

# 2015年 民航行业发展统计公报

2015年，全行业坚持“飞行安全，廉政安全，真情服务”三条底线，稳中求进，深化改革，各项工作取得较大成绩。

## 一、运输航空

2015年，在世界经济增速放缓，国内经济下行压力较大的情况下，民航主要运输指标继续保持平稳较快增长。

### 1. 运输总周转量

2015年，全行业完成运输总周转量851.65亿吨公里，比上年增长13.8%，完成旅客周转量7 282.55亿人公里，比上年增长15.0%；完成货邮周转量208.07亿吨公里，比上年增长10.8%。（见图1）

2015年，国内航线完成运输总周转量559.04亿吨公里，比上年增长10.0%，其中港澳台航线完成16.22亿吨公里，比上年增长0.3%；国际航线完成运输总周转量292.61亿吨公里，比上年增长21.9%。

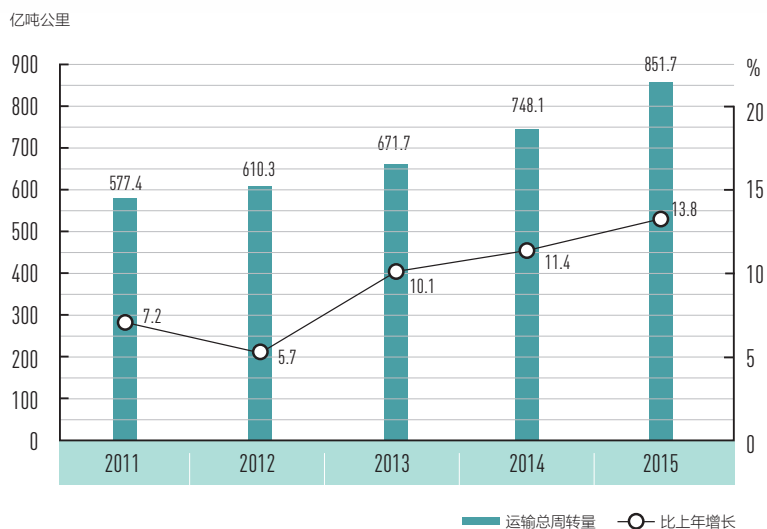


图1 2011—2015年民航运输总周转量

### 2. 旅客运输量

2015年，全行业完成旅客运输量43 618万人次，比上年增长11.3%。国内航线完成旅客运输量39 411万人次，比上年增长9.4%，其中港澳台航线完成1 020万人次，比上年增长1.4%；国际航线完成旅客运输量4 207万人次，比上年增长33.3%。（见图2）

### 3. 货邮运输量

2015年，全行业完成货邮运输量629.3万吨，比上年增长5.9%。国内航线完成货邮运输量442.4万吨，比上年增长3.9%，其中港澳台航线完成22.1万吨，比上年减少1.0%；国际航线完成货邮运输量186.8万吨，比上年增长10.9%。（见图3）

### 4. 机场业务量

2015年，全国民航运输机场完成旅客吞吐量9.15亿人次，比上年增长10.0%。（见图4）

其中：2015年东部地区完成旅客吞吐量5.02亿人次，东北地区完成旅客吞吐量0.55亿人次，中部地区完成旅客吞吐量0.90亿人次，西部地区完成旅客吞吐量2.69亿人次。（见图5）

2015年全国民航运输机场完成货邮吞吐量1409.40万吨，比上年增长3.9%。（见图6）

其中：2015年东部地区完成货邮吞吐量1062.88万吨，东北地区完成货邮吞吐量48.87万吨，中部地区完成货邮吞吐量85.89万吨，西部地区完成货邮吞吐量211.76万吨。（见图7）

