

AVIATION COLLEGE STUDENT AIRLINE CUSTOMER ELASTICITY

by

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Dedicated to my family,
thank you for everything.

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ABSTRACT

As populations continue to rise and potential markets begin to swell, it is up to the airline marketer to create an ample plan to sell more tickets to various target markets. There is a lack of research aimed directly at the college-aged market for airline ticket sales, and this study aims to fill this gap. Students at Middle Tennessee State University's Department of Aerospace were surveyed regarding their reasons for choosing a particular airline on which to purchase a ticket. The results indicated that price is the overall determining factor, but they also demonstrated that time schedules and the customers' previous experience on a particular airline also play a large part in selling airline tickets to college-aged students. The demographical data gathered indicated that college students over the age of 35 are very likely to be loyal to a particular airline and to be participating in at least one airline loyalty program.

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CHAPTER I: INTRODUCTION

Millions of Americans fly every day in the United States, going to a plethora of destinations for numerous reasons. These airline consumers can be categorized into two separate categories, either vacationers or business travelers. The one attribute they both have in common is that they have chosen to use air travel as their means of transportation from point A to point B. However, not everyone uses the same airline to facilitate their traveling needs, and this is especially true for the 20.2 million college students in the United States (Institute of Education Sciences, 2015). Different airlines, all varying in size, routes, price, amenities, bonuses, locations, and loyalty, each offer something different from the other competitors. Each college student has their own reasons and determinations for why they would choose a particular airline. Airline marketing practices and procedures are necessary in the overall narrative as to why people pick different airlines because these exhibit such an important role in the consumers' purchasing power. As defined by the UK Chartered Institute of Marketing, "Marketing is the management process responsible for identifying, anticipating and satisfying customer requirements profitably" (Shaw, 2011, p.3). This highlights the need for an academic study to analyze the question of why college students pick a particular airline for their traveling needs. While there is a tremendous amount of published academic literature on marketing in general, there is a distinctive lack of published, up-to-date academic studies that tackle the issue of college student airline customer elasticity. Elasticity is defined as "the responsiveness of a dependent economic variable to changes in influencing factors" (Merriam-Webster, 2016, para. 2). This research would be valuable to the airline industry

as a whole for truly understanding college student consumer trends and identifying reasons for appropriate marketing allocations.

Review of Literature

Gordon, O'Brian, and Ostrowski (1993) state how imperative airline marketing is to the airline industry, even if it means copying other competitors to gain a competitive edge. He continues by indicating how "in the first half of 1992, American Airlines' attempt to simplify and stabilize fares backfired when several competitors made or matched price reductions" (p.16). Gordon et al. reiterates the importance of marketing in the airline industry, and stresses how integral service quality will be on the customer. The first point is that airlines are service providers and that service is a performance (Gordon et al., 1993). An airline is a conglomeration of many different services and service providers consisting of individuals occupying different occupations that provide a service within a service (i.e. the baggage handler and ticket counter agents) (Gordon et al., 1993). These different services within the airline all affect customers' perception of the airline. Gordon et al. (1993) goes on to state that when any of the before-mentioned pieces of what makes up an airline break down, then the airline as a whole can be looked upon negatively. The next point, stated by Davidow and Uttal (1989) is that "good service may have little to do with what the provider believes; rather it depends solely on the beliefs of the customer" (As cited in Gordon et al., 1993, p.17). This principle places emphasis on impressions that are given to the customer by the airline, to make them want to be a repeat customer of said airline.

In the study mentioned previously by Gordon et al., data was taken from a survey that was administered throughout 1992, of deplaning and enplaning passengers at 35

United States airports. The results from the study concluded that 82% of the respondents received a less than excellent experience from the airline which they had patronized (Gordon et al., 1993). The study found that over half of the respondents, 53.3%, would seek a different airline from which to purchase an airline ticket in the future. The initial results from the study concluded that “strong evidence of customer displeasure with current levels of service quality provided by commercial air carriers,” was present (Gordon et al, 1993, p.19). Gordon et al also states that there appears to be a large number of people who are “brand-switchers” and stresses that airlines need to focus on customer satisfaction. After looking at the preliminary data, Gordon et al. decided to carry out a second study to determine service quality between two carriers.

In the second study completed in the same publication by Gordon et al. (1993), a questionnaire was utilized which highlighted four factors: schedule, price, frequent flyer programs, and loyalty. The data determined that Carrier A was perceived as a higher quality carrier and Carrier B as a low-cost airline. The questionnaire uncovered some interesting results. Carrier A’s patrons were more loyal than those of Carrier B’s, and were less likely to switch airlines. As Gordon et al. (1993) states:

The superior service quality of Carrier A paid off, it received a significantly higher rating than Carrier B for the overall flight evaluation...results of this section provide preliminary evidence that a positive relationship exists between perceived levels of service quality and levels of customer brand loyalty (p. 20).

These preliminary results spelled out that the overall perceived value of a superior product heralded in higher retention rates, while the other, cheaper airline experienced the exact opposite. The information gained from the two studies were placed into a

regression analysis, and the facts gained from the analysis supported the loyalty of Carrier A's customers.

A regression analysis of the data yielded the following results: the airline that was perceived to have a higher quality would be given leniency towards isolated negative experiences, and for the carrier that was perceived of a lesser quality, the negative aspects were exacerbated (Gordon et al., 1993). The independent variables, service quality and value, were in an exclusive relationship where the higher value of the perceived product has better service quality. He continued to state how the variables of reputation and image played a pivotal role that could be closely associated with loyalty trends for a particular airline. Gordon et al. (1993) explained how lower-cost airlines exist in a realm of a less than positively perceived product, and have a lower loyalty rate even when an unfortunate event was an isolated event.

Several conclusions were drawn from the research and analyses of the data gathered by Gordon et al. The first conclusion was that customers have a perceived service quality among the different airlines. One airline can be perceived as a better quality than another. The second conclusion drawn was that brand loyalty directly correlates to one's perceptions of a particular airline. The last conclusion from Gordon et al. (1993) was that relationships exist between reputation, service, and value offered. This research was important because it highlights the importance of perceived value and service quality of a superior and inferior product (legacy and low cost carriers). This relationship is important to determinations of modern day airline ticket purchasing power by the consumer.

A paper written by a Boeing employee reiterates the knowledge exhibited by Gordon et al's (1993) study pertaining to loyalty trends. Condit (1994) agrees with Gordon et al. (1993), by stating that airline customers are not loyal and adding that, "The only loyalty customers have is to a product that's better than the one they're currently using," (p. 33). Condit discusses that Boeing aims to design and build airplanes with the end consumer in mind. He continues by expressing the reason the company still exists to this day is because they take into account the person who buys the airline ticket in their research and development. Condit (1994) gives a final conclusion within the paper by declaring that the company is customer-oriented and must study the customer as one would study an animal to understand it better than it understands itself. Customer loyalty is a very important part of what makes up airline marketing as a whole; in this one part of the overall marketing scheme of an airline, relationship marketing is also a very integral part.

Relationship Marketing

In 1981, Bob Crandall was coined as the founder of the modern airline loyalty stunt at American Airlines, by highlighting gimmicks as ways to attract for customers (Gilbert, 1996). Gilbert added some interesting schemes associated with airline loyalty gimmicks. All of these were aimed at attracting more customers to fly a particular airline by the use of partnerships with other airlines and the introduction of exclusive travel incentives (Gilbert, 1996). Frequent flyer programs were "created to build brand loyalty, offer concessions in relation to the level of usage of flights with the [particular] airline," and would be cross marketed with other profitability areas (Gilbert, 1996, p. 578). He introduced some reasons why frequent flyer programs are not the most ideal form of

customer acquisition and retention. He stated that the first reason is a growing sense of customer animosity towards companies that participated in such endeavors, because it blurred the overall vision of a company who strived for more profits. The next reason was that the airlines are a copy-cat industry, and every airline had some sort of scheme that is very similar to the others, hence the competitive edge has all but disappeared. The last reason that Gilbert gave was that with all of the untaxed profitability, the government was prone to step in and do something in the realm of new taxes and or added taxes elsewhere. According to Gilbert (1996), currently there are no taxes to benefits accrued from frequent flyer programs, he postulated that it would not be long before the government starts to implement taxes on untaxed profitability associated with frequent flyer programs.

Gilbert offers many conclusions on the widespread use of frequent flyer loyalty programs across the airline industry. The first conclusion is that there needs to be a greater use of information across the airline industry sector. The next conclusion states that relationship marketing and the use of frequent flyer programs need to be more highly customized for consumers. Finally, there needs to be a method to track every frequent flyer program participant to ensure that the consumer gets the best opportunity for lifetime use (Gilbert, 1996). Whether it be with frequent flyer programs or some similar type of scheme, the use of information is key to understanding the customer.

In a study completed by Bejou and Palmer (1998), relationship marketing was brought to the forefront as the most important marketing strategy for airlines in the industry. Bejou and Palmer agreed with Gilbert by reiterating the importance of relationship marketing. A face-to-face questionnaire was designed and given to 214

airline passengers in the United States. During the data analysis, both of the hypotheses were partially confirmed, in the respect that duration was a factor that plays an important role in marketing (Bejou & Palmer, 1998). The study stated that the more prolonged and established a relationship with a particular company was, the more a customer was willing to overlook problems. This study explained that loyalty can be earned through constant use of the airline, but mistakes would lead to a customer patronizing another airline. As Gordon et al. (1993) concluded, brand-switchers are a constant and never ending reminder of why marketing, coupled with service quality, greatly influence loyalty. Although the study summarized that loyalty can go either way in the beginning of consumer relationships, loyal relationships required serious issues to be overturned (Bejou and Palmer, 1998). Once loyalty to an airline is established, it is very difficult to overturn the loyalty, unless a dramatic or serious issue arises for the customer.

In a separate research study by Liou (2008), customer relationship marketing was examined by creating a prediction model. This approach used an “if...then” method of creating a prediction model of airline customer relationship marketing (Liou, 2008). A sample size of a large international airline was used for the study to evaluate its prediction model. The study identified three potential groups of customers that utilized their airline; those three groups were: loyal customers, potential customers, and developed customers (Liou, 2008). Liou postulated that if the airline wanted to keep its loyal customers, new schemes needed to be identified and provided to keep the customers that fell into this category. Liou also discussed that customers that fell into the “to be developed” category needed to be coerced into patronizing the airline with reliability and safety records. Liou did not explain what a potential customer is; it appeared to be

assumed to be everyone else. The conclusion of the study was that the Variable Consistency Dominance-based Rough Set Approach was an important instrument in figuring out customer purchasing trends. The results from this study can provide the generalization that an airline can develop appropriate marketing strategies for the three different types of customers, potential, developed, and loyal.

