

Occupational Wages and Employee Benefits in the Airline Industry

BY ROBERT W. VAN GIEZEN

A BLS survey of large certificated air carriers showed an industry that had high-paying occupations, but also a wide dispersion of compensation—earnings as well as benefits—between major and regional carriers.

Gross monthly pay for airline pilots averaged nearly \$11,000 in March 1995, according to the survey. Gross monthly pay averaged \$6,059 for first officers/copilots and \$4,296 for second officers/flight engineers. In contrast, flight attendants, the most populous occupation with over 78,000 workers, averaged \$2,469. The wide dispersion of pay for inflight personnel reflects such factors as base salaries, number of credited flight hours, type of aircraft, and carrier revenue classification.

Among customer service personnel, straight-time weekly pay of reservation sales agents averaged \$467, passenger service agents \$570, and ticket agents \$511. The average straight-time hourly pay of maintenance occupations ranged from \$12.53 for aircraft cleaners to \$22.28 for aircraft inspectors. The two most populous maintenance jobs, aircraft mechanics and ground/ramp service helpers, averaged \$20.93 and \$15.10 per hour, respectively.

The Industry since deregulation

Between 1980 and 1995, a period marked by major changes in the structure of the airline industry, the Bureau conducted four occupational surveys of airlines. Many of the effects of changes in the industry are reflected in pay and employment patterns.

The Airline Deregulation Act of 1978 opened up new routes and services and spawned new airlines. During the past decade, the structure of the industry has continued to change through the restructuring, mergers, acquisitions, closing of operations, rerouting of passenger services, the continued creation of carriers, and the relocation of operations and maintenance facilities. In 2 years—1994-95—22 new carriers were certificated by the Department of Transportation.¹ In some cases, established carriers underwent drastic changes—selling selected portions of their routes, becoming employee-owned carriers, contracting out some services, or obtaining concessions from labor organizations.

Throughout this tumultuous era, air travel grew rapidly. In 1993,

domestic passengers flew over 350 billion miles, an increase of 76 percent from 1980. Similarly, operating revenue for domestic operations, including passenger, mail, and freight operations rose 138 percent, from \$26.4 billion in 1980 to \$62.8 billion in 1993.²

During the period, airline fares, as tracked by the Bureau's Consumer Price Index, increased dramatically. From September 1980 to March 1995, fares rose more than 150 percent, much more rapidly than employee earnings. Although airline fares have risen rapidly over this nearly 15-year span, the most dramatic increase occurred from September 1980 to September 1984, when airline fares rose 45 percent. During the four years ending March 1995, airline fares increased only 15 percent.

The Bureau's series on productivity, which measures the output per hour in goods and services produced per hour of labor, rose 49 percent for the air transportation industry from 1980 through 1994, the last year data are available.³ This compares with a rise of 17 percent in the output per hour for all nonfarm business from 1980 through 1994.⁴

Robert W. Van Giezen is an economist in the Division of Compensation Data Analysis and Planning, Bureau of Labor Statistics. Telephone (202) 606-6205.

Much of the productivity gains in the air transportation industry were realized through the introduction of larger two-engine planes requiring fewer personnel to fly and maintain the aircraft, more centralized repair and reservation systems which improved efficiency, and more sophisticated flight schedule plans which emphasized "hub" sites to maximize passengers and minimize empty seats per flight.

BLS conducted occupational wage surveys of the large certificated air carrier industry in 1980, 1984, 1989, and 1995.⁵ From September 1980 to March 1995, the earnings of the most populous inflight occupations—captains and flight attendants—rose 56 percent. Earnings of reservation sales agents rose 28 percent. Among ground personnel, earnings rose 68 percent for aircraft mechanics and 41 percent for ground/ramp service helpers. However, increases in earnings for workers in the airline industry lagged behind the 83 percent increase in wages and salaries of all private industry workers as measured by the Bureau's Employment Cost Index during this period. (See chart 1.)

