

Economic Impact of the Greenville-Spartanburg International Airport



September 2012

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Highlights

- The total economic impact of Greenville-Spartanburg International Airport; including the effects of on-going airport operations and visitor spending supports a total of 9,528 local jobs. Every job at the Airport supports an additional 9 jobs in the local economy.
- The Greenville-Spartanburg International Airport adds \$170.9 million in local income. Every dollar of income produced at the airport generates another \$3.05 of income in the community.
- Each year the economic activities at the airport cause state/local tax revenues to increase by \$46.1 million, and Federal tax revenues to increase by \$66.6 million. In total, economic activities generated from the Greenville-Spartanburg International Airport increases tax revenues by \$112.5 million.
- Total output increases by \$817.1 million in the local economy as a result of the Greenville-Spartanburg International Airport
- Total planned capital improvements at the Greenville-Spartanburg International Airport through year 2025 will support a total of 3,085 local jobs, increase local income by \$130.9 million, raise local output by \$363.1 million, and boost tax revenues by \$35.3 million.
- Terminal Renovation/Modernization at the Greenville-Spartanburg International Airport will support a total of 1,397 local jobs, increase local income by \$59.6 million, raise local output by \$164.1 million, and boost tax revenues by \$16 million.
- A seventy passenger round-trip flight out of the Greenville-Spartanburg International Airport at 70 percent capacity supports one-half local job, adds \$9,018 in additional local income, raises local output by \$43,221, and generates an additional \$5,953 in tax revenues.



Introduction

This report aims to capture the local economic impacts resulting from activities generated at or resulting from the Greenville-Spartanburg International Airport (GSP).

The economic impacts are measured as three local effects: *direct*, *indirect*, and *induced*.¹ Each of these effects is expressed in terms of their effect on jobs (local employment), income (local wages and proprietor income), output (local sales plus or minus inventory), and tax revenues. All results are expressed in annual terms; the changes are expected to occur in a one-year period.

Impacts were generated by employing an economic model based on the existing industrial structure of the local economy. The IMPLAN economic impact assessment software system² was utilized in the study. The IMPLAN model was originally developed by the USDA Forest Service in cooperation with the Federal Emergency Management Agency (FEMA) and the USDI Bureau of Land Management to assist in resource management and planning. Currently the model is used by dozens of public, private, and academic organizations.

The overriding objective of the model is to measure the full economic impact to a regional/local economy as a result of a specific economic activity. The model is built upon a matrix detailing the input-output relationships among industries and consumers. The primary matrix structure is derived from the National Bureau of Economic Analysis's Benchmark Input-Output Model. The national model is realigned to match the regional economy. Output ratios and imports for over 500 industrial sectors in the area are assigned. Purchase coefficients are derived to measure the percentage of intermediate and final demands that are satisfied from local production and the percentage that are imported from outside the area. Consumer expenditure patterns, price deflators, industry employment levels, household income groups and the area population are also factored in for the local economy.

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¹ **Direct** effects are those initial changes occurring to a firm in expenditures or production as a result of a change in demand. **Indirect** effects occur to industries in the backward linked industries that supply the firm. **Induced** effects result from household spending generated by the additional income received in the local area.

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Total Economic Impact

The *Total Economic Impact* aggregates the economic effects of on-going *airport operations* and *visitor spending*. Each of these activities is also presented separately further in this report.

A total of 951 persons are directly employed at the Greenville-Spartanburg International Airport. Economic activities generated by these operations support another 8,577 local jobs; meaning every job at the Greenville-Spartanburg International Airport supports an additional 9 jobs in the local economy (Table 1).

The Greenville-Spartanburg International Airport directly adds \$42 million in local income, with another \$128.3 million added as a result of indirect and induced effects as the direct dollars circulate through the local economy (Table 1). Every dollar of income produced at the airport generates another \$3.05 of income in the community.

It is estimated that each year the economic activities at the airport cause state/local tax revenues to increase by \$46.1 million, and Federal tax revenues to increase by \$66.6 million (Table 2). In total, economic activities generated from the Greenville-Spartanburg International Airport increases tax revenues by \$112.5 million.

