PILOT CAREER PROGRESSION IN NEW ZEALAND

A study conducted by NZALPA and Massey University School of Aviation

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Pilot career progression in New Zealand

The airline industry currently faces a well-publicised shortage of pilots projected to approach about 600,000 individuals by the year 2030. That shortage is a result of an impending surge in pilot retirements, legislative and regulatory change, insufficient industry training capacity and - most significantly - industry growth. Sourcing a sufficient supply of qualified, competent and suitable pilots for airlines is therefore crucial for the long-term sustainability of the industry. This is true also for New Zealand as a whole where aviation makes a significant direct and indirect contribution to the country's economy. Restrictions to daily flight schedules and to airline growth from pilot shortages already impact many regional centres.

Since 1996 in New Zealand, flight training has been funded fully and partially through the nation's student loan scheme. Over the last 20 years, this has seen a surge in demand for flight training and a rapid increase in the number of commercial pilot licences being issued by the New Zealand Civil Aviation Authority (CAA). However, despite strong growth in pilot numbers and the global pilot shortage, the local industry presents a paradox. Local airlines argue that they face difficulties sourcing sufficient qualified pilots while anecdotal evidence suggests that a significant number of pilots struggle to find employment. In 2009-10, concerned with the lack of obvious employment opportunities for pilot training graduates, the Tertiary Education Commission (TEC) instituted a review of the flight training industry. Among its key conclusions was that the industry did not provide pilot trainees with a clear pathway to employment and that this, along with other factors, acted as a key barrier to their career success.

The New Zealand Air Line Pilots Association (NZALPA), which represents pilots and aviation professionals employed throughout New Zealand, has a goal of improving the training and career pathways of pilots in this country. This year, in partnership with John Murrie of the Massey University School of Aviation, NZALPA surveyed individuals who completed fixed wing flight training to Commercial Pilot's Licence (CPL) standard 2000-2018. The focus of the survey was on identifying the motivations and interests of individuals pursuing a career as commercial pilots, the information they used to make decisions about their training and career, and training experiences and costs. In particular, the survey examined individuals' employment history within the aviation industry, seeking to build a more detailed picture of the steps pilots take and the pitfalls they encounter in pursuit of an aviation career.

In collecting this data, NZALPA hoped to gain a better understanding of current career pathways for commercial pilots, funding and training options, and especially employment opportunities for graduates and low-hour pilots. It is argued that this will assist NZALPA and the industry in developing a more seamless and affordable career pathway for commercial pilots from school to the airline cockpit, one that ensures the right candidates achieve genuinely positive outcomes. The information gathered by the survey should also be of interest to aviation industry stakeholders, individuals currently pursuing a career as commercial pilots and those considering doing so in the future. John Murrie's involvement forms part of his doctoral (PhD) studies at Massey University.

The "Pilot Career Progression Survey" was distributed via social media and email to NZALPA members, former students of New Zealand-based flight training organisations and other organisations in New Zealand in July 2018. The anonymous survey, which did not collect identifying or personal information, consisted of 72 questions covering basic demographic information, participants' history and experiences of flight training, employment history and perceptions of the career pathway for fixed wing commercial pilots. The target population was the 3,328 New Zealand citizens or permanent residents who had been issued with a fixed wing New Zealand CPL 2000-2017; this included individuals living in New Zealand and overseas.

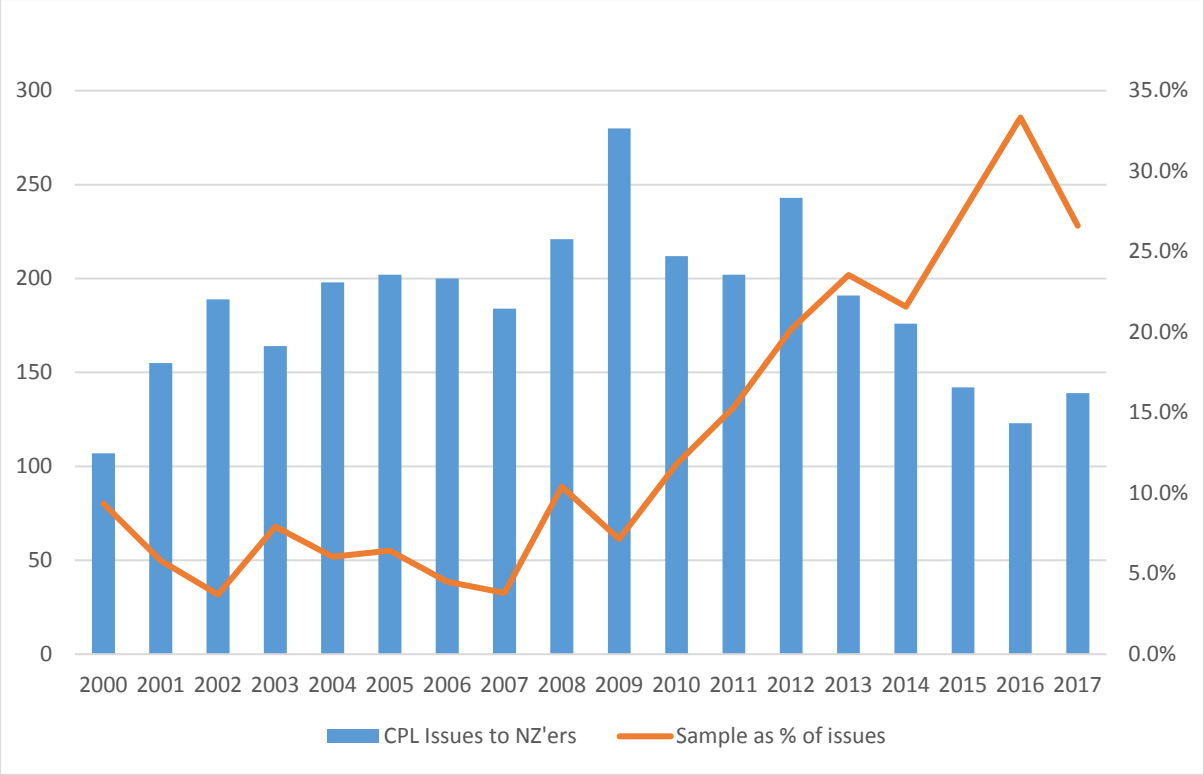

FIGURE 1 - YEAR CPLS ISSUED + % SURVEY RESPONDENTS

Summary of key survey responses

The survey attracted nearly 700 unique individual responses representing 18% of the target population (see: Figure 1). The typical respondent was male aged 30-34, completed flight training to CPL standard aged 18-24, gained the CPL in 2007-9, logged an average of 3,100 flight hours and was employed as a pilot for a New Zealand-based airline. Some of the key findings of the survey were:

- 89% of respondents were male, 11% female.
- 79% completed their flight training before the age of 24.
- 72% listed an airline position as their major career goal.
- 23% completed an Airline Integration Course as part of their training.
- 74% of respondents were currently employed as commercial pilots.
- 46% respondents estimate of peers employed after completing flight training
- 59% of those employed were working for a New Zealand-based airline.
- 21% were working in their first job as commercial pilots.
- 38% had been or were currently working for their training provider.
- 62% of those employed as pilots had been working for five or more years.
- 26% had found employment as pilots within three months of gaining their CPL.
- 43% had found employment as pilots within 12 months of gaining their CPL.
- 46% of pilots had, at some point, considered given up their pursuit of an aviation career.
- 78% of those employed as pilots had worked for three or more different employers.
- 57% of CPL holders would consider emigrating to further their career.
- 12% of respondents were working as pilots overseas.

Key findings

Employment and graduate success rates

A significant majority of survey respondents (74%) indicated that they were currently working as commercial pilots, of whom most listed that role as their primary source of income. When matched against the year in which they completed their CPL, employment rates for most years remained relatively high - in some cases close to or above 90%. However, a decline in employment rates was identified among those respondents who gained their CPL post-2014 (see: Figure 2).

FIGURE 2 - % CURRENTLY WORKING AS A COMMERCIAL PILOT BY YEAR OF CPL ISSUE

This decline in the employment rate is somewhat surprising, given that since that time the number of student loans available for flight training has reduced by one third, thereby reducing pilot supply, and that it occurs when the global pilot shortage is becoming of greater significance. Factors affecting this trend may include a reduced number of instructors required to train the reduced number permitted student loans, a decline in the size of the General Aviation (GA) industry meaning fewer opportunities for employment, and the increasing prevalence of turbine-powered aircraft and helicopters in tourist and parachute operations whose operators are less likely to hire low-hour new pilots.

Issues with graduates of flight training organisations finding employment reported in New Zealand and Australia in recent years align with the 2009-10 TEC review. This highlighted similar issues and identified that many GA operators (GA being one of the traditional steps on the pathway to the airline cockpit) had not hired new pilots for prolonged periods. A contributing factor in this trend was identified by a recent NZALPA survey of GA in New Zealand. This found that a surprisingly high number of commercial pilots employed in the GA industry were remaining in those positions and not advancing up the career path, to positions with larger operators and/or the major airlines. This lack of vertical movement would further reduce opportunities for employment for new and low-hour pilots.

The inability of many recent graduates to find employment was also highlighted by survey respondents, particularly those who trained as part of a larger class or cohort. Such classes are common among the country's larger flight training providers such as Massey University, Nelson Aviation College, IAANZ and

others. It was expected that it might be difficult to get responses from many of those who have left the industry. The question *"What percentage of your course [cohort] do you estimate are employed?* was included to estimate the employment rate as it is expected that respondents would have a good knowledge of their peers employment status. Respondents' answers gave an average figure of just 46% (see: Figure 3). Given that the majority of survey respondents were themselves employed as pilots, this low average is significant for any examination of employment trends within the industry, it also ties with anecdotal evidence of a relatively low rate of success finding employment and analysis of CAA Data in a later section of this report.

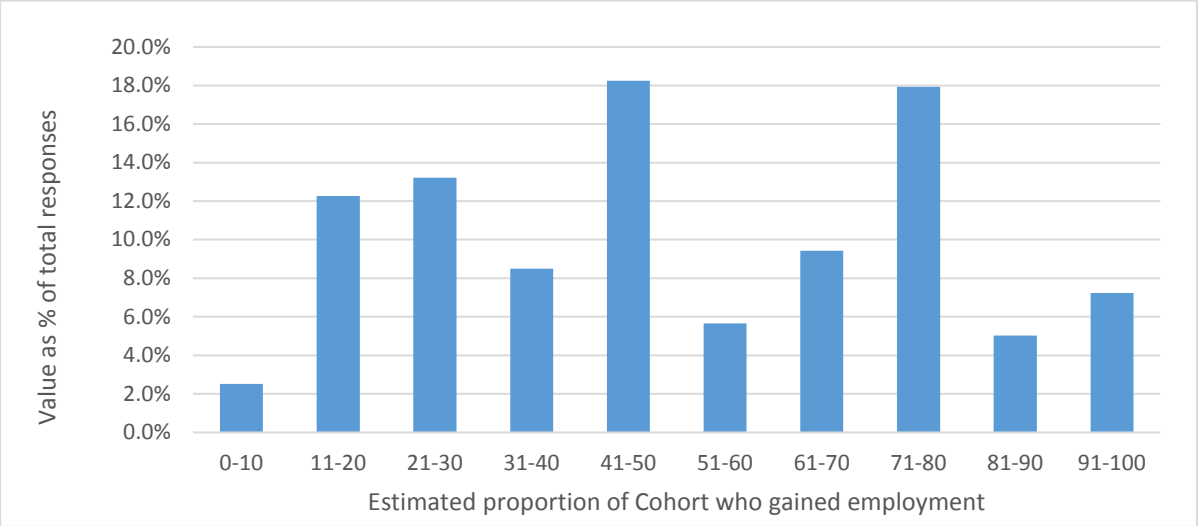

FIGURE 3 - WHAT PERCENTAGE OF YOUR CPL CLASS IS NOW EMPLOYED?

With the majority of respondents to the survey employed, the factors that contributed to that employment are of interest. Competition within the flight training industry is reasonably strong, with various organisations vying for a decreasing number of applicants and an increasingly limited pot of government funding. The choice of training provider appeared to have little or no impact on respondents' rate of employment (see: Figure 4). These figures should be viewed with a degree of caution, given that the number of survey respondents from some organisations was quite small while others were over-represented.

