

**ABSTRACT**

**ECONOMIC ANALYSIS OF THE BENEFITS OF  
THE WRIGHT AMENDMENT REFORM ACT**

**By**

**Sharon Sarmiento, Ph.D.  
Unison Consulting, Inc.  
24422 Avenida de la Carlota, Suite 235  
Laguna Hills, CA 92653, USA  
(949) 461-0407 (phone)  
(949) 461-0408 (fax)  
[sharonsarmiento@unison-ucg.com](mailto:sharonsarmiento@unison-ucg.com)**

Until October 2007, federal law restricted commercial passenger aircraft operations at Dallas Love Field to regional air service. The Wright Amendment, passed in 1979, limited commercial passenger service from Love Field on aircraft with more than 56-seats to locations within Texas and the four neighboring states of Louisiana, Arkansas, Oklahoma, and New Mexico, referred to as the Love Field Service Area. Subsequent amendments expanded the Love Field Service Area to include Alabama, Kansas and Mississippi beginning in 1997, and Missouri beginning in 2005. In October 2007, the Wright Amendment Reform Act was signed into law, calling for the immediate liberalization of the Wright Amendment restrictions and the eventual elimination of all remaining restrictions in 2014. This paper presents an economic analysis of the benefits of the Wright Amendment Reform Act. The results are useful in evaluating the costs of artificial air service restrictions and the benefits of removing them.

## **ECONOMIC ANALYSIS OF THE BENEFITS OF THE WRIGHT AMENDMENT REFORM ACT**

**Sharon Sarmiento\***

### **INTRODUCTION**

While U.S. commercial aviation was deregulated in 1978, federal law continued to restrict commercial airline operations at Dallas Love Field to regional air service. The Wright Amendment, passed in 1979, limited commercial passenger service from Love Field on aircraft with more than 56-seats to locations within Texas and the four neighboring states of Louisiana, Arkansas, Oklahoma, and New Mexico, referred to as the Love Field Service Area. Subsequent amendments expanded the Love Field Service Area to include Alabama, Kansas and Mississippi beginning in 1997, and Missouri beginning in 2005. In October 2007, the Wright Amendment Reform Act (Reform Act) was signed into law, calling for the immediate liberalization of the Wright Amendment restrictions and the eventual elimination of all remaining restrictions in 2014.

Previous work focused on estimating the potential air fare savings that passengers would enjoy from greater competition without the Wright Amendment restrictions on Love Field operations. This paper is the first attempt at a comprehensive assessment of the economic benefits of the Wright Amendment repeal, including travel time savings and distinguishing the gain in social surplus from transfers. The results are useful in evaluating the costs of artificial air service restrictions and the benefits of removing them.

### **DALLAS LOVE FIELD**

Love Field, owned and operated by the City of Dallas, is one of two commercial service airports serving the Dallas-Fort Worth metropolitan area. The other is the Dallas-Fort Worth International Airport (DFW), jointly owned by the cities of Dallas and Fort Worth.

---

\*Sharon Sarmiento is a Principal with Unison Consulting, Inc. She earned her B.S. degree in Business Economics from the University of the Philippines; M.A. in International and Development Economics from Yale University; M.A. in Mathematical Behavioral Sciences from the University of California, Irvine; and Ph.D. in Economics from the University of California, Irvine.

This paper is based on work done at Unison Consulting, Inc., involving the benefit-cost analysis of the Love Field Modernization Program and related capital developments. The original body of work benefitted from constructive input from Barry Molar, Director, Unison Consulting, Inc., and discussions with Stef Proost, Ph.D., Professor, Katholieke Universiteit Leuven.

Love Field is the older airport, previously the U.S. Army's Dallas training field and so named in 1917 in honor of U.S. Army Lieutenant Moss Lee Love. In 1928, the City of Dallas purchased Love Field to serve as the City's primary airport. In the early 1960s, the Federal Aviation Administration (FAA) determined that Love Field in Dallas and the Greater Southwest International Airport in Fort Worth were inadequate to meet the growing demand for air service in the region. The cities of Dallas and Fort Worth then built DFW on a parcel of land located directly north of Greater Southwest International Airport to serve both cities, and replace the two older and smaller airports. For safety reasons, Greater Southwest International Airport closed as soon as DFW opened, while Love Field continued to operate under certain restrictions as discussed below.

In 2009 Love Field served 7.74 million passengers, of which 96 percent were Southwest Airlines' passengers. DFW served 56.03 million passengers, of which 86 percent were American Airlines' passengers.

## **HISTORY OF THE WRIGHT AMENDMENT REFORM ACT**

Until October 2007, federal law restricted commercial passenger aircraft operations at the Airport to regional air service. The Wright Amendment, passed in 1979, limited commercial passenger service from DAL on aircraft with more than 56-seats to locations within Texas and the four neighboring states of Louisiana, Arkansas, Oklahoma, and New Mexico, referred to as the Love Field Service Area. Subsequent amendments expanded the Love Field Service Area to include Alabama, Kansas and Mississippi beginning in 1997, and Missouri beginning in 2005. In July 2006, the cities of Dallas and Fort Worth, the DFW Regional Airport Authority, American Airlines and Southwest Airlines entered into the Five Party Agreement, subsequently enacted into federal law called the Wright Amendment Reform Act, signed by the President in October 2007. The Five Party Agreement and the Reform Act called for the immediate liberalization of the Wright Amendment restrictions and the eventual elimination of all remaining restrictions in 2014.

### **The Wright Amendment<sup>1</sup>**

In the early 1960's, the FAA determined that Love Field and Fort Worth's Greater Southwest International Airport were inadequate to serve the growing regional demand for air transportation. The Civil Aeronautics Board (CAB) then ordered the cities of Dallas and Fort Worth to find a new site for a joint regional airport. In 1968, the cities of Dallas and Fort Worth agreed to build a new regional airport and adopted measures to restrict other local airports from serving commercial airlines and transfer commercial aircraft operations to the new airport. All the airlines serving the old airports at that time signed an agreement to relocate to DFW.

Meanwhile Southwest Airlines, founded after the agreement between the cities and the airlines to relocate to DFW was reached, received approval from the Texas Supreme Court, affirmed by the

---

<sup>1</sup> Much of the discussion on the history of the Wright Amendment was based on the following references: <http://en.wikipedia.org>, <http://www.aviationpast.com>, and Farris and Swartz (2006).

U.S. Supreme Court, to begin service on June 18, 1971, operating flights to and from Houston and San Antonio. As DFW was being constructed, Southwest Airlines indicated its intention to keep Love Field as its home base and not to move to DFW. Southwest Airlines felt that its customers would be discouraged by the longer drive to the new airport. Southwest Airlines initially offered service exclusively within the state of Texas, which did not require a certificate issued by the CAB. Southwest Airlines filed and ultimately won a lawsuit to remain at Love Field. In 1973, the U.S. Supreme Court ruled that, as long as Love Field remained open as an airport, the City of Dallas could not prevent Southwest Airlines from operating at Love Field. When DFW opened in 1974, all airlines, except Southwest, moved to the new airport. Through 1978, Southwest operated only intrastate flights from Love Field.

In 1978 the airline industry was deregulated with the passage of the Airline Deregulation Act to promote open competition, allowing airlines to determine routes and fares. In 1979 Southwest began offering interstate flights from Love Field to New Orleans. DFW supporters lobbied then House Speaker Jim Wright to attach an amendment to an otherwise unrelated law, the International Air Transportation Act of 1979, to protect DFW from competition from Love Field. In 1980 Congress passed the Wright Amendment, restricting passenger air traffic at Love Field in the following ways:

- Passenger services on aircraft with more than 56-seats could be provided from Love Field only to locations within Texas and the four neighboring states of Louisiana, Arkansas, Oklahoma, and New Mexico (the Love Field Service Area).
- Passenger service from Love Field to locations outside the Love Field Service Area would be allowed only on aircraft with no more than 56-seats (commuter aircraft) and on charter flights of up to 10 per month.
- Airlines were not allowed to market and issue tickets that would violate the provisions. They were not allowed to market and sell through tickets to destinations outside the Love Field Service Area.