Total output increases by \$817.1 million in the local economy as a result of the Greenville-Spartanburg International Airport (Table 1).

Table 1
Total Economic Impact

	Direct	Indirect ³	Induced	Total Impact
Local Jobs	951	7,146	1,431	9,528
Local Income	\$42,095,023	\$97,240,247	\$31,156,220	\$170,491,491
Local Output	\$142,393,292	\$540,129,584	\$134,596,535	\$817,119,411

Table 2
Total Economic Impact-Tax Revenues

Federal	State/Local	Total Tax Revenues
\$66,369,186	\$46,180,505	\$112,549,691

³ For the *Total Economic Impact* visitor spending is counted as an indirect or induced effect, as these activities occur at locations away from the airport.

Airport Operations Impact

The *Airport Operations Impact* measures the economic effects from on-going activities occurring at the Greenville-Spartanburg International Airport. The impact does not consider *visitor spending*.

Various private, government and operational activities employ a total of 951 persons on-site at the Greenville-Spartanburg International Airport. The economic effects of these activities support an additional local 749 jobs (Table 3).

Greenville-Spartanburg International Airport operations directly adds \$42 million in local income, with another \$27.9 million added as a result of indirect and induced effects as the direct dollars circulate through the local economy (Table 3). Airport operations add \$217 million in total output to the local economy.

It is estimated that each year the economic activities generated by operations at the airport cause state/local tax revenues to increase by \$8 million, and Federal tax revenues to increase by \$16.2 million (Table 4). In total, economic activities generated from operations at the Greenville-Spartanburg International Airport increases tax revenues by \$24.3 million.

Table 3
Airport Operations Economic Impact

	Direct	Indirect	Induced	Total Impact
Local Jobs	951	374	375	1,700
Local Income	\$42,095,023	\$15,155,968	\$12,771,143	\$70,022,134
Local Output	\$142,393,292	\$40,002,887	\$35,336,435	\$217,732,614

Table 4
Airport Operations Economic Impact-Tax Revenues

Federal	State/Local	Total Tax Revenues
\$16,224,316	\$8,096,684	\$24,321,000

Visiting Passenger Spending Impact

The *visiting passenger spending impact* measures the added economic activities generated from local spending by nonresident business and leisure passengers utilizing the Greenville-Spartanburg International Airport. Local spending by visiting passengers supports a total of 7,828 local jobs; 5,749 directly with another 2,079 jobs supported indirectly and induced (Table 5). In terms of income, visiting passenger spending adds \$195.9 million worth of income dollars to the local economy each year (Table 6). Total tax revenues generated from spending by visiting passengers equals \$88.2 million; with \$38 million collected by state/local agencies and \$50.1 million by Federal agencies (Table 7). Local output increases by \$599.3 million as a result of spending by visiting passengers (Table 8).

Visitor passenger spending figures were collected via an onsite survey of 400 enplaning travel parties, covering 559 total passengers. The survey was conducted between July 25 and August 16, 2012 (see Appendix for a summary of survey results).

Table 5
Visiting Passenger Spending Impact- Local Jobs

	Direct	Indirect	Induced	Total Impact
Leisure Travelers	2,835	477	515	3,827
Business Travelers	2,914	546	541	4,001
Total	5,749	1,023	1,056	7,828

Table 6
Visiting Passenger Spending Impact- Local Income

	Direct	Indirect	Induced	Total Impact
Leisure Travelers	\$59,950,564	\$18,020,563	\$17,473,372	\$95,444,498
Business Travelers	\$61,159,490	\$20,924,789	\$18,385,077	\$100,469,357
Total	\$121,110,054	\$38,945,352	\$35,858,449	\$195,913,855

Table 7
Visiting Passenger Spending Impact- Tax Revenues

	Federal	State/Local	Total Tax Revenues
Leisure Travelers	\$23,866,138	\$17,689,974	\$41,556,112
Business Travelers	\$26,278,732	\$20,393,847	\$46,672,579
Total	\$50,144,870	\$38,083,821	\$88,228,691

Table 8
Visiting Passenger Spending Impact- Local Output

	Direct	Indirect	Induced	Total Impact
Leisure Travelers	\$186,768,880	\$46,772,486	\$48,369,572	\$281,910,938
Business Travelers	\$212,298,205	\$54,287,126	\$50,890,528	\$317,475,859
Total	\$399,067,085	\$101,059,612	\$99,260,100	\$599,386,797

Total Capital Improvement Impact

Planned capital improvements at the Greenville-Spartanburg International Airport through year 2025 will support a total of 3,085 local jobs, increase local income by \$130.9 million, raise local output by \$363.1 million, and boost tax revenues by \$35.3 million (Table 9).