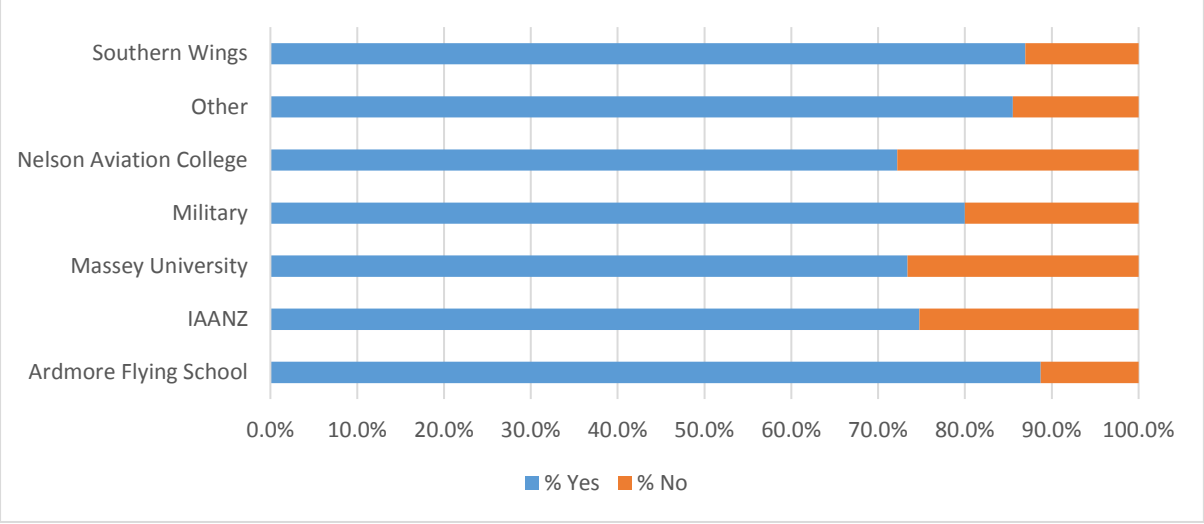

FIGURE 4 - WHERE TRAINING COMPLETED VS. EMPLOYMENT

Of the respondents not employed as pilots about 50% (representing 9% of all respondents) are working in various aviation related roles such as Air Traffic Control, Airline and Airport operations, CAA, RPAS ops.

Attitudes to career progression

The pathway from flight training to the cockpit of a New Zealand-based airline would see the typical individual complete their CPL, gain employment as a C-Cat flight instructor, work for a short period in GA and then after some years join one of the major airlines. This has been the widely accepted reality of the career pathway for commercial pilots in this country, and indeed most countries globally, for a considerable period of time. International reports and a recent NZALPA survey into working conditions in New Zealand suggest that the reality of that pathway may be contributing to the global pilot shortage. Of note was the impact of poor conditions of employment, low wages and poor job satisfaction on the ability of the flight training and GA industries to attract and retain qualified pilots. Retention rates among new flight instructors in particular was identified as a major concern, especially when the airline industry is faced with a shortage of pilots; pilots who first need to be trained.

Results from this survey continued to highlight the problems faced by pilots moving along the career pathway in New Zealand. When asked to identify the information the industry had not told them about the career pathway for pilots, several key factors stood out. A significant majority of respondents, regardless of the year in which they gained their CPL and their current occupational role, stated that:

- The industry did not provide potential pilots with an accurate description of the pathway from CPL issue to employment and the steps taken along the way.
- The realities of working conditions within the industry, notably flight training and GA, was either absent or inaccurate and did not reflect the often poor, sub-standard and stressful working conditions most had experienced or were currently facing.
- Key barriers to career progression were the ongoing costs of maintaining currency, travel and relocation to secure employment and the cost of supporting themselves and a family while working.

The dissatisfaction with the information potential pilots were provided on the realities of the career pathway was universal and consistent regardless of respondents' age, gender, current or former occupational roles, training provider or year in which their CPL was issued. Further analysis showed that 65% of all respondents either disagreed or strongly disagreed with the following statement:

> *"The information provided by the New Zealand aviation and flight training industry to potential pilots matches and accurately portrays the reality of the career pathway for commercial pilots in this country."*

Just 17% of respondents agreed with this statement, only 1% of them strongly. For an industry facing a shortage of pilots and struggling to attract new pilots, these attitudes should be of concern as they have a direct bearing on the future sustainability of the industry.

Surprisingly, respondents' experiences with poor working conditions, low job satisfaction, a lack of clear career progression and poor experience of the information they had been given did not appear to dampen their enthusiasm for an aviation career. When asked *"Would you recommend someone pursue a career as a commercial pilot?"* a majority stated that they would. Asked to explain their positive or negative responses further, those who would recommend the career emphasised the increased international job opportunities and the eventual rewards, especially for those who reached employment

with a major airline. Negative responses focused overwhelmingly on the poor working conditions faced by flight instructors and GA pilots in New Zealand, the cost of training vs. industry remuneration particularly for low-hour pilots and the difficulties faced by new pilots in gaining employment. Negative and positive responses emphasised the importance of motivation to individual success, suggesting that personal characteristics may play a large role in career progression and success.

Career progression and employment

A key objective of the survey was the collection of data on pilots' employment and occupational experiences. Survey responses included those from nearly 500 individuals currently employed as pilots in New Zealand and overseas, of whom 1:5 were working in their first job as pilots. When compared against the most recently available census data, those who responded to the survey represented 17% of the 2,816 individuals employed as airline pilots or flight instructors in 2012, and a similar number to projected 2017/18 employment figures. The occupational role in which an individual was employed showed a strong relationship with the year or period in which their CPL was issued. Individuals issued with licences post-2013 were more likely to be working as flight instructors, while those whose licences were issued prior to 2013 were more often employed for a New Zealand-based airline.

When examined against respondents' average flight hours, the relative experience level of pilots within each cohort and occupational role can be approximated. Average flight hours for respondents issued with a CPL from 2013-2018 were approximately 700, below that required for employment in most major airlines, and more likely among new flight instructors. Average flight hours across each cohort (2000-2006, 2007-2012 and 2013-2018) increased by approximately 180-200 hours per year, suggesting further that while employed as pilots the employment is likely to be part-time rather than full-time. In the case of instructors, the low rate at which flight hours are accumulated may be attributable to a decline in CPL issues recorded by the New Zealand Civil Aviation Authority (NZ CAA) since 2012. A reduction in issues corresponding to a decline in student numbers, training hours and therefore flight hours for instructors.

