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Linking age and career success among pilots in Thailand: Does it depend on pilot types?

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Abstract

Little research attention has been given to the factors that influence career success among pilots. In this study, we aim to examine the relationship between pilots' age and their career success measured in terms of monthly earnings. We also ask whether this relationship depends on the type of pilots (i.e., airplane pilots versus helicopter pilots). Survey data were collected from 593 pilots from seven major airline companies in Thailand, and moderated multiple regression (MMR) and simple slope test were used for the analyses. The results showed that pilots' age was positively related with earnings. However, in comparison to helicopter pilots, airplane pilots enjoy a steeper growth in their monthly earnings. Total flight time also emerged as the most influential factor in determining pilots' earnings. Despite the anecdotal reports that airplane pilots generally make more earnings in the long term in comparison to helicopter pilots, this study is among the very first to provide direct empirical evidence about the differences in their career trajectories.

Introduction

Pilot is one of the most highly paid jobs in the market (Henderson & Kriegel, 1989). According to a 2019 survey of 500 adults aged 18 to 30, it was found that twice as many of the males had considered a career as a pilot (Pilot Career News, 2019). However, becoming a pilot is not an easy endeavor. Being a pilot not only comes with great responsibility for the safety of passengers, but also entails a significant investment of training time and financial resources. Particularly, people interested in a pilot career have to go through rigorous flight training, in which they may receive funding from prospective employers or they may have to self-fund themselves, which can cost up to USD 30,000 to 50,000 (Valenta, 2018). Despite these inherent difficulties, a pilot career is still a desirable job even though the aviation industry has been hit hard by the COVID-19 pandemic.

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The clarification and justification of this study are to provide concrete and empirical evidence regarding objective career success in terms of future earning among airplane and helicopter pilots. This study also aims to answer the real-world question, "What should I put a big investment on, regarding better future earning, airplane or helicopter flight training?" The purpose of this research is to understand the factors that explain the variation in pilots' career success. While career success can be measured subjectively in terms of one's overall satisfaction with the different aspects of one's career (Seibert et al., 1999, 2001), this study focuses on pilots' career success measured in terms of their monthly earnings. The extant literature indicates that many factors may explain a person's career success including one's personality (Judge & Kammeyer-Mueller, 2007; Seibert et al., 1999), one's career strategies (Karavardar, 2014; Tan & Yahya, 2008) and organizational factors (Bagdadli & Gianecchini, 2019). In the area of pilot research, apart from a few studies on gender barriers among women pilots (Germain et al., 2012; McCarthy et al., 2015), very little research attention has been given to investigating the factors that may affect pilots' objective career success.

This study aims to examine the influence of pilots' age on their career success. While the Federal Aviation Administration (FAA) regulations prohibit airline pilots from flying beyond the age of 60 (Cornell et al., 2007), the minimum age regulation for starting the pilot training can be as low as 16 years, depending upon the country being considered and which license a pilot aims to acquire. This suggests that a pilot's career can span more than 40 years. While age is an oft-studied variable in predicting pilots' performance and aviation accidents (Li et al., 2003), it is unfortunate that the relationship between pilots' age and their career success has not been rigorously assessed using empirical data.

Apart from examining the direct effect of age on pilots' career success, this study proposes that the strength of this relationship will depend on the type of pilots. Particularly, this study also draws attention to two important types of civilian pilots, namely, airplane [fixed wing] vs. helicopter [rotary wing] pilots. In broad terms, people who wish to become pilots must first decide whether they want to fly airplanes or helicopters. While planes and helicopters have certain similarities, they are vastly different in many important aspects including training techniques, costs of training and license requirements (Southern Utah University, 2020). Airplane pilots are responsible for transportation of both passengers and cargo freights while helicopter pilots are primarily responsible for flying passengers in low altitude environment in specific industries such as healthcare, tourism, law enforcement and media (Dickinson, 1986). Given these characteristics, we expect that there could be significant differences in the growth of earnings between the two groups of pilots in relation to their age. In fact, it has often been suggested that if money is a primary factor in determining a pilot career choice, one should pursue a career in airplanes (Upper Limit Aviation, 2013); however, this claim has yet to be tested empirically and this is the main reason why this study needs be done.