The 1,927 local jobs created directly by planned capital improvements will support another 1,158 local jobs indirectly and induced (Table 10). Similarly, the direct increase in local income of \$84 million will generate another \$46.9 million of local income indirectly and induced (Table 11). Local output will increase \$244.9 million as a result of direct spending on capital improvements and increase another \$118.2 million as the spending flows through the local economy, indirectly and induced (Table 12).

Planned capital improvements at the Greenville-Spartanburg International Airport through year 2025 will boost state/local tax revenues by \$8.9 million and Federal tax revenues by \$26.4 million (Table 13).

Table 9
Total Capital Improvement Impacts-Summary

Budget Year	Total Local jobs	Total Local Income	Total Local Output	Total Tax Revenues
2013	469	\$20,732,893	\$54,325,862	\$5,483,204
2014	355	\$14,961,201	\$41,964,587	\$4,051,371
2015	534	\$22,493,990	\$63,080,505	\$6,090,737
2016	331	\$13,888,632	\$39,055,286	\$3,764,444
2017	115	\$4,781,164	\$13,657,582	\$1,303,458
2018	218	\$9,343,405	\$25,550,307	\$2,506,820
2019	192	\$7,977,184	\$22,787,140	\$2,174,767
2020	93	\$3,859,928	\$11,026,035	\$1,052,307
2021	51	\$2,792,744	\$5,488,924	\$673,104
2022	301	\$12,510,545	\$35,736,864	\$3,410,666
2023	301	\$12,510,545	\$35,736,864	\$3,410,666
2024	62	\$2,573,285	\$7,350,690	\$701,538
2025	62	\$2,573,285	\$7,350,690	\$701,538
Total	3,085	\$130,998,801	\$363,111,336	\$35,324,620

Table 10
Total Capital Improvement Impacts-Local Jobs

Budget Year	Direct	Indirect	Induced	Total Impact
2013	286	71	112	469
2014	223	52	81	355
2015	335	78	121	534
2016	208	48	75	331
2017	73	17	26	115
2018	135	32	50	218
2019	122	28	43	192
2020	59	13	21	93
2021	27	9	15	51
2022	191	43	68	301
2023	191	43	68	301
2024	39	9	14	62
2025	39	9	14	62
Total	1,927	452	707	3,085

Table 11
Total Capital Improvement Impacts-Local Income

Budget Year	Direct	Indirect	Induced	Total Impact
2013	\$13,498,731	\$3,434,649	\$3,799,513	\$20,732,893
2014	\$9,571,281	\$2,649,943	\$2,739,977	\$14,961,201
2015	\$14,391,125	\$3,983,332	\$4,119,532	\$22,493,990
2016	\$8,878,771	\$2,466,383	\$2,543,479	\$13,888,632
2017	\$3,042,900	\$862,820	\$875,443	\$4,781,164
2018	\$6,019,393	\$1,612,410	\$1,711,602	\$9,343,405
2019	\$5,076,960	\$1,439,581	\$1,460,643	\$7,977,184
2020	\$2,456,594	\$696,572	\$706,763	\$3,859,928
2021	\$1,936,663	\$342,974	\$513,108	\$2,792,744
2022	\$7,962,151	\$2,257,682	\$2,290,713	\$12,510,545
2023	\$7,962,151	\$2,257,682	\$2,290,713	\$12,510,545
2024	\$1,637,729	\$464,381	\$471,175	\$2,573,285
2025	\$1,637,729	\$464,381	\$471,175	\$2,573,285
Total	\$84,072,178	\$22,932,790	\$23,993,836	\$130,998,801

