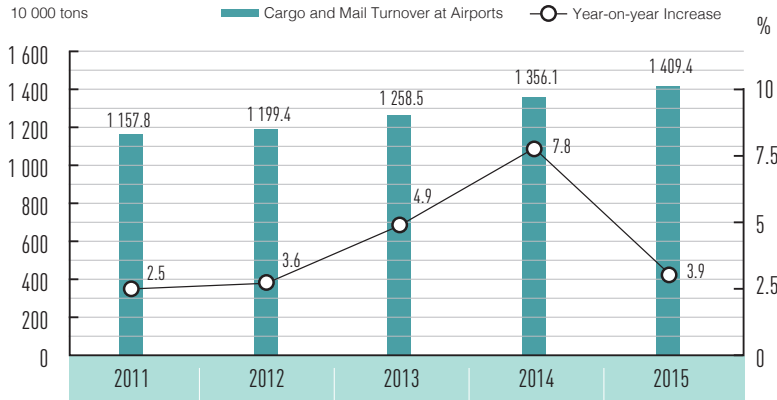


Figure 6 Cargo and Mail Turnover at Civil Aviation Transport Airports 2011-2015

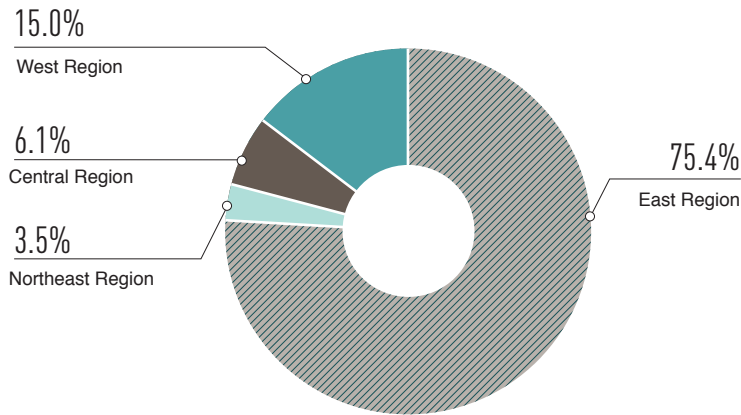


Figure 7 Cargo and Mail Turnover at Airports by Region in 2015

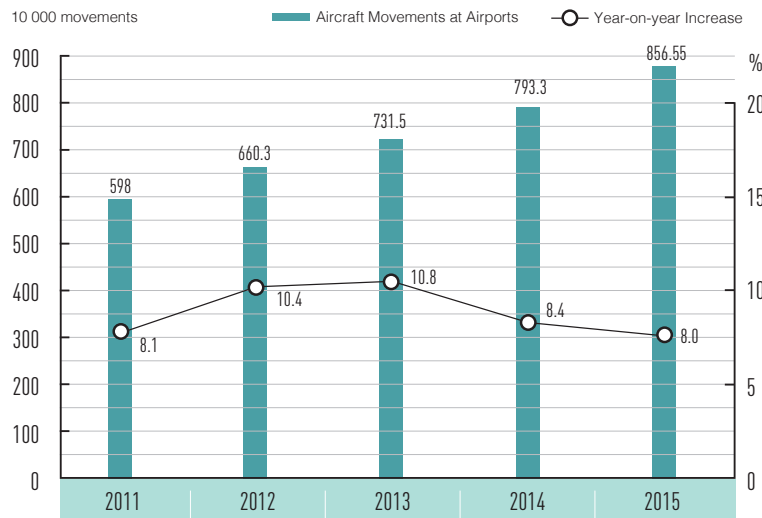


Figure 8 Aircraft Movements at Civil Aviation Transport Airports 2011-2015

and mail turnover of 14.094 million tons, up by 3.9% from 2014. (refer to Figure 6)

Specifically, in 2015, the cargo and mail turnover in East China stood at 10.628 8 million tons, in Northeast China, 488 700 tons, in Central China, 858 900 tons, and in West China, 2 117 600 tons.(refer to Figure 7)

In 2015, the civil aviation transport airports nationwide realized 8 565 500 flight movements, up by 8.0% from 2014.(refer to Figure 8)

In 2015, there were 70 transport airports with a passenger traffic of over 1 million, among which, the airports in Beijing, Shanghai and Guangzhou contributed 27.3% of the total passenger traffic. (refer to Table 1)

In 2015, there were 51 transport airports with a cargo and mail turnover of over 10 000 tons, among which, the cargo and mail turnover at the airports in Beijing, Shanghai and Guangzhou accounted for 50.9% of the total.(refer to Table 2)

In 2015, Beijing Capital International Airport posted a traffic of 90 million passengers, staying at the second place in the world for six straight years; Shanghai Pudong Airport realized a cargo and mail traffic of 3.275 million tons, ranking the 3rd in the world for eight years in a row.