Reaching out to as many potential customers as possible is critical for any airline to gain customers. Everyone on Earth is a potential customer, and it is up to the marketer to determine how to entice people to purchase the applicable product or service. A potential customer consists of everyone who is not yet a loyal customer of a particular product or service. However, anyone can also not be a customer, and it is up to the airline marketing department to attract as many people as possible to purchase airline tickets. Many people have no particular leanings either way, and must be coerced to become repeat customers of a particular airline. It is up to the marketer to design action plans and marketing schemes to convince potential customers that their airline is the one that is correct for the consumer. In their quest to attract more customers, American Airlines spent 59.7 million in 2013 on advertising media (Statista, n.d.). In 2014, Delta Airlines spent 54 million dollars on measured advertising media as well, so it is not uncommon to see advertising budgets inhabiting this degree of funding (Bruell, 2016). Attracting potential customers is an ever growing endeavor, and since the population of the planet keeps growing, advertising budgets will keep getting proportionally larger as time goes on. Companies cannot gamble on not having an advertising presence, as other companies will fill any voids that are left by another company. Being exposed to the world is key for the success of any product. Advertising and marketing budgets are

essential in gaining and maintaining a conversion rate of potential customers to developed customers.

Developed customers are customers who have purchased the product or service before, but are not yet loyal. These types of customers are more susceptible to negative experiences and can switch airlines at the smallest infraction inflicted from the airline, as reiterated by Gordon et al. (1993). They can also switch airlines during dramatic price changes. Since they are not loyal, nothing is holding them back from purchasing a ticket on a different airline. Advertisers and marketers aim at these types of customers because of their volatility and lack of loyalty to a particular airline; these consumers must be convinced to continue to buy airline tickets on a particular carrier. Developed customers may or may not have some type of rewards program fueling their purchasing habits, but potentially they could. They could also have rewards programs with many different airlines, since they are not loyal to a particular one. Like any good customer, they shop around for the best price for the particular trip they are taking. This group of customers, needs a significant amount of advertising exposure since they have a lack of loyalty and could go to a different airline for each and every flight they take. Airline marketers and advertisers must continue to utilize various media outlets to do what they can to keep these developed customers and do their best to convert them to loyal customers (Gordon et al., 1993).

Loyal customers are the bread and butter of any airline. They are the customers who will buy a ticket at any price and will fly on that particular airline for every flight they will take. They will come back time and time again, and are more immune to negative experiences on the airline. Being more forgiving in to overlooking problems on

the trip (e.g. late flights and maintenance issues), these customers are loyal to the airline. Additionally, this group of customers are less likely to switch airlines and need little to no advertising to be convinced to purchase a ticket on a specific carrier.

Online Reviews

While customer marketing and relationship marketing are pivotal instruments in attaining and securing customer loyalty, there are also other factors that can influence one's decision. Other external factors play a part in shaping a customers' overall experience with an airline. Several different websites are found across the internet that aim to be the voice of disgruntled customers who claim to never want to patronize a particular airline again.

In the modern world, the internet has become a pivotal tool in finding information for anything, and consumers are using the internet to become better informed on decisions where money is to be exchanged. Customer-generated reviews have sprung up in droves across the internet, and have different rating systems for each product they are reviewing. Airlines can be rated on the internet in a similar fashion as a new restaurant that opened up down the street.

The first website to be examined is Airlineratings.com (n.d.). The data found on this website showed that the majority of its respondents are primarily negative. Airlineratings.com has a rating system that is comprised of listing stars for different categories. The categories are: overall value for money, seat and cabin space, customer service, meals and beverages, inflight entertainment, and a checkbox of, "would you recommend this airline to others." In addition to each review, there is a section to gather

free response data where a respondent can write how they felt about their experience on a particular airline.

The next major website examined was a more commonly known website called Tripadvisor (n.d.). This website had a very similar setup to Airlineratings.com (n.d.), with a system of rating certain aspects of a particular airline's experience. Tripadvisor (n.d.) had the following criteria in deciding how to measure airlines: legroom, inflight entertainment, customer service, seat comfort, onboard experience, and value for money.

Another large website that attracts a plethora of daily visitors is Yelp (n.d.). This website had a simpler rating system that only consists of a quantitative one star through five stars rating system and a box that consisted of a quantitative explanative to justify why a customer would give an airline its rating.

Lastly, a website titled ConsumerAffairs.com (n.d.) appeared to be another likely outlet for airline customer reviews. This website had a system very similar to Yelp's in that it only had a one through five stars rating system, with a free response explanation available to catch exactly why the customer gave the rating they provided.

One might think that online reviews carry weight and could sway someone's opinion about a particular airline, but research shows that this is not the case. Gretzel (2007) studied the exact level by which reviews pertaining to travel were actually taken into account in one's decision-making process. Gretzel (2007) concluded that, "Most see reviews as important...but only a minority of respondents evaluates them as very important for other travel-related decisions" (p. 67). The study was potentially skewed, since it was sponsored by Tripadvisor, although it was completed at Texas A&M University. Ninety-seven percent of the participants in the study were users of

Tripadvisor, and this data could be generalizable to other review websites. Since the data was gathered from an online travel community, it could be assumed that the data would support the claim that internet reviews play a heavy part in the airline patron decision-making process. The exact opposite ended up being the case, and the data states that even though this is an online travel community, they hardly take reviews into account before making a trip (Gretzel, 2007).

Social Media

In the modern era, social media has started to become ever more prevalent in society and has shown it is here to stay. Businesses, especially major airlines, have embraced various social media platforms as necessary parts of their overall marketing promotion package that they sell to potential airline customers. Social media consists of websites such as: Facebook, Twitter, Instagram, Snapchat, Pinterest, and LinkedIn. As postulated by Scott (2009), marketers must embrace outlets such as the world wide web so they can reach the vast audiences of the web and to millions of potential customers.

Airline companies and social media have become rather intertwined. Different ways for the company to maintain direct and simplistic contact with its customers have been identified and utilized by the airlines. One airline in particular, has taken a very direct, hands-on approach to using social media in dealing with its customers. Cathay Pacific Airlines social media accounts will comment back to a patron, if they mention the airline on any outlet (Ashraf, 2015). This amount of dedication is starting to become the norm among large airlines of the world, and how they deal with social media and their customers. In the social media sites that are more picture oriented, Cathay Pacific will post a customers' picture for the world to see and comment on it, connecting the

company to a worldwide audience (Ashraf, 2015). Social media is an ever growing media outlet for the marketer, and will evolve to have an exponentially larger presence as time goes on.

College Student Marketing

There are 20.2 million college students in the U.S. and all of these students have the potential to be customers (Institute of Education Sciences, 2015). It is imperative for marketers to design plans to reach this sizeable audience to gain profits from them. Any company that wishes to be truly profitable must have a presence in different target markets to maximize revenues. This is especially true for college students as they are adults. While they may not have much money to spend, establishing a relationship with these young consumers who will ultimately gain purchasing power is important.

Marketing to college students is a very important endeavor to any business that wishes to realize maximized profits. According to Skellage (2012), there are five top ways to effectively market products or services to college students. The first way is to admit that the marketer or company attempting to sell a product to a college student realizes they are older than the students they are targeting. By stating that one is not of their demographic creates credibility for the marketer, as they acknowledge the company does not completely understand what the consumer wants. The author goes on to state that by demonstrating that the marketer is different from the target market, in this case college students, the target market is more open-minded to what it is the marketer has to say. Hiring someone younger, or at least having a consultant who falls into the category of college student, is a must for creating marketing plans for college students is the second reason stated by Skellage (2012). The insight that an actual college student can

provide to a marketing firm can be of great importance in determining if a marketing plan will work. This is highlighted by the author's statement that marketing plans need to be simplified and a college student used to determine the best course of action to effectively market to these students. Embracing segmentation to determine what the target market actually is through use of facts and figures is the third tip given by Skellage (2012).

Information can be a powerful mechanism, and the author is aware of this by highlighting the importance of having up-to-date facts and figures to determine the best course of action in reaching this unique target market. He goes on to state this information can be used to create action plans that utilize cutting edge technology with the conjunction of social media outlets to effectively reach college students to realize positive revenues.

This means that using the information gathered from different social media outlets can be used to create actions plans of marketing to different marketing segments within the college student target market. The fourth factor postulated by Skellage (2012) is using incentives to attract customers. According to the author, students receive discounts through many different outlets including Apple and Amazon, just for being a college student. Through the use of incentives, college students are more aware of and are more likely to be exposed to a product or a particular. The fifth and last way of marketing to college students is to create a target market through the use of all media outlets. By utilizing all available media outlets and tailoring the message that encompasses each separate outlet to the target market, the marketer can reach as many people as possible. By tailoring the message to each individual media outlet, marketers can augment the message to better fit the demographic closely associated with using that specific media outlet. The marketer has to design a multifaceted plan through the use of all the social

media outlets to tailor the message so as to find ways to connect to the “uber-connected” (Skellage, 2012). However, these are not the only ways that are identified as the best ways of marketing to college students, and another author has a similar list of the best ways of marketing to college students.

Marketing to college students is not like marketing to the other demographical target markets. This new segment of society is vastly different from what they were twenty years ago. According to Williams (2010), there is a different top five ways to market to this new target market that has the potential to make or break any business. The first reason he states is that this new target market is very mobile, with frequent use of their cell phones and other mobile devices, such as a tablet or a laptop. Using mobile applications, marketers can reach this market and influence their buying trends by having exposure on the devices they use the most. According to Williams (2010), “In our experience, SMS text and cell phone browser access are the surest ways to make your company reachable to college students” and is especially true as more and more media outlets are available through the use of mobile technology. The next suggestion hypothesized by Williams (2010, para. 6), is through the use of punctuality, being brief and concise. College students have a lot of commotion going on in their lives and do not have time nor a need for a complicated message or heavy advertising operation. The use of creativity can be used in conjunction with these concise messages to better get the point across in the least amount of time. The fourth way to market to college students is “not playing it cool,” and not trying to act and think what is “cool”. College students can tell if a company is trying too hard, or if a company is attempting to be something that they are not. The author states that college students can see through these types of

actions and they do not bode well for the marketer in the long run. College students respond more favorably to companies who act appropriately to the product or products they are trying to market to them. The last suggestion stated by Williams (2010) is to win over the college students' mother and father since they still look up to their parents to some degree. Winning over the parents is a must for any marketer because the parents are usually the ones who still make the majority of the decisions as far as finances go. The author reiterates how the parents are still in somewhat control of the cash flow for the college student and these relationships have the potential to transpose from the college student to their adult life as well.