Table 12
Total Capital Improvement Impacts-Local Output

Budget Year	Direct	Indirect	Induced	Total Impact
2013	\$36,032,520	\$7,774,249	\$10,519,092	\$54,325,862
2014	\$28,402,579	\$5,976,901	\$7,585,106	\$41,964,587
2015	\$42,691,921	\$8,984,439	\$11,404,145	\$63,080,505
2016	\$26,452,064	\$5,562,109	\$7,041,113	\$39,055,286
2017	\$9,289,999	\$1,944,143	\$2,423,439	\$13,657,582
2018	\$17,170,000	\$3,641,903	\$4,738,403	\$25,550,307
2019	\$15,500,000	\$3,243,727	\$4,043,412	\$22,787,140
2020	\$7,500,000	\$1,569,545	\$1,956,490	\$11,026,035
2021	\$3,276,000	\$791,918	\$1,421,006	\$5,488,924
2022	\$24,308,510	\$5,087,108	\$6,341,247	\$35,736,864
2023	\$24,308,510	\$5,087,108	\$6,341,247	\$35,736,864
2024	\$5,000,000	\$1,046,364	\$1,304,327	\$7,350,690
2025	\$5,000,000	\$1,046,364	\$1,304,327	\$7,350,690
Total	\$244,932,103	\$51,755,878	\$66,423,354	\$363,111,336

Table 13
Total Capital Improvement Impacts-Tax Revenues

Budget Year	State/Local	Federal	Total Tax Revenues
2013	\$1,364,911	\$4,118,293	\$5,483,204
2014	\$1,021,973	\$3,029,398	\$4,051,371
2015	\$1,536,346	\$4,554,391	\$6,090,737
2016	\$950,094	\$2,814,350	\$3,764,444
2017	\$330,047	\$973,411	\$1,303,458
2018	\$629,042	\$1,877,778	\$2,506,820
2019	\$550,671	\$1,624,096	\$2,174,767
2020	\$266,453	\$785,854	\$1,052,307
2021	\$157,970	\$515,134	\$673,104
2022	\$863,611	\$2,547,055	\$3,410,666
2023	\$863,611	\$2,547,055	\$3,410,666
2024	\$177,636	\$523,902	\$701,538
2025	\$177,636	\$523,902	\$701,538
Total	\$8,890,001	\$26,434,619	\$35,324,620

Terminal Renovation/Modernization Impact

Terminal Renovation/Modernization at the Greenville-Spartanburg International Airport through year 2016 will support a total of 1,397 local jobs, increase local income by \$59.6 million, raise local output by \$164.1 million, and boost tax revenues by \$16 million (Table 14).

The 870 local jobs created directly by the Terminal Renovation/Modernization construction will support another 527 local jobs indirectly and induced (Table 15). Similarly, the direct increase in local income of \$38.3 million will generate another \$21.2 million of local income indirectly and induced (Table 16). Local output will increase \$110.5 million as a result of direct spending on capital improvements and increase another \$53.6 million as the spending flows through the local economy, indirectly and induced (Table 17).

Planned capital improvements at the Greenville-Spartanburg International Airport through year 2025 will boost state/local tax revenues by \$4 million and Federal tax revenues by \$12 million (Table 18).

Table 14
Terminal Renovation/Modernization Impacts-Summary

Budget Year	Total Local jobs	Total Local Income	Total Local Output	Total Tax Revenue
2013	289	\$12,932,727	\$33,412,982	\$3,400,576
2014	334	\$14,060,550	\$39,391,845	\$3,805,831
2015	507	\$21,372,038	\$59,875,607	\$5,784,866
2016	267	\$11,248,441	\$31,513,477	\$3,044,667
Total	1,397	\$59,613,756	\$164,193,911	\$16,035,940

Table 15
Terminal Renovation/Modernization Impacts-Local Jobs

Budget Year	Direct	Indirect	Induced	Total Impact
2013	175	44	70	289
2014	209	49	76	334
2015	318	74	115	507
2016	168	39	61	267
Total	870	205	322	1,397

