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ASSESSING THE EFFECTS OF SEPTEMBER 11 EVENTS ON FLIGHT TRAINING

Atef Ghobrial and Gregory Streib

Abstract

On September 11, 2001 the U.S. and the World witnessed the atrocities that terrorists inflicted. These tragic events have changed the approach for aviation security planning, management and policy. This paper attempted to address the effects of September 11 on the flight training business. We designed a questionnaire and surveyed 12 flight training schools in Metro Atlanta. Analysis of the data was conducted using simple statistical correlations and cross tabulation. The results of the analysis are discussed in the body of the paper, and limitations of the study are also addressed.

INTRODUCTION

Aviation security has been on the government's agenda over the past thirty years in a cycle that overlays terrorist incidents involving airliners. Although the aviation community witnessed its first hijacking attempt in 1931, it was not until the late 1960's that terrorist hijackings and sabotage of commercial airlines took a sharp increase. The majority of hijackings and sabotages towards the end of the past century were aimed at Western governments. Terrorists repeatedly took advantage of the West's neglect to bring about major aviation security reform. Commercial aviation became a favored target of terrorists because airlines represent a nationally-labeled container of hostages in the case of hijackings, or victims in the case of sabotage. For years, an inefficient system of aviation security has given terrorists an instrument to force not only political changes to influence the West's foreign policy, but also national turmoil and disruptions for whatever nation they prey on.

Inadequate practices and procedures have been repeatedly documented and reported revealing vulnerabilities in the U.S. aviation security system well before the events of September 11, 2001 (GAO, May 25, 2000 & June 28, 2000). The commercial aviation industry lacked a uniform system of security procedures. Airlines have operated in an extremely volatile, cost sensitive environment, especially following deregulation in 1978. The responsibility of providing security screeners had been placed in the hands of air carriers until the recent changes to federalize screeners.

On September 11, 2001 the United States and the

world witnessed the atrocities that terrorists inflicted. Commercial airliners were hijacked and utilized as weapons when the two World Trade Center towers and the Pentagon were attacked causing deaths and destructions that will always be remembered. The Federal Aviation Administration's immediate response was to shut down the nation's airway system including airports. Not only were commercial air carriers grounded, but general aviation flying was also stopped. The FAA's crackdown on the nation's small aircraft industry lasted for nearly two weeks. With the banning of all Visual Flight Rules (VFR) flights during these two weeks, flight training schools across the U.S. were unable to operate their businesses. It is estimated that the nation's 2400 flight schools lost up to \$15 million a day while VFR flights were banned, (The Business Review, 2001).

Preliminary investigations following the events of September 11 showed that several of the hijackers had received flight training in the U.S., which raised concerns about security checks of individuals in flight training programs. It was later known that a number of hijackers were on the watch list of the Department of Justice, however, they were able to travel undetected through the nation's airways on commercial airliners and through airport security facilities.

On November 19, 2001, the President signed the Aviation and Transportation Security Act, creating the Transportation Security Administration (TSA) as an agency of the Department of Transportation. Under the Aviation and Transportation Security Act, flight schools and training

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centers received requirements from the FAA to advise the Attorney General of any foreign applicants for flight instruction and to provide specific information on them. The Department of Justice, the Federal Bureau of Investigation, and the former Immigration and Naturalization Service developed the process and the details on the information to be provided. Flight schools, training centers, and flight instructors were advised of these procedures (AOPA-online, December 26, 2001).

On January 5, 2002, a 15-year old student pilot took an aircraft without authorization from the flight school where he had been receiving flying lessons. The student pilot took off without clearance, traversed military airspace without permission, and crashed into a 42-story building in downtown Tampa, Florida. There was damage to the building, but no one inside the building or on the ground was injured by the crash itself or by falling debris. There was no fire, and the student was the only fatality. In view of that incident, the FAA, on January 9, 2002, suggested some measures for enhanced security for flight schools and fixed base operators (CNN-online, January 10, 2002). The suggestions dealt primarily with limiting access to aircraft, and keeping it from unauthorized use when it is unattended.