2015年，全国民航运输机场完成飞机起降856.55万架次，比上年增长8.0%。（见图8）

2015年，年旅客吞吐量100万人次以上的运输机场70个，其中北京、上海和广州三大城市机场旅客吞吐量占全部机场旅客吞吐量的27.3%。（见表1）

2015年，年货邮吞吐量1万吨以上的运输机场51个，其中北京、上海和广州三大城市机场货邮吞吐量占全部机场货邮吞吐量的50.9%。（见表2）

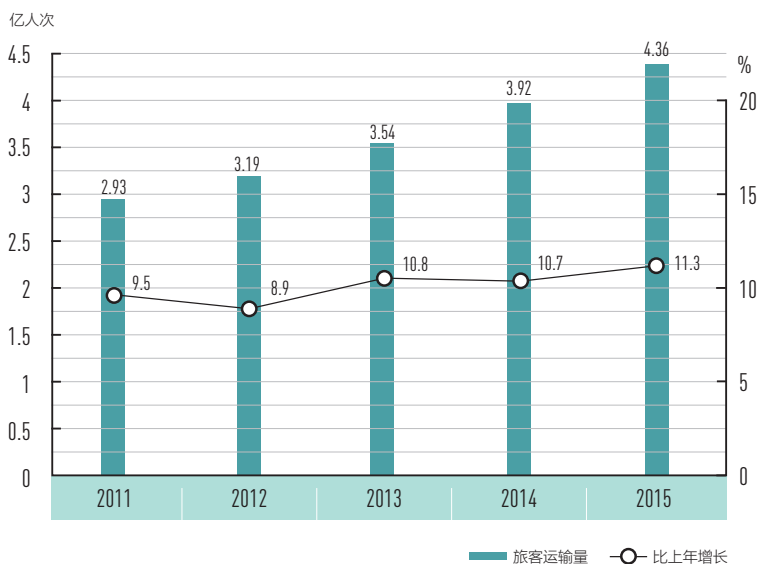


图2 2011—2015年民航旅客运输量

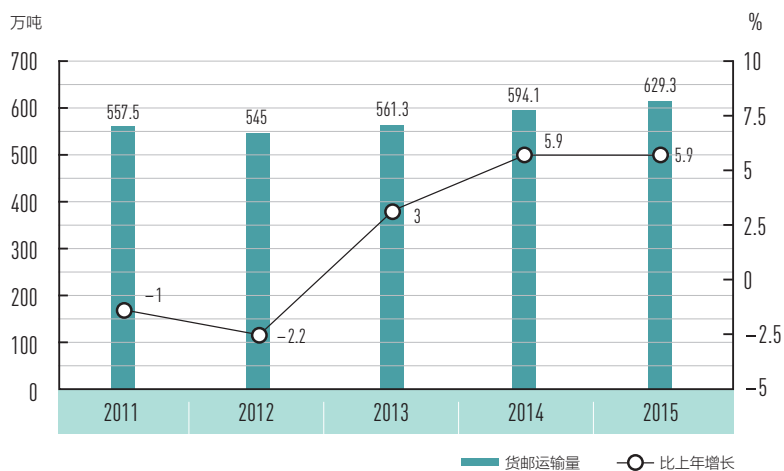


图3 2011—2015年民航货邮运输量

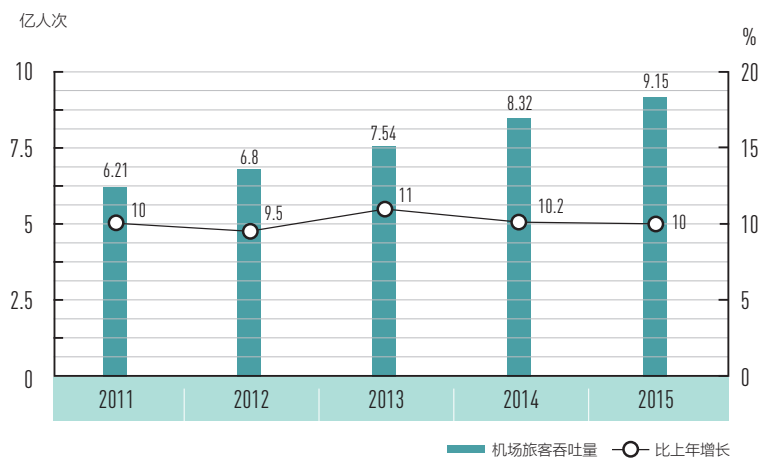


图4 2011—2015年民航运输机场旅客吞吐量

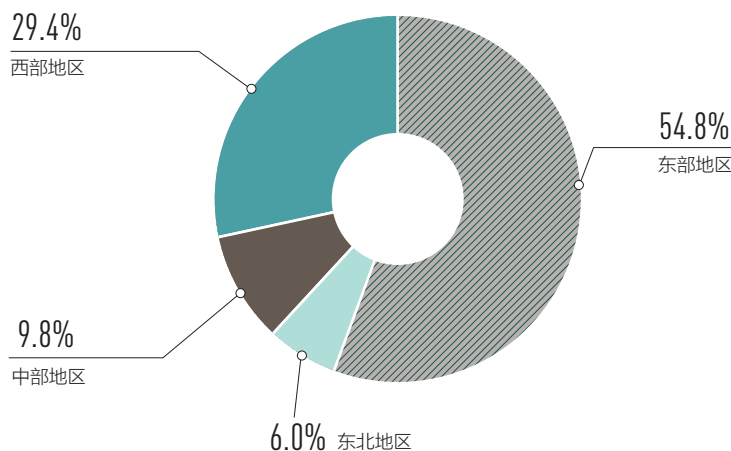


图5 2015年民航运输机场旅客吞吐量按地区分布

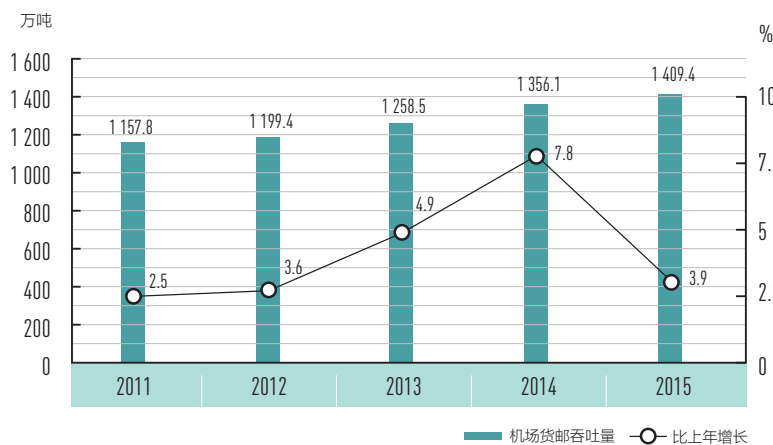


图6 2011—2015年民航运输机场货邮吞吐量

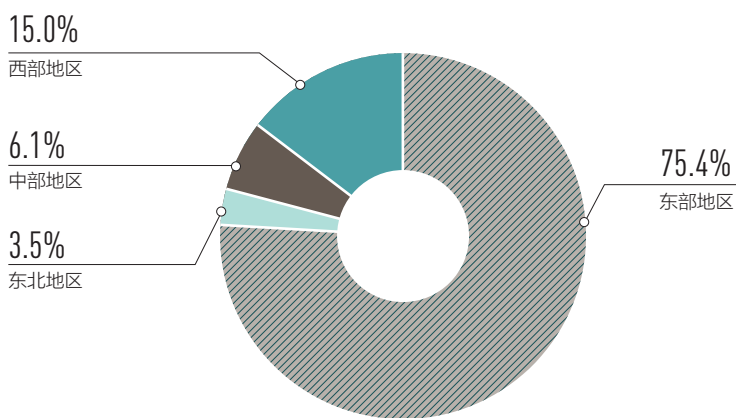