In the analyses, this study also considers other important factors that may explain a unique variance in pilots' objective career success. These factors include pilots' total flight time, gender, education level, their ranks and flight destinations. To date, very few studies have shed light on how different types of pilots' progress in their careers. While previous research has shed light on the role of gender in pilots' careers (Germain et al., 2012; McCarthy et al., 2015), the roles of age and pilot types have largely been neglected in the literature. In fact, a pilot' career progression is something that outsiders are hardly aware of, given that the aviation industry is relatively small, characterized by a closed environment reserved for only a small group of people. This study thus offers a window into the inner workings of pilots' career success while also shedding some light on how one can make an informed career choice in the aviation industry.

Literature Review

Career Success

Career success is considered a positive work-related outcome or achievement that individuals have accumulated because of their working experiences (Judge et al., 1995; Meade, 2000; Seibert et al., 1999). According to the literature, career success can be measured both subjectively and objectively (Abele & Spurk, 2009). Subjective career success reflects the extent to which individuals feel the accomplishment in their career, which may include the realization of goals, self-identity, perceived opportunities for career advancement and job satisfaction (Arthur et al., 2005; Heslin, 2005). On the contrary, objective career success emphasizes the importance of one's verifiable or measurable career accomplishments or attainments such as salary, bonus, pay checks, positions, and promotions (Boudreau et al., 2001). Even though these two factors can be anticipated to be positively correlated, they do not necessarily covary with one another (Judge & Bretz Jr, 1994).

While career success in the aviation context can be measured subjectively based on others' recognition of pilots' achievement (Hoermann & Goerke, 2014). the emphasis of this study is on pilots' objective career success measured in terms of their monthly earnings. As noted earlier, a pilot job is regarded as a high-investment career (Swenson-Lepper, 2005) owing to extensive training, which generally include flight simulation training, on-the-job training, and ground schools. Those who have completed such extensive and intensive training and procured a pilot license are said to have transformed into competent licensed airmen capable of operating a high-tech and complex flying aircraft. More importantly, these capable pilots are responsible for the lives of passengers on board. It is thus not a surprise that airlines are prepared to pay premium rates and devote more resources to attracting and retaining skilled pilots. For these reasons, it is interesting to examine the factors that affect their career success and whether in the long term, there is a financial payoff in their career investments.

Age and Career Success

Past research indicates that there are several precursors to one's career success. For instance, gender has been found to be related to salary and managerial level as well as salary increases, management promotions and career paths (Cox & Harquail, 1991; Gardiner & Tiggemann, 1999; Melamed et al., 1995). Traits conscientiousness and extraversion have been associated with more job satisfaction, monthly income, and professional status (Judge et al., 1999; Seibert et al., 2001). Furthermore, educational levels, quality of training programs, school reputation and prestige and type of degrees have all been found to be positively associated with subsequent financial success (Judge et al., 1995).

This study proposes that age is particularly important in the context of a pilot's career for many reasons. Most pilots create a career plan that outlines what they aim to accomplish at a certain age, which will most likely vary from person to person based on their ambitions and career goals (Betz & Fitzgerald, 1993). Moreover, age is an important component of one's job-related experience that one has accumulated over the course of his or her career (Tesluk & Jacobs, 1998). In fact, it could be suggested that pay structures that are designed to motivate and incentivize pilots are strongly correlated to their age. Generally, senior pilots are considered to be more seasoned than junior pilots (Quińones et al., 1995) and thus will most likely make more earnings. For these reasons, it is expected that the relationship between pilots' age and career success could be strong and positive. Thus, we hypothesize that;

Hypothesis 1: Age is positively related to pilots' career success in terms of their estimated monthly earnings.

The Moderating Role of Pilot Types

Although age is important in predicting pilots' performance and their career success, we still know relatively little about the contextual factors that may influence this relationship. In fact, in related literature, research findings regarding the relationship between age and employee career success has been mixed at best. For example, past research revealed that age could positively predict career success among top managers in the business sector (Du et al., 2012). Age has also been shown to be a strong predictor of employee career success in wireless network companies in South Korea (Kim & McLean, 2008). However, other studies showed that age only weakly predicted career success among entrepreneurs (Zhao et. al., 2021). Furthermore, it has been shown that age could negatively predict career success among employees in Dutch companies (Kuijpers et al., 2006). These conflicting findings suggest that there could be a contextual moderator that explains the variation in this relationship.

