

The total cost of employing flightcrew is more complex than pilot salaries. Airlines also have to bear a plethora of other costs. These include duty allowances, training, hotels & subsistence, pension schemes, medical & health insurance, and in some cases accommodation.

The different elements of pilot employment costs

Flightcrew is one of the large direct operating costs an airline has to bear. This is best expressed as cost per flight hour (FH). The full cost of employing flightcrew goes beyond basic salaries. The main extras are initial and recurrent training, duty pay and allowance, accommodation, uniforms, and medical care. The cost per FH is also influenced by annual pilot productivity. This is partially regulated by national and international aviation bodies, and also by pilot unions. The full costs of employing pilots and the factors affecting their productivity are examined here.

Pilot salaries, benefits and working conditions vary between countries and airlines. The issue of employing flightcrew starts with an examination of pilot career structures.

Pilot career structures

Although there are variations between countries and regulating authorities, the general requirements for commercial pilots are similar. A pilot joining an airline needs a minimum of a commercial pilot's licence and instrument rating (CPL/IR), or a frozen air transport pilot's licence (ATPL). Once a pilot has amassed a total time of 1,500 hours they will gain a full ATPL. Airlines in many parts of the world, including those in the US, require at least an ATPL.

Pilots traditionally started their careers as second officers (S/O). This was the flight engineer's position in north American carriers with older types, and in the jump seat in the case of European airlines.

The standard configuration of two-man flightdecks means that there are fewer S/O positions available. Some airlines, such as Cathay Pacific, still use S/Os, despite having a modern fleet, so that young pilots can gain flightdeck experience before migrating to the right-

hand seat. S/O's salaries are lower than those of first officers (F/O) and captains.

Many pilots are now going straight into F/O positions. Airlines usually only employ new F/Os when they have several hundred hours' experience on smaller commercial types. The number of hours a junior pilot has when they join an airline varies greatly between airlines and economic conditions. Many airlines have smaller regional affiliates, which employ F/Os for the first few years, before pilots transition to the mainline carrier. This allows them to gain experience. Some senior captains then fly for their last few years with the regional affiliates.

Promotion for pilots during their career is through the ranks of first officer, senior first officer (SFO), captain and training captain. Airlines have a seniority position for each pilot. A new F/O at an airline will be given the lowest seniority position in the F/Os' list, and will move up a position each time an F/O at the top moves to the SFO seniority list, or a new F/O joins at the bottom of the list. The same applies to the other three seniority lists. Pilots may be promoted to captain in as little as three years after joining an airline, but in some cases this can take 20 years or more.

Pilots generally start on the smaller types in an airline when they have low seniority in their particular rank, and progress to larger types every three to six years in the case of most airlines.

If a pilot were to move airline, fly a larger aircraft or gain a command, they would not transfer any seniority. They would go to the bottom of their rank's seniority list at the new airline and work their way up again.

Salary scales vary between different airlines. In most airlines there is a system of increasing basic salaries for each year of service. There are also separate salary scales for each rank. In many cases there are also separate salary scales for each

aircraft type in the airline, with the larger types having the higher salaries. Some airlines' national pilot unions have an agreement where the same salaries are paid to pilots of the same rank and seniority, regardless of aircraft type flown.

Each time a pilot changes aircraft type they have to gain a new type rating. This requires expensive ground and simulator training. Many F/Os are expected to agree to a bond towards their training of two or more years when they join an airline to ensure that an operator will get at least two years' service from a pilot after giving them a specific type rating.

Fast growing and start-up airlines recruit direct-entry captains from their competitors. Internal promotion takes place when a pilot has several thousand hours and at least three years' service.