Both of these marketers are fully aware that marketing for college students is very different from marketing to other target markets. A synthesis of the related research items suggests several areas where the authors agree; the first being that they realize that college students are interested in many different things and can change loyalty at any moment. As both of the marketers stated, college students do not have a lot of money in their pockets so they must be careful with the products they wish to buy. However, they are also swayed by popular culture, the company's overall attitude, and of course, parents, are still deciding factors to many college student purchases. These marketers agree that marketing to college students is the future for companies, and that the college student target market is available to all who follow the rules of how to effectively market to college students.

One airline in particular has taken the idea of marketing to college students to a whole new level. Delta Airlines has partnered with nine different universities across the country as of the fall semester of 2015 to create a unique relationship aimed at creating

more customers and funneling potential employees towards Deltas' general direction.

According to Delta (n.d.):

Delta's new university partners include: Duke University, The University of Florida, Indiana University, University of Michigan, Michigan State University, University of Notre Dame, The Ohio State University, Penn State University and University of Wisconsin. The airline has existing partnerships with Boston College, Georgia Institute of Technology, University of Georgia, University of Minnesota, University of North Carolina and Syracuse University (para. 4).

Delta (n.d.) has engrained itself into all facets of campus university life throughout these universities. As stated by the airline, they aim to "embed the airline and its employees in campus and alumni events, academics and career recruiting and counseling" (Delta, n.d., para. 1). This level of cooperation between an airline and a plethora of universities has never been attempted before. The potential of being on the inside of colleges and universities to get inside the hearts and minds of college students is limitless. Delta has the ability to create future employees, by investing in them through the use of a special internship program only offered at these universities. These students, having been exposed to the airline during their college years, will likely be more inclined to work for Delta since they have had all this exposure during school. Creating future employees is not just the only reason why this level of exposure is important; it is also meant for Delta to better understand the college student target market. Allowing such cohesive efforts to transpire, information could be attained and implemented daily. New promotions can be experimented with at these universities. Having that close proximity to the target market in an intimate setting, such as colleges and universities, the airline has the potential to

create groundbreaking marketing plans aimed directly towards college students, the likes of which have not been seen before.

While relatively new, the other major airlines do not have a program that is as sophisticated as this. Only one other major airline has a semblance of the scope of what Delta is trying to accomplish, and that is Southwest Airlines. Southwest (n.d.) only has a campus outreach program to target future employees and secure internships with prospective students. They do not have a cohesive agreement to intertwine themselves into daily student life for the majority of the campus. Since these programs are new, more will likely occur in the upcoming years to come.

Statement of the Problem

Modern commercial airline companies are always trying to find new ways of attracting new customers and keeping their old ones. This can be a cumbersome endeavor that requires extensive marketing research and trying out new methods of customer retention. Airline companies have a unique product that they are selling that “spoils” as soon as the door to the cabin on the airplane closes. The seat that was to be sold is no longer available to be purchased since the airplane is departing for its particular destination. It is the purpose of the airline marketer to help fill those seats as best as possible for the flight to yield a profit. The problem is that there is a void of substantial research completed on college students’ airline marketing trends and it is necessary to determine what motivates this target market.

Airline marketing is an ever growing field, which will benefit directly from an understanding of how and why a college student would pick an airline to patronize. The college student target market is an ever reforming market, which is growing

exponentially, year after year. This study will determine the reasons associated with aviation college students' decisions of which airline to fly. It is a commonly held belief that cost dictates what airline a college student would patronize, and this study will determine if this assumption holds true.

Research Questions

The purpose of this study is to identify the reasons a student enrolled in a collegiate aviation program would pick a particular airline within the U.S. from which to purchase an airline ticket within the economic climate of 2016, and if any demographical differences exist within that population.

Q1: What are the predominant factors that cause an aviation college student to purchase a ticket on a particular airline?

Q2: What impact do demographic factors have on collegiate aviation students purchasing of airline tickets?

CHAPTER II: METHODOLOGY

Overview

In determining the best way to answer the research questions, it was found that a qualitative survey was the best approach. Other methods of gathering data would be cumbersome and had the potential to supply unnecessary data. An interview method of data collection would be too cumbersome and time consuming for both the interviewer and the interviewee. A case study was not necessary because it would not supply the correct type of information that was needed to efficiently answer the research questions. An experiment would not be necessary because that would be an incorrect approach in answering the research questions. A survey would be the logical choice and was created at www.surveymonkey.com to allow for expedited data analysis and the creation of tables and graphs to answer the poised research questions. The Middle Tennessee State University (MTSU) Institutional Review Board approved the study (approval #16-1266, see Appendix A). A waiver from the requirement of informed consent was approved by the Institutional Review Board to ensure participant anonymity. Using this method of gathering qualitative data and the subsequent data analysis was the best design in determining the answers to the research questions. This was the appropriate method of gathering the qualitative data because it allowed for a lower workload for the respondent and created efficient and meaningful data to the researcher.

Participants

The participants in this study were students in the MTSU Aerospace Department in the Spring 2016 semester, who were willing to complete an online survey on www.surveymonkey.com. The students were studying either of the following programs:

professional pilot, air traffic control, airline dispatch, unmanned aerial systems, aircraft maintenance, aviation administration, and aviation technology. The participants' predominant demographics were: male, 18 to 25 years old, "Caucasian", and some college education. An email was sent to these students by the Department Executive Aide, of which a copy can be found in Appendix B, during the final week of the Spring semester, asking for their participation. A total response count of 126 students out of the possible 705 was attained.

Instrument

The survey, found in Appendix C, began with an informed consent paragraph required by the MTSU Institutional Review Board. The information contained in the informed consent paragraph consisted of the following: the purpose of the study, description of the procedures, expected costs, description of discomforts, compensation for study related injury, anticipated benefits of the study, alternative treatments of the study, compensation for the study, withdrawal procedures, contact information, confidentiality, and a statement of participation.

The first question was verification that the participant consented to being a part of the study and understood all the parameters of the study. The second and third questions were asking the participant if they had ever flown on an airline and purchased an airline ticket before. These two questions were meant to verify that the participant had the experiences necessary to be able to meaningfully respond to the research study. An answer of no supplied to either of these questions removed the participant from the survey. The second through thirteenth survey questions were designed to answer both of the research questions. The first research question was designed to determine what the

predominant factors are influencing an aviation college student in purchasing an airline ticket at a particular airline. The second research question was used in conjunction with the first to determine what factors, if any, vary with demographic differences.

The fourth survey question was designed to assist in answering both of the research questions by assessing what level of loyalty, if any at all, was experienced by the participant. This question's data was analyzed independently, as well as compared to the demographical data from the last four questions of the survey. This question asked if the participant was loyal to an airline and had a follow-on question that was given to any participants with a yes response. The follow-on question measured how loyal the participant was to their particular airline of choice.

The fifth survey question was designed to answer if the participant was a member of any type of loyalty program and was a simple yes or no response item. The data gathered from this question was analyzed independently as well as with demographical data.

The sixth survey question was also a yes/no design, and was designed to answer if ticket pricing was a decision factor for the participants. This question also contained a follow-on question if the participant answered with a yes response. The follow-on question was meant to determine how influential ticket pricing was to the participant.

The seventh survey question was designed to determine when the participant bought a particular airline ticket. This data was used in conjunction with the rest of the data surveyed in questions four and five in searching for a correlation that determined when a loyal customer would buy a ticket for an airline. This question was also used to

determine when a non-loyal customer might purchase their airline ticket in advance of a flight.

The eighth survey question was designed to determine what the top three most influential factors are for an aviation college student when determining which airline to purchase a ticket. The potential selections were: price, loyalty points/frequent flyer miles, amenities on flight, previous experience on carrier, safety record on carrier, on time performance of carrier, previous customer reviews of carrier, time schedule of flight, particular aircraft usage, and participants chose their top three choices.

The ninth survey question was designed as an open answer text box for the participant to freely answer if any other factors influencing ticket purchases might exist for the participant that were not available during the survey. These qualitative responses were grouped together for likeness.

The tenth through the thirteenth questions gathered demographical data from the participants. The tenth question was designed to determine what the gender was of the participant. The eleventh survey question asked participants to identify which age range they are in. The twelfth survey question was designed to determine the race of the participant, and the thirteenth survey question asked the highest level of education that has been attained by the participant.

Skip logic was used in the follow-on type questions of the survey, if the participant supplied an answer of no. The fourth and sixth survey questions had follow-on question, and skip logic was used to direct the participant to the next survey question if they supplied a no response. Skip logic was also used to remove the participant from the survey if they supplied an answer of no to any of the two validation questions at the

beginning of the survey. If they were removed from the survey, they were sent to the thank you for participating page. All participants were sent to the thank you for participating page when they completed the survey in its entirety.

Design

The design of the survey consisted of several online pages that had qualitative responses to them, which were necessary to answer the two research questions. The research questions required data generated from both yes/no and likert scale data to indicate consumer preferences. This data allowed commonalities and trends to be identified to be able to answer the research questions. The data was compiled by both reporting specific responses to each question, as well as by creating categories of the demographical data and their corresponding airline marketing responses. Comparing the demographical data with the overall gathered marketing data was the mechanism by which the second research question was answered. However, it was known that the likely predominant demographics of the aerospace department students consisted of a majority male population, aged 18-21, Caucasian, and having completed some college.

Procedure

Following survey development and subsequent Institutional Review Board approval of study, an email was sent to all graduate and undergraduate students by the Aerospace Department's Executive Aide at MTSU, asking for their support in participating in this research project. In the email was a link to the online survey. Three days before the closing of the survey, the Aerospace Department's Executive Aide emailed out a reminder to all of the students requesting participation if they had not

already participated. After a total of 10 days' time had passed, the survey was declared closed and the data analysis period began.

