

## PUBLIC FUNDING OF AIRPORT INCENTIVES: THE EFFICACY OF THE SMALL COMMUNITY AIR SERVICE DEVELOPMENT GRANT (SCASDG) PROGRAM

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# Public Funding of Airport Incentives: The Efficacy of the Small Community Air Service Development Grant (SCASDG) Program

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## Abstract

As U.S. airlines began to restrict available domestic capacity at smaller airports in 2008 as a result of higher fuel prices and an economic downturn, these airports have increasingly started to rely on incentive packages comprised of revenue guarantees, waived or reduced airport use fees, marketing support, or direct subsidies to attract new service. There are two main federal programs that provide funding for such incentives for small U.S. airports: the Essential Air Service (EAS) program and the Small Community Air Service Development Grant (SCASDG) program. While the EAS program has received considerable academic attention, there has been no comprehensive analysis of the success of SCASDG recipients in attracting and retaining their targeted air service.

Using a metric of SCASD grant success, this paper evaluates the outcomes of 115 SCASD grantees from 2006-2011. In each year, fewer than half of the grant recipients were ultimately successful in meeting the goals of their proposal. Three case studies suggest that successful grantees often had significant community or airline support prior to submitting their grant and were located in slightly larger-than-average communities. Further careful consideration is necessary to determine whether reform of the SCASDG program is warranted to more effectively support the development of small community air service in the United States.

*Keywords:* airport incentives, Small Community Air Service Development Grant program, small airports, capacity discipline

## 1. Introduction

Regional airports provide an essential service to smaller communities. Scheduled air service at a small community airport can connect area residents and business with the rest of the global air transportation network, and direct service to a hub of a major network carrier can provide one-stop access to hundreds of points around the globe. Airports can also provide significant opportunities for economic development, particularly in smaller communities (Kanafani and Abbas, 1987; Button et al., 2010; Mukkala and Tervo, 2012).

However, with smaller catchment areas and less developed urban economies than large airports in major metro regions, smaller airports in the United States have recently had trouble attracting and retaining commercial air service in an era of profitability-focused airline capacity management strategies. Smaller

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airports have been particularly affected by recent cuts in domestic airline capacity as a result of high and volatile jet fuel prices and a global economic recession. For instance, from 2007-2012, available domestic flights at the largest 29 U.S. airports fell by 8.2%, as compared to a 21.7% decline in flights at smaller airports (Wittman and Swelbar, 2013).

Small communities have also been harmed by a broader trend of upgauging of the small regional jets that have historically served these markets. Higher fuel prices have hurt the economics of operating smaller, 37-50 seat regional jets, and carriers have responded by cutting flights operated by these aircraft at many small community airports. Some carriers are attempting to remove these aircraft from their fleets entirely, replacing them with larger, 51-76 seat regional jets, often at reduced frequencies (Government Accountability Office, 2005). The lack of a properly-sized, economically viable aircraft to serve smaller communities has also limited the potential for profitable air service from these airports.

These challenges have left smaller communities scrambling to attract profitable and sustainable commercial air service. In many cases, airports have started to provide financial incentives directly to airlines in exchange for either new service or maintained levels of existing service. These incentives are broadly intended to reduce the risk of serving a small community market—usually by insuring the financial success of new service provided by either a new entrant or an incumbent carrier. Incentives can take many forms, and innovative airport managers and consultants have created a wide variety of incentive packages to attempt to lure airlines to their airport.

Incentive packages can be expensive—attracting new service can often require a package ranging into the millions of dollars. Small communities and their airports may have trouble affording such incentives, even if area businesses or local governments agree to contribute funds. Therefore, there are several federal programs intended to provide financial grants or subsidies to assist small communities in providing incentives to attract new air service.

One such funding source is the Essential Air Service (EAS) program, which provides hundreds of millions of dollars in subsidies for commercial air service to geographically isolated communities. Airports receiving EAS subsidies must be at least 70 miles from the nearest large airport and must fit a variety of other restrictions. Airlines receiving an EAS subsidy to serve these markets are obligated to provide service throughout the entire duration of the subsidy, and may not exit the market unless a replacement carrier is found.

There is also a second, lesser-known federal grant program that assists small communities in attracting new air service. The Small Community Air Service Development Grant (SCASDG) program was first funded in 2002, and provides funding in response to specifically targeted airport grant proposals. SCASD grants are often smaller in scale than Essential Air Service grants, but they are available to a wider variety of airports. Unlike EAS airports, airports receiving SCASD grants may already be receiving unsubsidized commercial air service and may be within 70 miles of the nearest large- or medium-hub airport.<sup>1</sup>

While the EAS program is well known and is often the target of governmental and academic research (cf. Metrass-Mendes and de Neufville (2010); Matisziw et. al (2012); Grubesic et al. (2012); Grubesic and Wei (2012) and others), the SCASDG program has received considerably less attention. Except for a Government Accountability Office (GAO) report in 2005, there has been no governmental or academic effort to examine the efficacy of the SCASDG program. This paper aims to correct this deficiency by providing an overview of the SCASDG program and an analysis of the success of the program's grantees in attracting air service.

The remainder of this paper is structured as follows: Section 2 discusses the growing need for airport incentives and provides a general overview of the Essential Air Service and Small Community Air Service Development Grant programs. Section 3 discusses the data used in the analysis and provides some summary statistics. Section 4 proposes a definition for SCASD grant "success" and examines the success or failure of 115 communities that received SCASD grants from 2006-2011 in attracting or retaining their targeted air service. Three case studies are presented that suggest some common characteristics of successful SCASD grant implementations. Section 5 provides a brief conclusion and discusses some possible reforms of the SCASDG program that could increase its rate of success.

#### 2. Overview of Federal Funding Programs for Airport Incentives

#### 2.1. The Need for Airport Incentives

In past decades, smaller communities did not need to specifically attract airlines to provide service to their airports. This was partly because of the rise of the 50-seat regional jet—a replacement aircraft for the turboprops that traditionally operated short-haul, "puddle-jumper" flights. As legacy carriers grew their networks in the early 2000s, the 50-seat regional jet emerged as the aircraft of choice to serve small communities. Buoyed by relatively inexpensive fuel prices, these aircraft were deployed on flights to small airports throughout the country. In an analysis of regional jet operation patterns from 1998 to 2003, Mozdzanowska (2004) found that while regional jets typically flew short-haul missions, the aircraft were deployed on longer range flights as compared to turboprops. As the number of regional jets in legacy carrier

<sup>&</sup>lt;sup>1</sup>The Federal Aviation Administration classifies primary commercial service airports in the United States into "large-hubs," "medium-hubs," "small-hubs," and "non-hubs" based on the previous year's passenger enplanement totals at the airport.

fleets increased, airlines were able to provide service to more smaller communities in the first half of the 2000s.

