Final Report

Phase One: The Economic Impact of Aerospace in Florida

Prepared for:
Space Florida
PO Box 656
Cape Canaveral, FL. 32920
321-730-5301 Phone
http://www.spaceflorida.gov/

Prepared by:
Center for Economic Forecasting and Analysis,
The Florida State University
3200 Commonwealth Blvd.
Tallahassee, FL. 32303-2770
850-644-7357
http://www.cefa.fsu.edu

March 7, 2011

Authors

Dr. Julie Harrington

Director, Center for Economic Forecasting and Analysis, Florida State University, FSU Research Complex, 3200 Commonwealth Blvd. Tallahassee, Fl. 32303. Tel. (850) 644-7357. Email: jharrington@cefa.fsu.edu

Yujing Liu

Research Assistant, Center for Economic Forecasting and Analysis, Florida State University, FSU Research Complex, 3200 Commonwealth Blvd. Tallahassee, Fl. 32303. Tel. (850) 645-0192. Email: yliu@cefa.fsu.edu

Heejae "HJ" Lee

Research Assistant, Center for Economic Forecasting and Analysis, Florida State University, FSU Research Complex, 3200 Commonwealth Blvd. Tallahassee, Fl. 32303. Tel. (850) 645-0192. Email: hjlee@cefa.fsu.edu

Executive Summary

The Florida State University Center for Economic Forecasting and Analysis (FSU CEFA) recently conducted an economic impact analysis of the aerospace industry in Florida, for Space Florida. The framework for the economic analysis involves using a two tiered approach. The first phase, or Phase One, provides relevant details for the Legislative meetings in March 2011. Phase Two is expected to be more detailed in scope and provide a complete analysis or profile of the aerospace industry in Florida. The following Phase One report highlighted the following:

- Development of a clear definition of aerospace industries, by sector and NAICS code.
- Datasets compilation and validation.
- Initial statistical analysis with results for: employee numbers, wage figures, salary versus capital outlay, reported revenues, asset holdings, and other economic indicators.
- Incentive Analysis: outline and compare current public and private financial incentives currently used, and available, in Florida.
- Economic Impact Analysis: using advanced economic models.

The economic modeling analysis was performed using Florida based aerospace-specific industries data for year 2010 (based on Dun and Bradstreet/Selectory Business data). As shown in the following table, the model provided economic impact results, expressed as output (or sales/revenues), employment (or jobs), and income (or wages), in 2011 dollars.

Economic Impact Results of the Aerospace-Related Industries in Florida, in Terms of Sales/Revenues, Jobs and Income

Economic Impact of Space Florida Aerospace Sectors	Output*	Employment	Income*
Aerospace in Florida	$26,733,162,151	147,365	$8,380,346,085

* in Jan 2011$

Key Findings

- The aerospace-related investment will generate about $26.73 B in total output; $12.94 B in direct output (i.e., the value of goods and services produced), and $7.3 B, and $6.5 B, of indirect and induced output, respectively.
- For each dollar the invested in aerospace in Florida, Florida will realize a return of $3.54.
- There will be $3.83 B in direct income, and $2.47 B and $2.08 B of indirect and induced income, respectively. In addition, 51,168 direct, 46,766 indirect, and 49,430 induced jobs, or a total of 147,365 jobs, are generated across the Florida economy.

Table of Contents

List of Tables

List of Figures

Introduction

Background

On December 17, 1903, Orville Wright piloted the first powered airplane 20 feet above a sandy beach in North Carolina. That flight lasted all of 12 seconds and covered 120 feet. More than 100 years later, aircraft manufacturers today are fabricating aircraft that can carry hundreds of passengers thousands of miles to destinations throughout the globe. The more comprehensive technology-- Aerospace manufacturing is a high technology industry that produces "aircraft, guided missiles, space vehicles, aircraft engines, propulsion units, and related parts"[1]. The aerospace industry ranks high among the world largest manufacturing industries in terms of people employed and value of output. Most of the industry is geared toward governmental work. On a global scale, many countries are currently directing investment to bolstering their aerospace industries.