图7 2015年民航运输机场货邮吞吐量按地区分布

2015年，北京首都机场完成旅客吞吐量0.90亿人次，连续六年位居世界第二；上海浦东机场完成货邮吞吐量327.5万吨，连续八年位居世界第三。

### 5. 运输机队

截至2015年底，民航全行业运输飞机期末在册架数2 650架，比上年增加280架。

### 6. 机场数量

截至2015年底，我国共有颁证运输机场210个，比上年增加8个。2015年新增机场分别为山东日照三字河机场、广东惠州平潭机场、云南宁蒗泸沽湖机场、青海海西花土沟机场、新疆富蕴可可托海机场、新疆石河子花园机场、辽宁营口兰旗机场、山西忻州五台山机场。另外，完成了山东烟台机场、辽宁锦州机场迁建。陕西安康机场、新疆且末机场年内停航。（见表3）

### 7. 航线网络

截至2015年底，我国共有定期航班航线3 326条，按重复距离计算的航线里程为786.6万公里，按不重复距离计算的航线里程为531.7万公里。（见表4）

截至2015年底，定期航班国内通航城市204个（不含香港、澳门、台湾）。我国航空公司国际定期航班通航55个国家的137个城市，国内航空公司定期航班从38个内地城市通航香港，从12个内地城市通航澳门，大陆航空公司从43个大陆城市通航台湾地区。

