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Alaska Part 135 Operations: The Need for Additional Regulatory Oversight and Continuous Aircraft Tracking

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Abstract

The airline industry plays a major role in the United States. Many passengers use air transportation as a major mode of traveling for business and personal. As the demand for traveling increased, pilot shortage has increased as well. A pilot shortage will devastate the economy and have a lasting effect that will be felt worldwide. However, sources predict that the United States will experience a sizable pilot shortage over the next few years. This paper will identify the reasons for the pilot shortage and discuss the devastating effects that the shortage has on the regional airline industry. In addition, this paper will offer recommendations to the problem.

Introduction

It is evident from the literature that the number of pilots in the United States has been on the decline for the past 20 years (Mattock, et al., 2016). Although there are many schools that train pilots, the shortage continues to exist. The laws that regulate pilots in the industry are the very ones that are the causes of the pilot shortage. The order of laws and arrangements on early retirement age implies that by 2025, an enormous number of pilots will leave the segment, because of the Federal Aviation Administration (FAA) Part 121 required retirement (Smith et al., 2017). Many carriers think about this as a noteworthy danger to their activities and presence in the business. For instance, the biggest carriers in the nation foresee to resign more than 54,000 of their pilots by 2023 in accordance with the FAA Part 121 compulsory retirement (Lutte & Lovelace, 2016). The interest for aircraft administrations is expanding, suggesting that the flexibility of pilots is beneath the desires. In like manner, the requirement for new pilots by 2025 will be around 498,000 (McGee, 2015). In addition, the essential factor entangling the issue of pilot retirement is the authorization of new laws to direct the permitting of new pilots, which are raising the expense of preparing and limiting the age and experience of pilots (Hemmerdinger, 2016). In particular, after the 2009 accident of Colgan Air Flight 3407, the institution of the Airline Safety and Federal Aviation Administrative Act of 2010 is confounding the circumstance. The new act, also known as Public Law, tries to suspend the profession open doors for some prospective pilots as it limits on the starting age and flight hours. According to this law, a pilot needs to have the Airline Transport Pilot (ATP) certification, be a minimum of 23 years, and have a minimum of 1,500 flight hours to qualify as a first officer (Lutte & Lovelace, 2016).

Now, with laws forcing experienced pilots to retire early and limiting the entry of young people into the service, the United States civil aviation sector is facing severe shortages of

workers. The issue is likely to become a significant problem by 2025 and could force airlines to reduce their services, thus affecting the ever increasing demand for flights.

Background of the problem

Selected articles of that focuses on the effects of pilot shortage in regional airlines are described below.

1. Gall (2018) wrote about the pilot shortage in the United States. The article illustrated the decline in pilots since the 1980's.
2. Lutte & Lovelace (2016) discussed the era before the First Officer Qualification rule came into existence. Before the rule, pilots had a different view of the career. They had no problem with working because they viewed it as a way to climb the career ladder.
3. Lutte (2018) wrote about pilot shortages at regional airlines. The article discussed how airlines are responding to the shortage.
4. McGee (2015) wrote about current laws and the way that they effect pilot supply and demand. The authors discussed the reasons for the pilot shortages. They cited the 2009 Colgan plane crash and other factors that lead to pilot shortages.
5. Silk (2016) wrote about the requirement of the 1,500-hour rule and the how it caused the pilot shortage.
6. Silk (2018) continued the discussion on the topic of pilot shortage and wrote about possible exceptions to the rule.
7. Smith, et al. (2017) wrote a series of reports. This was the third in which they discussed pilot shortage. They compared pilot performance before Public Law 111-216 and pilots hired after the law's effective date.

In any case, the pilot shortage is not a United States emergency only. Like avionics, it is worldwide. Qualified pilots are popular around the globe. Development markets, similar to Asia-Pacific and the Middle East, are offering pilots alluring bundles that incorporate taking care of certain expenses of living. Below is a map that illustrates pilot outlook:



Boeing 2018 Pilot Demand Global Projections
BOEING

Research of the problem

Congress, Regional Airline Association, and Federal Aviation Administration all have the same goals in mind, which is to improve the safety of the aviation sector in the United States. This goal has always been a priority, but since the incident with the 2009 Colgan Airflight 3407, more attention has been focused on safety. For example, after the crash, Congress passed the Airlines Safety and Extension Act of 2010. The goal of this act looks to build the degree of

limitations in the business (McGee, 2015). According to this rule, the FAA mandates all business carrier pilots flying part 121 schedules to have the transport pilot authentication (ATP) (McGee, 2015). Additionally, the law gives the FAA the adaptability to allow extra credit for top notch organized projects for pilot preparation. Moreover, the new law currently sets out the First Officer Qualifications order that disallows airlines from recruiting pilots with under 1,500 flight hours (Lutte & Lovelace, 2016). Also, for an individual to get the declaration and fit the bill to be a first official in the industry, he or she is required to have accomplished 23 years and must have met the flight hours requirement. The First Officer Qualifications rule changes the way that new first officers enter in the industry by changing the requirements of motor understanding. In particular, the new principle demands first officers to have at least 50 hours of multi-motor understanding to fit the bill for the ATP certificate (Lutte & Lovelace, 2016). Simultaneously, the law demands that all second-in-command pilots to have a sort of rating when flying under FAR Part 121. This prerequisite convolutes the chance of new pilots' capabilities as it implies that notwithstanding the base age and the 1,500 flight-hours necessity, one should likewise invest extra time to pick up involvement in airplane motors (Lutte & Lovelace, 2016). Thusly, these two prerequisites for pilots are restrictions to the advancement of the business, despite the fact that they help to enhance aeronautics security ceaselessly.

Since the age limit is 23, prospective pilots who qualify ahead of schedule through escalated preparing should stand by longer than typical to begin working (Lutte & Lovelace, 2016). For instance, numerous youthful hopeful pilots enroll in avionics schools after moving on from secondary school and universities, typically at around 18 years. At the point when such an individual qualifies by the age of 20, he/she cannot work because the laws will restrict his entrance into the market in light of the base age limit. Besides, obviously requiring the youthful

hopeful pilots to have in any event 1,500 flight hours is a huge constraint since it infers that additionally preparing is vital (Silk, 2017a). Hopeful pilots must take extra years in aeronautics schools to meet the 1,500 flight-hours limit, which implies that the preparation procedure will be protracted and exorbitant. In this way, the constraint will just aim delays in preparing and increment costs, yet in addition cost the airlines as they will confront a diminished flexibility of pilots.

Another issued that adds to the pilot shortage is recently established law on the required retirement age. As an activity to improve avionics security, the FAA and the National Transportation Safety Board suggested that pilots over 65 are probably going to have decreased vision capacity and expanded the likelihood of exhaustion and fatigue (McGee, 2015). In this way, the FAA has an extra strategy that sets the compulsory retirement age for pilots at 65. This necessity infers that carriers will ceaselessly lose qualified pilots through early retirement. Since most qualified pilots are between the ages of 40-60 right now, the guideline's effect is that a greater part of them will have arrived at the 65 age limit by 2025 (Lutte & Lovelace, 2016). Therefore, unmistakably the airlines will suffer a pilot shortage in the coming years because of this. Regional Airlines have been suffering of pilot shortage for an increasing period. There have been recommendations made to help eliminate this problem on countless occasions. During the Regional Airline Association (RAA) Annual Conference, CEO of Republic Airlines, Bran Bedford, expressed within the past 9 years 14 percent of U.S. airlines seat counts increased opposed to Regional Airlines decreased 4.5 percent (Silk, 2018). The lack of pilots has contributed to this downfall, and it started with the Colgan Air 3401 crash in 2009. This catastrophic event has raised congressional mandate strict policies of increasing flight hours from 1,000 to 1,500 hours for an Airline Transport Pilot Certificate (Silk, 2018).

Regional Airlines huge issue is since the increase in flight hours, other airlines have been stealing more qualified pilots by offering them an exclusive benefit package for joining their organization (Silk, 2018). It is unfortunate that this constantly happens, but each public and private sector of the airline industry must increase pilot jobs at these measures (Silk, 2018). The pilot shortage remains a disruption on the global and domestic level and must balance out. The Federal Aviation Administration (FAA) and The Air Line Pilot Association (ALPA) addressed pilot shortage and suggested to improve this can take in effect with a federal flight programs for aspiring pilots. Also, Veterans who has also be a potential pilot help change the narrative (Silk, 2018). In, relation to this during the RAA Convention Q and A sessions, creating a new approach to imply on rules if the data shows alternative policies program would be more effective (Silk, 2018). The executives of the University of North Dakota and regional airlines predict pilot shortage to peak in 2022, while the increasing rate mandatory of pilots age of 65 (Silk, 2018).

History of regional airline industry

Regional airlines are an umbrella of different airline companies that operates air travel to areas without sufficient interest to draw good business. They began by employing propeller-working airplanes going short distances of under 100 miles (Lutte, 2019). In the beginning of business flight hardly any airplanes had range more noteworthy than this, and carriers were regularly shaped to serve the zone in which they created. There was no solid distinction associating a regional airline and some other association (Lutte, 2019).