Socio-politically speaking, the aerospace industry was one of the defining industries of the twentieth century. Aerospace has sparked the imaginations of youth around the world, inspired new schools of industrial design, increased nation's self-confidence, and shrunk the effective size of the globe. As an economic phenomenon, aerospace has consumed a substantial portion of research and development funding across many fields, subsidized innovation in a vast array of component technologies, evoked new forms of production, spurred construction of large manufacturing complexes, inspired technology-sensitive managerial techniques, supported dependent regional economies and fostered global trade. As a high technology, aerospace permeates many other industries -- travel and tourism, logistics, telecommunications, electronics and computing, advanced materials, civil construction, capital goods manufacturing, and defense supply, among others.

As reported in the Space Report (2009), the aerospace industry has continued to grow in 2008 with estimated global space revenues and government budgets reaching $257.22 billion. The growth in terms of revenues has been increasing, but rather at a decreasing rate for the last four years since the *Space Foundation* began tracking global budgets and revenues for the industry in 2005 (see Table 1).

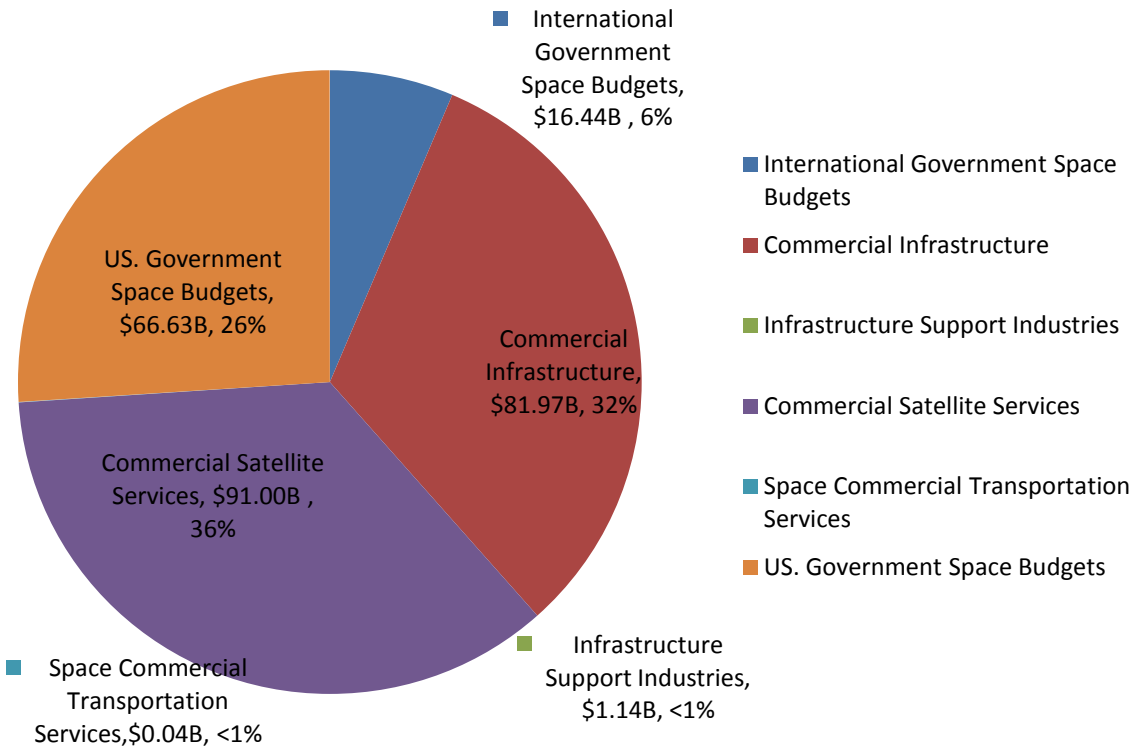
Table 1. Global Space Industry Revenues from Years 2005 to 2008

Year	Revenues	Growth rate
2005	$195.64 B	n/a
2006	$225.41 B	15%
2007	$251.04 B	11%
2008	$257.22 B	2%*

[1] The United States Bureau of Labor Statistics

Furthermore, the report states that the global space economy encompasses a wide range of business and government activities, some driven by individual consumer choices, others based on broad government policies. In the year 2008 $257 billion total, it includes 35%, or $91 billion commercial satellite services; 32%, or $82 billion in commercial infrastructure; 26%, or $66 billion in U.S. government space budgets; 6%, or $16 billion, in international government space budgets and less than 1%, or $1.2 billion, in space commercial transportation services and infrastructure support industries, as shown in Figure 1.

