Journal of Air Transport Management 34 (2014) 24–29

Contents lists available at ScienceDirect

Journal of Air Transport Management

journal homepage: www.elsevier.com/locate/jairtraman

Economic contribution of essential air service flights on small and remote communities

İsmail Çağrı Özcan*

Ministry of Development of Turkey, Necatibey Cad. No: 110-A, Ankara 06100, Turkey

Keywords:
Essential air service flights
Regional air transportation
Economic contribution
Two-stage least squares estimation

A B S T R A C T

The Essential Air Service Program (EAS) has attracted considerable criticism and has been a target for either modification or complete termination almost since its inception through the Airline Deregulation Act in 1978. Although its opponents emphasize the program's inefficiency, its supporters claim that the program is crucial to accessing small and remote communities, which helps them develop economically and socially. This paper demonstrates the economic contributions of EAS flights to small and remote communities. Using a two-stage least squares estimation, the major findings indicate that a 1% increase in air passenger traffic in EAS airports with a minimum annual air passenger traffic of 1000 likely leads to a 0.12% increase in per capita income of the community served by that airport. Our results also suggest that EAS communities that are able to sustain their subsidized flights experienced higher per capita income growth in the 1999–2011 period than did ex-EAS communities that lost their flights as a result of non-eligibility.

1. Introduction

The United States Congress passed the Airline Deregulation Act (ADA) in 1978, removing the restrictions on air carriers on where to fly, when to fly, and at what fares to fly. Although the ADA was expected to contribute to the growth of commercial air passenger travel, improve competition, and help reduce airfares in most markets, it also raised concerns about the future of commercial regional flights that connect small communities with the national air transportation network. During the era of regulation, airlines received operating subsidies and flight rights in longer-haul and profitable routes in exchange for providing (mostly unprofitable) air services to small communities. By its nature, deregulation was supposed to eliminate such cross-subsidization and other interventional mechanisms. Concerns regarding the continuity of regional air services led Congress to include a federal program, the Essential Air Service Program (EAS), within the ADA.

The goal of the EAS is to ensure the availability of scheduled air services to small communities that might otherwise lose these services in the absence of federal subsidization. To achieve this goal, the Department of Transportation (DOT) subsidizes the regional air carriers to enable them to serve mostly unprofitable routes between small communities (to satisfy the eligibility criteria) and hub airports. Although all communities receiving scheduled air service from a certified carrier as of the date of enactment the ADA were originally eligible for EAS flights, new, stricter eligibility criteria were set by the Airport and Airway Extension Act, Part IV and the Federal Aviation Administration (FAA) Modernization and Reform Act of 2012 to increase the efficiency of the program. Today, a community is eligible for EAS if it matches the following criteria (Department of Transportation, 2012): (i) "receiving EAS service at any time between September 30, 2010, and September 30, 2011,"[1] (ii) having at least an average of ten passenger enplanements per service day, and (iii) keeping the annual subsidy per passenger at less than $1000.

Subsidization of air services is actually somewhat older than the EAS. The first regularly scheduled air services started in 1918 in the form of airmail services on the New York–Philadelphia–Washington route, and the first regularly scheduled air passenger service started in 1925 between Los Angeles and San Diego (Sinha, 1999). However, because a self-sustaining market did not exist, and the airline industry lacked the necessary resources, the start of regularly scheduled air services required government intervention and support. As Vietor explained (1990, 63): "The airline business in America started out as a dangerous, heavily subsidized, mail delivery service." The U.S. government began to subsidize regularly scheduled air services almost since their inception, a practice that still continues today to a certain extent in the form of EAS flights.

* Tel.: +90 312 294 6337; fax: +90 312 294 6378
E-mail addresses: icagiozcan@yahoo.com, cagriucla@gmail.com.

[1] Communities that received a 90-day notice from their incumbent carrier and the Department held that carriers are also eligible for EAS (Department of Transportation, 2012).

0969-6997/$ – see front matter © 2013 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.jairtraman.2013.07.005

Subsidization of air services is common in other parts of the world, as well. In the past, many nations used their state-owned national air carriers to subsidize some commercially unviable routes. For such cases, establishing a formal subsidy mechanism was not needed because governments indirectly financed losses of state-owned airlines through equity injections and discriminatory air traffic rights for profitable routes. However, both the tendency to privatize state-owned airlines and rising international concerns that prevent state support to ensure fair competition among airlines necessitated new tools for supporting regional flights. For example, the European Union (EU) adopted public service obligations for air transportation to formally enable the subsidization of regional flights. Today, through such obligatory public service mechanisms, EU member states (plus the members of the European Economic Area that are not EU member states) are subsidizing scheduled air services on 257 routes (European Commission, 2009) that meet the eligibility criteria of being a thin route or that connect a peripheral or a development region.

