

#### SCHOLARLY COMMONS

International Journal of Aviation, Aeronautics, and Aerospace

Volume 1 | Issue 2

Article 1

3-16-2014

# Consumer Perceptions of Starting Regional Pilot Pay Given Additional Qualifications

Scott R. Winter *Florida Institute of Technology*, scott.winter@mac.com Stephen Rice *Florida Institute of Technology*, srice@fit.edu Timothy G. Rosser *Florida Institute of Technology*, trosser@fit.edu Rian Mehta *Florida Institute of Technology*, rianmehta91@gmail.com Ayu Rice *Florida Institute of Technology*, Ayucrice@gmail.com

Follow this and additional works at: https://commons.erau.edu/ijaaa

Part of the Other Psychology Commons, and the Other Social and Behavioral Sciences Commons

#### Scholarly Commons Citation

Winter, S. R., Rice, S., Rosser, T. G., Mehta, R., & Rice, A. (2014). Consumer Perceptions of Starting Regional Pilot Pay Given Additional Qualifications. *International Journal of Aviation, Aeronautics, and Aerospace, 1*(2). Retrieved from https://commons.erau.edu/ijaaa/vol1/iss2/1

This Article is brought to you for free and open access by the Journals at Scholarly Commons. It has been accepted for inclusion in International Journal of Aviation, Aeronautics, and Aerospace by an authorized administrator of Scholarly Commons. For more information, please contact commons@erau.edu.

## Consumer Perceptions of Starting Regional Pilot Pay Given Additional Qualifications

#### **Cover Page Footnote**

The authors wish to thank the 1st annual Aviation, Aeronautics, and Aerospace International Research (A3IR) Conference held January 17th-18th, 2014 in Phoenix, AZ and presented by Embry-Riddle Aeronautical University, where much of this data was presented.

The airline industry in the United States is comprised of a network of large, major and smaller, regional airlines. Pilot pay varies significantly between these two airline types. Data available from the United States Department of Labor's Bureau of Labor Statistics (BLS) indicate that the median annual wage for pilot flight crew in 2012 was \$114,200 USD (BLS, 2014). However, when regional airline pilot compensation is examined exclusively, the disparity between regional and major airline pilot pay becomes evident.

To date, no study has examined consumer perceptions on the issue of pilot pay, and little theoretical foundation exists within the literature to support whether pilots of regional airlines, or those just starting out, should receive more compensation. Therefore, the purpose of this descriptive research was to examine consumer perceptions on pilot pay and their willingness to accept fare or fee increases to support increased pilot pay. Additionally, the research sought to identify predictor variables of those consumers willing to accept fare and fee increases. The methodology and results of these two studies are provided as well as the background literature on pilot compensation, work environment, and new pilot training legislation.

#### **Determining Pilot Pay, and Work Environment**

According to the Airline Pilots Association International (ALPA) (2014), the majority of new airline pilots begin their career at a regional airline. Regional airlines typically fly smaller jet or turboprop aircraft on shorter routes than those operated by major airlines. Regional airlines enhance the air travel service provided by major airlines through flying to smaller communities that do not provide adequate passenger loads to justify larger aircraft. The regional airlines carry their passengers to a larger hub airport where a partner major airline provides service on longer routes (Wensveen, 2011).

Airline pilot pay scales vary by type of airline. Regional airline pilots earn considerably less money than their major airline counterparts. Average pay for a regional airline first officer is approximately \$20,000 and approximately \$55,000 for a captain. Depending on individual airline contracts, pilot pay increases gradually each year the pilot is employed (ALPA, 2014).

The work environment for pilots is complex and challenging (Fanjoy, Harriman, & DeMik, 2010). According to the Bureau of Labor Statistics (2014), airline pilots fly an average of 75 hours a month with additional duty requirements of 150 hours yet Federal regulations allow for an airline pilot to fly for as many as 100 hours in a month. Airline pilots frequently fly multiple-day

trips requiring them to be away from home for extended periods of time. During these trips they fly in all kinds of weather in and out of busy airports (BLS, 2014).

Flying for an airline does not involve great physical effort, but does demand a high level of concentration which can lead to mental stress (BLS, 2014). An additional challenge for airline pilots is fatigue. In a "survey of 1,424 regional airline pilots, 89 percent of the respondents identified fatigue associated with flight operations as a moderate to serious problem" (Fanjoy, Harriman, & DeMik, 2010, p. 16). Fatigue for regional airline pilots is considered to be a result of a high workload from several flights a day requiring many takeoffs and landings, a high stress phase of flight. Additionally, regional airline pilots tend to work irregular work hours (Fanjoy, Harriman, & DeMik, 2010).

