Industry Perception of Small Aircraft Transportation Systems

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Introduction

SATS Overview

- NASA Study
  - Nationwide small aircraft transportation system (SATS)
  - Combats the growing saturation of the National Airspace System (NAS)
- SATS Aircraft
  - Seat 14 or fewer passengers
  - Serves small satellite airports
    - Increased passenger convenience
    - Less congestion
  - Advanced navigation and flight instruments
  - Fuel efficient

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Introduction

Purpose of Study

- Given the current state of the economy, what is the viability of SATS in future businesses?
- Gain an industry-wide perspective concerning the risk of using SATS
  - Aviation
  - Non Aviation
- Determine trends that different industries view as necessary for its successful implementation.

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Literature Review

Past Research

- Graduate student and advisory committee
- Examined relationship between demographics and risk perception
  - Using SATS in collegiate transportation environment
- Findings
  - Significant predictors of SATS risk perception:
    - Gender, academic position, general aviation familiarity
  - High ranking individuals had different priorities with travel
    - Value of time was more important than cost
  - Individuals with aviation background demonstrated less concern of physical and status risk using SATS

Literature Review

Current Issues

- Declining number of general aviation flights
  - 5% decrease in 2010
  - Few signs of improvement in the short-term
- Average cost of Avgas: $6/gallon
  - Approximately 100% increase in four years
- Slowed development of very light jets (VLJ)
  - Piper Altaire, Hawker 200, Eclipse

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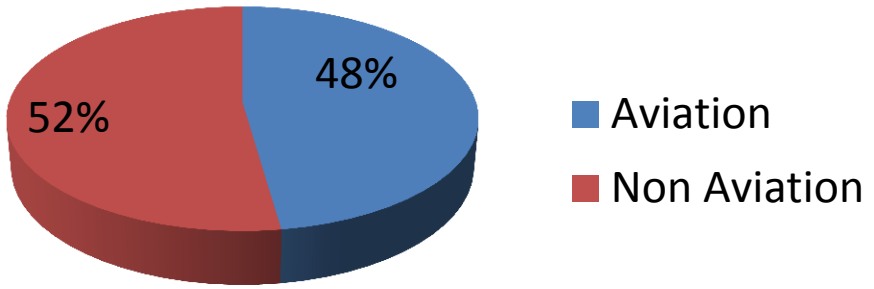
Methodology

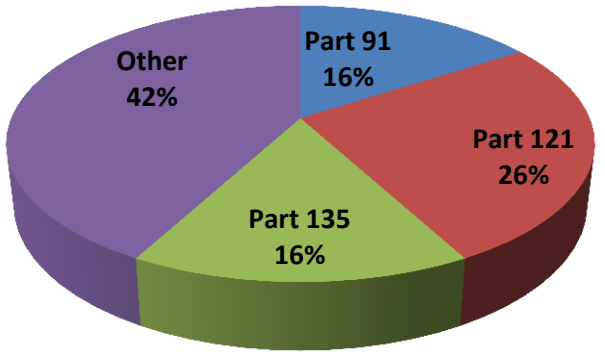
Data Collection

- Electronic Survey
  - Assess opinions and perceptions concerning SATS utilization
- Participants split into two categories
- Industry leaders from each industry
  - Business owners, managers, operators, and experienced professionals