Figure 1. Global Space Activity 2008



The commercial space industry consists of a group of large and small private firms that produce launchers, satellites, rocket engines and other kinds of space hardware and services, and comprises about 68% of the space economy. Primary locations of the civil aerospace industry worldwide include Seattle, Dayton, Ohio and St. Louis in the USA (Boeing), Montreal in Canada (Bombardier), Toulouse in France, and Hamburg in Germany (both Airbus/EADS), the North-West of England and Bristol in the UK (BAE Systems, Airbus and AgustaWestland), as well as São José dos Campos in Brazil (Embraer).

From a global governmental perspective; large-scale space programs, particularly those tied to national scientific or defense programs are heavily supported by government budgets. Government spending accounted for 32% of global space activity in year 2008. The International Government Space Budget increased by 12% in 2008. The largest four budgets were the European Space Agency,

Japan, China and Russia. As shown in Table 2, the countries which exhibited the fastest growth in space budgets were Japan, with a 58% increase, and Italy, with a 40% increase in year 2008. The United States accounted for 80% of the global government spending. Space budgets for other governments rose nearly 12% in 2008 in U.S. dollars (though actual growth was closer to 8%, when adjusted for currency fluctuations).

Table 2. International Space Budget, Growth in 2008

Country/Agency	Currency	2007 Funding	2008 Funding	Growth
Japan	Yen	¥225.5 B	¥314.0 B	39%
Italy	Euro	€0.48 B	€0.65 B	35%
Russia	Ruble	R34.28 B	R45.02 B	31%
China**	RMB (Yuan)	¥10.2 B	¥11.6 B	14%
India	Rupee	Rs39.0 B	Rs42.0 B	8%
Germany	Euro	€0.30 B	€0.31 B	3%
European Space Agency	Euro	€2.98 B	€3.03 B	2%
United Kingdom*	Pound	£0.06 B	£0.06 B	0%
France	Euro	€0.70 B	€0.69 B	-1%
Canada*	CAD	$0.37 B	$0.32 B	-14%

Source: Space Report 2009, Space Foundation. *Civilian agency budget only **Estimated budget

In manufacturing, the U.S. has had a balance of trade deficit in many years for almost every industry except one – Aerospace! The U.S. aerospace manufacturing industry showed solid signs of improvement in the second quarter of 2010. Most telling, sales were up from the previous quarter by 7.1%, as well as year-over-year raising 1.1%. Orders are up from significantly by 27.1% over the previous year, signaling renewed confidence in a global economic recovery and higher demand for aircraft. As domestic defense spending slows over the next few years, military aircraft exports will play a more important role for the U.S. aerospace industry[2]. However, Florida has experienced slight negative growth in terms of aerospace manufacturing, from year 2000 to 2007, of -13.5%, while Arkansas growth has more than tripled in the same time period![3]

In the U.S., the Department of Defense (DoD) and the National Aeronautics and Space Administration (NASA) are the two primary consumers of aerospace technology and products.

[2]. Aerospace Industry Association reports Aerospace Economic Indicators, which originate from the *Quarterly Financial Report* (QFR), while the QFR surveys categorize data according to the North American Industry Classification System (NAICS). http://www.aia-aerospace.org/resource_center/economics/economic_indicators.

[3] Aerospace Economic Report and Outlook for 2010, by Embry Riddle Aeronautical University

Table 3 U.S. Government Space Budget 2008

Agency	Budget ($B)	Source
Department of Defense (DoD)	25.95	DoD
National Aeronautics and Space Administration (NASA)	17.31	NASA
National Reconnaissance Office (NRO)	10	GlobalSecurity.org
Missile Defense Agency (MDA)	8.9	MDA
National Geospatial-Intelligence Agency (NGA)	3	GlobalSecurity.org
National Oceanic and Atmospheric Administration (NOAA)	0.95	NOAA
National Science Foundation (NSF)	0.48	NSF
Department of Energy (DOE)	0.03	DOE
Federal Aviation Administration (FAA)	0.01	FAA
Total	66.63	

From the *NASA Fiscal Year 2011 Budget Estimates*, there has been an increase of $6.0 billion in funds over five years, ranging from $19.0 billion to, $20.99 billion in fiscal year(s) 2011-2015, respectively, totaling $100 billion over five years (See Table 3). Florida, with $41.7 B, is ranked fourth in projected 2010 direct and indirect defense spending behind California, Texas and Virginia.