Of particular relevance for the future sustainability of the industry is the very low proportion of employed senior pilots - those whose licences were issued prior to 2013, working as flight instructors. Just 3.6% of those employed pilots within the 2000-2006 cohort work in that field, and only 7.3% of employed pilots within the 2007-2012 do so (see: Table 1). The inability of the flight training industry to retain instructors in the long-term should be of concern where it negatively impacts on industry training capacity and instructor experience levels. Respondent descriptions and comments on the poor working conditions for new low-hour flight instructors is likely to be a key contributor to the attrition rate experienced by this occupational field.

TABLE 1 – DISTRIBUTION OF SURVEY RESPONSES BY RESPONDENTS' OCCUPATIONAL ROLE AND YEAR OF CPL ISSUE

Year of CPL Issue	Flight Instruction	GA or Charter Pilot	New Zealand-based airline	Overseas-based airline
2000-2006	3.6%	1.5%	89.1%	3.6%
2007-2012	7.3%	9.3%	66.7%	9.3%
2013-2018	47.9%	18.2%	24.0%	4.1%
Overall totals	18.1%	9.3%	61.5%	5.9%

Pathways to employment and employment history

It has been long assumed that the typical pathway to employment with an airline after the issue of a CPL involved the accumulation of flight hours and experience as an instructor then GA pilot, before the first initial airline position. 79% of those surveyed had worked in at least one role prior to their current occupational position and of these a majority (62%) had been employed as pilots for more than five years. The multi-stage nature of the career pathway was illustrated further by respondent descriptions of their prior occupational roles and employment history. 7% of those surveyed had worked as pilots for three or more different employers, and 20% for five or more. Survey responses illustrated this typically involved individuals holding jobs as flight instructors and GA or charter pilots before moving on to a role in a major airline. Survey responses also highlighted the transitory and short-term nature of employment for those pilots not employed for a major airline. Those working as flight instructors and GA or charter pilots were more likely to have been employed for shorter periods of time and showed more frequent changes of employer and occupational role.

A consistent finding of the survey was the difficulties respondents faced in finding employment post-flight training, notably in New Zealand where the GA industry was argued to lack enough employment opportunities for new graduates. However, these responses were contradicted in part by the time taken by most of those surveyed to find their first job as a pilot. Just under half or 43% had found employment as pilots within 12 months of gaining their CPL, and a sizeable number (26%) had done so within three months. For many graduates, the ability to gain employment with their training provider may have been the key factor in being employed so quickly; 37.6% of those surveyed secured their first job in this fashion. It could be safely assumed here, especially given the training providers of those surveyed, that this involved work as flight instructors. This fits with the results of the 2009-10 TEC review which indicated that, locally, demand for pilots was not driven by airlines but by the flight training industry itself. While a valuable source of employment for some CPL graduates, this avenue is not available to all those undertaking flight training, especially for those not attending one of the larger flight training organisations. For individuals who could not gain employment in this way, survey responses illustrated the difficulty most faced in gaining their first job. This typically involved travelling the country for prolonged periods, door-knocking at numerous organisations and/or waiting for word-of-mouth referrals to secure them that elusive first job.

This report suggests that the vagaries and difficulties illustrated here may be a significant factor in the decision by many individuals to quit the pilot career pathway. Of those surveyed, nearly half (46.2%) had, at some point, considered giving up their pursuit of an aviation career. Most cited the difficulties they faced in getting meaningful, well-paid and secure employment and the negative impact on themselves and their families as factors in that decision. If the ratio of CPL holders with a valid Class 1 medical, necessary for employment as a pilot, versus those without a Class 1 is considered, then even a cursory examination of CAA licence data shows that an increasingly large number of individuals who gain a CPL may be choosing to move into other careers. Of those surveyed, 10% no longer held a valid Class 1, and half of those not working as pilots indicated they were not looking for employment now or in the near future. While still inconclusive, these findings highlight a possible problem with the industry's ability to retain pilots after completion of their CPL, especially where they cannot gain employment within a reasonable time period or where employment conditions make such employment untenable or undesirable.