Preliminary Data Analysis

The data that was collected consisted of exclusively qualitative data. The qualitative data was grouped together to show commonalities and trends, and these trends were then grouped together to answer the research questions. The demographical data was gathered at the end of the survey and resulted in the grouping of categories by; age, gender, education-level, and race. This demographical data was compared to all of the other survey questions to determine any differences between demographic groups.

If the participant responded no to any of the first three questions, then the participant was directed out of the survey because they either did not consent to the survey or were not qualified to take the survey. This data was collected, but did not have any significant bearing on the research study. The fourth through seventh questions on the survey were reported in aggregate, and were analyzed to determine if there were differences in the loyalty patterns of different age, gender, race, and educational levels. The eighth question was analyzed to determine what the top three factors were in determining which airline the participant wished to patronize and was then broken down by age, gender, race, and educational level. The ninth question was an open ended question to determine if there were any other deciding factors for the participant in deciding which airline to patronize compared to age, gender, race, and educational level. The responses from this question were grouped together by likeness, since there was an absence of two responses that were exactly the same. This data was analyzed by determining if any dominant factors existed among the grouped together response

CHAPTER III: DATA ANALYSIS

As described previously, a survey methodology was used for data gathering through the SurveyMonkey website, and the results were processed through the website's "analyze results" function. The raw survey data was then placed into a Microsoft Excel spreadsheet where graphs were created to allow a simplified view of the data. While there were 126 total responses, 30 participants did not meet the criteria of having purchased an airline ticket themselves, so were routed out of the survey at the initial screening questions. There were 6 participants who submitted incomplete surveys and their answered responses were removed from the data analysis. This left only 90 which had purchased a U.S. airline ticket personally, which participated in the survey.

Loyalty

As discussed in Chapter II, the first three survey questions were simply screening questions to ensure the participants met the qualifications to participate and were also willing to participate. The fourth survey question was a yes/no answer type question, aimed at determining if aviation college students are loyal to a particular airline. The data gathered from the survey determined that there is a lack of a predominant view regarding whether an aviation college student is loyal or not to an airline of their choice. There were 45 (50%) responses with a yes value and 45 (50%) responses with a no value. The demographic breakdown of responses for the fourth survey question can be found in Table 1.

Table 1

Demographic Data from Survey Question Four

Demographic trait	Response	Number of responses	Percentages
Male (76 total)	Yes	36	47.37%
	No	40	52.63%
Female (14 total)	Yes	9	64.29%
	No	5	35.71%
Under 35 years old (84 total)	Yes	43	51.19%
	No	42	48.81%
Over 35 years old (6 total)	Yes	2	33.33%
	No	4	66.67%
"Caucasian" (71 total)	Yes	38	53.52%
	No	33	46.48%
"Non-Caucasian" (19 total)	Yes	7	36.84%
	No	12	63.16%
GED - some college (47 total)	Yes	26	61.70%
	No	18	38.30%
Associates - PhD (43 total)	Yes	16	37.21%
	No	27	62.79%

This question had a follow-on question to determine if the “yes” responses varied in degree as to how loyal they might be. The 45 participants who answered “yes” in the first part of question four were led to this follow-on question, and were asked to indicate how loyal they were on a Likert-type scale. On the presented scale, 29 (64.44%) answered somewhat loyal, and 16 (35.56%) very loyal, with no one selecting any of the other three answer choices. The demographic breakdown of responses for this follow-on question can be found in Table 2.

Table 2

Demographic Data for Survey Question Four Follow-on

Demographic trait	Response	Number of responses	Percentages
Male (36 total)	Very loyal	13	36.11%
	Somewhat loyal	23	63.89%
Female (9 total)	Very loyal	3	33.33%
	Somewhat loyal	6	66.67%
Under 35 years old (43 total)	Very loyal	15	34.88%
	Somewhat loyal	28	65.12%
Over 35 years old (2 total)	Very loyal	1	50.00%
	Somewhat loyal	1	50.00%
"Caucasian" (38 total)	Very loyal	15	39.47%
	Somewhat loyal	23	60.53%
"Non-Caucasian" (7 total)	Very loyal	1	14.29%
	Somewhat loyal	6	85.71%
GED - some college (29 total)	Very loyal	13	44.83%
	Somewhat loyal	16	55.17%
Associates – PhD degree (16 total)	Very loyal	3	18.75%
	Somewhat loyal	13	81.25%

The last question in this section on loyalty asked the participant if they were a member of any particular airline loyalty or mileage program. The data showed that 52 (57.78%) participants were members of a loyalty program, while 38 (42.22%) were not members of an airline loyalty program of any kind. The demographic breakdown of responses for this question can be found in Table 3.

Table 3

Demographic Data for Loyalty Program Membership

Demographic trait	Response	Number of responses	Percentages
Male (76 total)	Yes	44	57.89%
	No	32	42.11%
Female (14 total)	Yes	8	57.14%
	No	6	42.86%
Under 35 years old (84 total)	Yes	46	54.12%
	No	39	45.88%
Over 35 years old (6 total)	Yes	6	100.00%
	No	0	0.00%
“Caucasian” (71 total)	Yes	40	56.34%
	No	31	43.66%
“Non-Caucasian” (19 total)	Yes	12	63.16%
	No	7	36.84%
GED – some college (47 total)	Yes	28	59.57%
	No	19	40.43%
Associates – PhD degree (43 total)	Yes	24	55.81%
	No	29	44.19%

Ticket Pricing

Question seven asked the participant if ticket price influenced their decision making process when deciding on which airline to purchase a ticket. Of the 90 total responses, 89 (98.89%) were yes, and 1 (1.11%) were no (the demographic breakdown of responses can be found in Table 4). This ticket pricing question had a follow-on, which asked the participants who answered yes another question to determine how much the ticket price influenced the indecision. Since two respondents answered no to the initial question, 90 participants were directed to this question. Out of the five different Likert-

type answer choices, only 1 (1.12%) participant chose neutral, 27 (30.34%) chose somewhat influential, and 61 (68.54%) chose very influential, as can be seen in Figure 1.

The demographic breakdown of responses for the follow-on question can be found in Table 5.

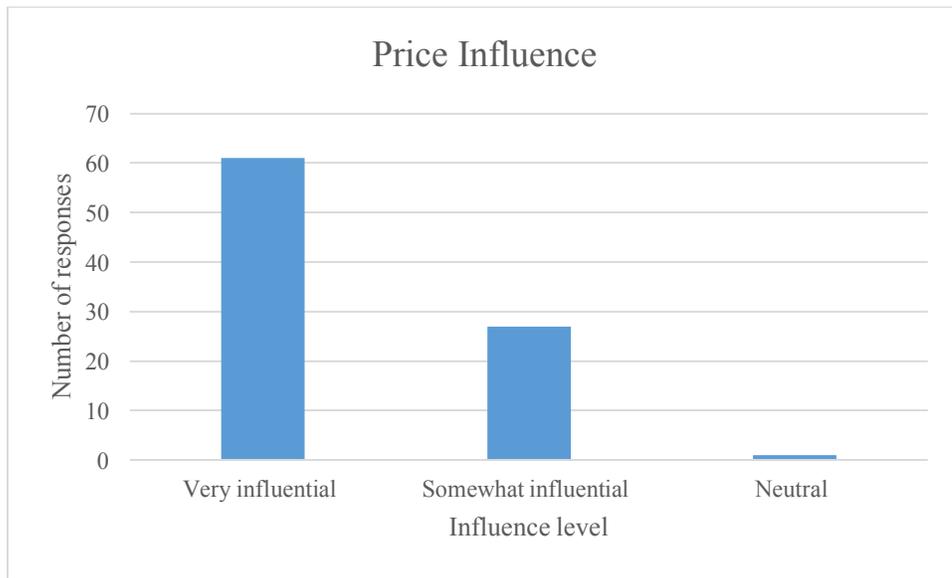


Figure 1: How Influential is Ticket Pricing?

Table 4

Demographic Data on Ticket Pricing Influence

Demographic trait	Response	Number of responses	Percentages
Male (76 total)	Yes	75	98.68%
	No	1	1.32%
Female (14 total)	Yes	14	100.00%
	No	0	0.00%
Under 35 years old (85 total)	Yes	83	98.81%
	No	1	1.19%
Over 35 years old (6 total)	Yes	6	100.00%
	No	0	0.00%

Table 4 (cont.)

"Caucasian" (71 total)	Yes	70	98.59%
	No	1	1.41%
"Non-Caucasian" (19 total)	Yes	19	100.00%
	No	0	0.00%
GED - some college (47 total)	Yes	46	97.87%
	No	1	2.13%
Associates - PhD degree (43 total)	Yes	43	100.00%
	No	0	0.00%

Table 5

Ticket Pricing Follow-on Demographics

Demographic trait	Response	Number of responses	Percentages
Male (75 total)	Very influential	52	69.33%
	Somewhat influential	22	29.33%
	Neutral	1	1.33%
Female (14 total)	Very influential	9	64.29%
	Somewhat influential	5	35.71%
	Neutral	0	0%
Under 35 years old (83 total)	Very influential	55	66.27%
	Somewhat influential	27	32.53%
	Neutral	1	1.20%
Over 36 years old (6 total)	Very influential	6	100%
	Somewhat influential	0	0%
	Neutral	0	0%
"Caucasian" (70 total)	Very influential	48	68.57%
	Somewhat influential	22	31.43%
	Neutral	0	0%
"Non-Caucasian" (20 total)	Very influential	13	68.42%
	Somewhat influential	5	26.32%
	Neutral	1	5.26%
GED - some college (46 total)	Very influential	29	63.04%
	Somewhat influential	17	36.96%
	Neutral	0	0%

Table 5 (cont.)

Associates - PhD degree (43 total)	Very influential	32	74.42%
	Somewhat influential	10	23.26%
	Neutral	1	2.33%

Airline Ticket Purchasing Timeframe

This question asked the participant when they typically purchase their tickets for an upcoming airline flight. Out of the 90 total responses to this question, 7 (7.78%) selected the week of the flight, 11 (12.22%) selected the same month as the flight, 34 (37.78%) selected a month in advance of the flight, 21 (23.33%) selected two months in advance, and 17 (18.89%) selected three months or more in advance of the flight (see Figure 2). The demographic breakdown of responses for airline ticket purchasing timeframe can be found in Table 6.