Another important issue as related to flying a light aircraft was the use of a drone aircraft as a biological or chemical weapon. These are pilotless and very small planes that come in a variety of sizes, shapes and capabilities. They can be equipped with spraying and aerosol-type capabilities. With today's Global Position Systems, GPS, and availability of maps, these planes can be purchased, used, guided and directed with great precision and capable of dispensing chemical and biological weapons. The concerns about drone aircraft were raised in February, 2003 before the war in Iraq. Arguments were also made that these small planes can be brought to the U.S. in small pieces and then be assembled and used against specific targets in the U.S. (CNN-online, February 25, 2003).

It should be noted that security of general aviation is of a national interest. In 2003, the TSA chartered a working group on general aviation within the existing Aviation Security Advisory Committee, (GAO, September 9, 2003). The working group consists of industry stakeholders and is designed to identify and recommend actions to close potential security gaps in general aviation. On October 1, 2003, the working group issued a report that included a number of recommendations for general aviation airport operators' voluntary use in evaluating airports' security requirements. These recommendations were both broad in scope and generic in their application, with the intent that every general aviation airport and landing facility

operators may use them to evaluate that facility's physical security, procedures, infrastructure, and resources. TSA is taking some additional action to strengthen security at general aviation airports, including developing a risk-based self-assessment tool for general aviation to use in identifying security concerns (GAO, November 5, 2003).

By early 2005, TSA will issue "best practice" guidelines for security at more than 18,000 landing facilities nationwide that serve general aviation. TSA has also implemented the "twelve-five rule", which requires that operators using aircraft with a maximum certificated take-off weight of 12,500 pounds or more carry out a security program (DOT.gov). Additionally, the Aircraft Owners and Pilots Association (AOPA) has partnered with TSA to develop a nationwide Airport Watch Program that uses the more than 650,000 pilots as eyes and ears for observing and reporting suspicious activity. This helps general aviation keep airports secure without needless and expensive security requirements. AOPA Airport Watch is supported by a centralized government provided toll free hotline, and system for reporting and acting on information provided by general aviation pilots. The Airport Watch Program includes warning signs for airports, informational literature, and training videotape to educate pilots and airport employees as to how security of their airports and aircraft can be enhanced, (AOPA – online).

In early October 2004, the House Transportation and Infrastructure Committee approved a bill to enhance commercial aviation security. This bill, along with other security measures, is likely to be considered by the full House as part of legislation developed in response to the recommendations of the 911 Commission Report. Top officials in AOPA were able to convince legislators to exclude general aviation security from including in the bill. They explained the substantial improvements in general aviation security since September 11, 2001. They also reviewed federal regulations to show that the safeguards in place governing flight over populated areas and near structures. General aviation pilots flying under Part 91 rules know who their passengers are and what's in their luggage — just like drivers of private passenger cars. Using a vehicle comparison chart, AOPA officials demonstrated the limited cargo capacity of a typical GA aircraft compared to the potential explosive loads of the cargo vans or semi trailer trucks that are ubiquitous in, for example, New York City, (AOPA on-line).

The purpose of this paper is to assess the effects of the tragic events of September 11 on the business of flight training. The study was conducted by designing a questionnaire and interviewing managers and directors of

flight training schools at general aviation airports in Metro Atlanta, Georgia. The information was tabulated and analyzed statistically. The findings and limitations of the study are discussed in the paper.

APPROACH

Our approach to assess the impacts of September 11 used interviews. We chose to design a questionnaire and interview managers and directors of a few flight schools in Metropolitan Atlanta. A copy of the questionnaire is at the end of the paper. The questionnaire consists mainly of four parts. Part I gathers information about individual flight school which includes certification types; composition of fleet; customer breakdown in terms of those seeking careers in aviation, business flying, or leisure flying; and association of flight instructors with the school – that is part-time or full-time employees. Part II of the questionnaire collects information which describes the flight school operations prior to the events of September 11. This information includes the flight school perception of business growth, and security precautions and procedures that were in place before September 11, 2001. Part III gathers information about the changes that have taken place in terms of security measures since September 11. This information includes adoption of any new procedures as related to security checks of trainees, availability of guiding procedures from the FAA to flight schools, security training needs of flight training schools, best methods to train flight schools on implanting security measures, financial arrangements to implement security procedures, and the impact of the events of September 11 on the financial health of flight training. In Part IV, managers of flight training schools express their

views on the outlook of the flight training business and identify some measures that ought to be implemented to revive their businesses.