Regional Airlines play a big part in the aviation world, which helps thousands of travelers annually. In order to support the aerospace flow, airlines are required to have enough pilots to keep enough aircraft in route (Lutte, 2019). Regional Airlines have been dealing with pilot

shortage for a period (Lutte, 2019). Therefore, there is solid impetus for territorial aircraft pilots to acknowledge bids for employment at significant carriers, and with the interest side of the pilot lack driven by quickening retirements of pilots at significant airlines when they turn 65, it might be expected that most of the pilot deficiency will be at local carriers, yet it is unknown exactly how huge it will be (Lutte, 2019). This effect creates work-overload to current employees, understaff, poor customer service, and decline in sales of ticket prices. This leads to consumers choosing other competitive airline companies.

United States regional airlines carriers operate airplanes with less than 90 seats. In 2005, regional airlines carried right around 135 million travelers or roughly one of every five domestic passengers. They finished more than 14,000-day flights and had a joined armada of more than 2,700 airplanes. Regional airline service has expanded consistently over the previous decade and there are no signs that this pattern is probably going to slow. However, notwithstanding the undeniably significant part that regional airlines play, this portion of the business has gotten shockingly little consideration from carrier market analysts. In fact, the scholastic writing has generally centered around the jobs of enormous network transporters and, more as of late, the supposed "minimal effort bearers", leaving regional airlines immaculate.

In 1926, the Air Commerce Act charged the Secretary of Trade with the undertaking of advancing air business and engaged him to issue and implement air traffic rules, license pilots, confirm the airworthiness of airplane, build up aviation routes, and work different guides to air route. The Civil Aeronautics Act of 1938 included monetary position to this operational and security authority, hence building up the Federal Government as the financial controller of the air transportation industry. The Act made the Civil Air transportation Board (CAB) and required each air transporter to get an authentication from the CAB that approved it to serve a specific

point or course. The 16 bearers in activity when the Taxi was framed were offered endorsements to proceed with the administration, they were at that point giving. In 1926, the Air Commerce Act charged the Secretary of Trade with the undertaking of advancing air business and engaged him to issue and implement air traffic rules, license pilots, confirm the airworthiness of airplane, build up aviation routes, and work different guides to air route. The Civil Aeronautics Act of 1938 included monetary position to this operational and security authority, hence building up the Federal Government as the financial controller of the air transportation industry. The Act made The Civil Aeronautics Board (CAB) and required each air transporter to get an authentication from the CAB that approved it to serve a specific point or course. The 16 bearers in activity when the Taxi was framed were offered endorsements to proceed with the administration, they were at that point giving.

Regional Airlines marketing strategy has changed due to the impact they are experiencing the turnaround of pilots. This helps increase the stability of the organization which gives it more of a flexible position. Congress correspondingly modified the obligation time controls in 2010 to moderate pilot exhaustion issues. This change implied carriers needed to build their pilot staffing by 5 to 8 percent to cover a similar timetable. At the end of the day, they must enlist much progressively qualified pilots.

The U.S. significant carriers are not yet legitimately encountering the pilot lack. Be that as it may, littler provincial aircrafts are encountering this firsthand. Their timetables have been decreased and a few, for example, Republic, have been constrained into chapter 11 because of deficient staffing. The business has found a way to address this issue. Regional Airlines presently offer a lot more significant salary and, in any event, marking rewards. Likewise, there have been some minor corrections to the 1,500-hour rule. Pilots would now be able to get their

authentication in less than 1,500 hours if preparing happens at certain flight schools. There's even talk of stretching out the retirement age again to 67. In my view, these means alone won't tackle this issue. Aircrafts need to consider shaping their own pipeline.

Conclusion

The ordered laws and guidelines in the business avionics industry in the United States contrarily influence the airlines as the quantity of qualified pilots accessible to run the organizations is rapidly decreasing. In particular, the reason for the decrease is because of the early retirement time of pilots (as of now at 65 years) and the requirements of age and flight hours (23 years, 1,500 flight hours, and 50 hours of multi-motor understanding). In excess of 18,000 qualified pilots leaving the industry because of the obligatory retirement age, the industry is moving towards a circumstance in which the need will be greater. Moreover, with the guidelines on the base section prerequisites for first officials staying compelling, the supply of pilots will keep on diminishing. Subsequently, the industry will confront a huge test as the number of pilots will be much less than the demand. However, the industry is developing, and the quantity of individuals utilizing carrier transportation is expanding. Along these lines, an incredible solution to the problem of pilot shortage is vital. For this situation, the private-public organization program for expanding the quantity of imminent understudies in flight school is by all accounts the best method of taking care of the issue. In particular, the activity will help grow the aeronautics schools and their preparation limits and increment the pool of pilots looking for work in the flight segment.