However, in 2008, the domestic air transportation system in the United States was hit with a pair of economic shocks. An economic downturn reduced the demand for air transportation throughout the country, and an upward shock in fuel prices increased costs throughout the industry. The increase in fuel prices led to a sudden spike in unit costs, particularly for smaller 50-seat regional jets. These aircraft could no longer be flown profitably on many small community routes, particularly in those markets with depressed demand. Airlines started cutting their frequencies of flights to smaller airports and reducing their reliance on 50-seat regional jets. Figure 1 shows that scheduled domestic flights using small, 37-50 seat regional jets fell significantly between 2007 and 2012, particularly at small-hub and medium-hub airports.



Figure 1: Scheduled domestic flights on 37-50 seat regional jets, 2007-2012. Source: Diio Mi

As aircraft gauge changed and demand for air transportation was reduced as a result of the economic recession, smaller airports were hit particularly hard by reductions in available service. Table 1 shows that flights to smaller airports (here defined as airports classified as medium-hub, small-hub, or non-hub by the Federal Aviation Administration<sup>2</sup>) decreased by 21.7% from 2007-2012, as compared to an 8.8% drop in flights at large-hub airports over that same time period.

As airlines restricted the amount of available capacity in the domestic air transportation network, many

<sup>&</sup>lt;sup>2</sup>There were 35 medium-hub airports, 74 small-hub airports, and 249 non-hub airports in 2013

Hub Type	% Change in Flights (2007-2012)
Large Hub	8.8%
Medium Hub	26.2%
Small Hub	18.2%
Non-Hub	15.4%
Smaller U.S. Airports	21.3%
All U.S. Airports	14.3%

Table 1: Percent Change in Scheduled Domestic Flights, 2007-2012. Source: Wittman and Swelbar (2013)

smaller airports found themselves at a disadvantage; as flights were removed and fares increased, smaller airports were unable to compete on frequency or price with larger airports. Many of these airports thus saw their levels of passenger enplanements begin to fall in concert with flight reductions.

Even as fuel prices began to stabilize in 2011 and later years, airlines seemed unwilling to reintroduce the service to small communities that had been previously removed. More precisely, the period from 2007-2012 represented a shift from an airline capacity management mentality that was focused on network expansion and market share growth to one that was focused on profitability. Without a reasonable chance of a profitable operation, airlines became more disciplined against adding new flights.

In this new era of "capacity discipline," smaller airports were forced to adopt more creative strategies to convince airlines to reinstate pre-recession levels of departures. Specifically, airports began preparing targeted business cases to convince airlines that the reinstated service would be profitable. While airports and airlines have always worked together closely on air service development, the bargaining power in these relationships shifted to the airlines in the capacity discipline period. That is, with lower levels of flights throughout the system, airports needed to be more aggressive in their negotiations by "opening their checkbooks" to attract an airline partner through incentive packages.

Airport incentives take a variety of forms, and new incentives continue to be introduced by innovative airports. Broadly, airport incentives can be seen as a payment or guarantee from an airport, airport authority, or local government to an airline to reduce the risk that a new service will be unprofitable. Some incentives take the form of a reduction of use fees (Allroggen et al., 2013), while other offer a guarantee of a minimum level of revenue or even a subsidy to cover the entire cost of providing air service.

Incentive packages often include a variety of different incentives, and vary from airport to airport and from route to route. Some forms of incentives that have been popular with airports and airlines include:

• Revenue guarantees, which essentially act as insurance for an airline that a minimum amount of revenue will be achieved on a route. Airports offering revenue guarantees set aside a certain amount

of funds that will be paid to an airline in the event that the revenue on a certain route is below expectations. For instance, if an airport makes a \$500,000 revenue guarantee to an airline, and the route only realizes \$200,000 in revenue over a certain time period, the airport will pay the airline \$300,000 to cover the difference. Note that if the route realizes the expected amount of revenue, no payment is made.

- Waived or reduced use fees. These agreements either waive or reduce the airport fees that are charged to the airline. Examples of fees that might be waived or reduced include landing fees, departure charges, parking charges, and other airport rents. The waiver or reduction in fees is not conditional upon whether the service is successful or not.
- Advertising and marketing assistance. Airports can either contribute to a carrier's advertising budget for marketing a new service, provide free or reduced-price in-airport advertising space, or directly purchase advertisements to attempt to attract passengers to use a newly introduced service. Many small airports are located in multi-airport regions in which passengers will drive long distances to nearby airports to save on price, so such advertising is of increasing importance to attract passengers to fly from their local airport (Fuellhart, 2007; Fournier et al., 2007).
- **Travel banks** offer an airline prepaid commitments that passengers will fly on a newly introduced route. With a travel bank, airports are responsible for selling a certain number of prepaid travel vouchers to area businesses and individuals for a future flight on the newly introduced service. Past research has suggested that the the success of airports in attracting sufficient numbers of passengers to purchase these prepaid tickets has been limited (Nolan et al., 2005).
- **Direct subsidies** are funded by the federal government and pay airlines directly in exchange for a commitment of a certain level of service. Subsidies can either be paid on a per-passenger basis or a per-period basis. The best known example of a direct subsidy program for air service is the Essential Air Service program, which is discussed in detail in the next section.

Funding for these incentive packages can come from a variety of sources, including the airport or airport authority's internal budget and contributions from local businesses or governmental agencies. There are also several federal programs that fund airport incentives in the United States. These programs—Essential Air Service (EAS) and the Small Community Air Service Development Grant Program (SCASDG)—collectively provide hundreds of millions of dollars in funding to dozens of small airports throughout the country. As government subsidy programs, both EAS and SCASDG are routinely exposed to political tugs-ofwar regarding the amount of their governmental funding. As such, the programs have been exposed to a considerable amount of both academic and governmental scrutiny of their effectiveness. The next two sections briefly discuss the details of the EAS and SCASDG programs and review the academic literature surrounding each of these public sources of funding for airport incentives.

#### 2.2. Essential Air Service (EAS)

Of the two major federal funding programs for airport incentives, Essential Air Service is larger, more comprehensive, and more restrictive than the Small Community Air Service Development Grant program. Established in the 1980s, the EAS program is specifically targeted towards geographically-isolated communities that would not otherwise receive commercial air service (Metrass-Mendes and de Neufville, 2010).

Airports receiving EAS grants must be located at least 70 miles from the nearest medium-hub or largehub airport.<sup>3</sup> EAS grants provide direct subsidies to airlines for a predefined level of service. Airlines submit competitive bids for EAS flight opportunities, specifying the level of service that they will provide, the type of equipment, and a proposed schedule, among other information. Airlines that receive EAS funding are required to provide service to a nearby medium-hub or large-hub airport, and are required to provide the service for the duration of the contract. Should a airline desire to exit an EAS market, it must find a replacement carrier that is willing to provide the agreed-upon level of service until the EAS contract expires (Office of Aviation Analysis, 2009).

As of 2013, the Essential Air Service provides subsidized service to 163 airports at a cost of over \$214 million per year. Payments are made to airlines on a per-flight basis, not a per-passenger basis. As such, on some scantly-traveled EAS routes, subsidies per-passenger can range into the hundreds of dollars, or even higher (Grubesic and Wei, 2012).<sup>4</sup> Note that the EAS funding subsidizes the airline only, not the passenger. That is, passengers must still pay regular, unsubsidized airfares for travel.