The focus of this research is on the distinction between airplane (fixed wing) and helicopter (rotary wing) pilots and how it can influence the association between their age and career success. According to Upper Limit Aviation (2013), most airplane pilots begin their careers by taking low paid entry-level jobs in aviation (e.g., ground handling) before moving up the career ladder in a lucrative commercial airline. Also, since the commercial airline industry is very competitive, new airplane pilots generally accept low-paying pilot jobs with regional airlines in order to build flight hours so that they can make the big money down the line (i.e., competing for a pilot job in a major airline). In contrast, most helicopter pilots can get a decent paid job right after their training due to the low supply of helicopter pilots and a high global demand for them. However, over time, it has been suggested that the growth in helicopter pilots' earnings is not as steep as those of airplane pilots (Upper Limit Aviation, 2013). Part of the reason is that helicopter pilots can reach the top paying jobs way faster than that of an airplane pilot. Thus, in the long haul, earnings of airline pilots are said to top out higher than those of helicopter pilots. Despite such anecdotal evidence, research has yet to examine whether such claims are empirically valid.

Thus, we are interested in testing whether the influence of pilots' age on their monthly income will vary between airplane pilots more than helicopter pilots. This leads to the second hypothesis.

Hypothesis 2: As age increases, it is expected that airplane pilots will experience more career success in terms of their estimated monthly earnings in comparison to helicopter pilots.

Methodology

Overview of Sample and Data Collection

The study hypotheses were tested using a sample of commercial pilots in Thailand collected from both airplane and helicopter companies totaling seven air carriers. The population of this study was Thai professional pilots and simple random sampling was utilized. The sample size was determined a priori by considering the suitable sample size for analyzing moderated multiple regression (MMR) according to infinite population mean formula as shown in Equation (1) (Cochran, 1977).

$$n = \frac{p(1-p)z^2_{\alpha/2}}{d^2} \quad (1)$$

In this formula, proportion (p) is .5, error (d) was 0.05, alpha was 0.05 and Z at 0.975 was 1.96. Thus, the minimum sample size would be 385. Self-administrated surveys were sent to pilots through each company's intra email system. A benefit of using email-based surveys is that the anonymity of the responding pilots could be affirmed. Research instruments were self-made by the researcher directly asking respondents regarding their gender, education, rank, flight destination, estimated total flight time, age, pilot type and estimated monthly income. These data drawn from respondent were exact and valid by themselves. After two months and reminder emails, 600 responses were returned. The data cleaning process (e.g., removing outliers and missing values [pilots' reported earnings]) resulted in a clean dataset of 593 pilots.

Variable Measurements

Career success was measured objectively in terms of pilots' monthly earnings (in Thai Baht). This is consistent with the approach in previous research (Abele & Spurk, 2009). Pilots' age was measured in years. The type of pilot was categorized into helicopter (rotary wing) pilots (coded as 0) and airplane (fixed wing) pilots (coded as 1). Apart from the main variables, we also controlled for several demographic variables that may influence pilots' career success including gender (coded as 0 for men pilots and 1 for women pilots), pilot ranks (coded as 0 for PIC or Pilot-in-Command and 1 for SIC or Second-in-Command), and flight destinations (coded as 0 for international and 1 for domestic).

In addition to the above control variables, we draw special attention to the role of total flight time (measured in hours), a crucial predictor of pilot's earnings. Firstly, flight time is the main factor generally used as license upgrade criteria from Commercial Pilot License (CPL) to Air Transport Pilot License (ATPL). According to the Civil Aviation Authority of Thailand regulation, for pilots to be qualified for ATPL (i.e., going through a flight test), they need to collect 1,000 – 1,500 hours of flight time. Secondly, flight time is a crucial criterion, which airline companies use for considering a captaincy promotion. Moreover, flight time is said to positively relate to pilot performance (Todd & Thomas, 2012). Indeed, more difficult flight missions would generally take longer hours for training and preparation (Quińones et al., 1995). Thus, flight time not only indicates the flying experience of each pilot but also determines their ability to handle unexpected events in-flight (You et al., 2013). Finally, flight time is used to determine levels of pilots' license and their ranks (Golaszewski, 1983).