In 1985, the Department of Transportation issued an order interpreting the restrictions on through-ticketing and sale of transportation from Love Field to destinations outside the Love Field Service Area. A carrier could not offer for sale, advertise, or promote service between Love Field and a destination outside the Love Field Service Area, even if the transportation were provided using multiple tickets. However, customers could buy two separate tickets – one for service between Love Field and a destination within the Love Field Service Area, and one for service between that point and the final destination outside the Love Field Service Area.

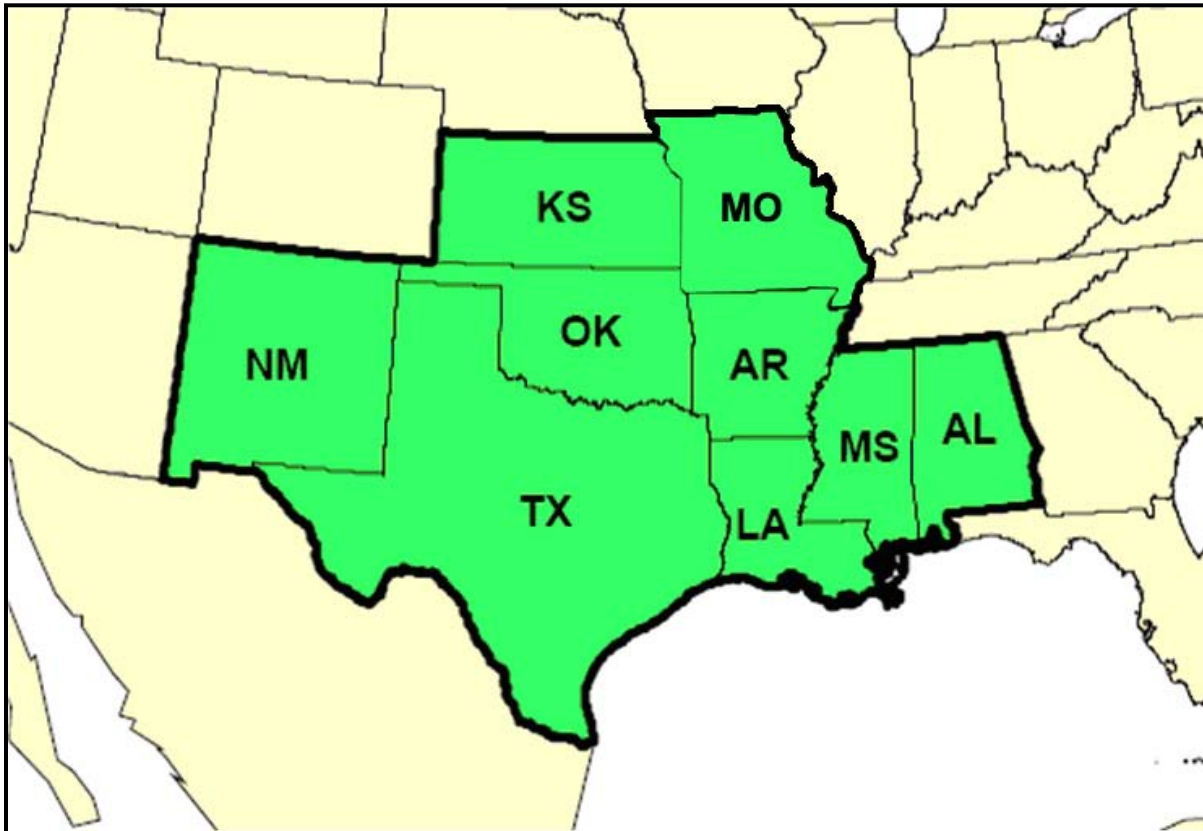
The Wright Amendment was amended subsequently to allow commercial passenger service on large aircraft from DAL to Alabama, Kansas, and Mississippi and clarify the “commuter aircraft” exception to include any aircraft, configured to accommodate 56 or fewer passengers, not exceeding a gross weight of 300,000 pounds (the Shelby Amendment<sup>2</sup>, 1997); and to allow commercial passenger service on large aircraft from Love Field to Missouri (the FY 2006

---

<sup>2</sup> Public Law No. 105-66, § 337, 111 stat. 1425, 1447 (1997).

Department of Transportation Appropriation Act<sup>3</sup>, 2005). These amendments expanded the Love Field Service Area to nine states (see **Figure 1**).

**Figure 1**  
**LOVE FIELD SERVICE AREA AS OF 2005**



In September 2004, Tennessee's House of Representatives delegation introduced a bill that would allow for direct, non-stop commercial air carrier service from the Airport to Nashville, Tennessee. While this legislation did not pass, it served as a catalyst to a strong movement, led by Southwest Airlines, to repeal the Wright Amendment in its entirety, resulting in the Five Party Agreement and the Reform Act.

<sup>3</sup> Public Law No. 109-115, § 181 119 stat. 2396, 2430 (2005).

## **The Five Party Agreement**

In July 2006, the City of Dallas, the City of Fort Worth, Southwest Airlines, American Airlines, and the DFW International Airport Board entered into an agreement (the Five Party Agreement) to seek legislation to initially amend the Wright Amendment and ultimately repeal it. The key provisions of the Five Party Agreement are as follows:

- Commercial air carriers serving Dallas Love Field could immediately offer through ticketing to destinations within the fifty United States and the District of Columbia. Through ticketing allows passengers to purchase a single ticket to complete their journey to a final destination outside the Love Field Service Area with one or more stops, continuing on a single aircraft or connecting on another aircraft.
- Except in the case of international commercial passenger service, non-stop flight restrictions on commercial air carriers serving Dallas Love Field would be eliminated after eight years from the enactment of the legislation, or the year 2014. This would allow commercial air carriers to provide non-stop flight service to all destinations within the fifty United States and the District of Columbia with any size aircraft that could be physically accommodated at the Airport.
- International commercial service shall continue to be limited exclusively to DFW. Through ticketing to or from a destination beyond the 50 United States and the District of Columbia shall remain prohibited from the Airport.
- As soon as practicable, the number of available gates at Dallas Love Field would be reduced from 32 to 20 gates total, with the gates to be assigned as follows, under existing preferential-use lease provisions:
  - Southwest Airlines – 16 gates
  - American Airlines – 2 gates
  - Continental Airlines – 2 gates
- The City of Dallas will acquire and demolish the Lemmon Avenue Terminal.
- The City of Dallas will invest between \$150 million and \$200 million in the redevelopment of the Airport, independent of the acquisition and demolition of the Lemmon Avenue Terminal.

## **Wright Amendment Reform Act**

The Five Party Agreement was presented to the United States Congress, accepted and executed into law by President George W. Bush on October 13, 2007 as the Wright Amendment Reform Act.<sup>4</sup> One-stop through ticketed commercial air carrier service originating at Dallas Love Field began on October 17, 2007, signifying the eventual repeal of the Wright Amendment and its restrictions had begun.

---

<sup>4</sup> Public Law 109-352, 120 Stat. 2011 (2007).

## **PREVIOUS RESEARCH**

The Wright Amendment had been the subject of numerous articles published in newspapers and similar publications, as well as airline press releases particularly by Southwest Airlines arguing to repeal the Wright Amendment restrictions and by American Airlines arguing to retain them. Farris and Swartz (2006) summarizes the arguments to repeal and retain the Wright Amendment, which consider mainly the profit or loss impact on stakeholders. Two studies – Morrison (1997) and The Campbell-Hill Aviation Group, Inc. (2005) – address the impact on consumer welfare and present estimates of passenger airfare savings from the repeal of the Wright Amendment restrictions.