### 8. 对外关系

截至2015年底，我国与其他国家或地区签订双边航空运输协定118个，比2014年底增加2个。其中：亚洲有43个

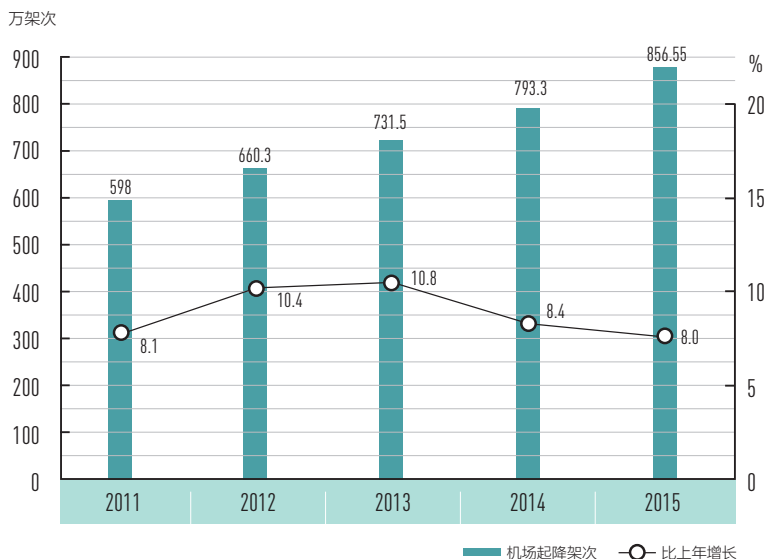


图8 2011—2015年民航运输机场飞机起降架次

表1 2015年旅客吞吐量100万人次以上的机场数量 单位：个

年旅客吞吐量	机场数量	比上年增长	吞吐量占全国比例 (%)
1 000万人次以上	26	2	77.9
100~1 000万人次	44	4	17.6

表2 2015年货邮吞吐量万吨以上的机场数量 单位：个

年货邮吞吐量	机场数量	比上年增长	吞吐量占全国比例 (%)
10 000 吨以上	51	1	98.4

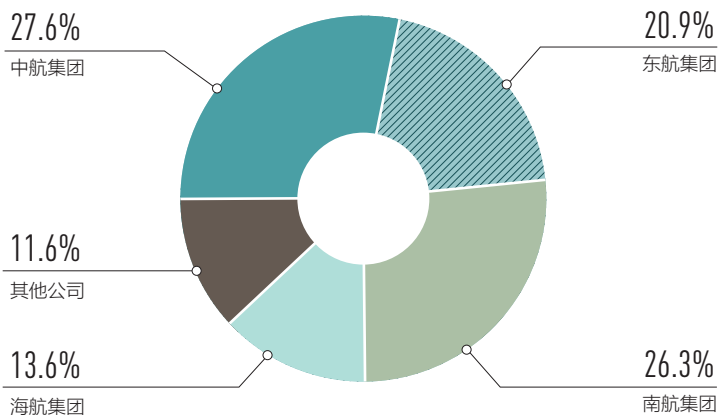


图9 2015年各航空（集团）公司运输总周转量比重

（含东盟），非洲有24个，欧洲有36个，美洲有9个，大洋洲有5个。

### 9. 运输航空（集团）公司生产

截至2015年底，我国共有运输航空公司55家，比上年底净增4家，按不同所有制类别划分：国有控股公司41家，民营和民营控股公司14家；全部运输航空公司中：全货运航空公司7家，中外合资航空公司12家，上市公司7家。

中航集团完成飞行小时211.6万小时，完成运输总周转量235.0亿吨公里，比上年增长12.8%，完成旅客运输量1.04亿人次，比上年增长9.5%，完成货邮运输量178.2万吨，比上年增长7.0%。

东航集团完成飞行小时181.7万小时，完成运输总周转量178.3亿吨公里，比上年增长10.7%，完成旅客运输量0.94亿人次，比上年增长11.9%，完成货邮运输量139.9万吨，比上年增长2.6%。

南航集团完成飞行小时223.8万小时，完成运输总周转量223.9亿吨公里，比上年增长13.3%，完成旅客运输量1.09亿人次，比上年增长7.9%，完成货邮运输量151.2万吨，比上年增长5.6%。

海航集团完成飞行小时116.5万小时，完成运输总周转量115.6亿吨公里，比上年增长15.7%，完成旅客运输量0.68亿人次，比上年增长13.3%，完成货邮运输量77.7万吨，比上年增长6.9%。

其他航空公司共完成飞行小时118.0万小时，完成运输总周转量98.8亿吨公里，比上年增长21.8%，完成旅客运输量0.62亿人次，比上年增长19.2%，完成货邮运输量82.3万吨，比上年增长9.3%。

（见图9）

表3 2015年各地区颁证运输机场数量

单位: 个

地区	颁证运输机场数量	占全国比例 (%)
全国	210	100
其中: 东北地区	23	11.0
东部地区	50	23.8
西部地区	106	50.5
中部地区	31	14.8

表4 2015年我国定期航班航线条数及里程

指标	数量
航线条数 (条)	3 326
国内航线	2 666
其中: 港澳台航线	109
国际航线	660
按重复距离计算的航线里程 (万公里)	786.6
国内航线	496.4
其中: 港澳台航线	17.8
国际航线	290.2
按不重复距离计算的航线里程 (万公里)	531.7
国内航线	292.3
其中: 港澳台航线	17.2
国际航线	239.4

表5 2015年正班客座率和正班载运率

指标	指标值 (%)	比上年增长 (百分点)
正班客座率	82.1	0.7
国内航线	83.0	1.0
其中: 港澳台航线	76.8	-0.4
国际航线	79.3	0.2
正班载运率	72.2	0.3
国内航线	74.1	0.8
其中: 港澳台航线	63.8	-0.2
国际航线	68.8	-0.4

## 二、通用航空

### 1. 飞行小时

2015年, 全行业完成通用航空飞行77.93万小时, 比上年增长15.5%。其中: 工业航空作业完成8.55万小时, 比上年增长1.4%; 农林业航空作业完成4.21万小时, 比上年增长10.1%; 其他通用航空飞行65.18万小时, 比上年增长18.0%。

### 2. 通用航空企业

截至2015年底, 获得通用航空经营许可证的通用航空企业281家, 其中, 华北地区72家, 中南地区55家, 华东地区56家, 东北地区30家, 西南地区37家, 西北地区25家, 新疆地区6家。

### 3. 机队规模

2015年底, 通用航空企业在册航空器总数达到1 904架, 其中教学训练用飞机508架。

## 三、运输效率与经济效益

### 1. 运输效率

2015年, 全行业在册运输飞机平均日利用率为9.49小时, 比上年减少0.02小时。其中, 大中型飞机平均日利用率为9.66小时, 比上年减少0.08小时, 小型飞机平均日利用率为6.58小时, 比上年增加0.22小时。

2015年, 正班客座率平均为82.1%, 比上年提高0.7个百分点。

2015年, 正班载运率平均为72.2%, 比上年提高0.3个百分点。(见表5)