Republic Airways operates with Delta Connection has conflict monthly cancellation services down 10% not honoring their contract because of the pilot shortage (Silk, 2016).

Regional umbrella airlines such as Seaport Airline decreased their flight routes from 10 to 3 for

not having enough pilots to secure the routes (Silk,2016). On the other hand, SkyWest was able to avoid this major effect with cancellation only because of they lowered the capacity from 5% since November of 2014. (Silk, 2016). In 2011 Regional Airlines pilot shortage has decreased 12% according to Bill Welber, who evaluated this issue and predict in 2016 and 2017 breaking point can get even worse.

There has been a report from the Flypath Economics predicting between 2014 to 2022, pilots will retire from Regional Airlines 4 major carriers (Silk, 2016). This Also raise a concern when pilots do retire, how it's going to leave a big gap trying to replace them with more experience pilots. Due to this, in 2009 congress increased the retirement age to 65 opposed to 60. One concerning issue from the Air Line Pilot Association International (ALPA) complaining the real issue pilot's shortage is increasing is due to unreasonable salaries (Lutte,2019). Airline companies has been working on ways strategize a plan to increase their staff with more experience pilots by giving them a decent base salary, signing bonus, and travel perks (Lutte,2019). This has been a global concern to make it a priority of eliminating pilot shortage on conducting research from different economic prospective. During a recent study issues from The Federal Aviation Administration (FAA) published by The Boeing Company, predicted within the next 2 decades nearly 40,000 new aircrafts will be needed worldwide and 600,000 pilots to fills these slots. Approximately 100,000 are needed in the United States (Lutte,2019). This also raise a red flag from The FAA with a projection on t how the Regional Airlines expected to increase profits nearly 24 billion dollars with the concern of not having enough pilots to fulfill their operation (Lutte,2019). Regional Airlines operates 40% in North America and the pilot shortage has resulted in the decline within the last decade from 71 to 64.

The Regional Airlines has announced there are struggling within the last year to maintain their operations. In the 2012 Regional Airline Association report, The President Roger Cohen mentioned the challenges there facing with pilot shortage (Lutte,2019). In 2015, One airline pilot expressed how the pilot shortage is an urgent concern faster than we expected. The Regional Airline hired an estimate of 18,000 pilots. However, the RAA insists that 26% of ATP pilots are unqualified for recruitment which consist of variation factors, pilot age, flight records, and physical requirements (Lutte, 2019).

Recently a study was conducted on how entry-level regional airline pilots starting base salary was in the mid-20,000. This evolve with only certified pilots follow a profession as an airline pilot with inadequate salary at the main disincentive followed by frustration over their lifestyle. By raising the concern with lack of pilots the increase of entry-level salary is now 40,000 to 45,000. Even the most experience pilots can start with a salary of 60,000 which a 55% increase (Lutte,2019). The real issue is the US major airlines are not severely impacted by pilot shortage, but regional airlines are experiencing this issue (Gall,2018).

Recommendation

A few activities can successfully take care of the pilot deficiency issue in the United States even before it tops by 2030. Despite the fact that the main source of the issue is the institution of new laws and guidelines to control the passage and retirement of pilots in the industry, it is not important to change these arrangements. Specifically, the main point of the frameworks and guidelines is to expand wellbeing in the aeronautics business, an objective that everyone wants to accomplish (Lutte & Lovelace, 2016). People in general additionally need affirmation of security when utilizing the carriers, air terminals, and different offices related to

the business aeronautics segment (Smith et al., 2017). In this manner, revamping the laws on least capability needs and the required retirement age for pilots is not an answer.

Maybe the best answer for the issue is to discover new reserves of pilots from other countries to fill the hole. But, such an activity would just profit the carriers and not the Americans and or the economy. In this way, it is additionally important to preclude utilizing such an answer. The proposed arrangement, for this situation, is to utilize activities under the open private organization programs in which the administration will work with the carriers and the pilot preparing foundations to build the quantity of pilots entering the business (Smith et al., 2017). For this situation, the aerodynamic preparing organizations ought to be brought into the condition to include them in an association with both the legislature and the aircraft (Balzo, 2016). The job of the administration in this sort of plan is to utilize such organizations as FAA and National Transportation Safety Board to encourage the extension of the pilot preparing programs in flying schools. The airlines have the basic job of offering help to the understudy through an organization with the flying schools. For this situation, carriers could consent to support forthcoming understudies' educational cost or in different manners and select those in their entry level position programs while still at school. Thusly, the avionics schools will accomplish the ability to prepare an enormous number of pilots through the budgetary and different sorts of help from the legislature and the aircrafts (Balzo, 2016). Subsequently, the quantity of imminent understudies in the avionics schools will increment essentially, which implies that the school to-industry pipeline will increment. At long last, the quantity of qualified pilots entering the business will be sufficiently huge to satisfy the need in the area even the same number of others are leaving because of the obligatory retirement age.