Pilot fatigue has been identified as a contributing factor in several recent accidents and incidents. In 2007, a Pinnacle Airlines aircraft was involved in a runway overrun in Michigan. Also in 2007, a Go! Airlines overflew its destination of Hilo Hawaii because the pilots had fallen asleep (Fanjoy, Harriman, & DeMik, 2010). In 2009, Colgan Air flight 3407 crashed on approach in Buffalo, NY killing all 49 persons on board and one person on the ground (Fanjoy, Harriman, & DeMik, 2010; NTSB, 2010). The fallout from this particular accident has led to significant changes to pilot hiring requirements and pilot rest rules.

Both the captain and the first officer of Colgan 3407 lived in cities other than their crew base of Newark, NJ. The captain lived in the Tampa Bay area of Florida and the first officer lived in the Seattle, WA area. The first officer and her husband lived with her parents (NTSB, 2010). Both the captain and first officer commuted to their crew base in Newark, which is a common practice among airline pilots. The National Transportation Safety Board (NTSB) (2010) reported that the captain of Colgan 3407 had finished a two-day trip the day before the accident, returned to duty on the day of the accident but had spent his off-duty time resting in the crew room in the Newark airport. The first officer had arrived at the Seattle airport at 5:30 PM PST on the day before the accident flying first from Seattle to Memphis TN on a cargo flight, arriving at 11:30 PM PST. The first officer then flew as a passenger on another cargo flight from Memphis to Newark, departing at 4:18 AM CST and arriving in Newark at 6:23 AM EST. She was then observed resting in the crew room either sleeping on a couch or watching television. Colgan 3407 pushed back from its gate at Newark at 7:45 PM and crashed during approach at Buffalo, NY at 10:17 PM (NTSB, 2010).

#### New Pilot Training Legislation and Airline Hiring Qualifications

In the wake of the Colgan accident, pilot hiring requirements and rest rules have been amended to be more restrictive. After the facts of the accident were brought to light, Federal legislators began developing new laws related to these pilot requirements. Public Law 111-216 was enacted August 1, 2010 and addressed multiple issues related to airline safety. Titled the Aviation Safety and Federal Aviation Administration Extension Act of 2010, it required the Federal Aviation Administration (FAA) to address issues of, among others, pilot training records, pilot fatigue, flight crewmember screening and qualifications, and airline transport pilot certification (PL111-216, 2010).

Public Law 111-216 led to changes to the FAA's regulations regarding the certification or licensure of airline pilots. Historically, a pilot could be hired by a regional airline with a Commercial Pilot Certificate, which requires a minimum of 190 hours and 250 flight hours when trained under Title 14 of the Code of Federal Regulations, part 141 and part 61, respectively. The new regulations enacted in response to PL111-216 now require that any pilot hired by any airline must hold an Airline Transport Pilot Certificate, which requires a minimum of 1,500 flight hours (FAA, 2013).

Legislative changes have increased the training and experience requirements for pilots hired at any airline, including regional airlines. These requirements represent additional training and cost that a prospective airline pilot must incur. While the training and experience levels required of a new airline pilot have increased, starting pilot pay has not.

#### **Current Study**

No prior research has examined the relationship between how much starting salary first officers make, consumer perceptions, and whether consumers would be willing to accept an increase in fares or fees to support an increase in pilot pay.

#### **Preliminary Data**

We conducted a preliminary pilot survey with 42 participants solicited from Amazon's <sup>®</sup> Mechanical Turk <sup>®</sup> to determine if consumers agreed or disagreed with a general pay raise for first officers. The purpose of this step was to determine if participants felt pilots should receive more pay and to justify the more in depth surveys completed in Studies 1 and 2. Specifically, participants were asked two questions. The first question was, "Public Law 111-216 recently increased the number of flight hours required for pilots to serve as an airline pilot. The previous required flight hours was 250, while the current requirement is 1500. Based on this information, do you think co-pilots should get an increase in pay or a decrease in pay or neither?" Participants were given three choices: a) first officers should get an increase in pay, or c) first officer pay should remain the same. The order of the responses was randomized to avoid order effects. The results of this survey showed that 74% of the participants reported that first officers should get an increase in pay, with zero participants reporting a preference for a decrease in pay.