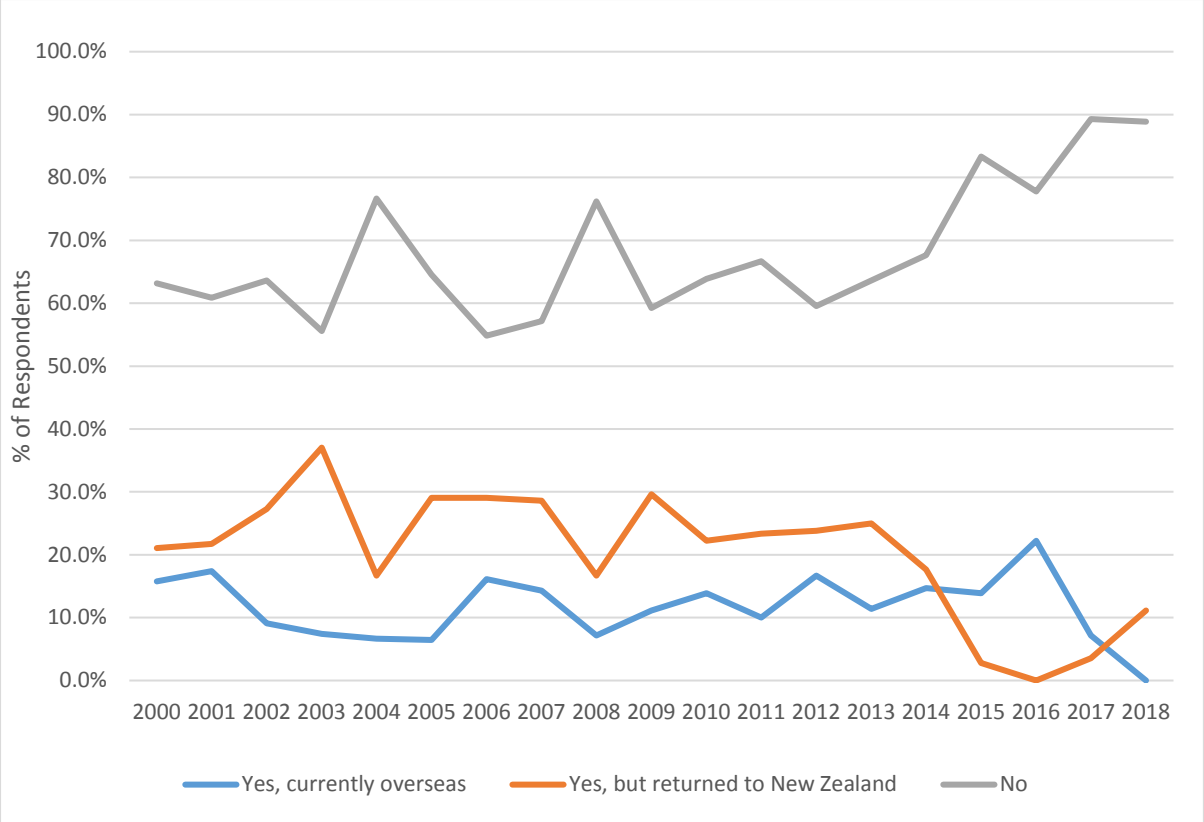

FIGURE 5 - CPL MIGRATION DECISIONS BY YEAR OF CPL ISSUE

Pilot migration

The global nature of the airline industry makes it possible for individuals to pursue and regard the career as a commercial pilot as one not limited to a specific country or region. It is expected that individuals will at some point either contemplate or engage in migration in pursuit of their career as commercial pilots. One section of the survey looked at issues relating to migration, examining why individuals choose to leave New Zealand, and whether such a move is necessary for career progression. Individual responses were collected in response to the following question: *Are you currently or have you previously worked as a commercial pilot outside of New Zealand"* (i.e. had they migrated in pursuit of their career?). 32% of those who responded had done so, of whom 21% had migrated and then returned to New Zealand, while 12% were still currently working in another country.

When matched against the year in which a respondent's CPL was issued, whether an individual had migrated remained remarkably consistent until 2012-13. From 2000-2012/13, approximately 30% of respondents issued a CPL in those years had either migrated or migrated then returned to New Zealand. From 2012-13 onward, the proportion of respondents who were currently overseas, or who had left but then returned to New Zealand, declined (See Figure 6). Respondents' comments suggested that migration was positive for two key reasons:

- The greater job opportunities for pilots, especially low-hour new CPLs, overseas vs. the small job market in New Zealand.
- The more favourable working conditions and remuneration particularly in Australia vs. those found in New Zealand.

Migration was also seen to offer pilots a chance to experience a wider variety of work and operational experiences, notably for those who did not want to work as instructors, the most common first rung on

the pilot career path in New Zealand. The survey results show that migrating is likely to provide a much greater chance of success in terms of finding employment, overseas and upon returning to New Zealand.

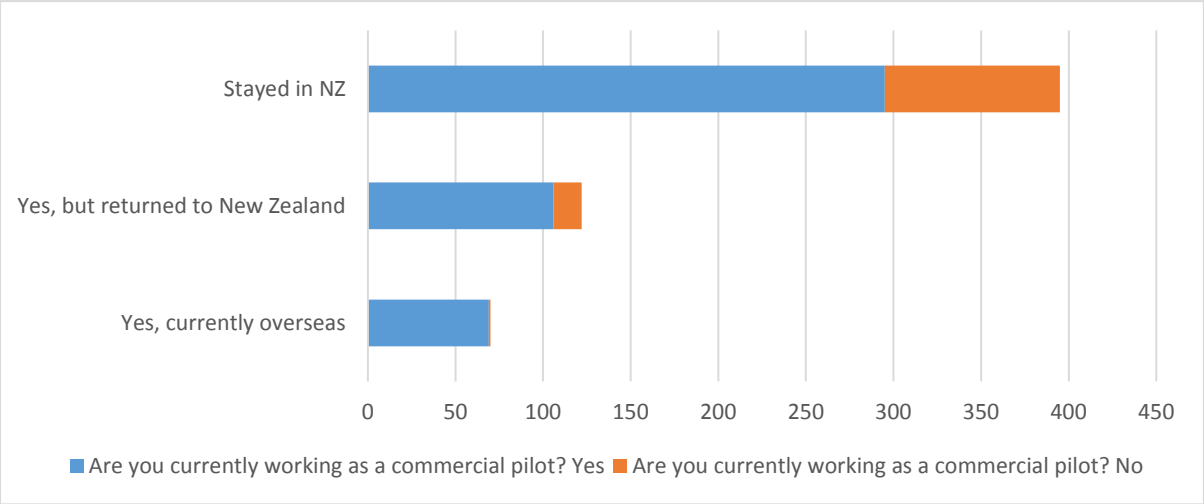

FIGURE 7 – MOVED OVERSEAS & EMPLOYMENT STATUS

It is interesting, then, that the trend to migration has declined - especially in the face of the current global pilot shortage and the lower employment rate of recent graduates. This may be for several reasons including;

- CPL graduates' and pilots' changing expectations of New Zealand employment opportunities.
- A greater perceived risk of migration not leading to a successful outcome.
- Greater financial hardship recent graduates find themselves in at the end of training. (That greater financial hardship is due to changes in government funding of flight training in New Zealand. Following a 2009-2011 review, fully funded flight training was discontinued and pilots must now self-fund a large proportion of their training costs)
- The requirement to pay interest on student loans if moving overseas.

For those who opted not to migrate or who would not recommend it, key problems with that decision were identified as the costs incurred in relation to their New Zealand- based student loan, and improving local opportunities for employment in New Zealand. The latter was a key factor in the decision of many individuals to return to New Zealand after working overseas. Another unexpected factor affecting the decision to migrate was lifestyle or family, with a number of respondents returning to New Zealand or not wishing to leave as it was perceived as a better place to raise a family and/or live overall. It would appear, however, that the increased employment opportunities within New Zealand were more relevant to experienced pilots rather than low-hour recent graduates.

The Cost of flight training

The current total cost of completing a Commercial licence with Multi Engine Instrument rating is in excess of $100,000 and varies depending on flight training provider and qualifications sought; an instructor rating on top can add another $15,000. Formerly students could borrow the total costs of their flight training as part of the countries student loan scheme. However, changes to student loan funding in 2010-12 placed a cap on aviation student borrowing, and limited access to funding for some aspects of flight training. These changes mean that aviation students must now self-fund a proportion of their training costs although the exact amount varies with training provider and course structure. For

longer courses such as Massey Universities Bachelor of Aviation programme students must now self-fund anywhere from $15,000 - $25,000 of the total cost of their training. This is in addition to the amount borrowed as part of their student loan. The suggested intent of these changes were to reduce the costs to government of aviation related student loan funding and to reduce demand for that training. The decline in CPL licence issues in New Zealand would suggest that this has in fact occurred. Similar trends have been identified internationally where increasing training costs, particularly where access to student loan funded is limited, is a barrier to individual entry into the aviation industry.