Industry Leadership Position



Participant Background



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Results

Categorical Data Analysis

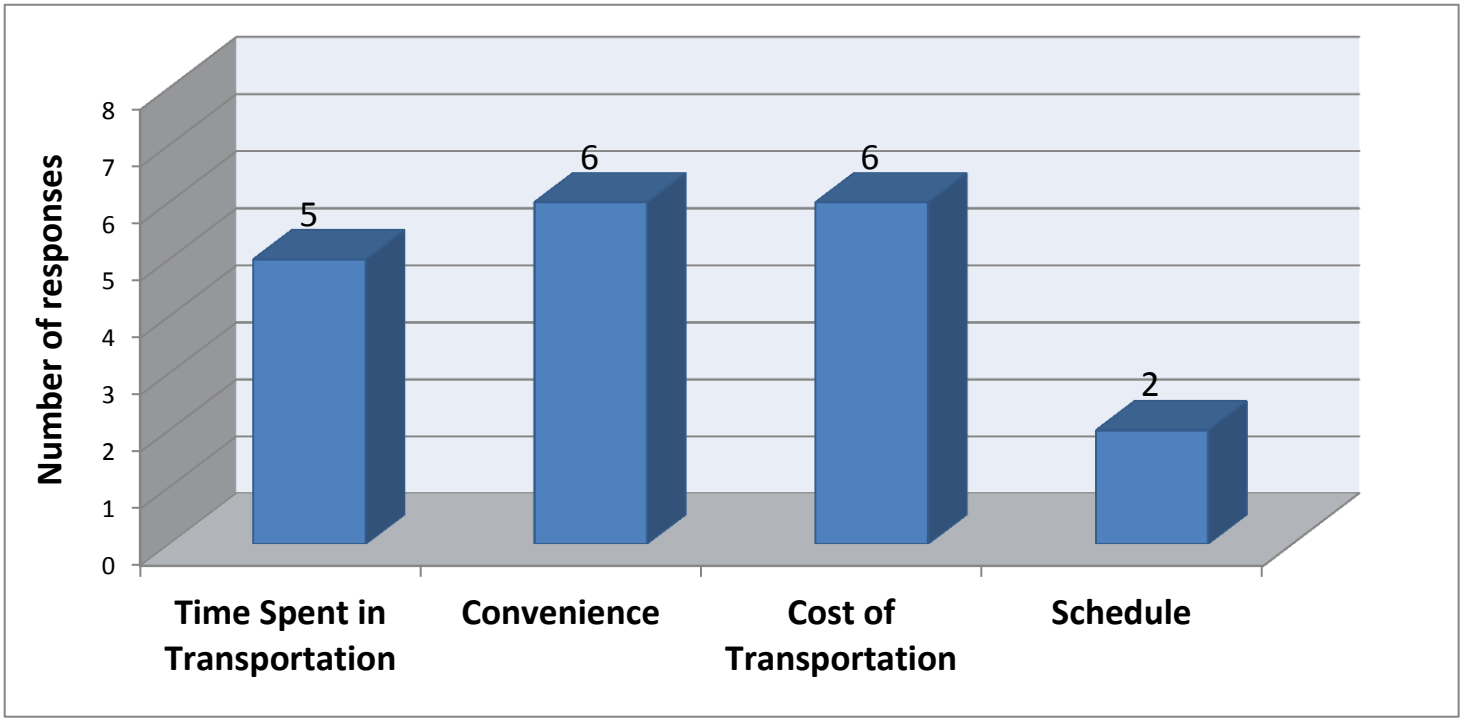
- Relationship between FAA pilot certificate holders and familiarity with SATS concept

	Pilot Certificate	Familiar with SATS
Yes	45%	47%
No	55%	53%

- Chi Squared revealed p-value of 0.11
  - No statistical significance

Results

Travel Priority: Business Owners or Managers



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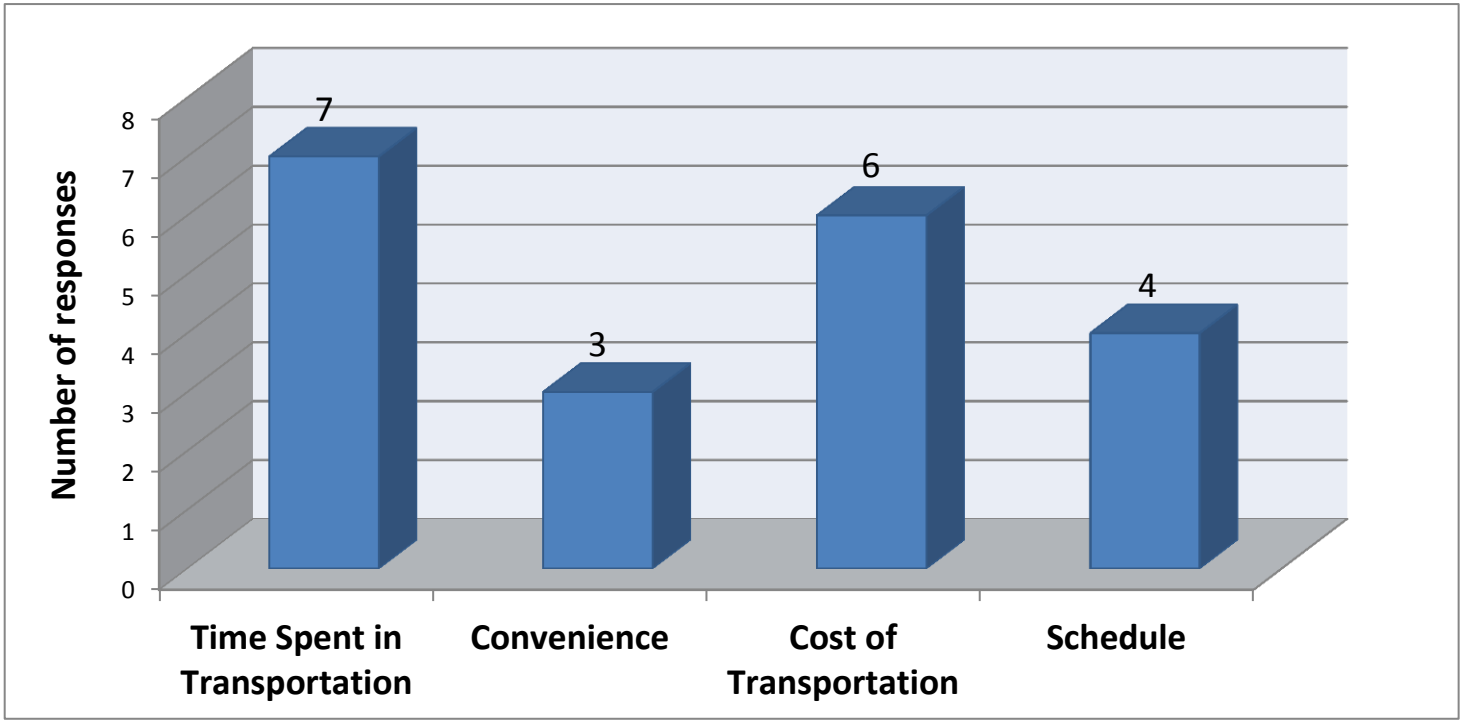
Results