Until recently many countries had different regulations on the retirement age of pilots. The International Civil Aviation Organisation (ICAO) now recommends an upper age of 65 for commercial pilots. But, if an operator has a pilot aged 60-65, the second pilot on the flightdeck must be under 60 years old. This is an important consideration for crew schedulers. Also the laws may differ in countries that do not sign up to the ICAO regulations or have local employment laws that override the ICAO regulations. France traditionally did not allow pilots over 60 to land into or overfly their airspace. Older pilots are now allowed to do this into most airports of the world, but some airlines still have lower age limits, such as Air France, KLM and Lufthansa. The latter is now fighting court cases from pilots that are angry at being forced to retire before they are ready. KLM, on the other hand, has pilots fighting to keep the retirement age of 56.

It is likely that all airlines in the long run will prefer later retirement ages. Austrian's answer to this is to have two



collective agreement schemes, with retirement at 60 or 65 depending on the pilot's pension scheme. Overall, airlines can now expect up to 40 years' service from a pilot that joins in their early 20s.

Training

Initial type ratings involve classroom lessons, exams and simulator sessions followed by actual flying training. British Airways (BA) says that from the point of joining a direct-entry pilot can expect to take up to three months to get a type rating. It can be longer for other airlines. Pilots are paid their basic salary while getting a type rating.

Airlines have to factor in this unproductive ground time, and its cost, every time a pilot gets a new type rating and promotion to captain.

Gaining new type ratings has become simpler and cheaper for aircraft types with commonality between their flightdecks. An A320 or A330 FAA type rating could take three weeks (or four to six weeks for an EASA/JAR Ops type rating as this is more in-depth) and cost \$11,800-\$13,500 in the US. Captain Jeff Bennett of Bond Aviation Services, says, "Airbus has developed a cross crew qualification (CCQ) concept. This means that a pilot with an A320 type rating can do the CCQ A330 course in a week and gain the A330 type rating (at a cost of \$9,500), because the many similarities between the aircraft mean that the course concentrates only on the differences." This compares to older types in the past which had no flightdeck commonality. Pilots with a 727 rating, for example, required complete training to get a type rating on the 757 or 767. Bennett adds that, "Boeing has no CCQ equivalent,

with FAA type ratings on Boeing aircraft each taking three weeks, regardless of previous rating and costing \$6,000-\$16,500 for the 777."

Manufacturers have increased commonality between types. A single type rating is a pilot's rating for a family of aircraft based on the same type. Thus the A318/19/20/21, 737-600/-700/-800/-900 and 777-200/-300 each have the same type rating. A common type rating is a single pilot type rating given to two different aircraft types. Examples are the A300-600R and A310, and 757 and 767.

The A330 and A340 have different type ratings, but the extensive commonality means that the transition training to get a rating on the A330 when a rating is already held on the A340, or vice versa, is just four days, according to Sabena Flight Academy (SFA) in Belgium.

SimCenter in Miami, Florida carries out FAA-approved type-rating training on the A320. It charges \$12,700 for A320 initials, which take about 21 days, but it charges only \$6,980 for an A320 initial type rating for pilots that are already trained on the A330 or A340. This CCQ also takes half the time. A JAR Ops type rating on the A320, A330 and A340 will each take 30 working days with SFA. Their CCQ takes 12-13 working days for A320 to A330 or A340 and vice-versa.

Training is a big financial consideration for fleet planning and training departments. BA says that it expects a pilot to stay on the first aircraft type for five years. Changing types at this frequency minimises the cost of getting pilots new ratings. The cost of training on fewer types also minimises their new-rating-related training costs.

As well as new type-rating training, pilots must do a recurrent course on the

Most pilots typically start their careers in first officer positions on turboprops or regional jets for a few years, before moving to larger carriers and flying as first officers on smaller jetliners.

aircraft type they are flying to keep their type rating current. Such courses are nearly always paid for by the operator with no cost to the pilot. This is generally made up of yearly safety and emergency procedure (SEP) exams and practicals, as well as simulator checks every six months. If the recurrent training is done as a course by an outside organisation, it can take longer. For example, A320 FAA recurrents cost \$2,550 and take three full days at SimCenter.

Courses undertaken in Europe or to EASA/Joint Aviation Authority (JAA) standards will cost more, because they are longer and the content more in-depth. In addition general costs are higher in Europe than in America.