### 2. 经济效益

2015年, 全行业累计实现营业收入6 062.5亿元, 比上年减少2.3%, 利润总额487.9亿元, 比上年增加184.5亿元。其中, 航空公司实现营业收入4 363.7亿元, 比上年增长4%, 利润总额320.3亿元, 比上年增长137.4亿元; 机场实现营业收入801.1亿元, 比上年增长9.7%, 利润总额106.8亿元, 比上年增长27.3亿元; 保障企业实现营业收入897.7亿元, 比上年减少29.9%, 利润总额60.8亿元, 比上年增加19.8亿元。



2015年,全行业运输收入水平为4.75元/吨公里,比上年下降0.42元/吨公里。其中,客运收入水平5.7元/吨公里,比上年下降0.6元/吨公里;货邮运输收入水平1.42元/吨公里,比去年下降0.27元/吨公里。

2015年,民航全行业应交税金248亿元。

## 四、航空安全与服务质量

### 1. 航空安全

2015年,民航安全形势平稳。全行业未发生运输航空事故,运输航空百万小时重大事故率10年滚动值为0.018。发生通用航空事故9起,死亡12人。

表6 2015年航班不正常原因分类统计

指标	占全部比例(%)	比上年增长(百分点)
全部航空公司航班不正常原因	100.0	—
其中:航空公司原因	19.1	-7.31
空管原因	30.68	5.35
天气原因	29.53	5.19
其他	20.69	-3.23
主要航空公司航班不正常原因	100.0	—
其中:航空公司原因	18.05	-7.82
空管原因	30.09	6.07
天气原因	30.16	5.37
其他	21.7	-3.62

自2010年8月25日至2015年底,运输航空连续安全飞行64个月,累计安全飞行3 672万小时。

2015年,全年共发生事故征候394起,同比增加14.9%。其中运输航空严重事故征候8起,同比减少3起,运输严重事故征候万时率为0.01,同比下降34.6%。

2015年,55家运输航空公司中,44家运输航空公司未发生责任事故征候。

### 2. 空防安全

2015年,全国民航安检部门共检查旅客4.7亿人次,检查旅客托运行李2.5亿件次,检查航空货物(不含邮件、快件)3.32亿件,检查

邮件、快件1.6亿件,处置违规和不文明旅客行为947起,处置编造虚假恐怖威胁信息非法干扰事件61起。

### 3. 航班正常率

2015年,全国客运航空公司共执行航班337.3万班次,其中正常航班230.5万班次,不正常航班99.9万班次,平均航班正常率为68.33%。

2015年,主要航空公司共执行航班270.7万班次,其中正常航班186.5万班次,不正常航班79.6万班次,平均航班正常率为68.90%。(见表6)

2015年,全国客运航班平均延误时间为21分钟,同比增加2分钟。

### 4. 旅客投诉情况

2015年,民航局、各地区管理局、民航局消费者事务中心和中国航空运输协会共受理航空消费者投诉3 418件。2015年全年受理投诉总量较2014年增加1 498件,增长78.02%。

## 五、固定资产投资

2015年,民航固定资产投资总额1 566.1亿元,其中:民航基本建设和技术改造投资769.3亿元,比上年增长4.8%。(见图10)

基本建设和技术改造投资按系统划分如下。

### 1. 机场建设

2015年,机场系统完成固定资产投资总额656.1亿元,比上年增长17.0%。重点建设项目15个,其中:郑州新郑机场扩建工程竣工;北京新机场工程、长沙黄花机场扩建工程、浦东机场飞行区扩建工程、广州白云机场扩建工程、重庆江北机

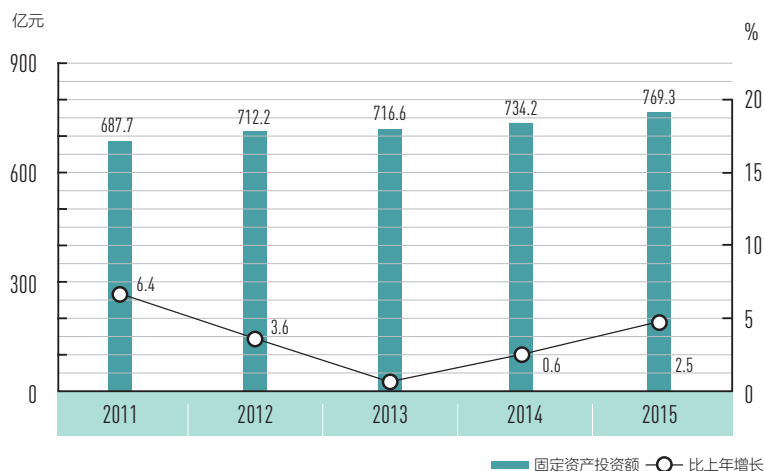


图10 2011—2015年民航基本建设和技术改造投资额

场扩建工程、武汉天河机场扩建工程、哈尔滨机场扩建工程等续建项目进展顺利；青岛机场迁建工程、桂林两江机场扩建工程、长春龙嘉机场二期扩建工程、海口美兰机场扩建工程、成都新机场、大连机场迁建等项目开工建设，厦门机场迁建工程已开展前期工作。

