

Bilateral Aviation Safety Agreements: Reducing Costs for the Aviation Industry

Prepared For:



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Executive Summary

In the spring of 2011, AeroStrategy and the Aeronautical Repair Station Association (ARSA) conducted a survey to assess the economic impact of Bilateral Aviation Safety Agreements (BASAs) on the civil aviation maintenance industry. The survey is part of ARSA's on-going effort to obtain and maintain economic data that will keep lawmakers, regulators, media, and other key audiences informed about this vital industry.

The survey sought to determine the impact of BASAs on aviation repair stations certificated by national aviation authorities outside of the repair station's home country. Specifically, the information gathered was used to evaluate the costs of part 145 certification both with and without a BASA.

The survey results reinforce the important economic benefits of bilateral agreements. Repair stations in the United States pay significantly less for certification from regions/countries that have bilateral agreements with the U.S. government.

In contrast, when looking at the certification costs compared to the revenues that the certificate generates, the results show that expenditures for certification by countries without a BASA are high. U.S. repair stations pay several times more to obtain or renew certificates from foreign civil aviation authorities (CAA) when there is no BASA in place.

Background

AeroStrategy is a management consulting firm based in Ann Arbor, Michigan with offices in London and Singapore. AeroStrategy has worked with ARSA to research the aviation maintenance industry's economic and employment impact both in the United States and globally. The research illustrates the economic importance of the civil aviation maintenance industry:

- The global maintenance, repair, and overhaul (MRO) market exceeded \$50 billion in 2008, with North America (the U.S. and Canada) accounting for \$19.4 billion of the total.
- When induced and related economic effects are considered, the maintenance industry's impact on the U.S. economy is \$39 billion per year.
- The industry employs at approximately 274,000 workers in the United States.
- North America is a major net exporter of aviation maintenance services, enjoying a \$2.4 billion positive balance of trade in this area.

The maintenance, preventive maintenance, and alteration of civil aviation products (aircraft, aircraft engines, propellers, and components) are controlled by the CAA where the aircraft is registered. In order to work on a "foreign-registered" aircraft, the repair station must be certificated by that foreign authority.

BASAs are government-to-government arrangements that regulate the operation of international air services between two countries. BASAs allow for cooperation in a range of aviation safety arenas, including design, production, flight operations, environmental certification, and maintenance.

While the United States has concluded more than a dozen BASAs with various governments, only the agreements with Canada and the European Union (EU) involve maintenance.¹ These are the focus of this study.

BASAs aim to reduce regulatory duplication and provide greater market access for repair stations. Generally, BASAs reduce regulatory obstacles by allowing the "domestic" aviation authority to perform audits and make findings on behalf of the "foreign" authority, thereby avoiding regulatory duplication and government waste, and making it easier for repair stations to serve foreign customers. For example, under the BASA between the United States and EU, U.S. repair stations can obtain approval to work on EU-registered products based upon a valid FAA part 145 certificate and compliance with certain other conditions.

¹ The recent agreement between the United States and EU has superseded earlier agreements with maintenance implications between the United States and France, Ireland, and Germany. More information about BASAs, including a list of current agreements, is available at http://www.faa.gov/aircraft/air_cert/international/.

While an analysis of the safety implications of BASAs is beyond the scope of this study, data demonstrate that since the first U.S. BASA which covered maintenance (with France) entered into force in 1996, fatal aviation accidents have continued to decline; at a minimum, there is not a negative correlation between BASAs and safety.²

The aviation maintenance industry, particularly contract maintenance, is being intensely scrutinized by the general media and governments. The BASA between the FAA and the EU was threatened by legislation that passed the U.S. House of Representatives during the 111th Congress, which resurfaced during the 2011 FAA reauthorization debate. This study demonstrates that the collapse of BASAs would have real, bottom line consequences for American companies serving international customers.

² See, e.g., November 2009 testimony of Air Transport Association before the House Transportation Security and Infrastructure Protection Subcommittee on contract maintenance and aviation safety trends (http://www.airlines.org/PublicPolicy/Testimony/Pages/testimony_11-18-09House.aspx).

Study Objectives and Respondent Profile

The BASA survey is part of ARSA's "Positive Publicity Campaign", a multi-year public relations initiative to educate key audiences about the civil aviation maintenance industry. The survey's objective was to measure the economic impact of BASAs on certificated repair stations.