Table 16
Terminal Renovation/Modernization Impacts-Local Income

Budget Year	Direct	Indirect	Induced	Total Impacts
2013	\$8,456,736	\$2,105,496	\$2,370,496	\$12,932,727
2014	\$8,998,075	\$2,487,409	\$2,575,066	\$14,060,550
2015	\$13,677,076	\$3,780,862	\$3,914,100	\$21,372,038
2016	\$7,198,461	\$1,989,928	\$2,060,053	\$11,248,441
Total	\$38,330,348	\$10,363,695	\$10,919,715	\$59,613,756

Table 17
Terminal Renovation/Modernization-Local Output

Budget Year	Direct	Indirect	Induced	Total Impacts
2013	\$22,078,720	\$4,771,305	\$6,562,957	\$33,412,982
2014	\$26,652,580	\$5,610,674	\$7,128,591	\$39,391,845
2015	\$40,511,922	\$8,528,225	\$10,835,460	\$59,875,607
2016	\$21,322,064	\$4,488,539	\$5,702,873	\$31,513,477
Total	\$110,565,286	\$23,398,743	\$30,229,881	\$164,193,911

Table 18
Terminal Renovation/Modernization-Tax Revenues

Budget Year	State/Local	Federal	Total Tax Revenues
2013	\$843,376	\$2,557,200	\$3,400,576
2014	\$959,800	\$2,846,031	\$3,805,831
2015	\$1,458,897	\$4,325,969	\$5,784,866
2016	\$767,841	\$2,276,826	\$3,044,667
Total	\$4,029,914	\$12,006,026	\$16,035,940

Average per Passenger & Flight Impact

Using the results of impacts generating from existing airport operations and visitor passenger spending, an average Greenville-Spartanburg International Airport *per passenger* local impact for can be derived. The average includes all passenger traffic; resident, visitors, enplaned or deplaned. An average passenger generates \$92.02 worth of additional local income, and raises local output by \$441.03 (Table 19). On average, tax revenues increase \$60.75 per passenger (Table 20).

Table 19
Average per Passenger Impact

	Direct	Indirect	Induced	Total Impact
Local Jobs	0.0005	0.0039	0.0008	0.0051
Local Income	\$22.72	\$52.48	\$16.82	\$92.02
Local Output	\$76.85	\$291.53	\$72.65	\$441.03

Table 20
Average per Passenger Impact-Tax Revenues

Federal	State/Local	Total Tax Revenues
\$35.82	\$24.93	\$60.75

Single Round-Trip Flight Examples

Based on the average per passenger impacts, estimates were calculated for two round-trip flights out of Greenville-Spartanburg International Airport. Each example provides a rough approximation of the total local economic impact per round-trip flight (Table 21).

A seventy passenger round-trip flight at 70 percent capacity supports one-half local job, adds \$9,018 in additional local income, raises local output by \$43,221, and generates an additional \$5,953 in tax revenues.

A fifty passenger round-trip flight at 70 percent capacity supports 0.4 local jobs, \$6,441 in additional local income, \$30,872 in increased output, and \$4,252 in tax revenues.

Table 21
Single Round Trip Flight-Estimated Impacts

	Local Jobs	Local Income	Local Output	Tax Revenues
70 Passenger	0.5	\$9,018	\$43,221	\$5,953
50 Passenger	0.4	\$6,441	\$30,872	\$4,252

Appendix

Summary: Passenger Survey Results

Total surveys	400
Total passengers	559
Average travel party size	1.4
Residents	149 (26.7%)
Visitors	410 (73.3%)

	Business	Leisure
Visitor passengers	224 (54.6%)	186 (45.4%)
Average length of stay	3.1 days	4.8 days
Average total spending per day	\$246.20	\$150.43
Average lodging spending per day	\$114.86	\$45.49
Average food & beverage spending per day	\$57.56	\$33.17
Average transportation spending per day	\$47.32	\$27.53
Average entertainment/recreation spending per day	\$11.44	\$19.00
Average retail spending per day	\$15.01	\$25.25



Firm Brief

SYNEVA Economics LLC is a private consultancy whose expertise is assisting public and private decision makers with local and regional economic analysis. SYNEVA Economic LLC's value is providing clear and insightful information to help clients make knowledgeable, efficient and effective decisions.

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