Traditionally, EAS flights were operated by regional affiliates of network carriers. However, in recent years, many network carriers have abandoned the EAS market in favor of more profitable routes, leaving some smaller "ultra-regional" carriers to take over service. These carriers, such as Cape Air and Great Lakes Airlines, generally operate small 7-19 seat aircraft that are better sized to serve these smaller communities. Figure 2 shows that in 2012, these two carriers alone operated nearly twice as many EAS flights as the network carriers and their regional affiliates combined.

<sup>&</sup>lt;sup>3</sup>Airports in Alaska fall under different requirements for EAS eligibility

 $<sup>^{4}</sup>$ A recent change to the EAS rule in 2012 limits EAS participation to communities in which subsidies were less than \$1,000 per passenger.



## **EAS Departures by Marketing Airline**

Figure 2: Scheduled EAS departure by carrier type, 2007-2012. Source: Wittman and Swelbar (2013)

The Essential Air Service program has received a considerable amount of academic attention, particularly in recent years. Analyses by Metrass-Mendes and de Neufville (2010); Matisziw and Grubesic (2010); Matisziw et. al (2012); Grubesic et al. (2012); Grubesic and Wei (2012, 2013) and others have each explored the EAS program from a variety of geographic, operational, demographic, and economic angles. In all, these reports suggest that certain improvements could be made to the EAS program to increase its efficiency, either by decreasing the amount of subsidy paid to airlines serving EAS airports or by tightening the participation criteria for EAS funding.

## 2.3. Small Community Air Service Development Grant (SCASDG) program

The Small Community Air Service Development Grant program is relatively newer than EAS. The program came into being in a provisional form in the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21) in 2000 and was first funded in 2002 (Metrass-Mendes and de Neufville, 2010). Compared to the Essential Air Service program, the Small Community Air Service Development Grant program is simultaneously smaller and more inclusive. As opposed to the nearly \$214 million allocated for EAS funding to 163 communities in 2012, the SCASDG program received only about \$14 million in funding for 33 airports in that same year. SCASD grants are also smaller on average than Essential Air Service grants. However, the intentions and funding mechanisms of these two programs are very different.

As opposed to the EAS program, which provides direct subsidies to carriers in exchange for guaranteed air

service, SCASD grants provide funding to airports to execute specific incentive packages to market existing air service or gain additional service. While EAS requires that airports fall under a number of restrictive criteria, the SCASDG program is relatively open in terms of which airports may apply. Any small-hub or non-hub airport may submit a SCASDG application, and airports can also form consortia to propose a grant for a group project. Additionally, SCASD grantees may already be receiving unsubsidized commercial air service. These relaxed restrictions make SCASD grants much more accessible to a larger number of small U.S. airports.

Airports can apply for SCASD grants on a yearly basis by submitting an application to the U.S. Department of Transportation's Office of Aviation Analysis. Airports are given considerable flexibility in how they may propose to use SCASDG funds. Grants may be applied to fund revenue guarantees, fee waivers, marketing, consultant studies of air service feasibility, new airport equipment, new airport infrastructure, and other incentives. Unlike EAS grantees, recipients of SCASD grants often promise to have some "skin in the game" by partially funding the programs that they propose in their grant applications. Community support of the SCASDG application is also highly valued by the Office of Aviation Analysis selection committee—typical SCASDG applications contain dozens of letters from congresspeople, local government, and local businesses showing their support for the proposed air service development program.

SCASD grants are evaluated by the Office of Aviation Analysis on a number of charateristics. Specifically, the committee looks favorably upon SCASD grants applications received from airports with higher-thanaverage airfares, limited existing service, a broad range of businesses, individuals, and educational institutions that would use the new service, and airports that have received significant community support for the application. Public-private partnerships are also particularly encouraged. Indeed, many SCASD grant applications include letters of support from airlines pledging that new service will be favorably evaluated as a result of a SCASDG-funded revenue guarantee.

Perhaps since the amount of SCASDG funding is low relative to the EAS program, the SCASDG program has received considerably less attention than EAS. However, with the growing reliance of small community airports on incentive packages to win new service, the SCASDG program is arguably more important than ever. Yet apart from one Government Accountability Office (GAO) study in 2005 (Government Account-ability Office, 2005), there has currently been no careful analysis of the efficacy of the SCASDG program. The GAO report found that SCASD grant recipients had mixed results in attracting and maintaining air service, but ultimately concluded that the program was too new (at the time) to evaluate fully (Government Accountability Office, 2005).

Now, more than a decade after the creation of the SCASDG program and after a number of structural changes to the U.S. air transportation network, a reevaluation of the program is timely. It is worthwhile to consider anew whether the millions of dollars that are spent on the SCASDG program are an effective means of inducing new or existing air service for smaller communities. To accomplish this, we first examine some summary trends of SCASD grant recipients. We then propose a metric of SCASD grant success, and evaluate how many grantees each year were able to successfully implement the air service that they proposed in their grant application. We also evaluate the applications of "successful" grantees to identify common trends in successful SCASDG implementation.

#### 3. Data sources and methodology

## 3.1. SCASD grant application data

Completed SCASD grant applications, regardless if the application is selected for funding or not, are published on publicly-available government websites. One such repository is Regulations.gov, a government website that collects and displays government documents for public comment. SCASDG applications for each year of the program (since the program was funded in 2002) are available on Regulatons.gov. The completed SCASDG applications are also collected by Airlineinfo.com, a private website owned by Airline Information Research that also provides short synopses of the goals of each application. Both of these websites were used to collect and review the SCASDG applications for each of the years in the study period.

After grant applications are collected by the Office of Aviation Analyses and posted online, the Department of Transportation reviews the applications and selects those that best meet the funding criteria. The airports that receive SCASD grants are published in August or September of each year in a Grant Selection Order signed by the Assistant Secretary for Aviation and International Affairs of the Department of Transportation. The Grant Selection Order details how many applications were received in the year and what the criteria were for selecting the grant awards. Starting in 2011, the Grant Selection Order also contains the rationale for each selection: information about how each individual application that was selected to receive a SCASD grant fits the goals of the program.

Table 2 summarizes the number of grants funded, average grant award, and total amount of funding available for each year of the SCASDG program's existence, from 2002-2013. As the table shows, the overall level of funding has changed dramatically from year to year, jumping from \$20 million in 2002 to \$6.5 million in 2007 before being increased again to \$11.5 million in 2013.