In addition to the on-going cost of giving pilots new type ratings every several years, and periodic recurrent training while holding the same type rating, airlines also have to consider the cost of ab initio training of new pilot recruits to provide them with a CPL/IR or frozen ATPL. Some airlines offer these schemes when the supply of qualified pilots in the industry is short. The cost of training these recruits can be up to \$150,000 each, and is usually amortised over the first five years of the pilot's employment. Most airlines now deduct some of this cost from the pilot's salary.

Pilots are legally bound to undertake annual SEP, first aid and line checks training, and fire & smoke and crew resource management (CRM) training every three years. A dangerous goods course must also be taken. These courses take 1-7 days each.

Many, if not all, of the larger legacy airlines, undertake most of their crew training in house. Some larger carriers with surplus training capacity offer third-party services to smaller airlines.

The time taken by pilots to undergo new type ratings, recurrent training and other courses affects their annual flying productivity. Airlines have reduced the number of aircraft types in recent years to save on type-rating training costs.

Working conditions

The legal restrictions that determine how many FH flightcrew can provide each year are very strict, and provide little room for overtime. These regulations also relate to how much rest time pilots are required to have between working shifts. This is influenced by issues such as the

Starting salaries for first officers on regional aircraft are in the region of \$20,000 per year. Salaries increase fast in the second or third year of operations. Starting salaries for first officers in mainline carriers are \$40,000-45,000 per year in the US, and as high as \$75,000-80,000 in widebody types with some Middle Eastern carriers.

number of time zones crossed, hours flown, and the time of day flown.

Where overtime is legally possible, a pilot may be paid by the day, hour or duty type depending on the particular operator's agreement. Pilots in the US are paid a higher hourly rate for duty over a certain number of hours per month, as decided by the airline. Austrian also pays more when pilots do more than 71 block hours per month. This is all dependent on the legal regulations.

The duty time restrictions are taken from an aviation authority's 'flight time limitations' (FTL) chart. These limitations cover how many flight, block, duty hours and sectors a crew can undertake in any one duty period. They are also affected by the local start time.

Additional restrictions are placed upon pilots regarding their maximum allowed monthly and yearly flight hours. The FAA allows up to 30FH and EASA allows a maximum of 60 duty hours in any consecutive seven-day period. EASA states a pilot cannot fly more than 100 block hours in any 28 consecutive days, or 900 block hours in a calendar year. Local agreements can change this, such as at Austrian where a collective agreement is for 800 block hours per year and 90 block hours per month. Virgin Atlantic pilots are contracted for 750 block hours per year, while BA long-haul pilots will undertake an average of 870 block hours.

The FAA is conversely less strict when considering longer periods with 100 FH allowed per calendar month and 1,000 FH per calendar year.

Holiday time varies between countries and airlines. This is 2-4 weeks per year in America and Canada, while European airlines have to give employees at least 28 days, with some giving more. Airlines in the Middle East and Asia Pacific are the most generous. Cathay Pacific and Etihad give F/Os 42 days annual leave.

Regulations on pilot duty and FH, vacation time, and pilot union agreements affect the number of FH and duty hours a pilot generates each year.

Salary scales

While there are a few different methods of pilot salary scales, each rank within an airline will generally have a salary scale according to seniority or year in service, and aircraft type.

Starting salaries for S/Os or F/Os of



low seniority are low, but only for the first year or two. For example, US regional feeder carriers Republic Airways and ExpressJet both offer first-year salaries of \$20,000 to F/Os on the ERJ-145. Mesa Air Dash 8 F/Os earn less at \$17,000 per annum. Salaries then increase by \$10,000 in the second year. Increases are then 5% per year thereafter. F/Os with 10 years' experience at regional carriers are paid about \$40,000.