The second question was, "Based on this information, how strongly do you agree that co-pilots should get an increase in pay or a decrease in pay?" Participants provided answers based on a 7-point Likert-type scale from "Extremely agree with increase in pay" (+3) to "Extremely agree with decrease in pay" (-3), with a zero neutral option of "Neutral (no increase or decrease in pay)". The results of this survey showed that the average rating was 1.48 (SD = 1.04), indicating that, in general, participants felt fairly strongly about increasing the pay of first officers.

Based on these preliminary data, we decided to assume that most participants would either prefer to increase pay or leave it as is. Thus, the wording of the questions in the following two studies centered on that assumption.

Study 1 was designed to initially determine if consumers thought first officers should make more starting salary due to recently increased qualifications. Study 2 sought to replicate the findings of Study 1, but additionally investigated 1) an in-depth review of what fares/fees participants would accept increased costs (Appendix A), and 2) gathered demographics to attempt and determine if there were any predictor variables that could help determine which consumers may be most likely to accept increased fares/fee (Appendix B). The research questions guiding Study 1 were:

- 1. Do participants believe that first officers should make more money?
- 2. Are participants willing to pay additional fares to offset this cost of increasing first officer pay?
- 3. What potential influences and relationships exist concerning participant views on first officer compensation and air travel costs?

Secondary to these questions, quantitative analysis was utilized to evaluate potential differences in participant sentiments based upon the factors of gender

and ethnicity. The following hypotheses were used to guide this portion of the analysis:

 $H_0$ : There are no significant differences in participant opinions on increasing first officer pay and their willingness to pay for these increases among their gender and ethnicity.

 $H_1$ : There are significant differences in participant opinions on increasing first officer pay and their willingness to pay for these increases among their gender and ethnicity.

#### Study 1 - Methods

#### **Participants**

Using an online convenience sample, 257 (164 males and 93 females) participants from the United States took part in the study. This sample size was based deemed to provide adequate power when assuming a medium effect size. The mean age was 30.03 (SD = 9.77). Participants were solicited from Amazon's **(Decentrementalistic)** Mechanical Turk **(Decentrementalistic)** (MTurk) which is a global online portal where persons (Turkers) can complete human intelligence tasks (HITs) in exchange for a small monetary compensation. MTurk has been demonstrated to provide reliable data, equivalent to laboratory data (Buhrmester, Kwang & Gosling, 2001; Germine, et al., in press).

#### **Materials and Procedure**

Participants first signed an electronic consent form stating that they were at least 18 years of age. They were then told the following: *Public Law 111-216 recently increased the number of flight hours required for pilots to serve as an airline pilot. The previous required amount of flight hours was 250, while the current requirement is 1500. However, despite the increased flight hour requirements, the current average starting salary for a new co-pilot remains at approximately \$21,000 in the USA.* Participants were then asked how much of a pay raise they thought new first officers should receive as a result of these new flight hour requirements, and how much of a fare increase they would be willing to pay to finance an increase of the co-pilot's starting salary. These two questions were randomly ordered for each participant. For both questions, participants gave their answers in terms of percentage increases. Lastly, participants were asked for their demographic information and dismissed. The Study 1 instrument is located in Appendix C.

#### Study 1 – Results

On average, participants responded that new first officers should receive a 39.0% pay raise due to the new flight hour regulations. They also responded that they would be willing to be subject to a 19.5% fare increase to help pay for the additional salary increase. Via an analysis utilizing ANOVA, there were no significant differences across gender, F(1, 255) = .72, p = .40, or ethnicity, F(5, 251) = .39, p = .86.

#### Study 1 – Discussion

The results of Study 1 indicate that, in general, participants felt starting first officers should make approximately 39% more in starting salary due to new legislation that has increased hiring qualifications. Participants also indicated that they would be willing to accept a fare increase of approximately 19.5% to help finance this increase in salary. Therefore, we accomplished Study 2 to investigate this relationship further.