However, the subsidization of air services always attracts worldwide criticism, and EAS flights are no exception. First, as a public program involving subsidies, it is a source of deadweight losses, i.e., the amount of federal subsidies exceeds the sum of the benefits of air passengers (consumers) and regional airlines (producers), and the transfer of welfare is from taxpayers not using EAS flights to passengers of these flights who are mostly residents of the benefiting communities. Gessing (2005) of the National Taxpayers Union emphasized that federal intervention into the market usually works against consumers and that the EAS is an example of such an intervention. Second, despite increasing annual funding, the number of air passengers using EAS flights is still relatively low. Table 1 shows this phenomenon for some small communities. At Great Bend, Kansas and Brookings, South Dakota, average daily passenger enplanement was 2.5 in 2005. Third, per passenger subsidies have reached very high levels and the situation is even worse for some small and remote communities. The third column of Table 1[2] shows some striking examples. For example, at Brookings, South Dakota in 2005, the per passenger subsidy was $677. Note that in addition to this per passenger subsidy, the passenger also pays for his/her airfare.

Such subsidies and inefficiencies make the EAS a target of media and non-profit organizations that support free markets and less government spending. For example, Frank (2007) criticized the EAS for its mostly empty flights and provided examples of how some of these flights can be easily substituted by simply driving. Stansel (1997) of the Cato Institute, criticized President Clinton and the Congress for not eliminating corporate welfare programs consisting of federal subsidies to firms, including the EAS. When Riedl (2003) of the Heritage Foundation provided guidelines for reducing wasteful government spending, he suggested terminating the EAS.

In addition to such negative views from the media and non-profit organizations, government agencies and academics also underlined the drawbacks of EAS. For example, the U.S. Government Accountability Office[3] (GAO) discussed the rehabilitation options to enhance efficiency in light of increasing subsidy levels and inefficiencies associated with the program [GAO, 2002; GAO, 2003; GAO, 2006; GAO, 2007a, 2007b; GAO, 2009]. Cunningham and Eckard (1987) showed that the EAS's effect was insignificant on flights to benefit communities. Grubesic and Matisziw (2011), Grubesic et al. (2012), Grubesic and Wei (2012), and Matisziw et al. (2012) suggested that revised eligibility criteria for EAS communities could help to increase program efficiency.

Against these criticisms, the main argument for the continuation of EAS flights is that they provide important value to communities, such as easy access to the national transportation network, new business opportunities, attraction of qualified human resources given the existence of air service, and improved local tourism. In part of a previous survey (Ozcan, 2011), the respondents, who were mayors, vice mayors, city council members, city managers, regional airport directors, and city clerks of the EAS communities, were asked to provide real-life examples of the tangible benefits of the EAS flights they experienced. About the benefits of EAS flights for attracting new businesses, the City Manager of McCook, Nebraska, wrote, "Helped to locate major manufacturer here 10 years ago. Continues to be important to maintaining manufacturing and bringing in additional companies." The Mayor of Harrison, Arkansas, wrote, "Access of our largest employer to their main office in Memphis TN." About the benefits of EAS flights for attracting qualified human resources, the Regional Airport Manager of Hays, Kansas, replied, "University uses it as a recruiting tool for faculty." On tourism benefits, the President of the City Council of Watertown, South Dakota, stated "Watertown relies on a lot of tourist. We have a lot of hunters and fishermen fly into our city for short stays… Essential air service is important to our economy for both business and tourism."

Table 1
Examples of low traffic and high subsidy cases in the EAS Program.

Community (State)	Average daily passenger enplanement in 2005	Subsidy per passenger ($)
Visalia (California)	4.2	173.14
Great Bend (Kansas)	2.5	403.08
Kirksville (Missouri)	4.4	306.42
Lewistown (Montana)	2.8	472.78
Ponca City (Oklahoma)	2.6	387.03
Brookings (South Dakota)	2.5	677.11

Although these examples are worth noting, they are relatively discrete and fail to demonstrate the general benefits of EAS flights. Without a doubt, EAS is a controversial public program. The ongoing debate—that increased in intensity especially during the enactment of the Airport and Airway Extension Act—over EAS's efficiency calls for its evaluation and involves a comparison of the costs and benefits of the program. This paper attempts to quantify the economic benefits of EAS flights on small and remote communities. Using two-stage least squares estimation (2SLS), the findings reveal that a 1% increase in air passenger traffic in EAS airports with a minimum annual air passenger traffic of 1000 likely leads to a 0.12% increase in per capita income of the community served by that airport. Its results also suggest that EAS communities that are able to sustain their subsidized flights experienced higher per capita income growth in the 1999–2011 period than did ex-EAS communities that lost their flights as a result of non-eligibility.

This paper proceeds with a literature review. Next, we explain our methodology and data. The fourth part of the paper discusses the empirical findings. The conclusions section offers policy implications.

2. Literature review

The superior features of air transportation, such as greater speed, safety, and reliability over alternative modes, create positive economic effects from both the expenditure and the transportation effects of air transportation. The expenditure effects of air transportation arise from the construction and operation of airports. In the construction phase, payments to construction workers and to suppliers of construction materials have relatively short-term effects, whereas payments in the operational phase, such as wages of employees at the airport site, are more sustainable. For example, airports provide some direct employment related to the ground facilities of the airlines, ground handling companies, MRO (maintenance, repair, and overhaul) establishments, freight operations, and other

[2] Derived using data from U.S. Government Accountability Office (2007).
[3] General Accounting Office until July 7, 2004.