Occupations and earnings in 1995

As a whole, captains earned an average of \$10,706 per month, with those working for major airlines averaging \$11,495 and those working for regional ones \$4,459, a difference of more than 157 percent.⁶ (See table 1.) First officers/copilots earned \$6,546 at major carriers and \$3,419 at regional ones. Earnings for flight attendants averaged \$2,469 per month, ranging from \$1,357 for those working for regional carriers to \$2,543 for those at major carriers. Pay differences were approximately 90 percent between major and regional carriers for flight attendants and first officers. The 10-percent dispersion in earnings between second officers/flight engineers

working at major and regional carriers was the narrowest among the inflight occupations.

Average earnings among regional carriers, at \$4,097 per month, were higher for flight engineers than for first officers/copilots, who averaged \$3,419. This inverse relationship reflects factors such as a high degree of seniority among flight engineers, whose functions are being eliminated on newer larger aircraft, as well as differences in the type of aircraft being flown by regional carriers. (See the following box.)

Pay for Inflight Personnel

Gross monthly earnings for inflight personnel include base pay, overtime or incentive pay, and all other pay directly related to duty. Included in pay were credited flight hours which are actual flight hours (block-to-block time) and flight-hour equivalents for nonflying and deadheading time. Block-to-block refers to the time period starting when blocks are removed from aircraft wheels prior to takeoff and ending when blocks are placed under the wheels after landing. Deadheading refers to flight time without cargo or passengers. Flight-hour equivalents are determined by applying a specified ratio to nonflying and deadheading time to translate it into fractions or whole hours of flight time.

Some inflight personnel were paid a fixed base salary, others were compensated by receiving a base pay for a minimum number of flight hours plus an additional amount for every hour flown. For flight attendants, earnings also include premium pay received while serving as first, lead, or senior attendant. Excluded from earnings were special allowances for room and board while inflight personnel were away from their home stations.

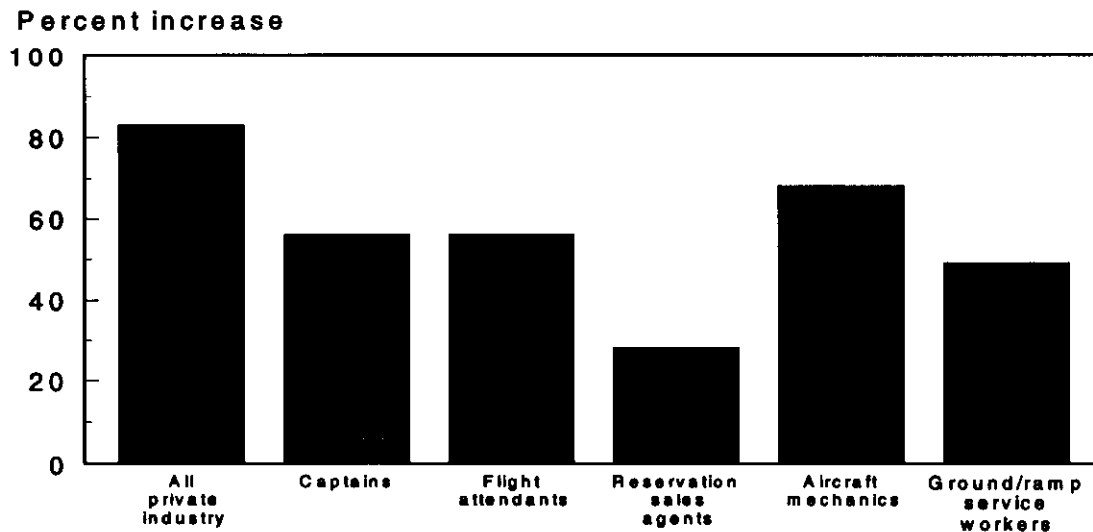
Workers at major air carriers, accounting for over nine-tenths of all customer service and maintenance employees covered by the survey, nearly always averaged more than their counterparts in regional carriers. Among customer service occupations in major airlines for which straight-time weekly earnings were tabulated, ticket agents earned \$649, passenger service agents \$579, and reservation sales agents, the most populous job, averaged \$476 per week. (See table 2.) However, the only occupation between major and regional carriers which allows comparison (because of publication criteria) is reservation sales agent. Workers in that occupation averaged \$295 per week at regional carriers, slightly more than 60 percent of the earnings of their counterparts at major carriers.