#### **Study 2 – Introduction**

Study 2 sought to replicate the findings of Study 1, but additionally gathered more information on the fare and fee increases that consumers would be willing to accept. Our original hypothesis remained the same as in Study 1 that consumers would think first officers should make more money, however, we modified our second hypothesis that consumers would be willing to accept an increase in fare/fees to finance the increase in salary. Additionally, it was hypothesized that key variables could be identified to help predict a participant's willingness for a fare/fee increase. A descriptive regression analysis was completed to identify these possible predictors

#### Study 2 – Methods

#### **Participants**

Using an online convenience sample, 160 (64 males and 96 females) participants from the United States took part in the study. This sample size was based a power analysis designed to detect a medium effect size. The mean age was 34.14 (*SD* = 12.67). Participants were solicited from Amazon's **®** Mechanical Turk **®** (MTurk).

#### **Materials and Procedure**

Study 2 was identical to Study 1 with the following exceptions: 1) questions were added regarding participants' willingness to pay additional airline fees (see Appendix A for a complete list); and 2) additional demographics questions were asked to determine what predictors might significantly predict the questions about pilot pay raise and fare/fee increases. These questions asked about Gender, Age, Number of Flights per Year, Flight Miles per Year, Income, Political Orientation, Ticket Class Usually Purchased, Number of Children, Relationship Status, and Most Common Purpose of Flying (business versus pleasure) as predictors. The Study 2 instrument is located in Appendix D.

#### Study 2 – Results

#### **Descriptive Statistics**

The data from Study 2 are similar to that of Study 1 and can be found in Table 1. On average, participants responded that new first officers should receive a 34.0% increase in pay and they would be willing to be subject to a 12.3% fare increase to help pay for the additional salary increase. Participants were also willing, in general, to be subjected to increases in a variety of airline fees. These ranged from a 10.5% increase in checked baggage fees to a 23.1% decrease in earned frequent flyer miles. The average percentage of increase in fare/fees (or decrease in frequent flyer miles) was 16.7%.

#### Table 1

Question	Study 1 Percentage	Study 2 Percentage
Pay Raise	39.0%	34.0%
Fare Increase	19.5%	12.3%
Fee Increase	N/A	17.1%

Summary of Study 1 and 2 results on average pay raise, fare, and fee increase percentages.

#### **Regression Analyses**

Table 2 contains a correlation matrix showing how each predictor variable correlated with each of the three criterion variables (Pay Raise, Fare Increase, and Average Fare/Fee Increase). A regression analysis of the dataset was conducted using Pay Raise as the criterion variable, and Gender, Age, Number of Flights per Year, Flight Miles per Year, Income, Political Orientation, Ticket Class Usually Purchased, Number of Children, Relationship Status, and Most Common Purpose of Flying as predictors. We used backward stepwise regression to eliminate ineffective predictors. The resulting model included zero of the original 10 predictors, F(10, 159) = 1.50, p = .14.

#### Table 2

Results of regression analysis in Study 2.

Criterion Variables	Predictors	β	t-test	р	$r^2$
Pay Raise	Zero predictors			NA	
Fare Increase	Ticket Class	.307	<i>t</i> (149)=16.40	<.001	9.5%
Average Fare/Fee Increase	Ticket Class	.267	<i>t</i> (149)=3.59	<.001	13.0%
	Income	.229	t(149)=3.07	<.001	101070

A second regression analysis of the dataset was conducted using Fare Increase as the criterion variable. The resulting model included one of the original 10 predictors. Ticket Class significantly predicted Fare Increase scores,  $\beta = .307$ , t(149) = 4.05, p < .001. This model accounted for 9.5% of the variance in the criterion, F(1, 159) = 16.40, p < .001.

A third regression analysis of the dataset was calculated using the Average Fare/Fee Increase as the criterion variable. A Cronbach's Alpha test on all the variables involving fare or fee increases was also conducted resulting in a value of .93, allowing the for the assumption that the variables were internally consistent. The resulting model included two of the original 10 predictors. Ticket Class,  $\beta = .267$ , t(149) = 3.59, p < .001, and Income,  $\beta = .229$ , t(149) = 3.07, p < .001, both

significantly predicted Fare/Fee Increase scores. This model accounted for 13.0% of the variance in the criterion, F(2, 159) = 11.72, p < 0.001.

#### **Study 2 – Discussion**

The findings from Study 2 mostly replicated those from Study 1, although there was a slight decrease in percentage of both how much additional salary participants thought starting first officers should make and in how much additional fare increase they were willing to tolerate. Participants did complete a detailed breakdown of what fees they would be most and least willing to have increased, and these ranged from 10.5% for an increase in checked bag fee to a 23.1% decrease in earned frequent flyer miles. Three regression analyses were completed on pay raise, fare increase, and average fare/fee increase. No predictor variables were identified for pay raise. Ticket class purchased was determined to be a predictor variable for fare increases, explaining 9.5% of the variance, and ticket class and income were predictor variables that explained 13% of the variance for average fare/fee increase.