5. Transport Aircraft Fleet

By the end of 2015, the civil aviation industry had 2 650 registered transport aircraft, 280 more than that in 2014.

Table 1 Number of Airports with Passenger Traffic Exceeding 1 Million in 2015

Annual Passenger Traffic	Number of Airports	Increase from 2014	Percentage of Total (%)
More Than 10 Million Passengers	26	2	77.9
1~10 Million Passengers	44	4	17.6

Table 2 Number of Airports with Cargo and Mail Turnover Exceeding 10 000 Tons in 2015

Annual Cargo and Mail Turnover	Number of Airports	Increase from 2014	Percentage of Total (%)
10 000 Tons or Above	51	1	98.4

Table 3 Number of Airports in Regions in 2015

Region	Number of Transport Airports	Percentage of the Total (%)
Nationwide	210	100
Including: Northeast Region	23	11.0
East Region	50	23.8
West Region	106	50.5
Central Region	31	14.8

Table 4 Number of Air Routes and Mileage Covered by Scheduled Flight in China 2015

Indicator	No.
Number of Air Routes	3 326
Domestic Air Routes	2 666
Including: Hong Kong, Macao and Taiwan Air Routes	109
International Air Routes	660
Air Route Mileage Including Overlapped Distance (10 000 km)	786.6
Domestic Air Routes	496.4
Including: Hong Kong, Macao and Taiwan Air Routes	17.8
International Air Routes	290.2
Air Route Mileage Excluding Overlapped Distance (10 000 km)	531.7
Domestic Air Routes	292.3
Including: Hong Kong, Macao and Taiwan Air Routes	17.2
International Air Routes	239.4

6. Number of Airports

By the end of 2015, there were 210 certified transport airports in China, up by 8 from 2014. Newly built airports in 2015 were Rizhao Sanzihe Airport in Shandong, Huizhou Pingtan Airport in Guangdong, Ninglang Luguahu Airport in Yunnan, Haixi Huatugou Airport in Qinghai,

Fuyun Keketuohai Airport in Xinjiang, Shihezi Huayuan Airport in Xinjiang, Yingkou Lanqi Airport in Liaoning and Xinzhou Wutaishan Airport in Shanxi. In addition, Shandong Yantai Airport and Liaoning Jinzhou Airport were relocated; Shaanxi Ankang Airport and Xinjiang Qiemo Airport ceased operation.(refer to Table 3)

7. Route Network

By the end of 2015, there were 3 326 scheduled flight routes in China, with a mileage of 7 866 000 km including the overlapped distance or 5 317 000 km excluding the overlapped distance. (refer to Table 4)

By the end of 2015, there were 204 Chinese cities with domestic scheduled flights (excluding Hong Kong, Macao and Taiwan). Chinese airlines operated scheduled international flights to 137 cities in 55 countries; the domestic airlines operated scheduled flights to Hong Kong from 38 mainland cities and to Macao from 12 mainland cities and to Taiwan from 43 mainland cities.

8. Foreign Relations

By the end of 2015, China had already signed 118 bilateral air service agreements with other countries or regions, up by 2 from 2014, including 43 in Asia (including ASEAN), 24 in Africa, 36 in Europe, 9 in Americas and 5 in Oceania.

9. Operations of Transport Airlines (Groups)

By the end of 2015, there were a total of 55 transport airlines in China, with a

net addition of 4 to the number of 2014. By the type of ownership, there were 41 state-holding airlines and 14 private and privately-holding airlines. Among all the transport airlines, there were 7 all-cargo airlines, 12 joint-venture airlines and 7 publicly listed airlines.

China National Aviation Holding Group recorded 2.116 million flight hours and a total transport turnover of 23.5 billion ton-km, up by 12.8% from a year earlier; it carried 104 million passengers, up by 9.5% from 2014 and 1.782 million tons of cargo and mail, up by 7.0% from 2014.