FIGURE 8 – TOTAL COST OF FLIGHT TRAINING

Measuring supply and demand for pilots in New Zealand

While there is no definitive model of the supply and demand for commercial pilots in New Zealand. We can make some estimations of the flow.

- The new Pilot supply can be measured by the number of CPL licences issued annually by the CAA.
- The current active professional pilot population can be calculated from those CPL and ATPL with active class 1 medicals from CAA data and adding those employed by Virgin Australia (Since 2014), JetStar (Jet pilots 2006 and Q300 pilots since 2015) utilising the Trans Tasman Mutual Recognition Agreement and Australian Licences and Medicals. (Jet Connect (Qantas NZ) moved over to CASA licences in 2018 and are not included in calculations)
- Census data (see: Table 2) correlates closely to CAA data (Table 16). 2017 Census data will be available in April 2018
- There are a high number of inactive CPL & ATPL holders identified by CAA data – those holding a Class 2 or no medical. This indicates that the actual number of licence holders available for employment is significantly lower than the total number of licences issued.
- On the demand side there have been large annual variations in hiring by Air New Zealand, Virgin, JetStar and Qantas' New Zealand based operations and smaller NZ Airlines. Currently it is estimated about 200 new pilots will be hired this year.

- The total number of employable pilots has fluctuated in the period 2000-2017 (including some big fluctuations such as when Ansett & Origin collapsed, years with no airline hiring) The net change in this period is near 0%. See Figure 6.
- Retirements are not recorded by CAA. Some Pilots acquire a Class 2 licence after retirement, some let their licence lapse. An estimate of the retirement rate has been made from actual NZALPA data (2000-2017) of over 55 Pilots resigning and a factor applied to account for the 72% NZALPA representation of the NZ Pilots. This shows an average of 21 per year, varying between 17 and 40.

TABLE 2 - PILOT SUPPLY AND DEMAND IN NEW ZEALAND 2006-2012

Year	Census total - Pilots all 3 Categories	Airline Pilots (23111)	Flight Instructors (231113)	Helicopter Pilots (231114)	Net Aeroplane Pilots	Total ATPL + CPL- Aeroplane (CAA data Table 17)	Excess ATPL+CPL over Employment
2006	2,526	1,896	336	294	2,232	7,340	5,108
2012	3,205	2,340	476	389	2,816	9,737	6,921

SOURCE: STATISTICS NEW ZEALAND & CAA.

The data shows a clear difference between the total number of CPLs issued by the CAA and pilot employment in this country. Trends from 2006-2012 show that the number of ATPL & CPL holders has increased at a far greater rate than total industry employment. This does match with survey responses that describe the lack of job opportunities for new CPL holders and less experienced pilots, and declining employment rates for those issued CPLs after 2012. The data also reflects survey responses to the question *"What percentage of your course [cohort] do you estimate are employed?"* which, as stated earlier, produced an average figure of 46%.

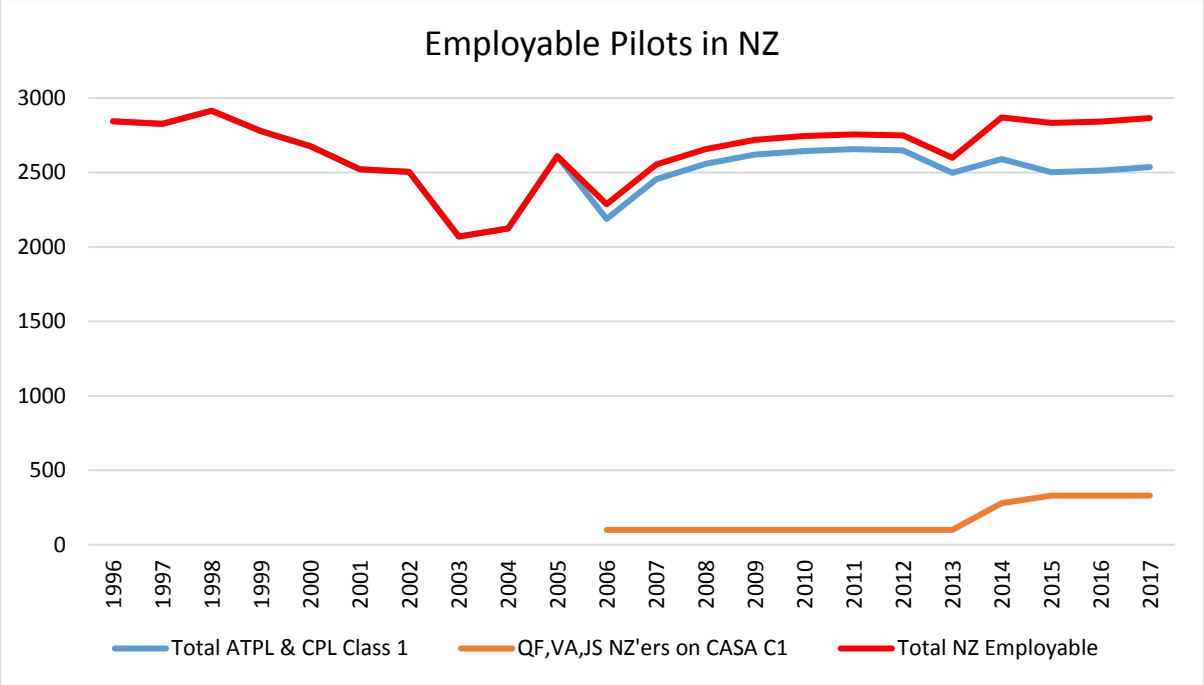

FIGURE 6: EMPLOYABLE PILOTS IN NZ (DRAWN FROM CAA DATA & CASA NZ PILOTS – TABLE 17)

An estimate of the number of pilots employed compared to the total trained can be made (See Table 16 and Figure 7 above). While 80% of Survey respondents are employed, as noted earlier we did not expect to connect with many of those who have left the industry. The scale of those leaving was tested by the survey at an estimated 54% and assessed by combining actual CAA data with an estimate of retirements and migration to estimate an alarming 71% of CPL graduates not employed as pilots. The bottom line is a very large percentage of NZ Pilot trainees are not employed as pilots.