Security of general aviation is a national issue which is being addressed by the industry stakeholders. However, for the purpose of demonstration and manipulation of the data, we limited our analysis to thirteen (13) flight training schools in Metropolitan Atlanta. These schools were interviewed in the fall quarter of 2002 and are located at Dekalb-Peachtree Airport, Cobb County Airport-McCollum Field, Fulton County Airport-Brown Field, Peachtree City Airport-Falcon Field, Douglas Municipal Airport, Griffin-Spalding County Airport, Clayton County Airport - Tara Field, Gwinnett County Airport-Briscoe Field. Individual school names are not identified in the paper to maintain their privacy. By limiting the scope of the study to these thirteen flight schools, we hoped to capture a group of homogenous flight schools in terms of operating environment, and the socio-economic characteristics of the users. A cursory examination of the responses showed that the responses from one of the thirteen training schools were completely inconsistent. The school was viewed as an outlier observation, and was dropped from the list of flight schools in the study.

Flight schools under consideration were established between 1984 and 1998, with an average of a little over ten years in business. Seven schools have Part 61 Certification only, and four schools have Part 61 and Part 141 Certification. Table 1 depicts the breakdown of certifications and ratings offered by the schools.

Table 1: A breakdown of Flight Schools by Certifications

Type of Rating	# of Flight Training Schools	Type of Rating	# of Flight Training Schools
Private	12	Private	12
Commercial	11	Commercial	11
CFI	8	CFI	8
MEI	5	MEI	5

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All flight schools have single-engines; the number varies from one to five planes with an average of about 2.5 planes. As one would expect, the seven flight schools that offer multi-engine training would have multi-engine planes. Each of the seven schools has one multi-engine plane.

The number of trainees in 2001 varies from 25 to 250. The correlation between the number of trainees in each school and the number of available planes is about 0.45. The weak correlation suggests that trainees select flight schools not only because of availability of planes but also because of other factors such as reputation of the school, its proximity to home/work, training fees, etc. It also suggests that utilization of planes varies considerably among flight

schools. Figure 1 depicts a breakdown of the percentage of trainees in each school by purpose of training. Series 1, 2 and 3 represent the percentages of trainees seeking careers in aviation, business flying, and leisure flying; respectively. The Figure shows a wide variation in trainee mix among the different flight schools. On the average, half of the trainees are interested in leisure travel. Those interested in pursuing careers in aviation and those interested in business flying are, on the average, equal. Finally, five schools in the sample schools have full-time flight instructors, four rely on part-time instructors, and three have a combination of full-time and part-time instructors.

Figure 1: Distribution of Students Seeking Flight Training

DATA ANALYSIS**A Growing Consensus about Security:**

The findings from the survey show that security measures were virtually non-existent prior to September 11. No background checks were conducted on applicants or employees. The respondents did not feel that checks were required by the FAA. Nor did they feel it was required to have procedures in place to conduct such checks. They indicated that they had never been contacted by the FAA (or any other agencies) about these matters. The respondents also indicated that there had been no security checking procedures for aircraft renters. The findings show a sea change, post September 11. Most of the respondents reported that background checks are now in place for American students, international students, and renters.

The Business Impact of September 11:

Flight schools do not exist to provide security. Their main business is train student to fly. The events of September 11 could certainly be seen as having an impact on both their ability to do this job efficiently and on the demand for flight training. By all outward appearances, flight training would appear to be a business that is under a great deal of strain. Much is written about the financial status of major airline carriers, but little is said about the prospects for flight training. Our survey explored this issue through four questions, asking respondents to rate the outlook for the flight training business in general, before and after September 11, and for the respondents own flight school, before and after September 11.

Table 2: Respondent's Views of Flight Training Business Before and After September 11

			How did you view the outlook of the Flight Training Business prior to 9-11?				
			Growing significantly	Moderate growth	Slow growth	Stagnate	Total
How do you view the outlook of the Flight Training Business after 9-11?	Growing significantly	Count	1				1
		%	33				8
	Moderate growth	Count	2	4			6
		%	67	57			50
	Slow growth	Count		3	1	1	5
		%		43	100	100	42
Total	Count	3	7	1	1	12	
	%	100%	100%	100%	100%	100%	

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As shown in Table 2, the views about the flight training business are mixed, though they are certainly not overly negative. Nor is there clear evidence that the outlook for the flight school business changed dramatically as a result of September 11. Looking at the extreme upper left cell, we see that one flight school respondent saw significant growth, both before and after September 11. Also, in the upper left are respondents from 6 other schools who see moderate growth. Two of these respondents predicted significant growth prior to September 11 and shifted downward to moderate growth for their post September 11 rating. The 4 respondents predicting moderate growth gave the same ratings for before and after September 11.