China Eastern Air Holding Group recorded 1.817 million flight hours and a total transport turnover of 17.83 billion ton-km, up by 10.7% from a year earlier; it carried 94 million passengers, up by 11.9% from 2014 and 1.399 million tons of cargo and mail, up by 2.6% from 2014.

China Southern Air Holding Group recorded 2.238 million flight hours and a total transport turnover of 22.39 billion ton-km, up by 13.3% from a year earlier; it carried 109 million passengers, up by 7.9% from 2014 and 1.512 million tons of cargo and mail, up by 5.6% from 2014.

Hainan Airlines Group recorded 1.165 million flight hours and a total transport turnover of 11.56 billion ton-km, up by 15.7% from a year earlier; it carried 68 million passengers, up by 13.3% from 2014 and 777 000 tons of cargo and mail, up by 6.9% from 2014.

All the other airlines altogether realized 1.18 million flight hours and a total transport turnover of 9.88 billion ton-km, up by 21.8% from a year earlier; they

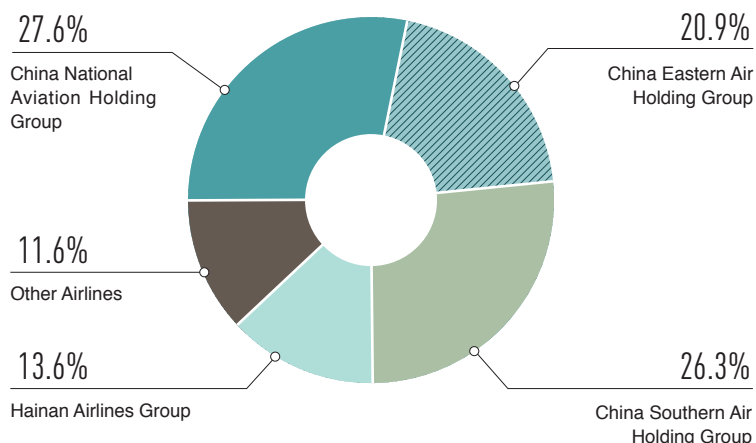


Figure 9 Proportions of Total Transport Turnover by Airlines (Groups) in 2015

carried 62 million passengers, up by 19.2% from a year earlier and 823 thousand tons of cargo and mail, up by 9.3% from 2014.(refer to Figure 9)

II. General Aviation

1. Flight Hours

In 2015, the whole general aviation industry posted 779 300 flight hours, up by 15.5% from a year earlier, including 85 500 hours of industry aerial operations, up by 1.4% from 2014; 42 100 hours of agriculture and forestry operations, up by 10.1% from 2014; and 651 800 hours of other general aviation operations, up by 18.0% from 2014.

2. General Aviation Enterprises

By the end of 2015, there were 281 certified general aviation enterprises, including 72 in North China, 55 in Central South China, 56 in East China, 30 in Northeast China, 37 in Southwest China, 25 in Northwest China and 6 in Xinjiang.

3. Aircraft Fleet Scale

By the end of 2015, there were a total of 1 904 registered general aviation aircraft, including 508 aircraft for training.

III. Transport Efficiency and Financial Performance

1. Transport Efficiency

In 2015, the average daily use rate of registered transport aircraft industry-wide stood at 9.49 hours, down by 0.02 hours from 2014.



Specifically, the average daily use rate of medium and large-sized aircraft was 9.66 hours, down by 0.08 hours from a year earlier, whereas that of small-sized aircraft was 6.58 hours, up by 0.22 hours from 2014.

In 2015, the passenger load factor for scheduled flights averaged 82.1%, up by 0.7 percentage points from 2014.

In 2015, the load factor for scheduled flights averaged 72.2%, up by 0.3 percentage points from 2014. (Refer to Table 5)

2. Financial Performance

In 2015, the whole civil aviation industry made 606.25 billion yuan in business revenue, down by 2.3% from 2014, and 48.79 billion yuan in profit, up by 18.45 billion yuan from a year earlier, of which, airlines made 436.37 billion yuan in business revenue, up by 4% from a year earlier, and 32.03 billion yuan in profit, up by 13.74 billion yuan from 2014; airports made 80.11 billion yuan in business revenue, up by 9.7% from 2014, and 10.68 billion yuan in profit, up by 2.73 billion yuan from 2014; support businesses made 89.77 billion yuan in business revenue, down by 29.9% from 2014, and 6.08 billion yuan in profit, up by 1.98 billion yuan from a year earlier.