Any repair station, regardless of location or ARSA membership, that served foreign customers under its domestic certificate (e.g., Canadian repair station working on U.S.-registered aircraft) or that held a foreign certificate (e.g., European Aviation Safety Agency (EASA) approval in the United States) was welcome to participate in the survey. The survey was widely publicized on ARSA's website, through direct communications to ARSA members, and in the media.

ARSA and AeroStrategy received broad participation in the survey, with responses from more than 30 repair stations that support maintenance activities in the United States, the European Union, China, Brazil, Japan, Thailand, Korea, Vietnam, Venezuela, Argentina, Singapore, Saudi Arabia, Indonesia and Caribbean nations.

Three quarters of the respondents were based in the U.S.; most held certificates from multiple countries. Ultimately, certification cost data from over 65 individual certificates were received. Annual revenues of the survey participants varied from under \$1 million to over \$700 million.

Each survey respondent provided the following key data:

- Location, revenues, number of employees;
- General type of work performed;
- The direct and indirect costs to acquire and renew each foreign repair station certificate (for purposes of this evaluation, direct costs include such things as application fees and other monies paid directly to regulatory bodies; indirect costs include company staff time associated with regulatory compliance, etc.); and,
- The revenues that each foreign repair station certificate generates.

Respondents provided data directly to AeroStrategy; the association was not involved in the analysis process.

Findings

On average, when direct and indirect costs are considered, initial FAA certification for a repair station located in the United States costs a little over \$15,000, while EASA approval for U.S. facilities costs slightly less (around \$11,500). EASA certification is less expensive because the BASA with the United States allows the FAA certificate to serve as the basis for EASA approval.

In contrast, there is no BASA between the United States and China. As a result, the cost for a repair station in the United States to become certificated by the Civil Aviation Administration of China (CAAC) is over \$30,000. Initial and renewal fees for other non-BASA certificates are similarly more expensive. The findings establish that it costs repair stations significantly more (up to two and half times as much) to become certificated by “foreign” CAAs when the home country does not have a BASA with the associated foreign country.

Table One details the average costs compiled from the survey:

Table 1. Average Certification Costs for U.S. Repair Stations					
BASA in Place with United States	Issuing Civil Aviation Authority (CAA)	Initial Certification Cost	Initial Certification Cost Difference vs. EASA	Certificate Renewal	Renewal Cost Difference vs. EASA
	Federal Aviation Administration (FAA)	\$15,206	N/A	\$10,636	N/A
Yes	European Aviation Safety Agency (EASA)	\$11,626	Baseline	\$5,882	Baseline
No	Civil Aviation Administration of China (CAAC)	\$30,524	\$18,898	\$13,225	\$7,343
	Other CAA*	\$16,826	\$5,200	\$17,172	\$11,290

*Other includes Brazil, Japan, Thailand, Korea, Vietnam, Venezuela, Argentina, Singapore, Saudi Arabia, Indonesia and Caribbean

When comparing certification costs to the revenues the certificate generates, another fact emerges: non-BASA certification fees consume a larger percentage of company revenues. As reflected by Table 2, average FAA certification renewal costs consume two cents of every dollar of revenue generated by that certificate. By comparison, renewing a CAAC certificate consumes 16 cents of the revenue dollar it generates. Other certificates average even higher. In addition, certificates for these other regions typically generate lower revenues (relative to FAA/EASA business). High certification

costs therefore make the work more expensive – and less profitable – for the repair station.

Table 2. Cost of 145 Certificate Renewal As Percentage of Revenue Derived from Certificate			
BASA in Place with United States	Issuing Civil Aviation Authority (CAA)	Percent of Revenue (Range)	Percent of Revenue (Weighted Average)
	Federal Aviation Administration (FAA)	.003 to 1	.02
Yes	European Aviation Safety Agency (EASA)	.01 to 3.08	.04
No	Civil Aviation Administration of China (CAAC)	.05 to 1.56	.16
	Other CAA	.05 to 8.29	.41

Finally, when looking more closely at renewal costs, two other key points come to light:

- (1) EASA renewal fees for U.S. repair stations are currently less than half that of other regions of the world;
- (2) Current renewal fees disproportionately affect small businesses because larger companies are better able to absorb compliance costs. (See Exhibit 4 & 5 in the appendix)

If the BASA did not exist between the FAA and EASA, fees for EASA renewal would at least double; small businesses would bear the brunt of an increase in renewal costs.