## 2. 空管建设

2015年，空管系统完成固定资产投资17.7亿元，比上年减少6.2亿元，重点建设项目5个，其中：沈阳区域管制中心工程竣工，乌鲁木齐区域管制中心工程进展顺利，民航运行管理中心和气象中心工程、民航通信网建设工程、东西部地区广播自动相关监视（ADS-B）等工程开展前期工作。

## 3. 其他方面

2015年，民航其他系统完成固定资产投资总额95.5亿元，比上年减少54亿元。其中：民航信息系统建设投资18.4亿元，民航科研、教育系统投资5.5亿元，民航安全保卫系统投资1.5亿元，民航油料系统投资1.5亿元，民航机务维修系统投资2.3亿元，运输服务系统投资9.8亿元，公共设施系统投资18.2亿元，其他系统投资38.3亿元。

## 六、节能减排

2015年，中国民航吨公里油耗为0.294公斤，较2005年（行业节能减排目标基年）下降13.5%；“十二五”期间，中国民航吨公里油耗较“十一五”下降近5%。

2015年，积极推动全行业采取行动，控制和减少能源消耗及排放，对行业内符合《民航节能减排专项资金项目指南》要求的八大类220个项目提供支持。初步测算，全部项目投产后将具备年均减排二氧化碳90余万吨的能力。

2015年，继续加强航空器APU替代、临时航路使用以及机场地面车辆“油改电”等民航节能减排专项工作。目前，全国年旅客吞吐量500万人次以上机场中有33家单位已完成APU替代设备安装并陆续投入使用，该专项工作具备年减排30万吨以上二氧化碳的能力；全年共有34.9万架次航班使用临时航路，缩短飞行距离1158万公里，节省燃油消耗6.25万吨，减少二氧化碳排放约19.7万吨；启动并推进机场特种车辆“油改电”专项试点工作，确定首都机场等六家机场及其主要驻场航空公司为首批试点单位，探索行业机场全面提升空侧车辆设备电气化水平的实施路径。