In 2015, across the whole industry, the revenue per ton-km was 4.75 yuan, down by 0.42 yuan from the previous year. Passenger revenue per ton-km was 5.7 yuan, down by 0.6 yuan from 2014; cargo and mail revenue per ton-km was 1.42 yuan, down by 0.27 yuan from 2014.

Table 5 Passenger Load Factor and Load Factor for Scheduled Flights in 2015

Indicator	Value (%)	Increase from 2014 (Percentage Point)
Passenger Load Factor of Scheduled Flights	82.1	0.7
Domestic Air Routes	83.0	1.0
Including: Hong Kong, Macao and Taiwan Air Routes	76.8	-0.4
International Air Routes	79.3	0.2
Load Factor of Scheduled Flights	72.2	0.3
Domestic Air Routes	74.1	0.8
Including: Hong Kong, Macao and Taiwan Air Routes	63.8	-0.2
International Air Routes	68.8	-0.4

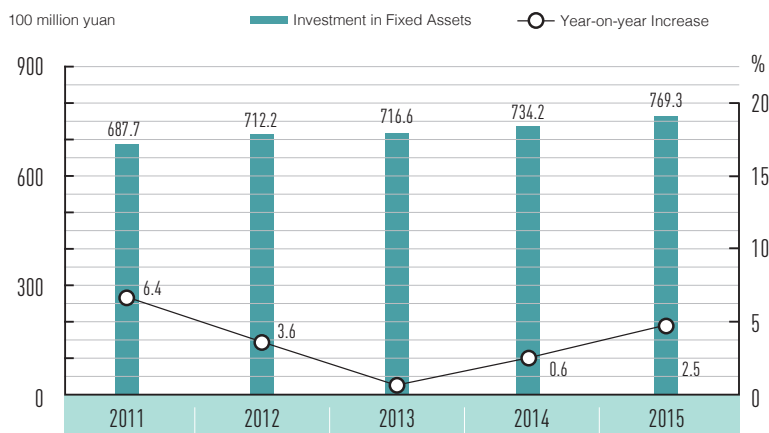


Figure 10 Investment in Civil Aviation Infrastructure Development and Technological Upgrading 2011-2015

In 2015, the taxes payable by the whole civil aviation industry stood at 24.8 billion yuan.

IV. Aviation Safety and Service Quality

1. Aviation Safety

In 2015, China civil aviation maintained a stable safety situation. There was no transport aviation accident, with the 10-year rolling value of the major transport aviation accident rate per one million hours standing at 0.018, and 9 general aviation accidents, resulting in 12 deaths.

From August 25, 2010 to the end of 2015, transport aviation had been operating safely for 64 months, with an accumulated 36.72 million hours of safe flight.

2015 saw 394 incidents, up by 14.9% year on year, including 8 severe transport aviation incidents, down by 3 from the previous year, with the rate of severe incidents per 10 000 flight hours standing at 0.01, down by 34.6% from the earlier year.

In 2015, out of the 55 transport airlines, 44 were free of human-factor incidents.

2. Aviation Security

In 2015, the civil aviation security inspection departments screened 470 million passengers, 250 million items of checked baggage, 332 million items of air cargo (excluding mails and express deliveries), and 160 million mails and express deliveries, and handled 947 cases of illegal and uncivilized passenger behaviors and 61 cases of unlawful interference involving concoction of fake terrorist threat information.

3. Flight Regularity Rate

In 2015, passenger airlines in China operated 3.373 million flights in total, among which, there were 2.305 million regular flights and 0.999 million irregular flights, with an average flight regularity rate of 68.33%.

In 2015, major airlines operated 2.707 million flights in total, among which, there were 1.865 million regular flights and 0.796 million irregular flights, with an average flight regularity rate of 68.90%. (refer to Table 6)

In 2015, the average delay time of passenger flights in China was 21 minutes, up by 2 minutes on a year-on-year basis.

4. Passenger Complaints

In 2015, CAAC, CAAC regional administrations, CAAC Consumer Affairs Center and China Air Transport Association accepted 3 418 flight passenger complaints in total, up by 1 498 or 78.02% from 2014.

V. Investment in Fixed Assets

In 2015, China civil aviation made investment in fixed assets to the tune of 156.61 billion yuan, of which, 76.93 billion yuan went to civil aviation infrastructure development and technological upgrading, up by 4.8% from 2014. (refer to Figure 10)

Investment in infrastructure development and technological upgrading can be classified as follows.