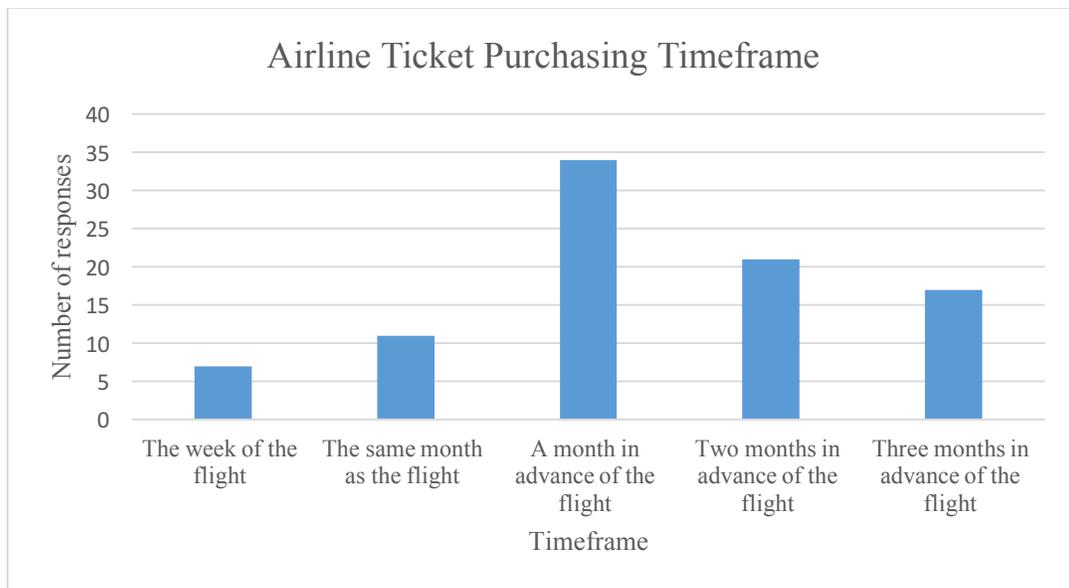


Figure 2: Airline Ticket Purchasing Timeframe

Table 6

Airline Ticket Purchasing Timeframe Demographics

Demographic trait	Response	Number of responses	Percentages
Male (76 total)	The week of	5	6.58%
	Same month	9	11.84%
	A month in advance	32	42.11%
	Two months	16	21.05%
	Three months	14	18.42%
Female (14 total)	The week of	2	14.29%
	Same month	2	14.29%
	A month in advance	2	14.29%
	Two months	5	35.71%
	Three months	3	21.43%
Under 35 years old (84 total)	The week of	5	5.95%
	Same month	11	13.10%
	A month in advance	33	39.29%
	Two months	21	25.00%
	Three months	14	16.67%
Over 35 years old (6 total)	The week of	2	33.33%
	Same month	0	0%
	A month in advance	1	16.67%
	Two months	0	0%
	Three months	3	50%
"Caucasian" (71 total)	The week of	3	4.23%
	Same month	10	14.08%
	A month in advance	25	35.21%
	Two months	19	26.76%
	Three months	14	19.72%
"Non-Caucasian" (19 total)	The week of	4	21.05%
	Same month	1	5.26%
	A month in advance	9	47.37%
	Two months	2	10.53%
	Three months	3	15.79%
GED - some college (47 total)	The week of	3	6.38%
	Same month	5	10.64%
	A month in advance	15	31.91%
	Two months	16	34.04%

Table 6 (cont.)

	Three months	8	17.02%
Associates - PhD degree (44 total)	The week of	4	9.30%
	Same month	6	13.95%
	A month in advance	19	44.19%
	Two months	5	11.63%
	Three months	9	20.93%

Most Influential Decision Making Factors

This question asked participants to indicate the 3 most important factors associated with their decision making process when determining which airline to purchase a ticket. There were a total of 90 responses for this question.

Out of the 90 responses indicating the most important factor, 67 (74.44%) indicated price, 3 (3.33%) indicated loyalty points/frequent flyer miles, 5 (5.56%) indicated previous experience on carrier, 7 (7.78%) indicated safety record of carrier, 2 (2.22%) indicated on-time performance, 5 (5.56%) indicated time schedule of flight, and 1 (1.1%) indicated particular aircraft usage (see Figure 3). One respondent did list a most important factor, but did not list a second and third most important determining factor. The demographic breakdown of the most important determining factor can be found in Table 7.

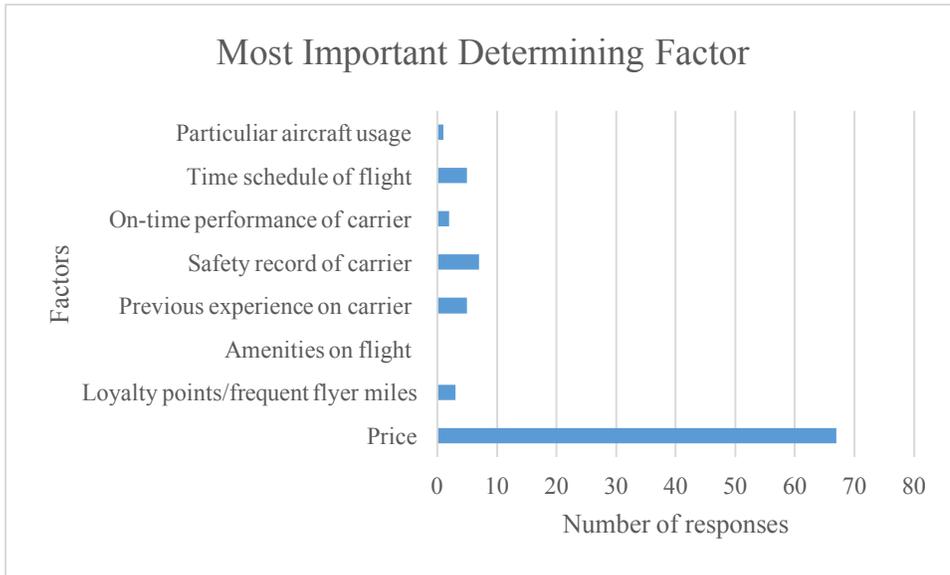


Figure 3: Most Important Factor in Patronizing an Airline

Table 7

Demographics of the Most Important Determining Factor

Demographic trait	Response	Number of responses	Percentages
Male (76 total)	Price	56	73.68%
	Loyalty	3	3.95%
	Amenities	0	0%
	Experience	5	6.58%
	Safety	6	7.89%
	On-time	1	1.32%
	Schedule	4	5.26%
	Aircraft	1	1.32%
	Female (14 total)	Price	11
Loyalty		0	0%
Amenities		0	0%
Experience		0	0%
Safety		1	7.14%
On-time		1	7.14%
Schedule		1	7.14%
Aircraft		0	0%
Under 35 years old (85 total)	Price	62	73.81%
	Loyalty	3	3.57%
	Amenities	0	0%
	Experience	5	5.95%
	Safety	5	5.95%
	On-time	2	2.38%
	Schedule	5	5.95%
	Aircraft	1	1.19%
	Over 35 years old (6 total)	Price	5
Loyalty		0	0%
Amenities		0	0%
Experience		0	0%
Safety		1	16.67%
On-time		0	0%
Schedule		0	0%
Aircraft		0	0%
"Caucasian" (71 total)	Price	51	71.83%
	Loyalty	3	4.23%

Table 7 (cont.)

	Amenities	0	0%
	Experience	5	7.04%
	Safety	4	5.63%
	On-time	2	2.82%
	Schedule	5	7.04%
	Aircraft	1	1.41%
"Non-Caucasian" (19 total)	Price	16	84.21%
	Loyalty	0	0%
	Amenities	0	0%
	Experience	0	0%
	Safety	3	15.79%
	On-time	0	0%
	Schedule	0	0%
	Aircraft	0	0%
GED - some college (47 total)	Price	32	68.09%
	Loyalty	3	6.38%
	Amenities	0	0
	Experience	3	6.38%
	Safety	3	6.38%
	On-time	2	4.26%
	Schedule	3	6.38%
	Aircraft	1	2.13%
Associates - PhD degree (43 total)	Price	35	81.40%
	Loyalty	0	0%
	Amenities	0	0%
	Experience	2	4.65%
	Safety	4	9.30%
	On-time	0	0%
	Schedule	2	4.65%
	Aircraft	0	0%

For the second most important factor, 15 (16.67%) indicated price, 13 (14.44%) indicated loyalty points/frequent flyer miles, 4 (4.44%) indicated amenities on flight, 18

(20.00%) indicated previous experience on carrier, 10 (11.11%) indicated safety record on carrier, 6 (6.67%) indicated on-time performance of carrier, and 24 (26.67%) indicated time schedule of flight (see Figure 4). For the demographic breakdown of the second most important determining factor, see Table 8.

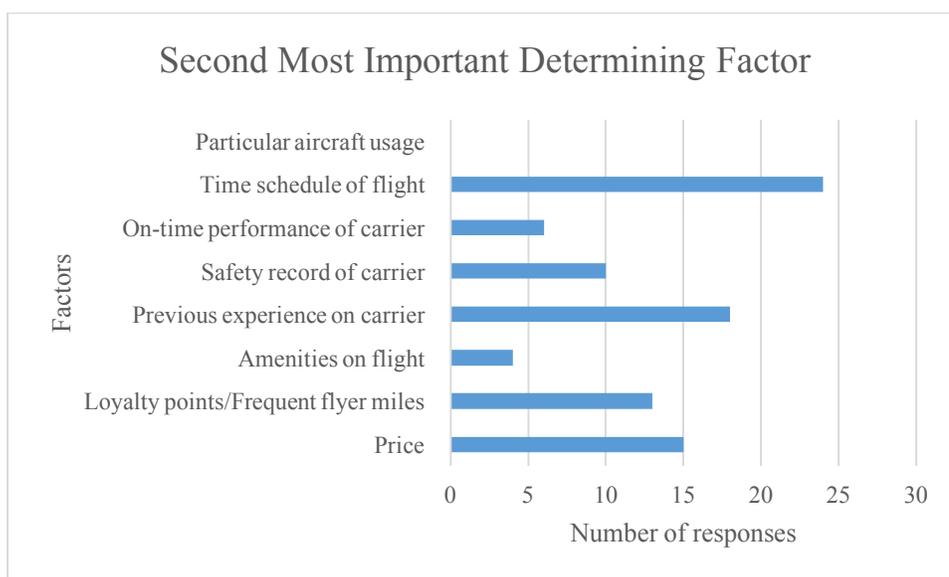


Figure 4: Second Most Important Factor in Patronizing an Airline

Table 8

Demographics of the Second Most Important Determining Factor

Demographic title	Response	Number of responses	Percentages
Male	Price	13	17.11%
77 total	Loyalty	13	17.11%
	Amenities	3	3.95%
	Experience	14	18.42%
	Safety	8	10.53%
	On-time	5	6.58%

Table 8 (cont.)