Morrison (1997) argues that, by prohibiting Southwest Airlines (or other carriers) from operating selling flights from Love Field to destinations outside the Love Field service area, airlines offering these flights from DFW face less competition and charge higher fares than they would in the absence of the Wright Amendment. Therefore eliminating the Wright Amendment restrictions on flights from Love Field would result in fare savings to consumers. Drawing from other published work such as Morrison and Winston (1998) and Morrison (1998), Morrison (1997) estimates at least \$11 million and more than \$800 million in aggregate annual fare savings. These estimates were generated by: (a) comparing average fares (including frequent flier tickets) that carriers charged between DFW and destinations within the Love Field service area with the fares that the same carriers charged for flights covering the same distance on routes not involving DFW; (b) comparing average fares between DFW and destinations in all non-contiguous states with the average fares between DFW and destinations in all four contiguous states. Morrison (1997) also observes that even Southwest Airlines charged higher fares on flights to and from Love Field, compared to flights to and from other airports.

The Campbell-Hill Aviation Group, Inc. (2005), in a study commissioned by Southwest Airlines, calculates the amount of the “Wright Amendment Economic Penalty” by simulating what would happen if the Wright Amendment were repealed and Southwest Airlines were permitted to serve from Love Field 15 markets outside the Love Field service area. If Southwest airlines operated three roundtrip flights each day to each of the 15 markets, the Campbell-Hill Aviation Group, Inc. (2005) estimates 3.7 million additional passengers would travel in the 15 markets annually due to new competition and lower fares, and these passengers would save nearly \$700 million annually from lower fares.

## **ECONOMIC VALUATION OF THE BENEFITS OF THE WRIGHT AMENDMENT REFORM ACT**

Previous work focused on one aspect of potential benefits from the repeal of the Wright Amendment: air fare savings. This paper attempts a more comprehensive assessment of the economic benefits of the Wright Amendment repeal, pursuant to the Reform Act, distinguishing net economic benefits and transfers.

The Reform Act, signed on October 13, 2007, allowed one-stop through ticketed commercial air carrier service from Dallas Love Field to all destinations within the fifty United States and the District of Columbia with any size aircraft effective on October 17, 2007. Less than three years

after the lifting of the through service restriction, air service at Love Field has already expanded to include one-stop single-plane service to 12 large hub airports and six medium hub airports:

**Large hubs**

- Baltimore-Washington
- Chicago Midway
- Fort Lauderdale
- Las Vegas
- Los Angeles
- Orlando
- Philadelphia
- Phoenix
- Salt Lake City
- Seattle
- Tampa
- San Diego

**Medium hubs**

- Cleveland
- Indianapolis
- Nashville
- Oakland
- Omaha
- Portland

The Reform Act will also allow non-stop flights from Dallas Love Field to all destinations within the fifty United States and the District of Columbia using any size aircraft that could be physically accommodated at the airport effective 2014.

Therefore the Reform Act allows Love Field to grow from a limited regional airport to one offering nationwide service, promoting competition in the Dallas-Fort Worth regional air service area. This benefits passengers who currently use Love Field (*current* passengers), those switching from DFW to Love Field with the availability of competitively-priced expanded air service at Love Field (*diverted* passengers), and new passengers induced by lower air fares to make a trip (*induced* passengers). This study identifies and quantifies the following benefits:

- **Time savings to current through-passengers who would avoid flying with two separate tickets and checking in luggage twice** – These passengers, headed to destinations out of the Love Field Service Area, would have had to purchase two separate tickets and check in luggage on separately ticketed flights when the Wright Amendment through-ticketing restrictions were in place.
- **Time savings to current through-passengers who would be able to fly non-stop to destinations outside the Love Field service area beginning in 2014** – Beginning in 2014, airlines will be able to offer nonstop flights from Love Field to all domestic destinations, giving passengers headed to destinations outside the Love Field Service Area another opportunity to save travel time.
- **Ground travel time savings to passengers switching from DFW to Love Field (*diverted* passengers) with the removal of through-ticketing and non-stop service restrictions at Love Field** – Even holding air fares constant, certain passengers currently using DFW could benefit from shorter ground access to Love Field once expanded air service becomes available at Love Field. Love Field is closer to the Dallas central business district (CBD) than DFW.
- **Gain in social surplus resulting from expanded service at lower airfares** – Savings from lower airfares to current and diverted passengers represent a transfer of producer

surplus to consumer surplus and do not represent a net economic benefit. However, the new demand induced by lower airfares brings a clear gain in social surplus, which consists of net gains in both consumer and producer surplus. Consumer surplus is the benefit to consumers from being able to purchase a product or service for a price that is less than the highest price they would be willing to pay. Producer surplus is the benefit to producers from being able to sell at a price higher than the lowest price they would be willing to accept for their product or service. Consumer surplus and producer surplus make up social surplus, also called total surplus.

## **Technical Parameters**

The benefit evaluation is based upon the following technical parameters:

- **Evaluation Period.** Annual benefits are evaluated on the basis of the federal fiscal year, which covers the 12-month period ending in September, and over the period from fiscal year 2008, the first year from the enactment of the Reform Act, through fiscal year 2033, 20 years from the complete repeal of Wright Amendment restrictions effective 2014. The choice of federal fiscal year basis is a matter of convenience – historical and forecast data on airport activity are available from the FAA Terminal Area Forecasts (TAF) database on a federal fiscal year basis.
- **Constant-Dollar Valuation.** To facilitate year-to-year comparison in real terms, the annual streams of benefits are valued in constant 2008 dollars. This study uses certain economic values recommended for evaluating FAA investment and regulatory programs (Federal Aviation Administration, 2007). These economic values are measured using different dollar base years, and updated to a 2008 base year using the U.S. gross domestic product (GDP) Price Index, a broad-based price index that represents the price of all goods and services produced in the U.S. economy.
- **Discount Rate.** The study uses a real discount rate of 7 percent, as recommended for evaluating U.S. federal regulatory decisions and capital investment. The present value is calculated as of the beginning of year 2008.

## **Passenger Traffic Forecasts**

This study uses historical and forecast data on commercial passenger traffic at Love Field from the FAA Terminal Area Forecasts. The TAF system is the FAA's official forecast of aviation activity at FAA facilities. Forecasts are prepared for each active airport to meet FAA's budget and planning needs, and to provide information for use by state and local authorities, the aviation industry and the public. Forecasts are updated and published annually on the FAA's TAF website (see <http://aspm.faa.gov/main/taf.asp>).

Comparing FAA's commercial passenger enplanement forecasts for Love Field published before and after the Reform Act shows a clear change in expectations of passenger traffic growth at Love Field – the elimination of the Wright Amendment restrictions is expected to expand air service at DAL and attract new passengers (see **Table 1**). Under the 2005 TAF, published before the Reform Act, Love Field enplanements were projected to grow at 1.3 percent annually. The

2007 TAF published after the Reform Act predicted significantly higher annual growth rates, especially when nonstop service restrictions are removed beginning in 2014.

**Table 1**  
**FAA TERMINAL AREA FORECASTS OF ENPLANEMENTS FOR LOVE FIELD**  
**PUBLISHED BEFORE AND AFTER THE WRIGHT AMENDMENT REFORM ACT**

Fiscal Year	TAF, Published Dec. 2005		TAF, Published Dec. 2007	
	Enplanements	Annual Growth Rate	Enplanements	Annual Growth Rate
2008	3,710,210	1.3%	4,015,058	2.1%
2009	3,758,475	1.3%	4,100,736	2.1%
2010	3,807,569	1.3%	4,187,223	2.1%
2011	3,856,401	1.3%	4,275,602	2.1%
2012	3,906,020	1.3%	4,365,915	2.1%
2013	3,956,444	1.3%	4,458,208	2.1%
2014	4,007,691	1.3%	4,935,077	10.7%
2015	4,059,781	1.3%	5,412,256	9.7%
2016	4,112,732	1.3%	5,889,779	8.8%
2017	4,166,564	1.3%	6,367,854	8.1%
2018	4,221,298	1.3%	6,846,538	7.5%
2019	4,276,955	1.3%	7,325,626	7.0%
2020	4,333,556	1.3%	7,804,769	6.5%
2021	4,391,123	1.3%	7,967,466	2.1%
2022	4,449,681	1.3%	8,133,655	2.1%
2023	4,509,252	1.3%	8,303,414	2.1%
2024	4,569,861	1.3%	8,476,823	2.1%
2025	4,631,532	1.3%	8,653,965	2.1%

Source: Federal Aviation Administration

As a first step in estimating the benefits of eliminating the Wright Amendment restrictions, **Table 2** determines how many of forecast annual passengers at Love Field represent *current traffic* – passengers who would have been using Love Field even if the Wright Amendment restrictions were still in place – and how many represent *new traffic* – passengers attracted to Love Field’s expanded service and lower fares resulting from the repeal of the Wright Amendment restrictions. Annual passengers equal two times forecast annual enplanements in **Table 1**. Forecast annual passengers under the 2005 TAF are assumed to represent *current traffic*, and the difference between forecast annual passengers under the 2005 TAF and the 2007 TAF represent *new passengers*. For the analysis, *new passengers* need to be distinguished further between those who would have otherwise used DFW (*diverted passenger traffic*) and those who represent demand induced by the availability of expanded service and lower airfares (*induced passenger traffic*). The study provides estimates of benefits for a 100/0, 75/25, 50/50 and 25/75 percent split of *new passengers* between *diverted traffic* and *induced traffic*.