Among those respondents holding more negative views, the Table also shows three respondents who predicted moderate growth prior to September 11 that shifted to a rating of slow growth, one who predicted slow growth before and after, and one who predicted stagnant growth prior to September 11 and slow growth afterwards.

Coping with Insurance cost:

Spiraling insurance costs are one of the greatest threats to the flight school business. The news here is mixed, but generally positive. Fifty-eight percent of the respondents indicated that their insurance premiums had stayed the same, post 9-11. The increases (at those schools that had them) ranged from 18 to 100 percent. The average increase was 49 percent. Only one respondent reported an increase of 100 percent, but this is certainly a stunning increase. Seventy-five percent of the respondents indicated that they were aware of flight schools that went bankrupt due to "unanticipated increases in insurance premiums."

Security Burdens and Flight Schools, Post September 11:

From the findings present above, we see that security checks are now a fact of life for flight schools—at least most of them. This raises many questions about the implementation of the new security procedures. Flight schools are now in the security business, to some extent or another, in the post September 11 world.

One key question involves the role of the FAA in security checks. Analysis of the surveys showed no evidence that the FAA or the Department of Justice (DOJ) is involved in security checking. The respondents did not have any information on conducting security checks from federal agencies, and no training had been provided. In contrast, 67 percent of our respondents indicated that these agencies should conduct the checks themselves.

Of course, there is no reason to think that federal agencies will do checks for flight schools anytime soon. This is most likely to be mandated and possibly there will also be some sort of training to help ensure the effectiveness of the process. Our respondents were asked about a number of possible training methods, and the findings are presented in Figure 2. A clear preference is evident, for live seminars or videos over computer-based training or manuals.

If training on security checking was to be conducted, our respondents were not very interested in assuming the cost. All of our respondents indicated that individual flight schools should not be required to pay for training, and 75 percent felt that the FAA should cover the cost. Indeed, our respondents did not feel that they should pay the costs of any aspects of background checking. Ninety-two percent indicated that the FAA should pay the costs for security checking and all of the respondents agreed that the flight school industry should not be responsible for these costs.

Figure 2: Respondent Preferences for FAA Security Training

SUMMARY, CONCLUSIONS AND LIMITATIONS OF STUDY:

The tragic events of September 11, 2001 have changed the approach to aviation security planning, management and policy. This paper attempted to investigate the effects of September 11 on the flight training business. Data were obtained from surveying 12 flight training schools in Metro Atlanta. Major findings in our study include: a) security measures were virtually non-existent prior to September 11; b) background checks is now required on applicants seeking flight training; c) there is not strong statistical evidence that the outlook for the flight training business changed dramatically as a result of September 11 events; d) a significant number of respondents indicated that they were aware of flight school that went bankrupt due to unanticipated increases in insurance premiums; and e) as one would expect, flight schools are not interested in assuming the cost of conducting security training or

checking.

There are some limitations to our study. Although security of general aviation is a national issue, the study was conducted using a limited number of flight schools in Metropolitan Atlanta. Thirteen flight schools were interviewed and one had inconsistent results and was dropped from the analysis. There were variations among flight schools in terms of certification, number and types of planes, mix of trainees by purpose, etc. Flight schools were, however, selected from airports in Metro Atlanta. One may suggest that the results of the study are thus confined to that geographical area. It can also be suggested that future studies would consider a much broader cross-sectional data from flight schools located in different parts of the U.S.; thus capturing variations in the operating environments of flight schools and in the socio-economic characteristics of the users. ➔

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Questionnaire

Assessing the Effects of the September 11 Events on General Aviation Airports

GENERAL

1. Ownership of the airport:

☐ State ☐ County ☐ City ☐ Private

2. What are the sources of income for your airport?

_____	% (roughly)
_____	% (roughly)
_____	% (roughly)
_____	% (roughly)
_____	% (roughly)
_____	% (roughly)
_____	% (roughly)
_____	% (roughly)

3. What is the breakdown in aircraft operations in percentages (roughly):

☐ Local Operations:	_____	%
☐ Itinerant Operations:	_____	%
☐ Others:	_____	%

4. Does the airport have a control tower?

☐ Yes ☐ No

☐ If YES, what are the hours of operations? _____

5.