	Schedule	20	26.32%
	Aircraft	0	0%
Female	Price	2	14.29%
14 total	Loyalty	0	0%
	Amenities	1	7.14%
	Experience	4	28.57%
	Safety	2	14.29%
	On-time	1	7.14%
	Schedule	4	28.57%
	Aircraft	0	0%
Under 35 years old	Price	15	16.67%
81 total	Loyalty	13	14.44%
	Amenities	4	4.44%
	Experience	18	20.00%
	Safety	10	11.11%
	On-time	6	6.67%
	Schedule	25	26.67%
	Aircraft	0	0%
Over 35 years old	Price	1	16.67%
6 total	Loyalty	3	50.00%
	Amenities	0	0%
	Experience	1	16.67%
	Safety	0	0%
	On-time	0	0%
	Schedule	1	16.67%
	Aircraft	0	0%
"Caucasian"	Price	13	18.31%
71 total	Loyalty	8	11.27%
	Amenities	4	5.56%
	Experience	15	21.13%
	Safety	6	8.45%
	On-time	6	8.45%
	Schedule	19	26.75%
	Aircraft	0	0%
"All the other races"	Price	2	10.53%
20 total	Loyalty	5	26.32%

Table 8 (cont.)

	Amenities	0	0%
	Experience	3	15.79%
	Safety	4	21.05%
	On-time	0	0%
	Schedule	5	26.32%
	Aircraft	0	0%
GED - some college	Price	9	19.15%
47 Total	Loyalty	8	17.02%
	Amenities	4	8.51%
	Experience	10	21.28%
	Safety	4	8.51%
	On-time	5	10.64%
	Schedule	7	14.89%
	Aircraft	0	0%
Associates - PhD degree	Price	6	13.95%
44 total	Loyalty	5	11.63%
	Amenities	0	0%
	Experience	8	18.60%
	Safety	6	13.95%
	On-time	1	2.33%
	Schedule	17	29.53%
	Aircraft	0	0%

For the third most important factor, 5 (5.56%) indicated price, 4 (4.44%) indicated loyalty points, 11 (12.22%) indicated amenities on flights, 19 (21.11%) indicated previous experience on carrier, 8 (8.89%) indicated safety record on carrier, 12 (13.33%) indicated on-time performance of carrier, 22 (24.44%) indicated time schedule of flight, and 9 (10.00%) indicated particular aircraft usage (see Figure 5). The demographic breakdown of the responses for the third most important determining factor can be found in Table 9.

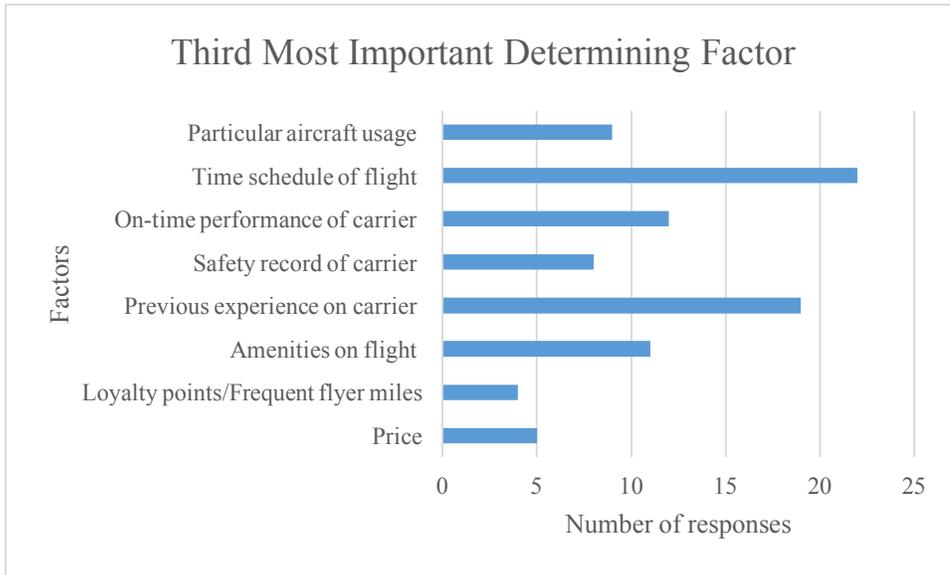


Figure 5: Third Most Important Factor in Patronizing an Airline

Table 9

Demographics of the Third Most Important Determining Factor

Demographic trait	Response	Number of responses	Percentages
Male (76 total)	Price	4	5.26%
	Loyalty	3	3.95%
	Amenities	8	10.53%
	Experience	15	19.74%
	Safety	7	9.21%
	On-time	10	13.16%
	Schedule	20	26.32%
	Aircraft	9	11.84%
	Female (14 total)	Price	1
	Loyalty	1	7.14%
	Amenities	3	21.43%
	Experience	4	28.57%
	Safety	1	7.14%
	On-time	2	14.29%
	Schedule	2	14.29%
	Aircraft	0	0%
Under 35 years old (84 total)	Price	5	5.95%
	Loyalty	4	4.76%

Table 9 (cont.)

	Amenities	10	12.22%
	Experience	18	21.43%
	Safety	8	9.52%
	On-time	11	13.10%
	Schedule	19	22.62%
	Aircraft	9	10.71%
Over 35 years old (6 total)	Price	0	0%
	Loyalty	0	0%
	Amenities	1	16.67%
	Experience	1	16.67%
	Safety	0	0%
	On-time	1	16.67%
	Schedule	3	50.00%
	Aircraft	0	0%
"Caucasian" (71 total)	Price	4	5.63%
	Loyalty	3	4.23%
	Amenities	7	9.86%
	Experience	15	21.13%
	Safety	8	11.27%
	On-time	8	11.27%
	Schedule	18	25.35%
	Aircraft	8	11.27%
"Non-Caucasian" (19 total)	Price	1	5.26%
	Loyalty	1	5.26%
	Amenities	4	21.05%
	Experience	4	21.05%
	Safety	0	0%
	On-time	4	21.05%
	Schedule	4	21.05%
	Aircraft	1	5.26%
GED - some college (47 total)	Price	5	10.64%
	Loyalty	2	4.26%
	Amenities	2	4.26%
	Experience	9	19.15%
	Safety	8	17.02%

Table 9 (cont.)

	On-time	4	8.51%
	Schedule	1	23.40%
	Aircraft	6	12.77%
Associates - PhD degree (43 total)	Price	2	4.65%
	Loyalty	0	0%
	Amenities	9	20.93%
	Experience	10	23.26%
	Safety	0	0%
	On-time	8	18.60%
	Schedule	11	25.58%
	Aircraft	3	6.98%

Other Determining Factors

This question was open ended, asking if there were any other determining factors associated with purchasing of an airline ticket that is not associated with a business expense flight account, and the responses were grouped together by similarity. Only 33 of the 93 participants responded to this question. The text of the actual open ended responses can be seen in Appendix D. Of the 33 responses, 13 were answers of “no” or “yes”, which was not helpful in answering the question. Ten of the remaining responses were either price, safety, or loyalty related, which were possible answer choices in the previous questions, so these were disregarded as well. This left only 10 responses which were actually useful in determining any other factors associated with picking one particular airline over another. Four of these 10 responses were related to the overall attitude of the airline and their personality as perceived by the customer. Three out of the 10 useful responses were related to the destinations of a particular flight, 2 were related to baggage fees, and 1 was related to the ability to cancel the flight if need be (see Figure 6).

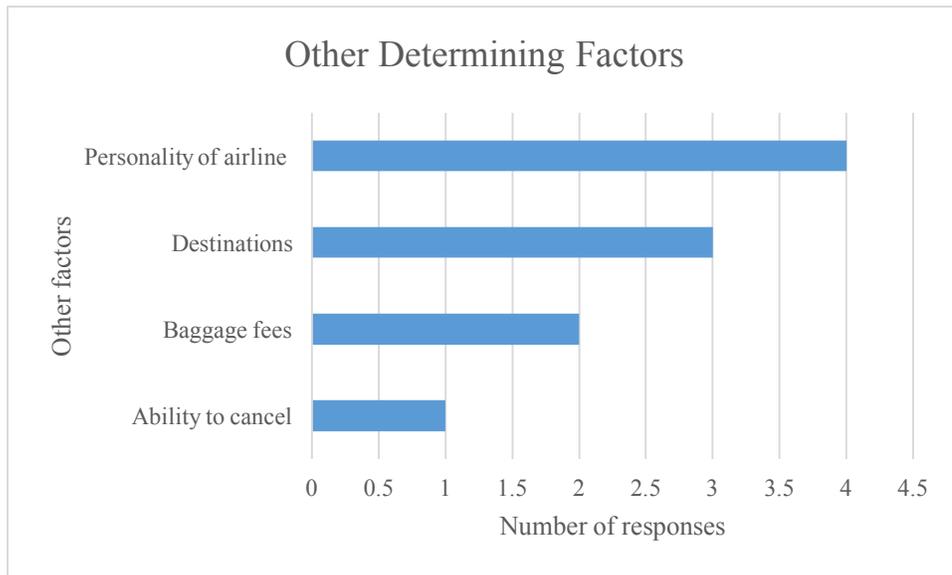


Figure 6: Other Determining Factors for Picking a Particular Airline

General Demographics of Participants

The demographic specific questions were asked at the end of the survey. Only 90 participants chose to answer the question on gender. Seventy-six (84.44%) of the 90 participants indicated they were male and 14 (15.56%) indicated that they were female. The next demographical question dealt with the age of the participants. This question also had 90 participants answer, and had the following data: ages 18-21 had 34 (37.78%) responses, ages 22-25 had 32 (35.56%) responses, ages 26-35 had 18 (20.00%) responses, ages 36-45 had 2 (2.22%) responses, ages 46-55 had zero responses, ages 56-65 had 2 (2.22%) responses, and ages 66 and older had 2 (2.22%) responses (see Figure 7).