Forecast total annual passengers are capped beginning in 2026 at 17.6 million, the maximum that Love Field’s 20-gate terminal can accommodate according to the airport’s Terminal

Redevelopment Program Study (Gresham, Smith and Partners 2008). One of the provisions of the Five Party Agreement and the Reform Act requires the city of Dallas, Texas, to reduce the number of gates available for passenger air service at Love Field to no more than 20.

**Table 2**  
**CURRENT AND NEW PASSENGERS AT LOVE FIELD**  
**2008-2033**

Fiscal Year	Number of Passengers <sup>1</sup>			New as % of Total D = C/A
	Total	Current	New	
	TAF, Dec. 2007 <sup>2</sup> A	TAF, Dec. 2005 <sup>3</sup> B	C = A-B	
2008	8,030,116	7,420,420	609,696	7.6%
2009	8,201,472	7,516,950	684,522	8.3%
2010	8,374,446	7,615,138	759,308	9.1%
2011	8,551,204	7,712,802	838,402	9.8%
2012	8,731,830	7,812,040	919,790	10.5%
2013	8,916,416	7,912,888	1,003,528	11.3%
2014	9,870,154	8,015,382	1,854,772	18.8%
2015	10,824,512	8,119,562	2,704,950	25.0%
2016	11,779,558	8,225,464	3,554,094	30.2%
2017	12,735,708	8,333,128	4,402,580	34.6%
2018	13,693,076	8,442,596	5,250,480	38.3%
2019	14,651,252	8,553,910	6,097,342	41.6%
2020	15,609,538	8,667,112	6,942,426	44.5%
2021	15,934,932	8,782,246	7,152,686	44.9%
2022	16,267,310	8,899,362	7,367,948	45.3%
2023	16,606,828	9,018,504	7,588,324	45.7%
2024	16,953,646	9,139,722	7,813,924	46.1%
2025	17,307,930	9,263,064	8,044,866	46.5%
2026	17,596,760	9,383,484	8,213,276	46.7%
2027	17,596,760	9,505,469	8,091,291	46.0%
2028	17,596,760	9,629,040	7,967,720	45.3%
2029	17,596,760	9,754,218	7,842,542	44.6%
2030	17,596,760	9,881,023	7,715,737	43.8%
2031	17,596,760	10,009,476	7,587,284	43.1%
2032	17,596,760	10,139,599	7,457,161	42.4%
2033	17,596,760	10,271,414	7,325,346	41.6%

<sup>1</sup> Total passengers equal two times enplanements.

<sup>2</sup> Total passengers are capped at 17,596,760, the maximum that Love Field can accommodate with a 20-gate terminal according to Gresham, Smith and Partners (2008).

<sup>3</sup> Beyond 2025 growth is extrapolated to continue at a 1.3% annual rate (see **Table 1**).

### **Benefit #1: Travel Time Savings to Current Passengers from the Removal of the Through-Ticketing Restriction**

When the through-ticketing restriction was in place, Love Field passengers going to destinations beyond the Love Field Service Area would have had to buy two separate round-trip tickets: one to go from Love Field to an airport within the Love Field service area, and another to go from an airport within the Love Field Service Area to the final destination outside the Love Field Service Area. If they had luggage to check in, they would have had to check in luggage at Love Field, claim and re-check in luggage at the intermediate airport destination, and then claim the luggage at the final airport destination. This means that these passengers would have had to check in luggage, go through security check, and wait to claim luggage twice on their way to their final destination. With the removal of the through-ticketing restriction, passengers can now purchase a single ticket to complete their trip and save time from not having to check in luggage, go through security and claim luggage twice.

The following parameters and assumptions are needed to estimate the value of travel time savings from the removal of through-ticketing restriction:

- **Proportion of current passengers enjoying the benefit** – Based on data collected by the U.S. Department of Transportation from airlines for a 10 percent sample of tickets sold, approximately 5.4 percent of current passengers at DAL fly to destinations beyond the Love Field Service Area. Of these passengers, only 50 percent (or only 2.7 percent of current passengers) would be checking in luggage – a conservative assumption compared to survey findings from other airports.<sup>5</sup>
- **Time savings** - If the passenger had purchased two tickets, as one would have needed to do when through-ticketing was restricted under the Wright Amendment, the passenger would have taken at least 45 minutes to exit security, wait for luggage, claim luggage, re-check in luggage on the next flight, and re-enter security. Saving these 45 minutes represents a benefit to the passenger who can now purchase a one-stop, single-plane service from DAL to a final destination outside the Love Field Service Area.
- **Value of time** - The FAA recommends using \$28.60 per hour, in 2000 dollars,<sup>6</sup> to value commercial passenger time savings for all trip purposes (Federal Aviation Administration 2007). This study updates the recommended value of time to 2008 dollars at \$35.04 per hour.

The total present value of travel time savings to current passengers from through-ticketing is \$70.2 million (**Table 3**).

---

<sup>5</sup> A survey conducted by Unison Consulting, Inc. at Louis Armstrong New Orleans International Airport in November 2008 showed that 66 percent of Southwest passengers checked in luggage. Another survey conducted by Unison Consulting, Inc. at Lambert-St. Louis International Airport in January 2006 showed that 60 percent of Southwest passengers checked in luggage.

<sup>6</sup> For benefit-cost analyses submitted to the FAA, the FAA does not recommend updating the value of time to present dollars, which leads to a significant understatement of benefits from travel time savings.

**Table 3**  
**VALUE OF TRAVEL TIME SAVINGS TO CURRENT PASSENGERS FROM THROUGH-TICKETING**

<b>Fiscal year</b>	<b>Passengers enjoying the benefit<sup>1</sup></b>	<b>Travel time savings (hours)<sup>2</sup></b>	<b>Value of travel time savings (2008 \$)<sup>3</sup></b>
2008	200,351	150,264	\$5,264,953
2009	202,958	152,218	\$5,333,443
2010	205,609	154,207	\$5,403,110
2011	208,246	156,184	\$5,472,405
2012	210,925	158,194	\$5,542,816
2013	213,648	160,236	\$5,614,370
2014	216,415	162,311	\$5,687,092
2015	219,228	164,421	\$5,761,010
2016	222,088	166,566	\$5,836,150
2017	224,994	168,746	\$5,912,540
2018	227,950	170,963	\$5,990,210
2019	230,956	173,217	\$6,069,190
2020	234,012	175,509	\$6,149,509
2021	237,121	177,840	\$6,231,199
2022	240,283	180,212	\$6,314,296
2023	243,500	182,625	\$6,398,829
2024	246,772	185,079	\$6,484,836
2025	250,103	187,577	\$6,572,350
2026	253,354	190,016	\$6,657,791
2027	256,648	192,486	\$6,744,342
2028	259,984	194,988	\$6,832,019
2029	263,364	197,523	\$6,920,835
2030	266,788	200,091	\$7,010,806
2031	270,256	202,692	\$7,101,946
2032	273,769	205,327	\$7,194,271
2033	277,328	207,996	\$7,287,797
<b>Present value at 7%</b>			<b>\$70,150,211</b>

<sup>1</sup> 2.7 percent of current passengers in **Table 2**

<sup>2</sup> 45 minutes times 2.7 percent of current passengers, divided by 60 minutes

<sup>3</sup> Travel time savings (hours) times \$35.04 per hour

### **Benefit #2: Travel Time Savings to Current Passengers from the Removal of Non-Stop Service Restriction**

Beginning in 2014, current passengers going to destinations beyond the Love Field Service Area, can enjoy additional travel time savings from the availability of non-stop flights.<sup>7</sup> The valuation of the additional travel time savings is based on the following parameters and assumptions:

<sup>7</sup> The Campbell-Hill Aviation Group, Inc. (2005) indicated that if the Wright Amendment were repealed, Southwest could initiate non-stop service in at least 15 new markets.