Average straight-time hourly earnings for maintenance and related occupations in major air carriers ranged from \$15.30 for ground/ramp service helpers who service the aircraft prior to flight, to \$22.84 for aircraft inspectors, who insure that aircraft repairs have been made according to specifications and certify the airworthiness of the craft. (See table 3.) The most populous job, aircraft mechanics, averaged \$21.32 per hour at major airlines and \$14.82 per hour at regional carriers, a 44-percent pay difference.⁷

Employment changes

Employment growth has been uneven among the occupations in the industry based on data from BLS Occupational Wage Surveys in 1980 and 1995, reflecting the changes airlines have undergone to remain competitive. (See table 4.) Employment gains for captains, first officers, and flight attendants exceeded the industry average (11 percent). However, employment of flight engineers, dropped by over 37 percent as the introduction of computerized flight navigation systems eliminated the need for them

Chart 1. Wage Increases, large certificated air carriers, September 1980 to March 1995



in many aircraft.⁸ Employment growth of pilots and first officers was slowed somewhat by the introduction of larger planes which carried more passengers or cargo. Employment of flight attendants grew by nearly 70 percent between 1980 and 1995, in tandem with increased passenger travel and FAA regulations, which require 1 flight attendant for every 50 seats.⁹

Employment of ground personnel either decreased or grew much slower than that of inflight personnel. Among customer service occupations, only reservation sales agents, who primarily accept reservations and answer inquiries on fares, schedules, connecting flights, and other facets of travel by telephone, had more employees in 1995 than in 1980. Ticket agents, who work at airport counters and in offices selling tickets directly to customers, dropped by 60 percent as more travelers made their reservations by telephone.

Among blue-collar ground occupations, employment dropped nearly 70 percent for aircraft cleaners, as airlines contracted out much of this work. Employment for

aircraft mechanics dropped slightly, as growth was limited by increases in productivity resulting from greater use of automated inventory control and modular systems that speed repairs and parts replacement, and the replacement of three and four-engine turbojets with two-engine aircraft. Aircraft inspectors and ground/ramp service helpers enjoyed modest employment growth.

Employee benefits

Paid holidays were given to 7 of 10 customer service and nearly all maintenance and related workers and averaged a little less than 10 days per year for those receiving the benefit. (See table 5.) Only slightly more than one-fourth of pilots and flight engineers and flight attendants were granted paid holidays. Pilots and flight engineers averaged 7 days per year, and flight attendants, 9 days. (See table 6.) Approximately one-fifth of pilots and one-fourth of flight attendants in major air carriers received paid holiday compared with over three-fourths of pilots and nearly two-thirds of flight attendants in regional carriers. Although the incidence of paid holidays was

greater among regional carriers, in all occupations studied except maintenance workers, regional carriers typically provided fewer days than major carriers.

Paid vacations after qualifying periods of service were provided to nearly all workers included in the study. Provisions varied widely, but averaged 10 to 12 days after 1 year of service, 15 to 18 days after 5 years, 18 to 21 days after 10 years, 20 to 24 days after 15 years, and 25 to 30 days after 20 years for all occupational groups. Vacation provisions were more generous in major than regional carriers, especially after longer periods of service.