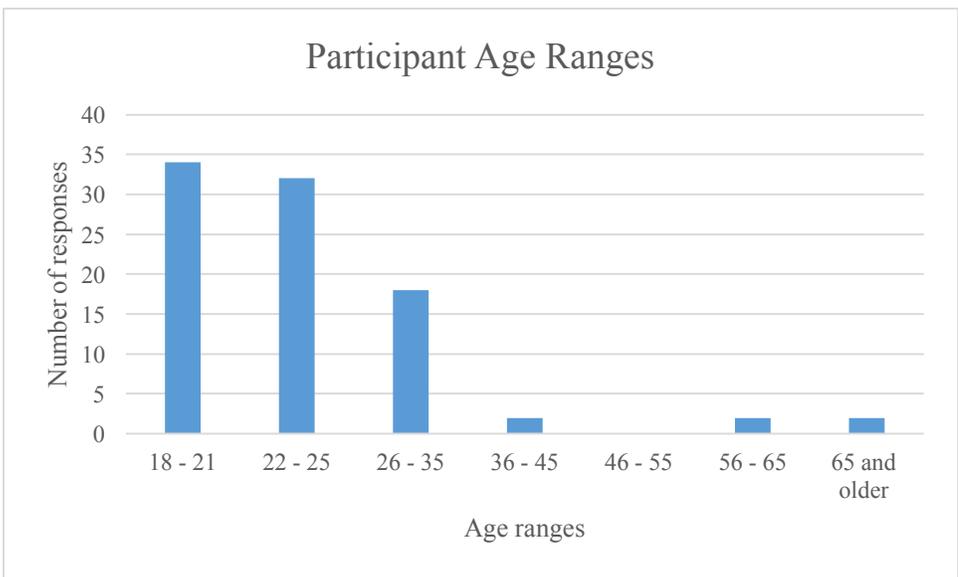


Figure 7: Participant Age Demographics

For the question regarding their race, there were 71 (78.89%) “Caucasian” responses, 8 (8.89%) “African American” responses, 3 (3.33%) “Asian” responses, 4 (4.44%) “Hispanic” responses, and 4 (4.44%) “other” responses all of which are labeled “Non-Caucasian” in tables (see Figure 8).

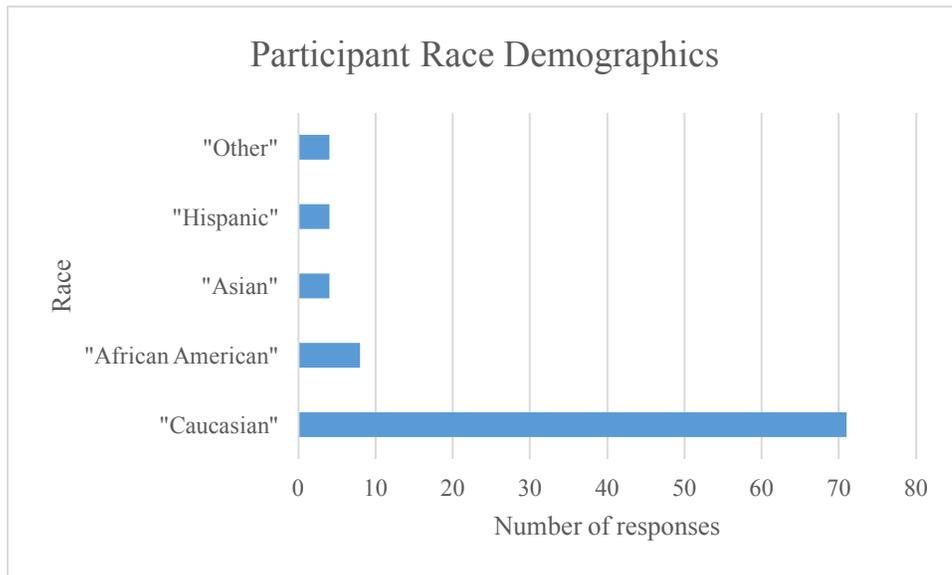


Figure 8: Participant Race Demographics

For the question about the participant's current highest level of education question, there were: zero "GED" responses, 7 (7.78%) "High School Diploma" responses, 40 (44.44%) "some college" responses, 13 (14.44%) "Associates Degree" responses, 23 (25.56%) "Bachelor Degree" responses, and 7 (7.78%) "Graduate degree (Masters or Doctorate)" responses, and zero who choose not to answer (see Figure 9).

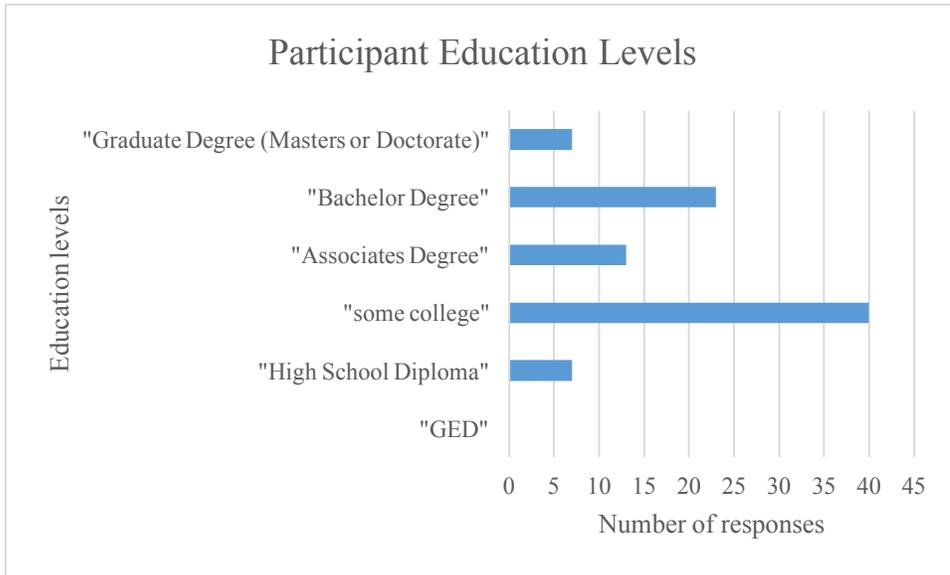


Figure 9: Education Demographics

CHAPTER IV: DISCUSSION

The purpose of this study was to identify the reasons associated with aviation college students' decisions regarding which airline to purchase a ticket from, and if any demographic differences existed regarding these reasons. After data collection and analysis, it is reasonable to state that price is the dominant factor in deciding on which airline aviation college students will purchase a ticket.

In answering the first research question, what are the predominant factors that cause an aviation college student to purchase a ticket on a particular airline, several factors are seen as important. Again, price is the most important factor in selecting an airline for a flight, as stated by the data gathered in the survey. The second most important factor is the time schedule of the flight, followed by previous experiences on the airline as the tertiary deciding factor. The second and third factors, however, had numbers of responses that were very close together. Under the second most influential factor, 18 indicated previous experience on the carrier and 24 indicated the time schedule of the carrier. For the third most influential factor, 19 indicated previous experience on the carrier while 22 indicated the time schedule of the carrier. When the second and third most influential factor were combined, a total of 37 indicated previous experience on the carrier and a total of 46 indicated the time schedule of the carrier, making these two factors the clear influences on decision-making beyond ticket price.

In answering the second research question, what impact do demographic factors have on collegiate aviation students purchasing of airline tickets, only significant conclusions will be identified. For the fourth survey question follow-on, which asked participants to state exactly how loyal they were to their airline of choice, "Non-

Caucasians” indicated they were 85.71% likely to be somewhat loyal to an airline versus “Caucasians” indicated they were 60.53% likely to be somewhat loyal to an airline. Also for the fourth survey question follow-on, respondents who had from an Associate’s degree to a Doctorate degree were 81.25% versus those who had from a GED to some college education, which were 55.17% likely to also be somewhat loyal to an airline. Under the sixth survey question, which asked if the participant was a member of a loyalty program, respondents who were over the age of 35 were 100% likely to be members of an airline loyalty program of some sort, versus those under the age of 35 who were only 54.76% likely to be a member of an airline loyalty program. For the eighth survey question, which asked how much ticket price influences the participants’ decision, respondents who were over the age of 35 were 100% likely to be very influenced by ticket pricing versus those under the age of 35, where only 66.37% indicated they were very influenced by ticket pricing. This is interesting from a marketing perspective because marketers can use this information to tailor ticket pricing and promotions centered on the 35 years of age and older demographic to potentially better realize higher profits from this older demographic market.

Recommendations

This study found that college students care most about price when it comes to purchasing an airline ticket, but most airline internet websites list very similar prices for flights. However, the time schedule of the flight and an airline customer’s previous experience on the carrier are also influential in deciding if a person will purchase a ticket on a particular airline. Customers have to decide, based on their previous experiences with the carrier, if the carrier is worth flying with again. Based on the results of this

study, airlines should work to improve their customer service models, to make sure that customers have a good experience on their airline and therefore want to come back. Price models and time schedules cannot conceivably be reformed to match a customer's needs, but the customer service experience model can be augmented. Providing good customer service for a student while they are in college, will create an everlasting impression that will carry on in their lives; once a customer reaches 35 years of age, they are very likely to become a loyal customer and buy tickets on a particular airline for the long-term.

Limitations

The research study had several limitations. The first limitation was that a population had to be found, but the only readily available population had very specific demographics. The demographics and background of those that completed the survey was predominately "Caucasian", male, between 18 and 25 years of age, had received some college, and had an interest in aviation as a career field. It was known that there was a distinct possibility that the demographics would be skewed in this manner, and after the data was analyzed, this fact held true. This population is not accurately representative of the entirety of all college students in the U.S., since this group does not share the characteristics of the participants in the study. However, the results of this study is generalizable to other collegiate aviation programs in the United States.

Another limitation was that using an anonymous online survey website link, which was emailed to college students, prevented extensive data collection. College students are not known to be the most responsive of individuals, and although having 126 out of the 705 total students in the Aerospace Department was adequate, more responses would have been better.