- **Proportion of current passengers enjoying the benefit** – Only 2.7 percent of current passengers, representing half of those going to destinations outside the Love Field Service Area, would purchase non-stop service when it becomes available in 2014.
- **Time savings** - Based on research of Southwest Airlines and cheaptickets.com online flight reservation sites, the difference in the minimum travel time between one-stop and nonstop flights from Dallas to twelve major destinations outside of the Love Field Service Area is 64 minutes on average (**Table 4**). The travel time is determined from the scheduled flight departure time from origin to the scheduled flight arrival time at the final destination.
- **Value of time** - Federal Aviation Administration (2007) recommends using \$28.60 per hour, in 2000 dollars, to value commercial passenger time savings for all trip purposes, updated to 2008 dollars at \$35.04 per hour.

The total present value of travel time savings to current passengers from non-stop service is \$63.0 million (**Table 5**).

**Table 4**  
**AIR TRAVEL TIME DIFFERENTIAL BETWEEN ONE-STOP AND NONSTOP FLIGHT FROM DALLAS TO MAJOR NON-LFSA DESTINATIONS**

Destination	Minimum travel time (hh:mm) <sup>1</sup>		
	One-Stop <sup>2</sup> A	Nonstop <sup>3</sup> B	Difference C = A-B
Phoenix	3:35	2:20	1:05
Chicago	3:10	2:20	0:50
Las Vegas	3:45	2:25	1:20
Nashville	2:55	1:40	1:15
Orlando	3:25	2:20	1:05
Los Angeles	4:15	3:10	1:05
San Diego	4:00	2:50	1:10
Tampa Bay	3:10	2:15	0:55
Fort Lauderdale	3:30	2:40	0:50
Baltimore	3:40	2:50	0:50
Salt Lake City	3:50	2:45	1:05
Seattle	5:30	4:10	1:20
<b>Avg. time differential (hh:mm)</b>			<b>1:04</b>
<b>Avg. time differential (minutes)</b>			<b>64</b>

<sup>1</sup> Author's calculations based on information from Southwest and cheaptickets.com online flight reservation sites

<sup>2</sup> Based on Southwest Airlines' one-stop flights from Love Field

<sup>3</sup> Based on American Airlines' nonstop flights from DFW

**Table 5**  
**VALUE OF TRAVEL TIME SAVINGS TO CURRENT PASSENGERS FROM NON-STOP SERVICE**

Fiscal year	Passengers enjoying the benefit <sup>1</sup>	Travel time savings (hours) <sup>2</sup>	Value of travel time savings (2008 \$) <sup>3</sup>
2014	216,415	230,843	\$8,088,309
2015	219,228	233,843	\$8,193,437
2016	222,088	236,893	\$8,300,302
2017	224,994	239,994	\$8,408,946
2018	227,950	243,147	\$8,519,410
2019	230,956	246,353	\$8,631,736
2020	234,012	249,613	\$8,745,968
2021	237,121	252,929	\$8,862,150
2022	240,283	256,302	\$8,980,331
2023	243,500	259,733	\$9,100,557
2024	246,772	263,224	\$9,222,878
2025	250,103	266,776	\$9,347,343
2026	253,354	270,244	\$9,468,858
2027	256,648	273,758	\$9,591,953
2028	259,984	277,316	\$9,716,649
2029	263,364	280,921	\$9,842,965
2030	266,788	284,573	\$9,970,924
2031	270,256	288,273	\$10,100,546
2032	273,769	292,020	\$10,231,853
2033	277,328	295,817	\$10,364,867
<b>Present value at 7%</b>			<b>\$62,994,198</b>

<sup>1</sup> 2.7 percent of current passengers in Table 2

<sup>2</sup> 64 minutes times 2.7 percent of current passengers, divided by 60 minutes

<sup>3</sup> Travel time savings (hours) times \$35.04 per hour

### **Benefit #3: Ground Travel Time Savings to Diverted Passengers from DFW from Shorter Ground Access to Love Field**

Love Field is closer to the Dallas central business district (CBD) than DFW, so that certain passengers currently using DFW could benefit from shorter ground access to Love Field once expanded air service becomes available at Love Field. The valuation of ground access time savings is based on the following parameters and assumptions:

- **Number of passengers enjoying the benefit** – Table 2 derives the number of new passengers forecast to use Love Field with the removal of air service restrictions under the Reform Act as the difference in forecast annual total passengers at Love Field before and after the Reform Act. In the absence of empirical data with which to base an allocation of new passengers between diverted and induced traffic, the benefit is estimated for four alternative percentage allocations: 100/0, 75/25, 50/50 and 25/75.

- **Time savings** - If airfares were equal from DFW and Love Field to the same destinations, it is reasonable to assume that those passengers who would switch from DFW to Love Field are those who either benefit from shorter ground access or suffer no additional ground travel time. Recognizing that passengers have different points of origin and destinations in the air service area, the study adopts a simplified approach that uses the Dallas Convention Center in downtown Dallas as a common reference point in calculating and comparing ground access travel time to Love Field and DFW. According to Google maps, using the Dallas Convention Center as a reference point, it takes 12 minutes by car to go to Love Field and 23 minutes to DFW without traffic. With traffic, it takes up to 25 minutes to go to Love Field and up to 45 minutes to DFW. Based on these travel time estimates, the study assumes that a diverted passenger from DFW to Love Field would save ground access travel time as follows: Without traffic, a diverted passenger can save 0 to 11 minutes, or an average of 5.5 minutes in airport ground access savings. With traffic, a diverted passenger can save 0 to 20 minutes in airport ground access, or an average of 10 minutes. The study uses an average ground access time savings of 7.75 minutes per diverted passenger, assuming equal probabilities of the incidence of traffic and no traffic.
- **Value of time** - Federal Aviation Administration (2007) recommends using \$28.60 per hour, in 2000 dollars, to value commercial passenger time savings for all trip purposes, converted to 2008 dollars at \$35.04 per hour.

The value of ground access time savings to diverted passengers is estimated to range from \$51.4 million assuming that 25 percent of new Love Field passengers are diverted from DFW)to \$205.6 million assuming that 100 percent of new Love Field passengers are diverted from DFW (**Table 6**).