Life, health, and dental insurance were offered to nearly all workers.¹⁰ Life insurance was wholly employer financed for workers in major airlines and between 81 to 91 percent of workers in regional carriers. Except for customer service workers, a majority of employees were offered health and dental insurance plans wholly financed by their employer. Where the incidence of these plans varied by type of carrier, it was generally higher in

Table 1. Gross monthly earnings of full-time inflight personnel, large certificated airlines, March 1995

Occupation	Number of workers	Mean earnings	Median earnings
All carriers¹			
Captains	23,598	\$10,706	\$10,951
First officers/copilots	20,356	6,059	5,991
Second officers/flight engineers	5,407	4,296	4,142
Flight attendants	78,020	2,469	2,403
Major carriers			
Captains	20,496	11,495	11,744
First officers/copilots	17,513	6,546	6,247
Second officers/flight engineers	3,910	4,524	4,335
Flight attendants	71,583	2,543	2,540
Regional carriers			
Captains	904	4,459	3,600
First officers/copilots	527	3,419	2,650
Second officers/flight engineers	205	4,097	3,801
Flight attendants	1,155	1,357	1,400

¹ Includes data for national carriers that do not meet criteria for separate publication.

Table 2. Straight-time weekly earnings of full-time selected customer service occupations, large certificated air carriers, March 1995

Occupation	Number of workers	Mean earnings	Median earnings
All carriers¹			
Passenger service agents	14,313	\$570	\$647
Reservation sales agents	29,232	467	462
Ticket agents	3,252	511	528
Major carriers			
Passenger service agents	13,661	579	679
Reservation sales agents	27,502	476	478
Ticket agents	1,971	649	701
Regional carriers			
Reservation sales agents	1,092	295	260

¹ Includes data for national carriers that do not meet criteria for separate publication.

Table 3. Straight-time hourly earnings of full-time selected maintenance and related occupations, large certificated airlines, March 1995

Occupation	Number of workers	Mean earnings	Median earnings
All carriers¹			
Aircraft cleaners	2,021	\$12.53	\$14.20
Aircraft inspectors	2,724	22.28	23.20
Aircraft mechanics	34,698	20.93	22.11
Ground/Ramp service helper	24,942	15.10	16.49
Major carriers			
Aircraft inspectors	2,452	22.84	23.29
Aircraft mechanics	32,065	21.32	22.15
Ground/Ramp service helper	23,947	15.30	16.49
Regional carriers			
Aircraft cleaners	122	10.00	9.40
Aircraft inspectors	162	17.48	17.80
Aircraft mechanics	893	14.82	14.50

¹ Includes data for national carriers that do not meet criteria for separate publication.

Table 4. Employment change, large certificated airlines, September 1980 to March 1995

Occupation	Employment		Percentage change
	1980 ¹	1995 ²	
Inflight personnel			
Captains	13,678	23,598	72.5
First officers/copilots	12,435	20,356	63.7
Second officers/flight engineers	8,606	5,407	-37.2
Flight attendants	45,959	78,020	69.8
Customer service personnel			
Passenger service agents	15,097	14,313	-5.2
Reservation sales agents	24,555	29,232	19.0
Ticket agents	8,038	3,252	-59.5
Maintenance and related personnel			
Aircraft cleaners	6,719	2,021	-69.9
Aircraft inspectors	2,220	2,724	22.7
Aircraft mechanics	37,058	34,698	-6.4
Ground/ramp service helpers	20,909	24,942	19.3

¹ Includes employees based in the contiguous 48 states and the District of Columbia. Excludes air carriers employing fewer than 500 workers.

² Includes employees based in the 50 states and the District of Columbia. Excludes air carriers employing fewer than 100 workers.

major carriers than in regional carriers.

Retirement plans were provided to nearly all workers employed in major airlines, but fewer than one-third of all workers in regional carriers. The majority of workers in major airlines were offered a defined benefit plan entirely employer financed and a defined contribution plan which was jointly financed by employers and employees. A minority of workers in regional carriers were offered only a defined contribution plan jointly financed by employer and employees.