After 2-4 years, however, pilots usually move to the mainline carriers, which have higher salary scales. Salaries paid by American carriers are worked out from an hourly rate multiplied by a minimum number of hours that are guaranteed by the airline each month, depending on the particular airline. This is about 70 hours per month, so a pilot flying 65 hours will still get paid for 70. An hourly rate is \$52-200, depending on rank, year of service and aircraft type. A junior F/O's monthly salary is \$3,500, and a senior captain's \$14,000. Pilots can earn more if they fly more hours up to the maximum of 100FH per month. This is less likely in other areas of the world.

Canadian pilot salaries are worked out in a similar way, although some operators pay monthly salaries. Generally the Canadian salaries start higher than their US counterparts, but the annual increases are smaller. Looking at 10-year captain salaries for the 777, US pilots (on \$166,000 per year with Delta) do a little better than Canadian ones (on \$150,000 per year with Air Canada).

European legacy airlines and the Asia Pacific have paid well in the past. With the advent of low-cost carriers (LCCs), old European salary scales are slowly being reduced as new crew fill in from the bottom. Asia Pacific and Middle East

airlines are now some of the best payers.

An F/O's starting salary at Emirates is \$6,225 per month (\$74,700 per annum) for a short-haul aircraft like the A320.

The minimum basic salary for an Emirates captain is \$8,885 per month (\$106,620 per year), while an equivalent BA captain on what BA calls pay-point 1 would get £52,000 per year (\$71,880).

Etihad has a similar system with the basic initial salary for F/Os and captains at \$6,925 per month (\$83,100 per year) and \$9,325 per month (\$111,900 per year). Etihad has salary increases of about \$135 and \$190 per month for F/Os and captains respectively every year.

Often, the larger the aircraft the larger the salary. Qatar Airways offers its F/Os and captains on the 777 \$9,900 per month (\$118,800 per year) and \$13,300 per month (\$159,600 per year).

European salaries have traditionally fallen between the rates paid by American and Middle Eastern airlines. This is not necessarily the current situation. Lufthansa offers a starting salary of Euro 60,000 (\$76,000) per year for F/Os, which increases annually. After 8-12 years' experience and a new promotion to captain, a pilot can expect to earn over Euro 110,000 (\$139,000) per year.

While LCC pilots used to earn less than those with legacy carriers, the gap is much smaller these days, and in some cases non-existent. For example, easyJet pays its F/Os Euro 52-62,000 (\$65,000-78,000) and captains Euro 110,000-125,000 (\$139,000-157,000) when based in Spain, Italy or France. UK F/Os earn from £40,247 (\$60,000) and captains £81,509 (\$123,000) with easyJet.

Charter airlines are in many ways similar to LCCs in the way they keep costs low. Monarch is a typical example



of the high end of the charter market. Its starting salary for an experienced F/O is £47,305 (\$71,000) per year.

Middle Eastern operators' salaries are tax-free, and include accommodation for pilots and their families, and free flights home each year.

Benefits & extras

In addition to a basic salary, pilots also receive duty pay for hours flown, and allowances for meals and drinks. Systems vary between airline. Some airlines only give duty pay, and cover the cost of meals and transport directly with hotels when pilots are at outstations.

The most common option is to pay pilots a rate for every hour they are on duty; duty pay. American operators pay \$1.30-2.50 per hour, with the LCCs tending to pay the lower rates in addition to the basic salary which is also made up of an hourly rate. These rates also depend on whether the flight is domestic or international, and if there is a night stop involved. The latter two paying more.

In Europe hourly allowances are a popular option that are paid on top of the basic monthly salary. Alitalia pays Euro 3.50 (\$4.50) per hour while Monarch Airlines states that a pilot can expect their hourly flying allowances to amount to about £4,000 (\$6,000) per year. BA's long-haul pay scale consists of £3.00 (\$4) for every hour that a pilot is on duty with an additional £11.00 (\$15) per hour for every block hour.

In the Middle East, an hourly allowance is one of many additional payments and can be about \$12 per FH, and amount to about \$900 per month for F/Os and about 30% more for captains.