**Table 6**  
**VALUE OF GROUND ACCESS TIME SAVINGS TO DIVERTED PASSENGERS**

Fiscal year	Diverted traffic = 100% of new passengers <sup>1</sup>			Diverted traffic = 75% of new passengers <sup>1</sup>			Diverted traffic = 50% of new passengers <sup>1</sup>			Diverted traffic = 25% of new passengers <sup>1</sup>				
	Passengers enjoying the benefit <sup>1</sup>	Travel time savings (hours) <sup>2</sup>	Value of travel time savings (2008 \$) <sup>3</sup>	Passengers enjoying the benefit <sup>1</sup>	Travel time savings (hours) <sup>2</sup>	Value of travel time savings (2008 \$) <sup>3</sup>	Passengers enjoying the benefit <sup>1</sup>	Travel time savings (hours) <sup>2</sup>	Value of travel time savings (2008 \$) <sup>3</sup>	Passengers enjoying the benefit <sup>1</sup>	Travel time savings (hours) <sup>2</sup>	Value of travel time savings (2008 \$) <sup>3</sup>		
2008	609,696	78,752	\$2,759,337	457,272	59,064	\$2,069,503	304,848	39,376	\$1,379,669	152,424	19,688	\$689,834		
2009	684,522	88,417	\$3,097,982	513,392	66,313	\$2,323,486	342,261	44,209	\$1,548,991	171,131	22,104	\$774,495		
2010	759,308	98,077	\$3,436,445	569,481	73,558	\$2,577,334	379,654	49,039	\$1,718,223	189,827	24,519	\$859,111		
2011	838,402	108,294	\$3,794,406	628,802	81,220	\$2,845,804	419,201	54,147	\$1,897,203	209,601	27,073	\$948,601		
2012	919,790	118,806	\$4,162,748	689,843	89,105	\$3,122,061	459,895	59,403	\$2,081,374	229,948	29,702	\$1,040,687		
2013	1,003,528	129,622	\$4,541,726	752,646	97,217	\$3,406,295	501,764	64,811	\$2,270,863	250,882	32,406	\$1,135,432		
2014	1,854,772	239,575	\$8,394,252	1,391,079	179,681	\$6,295,689	927,386	119,787	\$4,197,126	463,693	59,894	\$2,098,563		
2015	2,704,950	349,389	\$12,241,953	2,028,713	262,042	\$9,181,465	1,352,475	174,695	\$6,120,976	676,238	87,347	\$3,060,488		
2016	3,554,094	459,070	\$16,084,974	2,665,571	344,303	\$12,063,731	1,777,047	229,535	\$8,042,487	888,524	114,768	\$4,021,244		
2017	4,402,580	568,667	\$19,925,018	3,301,935	426,500	\$14,943,763	2,201,290	284,333	\$9,962,509	1,100,645	142,167	\$4,981,254		
2018	5,250,480	678,187	\$23,762,409	3,937,860	508,640	\$17,821,807	2,625,240	339,094	\$11,881,205	1,312,620	169,547	\$5,940,602		
2019	6,097,342	787,573	\$27,595,103	4,573,007	590,680	\$20,696,327	3,048,671	393,787	\$13,797,551	1,524,336	196,893	\$6,898,776		
2020	6,942,426	896,730	\$31,419,749	5,206,820	672,548	\$23,564,812	3,471,213	448,365	\$15,709,875	1,735,607	224,183	\$7,854,937		
2021	7,152,686	923,889	\$32,371,336	5,364,515	692,916	\$24,278,502	3,576,343	461,944	\$16,185,668	1,788,172	230,972	\$8,092,834		
2022	7,367,948	951,693	\$33,345,560	5,525,961	713,770	\$25,009,170	3,683,974	475,847	\$16,672,780	1,841,987	237,923	\$8,336,390		
2023	7,588,324	980,159	\$34,342,928	5,691,243	735,119	\$25,757,196	3,794,162	490,079	\$17,171,464	1,897,081	245,040	\$8,585,732		
2024	7,813,924	1,009,299	\$35,363,940	5,860,443	756,974	\$26,522,955	3,906,962	504,649	\$17,681,970	1,953,481	252,325	\$8,840,985		
2025	8,044,866	1,039,129	\$36,409,128	6,033,650	779,346	\$27,306,846	4,022,433	519,564	\$18,204,564	2,011,217	259,782	\$9,102,282		
2026	8,213,276	1,060,882	\$37,171,312	6,159,957	795,661	\$27,878,484	4,106,638	530,441	\$18,585,656	2,053,319	265,220	\$9,292,828		
2027	8,091,291	1,045,125	\$36,619,235	6,068,468	783,844	\$27,464,427	4,045,645	522,563	\$18,309,618	2,022,823	261,281	\$9,154,809		
2028	7,967,720	1,029,164	\$36,059,982	5,975,790	771,873	\$27,044,987	3,983,860	514,582	\$18,029,991	1,991,930	257,291	\$9,014,996		
2029	7,842,542	1,012,995	\$35,493,459	5,881,907	759,746	\$26,620,094	3,921,271	506,498	\$17,746,730	1,960,636	253,249	\$8,873,365		
2030	7,715,737	996,616	\$34,919,571	5,786,803	747,462	\$26,189,678	3,857,869	498,308	\$17,459,785	1,928,934	249,154	\$8,729,893		
2031	7,587,284	980,024	\$34,338,222	5,690,463	735,018	\$25,753,667	3,793,642	490,012	\$17,169,111	1,896,821	245,006	\$8,584,556		
2032	7,457,161	963,217	\$33,749,316	5,592,871	722,412	\$25,311,987	3,728,580	481,608	\$16,874,658	1,864,290	240,804	\$8,437,329		
2033	7,325,346	946,191	\$33,152,754	5,494,010	709,643	\$24,864,565	3,662,673	473,095	\$16,576,377	1,831,337	236,548	\$8,288,188		
<b>Present value at 7%</b>			<b>\$205,554,589</b>				<b>\$154,165,942</b>				<b>\$102,777,295</b>			<b>\$51,388,647</b>

<sup>1</sup> The appropriate proportion applied to the forecast number of new passengers in Table 2.

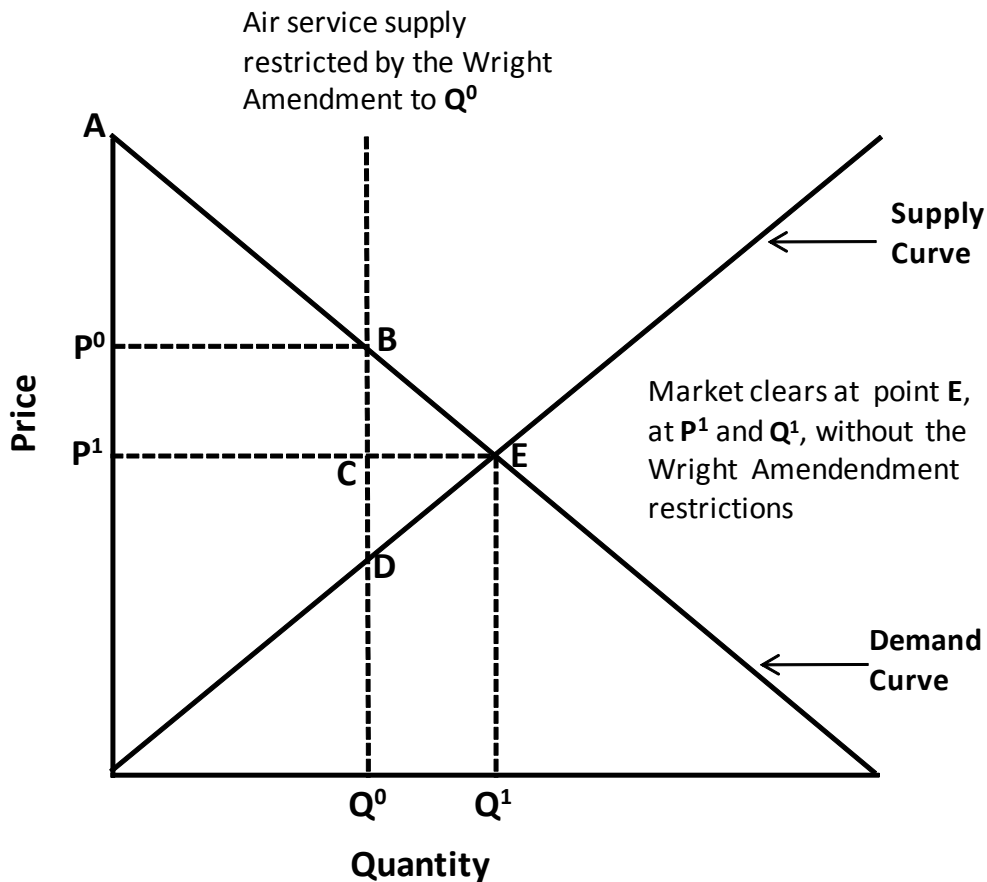
<sup>2</sup> 7.75 minutes times the number of diverted passengers, divided by 60 minutes