Data Analytics

The analysis consists of descriptive statistics (i.e., means, standard deviation [SDs], frequency and range) and inferential statistics (i.e., hypothesis testing). First, in line with a conventional practice, monthly earnings were log-transformed before the analyses. Age was mean centered to create the interaction term. The control variables were first regressed on monthly earnings along with age and pilot type. Next, the interaction term was entered in the regression following the Moderated Multiple Regression (MMR) technique for the first hypothesis testing, which allow the simple relationship between the dependent variable and the independent variable to depend upon the level or degree of another independent variable, produced by Dawson (2014). For the second hypothesis testing of the study, simple slope test will be utilized. A simple slope test is defined as the regression of the outcome on the dependent variable on the predictor or the independent variable at a specific value of the moderator. All the analyses were conducted using R, a loyalty-free statistical computational language (R Core Team, 2021).

Results

Descriptive Statistics

Descriptive statistics for discrete data are presented in Table 1. Most pilot respondents were male (93.60%), holding a bachelor's degree or equivalent (75.40%). The majority of the pilots received sponsorship for flight training (58.50%), worked as Piot-in-Command (50.60%), held Air Transport Pilot License (53.80%), operated Airplane (76.60%) and flew for domestic flights (77.10%). Descriptive statistic (means and SDs) for continuous demographic data is shown in Table 2.

Table 1 Descriptive statistics for discrete demographic data

Discrete Variable (N = 593)	Frequency	Percentage
1. Gender		
- Male (1)	555	93.60
- Female (0)	38	6.40
2. Educational Levels		
- Bachelor Degree or Equivalent (1)	447	75.40
- Higher than Bachelor Degree (0)	146	24.60
3. Flight Training Funding		
- Organization Sponsorship (1)	347	58.50
- Self-funded (0)	246	41.50
4. Pilot Ranks		
- Pilot-in-Command (1)	293	50.60
- Second-in-Command (0)	300	49.40
5. Pilot License		
- Commercial Pilot License (1)	274	46.20
- Air Transport Pilot License (0)	319	53.80
6. Pilot Type		
- Airplane Pilot (1)	454	76.60
- Helicopter Pilot (0)	139	23.40
7. Flight Destinations		
- Domestic (1)	457	77.10
- International (0)	136	22.90

Hypothesis Testing

As shown in Table 3, all the independent variables were moderately correlated, suggesting that multi-collinearity was not a problem. As portrayed in Table 4, the estimated model was significant ($F = 33.17$, $p < .001$). As expected, age was found to be significantly and positively related to monthly earnings ($B = .23$, $p < .001$), while pilot type was also not significantly related to monthly earnings ($B = -.02$, $p = .55$). Total flight time also emerged as the factor in determining pilots' earnings ($B = .20$, $p < .001$). This model can explain about 28% of the variance (R^2) in earnings. There was no indication of multicollinearity as the variance inflation factor (VIF) of each predictor variable was less than 5 (Robinson & Schumacker, 2009). Therefore, the first hypothesis was supported.

As for the moderation effect (Table 5), the results showed that the estimated model was significant ($F = 29.7$, $p < .001$) The interaction term was significant in the predicted direction ($B = .14$, $p < .05$). This procedure resulted in a R^2 of 29 percent or a 1 percent increase in explained variance from the previous model. This suggests that the relationship between age and career success is stronger among airplane pilots (coded as 1) in comparison to helicopter pilots (coded as 0).

Table 2 Descriptive statistics for continuous demographic data

Continuous Variable ($N = 593$)	*Mean*	*SD*	Min	Max
1. Age (Years)	37.55	8.96	21	65
2. Tenure (Years)	13.26	8.99	1	45
3. Total Flight Time (Hours)	4,974.78	6,480.18	210	15,240
4. Monthly Income (Thai Baht)	144,788.70	128,296.71	25,000	350,000

Table 3 Bivariate correlation matrix

Variable (N = 593)	1	2	3	4	5	6	7	8
1. Gender	-							
2. Education	0.04	-						
3. Pilot Ranks	0.09*	0.01	-					
4. Flight Destination	-0.09*	0.07	0.04	-				
5. Age	0.12**	0.03	0.54**	-0.12**	-			
6. Total Flight Time	-0.01	0.03	0.42***	-0.25***	0.61***	-		
7. Pilot Type	-0.04	0.00	-0.21***	-0.28***	-0.18***	0.13**	-	
8. Objective Career Success	0.02	-0.08	0.34***	-0.26***	0.41***	0.43***	0.03	-

Note: Gender was coded as 0 for male and 1 for female; pilot ranks were coded as 0 for PIC (Pilot-in-Command) and 1 for SIC (Second-in-Command); flight destination was coded as 0 for international and 1 for domestic; pilot type was coded as 0 for helicopter pilots and 1 for airplane pilots.