Travel Priority: Aviation Industry Leaders



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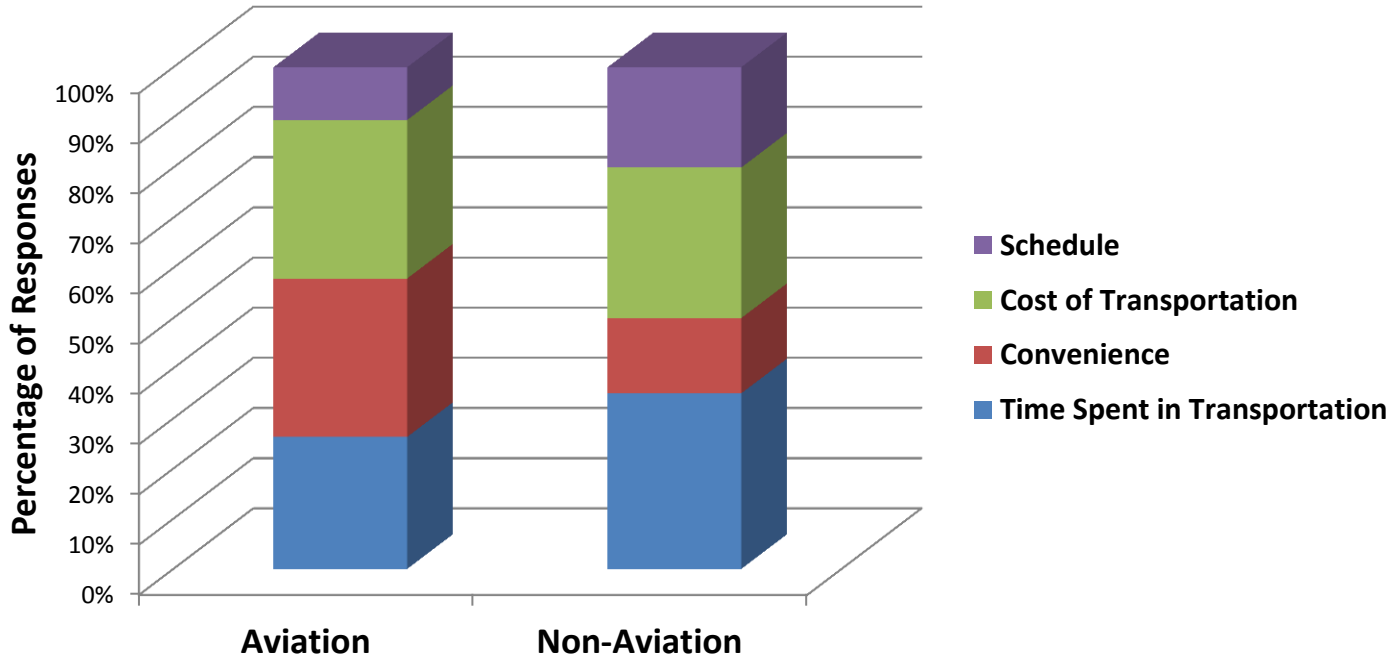
Results

Comparison of Means



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Results

Likert Scale - Risk

- Aviation familiarity linked with risk perception of single engine aircraft
  - 78% of aviation professionals strongly agree they would be comfortable
  - Only 44% of non-aviation professionals strongly agreed
- Responses began to vary when asked specifics of SATS service
  - Both groups had 56% agreement concerning aircraft with less than 5 seats
- Single pilot operation
  - Only 22% of aviation professionals strongly agreed
  - 44% of non-aviation professionals strongly agreed
- Public Image
  - 11% of aviation and 22% of non aviation leaders exhibit positive perception

Results

Likert Scale – Marketability of SATS

- Hesitations revealed in both groups
- Is SATS is a viable system with current market trends?
  - Both groups had only 22% agreement
  - Unanimous disagreement from aviation group concerning sustainability of piston powered aircraft
    - 22% of non-aviators agreed
- Profitability of SATS
  - 44% of aviation and 33% of non aviation groups ranked 5
- Investing into SATS
  - 22% of both groups strongly agree

Discussion

Industry Suggestions

- Accident rates and small aircraft
- Large capital investment
- Strategic budgeting and cash flow analysis
- Critical success factors
  - Reliability, safety, aircraft maintenance
- Time value of money

Conclusion

Recommendations

- Application for further studies
  - Larger sample size
  - Provide insight on introducing SATS approach
- Aviation familiarity strong predictor of SATS risk
  - In agreement with previous study
    - 89% of respondents familiar with aviation are comfortable with small aircraft
- Given time, SATS could be a profitable asset for a company

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Questions
Comments

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