Year	# of Grants	Total Funding	Avg. Grant Amount
2002	40	\$19,985,056	\$499,626
2003	35	\$19,849,807	\$567,137
2004	40	\$19,853,546	\$496,338
2005	37	\$18,952,685	\$512,234
2006	25	\$9,692,600	\$387,704
2007	26	\$8,975,678	\$345,218
2008	15	\$6,499,000	\$433,266
2009	19	\$6,445,450	\$339,234
2010	19	\$6,993,000	368,052
2011	29	\$14,984,000	\$515,448
2012	33	\$13,917,000	\$421,727
2013	25	$$11,\!484,\!375$	\$459,375

Table 2: Summary of SCASDG Program Funding 2002-2013. Source: DOT Office of Aviation Analysis

While SCASDG application information is available since 2002, this study focuses specifically on the six years from 2006-2011 for several reasons. First, the initial grants funded in the first years of the SCASD program have already been evaluated in detail by the Government Accountability Office (2005). We will investigate whether our findings agree with this early GAO study in Section 4. Additionally, since this study is focused specifically on the effects of changes to the air transportation system as a result of changes in airline capacity management strategies in an era of higher fuel prices, using more recent SCASD projects in this analysis will best explore how smaller airports have adapted to this structural change to the U.S. air transportation system. While 2012 and 2013 SCASD grant applications were available at the time of this analysis, they were also not used because sufficient time had not passed to evaluate whether these grantees have been able to implement their desired air service project successfully.

Therefore, a data set of SCASD grant awards was created using the grant applications and the Grant Selection Orders for the SCASDG program for the years 2006-2011. Along with information about which airport(s) requested the grants, data was also gathered about the grant amount awarded and the stated purpose of the grant. Each grant application contains a standardized summary form, in which the grant requester checks one or more boxes describing the grant's primary purpose. This information, along with the grant application summaries provided on the Airline Information Research website, were used to both sort the accepted grants into general categories based on their primary purpose (e.g. attract new service, maintain existing service, marketing, air service study, etc.) and to identify the precise airlines/destinations that were targeted by the grant (e.g., "attract new United Airlines service to Denver").

Table 3 provides a summary of the primary objective of each accepted SCASD grant application from 2006-2011. The applications are sorted into those proposing to use the grant money for new service, to

market existing service, to fund an air service viability study, or for other purposes. Table 3 also notes which SCASD applications intended to offer revenue guarantees as part of an air service development package for new service—note that this category is not mutually exclusive with others, so that a SCASD grant application may be classified into both the "new service" and the "revenue guarantee" category.

Year	Total	New Service	Rev. Guarantees	Marketing	Study	Other
2006	25	20	15	4	1	0
2007	26	16	15	8	3	1
2008	15	10	8	4	1	0
2009	19	10	10	7	1	1
2010	19	12	11	4	2	1
2011	29	23	22	4	1	1

Table 3: Primary purpose of accepted SCASDG applications, 2006-2011. Source: SCASDG applications

Note from Table 3 that in each year, the majority of accepted SCASDG applications intended to fund new air service that had not previously existed. In addition, almost all of these applications that proposed new air service aimed to accomplish this goal by offering a revenue guarantee to their targeted airline. In some years, each "new service" proposal aimed to accomplish the new service by means of such a guarantee. This is not a new phenomenon; the Government Accountability Office (2005) study on the early years of the SCASD program also found that most applications intended to induce new service also relied on revenue guarantees. This shows the continued importance of revenue guarantees in the incentive packages that small airports offer to airlines in exchange for the chance of new service, as well as the perceived attractiveness of such guarantees from the airlines' perspective.

## 3.2. Defining a metric for SCASDG success or failure

Given the diversity of goals that SCASD grantees aim to accomplish with their funding, defining a single metric for SCASD grant success or failure is challenging. Broadly, however, we wish to examine whether each community was successful in either attracting their targeted new air service (as defined in their application) or maintaining/improving current levels of service (in the case of grantees that aimed to use their grant funding for marketing purposes). To accomplish this analysis, the precise primary goal of each SCASDG grant application was determined from reading each application. The primary goals of each application are detailed in Appendix A.

However, before we can determine whether an airport was successful in achieving its targeted air service, we must first decide upon a time period of analysis. Choosing a time period that is too short may be unfair to the airports, who have to undergo time-intensive periods of negotiation and renegotiation with airlines after the grant funding is announced. Yet choosing a time period that is too long dilutes the purpose of the SCASDG program, and may confound the grants with other industry or economic trends that could result in a success or failure of the grant application's primary objective.

The SCASD Grant Selection Order for each fiscal year is usually published in August or September, and funds are disbursed by the end of the year. Since a one-year period is likely too short for analysis, we allow for a 28-month period from grant acceptance for the airport to achieve their stated objective. That is, if a grant was funded in August 2006, we examine if that airport has achieved its objective as of December 2008. We feel that this time period allows ample time for the airport to achieve their proposed goals while limiting the possibility of confounding factors muddling the analysis.

Therefore, we propose the following definition for SCASD grant success:

## Definition: SCASD grant success

- A SCASD grant intended to provide **new service** is successful if the airport achieves the new scheduled service identified in its proposal within 28 months of grant acceptance, and maintains that service throughout the remainder of the 28 month period.
- A SCASD grant intended to **market existing service** is successful if the airport maintains or improves its level of service (number of flights, ± 10%) present at grant acceptance for at least 28 months afterwards.
- A SCASD grant that does not meet these characteristics is deemed to have failed to meet its objectives.

#### 3.3. Airline schedule data

Once the targeted service for each SCASD grant was identified, domestic schedule data was used to determine whether the grantee met the conditions of the success metric. Schedule data was provided by Diio Mi and sourced from the Innovata Schedule Reference Service (SRS), which provides information on scheduled flights for U.S. airlines. Data was gathered on scheduled domestic flights in the United States from 2007-2013. The data included the marketing airline, destination, equipment type, and the level of scheduled flights, seats, and available seat-miles on a yearly basis. Air service between a city-pair that was scheduled fewer than 12 times per year (i.e., less than once monthly) were treated as extraneous and removed from the dataset.

## 4. Evaluating the success of the SCASDG program

## 4.1. Overall trends of SCASDG success

Once the schedule data and SCASDG overview data was collected as described in the previous section, the success metric proposed in Section 3.2 was used to evaluate the success or failure of each SCASD grantee from 2006-2011. While this was a fairly straightforward process for grantees that proposed to attract new air service or to market existing service, the grants that proposed air service studies, new infrastructure, or other airport improvements had slightly more nebulous goals that were more challenging to evaluate fairly using schedule data. For instance, it is unfair to penalize an airport that used SCASDG money to conduct an air service study for not obtaining new air service; perhaps the study found that new service would not be economically sustainable.

For this reason, grant applications with goals other than "new air service" or "marketing" were not evaluated using this success metric. Proposals from a consortium of airports or from a Department of Transportation were also not analyzed due to the challenges of defining a precise and measurable primary objective. Of the 133 SCASD grant recipients from 2006-2011, 18 (13.5%) of the applications met one or more of these conditions and hence were not evaluated. Therefore, the analysis in this section reviews SCASDG applications for 115 airports and communities from 2006-2011.

Table 4 summarizes the success rates, as well as the absolute number of successes and failures, for SCASDG program participants from 2006-2011. The table also shows how many grants were not evaluated in each year due to having primary objectives that were not new commercial air service or marketing of existing service.