Conclusions

The results of this survey point to the importance of BASAs. BASAs reduce economic barriers and compliance costs, while improving efficiency. When there is no BASA in place, certification costs are significantly higher.

Previous studies have illustrated the importance of the civil aviation contract maintenance industry, which employs approximately 274,000 workers in the United States. Policies that threaten BASAs threaten U.S. jobs and the profitability of U.S. companies. Concluding additional BASAs will level the playing field and make it easier for U.S. companies to compete globally.

Appendix

Exhibit 1: Survey Respondent Profile

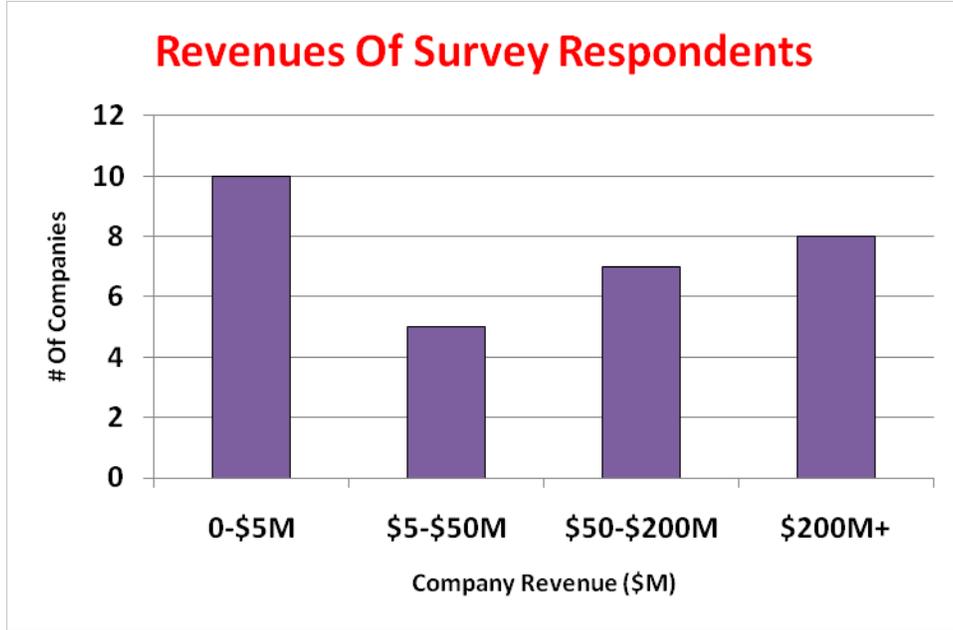


Exhibit 2: Regulatory Agency Renewal Costs As Percent Of Revenue Generated By Certificate
(Includes Direct Fees As Well As Indirect Costs To Station)