#### **General Discussion**

It has started to emerge as common knowledge that entry-level airline pilots, especially those flying for regional airlines, receive fairly low wages annually, compared to the magnitude and responsibility of tasks placed under their care. It has been demonstrated from Fanjoy, Harriman, and DeMik (2010) that the work of a pilot is complex and challenging, and the current study aims to research consumer perceptions on whether they believe entry-level pilots are paid an appropriate wage; something that has not before been researched. The purpose of this study was to provide a preliminary understanding of consumer's perceptions on the conditions of the co-pilot pay, and determine whether any demographic predictors could be identified as those willing to compensate for the same with increased fares and fees.

Study 1 was purely used to determine the consumer's perception, and it was hypothesized that participants would indicate that starting first officers should make more money, but conversely, would not be willing to pay additional fares to offset this cost. The results supported this hypothesis and as stated earlier, the participants felt that first officers should earn approximately 39% more wages in wages for starting salary. As in any industry, with an increase in qualifications required to obtain the job, there is the trend to receive higher wages. According to the National Center for Education Statistics (2011), the same trend is observed through education, with Master's degree holders earning higher, on average, starting wages than those with Bachelor's degrees earning more than those with

associate degrees. Additionally, due to the individualistic culture of the United States, it was predicted that even though the participants believed that the first officers deserved more money, they would not be willing to suffer economically with higher fares and fees to compensate for the same (Hofstede, 1980). Interestingly, this hypothesis was not supported by the results of Study 1. The participants were agreeable to bear a 19.5% fare increase to aid in the solution of this issue. The participants indicated they might be receptive to higher wages for pilots. These wages would alleviate the financial challenges faced by these pilots and potentially reduce issues related to pilot fatigue. Additionally, a wage increase may result in safer flight operations.

Along the lines of the original hypothesis, the participants were not willing to bear the complete burden of the total suggested wage increase, however, they were willing to accept some level of fare increase. This may indicate that the participants recognize that an increase in first officer salary may not be possible without also having an increase in fares.

Study 2 was fairly similar to Study 1. With the prediction that the participants would feel an increase in starting wages was necessary, it was hypothesized that the consumers would be accepting of fare and fee increases. Additionally, Study 2 aimed at conducting a regression analysis of several different demographic variables in the hopes of identifying which demographic descriptors would predict a participant's willing to incur the fare and fee increases to help mitigate the issues. Consumers were still only willing to incur an increase of 16.7% in fares and fees, even though they believed the pilots should receive approximately 34% more in wages, keeping the trend that consumers are only willing to pay a part of the percentage in fare increase.

Three regression analyses were completed on pay raise, fare increase, and average fare/fee increase. No predictor variables were identified for pay raise. Ticket class purchased was determined to be a predictor variable for fare increases, explaining 9.5% of the variance. An explanation to be considered for this occurrence is that a primary distinction of the ticket classes exists in terms of the reason for travel. When considering business travel, it may be presumed that the person's corporation will bear the cost of the ticket, and therefore is not personally affecting the individual's own finances. With that in mind, it could be said that since the individual is not personally bearing the increase in costs, he/she is willing to accept a higher airfare, compared to those in the economy section that may not be willing to personally incur the increase in airfare costs.

However, ticket class and income were predictor variables that explained 13% of the variance for average fare/fee increase. As in the previous case, the ticket class has a bearing on the decision presumably due to the fact that one case will involve an individual to incur the cost personally, versus a corporation purchasing the cost of the ticket. With an increase of income, comes a greater capability to afford more expenses, and this demographic was a predictor of increases in fares and fees. Disposable income may lead an individual to be more likely to accept higher fares and fees, and the effect of such an increase is not financially critical to the individual.

Consumer perceptions can be fairly complex, and it is important for the study to thoroughly understand the relationships that exist between the demographic predictors and the conditions. Future studies can delve into other demographics in order to identify target markets for airlines to maximize their sustainable economic structures such as expanding beyond the characteristics of those participants that complete human intelligence tasks online. This study also succeeds in educating more individuals about the salaries of entry-level first officers, and creates awareness of certain conditions prevailing within the aviation industry.