<sup>3</sup> Travel time savings (hours) times \$35.04 per hour

**Benefit #4: Gain in Social Surplus Resulting from Expanded Service at Lower Airfares**

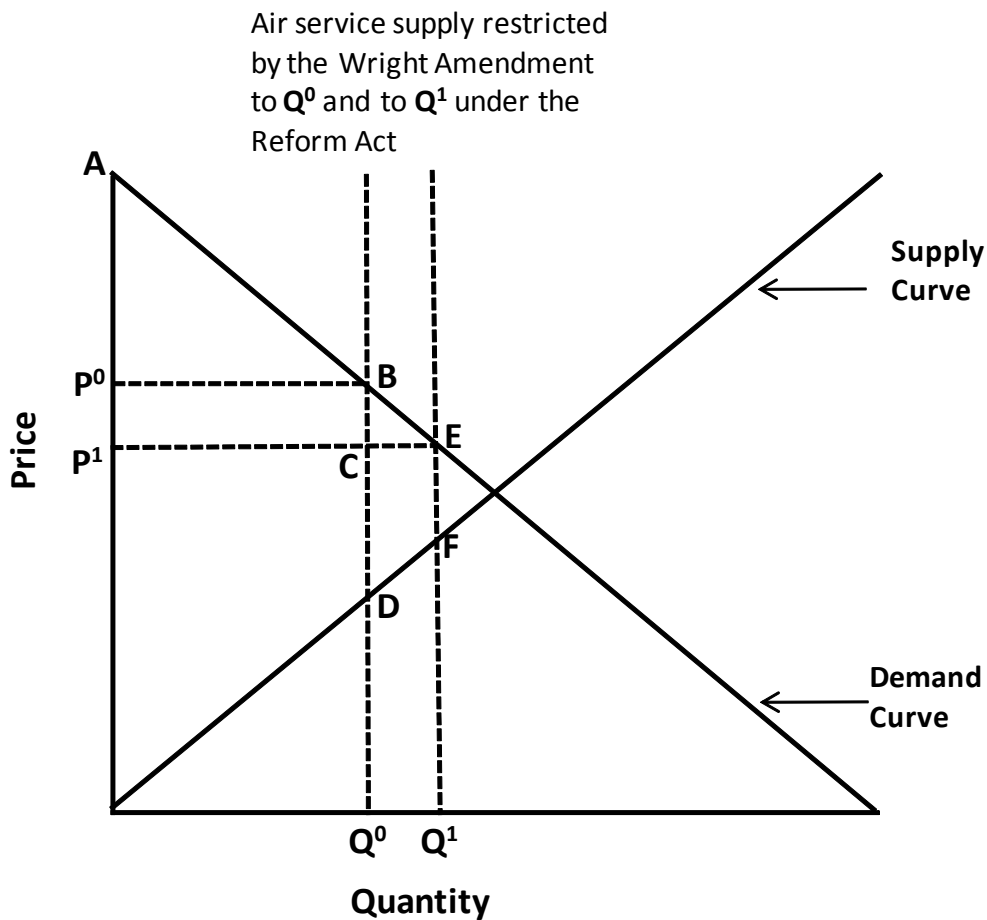
Under certain air service supply and demand conditions as illustrated in **Figure 2**, the removal of the air service restrictions increase supply. The market clears at a lower price and higher quantity, resulting in a clear gain in social surplus. **Figure 2** shows a simplified one-airport model of demand and supply. Under the Wright Amendment, supply (and therefore demand) is artificially restricted to the quantity labeled  $Q^0$ ; and consumers pay at a price of  $P^0$ . Eliminating the artificial supply constraint (the Wright Amendment) allows the market to clear at equilibrium point D, at price  $P^1$  and quantity  $Q^1$ . *Area  $P^1P^0BC$*  represents the fare savings to existing passengers matched by a loss in airline profits, and therefore represents a transfer. The difference between  $Q^0$  and  $Q^1$  represents the induced demand resulting from expanded air service without the Wright Amendment restrictions. Corresponding to this induced demand is a gain in social surplus represented by *Area  $BED$* . The gain in social surplus has two components: *Area  $CBE$*  representing the net gain in consumer surplus, and *Area  $CDE$*  representing the net gain in producer surplus.

**Figure 2**  
**A SIMPLE MODEL OF AIR SERVICE SUPPLY AND DEMAND**  
**WITH AND WITHOUT THE WRIGHT AMENDMENT RESTRICTIONS**



The simplified model in **Figure 2** illustrates that the removal of the Wright Amendment restrictions can result in induced demand and associated gain in social surplus, notwithstanding a few shortcomings. It assumes no remaining supply restrictions, yet one of the provisions of the Reform Act is to limit the Love Field terminal to 20 gates. **Figure 3** illustrates the situation whereby the removal of the Wright Amendment restrictions still results in increased supply, lower airfares, increased demand, and gain in social surplus, even if certain supply restrictions remain. The gain in social surplus is represented by *Area BDEF*, consisting of the net gain in consumer surplus (*Area BCE*) and the net gain in producer surplus (*Area ECDF*).

**Figure 3**  
**A SIMPLE MODEL OF AIR SERVICE SUPPLY AND DEMAND**  
**WITH AND WITHOUT THE WRIGHT AMENDMENT RESTRICTIONS,**  
**WITH REMAINING SUPPLY RESTRICTIONS UNDER THE WRIGHT AMENDMENT REFORM ACT**



Neither **Figure 2** nor **Figure 3** models explicitly what happens at DFW. In a model with two competing airports, the gain in social surplus is the sum of the changes in social surplus at the two airports. If all of the new traffic at Love Field were diverted from DFW, the net gain in social surplus would be zero. However, economic theory tells us that, as long as the demand curve is downward sloping, lower fares will induce new demand. Demand will increase not only

at Love Field but also at DFW, to the extent that airlines operating at DFW respond competitively by lowering fares at DFW to match fares at Love Field.

**Table 7** presents estimates of the value of the gain in social surplus based on the following parameters and assumptions:

- **Number of passengers enjoying the benefit** - **Table 7** presents estimates of the value of the gain in social surplus assuming that induced traffic account for the following alternative percentage shares of forecast new passengers in **Table 2**: 25 percent, 50 percent, and 75 percent.
- **Change in airfares** - The Campbell-Hill Aviation Group, Inc. (2005) estimates airfare savings of \$134 on average on each roundtrip ticket – or \$67 each way – if Southwest Airlines were allowed to provide service to a sample of 15 markets outside the Love Field Service Area. This estimate was derived by comparing 2004 airfares offered by American Airlines from DFW to these markets to airfares that Southwest Airlines would have offered from Love Field to the same markets. The calculations in **Table 7** are based on \$67 one-way fare savings, inflated to \$75.34 in 2008 dollars.
- **Empirical estimate of the gain in social surplus** – The gain in social surplus consists of the net gain in consumer surplus and the net gain in producer surplus. Assuming a linear downward sloping demand curve, the net gain in consumer surplus (the change in consumer surplus less transfer from producer surplus) is approximated by the area of the triangle BCE in **Figure 2** and **Figure 3**. The area of the triangle BCE is calculated as follows:  $\frac{1}{2} \times (P^0 - P^1) \times (Q^1 - Q^0)$ . The net gain in producer surplus, which is the area of the triangle CDE in **Figure 2**, is assumed to equal the net gain in consumer surplus, which is the area of the triangle BCE. Therefore the gain in social surplus, which is the sum of the two triangles, is estimated as follows:  $(P^0 - P^1) \times (Q^1 - Q^0)$ . This simplifying assumption yields a close approximation of the net gain in producer surplus and therefore the gain in social surplus in the case of **Figure 2**, but can result in a significant underestimation in the case of **Figure 3**.

The total present value of the gains in social surplus is estimated to range from \$855.5 million, assuming that 25 percent of new Love Field passengers represent induced traffic, to \$2.6 billion assuming that 75 percent of new Love Field passengers represent induced traffic (**Table 7**).