More than nine-tenths of the pilots and flight engineers were covered by labor-management agreements in March 1995. Among other occupational groups, about three-fourths of flight attendants, two-thirds of maintenance and related workers, and less than a tenth of customer service employees were covered by such agreements.

Conclusion

The airline industry is one of the largest and highest paying industries in the United States. Since deregulation, the number of carriers and employees has expanded rapidly. While employment grew rapidly for inflight personnel such as captains, copilots, and flight attendants, the number of ground personnel has grown more slowly or decreased. And, although earnings in the airline industry have not kept pace

with pay increases for the private sector as a whole since 1980, it remains among the highest paid industries in the country.

Technical note

The survey of large certificated air carriers was conducted on a sample basis using information obtained from the Federal Aviation Administration (FAA). The survey included those carriers holding a certificate issued under Section 401 of the Federal Aviation Act of 1958. Large certificated air carriers are defined by the FAA as "airlines operating aircraft designed to have a maximum passenger seating capacity of 60 seats or more or a maximum payload capacity of 18,000 pounds or more."¹¹ BLS included carriers employing more than 100 workers and providing air transportation of passengers and air delivery of addressed letters, parcels, and packages, with the exception of the U.S. Postal Service. Also excluded from the survey were helicopter services, foreign flag carriers, and employees of U.S. companies based outside the United States.

Large certificated air carriers are classified by the FAA based on annual revenue as follows: Major carriers, over \$1 billion; national carriers, \$100 million to \$1 billion; and regional carriers, under \$100 million. Major carriers dominate the

industry, employing 90 percent of its workers.

There were a variety of aircraft operated by the large carriers. Among the major carriers, two-thirds of the aircraft operated were two-engine turbojets, with nearly all being Boeing B737, Boeing B757, Boeing B767, or Douglas DC9/MD88 aircraft. Over one-quarter of the aircraft were three-engine turbojets, primarily Boeing B727 and Douglas DC10/MD11 planes. Only 5 percent were four-engine turbojets, nearly all either Boeing B747 or Douglas DC8 aircraft. Regional carriers, in addition to operating turbojet aircraft, also flew a variety of 2-engine and 4-engine turboprop planes.¹²

The March 1995 survey of large certificated air carriers, was conducted under contract for the Employment Standards Administration (ESA) of the U.S. Department of Labor for use in administering the Service Contract Act of 1965. The legislation requires the Secretary of Labor to establish minimum rates of pay for establishments providing services valued at more than \$2,500 to the Federal Government. BLS conducts cross-industry surveys of more than 120 areas, as well as other special industry studies for ESA.

For additional information on this survey contact the Division of Compensation Data Analysis and Planning, 2 Massachusetts Avenue, NE, Washington, D.C. 20212-000. Telephone (202) 606-6220.

—Endnotes—

¹ *The Wall Street Journal*, April 1, 1996, p. 1.

² *FAA Statistical Handbook of Aviation, 1993*, Federal Aviation Administration, pp. 6-9 and *FAA Statistical Handbook of Aviation, 1989*, Federal Aviation Administration, pp. 6-9.

³ *Productivity Measures for Selected Industries and Government Services*, Bulletin 2480, Bureau of Labor Statistics, August 1996.

⁴ *Productivity and Costs, First Quarter 1996*, Press release, USDL 96-236, U.S. Department of Labor, June 18, 1996. See also *Productivity Measures for Selected Industries and Government Services*, Bulletin 2461, Bureau of Labor Statistics, May 1995, p. 80.

⁵ *Occupational Compensation Survey: Pay and Benefits, Certificated Air Carriers, March 1995*, Bureau of Labor Statistics, September

1995; *Industry Wage Survey: Certificated Air Carriers, January 1989*, Bulletin 2356, Bureau of Labor Statistics, March 1990; *Industry Wage Survey: Certificated Air Carriers, June 1984*, Bulletin 2214, Bureau of Labor Statistics, August 1985; and *Industry Wage Survey: Certificated Air Carriers, September 1980*, Bulletin 2129, Bureau of Labor Statistics, June 1982.