Year	Total Grants	Grants Evaluated	Successes	Failures	Success Rate	Not Evaluated
2006	25	24	9	15	$\mathbf{37.5\%}$	1
2007	26	21	8	13	$\mathbf{38.1\%}$	5
2008	15	13	4	10	$\mathbf{30.8\%}$	2
2009	19	17	6	11	$\mathbf{35.3\%}$	2
2010	19	14	6	8	42.9%	5
2011	29	26	9	17	$\mathbf{34.6\%}$	3
Total	133	115	42	74	$\mathbf{36.5\%}$	18

Table 4: Summary of SCASDG successes and failures, 2006-2011

As Table 4 shows, in each year analyzed, the majority of SCASDG recipients were not successful in achieving the primary goals that were set out in their proposals. In most years, the success rate was between

30-40%; the success rate in 2010, the program's most successful year, was 42.9%.<sup>5</sup> Overall, the SCASDG program had 42 applications that acheived the goals proposed in their application within 28 months of grant acceptance out of 115 applications analyzed—a total success rate of 36.5%.

The results of this analysis generally match a Government Accountability Office (2005) assessment of SCASD grants that were awarded from 2002-2004. After surveying executives of airports that had received SCASD grants in those years, the GAO concluded that "about half" of the airports had seen improvements in their commercial air service. As with recent grantees, airports interviewed in the GAO study were unsuccessful for a variety of reasons, including exogenous airline specific factors (such as an airline removing a hub from its network, or a merger) that were not related to the airport itself. The comparison with the GAO study shows that current SCASDG success rate, while low, does not represent an improvement over earlier years of the program.

There are several reasons was SCASD grantees might be unsuccessful in achieving their proposed goals. First, the nature of many SCASDG applications is highly speculative. In many cases, airports hire consultants to identify target airlines or airports that might be likely to begin new service as a result of a SCASD grant. However, airlines themselves are often not involved in the SCASD application. Therefore, after receiving the grant, some communities may approach an airline to propose new service only to be turned down because the service would not be economically viable.

There could also be other confounding factors that would result in the failure of an airport to meet their SCASD goals. For instance, an economic slowdown or a spike in fuel prices could torpedo a promising SCASD relationship between an airport and an airline. Furthermore, in some cases, other airlines already operating unsubsidized service at an airport may be upset if a new entrant is provided with a revenue guarantee or an incentive package to begin new service. In some cases, these airlines file petitions to the DOT during the grant review process to formally state their objections to the communities' grant application. Managing the airline relationships in these circumstances can be tricky, and airport managers have to proceed with caution at the risk of attracting new service with an incentive only to lose existing, unincentivized service.

Given the millions of dollars that are apportioned for the SCASD program each year, an average program success rate of 36.5% seems rather low. While the average grant amount awarded per airport has ranged between \$300,000 and \$600,000 throughout the course of the program, when only successful applications are considered, the average grant amount per successful applicant can range into the millions of dollars.

 $<sup>^{5}</sup>$ However, there were also 5 applications that were not analyzed in this year, which may have skewed this year's success rate.

## 4.2. Patterns of success in the SCASD program

Besides looking at the characteristics of airports that failed to acheive their proposed goals, it is also valuable to examine those airports that were successful to see if any common trends can be identified. This section presents case studies of three airports, all of whom were successful in obtaining their targeted service within 28 months of grant acceptance. These airports could serve as models for airports looking to increase the probability that their future SCASDG application will succeed, as well as examples for the SCASDG approval committee to select applications that are most likely to acheive success.

### 4.2.1. Case study—Building on Past Success: Manhattan Regional Airport, Manhattan, KS (MHK)

Manhattan Regional Airport (MHK) is a non-hub airport located in Manhattan, KS. MHK has had a long history with government funding of airport incentives. From 2003-2009, the airport was funded by the Essential Air Service program to provide subsidized service to nearby Kansas City International Airport (MCI). However, in 2009, the airport was able to induce American Airlines service to Dallas/Fort Worth International Airport (DFW) by means of a two-year revenue guarantee. As the airport was able to support unsubsidized service, the EAS contract was terminated in 2010 and MHK became a fully unsubsidized airport (Manhattan Regional Airport, 2010).

In 2010, MHK filed a SCASDG application for \$300,000 of federal funds for a comprehensive marketing and air service development program intended to successfully maintain the new unsubsidized service, particularly after the revenue guarantee expired in 2011. The airport proposed a targeted multimedia marketing approach that touted the simplicity of using MHK airport instead of driving to nearby MCI. The airport also pledged \$500,000 in free parking to further attract passengers to MHK, and to start an airport rewards program for passengers choosing MHK over MCI. The program also specifically focused on advertising at nearby Kansas State University, which provided a significant portion of its enplaned passengers (Manhattan Regional Airport, 2010).

IT'S TRAVEL simplified. | FLYMHK.COM Manhattan Regional Airport

Figure 3: "It's Travel Simplified." marketing concept at MHK. Source: Manhattan Regional Airport (2010)

As Table 5 shows, the advertising program at MHK was ultimately successful. American Airlines maintained their three frequencies per day to DFW, even after the revenue guarantee expired in 2011. Additionally, American added an additional daily frequency to its ORD service between 2011 and 2012, showing the continued strength of the MHK market. This case study shows the value of building upon past successful incentive packages to attract and retain new service using SCASD grants.

Origin	Dest'n	2010 Flights	2011 Flights	2012 Flights
MHK	DFW	998	1089	1064
MHK	ORD	43	398	699
MHK	MCK	260	0	0
MHK	MCI	97	0	0
Total		1389	1487	1763

Table 5: Yearly Scheduled Flights from MHK, 2010-2012. Source: Diio Mi.

## 4.2.2. Case study—Significant Airline Buy-in: Outagamie County Regional Airport, Appleton, WI (ATW)

Outagamie County Regional Airport (ATW) is a non-hub airport serving Appleton, WI, and the other communities in Outagamie County in Wisconsin. In 2009, the airport filed a SCASDG application for \$150,000 to support marketing efforts to publicize its existing service and prevent passenger leakage to nearby Milwaukee International Airport (MKE). The grant application quoted a study that found only 44% of Appleton-region passengers flew from ATW, with others choosing to make the nearly two-hour drive to MKE or the 40-minute drive north to Austin Straubel International Airport (GRB) in Green Bay (Outagamie County Regional Airport, 2009). The SCASDG funds would be used for targeted marketing efforts to reduce leakage and increase local awareness of service from ATW.

While many SCASDG applications include a letter of support from an airline pledging its consideration for new or continued service if SCASDG funds were made available, ATW's application was notable in that it included no fewer than *four* letters of support from existing carriers. Delta, United, Allegiant, and Air Wisconsin all submitted letters in ATW's grant application supporting both the application and the marketing effort. This is an unusually high level of airline support for a SCASDG project, and was a harbinger of future success. After being selected for funding in 2009, ATW was able to largely maintain its level of service from these carriers through 2011 due in part to the marketing efforts, as shown in Table 6.

ATW's staff was also recongnized for its marketing efforts as a result of the SCASDG program. Allegiant Air awarded ATW a "Best Use of Social Media" award in 2011 and the "Best Marketing Award" in 2012 at their annual Allegiant Travel Company conference (Lenss, 2012). This application shows how a close relationship between the airport authority and the airlines that it serves can be crucial in maintaining levels of service despite capacity discipline.