#### **Practical Implications/Limitations**

The current study completed an initial examination of consumer opinions on co-pilot starting salary and fare/fee increases. No study to date has examined the relationship between these variables. The findings of this study may be helpful moving forward as airlines deal with having to recruit more qualified pilots to fill open positions. If salary increases are needed to recruit qualified applications, it appears, at least from this group of participants, that consumers would be willing to tolerate some increase in fares/fees to address this issue. However, further research should be completed to diversify the population, verify the findings of this study, and attempt to expand on the generalizability of these results.

Additionally, this study is limited by the fact that the results are a one-time snapshot of consumer perceptions over the date and time this study was completed. Additionally, the authors recognize that the drivers of pilot pay are influenced by a number of variables such as demand, supply, union negotiations, and management policies. Furthermore, the amount/percentage that consumers would be willing to pay extra to reduce this problem would also be incorporated into a larger economic principle. The authors recognize that additional data is needed to determine how this consumer perspective relates to the economic model of fares, fees, and salaries. However, it is the fact that consumers indicate a willingness to respond to this issue and would accept higher fares/fees is what is believed to be the interesting outcome from this research and a topic that has never previously been researched. Further research can examine how this knowledge relates and interacts with the larger economic principles that influence the airline industry and to examine how these findings could be applied.

It is recognized that financial items, such as those examined in this study, are dynamic situations, and furthermore, there may be a discrepancy in what consumers say they will do in a survey environment and what they may actually do in a real-world context. Additional research should be accomplished to see how this study's results could be practically accomplished or administered in a real-world airline setting. Finally, since the instrument was created and used for the first time with these two studies, it is possible that language within the instrument may have biased participants. Future research should be completed to see how consumer perception's change over time and to verify the findings of these studies.

#### Conclusions

The aim of this study was to further the industry's understanding of the consumer's perception of co-pilot starting salaries. By using a two-study approach, it also aimed to understand which demographic variables are more likely and/or willing to accept increases in fare and fees to compensate for the increase in wages. The study shows that, on average, consumers believed that first officers deserve higher initial wages, but were only willing to accept increases in fares and fees of approximately half the desired increase amount. Additionally, it was found through the regression analysis that ticket class purchased was determined to be a predictor variable for fare increases, and ticket class and income were predictor variables for average fare/fee increase.

#### **Author Bios**

Dr. Scott R. Winter is an Assistant Professor at the Florida Institute of Technology. He completed his Ph.D. in Aviation Technology from Purdue University in 2013. His research interests have centered on decision-making, pilot training, and aviation human factors.

Dr. Stephen Rice is an Associate Professor at Florida Institute of Technology. He received his Ph.D. in Human Factors from the University of Illinois at Urbana-Champaign in 2006. His research interests include aviation psychology, automation, trust, stigmas, and human performance.

Mr. Timothy G. Rosser is an assistant Professor at Florida Institute of Technology. He received his MBA in Finance from Marywood University in 2004. His research interests include business best practices, pilot training and pilot operations.

Mr. Rian Mehta is a graduate student at the Florida Institute of Technology pursuing a Master's degree in Aviation Safety. He received his Bachelor's Degree in Aviation Management with Flight from the Florida Institute of Technology in 2013. His research interests include automation, pilot fatigue, and decisionmaking in the cockpit.

Ms. Ayu Rice is a graduate student at Florida Institute of technology in I/O Psychology. She received her B.A in Psychology from New Mexico State University in 2012.