Table 4 The NASA Current Projected Budget in 2010, for Years 2011 – 2015

Budget Authority ($M)	FY 2009	ARRA	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Science	4,503	400	4,493	5,006	5,429	5,710	5,710	5,814
Aeronautics and Space Research and Technology	500	150	507	1,152	1,597	1,650	1,659	1,818
Exploration	3,506	400	3,780	4,263	4,577	4,719	4,923	5,179
Space Operations	5,765		6,181	4,888	4,290	4,253	4,363	4,131
Education	169		184	146	146	146	146	147
Cross-Agency Support	3,306	50	3,095	3,111	3,190	3,277	3,367	3,462
Construction and Environ. Compliance and Restor			448	397	364	367	394	399
Inspector General	34	2	36	37	38	39	40	41
NASA FY 2010	17,782	1,002	18,724	19,000	19,450	19,960	20,600	20,990

Year to Year Change (%)			5.3	1.5	2.4	2.6	3.2	1.9

Data Source: http://www.nasa.gov/news/budget/2011.html

The current economic outlook regarding the space industry in the United States appears to be somewhat of a moving target, at least in terms of federal funding/investment in aerospace. While there are two main firms planning and developing for near term commercialization of space (i.e., SpaceX has a $1.6 B contract for 12 cargo flights to the International Space Station (ISS), and Orbital Sciences Corp., has a $1.9 B contract for eight supply hauls; both with NASA). When involving human space flight, there are monumental regulatory requirements that make space flight a very costly activity. However, under NASA's commercial crew development program to be ready to launch by year 2014, there are currently five companies competing on developing a Space Florida program[4]. Initially, the Obama administration requested $6 B set aside for commercial space flight in NASA's budget over the next five years. Last October, 2010, the amount was reduced and then, in February 2011, all of the $6 B proposed funding request was frozen. Currently, funding to NASA will remain at the existing year 2010 level of $18.7 B[5]. The reduced funding stream is anticipated to slow rocket development, quite possibly delaying the heavy lift rocket initial launch date of year 2016. NASA would receive about $850 M to assist private rocket companies develop a rocket to travel to and from the ISS. The two areas of NASA's budget that actually increased were for the ISS ($2.8 B, up $500 M from year 2010), and Earth Science ($1.8 B; more than $300 M from year 2010) for research on climate change and planetary science, among other areas.

There are few studies that have conducted economic impact analysis primarily of the aerospace sector (i.e., not including aviation). One recent study (November 2010) examined Virginia's Aerospace Industry. The authors found that the aerospace industry in Virginia supports about 28,110 jobs, and contributed a total of $7.6 B (in $2009) annually to the state economy. The direct economic output was $4.3 B, and 9,029 workers. The study also found that, in 2009, the average wage for the aerospace industry was $99,385 (compared to $48,334 for all industries in Virginia).

An economic impact analysis study was conducted in 2009, by Deloitte Consulting, of the aerospace industry in Washington. The authors found that the aerospace contributed $36 B to the Washington economy. In addition, the aerospace industry employed a total of 209,300 workers, earning $5.4 B. The average wage (in $2009) of an aerospace employee in Washington was $83,370.

[4] Companies are: Sierra Nevada (Dream Chaser), Amazon (Blue Origin), Boeing/Bigelow Aerospace, Paragon Space Development Corp., and United Launch Alliance (currently builds the Atlas and Delta rockets).

[5] Still in the Obama Administration proposed budget; it might be reduced further based on discussions/debates still in Congress that are focusing on the funding period between March 4 (when federal gov't funding expires) and Sept 30 (when the federal fiscal year ends).