Origin	Dest'n	2011 Flights	2012 Flights	2013 Flights
ATW	ORD	1928	2013	1925
ATW	MSP	1671	1706	1482
ATW	DTW	1289	1569	1616
ATW	MKE	985	979	677
ATW	ATL	548	358	363
ATW	DEN	273	300	4
ATW	LAS	117	144	111
ATW	CVG	107	0	0
ATW	SFB	64	87	68
Total		6982	7156	6329

Table 6: Yearly Scheduled Flights from ATW, 2009-2011. Source: Diio Mi.

## 4.2.3. Case study—Significant Community Buy-in: Bozeman Gallatin Field Airport, Bozeman, MT (BZN)

Bozeman Gallatin Field Airport (also known as Bozeman Yellowstone International Airport) (BZN) is a small-hub airport located in Bozeman, MT. The airport serves as a gateway to Yellowstone National Park in the northwestern United States, and is therefore heavily reliant on leisure traffic. In 2011, BZN filed a SCASDG application for a \$1,000,000 grant to support an incentive package intended to induce new direct service to the New York City area. The incentive package consisted mostly of a revenue guarantee intended to support two years of seasonal service in the New York-Bozeman market. The grant was selected for award in August, 2011, receiving an award \$950,000—\$50,000 short of its original proposal.

BZN's application was notable due to its plan to match a significant amount of the federal funding with community-raised dollars. Recognizing the importance of the airports to local tourism, a public-private coalition of state tourism councils and local resorts pledged \$725,000 (42.0% of the full \$1.725 million incentive package) to support the revenue guarantee (Gallatin Field Airport Authority, 2011). This represents a significant investment on the part of the local community for new air service, and the "very strong local contribution" was highlighted in the DOT's grant selection order as a primary reason why the BZN application was selected for funding (Department of Transportation, 2011).

The revenue guarantee was of a sufficient size to attract United Airlines to provide new nonstop service from BZN to Newark Liberty International Airport (EWR) starting in 2012. After a successful trial period in the summer and winter of 2012, the seasonal service was expanded in 2013 from 13 to 20 flights per season (Bozeman Daily Chronicle, 2013). Table 7 below shows the yearly scheduled flights from BZN to EWR from 2011 to 2013, demonstrating how the available service in this market doubled as a result of the successful revenue guarantee program and community buy-in of the new service.

It is also worthwhile to note that in 2011, many of the airports that were successful in meeting the goals

Origin	Dest'n	2011 Flights	2012 Flights	2013 Flights
BZN	EWR	0	15	36

Table 7: Yearly Scheduled Flights from BZN to EWR, 2011-2013. Source: Diio Mi.

of their SCASDG applications were small-hub airports. Recall that SCASDG applications may be filed by airports designated as small-hubs (enplaning between 0.05% and 0.25% of annual passenger boardings in the United States) and non-hubs (enplaning at least 10,000 passengers, but less than 0.05% of the national total) by the Federal Aviation Administration. Of the six grants awarded in 2011 to small-hubs—the larger of the two airport categories eligible for SCASD grants—five grantees (83.3%) were successful in meeting the goals of their application. Compared to a success rate of 5/21 (23.8%) for smaller, non-hub airports in the same year, this suggests that slightly larger small-community airports may have more success in reaching the goals of their SCASDG applications than very small airports in the smallest communities.

## 5. Conclusions

Given the importance of air service to economic development and community growth, ensuring that small communities have access to regularly scheduled commercial air service is a noble policy goal. The three case studies discussed in the previous section demonstrate that it is possible for smaller airports to successfully use SCASDG funding to induce or maintain this air service using incentive or marketing packages. However, with a success rate that varied from 30.8% to 42.9% over the six years studied in this report, it is worthwhile to consider whether the current iteration of the SCASDG program is the most efficient way to induce the type of air service development that small communities desire.

Some SCASDG applications suffer from unrealistic expectations about how much traffic will be stimulated or diverted from nearby airports. As airlines have consolidated service at larger airports (cf. Wittman and Swelbar (2013)), the diversion potential of large airports in multi-airport regions have only increased in recent years. Therefore, unless new commercial air service in smaller communities is embraced by area travelers, such service will have trouble surviving in the current profitability-focused era of airline capacity management. Even when service is successfully induced, there are many examples of an airline pulling service in as little as 12 months once it becomes clear that the flights are not stimulating enough demand to operate profitably.

While the SCASDG program is notable for its relatively lax requirements for applying airports (as compared to the EAS program), the case studies discussed in the previous section suggest that some airports are perhaps better candidates for SCASD grant selection than others. Therefore, reforming the SCASD program to strengthen the requirements of airports that may apply for grants is one possible avenue towards increasing the program's success rate.

The challenge will be reforming the SCASD program in a way that will raise the success rate of grantees while still maintaining flexibility for innovative projects and the program's desire to support air service at the very smallest U.S. airports. However, one straightforward way of focusing SCASD grant acceptances would be to require airline buy-in through a letter of support before a grant is assigned. This requirement would likely remove many speculative projects that have no real chance at airline buy-in once grants are received.

Furthermore, given the strength of applications with significant community support, a significant community match requirement could be introduced in the application process. Such a requirement would require that at least certain percentage of the grant amount requested must be matched by the airport or the community, potentially increasing the chance that the community will embrace the new service once it is introduced. Finally, since it appears that small-hub grantees are more successful than non-hub grantees, small-hub airports should be particularly encouraged to apply for SCASD grants. Each of these means of reform would likely increase the SCASDG program success rate and ensure more efficient use of the federal dollars that fund the program.

However, no conversation about small community air service can escape the "elephant in the room:" with nearly 500 primary commercial service airports in the United States, decisions will have to ultimately be made on a national and local level about which airports "deserve" commercial air service and which do not—as well as the amount of federal dollars that should be used to support this type of service that could not exist on its own. This issue is incredibly controversal and personal, and the answer to this question will vary among airline and airport executives, local and national politicians, and the traveling public. While the discussion will be difficult, it is vital to debate these issues on a national level to decide collectively on the form and function of the airport network in the United States in the decades to come.