***$p < .00$, **$p < .001$, *$p < .05$.

Table 4 Multiple regression

Variables	*b*	*B*	*SE*	*t*	*p* value
Intercept	1.11(10)[1]	-	2.15(10)[-1]	51.84	.00***
Control Variables					
Gender	-2.17(10)[-1]	-0.06	1.16(10)[-1]	-1.87	.06
Education	-1.17(10)[-1]	-0.06	6.50(10)[-2]	-1.80	.07
Pilot Rank	1.88(10)[-1]	0.11	6.83(10)[-2]	2.75	.00**
Flight Destination	-3.33(10)[-1]	-0.17	7.18(10)[-2]	-4.63	.00***
Total Flight Time	2.50(10)[-5]	0.20	5.94(10)[-6]	4.21	.00***
Main Variables					
Age	2.10(10)[-2]	0.23	4.47(10)[-3]	4.71	.00***
Pilot Type	-4.29(10)[-2]	-0.02	7.33(10)[-2]	-0.58	.55
R^2 = .28, Adj. R^2 = .27, *F*-test = 33.17, p < .00					

Note: *b* = Estimated Coefficient, *B* = Standardized Coefficient, *SE* = Standard Error, Gender was coded as 0 for male and 1 for Female; pilot ranks were coded as 0 for PIC (Pilot-in-Command) and 1 for SIC (Second-in-Command); flight destination was coded as 0 for international and 1 for domestic; pilot type was coded as 0 for helicopter pilots and 1 for airplane pilots.
*p < .05, ***p < .001.

Table 5 Moderated multiple regression

Variables	*b*	*B*	*SE*	*t*	*p*-value
Intercept	1.20(10)[1]	-	1.58(10)[-1]	75.94	.00***
Control Variables					
Gender	-2.31(10)[-1]	-0.07	1.16(10)[-1]	-2.00	.04*
Education	-1.06(10)[-1]	-0.05	6.50(10)[-2]	-1.64	.10
Pilot Rank	1.65(10)[-1]	0.10	6.94(10)[-2]	2.38	.01*
Flight Destination	-3.23(10)[-1]	-0.17	7.18(10)[-2]	-4.50	.00***
Total Flight Time	2.23(10)[-5]	0.18	6.07(10)[-6]	3.67	.00***
Main Variables					
Age	1.24(10)[-2]	0.14	6.17(10)[-3]	2.01	.04*
Pilot Type	-6.06(10)[-2]	-0.03	7.37(10)[-2]	-0.82	.41
Age x Pilot Type	1.49(10)[-2]	0.14	7.37(10)[-3]	2.03	.04*
R^2 = .29, Adj. R^2 = .28, *F*-test = 29.7, p < .00					

Note: *b* = Estimated Coefficient, *B* = Standardized Coefficient, *SE* = Standard Error, Gender was coded as 0 for male and 1 for Female; pilot ranks were coded as 0 for PIC (Pilot-in-Command) and 1 for SIC (Second-in-Command); flight destination was coded as 0 for international and 1 for domestic; pilot type was coded as 0 for helicopter pilots and 1 for airplane pilots.
*p < .05, ***p < .001.

Apart from those main variables, the study also controlled for several demographic variables that may influence pilots' career success including gender, education, pilot ranks, and flight destinations. Control variables in this study were held constant to prevent them from interfering with the result.

The negative values of Flight Destination coefficients were noted due to the negative effect of the relationship. This suggested that as the independent variable increased the dependent variable tended to decrease. It implied that when the flight destination was domestic, pilots' monthly income tended to decrease.

The insignificance of pilot type indicated that this independent variable did not significantly affect objective career success and the negative vales of Pilot Type coefficient were also noted due to the negative effect of the relationship. This indicated that when the pilot type is an airplane pilot, objective career success tended to decrease.

To test the second hypothesis, a simple slope test was analyzed to provide a graphical depiction of interactive effects (Dawson, 2014). As shown in Table 6 and Figure 1, the slope for airplane pilots (B = 0.03, p < .00) were more positive than the slope for helicopter pilots (B = 0.01, p < .05). Therefore, the second hypothesis was fully supported.