The second method of flight or duty

pay is to pay per sector flown, as happens for easyJet pilots on UK or French contracts. This is published as about £15/Euro 17 (\$22-24) per sector for F/Os and 60% higher for captains. This is a popular option for short-haul airlines that utilise their crew for multi-sector days, sometimes up to four or six sectors in 12-hour days. easyJet's Spanish and Italian pilots are paid a daily duty allowance.

This option is particularly popular in Canada, where pilots gain on average about C\$40-50 (\$31-39) per days flying, with Calm Air topping the list at C\$69.50 (\$54) per day.

Middle Eastern airlines such as Qatar Airways and Etihad also pay pilots a meal allowance, depending on the destination of the flight.

It is generally that transport to and from work is the pilot's own responsibility. Having said that, when a crew are down route, an operator will always organise transport for the crew between the airport and accommodation, which is generally in hotels.

Another benefit that is almost only ever seen at Middle Eastern airlines is accommodation allowances. Qatar Airways says its monthly salary includes a housing allowance, while others list them as an extra item in the salary breakdown. For example, Etihad offers pilots free housing (with no utility bills to pay) or an allowance of AED170,000 (\$46,000) per year for captains and AED160,000 (\$43,000) per year for F/Os. This is the same with Emirates.

Generally all passenger airlines offer their employees some level of staff travel. The benefit is usually provided after 6-12 months of service and applies for the staff member and their immediate family. The general idea is that airline employees can

Pilots can receive a wide range of benefits in addition to their basic salary packages. In addition to usual duty pay and pension schemes, some airlines provide contributions to pilot's housing and children's school fees for expat pilots.

buy a flight ticket for 10% of the full public price plus any additional charges such as taxes. These are called ID90s, but there are also ID 75s, which are standby tickets if there is space on the flight.

There are various insurances that pilots expect a company to provide, and one is loss-of-licence insurance. easyJet offers the majority of its pilots (depending on contracted base) both loss-of-licence insurance and death-in-service and personal accident insurance. These pay out up to 1.3 times the annual basic salary (up to a maximum of £150,000/\$207,380) for loss of licence, and four times the basic annual salary for death in service and personal accident payments depending on the industry/disablement.

Cathay Pacific provides insurance for a pilot, with the pilots receiving a maximum of 24 months' salary for loss of licence up to the age of 53. The compensation then gets reduced from 24 months' salary to nil from the ages of 53 to 55. Life insurance payouts are equal to 60 months' salary.

It is standard practice to offer pilots private medical insurance. Most European operators will offer this to the pilot only, while Cathay Pacific provides it to the pilot's immediate family as well.

The airlines in the Middle East tend to offer a cover similar to that of Bupa International. This covers their crews anywhere in the world. Bupa International healthcare insurance would cost a pilot (in his thirties and based in the Middle East, with a spouse and two small children), about £360 (\$500) per month or about £4,150 (\$5,740) per year, if they were to purchase it privately. The airlines will have a company policy, which is cheaper per person, but it is still a large additional cost. This is also the case for many Middle-Eastern-based pilots, although Emirates has reduced some of its costs by heavily subsidising the medical insurance for the pilot's spouse and dependant children (rather than it being totally complimentary)

An additional benefit that pilots do not always receive, but has become the norm with Middle Eastern airlines, is dependants' educational allowances. Emirates for example will pay up to Dhs 34,000 (\$9,250) per primary school child per academic year and Dhs 54,000 (\$14,700) per year for secondary school children. This could equate to about two-thirds of average British private school fees at current exchange rates.

The total costs of flightcrew employment have to be considered in relation to annual hours flown. In most airlines' cases this is 650-900 hours per year.

Pension schemes

In America and Canada pilots' retirement funds are a combination of employee and employer contributions. For example, Calm Air matches a pilot's contributions up to 3% of their wage.

ExpressJet and Frontier contribute a percentage, depending on a pilot's length of service, while Midwest's contributions depend on a pilot's age.