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Year	Airport	State	Code	Amount	Goal	Success?	Reason
2006	Fairbanks	AK	FAI	\$500,000	Summer service to DEN	ON	No DEN service
2006	Tuscaloosa	AL	$\mathbf{TCL}$	\$400,000	DL service to ATL	NO	Remains unserved
2006	Chico	CA	CIC	\$472,500	UA service to LAX	ON	No LAX service
2006	Palmdale	CA	PMD	\$900,000	New hub service in Western U.S.	NO	No service
2006	Montrose	CO	MTJ	\$450,000	Increase service to SLC, DFW	YES	More service to SLC and DFW
2006	Melbourne	FL	MLB	\$800,000	US service to CLT	ON	No US service
2006	$\operatorname{Brunswick}$	GA	BQK	\$500,000	New dest'n	ON	No new dest'n
2006	Cedar Rapids	IA	CID	\$200,000	Maintain service to ATL and STL	YES	Service maintained
2006	Springfield	IL	IdS	\$390,000	New UA service to IAD	ON	New service to IAD, but removed in 08
2006	Gary	IN	GYY	\$600,000	New DL service to ATL	ON	No service
2006	Garden City	KS	GCK	\$150,000	Marketing	YES	Kept service
2006	Big Sandy	КУ	NXN	\$90,000	Study	N/A	
2006	Monroe	$\mathbf{LA}$	MLU	\$50,000	Service to DFW	YES	Increase in DFW service
2006	Jackson	MS	JAN	\$400,000	Service to NY metro area	ON	EWR service disappeared in 2008
2006	Kalispell	MT	FCA	\$450,000	UA service to DEN	YES	New DEN service
2006	Grand Forks	ND	GFK	\$350,000	Second carrier	ON	No new service
2006	Jamestown	ND	JMS	\$100,000	Marketing	YES	Levels maintained
2006	Gallup	NN	GUP	\$600,000	Service to PHX	ON	No PHX service
2006	Jamestown	λN	MHU	\$150,000	Marketing for CLE service	YES	CLE service 2008
2006	Toledo	НО	TOL	\$400,000	Service to NY metro area	ON	No service
2006	North Bend	OR	OTH	\$400,000	Service to SFO	YES	SFO service in 08
2006	Harrisburg	$\mathbf{PA}$	MDT	\$400,000	New LCC service	YES	Attracted FL service in 08
2006	Abilene	$\mathbf{T}\mathbf{X}$	ABI	\$465,100	New service to Western US	ON	No new service
2006	Longview	$\mathbf{T}\mathbf{X}$	GGG	\$225,000	Market existing DFW service	ON	Service levels dropped
2006	Lynchburg	VA	LYH	\$250,000	New IAD service	NO	No IAD service
2007	Yuma	AZ	AZA	\$200,000	Marketing	YES	Frequencies increased
2007	$\operatorname{Stockton}$	CA	SCK	\$400,000	New hub service	NO	Only G4 service
2007	New Haven	СŢ	NVH	\$300,000	First service to BOS	ON	No service to BOS
2007	Panama City	FL	ECP	\$575,000	New Service to CLT or IAH and DFW	ON	No westbound service or to CLT
2007	Burlington	IA	BRL	\$140,000	Marketing to reintroduce air service	YES	Air service introduced
2007	Terre Haute	NI	HUF	\$350,000	First service to CVG	ON	No air service introduced
2007	Bowling Green	КУ	BWG	\$150,000	Study	N/A	
2007	Lexington	КУ	LEX	\$600,000	New Service (FL to BWI or B6 to JFK)	ON	No FL or B6 service
2007	Ironwood	IW	IWD	\$135,000	Marketing	YES	Kept service
2007	$\operatorname{Saginaw}$	IIN	MBS	\$500,000	New Service (third carrier)	NO	No new carrier until 2010
2007	Kirksville	MO	IRK	\$30,000	Marketing	ON	Lost network carrier service
2007	Golden Triangle	MS	GTR	\$500,000	New Service (second carrier, westbound)	ON	No new service

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Year	Airport	State	Code	$\operatorname{Amount}$	Goal	Success?	Reason
2007	Greenville	MS	GLH	\$450,000	New Service to ATL	ON	No ATL service
2007	Helena	$\mathbf{MT}$	HLN	\$450,000	New Service to DEN	YES	Gained UA DEN service
2007	NC DOT	NC	N/A	\$573, 278	Marketing	N/A	
2007	Minot	ND	MOT	\$500,000	New Service westbound	ON	No westbound service until 2010
2007	Roswell	NM	ROW	\$400,000	Marketing for existing DFW service	YES	Increased DFW frequencies
2007	Athens	HO	ATO	\$50,000	Study	N/A	ı
2007	Youngstown	НО	YNG	\$575,000	Second carrier (new hub service)	ON	No new service
2007	Astoria/Newport	OR	AST	\$842,400	First service with Cape Air	YES	Wings of Alaska to PDX
2007	Klamath Falls	OR	LMT	\$400,000	New service to SFO	YES	SFO service
2007	Penn DOT	$\mathbf{PA}$	N/A	\$400,000	Marketing	N/A	
2007	Jackson	$\mathbf{NT}$	MKL	\$50,000	Marketing	YES	Gained new BNA service in 09
2007	St Croix	ΙΛ	STX	\$150,000	Improve service	NO	No increase in frequencies to US
2007	Oak Harbor	WA	ODW	\$180,000	Shuttle and marketing	ON	Service reduced in 09
2007	Rhinelander	IW	RHI	\$75,000	Study	N/A	
2008	Bullhead	AZ	IFP	\$500,000	First service	ON	No service
2008	Merced	$\mathbf{C}\mathbf{A}$	MCE	\$100,000	Marketing	YES	Maintained service levels
2008	Redding	$\mathbf{C}\mathbf{A}$	RDD	\$500,000	New service	NO	No hub service east of RDD
2008	Dover	DE	DOV	\$135,000	Study	N/A	No service
2008	Bloomington	IL	BMI	\$225,000	Marketing	ON	Lost ORD service
2008	Springfield	IL	$\operatorname{SPI}$	\$750,000	New service	NO	No MEM service
2008	Muskegon	III	MKG	\$650,000	Second carrier	NO	No AA service
2008	Missoula	MT	MSO	\$485,000	New service	YES	SFO service in 2010
2008	State of Montana	$\mathbf{MT}$	N/A	\$105,000	Marketing	N/A	N/A
2008	State College	$\mathbf{PA}$	SCE	\$474,000	New servie	ON	No CLT service
2008	Sioux Falls	SD	FSD	\$500,000	New service	YES	ORD and DFW service in 2010
2008	Midland	$\mathbf{T}\mathbf{X}$	MAF	\$600,000	Marketing	YES	DEN service
2008	Wichita Falls	$\mathbf{T}\mathbf{X}$	SPS	\$500,000	Second carrier	ON	No second carrier
2008	Moses Lake	WA	MWH	\$475,000	First service	ON	No service
2008	Huntington	$\rm WV$	HTS	\$500,000	New service	ON	No new NE US service
2009	Huntsville	$\mathbf{AL}$	$\mathrm{ASH}$	\$1,000,000	New service to BWI or MCO	YES	New BWI and MCO service on FL in 2010
2009	Jonesboro	AR	JBR	\$150,000	Marketing	YES	Traffic levels maintained
2009	American Samoa	$\operatorname{AS}$	APW	\$169,000	Ground equip	N/A	N/A
2009	San Luis Obispo	CA	SBP	\$500,000	New service to SMF	ON	No new SMF service
2009	$\operatorname{Rockford}$	IL	RFD	\$500,000	New LCC service	ON	No new LCC service
2009	Hays	KS	HYS	\$216,450	Marketing	YES	Traffic levels maintained
2009	Bowling Green	КУ	BWG	\$500,000	First service to MEM	ON	No service
2009	Shreveport	$\mathbf{LA}$	$\mathrm{SHV}$	\$100,000	New service to LAX, DEN, or PHX	ON	No new LAX DEN or PHX service