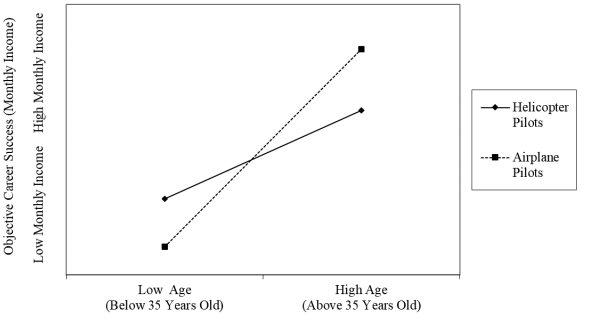

Figure 1 Interactive Effect of Age and Pilot Type on Career Success (measured in terms of monthly earnings)

Table 6 Simple slopes analysis

No.	Slope	*EST*	*SE*	*t*	*p*-value
1	Slope of age for helicopter pilots (0)	0.01	0.01	2.01	.04*
2	Slope of age for airplane pilots (1)	0.03	0.01	5.04	.00***

Note: *$p < .05$, ***$p < .001$.

Discussion

This study was based on anecdotal evidence that airplane pilots tend to make a better living than do helicopter pilots. We tested this idea in a moderated multiple regression and simple slope testing framework, in which pilots' age was hypothesized to be a predictor of their monthly earning, an indicator of one's career success, and pilot type was hypothesized to be a moderator in this relationship. The results provide full support for the proposed hypotheses after controlling for several important demographics as well as other control variables that are specific to a pilot's career. The result from the analysis process amplified several previous studies (Ginieis et al., 2013; Hansen & Moskowitz, 2006; Lambeth et al., 2022). One previous study indicated that an onshore helicopter pilot job was mostly part time, insecure and helicopter pilots earn less than their fellow offshore helicopter pilots or airplane pilot (Lutte, 2018). Another research also mentioned that there were a lot of differences in term of earning among different types of flight operation (Bye et al., 2018). Moreover, this study was also relevant with previous survey in terms of salary, the more experience pilots attained, the more earnings they possibly attained (Dillon, 2007).

Research Implications

Theoretical Implications

First, the study provides an important insight into the role of pilots' age in predicting their career success measured in terms of monthly learnings. This finding is consistent with previous research regarding objective career success (Koch et al., 2021; Rasdi et al., 2009). More importantly, the results revealed that the effect of pilots' age on their monthly earnings depend on the type of pilots. While the direct effect of pilot type was non-significant, the results showed that airplane pilots tend to experience a steeper growth in their earnings in relation to their age. While airplane pilots earn lower monthly earnings at the beginning of their career in comparison to helicopter pilots, as they progress through their career journey, their monthly earnings ultimately surpass those of helicopter pilots. Particularly, a one-year increase in airplane pilots' age leads to an increase of 3,000 to 10,000 Baht in their monthly earnings, holding everything else constant. For helicopter pilots, a one-year increase in age leads to an increase of 2,000 to 5,000 Baht in their monthly earnings, holding everything else constant. Although there are anecdotal reports that airplane pilots, in comparison to helicopter pilots, make significantly more earnings in the long run, this study is among the very first to provide direct empirical evidence about the differences in their career trajectories using large-scale survey data from multiple airlines and air operators. Our findings also provide further evidence in relation to the inconsistent findings regarding the age-career success relationship observed in previous research (Baruch et al., 2014; Zhao et al., 2021), which could be due to the omission of important context-specific variables.

Apart from the above findings, other significant findings also deserve attention. First, total flight time emerged as the most influential factor in determining a level of monthly earnings. Although pilots' age and total flight time were highly positively correlated ($r = 0.61$), it is interesting to observe that they each explained incremental variance in pilots' earnings. Indeed, pilots working for scheduled flight operations as in typical commercial airlines will gain more experiences than those working for non-schedule flight operations such as in air taxi, fire-fighting, parapublic and paralegal support flights. Furthermore, we found that pilot ranks and flight destinations are crucial factors that determines pilots' monthly earnings. Specifically, pilots holding air transport pilot license (ATPL) were found to earn more than do pilots holding commercial pilot license (CPL) due to the allowance and per diem associated with the license. This is not surprising given that pilots holding ATPL are flight commanders. Furthermore, pilots flying international routes were found to make significantly more earnings that those flying domestic routes due to the additional pay that they receive for their working hours (i.e., per diem). Typically, scheduled flight operations will put less experienced flight crews into domestic flights and smaller aircraft first to provide them with necessary flight experience. Only when more flight hours are logged, can they be upgraded to international flight operations

with more sophisticated aircraft. Therefore, highly experienced first officers and senior captains in international flight operations will normally make more earnings than those flying domestic routes.