NZALPA Executive Summary

There is much publicity of an impending *professional pilot* shortage. Current record hiring rates ought to make the pathway into a rewarding employment position quicker and more achievable. Yet In the last 17 years it seems that just one third of those trained have stayed in the career path, many leaving after trying to find employment for quite some time. Survey responses indicate that even with the current record hiring of experienced Pilots it is still hard to find a first job to get the hours needed to find decent employment.

We are also faced with a relatively low number of young people considering the pilot career. There are many attractive, interesting career paths available to the segment of youth able to consider becoming a pilot – well educated (but not brilliant), with common sense, spatially aware and with access to funding to bridge the gap between available student loans and the cost of learning to fly.

The cost of flight training is prohibitive for a large section of society with around $20,000 plus living expenses for 18 months needing to be funded personally or from family or other funds. This greatly reduces the socio-economic diversity of candidates for flight training.

Flying schools report low numbers applying for courses and selecting well over 50% of applicants for student loan funded positions on training courses. Whether this is due to a decline in applicant numbers, improvements in candidate suitability or other factors such as a desire to generate revenue is not clear. Some of those selected for training may not be suitable for airline selection. The schools report a high pass rate of trainees gaining the CPL – well over 90%.

L3 in Hamilton trains pilots for many overseas airlines. It reports accepting about 10% of candidates. Qantas's new cadet programme has now recorded 18,000 expressions of interest within 6 months of opening in 2018. Even if only 10% of those finally apply for the cadetship, Qantas will have a decent pool from which to choose the first 200 cadets.

The high failure to gain employment, while not well publicised, will be known to many potential pilots and be seen as quite a deterrent. Many respondents complained of a lofty career vision portrayed in the sales pitch of most flying schools, unmatched by the reality of successfully completing CPL training, and then being unable to find employment to gain the experience necessary to be employable by an airline – the career goal for most.

There are simply not enough flying positions in New Zealand for low-experience pilots to enable all graduates to make their way forward. The most successful stream is Flight Instructing, about 1/3 of graduates are trained and mostly employed, most often by the organisation that trained them. Those who are able and motivated to go overseas were also much more successful in finding employment. Many have done so and returned to airline employment in New Zealand. Some have stayed overseas and may not return. There seems to have been quite a decline in migration in the last 5 years.

The path from successful commercial licence to an airline seat often includes time as a flight instructor. Time spent instructing is valuable experience, but for most this is just a stepping stone to higher goals. Average Air NZ Regional hiring experience is now under 1000 hours with many around 700, most are former instructors who will have served in that role for only a year or two. The result is a declining experience amongst instructors, the very personnel required to train future instructors and pilots.

Finding accurate data on Pilot supply is difficult. CAA, TEC, flying schools and Airlines have various parts of the picture, but there exists no complete picture of the flow of pilots into and through the aviation

industry in New Zealand. Given the small size of our industry this should be readily achievable and would greatly aid decision making across the pilot career progression pathway.

Recommendations

A large number of CPL of graduates are giving up after failing to find employment as a pilot. For those students involved the very large expense will likely be a burden for a significant part of the rest of their lives. This is also major loss of potential to the industry and a waste to the country.

To halt the decline in experience at flying schools and to ensure an adequate supply of pilots to airlines, action is required to enable more CPL graduates to progress beyond training into successful employment. The data presented shows New Zealand has trained too many pilots in the last 17 years. Current airline hiring rates are quickly picking up many of those who have made it into successful employment and average experience of new airline hires is reducing. Most of these new hires are relatively low time instructors – furthering the decline of experienced instructors. With the current rate of hiring of NZ airlines exceeding the net rate of pilots entering the industry NZ may well need a greater supply of Pilots than are currently being trained.

Success finding employment for most of those trained would quickly double the new pilot supply available. Change is needed in the career progression model that has existed post WW2, while for decades airlines have been able to pick the most experienced and best "culturally fit" candidates, the experience pool is now getting shallower. Many overseas airlines are hiring directly from flight training schools**. A career path for New Zealanders that takes an appropriate number of graduates from flight training directly to an airline cadet training program will secure employment for many.**

Our airlines should get involved in trainee selection before any flight training commences to identify (and possibly compete for) the most suitable people. Investment will be required to make these graduates airline ready. **Student pilot numbers should relate much more closely to employment demand.**

If there are jobs for most graduates in airline cadet programs, General Aviation, flight instruction and other entry level jobs, the career will look more attractive and be more saleable to suitable young people. Then the industry can fairly pitch this as a career worth working towards**. An industry wide effort to promote the career to young people would create a wider pool from which to select an appropriate number of the best**. NZALPA should be involved in this promotion to ensure a balanced view of the career and progression is portrayed.

Airlines and the CAA should design and specify airline- specific training for these candidates and follow it up after induction with rigorous airline and type- specific training. Many countries have a Multi- Crew Training program designed specifically for future airline pilots.

Government should adjust the student loan funding short fall to reduce the total upfront cost. Secondly interest on student loans to pilots driven overseas to find employment should be deferred for 2-3 years.

Government and industry should take steps to reduce the total cost of flight training through steps such as enabling cheaper light sport aircraft to be used for flight training, reducing costs passed on by CAA and flight testing companies. Airlines should instigate a loan repayment scheme in return for a period of service. This would be attractive to candidates and encourage long term loyalty to employers. **A more affordable training path would enable a larger financially and culturally more diverse pool of candidates, and would enable better selection of those best suited to aviation.**

Flight instruction should be recognised as a valuable part of the aviation industry, employment conditions and pay should reflect this value and be set to attract some to consider staying in this part of the industry.

A potential downside to airline preselection could be those not successful deciding to pursue other careers, leading to a shortage of General Aviation level pilots. It may be necessary for employers in

these areas to find and encourage their own candidates. Employment conditions offered by many General Aviation operators and flight training schools are seen by most respondents as poor. As airline demand ramps up, some employers at this level will need to lift their offering to attract and retain pilots.

Industry bodies and Government agencies should work together and support a single point of data collection and analysis to provide accurate data to aid funding and trainee recruiting decisions.

Being a pilot is the dream of many, and for those who succeed in making it a career it is often considered the best job in the world. Our survey has provided many interesting insights into the career pathway from inspiration to employment. It is hoped that the data and insights will be absorbed by all those involved in the many stages of a pilots development to make the path smoother, more cost effective and ultimately successful for future pilots and the aviation industry as a whole.