applications analyzed
List of SCASDG
(continued):
Appendix A

Year	Airport	State	Code	Amount	Goal	Success?	Reason
2009	Augusta	ME	AUG	\$100,000	Marketing	ON	US service replaced by Cape Air
2009	Traverse City	IIN	TVC	\$400,000	Full-year service to DEN	ON	No full year service
2009	Tunica	MS	NTN	\$500,000	First service to ATL on FL	NO	Some service to ATL on FL, exited in 11
2009	Butte	$\mathbf{TM}$	BTM	\$460,000	Increase frequency to SLC	NO	Frequencies not maintained
2009	West Wendover	NV	ELK	\$40,000	Study	N/A	4
2009	Binghamton	λN	BGM	\$550,000	New westbound hub service	ON	No new ORD service
2009	Knoxville	$\mathbf{TN}$	TYS	\$500,000	New service LCC	ON	No new LCC service in 2011
2009	St. George	$\mathbf{UT}$	$\operatorname{SGU}$	\$100,000	Marketing	ON	Lost LAX service in 2010
2009	Port Angeles	WA	CLM	\$360,000	Marketing	YES	Maintained Kenmore service
2009	Appleton	ΜI	ATW	\$150,000	Marketing	YES	Maintained levels of service
2009	Bridgeport/Clarksburg	$\rm WV$	CKB	\$150,000	Marketing	$\mathbf{YES}$	Maintained UA service
2010	Dothan	$\mathbf{AL}$	DHN	\$750,000	Second carrier AA to DFW	ON	No new AA service
2010	Yuma	AZ	YUM	\$400,000	New service to a hub	ON	No new connecting service to a hub
2010	Gainesville	FL	GNV	\$140,000	Marketing of MIA service	YES	MIA frequencies increased
2010	Sioux City	IA	SUX	\$500,000	Second carrier to ORD	$\mathbf{YES}$	Gained AA service to ORD in 2012
2010	Idaho Falls	Θ	IDA	\$500,000	New service westbound on UA	$\mathbf{YES}$	New UA service to SFO in 2011
2010	Fort Wanye	NI	FWA	\$203,000	Infrastructure	N/A	
2010	Manhattan	KS	MHK	\$300,000	Marketing	YES	Frequencies to ORD increased
2010	$\operatorname{Bangor}$	ME	$\operatorname{BGR}$	\$500,000	New service to hubs	ON	No UA service to IAD or ORD
2010	Lansing	IIN	LAN	\$750,000	New service to IAD	ON	No IAD service
2010	Missouri DOT	MO	N/A	\$210,000	Marketing	N/A	
2010	Kinston	NC	ISO	\$350,000	First service to IAD	ON	No IAD service
2010	Kearney	NE	EAR	\$50,000	Study	N/A	
2010	Keene	ΗN	EEN	\$30,000	Study	N/A	
2010	$\mathbf{Syracuse}$	λN	SYR	\$500,000	New LCC service	ON	Did not attract targeted LCCs
2010	Eugene	OR	EUG	\$500,000	New service to SJC	NO	No service to SJC
2010	Provo	UT	PVU	\$500,000	First service to DEN on F9	YES	F9 service
2010	Charlottesville	VA	CHO	\$500,000	New service to ORD	YES	New AA service to ORD
2010	Mosinee	IM	CWA	\$250,000	Upgauging of DL service and new F9 to MKE	ON	No new service
2010	$\operatorname{Parkersburg}$	$\rm WV$	PKB	\$60,000	Marketing	N/A	
2011	${ m Flagstaff}$	AZ	FLG	\$800,000	Revenue guarantee to add a second carrier	NO	No second carrier
2011	Crescent City	CA	CEC	\$200,000	Market existing EAS service	$\mathbf{YES}$	Service maintained
2011	Santa Rosa	CA	STS	\$650,000	Revenue guarantee for RJ service	ON	No RJ service
2011	Loveland	CO	FNL	\$221,500	Study for air service plan	N/A	
2011	$\mathbf{Pocatello}$	Ð	ΗIϤ	\$500,000	Financial assistance for DL upgauging	YES	CRJ service
2011	Evansville	NI	EVV	\$500,000	Revenue guarantee for *A carrier	NO	No *A carrier
2011	South Bend	NI	SBN	\$750,000	Revenue guarantee for new DEN service	YES	F9 DEN service

Appendix A (continued): List of SCASDG applications analyzed

Year	Airport	State	Code	Amount	Goal	Success?	Reason
2011	Dubuque	IA	DBQ	\$500,000	Revenue guarantee for DFW service	ON	No DFW service
2011	Pikeville	КУ	PBX	\$750,000	Revenue guarantee for new service	ON	No service
2011	Baton Rouge	$\mathbf{LA}$	BTR	\$340,000	Revenue guarantee for WAS service	ON	No service
2011	Auburn	ME	LEW	\$600,000	Revenue guarantee for new BOS service	ON	No service
2011	Escanaba	IIN	ESC	\$72,500	Marketing	N/A	
2011	Kalamazoo	IIN	AZO	\$500,000	Revenue guarantee for new DFW service	ON	No DFW service
2011	Manistee	IIN	MBL	\$50,000	Marketing EAS service	ON	Service declined
2011	St. Cloud	MN	STC	\$750,000	ORD service	ON	No ORD service
2011	Bozeman	MT	BZN	\$950,000	NYC service	$\mathbf{YES}$	EWR service
2011	$\operatorname{Fargo}$	ND	FAR	\$750,000	DFW service	YES	DFW service in 2013
2011	Grand Forks	ND	GFK	\$300,000	Westbound service	$\mathbf{YES}$	DEN service in 2013
2011	Albany	NΥ	ALB	\$750,000	IAH service	ON	No IAH service
2011	Toledo	HO	TOL	\$750,000	DEN service	ON	No DEN service
2011	North Bend	OR	OTH	\$550,000	Eastbound service	ON	No eastbound service
2011	Harrisburg	$\mathbf{PA}$	MDT	\$500,000	DEN service	$\mathbf{YES}$	F9 DEN service
2011	Latrobe	$\mathbf{PA}$	LBE	\$200,000	Expand Spirit service	$\mathbf{YES}$	New NK destinations
2011	Tri-Cities	$\mathbf{N}\mathbf{L}$	TRI	\$250,000	DFW service	ON	No DFW service
2011	San Angelo	$\mathbf{T}\mathbf{X}$	SJT	\$500,000	Second carrier	ON	No second carrier
2011	Lynchburg	VA	LYH	\$700,000	Low fare service	NO	Only DL and US service
2011	Shenandoah Valley	VA	SHD	\$150,000	Marketing existing service	N/A	
2011	$\operatorname{Spokane}$	WA	GEG	\$950,000	LA service	$\mathbf{YES}$	DL LAX service
2011	Green Bay	ΜI	GRB	\$500,000	Yearround westbound service	ON	NO DFW or DEN service