In the aspect of pilot first flying job, even if the helicopter flight training cost is more expensive than the airplane cost due to the maintenance and operating cost of the helicopter, surprisingly, according to the analysis result and previous empirical evidences, helicopter pilots tended to earn more during the very first step of their career because freshly graduated helicopter pilots are always assigned to fly a 'real aircraft', which means the helicopters that can truly transport passenger, cargo or any utility mission like Robinson R44, R66, Bell Jet Ranger, Eurocopter AS350, right after graduation. With 'real aircraft' and 'real operation', this leads to a 'real job' that pays decently (Kaminska et al., 2021). Airplane pilots mostly fly single engine piston aircraft like Cessna C152 or C172 as a flight instructor for their living right after graduation. Flight instructors are always underpaid and it is not considered as a 'real job' compared to their helicopter pilot counterparts (Bjerke & Malott, 2011).

Finally, we also found that women pilots tend to earn less than do men pilots. This provides additional evidence, which is consistent with previous research (Germain et al., 2012; McCarthy et al., 2015), that after considering everything else, women pilots still experience significant barriers in their careers.

Practical Implications

The findings showed that, over the long haul, airplane pilots tend to earn significantly more than do helicopter pilots. On the surface, this suggests that those who are interested in a pilot career may find it financially wise to make an early investment on their training to ensure a more lucrative career as an airplane pilot. In the Thai aviation industry context, a seasoned airplane commander can make well over 4 million baht per year, although it may take longer for them to get to the top than helicopter pilots. By comparison, a mature experienced helicopter commander would generally earn approximately 2.5 million Baht per year. However, it is important to note that each type of pilot is associated with different career-related benefits. Helicopter pilots have an opportunity to fly in a dynamic environment, landing practically anywhere, and their missions are typically short-haul and faster. Moreover, during COVID-19 pandemic, which restricted international transportation, helicopter pilot jobs were more secure than their airplane pilot counterparts as the helicopter short-haul, air taxi, chartered flight or even offshore oil and gas operation were still operating. This phenomenon secured helicopter pilot jobs even in the very hard times. In contrast, airplane pilots must invest a significant amount of money in their training while the job market is extremely competitive. Furthermore, airplane pilots' flying generally involves straight-line distances at 30,000 feet on autopilot. Nevertheless, if there will be any critical pandemic that deters mass public transportation like COVID-19 in the unforeseen future, the futuristic airplane pilot seats in glamourous big jetliners out there might not be as secure as conventional pilot seats of those tiny helicopters (Vulturius et al., 2024).

More importantly, at the end of the day, money may not be the primary factor that determines whether one decides to be a helicopter pilot or airplane pilot. Thus, the current findings should be considered as a preliminary glimpse into the career trajectories of both types of pilots and not as a definite answer to one's career choice.

Study Limitations and Avenues for Future Research

An important strength of this current research is that age and the type of pilots are truly exogenous variables that cannot be influenced by other extraneous variables, which provides some confidence about the internal validity of the findings while also alleviating concerns about common method bias (CMB). Despite these strengths, it is important to acknowledge that the study sample was collected from pilots in a single country, and the results may not be generalizable to other aviation settings where the labor markets and costs of living may be entirely different. Furthermore, it is important to note that the current sample is heavily male-dominated with less than 7% of women pilots. Thus, it is likely that pilots' earnings, on average, would be higher in the Western context, where women pilots experience fewer barriers in their career. Future studies should mitigate those weaknesses in this study aforementioned.

Conclusion

In this research, the study examined the much-investigated relationship between age and career success. Our findings revealed that pilots' age significantly predicted their objective career success measured in terms of their monthly earnings. Furthermore, the analysis result found that, in the long run, airplane pilots tend to

enjoy a steeper growth in their earnings in comparison to helicopter pilots. These findings do not imply that being an airplane pilot is a better career choice, but they do highlight that there are significant underlying differences in a pilot's career path, which prospective pilots could take into consideration.

Conflict of Interest

The author declares that there is no conflict of interest.

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"I can do all things through Christ which strengthened me."

Philippians 4:13

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