Summary of key survey data

TABLE 3 - RESPONDENT DISTRIBUTION BY GENDER

Respondent gender	%
Male	89%
Female	11%

TABLE 4 - DISTRIBUTION OF RESPONSES BY AGE

Respondent age	%
18-24	29%
25-29	33%
30-34	18%
35-39	9%
40-44	6%
45-49	3%
50-54	2%
55+	1%

TABLE 5 – AT WHAT AGE DID YOU COMPLETE YOUR FLIGHT TRAINING?

Answer	%
18-24	77%
25-29	14%
30-34	5%
35-39	4%
40-44	1%
45-49	0.2%

TABLE 6 - ARE YOU CURRENTLY WORKING AS A COMMERCIAL PILOT?

Answer	%
Yes	80%
No	20%

TABLE 7 - RESPONDENT FLIGHT HOURS TOTAL SAMPLE (VALID FULLY COMPLETE RESPONSES ONLY)

Flight Hours	%
>8,000	7%
5,000-7,999	19%
3,000-4,999	16%
1,500-2,999	19%
500-1,499	23%
<500	17%

TABLE 8 - DID RESPONDENT TRAIN INDIVIDUALLY OR AS PART OF A LARGER CLASS OR COHORT?

Detail	%
Part of a larger class or cohort	78%
Trained individually	22%

TABLE 9 - WHAT WAS THE TOTAL COST OF YOUR FLIGHT TRAINING?

Total cost of flight training	%
<$10,000	2%
$10,001 - $30,000	2%
$30,001 - $50,000	5%
$50,001 - $70,000	12%
$70,001 - $90,000	21%
$90,001 - $110,000	20%
$110,001 - $130,000	19%
>$130,000	19%

TABLE 10 - CURRENT OCCUPATIONAL ROLE OF EMPLOYED RESPONDENTS

Current occupational role	%
Flight instruction	18%
Charter or General Aviation	10%
Agricultural pilot	1%
Military	0.2%
New Zealand-based airline pilot	59%
Overseas-based airline pilot	6%
Corporate	1%
Other	4%

TABLE 11 - WHAT OCCUPATIONAL ROLES HAVE YOU HELD PRIOR TO YOUR CURRENT POSITION?

Occupational role	%
Flight instruction	37%
GA or Charter flying	29%
Agricultural pilot	0.5%
Military	0.4%
New Zealand-based airline pilot	19%
Overseas-based airline pilot	6%
Corporate	3%
Other (please specify)	5%

TABLE 12 - HOW LONG HAVE YOU BEEN EMPLOYED IN YOUR CURRENT OCCUPATIONAL ROLE?

Time in role	%
< 1 year	27%
1 - 2 years	22%
2 - 3 years	18%
3 - 4 years	6%
4 - 5 years	6%
5+ years	21%

TABLE 13 - INCLUDING YOUR CURRENT ROLE, HOW LONG IN TOTAL HAVE YOU BEEN EMPLOYED AS A COMMERCIAL PILOT?

Time employed	%
< 1 year	7%
1 - 2 years	9%
2 - 3 years	9%
3 - 4 years	6%
4 - 5 years	7%
5+ years	62%

TABLE 14 - HOW LONG AFTER COMPLETING YOUR FLIGHT TRAINING DID IT TAKE TO FIND YOUR FIRST PILOT JOB?

Time to find first job	%
< 3 months	26%
3 - 6 months	17%
6 - 12 months	24%
1 - 2 years	17%
2 - 3 years	7%
3 - 4 years	3%
4 - 5 years	3%
5+ years	3%

TABLE 15 – ARE YOU CURRENTLY OR HAVE YOU EVER WORKED OVERSEAS AS A COMMERCIAL PILOT?

Answer	%
Yes, currently overseas	12%
Yes, but returned to New Zealand	21%
No	68%

TABLE 16: ESTIMATE OF PROPORTION OF CPL HOLDERS EMPLOYED

Measurement Value	Relevant Figure
Total number of CAA Class 1 at the end of 1999	2,677
New CPL(A) issued 2000-2017	+3,328
Less estimated retirements 2000-17*	-(383)
Less individuals who left New Zealand and did not return#	-(350)
Sub Total	=5,222
Deduct End 2017 CAA Class 1 + Virgin Airlines, Jet Star Pilots**	-(2,866)
=Missing CPL's , those trained but no longer holding a Class 1 medical (i.e. given up or flying overseas)	=2,356
% of those trained added to NZ employment total	=29%

*Estimated from all NZALPA Pilot Retirements 2000-2017 as % of industry total.

Based on data from NZALPA Career Progression Survey

**JetStar from 2006, Virgin and JetStar Regional from 2014 hired or transferred NZ Pilots to flying on a CASA Licence.

TABLE 17. CAA LICENCE DATA + CASA NZ PILOTS

End of Year	ATPL Total	ATPL + Class 1	CPL Total	CPL +Class 1	Total ATPL & CPL Class 1	VA, JS** NZ'ers on CASA C1	Total NZ Employable
1996	1,346	1,146	2,640	1,699	2,845		2,845
1997	1,430	1,185	2,865	1,642	2,827		2,827
1998	1,509	1,216	3,060	1,699	2,915		2,915
1999	1,617	1,252	3,172	1,526	2,778		2,778
2000	1,732	1,299	3,272	1,378	2,677		2,677
2001	1,814	1,210	3,378	1,311	2,521		2,521
2002	1,919	1,221	3,517	1,283	2,504		2,504
2003	2,096	836	3,741	1,234	2,070		2,070
2004	2,289	911	3,913	1,212	2,123		2,123
2005	2,529	1,142	4,163	1,467	2,609		2,609
2006	2,802	844	4,538	1,344	2,188	100	2,288
2007	2,931	1,005	4,721	1,449	2,454	100	2,554
2008	3,054	997	5,028	1,561	2,558	100	2,658
2009	3,131	1,009	5,444	1,611	2,620	100	2,720
2010	3,256	1,041	5,731	1,604	2,645	100	2,745
2011	3,346	1,061	5,997	1,595	2,656	100	2,756
2012	3,435	1,057	6,302	1,592	2,649	100	2,749
2013	3,557	1,051	6,506	1,447	2,498	100	2,598
2014	3,708	1,152	6,701	1,439	2,591	280	2,871
2015	3,810	1,142	6,839	1,361	2,503	330	2,833
2016	3,923	1,175	6,986	1,337	2,512	330	2,842
2017	4,021	1,135	7,138	1,401	2,536	330	2,866