The Airline Industry has taken in account this problem and working on different methods by addressing it. Regional Airlines are now giving a signing bonus and an inconsequential amendment to the 1,500-hour requirement (Gall,2018). It has also been discussions on making exceptions with increasing the pilot retirement age to 67. Airline carriers need to develop their own recruiting program, such as American Airline which introduce the American Airline Cadet Academy with the intentions of conscript the next aspiring pilots (Gall,2018). Since congress made the change, regional airlines must increase their staff from 5 to 8%. Originally the 1978 Airline Deregulation Act initiated the next generation of inexpensive carriers, and with this implementation airlines such as Pan-Am went out of business (Gall,2018).

Regional airlines are forced top plan by structuring pilot routes on their limited staff. Results from this, Captains was demoted from Captain to First Officer with salary dropping from 190,000 per year to 75,000 per year (Gall,2018). Recently from conducted research the combination of pilots retiring in North America need estimate of 4,000 new pilots this year. In recent research a bar graph illustrates retires pilots, increase of pilots employed, and effectiveness of trying to reduce the shortage.

(Illustrated on chart below)

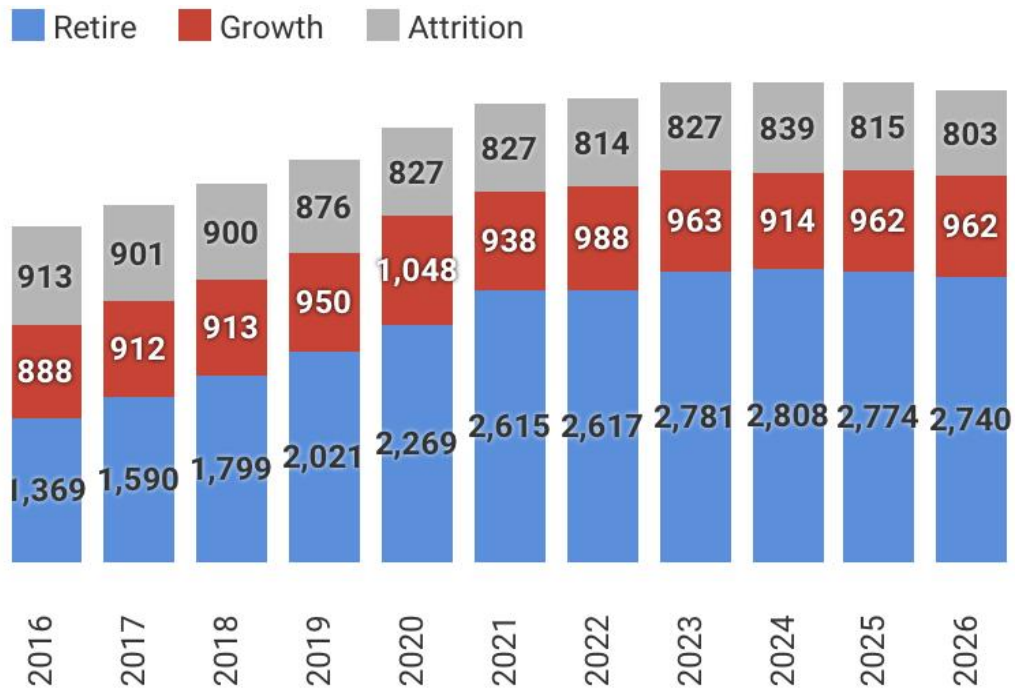


Chart retrieved from: Gall, P. (2018). *The US is facing a serious shortage of airline pilots*. In the Conversation (Ed.).

In order to increase regional airline staff is to educated young aspiring pilots on the advancement on the aviation industry and tailored competitive base salary package that’s offered once hired. This will certainly contribute on lowering the pilot shortage with giving pilots a reason to fly (Gall,2018). I also believe making pilot shortage awareness in schools across the countries to express the concerns on what the airline companies. This will give each, major airline company to help grown their organization.

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