Europe also tends to have contributory pension schemes. BA has a retirement plan, but it is not automatic and employees must 'contract in' to the scheme, which also entitles the pilot to permanent health insurance after a qualifying period.

EasyJet also has an opt-in system, which the employee must apply to join, with the company contributing 7% regardless of how much the pilot decides to put into their pension account.

Cathay Pacific is particularly generous, and pays its pilots 15.5% of the salary as a retirement scheme. This either goes into their monthly pay, or to a private pension fund.

In the Middle East, traditional pensions are not necessarily paid, but alternative schemes are offered. Emirates calls its scheme a provident fund, which pays 12% of a pilot's basic salary for up to the first 10 years of service, and then 15% after 10 years. If a pilot leaves Emirates prior to reaching five years' service, then they will receive none of the fund. If a pilot leaves after 5-7 years of service, they are entitled to 75% of the company's contributions, and after seven years they would receive all of the contributions.

Another benefit that many airlines, such as Emirates, SkyWest and WestJet offer, is profit sharing. easyJet also offers this, but with shares instead of salary bonuses. Bonuses depend on the company's performance, and are therefore not necessarily a regular thing.

American Eagle links a performance bonus to on-time arrivals. easyJet offers a loyalty bonus of 5% of basic salary that is paid yearly from the second anniversary of the pilot's start date, rising to 15% after 10 years' service.

Thorough medical checks are a yearly event for pilots. This increases to every six months if there are certain health problems or the pilot is over 60. Once a pilot is employed by an operator, it is generally considered normal for the



operator to cover the cost of medicals. easyJet states that 'flight crew will be reimbursed for the actual cost of one Class One Medical Certificate renewal per year, based on CAA/JAA requirements and recommended charges'. The general cost of an initial JAA/CAA medical in the UK is about £300 (\$415) and about £150 (\$207) for an annual FAA or JAA/CAA renewal. Electrocardiograms (ECGs) have to be done every other year and this brings the medical renewal to about £235 (\$325).

Additional costs

All crew members have traditionally been given their uniform to last a certain time before a replacement is issued. But, with the advent of LCCs, various ways of reducing costs have been developed. One, which easyJet uses, is to ask pilots to purchase their own uniform on joining the company, although easyJet will provide the initial issue of any item that undergoes a change of style. After that, easyJet gives pilots an allowance of £17.33 (\$24) per month in their salary, to purchase additional items and maintain their uniform.

BA and Austrian, on the other hand, provide a full uniform to their staff free of charge, with BA replacing it fully at least every three years.

In order for crew to look their best an airline will often make arrangements for dry cleaning. Qatar Airways, for example, has its own laundry department located at the crew report centre making it easy for crew to drop off and collect a clean uniform. British Airways on the other hand gives a certain number of vouchers to crew each month to enable them to have uniforms cleaned at any

local dry cleaner.

An average long-haul pilot at BA would expect to be working 14-16 days per month, with 6-8 nights spent in a hotel and 4-5 nights in the air. When required, each crew member will be provided with a room each at a hotel of at least three and a half stars. Depending on the airline's policy and the length of the layover, the hotel could be at the airport or in the town centre. Although an airline may choose a hotel of a high standard, they rarely pay the full rate and will have organised a better rate for a number of rooms every night for the next year or two.

In addition to the hotels, duty pay and in some cases meal allowances, a crew may need visas to fly into a country. For some destinations crew can enter with just their passport and airport/crew ID, as long as they are working their flight in and out. For other destinations, although tourists may not need a visa, crew will need a visa as technically they will be working in the country. This is the case in America where crew must get a C1/D or B1/B2 visa to enter, which costs a minimum of \$131. Visas are generally paid for by the operator and can vary greatly in price. The time it takes for the visa to be issued and therefore the potential time the crew member is without their passport (and possibly at an embassy being interviewed) and cannot fly should also be taken into account. For this reason, some operators (especially executive jet operations and those flying to two politically opposed countries) will pay for crew to have two passports. 

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