**Table 7**  
**VALUE OF GAIN IN SOCIAL SURPLUS FROM EXPANDED SERVICE AND LOWER AIRFARES**

Fiscal year	Induced traffic = 25% of new passengers <sup>1</sup>		Induced traffic = 50% of new passengers <sup>1</sup>		Induced traffic = 75% of new passengers <sup>1</sup>	
	Induced Passengers <sup>1</sup>	Gain in Social Surplus (2008 \$) <sup>2</sup>	Induced Passengers <sup>1</sup>	Gain in Social Surplus (2008 \$) <sup>2</sup>	Induced Passengers <sup>1</sup>	Gain in Social Surplus (2008 \$) <sup>2</sup>
2008	152,424	\$11,484,213	304,848	\$22,968,427	457,272	\$34,452,640
2009	171,131	\$12,893,633	342,261	\$25,787,267	513,392	\$38,680,900
2010	189,827	\$14,302,300	379,654	\$28,604,600	569,481	\$42,906,900
2011	209,601	\$15,792,112	419,201	\$31,584,224	628,802	\$47,376,336
2012	229,948	\$17,325,134	459,895	\$34,650,267	689,843	\$51,975,401
2013	250,882	\$18,902,420	501,764	\$37,804,840	752,646	\$56,707,259
2014	463,693	\$34,936,423	927,386	\$69,872,847	1,391,079	\$104,809,270
2015	676,238	\$50,950,348	1,352,475	\$101,900,695	2,028,713	\$152,851,043
2016	888,524	\$66,944,796	1,777,047	\$133,889,591	2,665,571	\$200,834,387
2017	1,100,645	\$82,926,850	2,201,290	\$165,853,699	3,301,935	\$248,780,549
2018	1,312,620	\$98,897,866	2,625,240	\$197,795,731	3,937,860	\$296,693,597
2019	1,524,336	\$114,849,330	3,048,671	\$229,698,660	4,573,007	\$344,547,990
2020	1,735,607	\$130,767,304	3,471,213	\$261,534,608	5,206,820	\$392,301,912
2021	1,788,172	\$134,727,754	3,576,343	\$269,455,508	5,364,515	\$404,183,263
2022	1,841,987	\$138,782,422	3,683,974	\$277,564,844	5,525,961	\$416,347,266
2023	1,897,081	\$142,933,417	3,794,162	\$285,866,834	5,691,243	\$428,800,251
2024	1,953,481	\$147,182,811	3,906,962	\$294,365,622	5,860,443	\$441,548,433
2025	2,011,217	\$151,532,827	4,022,433	\$303,065,654	6,033,650	\$454,598,480
2026	2,053,319	\$154,704,995	4,106,638	\$309,409,990	6,159,957	\$464,114,985
2027	2,022,823	\$152,407,284	4,045,645	\$304,814,569	6,068,468	\$457,221,853
2028	1,991,930	\$150,079,703	3,983,860	\$300,159,406	5,975,790	\$450,239,110
2029	1,960,636	\$147,721,864	3,921,271	\$295,443,727	5,881,907	\$443,165,591
2030	1,928,934	\$145,333,372	3,857,869	\$290,666,744	5,786,803	\$436,000,116
2031	1,896,821	\$142,913,830	3,793,642	\$285,827,660	5,690,463	\$428,741,490
2032	1,864,290	\$140,462,834	3,728,580	\$280,925,668	5,592,871	\$421,388,502
2033	1,831,337	\$137,979,975	3,662,673	\$275,959,950	5,494,010	\$413,939,925
<b>Present value at 7%</b>		<b>\$855,507,121</b>		<b>\$1,711,014,243</b>		<b>\$2,566,521,364</b>

<sup>1</sup> The appropriate proportion applied to the forecast number of new passengers in **Table 2**.

<sup>2</sup> The average one-way airfare savings of \$74.34 (in 2008 dollars) times the number of induced passengers

**Table 8** presents the sum of the following economic benefits:

- travel time savings to current passengers from through-ticketing (**Table 3**)
- travel time savings to current passengers from non-stop service (**Table 5**)
- ground access time savings to diverted passengers (**Table 6**)
- gain in social surplus from expanded service and lower airfares (**Table 7**)

Estimates of the total economic benefits from the elimination of air service restrictions at Love Field under the Reform Act over a 26-year evaluation period range from \$339 million, assuming that forecast new traffic at Love Field consists entirely of diverted traffic from DFW, to \$2.75 billion, assuming that forecast new traffic consists of 25 percent diverted traffic and 75 percent induced traffic.

**Table 8**  
**TOTAL ECONOMIC BENEFITS OF THE WRIGHT AMENDMENT REFORM ACT**  
**2008-2033**

Benefit	Distribution of new passengers between diverted and induced traffic			
	100% Diverted 0% Induced	75% Diverted 25% Induced	50% Diverted 50% Induced	25% Diverted 75% Induced
Travel time savings to current passengers from through-ticketing (Table 3)	\$70,150,211	\$70,150,211	\$70,150,211	\$70,150,211
Travel time savings to current passengers from non-stop service (Table 5)	\$62,994,198	\$62,994,198	\$62,994,198	\$62,994,198
Ground access time savings to diverted passengers (Table 6)	\$205,554,589	\$154,165,942	\$102,777,295	\$51,388,647
Gain in social surplus from expanded service and lower airfares (Table 7)	0	\$855,507,121	\$1,711,014,243	\$2,566,521,364
<b>Total economic benefits</b>	<b>\$338,698,999</b>	<b>\$1,142,817,473</b>	<b>\$1,946,935,947</b>	<b>\$2,751,054,421</b>

#### SUMMARY

The Wright Amendment Reform Act was passed in October 2007 to remove restrictions on air service at Love Field placed by the Wright Amendment of 1980. The Reform Act removed the through-ticketing restrictions on flights from Love Field to destinations outside the Love Field Service Area immediately upon the signing of the law in 2007. It also provides for the removal of non-stop service restrictions effective 2014. This paper presents an economic analysis of the benefits of the Reform Act. The results are useful in evaluating the costs of artificial air service restrictions and the benefits of removing them.

Previous research focused on only one aspect of potential benefits from the repeal of the Wright Amendment: airfare savings. This paper presents a more comprehensive assessment of economic benefits, including travel time savings, while distinguishing the gain in social surplus from transfers. Estimates of the present value of the total economic benefits from the elimination of air service restrictions at Love Field under the Reform Act over a 26-year evaluation period at a 7 percent discount rate range from \$339 million, assuming that forecast new traffic at Love Field consists entirely of diverted traffic from DFW, to \$2.75 billion, assuming that forecast new traffic consists of 25 percent diverted traffic and 75 percent induced traffic.

Areas for the future extension of this research include the following: (1) an assessment of benefits based on a two-airport model, explicitly accounting for the effects of the Wright Amendment Reform Act on DFW; (2) an assessment of distributive impacts in terms of airfare savings realized by current passengers at Love Field and passengers diverted from DFW; and (3) an assessment of the costs of the restriction in the growth of air service at Love Field placed by the 20-gate restriction on terminal facilities under the Reform Act.

## REFERENCES

- The Campbell-Hill Aviation Group, Inc. (2005). *The Wright Amendment Penalty*, June 10.
- Farris, M. Theodore and Stephen M. Swartz (2006). "Repeal or Retain? The Wright Amendment Debate," *Journal of Transportation Law, Logistics & Policy* 73(1), 86-94.
- Federal Aviation Administration (2007). *Economic Values for FAA Investment and Regulatory Decisions, A Guide*, Final Report, October 3.
- Gresham, Smith and Partners (2008). *Love Field Terminal Area Redevelopment Program Study*, Final Report, June 25.
- Morrison, Steven (1997). "The Effect of Airport Restrictions on Air Fares," *Statement for Hearing before the Subcommittee on Transportation and Related Agencies*, Committee on Appropriations, United States Senate, October 21.
- Morrison, Steven (1998). "Airline Services: The Evolution of Competition Since Deregulation," in Larry L. Deutsch, ed., *Industry Studies* (Armonk, NY: M.E. Sharpe, 1998).
- Morrison, Steven and Clifford Winston (1998). "Regulatory Reform of U.S. Intercity Transportation," in J. Gomez-Ibanez, W. Tye, and C. Winston, eds., *Essays in Transportation Economics and Policy: A Handbook in Honor of John R. Meyer* (Washington, DC: The Brookings Institution, 1998).
- "The Wright Amendment," *Aviation Past* in [www.aviationpast.com](http://www.aviationpast.com), accessed on March 10, 2009.