Future Studies

For future studies, several recommendations can be made regarding achieving more extensive data. The first recommendation is that access to a larger, more generalized population of college students, not just within one college or subset within a college, would result in more generalizable results. The next recommendation is to design a more extensive survey, by adding questions about items such as airline culture and baggage fees to the main list of influencing factors, when determining on which airline to purchase a ticket. Lastly, securing a demographic population that is larger would produce more meaningful demographical data, that has the potential to identify commonalities that might not have been clear from this study.

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APPENDICES

APPENDIX A: IRB APPROVAL LETTER

IRB
INSTITUTIONAL REVIEW BOARD
 Office of Research Compliance,
 010A Sam Ingram Building,
 2269 Middle Tennessee Blvd
 Murfreesboro, TN 37129



IRBN007 – EXEMPTION DETERMINATION NOTICE

Wednesday, April 27, 2016

Investigator(s): John Mahlman & Wendy Beckman
 Investigator(s) Email(s): jam2cz@mtmail.mtsu.edu
 Department: Aerospace

Study Title: **"Aviation College Student Airline Customer Elasticity"**
 Protocol ID: **16-1266**

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category (2) *Educational Tests*. A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:

IRB Action	EXEMPT from further IRB review***	
Date of expiration	NOT APPLICABLE	
Participant Size	Click here to enter text.	
Participant Pool	Click here to enter text.	
Mandatory Restrictions	Click here to enter text.	
Additional Restrictions	ONLY STUDENTS FROM MTSU AEROSPACE DEPARTMENT	
Comments	Click here to enter text.	
Amendments	Date	Post-Approval Amendments
		Click here to enter text.

***This exemption determination only allows above defined protocol from further IRB review such as continuing review. However, the following post-approval requirements still apply:

- Addition/removal of subject population should not be implemented without IRB approval
- Change in investigators must be notified and approved
- Modifications to procedures must be clearly articulated in an addendum request and the proposed changes must not be incorporated without an approval
- Be advised that the proposed change must comply within the requirements for exemption
- Changes to the research location must be approved – appropriate permission letter(s) from external institutions must accompany the addendum request form
- Changes to funding source must be notified via email (irb_submissions@mtsu.edu)
- The exemption does not expire as long as the protocol is in good standing
- Project completion must be reported via email (irb_submissions@mtsu.edu)

APPENDIX B: EMAIL REQUESTING PARTICIPANTS

Aerospace Students,

This is a request for you to participate in a research study that is part of the thesis required for my Master's degree. The purpose of this study is to identify the factors that impact the purchase of airline tickets by college students. To participate, please complete the online survey found at the link below, which will take no more than five minutes to complete.

<https://www.surveymonkey.com/r/CollegeStudentAirlineSelection>

Thank you for your participation!

John Mahlman
Principal Investigator
Masters Candidate
Department of Aerospace
Middle Tennessee State University
Office BAS S-247

APPENDIX C: SURVEY INSTRUMENT

Aviation College Student Airline Customer Elasticity

Survey Introduction

Principal Investigator: John Mahlman

Study Title: Aviation College Student Airline Customer Elasticity

Institution: Middle Tennessee State University, Department of Aerospace

The following information is provided to inform you about the research project and your participation in it. Please read this form carefully and feel free to ask any questions you may have about this study and the information given on the next page.

For additional information about giving consent or your rights as a participant in this study, please feel free to contact the MTSU Office of Compliance at (615) 494-8918.

Aviation College Student Airline Customer Elasticity**Informed Consent**

1. You are being asked to participate in a research study on aviation college students' marketing and demographical trends which requests aviation students at Middle Tennessee State University to complete the study. This survey is completely voluntary and does not have any identifying marks, thus ensuring your anonymity. There are no costs, discomforts, that can be expected as a result of taking this survey. This survey has potential benefits to science and humankind by adding to the overall knowledge of college aged student's airline purchasing preferences. If you choose to withdraw from the survey before it is concluded, there is no penalty for withdrawing from the survey at any time. If you should have any questions about this research study, please feel free to contact Mr. John Mahlman at 865-680-6491, my faculty advisor, Dr. Wendy Beckman at 615-898-2988, or the MTSU Office of Compliance at 615-494-8918. Your surveyed information may be shared with Middle Tennessee State University Institutional Review Board.

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY

I have read this informed consent information and the material contained in it. I understand each part of the document, all my questions have been answered, and I freely and voluntarily choose to participate in this study.

Yes

No

Aviation College Student Airline Customer Elasticity**Verification One**

2. Have you ever flown on a US airline?

- Yes
- No

Aviation College Student Airline Customer Elasticity**Verification Two**

3. Have you personally purchased a ticket on a US airline before?

Yes

No

Aviation College Student Airline Customer Elasticity**Loyalty**

4. Would you say you are loyal to a particular airline, continually using the same airline for each and every flight that is not associated with a business expense flight account?

Yes

No

Aviation College Student Airline Customer Elasticity**Loyalty Follow On**

5. How loyal are you to your particular airline of choice?

Very loyal

Somewhat loyal

Neutral

Not very loyal

Not at all loyal

How loyal are you to
your particular airline of
choice?

Aviation College Student Airline Customer Elasticity**Loyalty Programs**

6. Are you a member of any loyalty programs of airlines, i.e. Aadvantage Program at American Airlines, Southwest Airlines Rapid Rewards Program, Mileage Plus at United Airlines, or Delta SkyMiles?

Yes

No

Aviation College Student Airline Customer Elasticity**Ticket Price**

7. Does ticket price influence your decision making process when deciding on which airline to purchase a ticket?

Yes

No

Aviation College Student Airline Customer Elasticity**Ticket Price Follow On**

8. How much does ticket price influence your decision making process?

	Very influential	Somewhat influential	Neutral	Not very influential	Not at all influential
How much does ticket price influence your decision making process?	<input type="radio"/>				

Aviation College Student Airline Customer Elasticity**Ticket Purchasing Time**

9. When on average would you say you purchase an airline ticket that is not associated with a business expense flight account?

- The week of the flight
- The same month as the flight
- A month in advance of the flight
- Two months in advance of the flight
- Three months or more in advance of the flight

Aviation College Student Airline Customer Elasticity

Top Three Factors

10. Please rank the top three following factors from most influential to least influential in your decision making process in deciding which airline to purchase a ticket on.

	Most important factor	Second most important factor	Third most important factor
Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loyalty points/ Frequent flyer miles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amenities on flight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Previous experience on carrier	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety record of carrier	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On-time performance of carrier	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time schedule of flight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Particular aircraft usage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Aviation College Student Airline Customer Elasticity**Open Ended**

11. Are there any other determining factors associated with your purchasing of an airline ticket that is not associated with a business expense flight account?

Aviation College Student Airline Customer Elasticity**Gender**

12. What is your gender?

- Male
- Female
- Other
- Choose not to answer

Aviation College Student Airline Customer Elasticity**Age**

13. What age category do you fall into?

- 18 - 21
- 22 - 25
- 26 - 35
- 36 - 45
- 46 - 55
- 56 - 65
- 66 and older
- Choose not to answer

Aviation College Student Airline Customer Elasticity**Age**

13. What age category do you fall into?

- 18 - 21
- 22 - 25
- 26 - 35
- 36 - 45
- 46 - 55
- 56 - 65
- 66 and older
- Choose not to answer

Aviation College Student Airline Customer Elasticity**Race**

14. What is your race?

- Caucasian
- African American
- Asian
- Hispanic
- Other
- Choose not to answer

Aviation College Student Airline Customer Elasticity**Education**

15. What is your current highest level of education?

- GED
- High School Diploma
- Some College
- Associate Degree
- Bachelor Degree
- Graduate Degree (Masters or Doctorate)
- Choose not to answer

Aviation College Student Airline Customer Elasticity**Thank You**

Thank you for participating in this survey.

APPENDIX D: Q11 OPEN-ENDED QUESTION ANSWERS

Aviation College Student Airline Customer Elasticity

Q11 Are there any other determining factors associated with your purchasing of an airline ticket that is not associated with a business expense flight account?

Answered: 33 Skipped: 87

#	Responses	Date
1	Personality of the airline.	5/11/2016 9:12 PM
2	Destination	5/11/2016 12:29 PM
3	turn around time	5/11/2016 1:46 AM
4	No.	5/10/2016 9:31 AM
5	None	5/10/2016 12:50 AM
6	I purchase the cheapest ticket at the time and date of my planned trip.	5/9/2016 2:13 PM
7	TV commercials	5/9/2016 1:41 PM
8	Routes	5/9/2016 12:13 PM
9	Bottom line, the most important factor to me is the relationship between time of the flight and the price. If my times are flexible, I will find the best price but sometimes it is necessary to fly at a specific time, making it necessary to take time over price.	5/9/2016 11:57 AM
10	No	5/9/2016 11:45 AM
11	Friendly staff and flight attendants. Where the airline flies out of and to.	5/9/2016 11:35 AM
12	no	5/9/2016 11:10 AM
13	N/A	5/9/2016 11:04 AM
14	N/A	5/8/2016 3:22 PM
15	Baggage fees	5/3/2016 2:30 PM
16	Yes.	5/1/2016 10:06 AM
17	N/A	5/1/2016 3:43 AM
18	safety history of airline	4/30/2016 2:46 PM
19	my dad works at an airline, American Airlines	4/30/2016 2:26 PM
20	number of stops or connections	4/30/2016 12:05 PM
21	Flight departure and arrival times Direct flights Connection airports (avoiding the "bad" ones) Baggage fees	4/30/2016 9:45 AM
22	Baggage Fees	4/30/2016 9:37 AM
23	Which regional airline will be operating the flight (i.e. Delta Connection operated by Endeavor Air, ExpressJet, or SkyWest).	4/29/2016 4:25 PM
24	The company's political and social views	4/29/2016 3:32 PM
25	No	4/29/2016 3:19 PM
26	No	4/29/2016 2:46 PM
27	I stick to the airlines I know and avoid super low cost carriers like Spirit Air. The prices are competitive among the majors, and there is root reason the super low cost carriers can offer those airfares - something's not right.	4/29/2016 2:23 PM
28	Not particularly.	4/29/2016 1:55 PM
29	Ability to cancel flight for any reason	4/29/2016 11:42 AM
30	Number and duration of layovers	4/29/2016 10:53 AM

Aviation College Student Airline Customer Elasticity

31	No	4/29/2016 10:48 AM
32	Price is 80%, time of flight is 20%.	4/29/2016 10:46 AM
33	No	4/29/2016 10:46 AM