## 七、教育与科技

2015年，民航直属院校共招收学生20509人，其中：研究生1000人，普通本专科生17417人，成人招生2092人。

2015年，民航直属院校在校生数达到65621人，其中：研究生3387人，普通本专科生56692人，成人在校生5542人，中专生0人。

2015年，民航直属院校共毕业学生16261人，其中：硕士研究生899人，普通本专科12653人，中专学生522人，成人学生2187人。

2015年，民航共验收科技成果31项。 ■



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

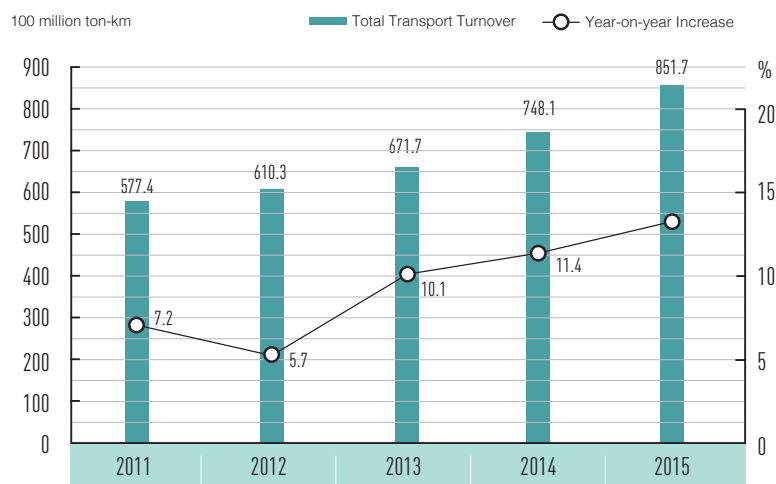


Figure 1 Total Transport Turnover of Civil Aviation 2011-2015

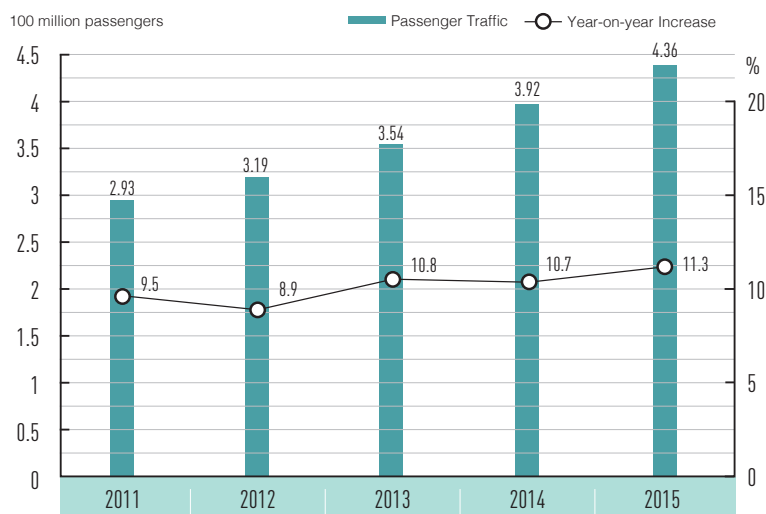


Figure 2 Passenger Traffic of Civil Aviation 2011-2015



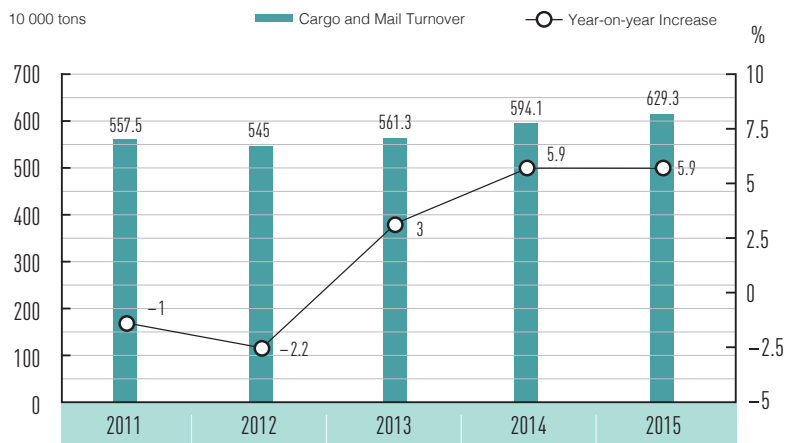


Figure 3 Cargo and Mail Turnover of Civil Aviation 2011-2015

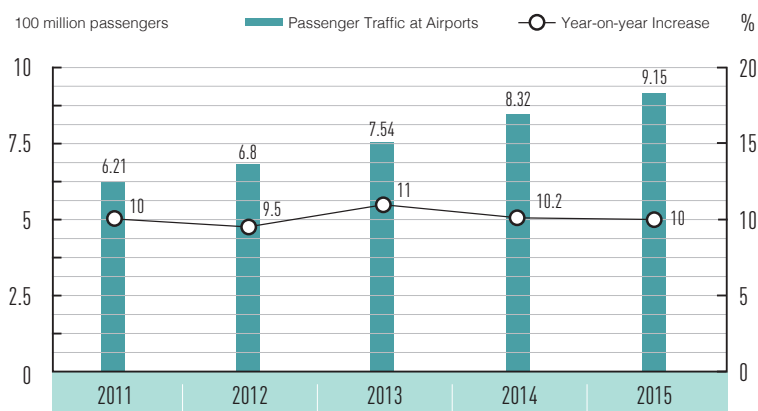


Figure 4 Passenger Traffic at Civil Aviation Transport Airports 2011-2015

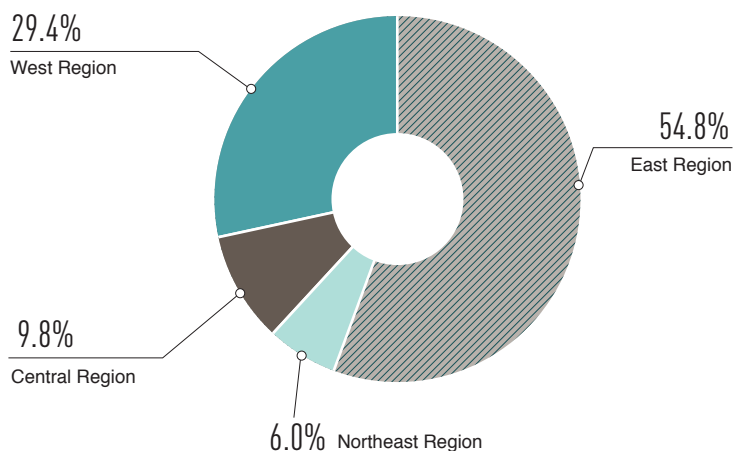


Figure 5 Distribution of Passengers Traffic at Airports by Region in 2015

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

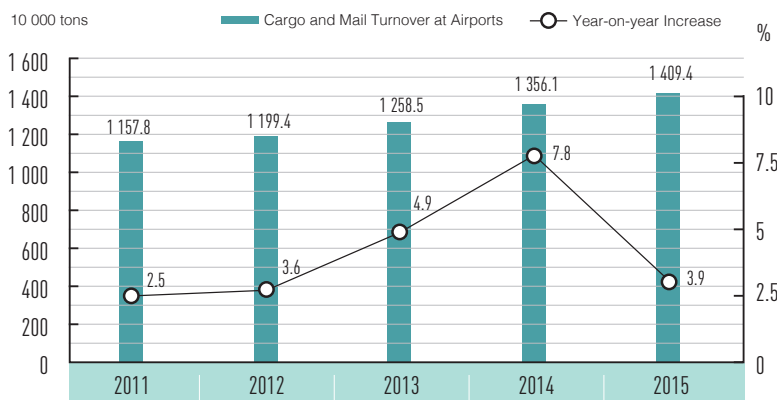