#### References

- Airline Pilots Association International (ALPA). (2014). Retrieved from: http://www.clearedtodream.org/BecomeAnAirlinePilot/TypesofAirlinePil otJobs/tabid/1273/Default.aspx
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality data? *Perspectives on Psychological Science*, 6(3), 3-5. http://dx.doi.org/10.1177/1745691610393980
- Bureau of Labor Statistics (BLS). (2014). Retrieved from: http://www.bls.gov/ooh/transportation-and-material-moving/airline-andcommercial-pilots.htm
- Fanjoy, R. O., Harriman, S. L., DeMik, R. J. (2010). Individual and environmental predictors of burnout among regional airline pilots. *International Journal of Applied Aviation Studies*, 10(1), 15-30.
- Federal Aviation Administration (FAA). (2013). *Advisory circular 61-139*. Washington, DC: Author.
- Germine, L., Nakayama, K., Duchaine, B.C., Chabris, C.F., Chatterjee, G., & Wilmer, J.B. (in press) Is the web as good as the lab? Comparable performance from web and lab in cognitive/perceptual experiments. *Psychonomic Bulletin & Review*.
- Hofstede, G. (1980). Motivation, leadership and organization: do American theories apply abroad? *Organizational Dynamics*, *9*(1), 42-63. http://dx.doi.org/10.1016/0090-2616(80)90013-3
- Jackson, C. A., Earl, L. (2006). Prevalence of fatigue among commercial pilots. *Occupational Medicine*, 56(4), 263-268. http://dx.doi.org/10.1093/occmed/kql021
- National Center for Education Statistics (NCES). (2011). *Fast facts*. Retrieved from: http://nces.ed.gov/fastfacts/display.asp?id=77
- National Transportation Safety Board (NTSB). (2010). Loss of control on approach: Colgan Air, Inc. Washington, DC: Author.

Winter et al.: Pilot Pay

Wensveen, J. G. (2011). *Air transportation: A management perspective* (7<sup>th</sup> ed.). Burlington, VT: Ashgate Publishing Company.

## Appendix A

Criterion Variables	Mean % Increase (SD)		
Pay Raise	34.04 (25.96)		
Fare Increase	12.34 (15.72)		
Checked Baggage Fees	10.49 (15.61)		
Overweight Baggage Fees	14.93 (19.56)		
Earned Frequent Flyer Miles	23.09 (26.03)		
Additional Miles	16.04 (19.26)		
Early Boarding Fees	17.79 (22.54)		
Premium Seat Fees	21.43 (22.62)		
Onboard Food Cost	15.31 (18.71)		
Onboard Beverage Cost	16.84 (20.05)		
Inflight WIFI	16.02 (19.72)		
Inflight Entertainment	18.93 (22.44)		

## Appendix **B**

Predictors	Pay Raise	Fare Raise	Avg. Fee/Fare	
Gender	009	103	056	
Age	139	087	087	
Flights Per Year	095	030	037	
Miles Per Year	034	.013	.010	
Income	.011	.125	.242**	
Political Orientation	146	.006	018	
Ticket Class	.113	.307**	.279**	
Number of Children	108	.001	035	
<b>Relationship Status</b>	107	052	147	
Purpose of Flight	075	161*	146	

Correlations between predictor and criterion variables from Study 2

\* Correlation is significant at the 0.05 level (2-tailed). \*\* Correlation is significant at the 0.01 level (2-tailed).

### Appendix C

#### Survey Questions from Study 1

1) How much of a PAY RAISE do you think new first officers should receive as a result of these new flight hour requirements?

2) How much of a FARE INCREASE would you be willing to pay to finance the increase of the co-pilot's starting salary?

#### Appendix D

#### Survey Questions from Study 2

1) How much of a PAY RAISE do you think new first officers should receive as a result of these new flight hour requirements?

2) How much of a FARE INCREASE would you be willing to pay to finance the increase of the co-pilot's starting salary?

3) How much of an increase in CHECKED BAGGAGE FEES would you be willing to pay to finance the increase of the co-pilot's starting salary?

4) How much of an increase in OVERWEIGHT BAGGAGE FEES would you be willing to pay to finance the increase of the co-pilot's starting salary?

5) How much of a decrease in EARNED FREQUENT FLYER MILES would you be willing to give up to finance the increase of the co-pilot's starting salary?

6) How much more of an increase would you be willing to spend on purchasing ADDITIONAL MILES to finance the increase of the co-pilot's starting salary?

7) How much of an increase in EARLY BOARDING FEES would you be willing to pay to finance the increase of the co-pilot's starting salary?

8) How much of an increase in PREMIUM SEAT FEES would you be willing to pay to finance the increase of the co-pilot's starting salary?

9) How much of an increase in ON-BOARD FOOD COSTS would you be willing to pay to finance the increase of the co-pilot's starting salary?

10) How much of an increase in ON-BOARD BEVERAGE (DRINKS) COSTS would you be willing to pay to finance the increase of the co-pilot's starting salary?

11) How much of an increase in IN-FLIGHT WIFI (INTERNET) COSTS would you be willing to pay to finance the increase of the co-pilot's starting salary?

12) How much of an increase in IN-FLIGHT ENTERTAINMENT COSTS would you be willing to pay to finance the increase of the co-pilot's starting salary?