How many runways and their lengths that your airport has?

☐ 1st runway Length: _____

☐ 2nd runway Length: _____

☐ 3rd runway Length: _____

6. Who are the tenants at your airport?

☐ Flight Schools

☐ FBO's

☐ Charter Operators

☐ Avionics

☐ Maintenance

☐ _____

☐ _____

☐ _____

7. Who are the users at your airport?

☐ Flight Schools

☐ Corporate Operators

☐ Private/ Leisure (Individuals)

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- ☐ Commercial Operators (Charters)
- ☐ Industrial Use (Leasing space in the airport vicinity)
- ☐ _____
- ☐ _____
- ☐ _____

II. PRE-September 11, 2001

How did you view the outlook of the General Aviation Industry prior to 9-11?

Growing significantly

Moderate growth

Slow growth

Stagnate

Declining

How did you view the outlook of YOUR Airport prior to 9-11?

Growing significantly

Moderate growth

Slow growth

Stagnate

Declining

Did the FAA or any other agencies ever inquire whether YOUR Airport had a procedure in place to conduct a background check?

☐ Yes

☐ No

Was background checking on the employees of airports required by the FAA or any other agencies?

☐ Yes

☐ No

Were there any procedures set forth by the FAA or any other agencies for security and background checking on airport employees or airport users?

☐ Yes

☐ No

Was identification required by each of the following group while on the airport premises?

- Airport Employees ☐ Yes ☐ No
- Tenants of the Airport ☐ Yes ☐ No
- Users of the Airport ☐ Yes ☐ No

7. Was there any communication between the airport management and the tenants on security issues?

- ☐ Yes ☐ No

III. Post-September 11, 2001

1. Are there any information or procedures currently available from the FAA or other agencies on guiding General Aviation Airports to perform security checks?
☐ Yes ☐ No
2. Should security checks be conducted by individual General Aviation Airports or managed by the FAA-that is the FAA/DOJ conduct security checks on airport employees and tenants?
☐ Conducted by individual Airports ☐ Conducted by the FAA/DOJ
3. Is there any coordination between the management of your airport and the tenants/users at your airport in terms of "security"?
☐ Yes ☐ No
4. Do you see the need for the FAA to provide "security training" to Airports?
☐ Yes ☐ No
5. Do you see the need for certification of airports by the FAA based on "participation in a security training program"-that is an airport is certified if it participates in an approved security training program?
☐ Yes ☐ No
6. What would be the favorable method of providing security training to airport management:
 - ☐ Seminars
 - ☐ Video tapes
 - ☐ Manuals
 - ☐ Computer Based Training (CBT)
7. In your opinion, who should pay for the expenses of training general aviation airports on security matters?
 - ☐ FAA
 - ☐ Individual Airport
 - ☐ The tenants through increased fees
4. In your opinion, who should pay for the expenses of conducting "security checks"?

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- ☐ FAA
 - ☐ Individual airport from operating income
 - ☐ The tenants through increased fees
5. Following the events of 9/11, "insurance premiums" for YOUR airport:
- ☐ Stayed the same
 - ☐ Increased by _____ % (roughly)
6. Are you aware of any tenants that went bankrupt due to "unanticipated increases in their insurance premiums"?
- ☐ Yes ☐ No, If your answer is yes, how many tenants (roughly)? _____

IV. OUTLOOK FOR GENERAL AVIATION

1. How do you view the outlook of businesses at general aviation airports after 9-11 ?

Growing significantly
Moderate growth
Slow growth
Stagnate
Declining

2. How do you view the outlook of YOUR airport after 9-11 ?

Growing significantly
Moderate growth
Slow growth
Stagnate
Declining

3. What changes do you think ought to be made in order to revive the general aviation industry?