⁶ *Occupational Compensation Survey: Pay and Benefits, Certificated Air Carriers, March 1995*, p. 2.

⁷ Classification of workers was based on a uniform set of job descriptions designed to take account of interestablishment variations in duties within the same job. The job descriptions used in this survey are available upon request. Only full-

time workers were included in the survey of large certificated carriers.

⁸ *Occupational Outlook Handbook, 1996-97 Edition*, Bulletin 2470, Bureau of Labor Statistics, February 1996, p. 217.

⁹ *Occupational Outlook Handbook*, p. 325.

¹⁰ Health plans include hospitalization, surgical, and medical insurance plans (HSM's) which provide, at a minimum, partial payment for: Hospital room charges; inpatient surgery; and doctors' fees for hospital, office, or home visits. HSM's typically cover other expenses, such as outpatient surgery and prescription drugs.

¹¹ *FAA Statistical Handbook of Aviation, 1933*, Federal Aviation Administration, p. 6-1.

¹² *FAA Statistical Handbook*, pp. 5-4, 5-10, 5-11, and 5-12.

Table 5. Selected benefits offered to ground personnel, large certificated air carriers, March 1995

Benefit item	All carriers ¹		Major carriers		Regional carriers	
	Customer service	Maintenance workers	Customer service	Maintenance workers	Customer service	Maintenance workers
Paid holidays						
Percent of workers receiving paid holidays	71	99	69	100	81	91
Average number of paid holidays where provided	9.3	9.5	9.6	9.7	7.1	6.9
Paid vacation policy						
Percent of workers receiving paid vacations	100	100	100	100	100	100
Median ² amount of pay (in days) after the following years of service:						
1 year	10	10	10	10	10	10
5 years	15	15	15	15	12	15
10 years	20	20	20	20	12	15
15 years	20	20	20	20	12	20
20 years	25	25	25	25	12	20
Maximum	30	30	30	30	12	20
Insurance, health, and retirement plans						
Percent of workers offered:						
Life insurance	100	100	100	100	100	100
Hospitalization, surgical, and medical insurance	100	100	100	100	100	100
Dental care	87	93	88	94	81	91
Retirement benefits	92	88	96	92	25	1
Defined benefit	60	87	64	92	-	-
Defined contribution	80	60	83	61	25	1

¹ Includes data for national carriers that do not meet criteria for separate publication.

² The median number of days provided to all covered workers. NOTE: Dashes indicate that no data were reported.

Table 6. Selected benefits offered to inflight personnel, large certificated air carriers, March 1995

Benefit item	All carriers ¹		Majors carriers		Regional carriers	
	Pilots and flight engineers	Flight attendants	Pilots and flight engineers	Flight attendants	Pilots and flight engineers	Flight attendants
Paid holidays						
Percent of workers receiving paid holidays	25	28	19	27	78	66
Average number of paid holidays	7.2	8.7	7.7	9.1	6.8	6.8
Paid vacation policy						
Percent of workers receiving paid vacations	99	99	100	100	89	84
Median ² amount of pay (in days) after the following years of service:						
1 year	12	12	12	12	10	10
5 years	15	18	21	18	12	12
10 years	21	18	21	19	12	12
15 years	24	24	28	24	12	12
20 years	28	30	35	30	12	12
Maximum	30	42	35	42	12	12
Insurance, health, and retirement plans						
Percent of workers offered:						
Life insurance	100	100	100	100	100	100
Hospitalization, surgical, and medical insurance	100	100	100	100	100	100
Dental care	97	99	100	100	89	84
Retirement benefits	95	98	100	100	28	18
Defined benefit	70	92	78	100	16	-
Defined contribution	89	79	94	79	28	18

¹ Includes data for national carriers that do not meet criteria for separate publication.

² The median number of days provided to all covered workers. NOTE: Dashes indicate that no data were reported.