1. Airport Construction

In 2015, the airport system made investment in fixed assets worth 65.61 billion yuan, up by 17.0% from a year earlier. There were 15 key projects, among which, the expansion of Zhengzhou Xinzheng Airport was completed; the building of the new airport in Beijing, the expansion of Changsha Huanghua Airport, the expansion of the movement area of Pudong Airport, and the expansion projects of Guangzhou Baiyun Airport, Chongqing Jiangbei Airport, Wuhan Tianhe Airport, and Harbin Airport were smoothly under way; the relocation of Qingdao Airport, the expansion projects of Guilin Liangjiang Airport, Changchun Longjia Airport and Haikou Meilan Airport, the building of the new airport in

Table 6 Flight Irregularity Causes in 2015

Item	% of the Total	Growth from 2014(%)
Causes of Flight Irregularity for All Airlines	100.0	—
Including: Airlines	19.1	-7.31
ATC	30.68	5.35
Weather	29.53	5.19
Others	20.69	-3.23
Causes of Flight Irregularity for Major Airlines	100.0	—
Including: Airlines	18.05	-7.82
ATC	30.09	6.07
Weather	30.16	5.37
Others	21.7	-3.62



Chengdu, and the relocation of Dalian Airport had kicked off, and preliminary work had been completed for the relocation of Xiamen Airport.

2. ATM Construction

In 2015, the ATM system made investment in fixed assets to the tune of 1.77 billion yuan, down by 620 million yuan from a year earlier. There were five key projects, of which, Shenyang Area Control Center was completed, Urumqi Area Control Center was smoothly under way, and preliminary work was done for the Civil Aviation Operational Management Center and the Meteorological Center, the civil aviation communication network, and the ADS-B system in East and West China.

3. Others

In 2015, other civil aviation divisions made investment in fixed assets worth 9.55 billion yuan in total, down by 5.4 billion yuan from 2014, which included 1.84 billion yuan for civil aviation information system development, 550 million yuan for scientific R&D and education, 150 million yuan for security system, 150 million yuan for fuel supply system, 230 million yuan for aircraft service and maintenance, 980 million yuan for transport services, 1.82 billion yuan for public facilities and 3.83 billion yuan for other systems.

VI. Energy Conservation and Emission Reduction

In 2015, the ton-km fuel consumption of China's civil aviation stood at 0.294 kg, down by 13.5% from 2005 (the base year for the industry's energy conservation and emission reduction target); the consumption level during the 12th Five-Year Plan period fell by nearly 5% compared to the 11th Five-Year Plan period.

In 2015, CAAC actively promoted efforts across the whole industry to control and reduce energy consumption and emission, and supported 220 projects in eight categories meeting the requirements of the Guide for Civil Aviation Energy Conservation & Emission Reduction Fund Projects. Preliminary estimation shows that all the projects, after being put

into operation, will cut carbon dioxide emissions by over 900 000 tons on average per year.

In 2015, CAAC continued to reinforce efforts in aircraft APU substitution, the use of temporary routes, the oil-to-electricity transformation of ground vehicles, etc. So far, 33 of the airports with the annual passenger traffic above 5 million have installed and put into use alternative devices for APU, which will cut carbon dioxide emissions by over 300 000 tons per year. In 2015, 349 000 flights used temporary routes, shortening a flight distance of 11.58 million km, saving 62 500 tons of fuel consumption and reducing about 197 000 tons of carbon dioxide emissions. CAAC launched and promoted the pilot project of the oil-to-electricity transformation of special vehicles at airports, and designated six airports including Beijing Capital International Airport and their major resident airlines as the first batch of pilot units, to explore an implementation path for the overall electrification of air-side vehicles and equipment.

VII. Education and Science & Technology

In 2015, the enrollment by universities and colleges directly under CAAC totaled 20 509 students, among which, 1 000 were postgraduate students, 17 417 undergraduates and junior college students, and 2 092 adult students.

In 2015, the number of registered students at universities and colleges directly under CAAC stood at 65 621, among which, there were 3 387 postgraduates, 56 692 undergraduates and junior college students, 5 542 adult students, and there was no secondary polytechnic student.

In 2015, universities and colleges directly under CAAC graduated 16 261 students in total, among which, there were 899 postgraduates, 12 653 undergraduates and junior college students, 522 secondary polytechnic students and 2 187 adult students.

In 2015, CAAC inspected and accepted a total of 31 scientific and technological achievements. ■