Figure 6 Cargo and Mail Turnover at Civil Aviation Transport Airports 2011-2015

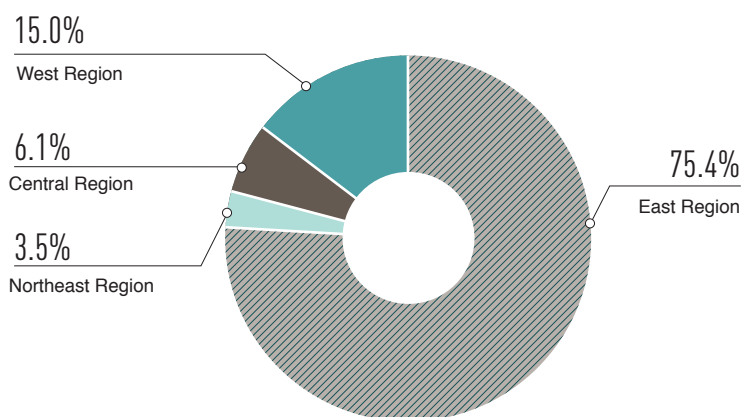


Figure 7 Cargo and Mail Turnover at Airports by Region in 2015

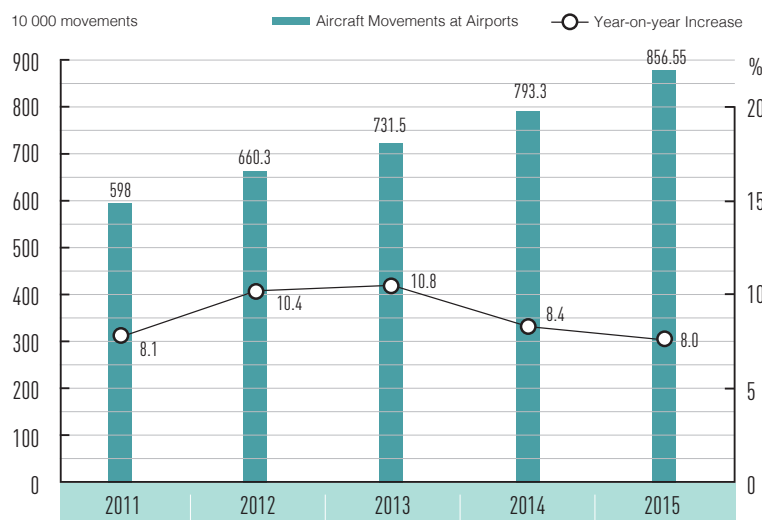


Figure 8 Aircraft Movements at Civil Aviation Transport Airports 2011-2015

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

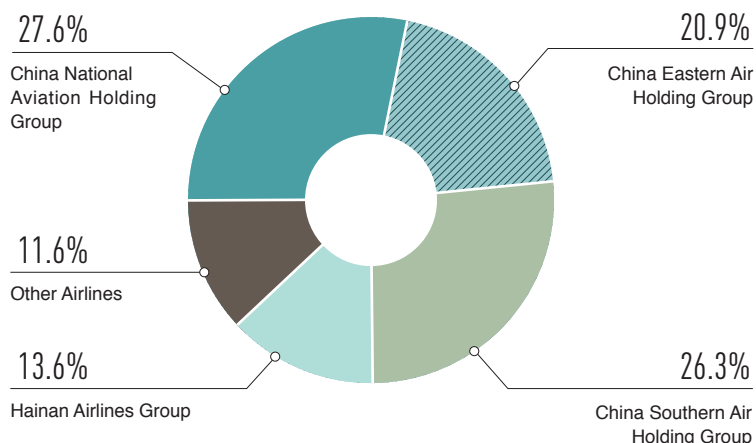


Figure 9 Proportions of Total Transport Turnover by Airlines (Groups) in 2015

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

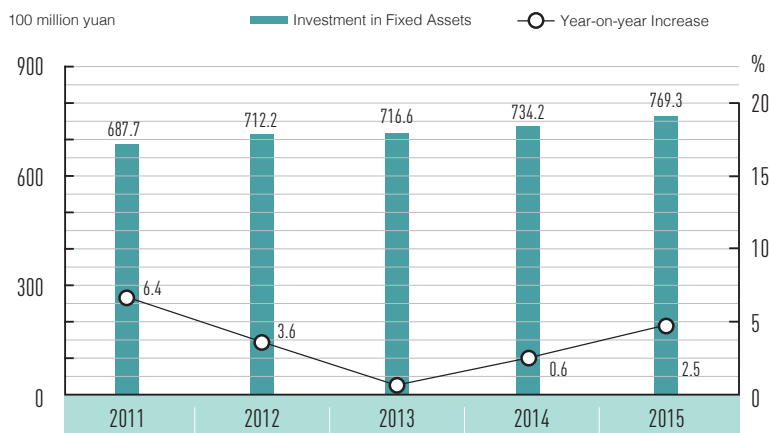


Figure 10 Investment in Civil Aviation Infrastructure Development and Technological Upgrading 2011-2015

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(%)
<b>Causes of Flight Irregularity for All Airlines</b>	100.0	—
Including: Airlines	19.1	-7.31
ATC	30.68	5.35
Weather	29.53	5.19
Others	20.69	-3.23
<b>Causes of Flight Irregularity for Major Airlines</b>	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. ■