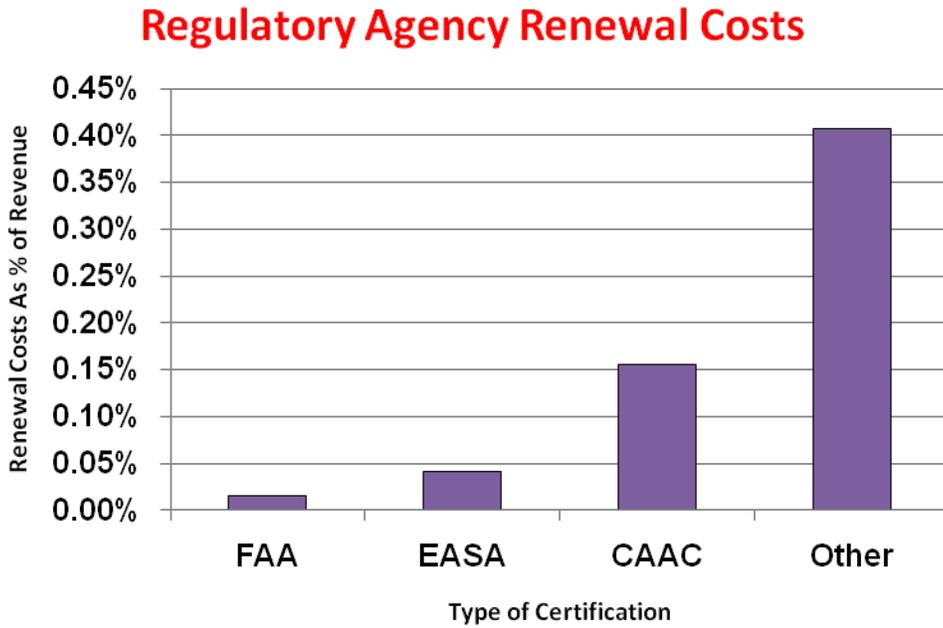


Exhibit 3: Revenue Breakdown of Survey Participants

Survey Participants Revenue Breakdown

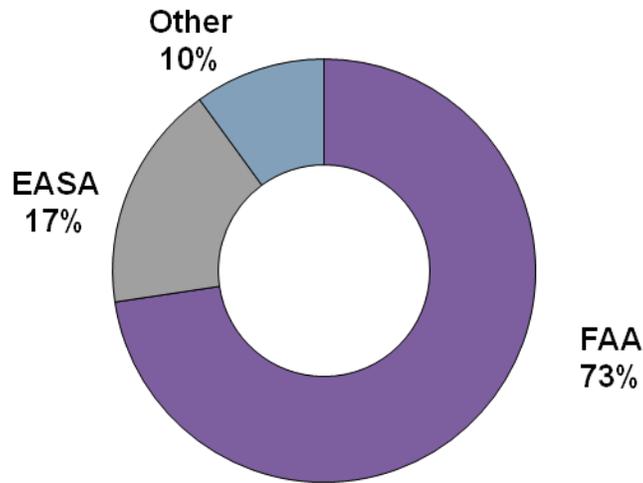


Exhibit 4: Average Certificate Renewal Fees

Average Certificate Renewal Fees

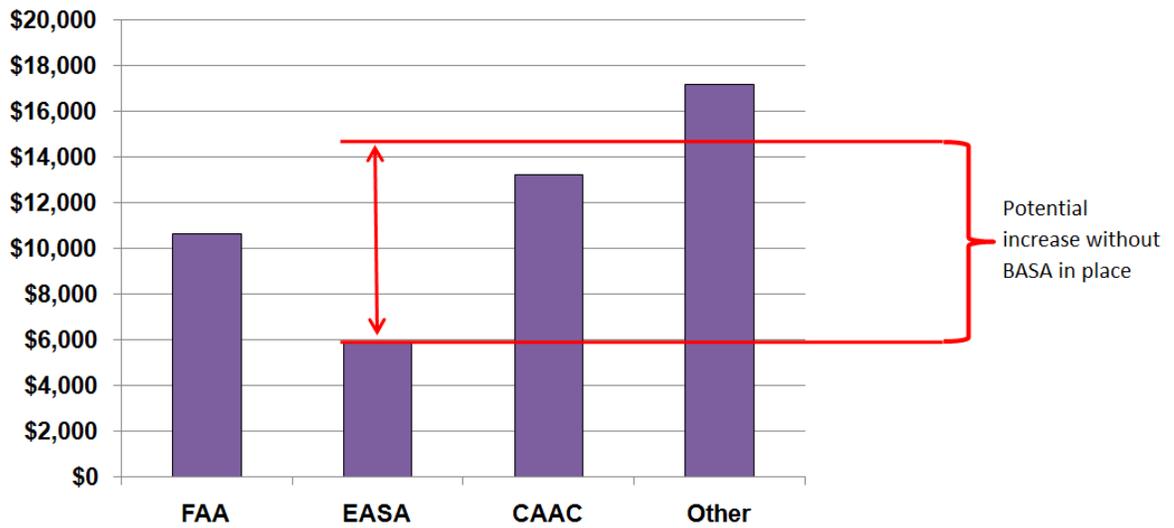


Exhibit 5: EASA Renewal Cost As A Percentage Of Revenue By Company Size

EASA Renewal Costs By Company Revenue