An economic impact analysis study of NASA was conducted in Florida in 2008. The authors found that the economic impact of NASA in the state was $4.1 B in output, 40,802 jobs and $2.1 B in income. The majority of the economic impact activity was in Central Florida. The average wage of an aerospace employee was found to be: $77,235 (in FY $2008). The Kennedy Space Center (KSC), in conjunction with NASA, plays a dominant role in the state's economy where it employs 14,865 workers with an average salary of $77,235. In 2008, the payroll for all KSC/NASA workers totaled $1.124 billion, with an estimated economic impact of $4.1 billion in output and 40,802 jobs. In addition, $246 million of federal taxes and $103 million of state and local taxes were paid. At the KSC Visitor Center, $39 million in wages was generated from 1.6 million out-of-state visitors, in addition to $5.8 million from travel and lodging expenses. It is important to note that almost the entire economic activity resulting from the KSC/NASA workers was experienced locally, in the seven county Central Florida region. If the KSC is closed, 23,000 total jobs (or 9,000 direct jobs), and an estimated $1.96 billion in outside monetary injection to Florida's economy will be lost at a time when Florida is committed to maintaining its status as a primary hub for the space industry.[6]

Enterprise Florida Inc. (EFI), a public-private partnership serving as Florida's primary organization devoted to statewide economic development, included a definition of Florida's aviation & aerospace industry by counting nearly 2,000 aviation and aerospace companies which employ approximately 83,800 workers with a total payroll of more than $4.8 billion and an average wage of approximately $57,021[7]. EFI also examined the quality of life issues that attract aerospace companies to Florida including; the state's excellent education, infrastructure and business development in Space and Aeronautics and its optimal geographic location and climate conditions.

From their summary data chart and an interactive map, it indicates that the majority of space-related businesses are located in the Cape Canaveral area, but their network of suppliers extends throughout the state. The more than 400 aerospace companies in Florida employ more than 31,000 workers. In addition, the state is host to nearly a third of all commercial space activity worldwide. Virtually every major aerospace company and defense contractor from the U.S. and abroad has operations in Florida. The EFI obtains employment data for the specifics of the aerospace industry in Florida, from the Florida Agency for Workforce Innovation (AWI). A current "point in time" analysis (based on 2009 data, and generated on January 28, 2011) by the AWI found that there are 456 aerospace companies, employing 31,295 employees, with a total payroll of $2.3 M as portrayed in the following table. The annual average wage of an aerospace employee is $74,901. [8]

---

[6] Economic Impact of NASA in Florida FY 2008 and http://www.ketknbc.com/news/economy/23000-now-expected-lose-jobs-after-shuttle-retirement

[7] Enterprise Florida estimates based on U.S. Department of Labor, BLS data. View summary data chart. http://www.eflorida.com/Aviation_Aerospace.aspx?id=306.

[8] Florida Agency for Workforce Innovation. Data generated for FSU CEFA on January 28, 2011.

Table 5 Employment, Income and Average Wage for the Aerospace Industry in Florida, 2009

Industry Title	NAICS Code	Companies	Employees	Average Number of Workers	Total Payroll	Average Annual Wage
Aerospace Total		**456**	**31,295**	**69**	**$2,343,993,031**	**$74,901**
Search, detection, and navigation instruments	334511	69	9,179	133	$653,395,518	$71,184
Aerospace product and parts manufacturing	3364	253	19,326	76	$1,432,507,722	$74,123
Aircraft manufacturing	336411	65	3,830	59	$255,760,029	$66,772
Aircraft engine and engine parts mfg.	336412	70	3,935	56	$262,060,872	$66,596
Other aircraft parts and equipment	336413	66	3,296	50	$167,813,859	$50,917
Guided missile and space vehicle mfg.	336414	41	6,751	165	$645,134,804	$95,566
Space vehicle propulsion units and parts; and other guided missile and space vehicle parts mfg.	336415 & 336419	11	n/a	n/a	n/a	n/a
Satellite telecommunications	517410	119	553	5	$40,774,318	$73,744
Space research and technology	927110	15	2,237	149	$217,315,473	$97,157

Source: Florida Agency for Workforce Innovation, Labor Market Statistics Center, Quarterly Census of Employment and Wages Program. Prepared January 28, 2011.

In the Space Foundation's Space Report[9] , it was estimated that $20 B in economic impact, and over 65,000 jobs, 2,000 companies, and $4.7 billion in wages can be attributed to the space industry in Florida. The economic impact is generated from primarily: an $8 billion investment by NASA-KSC/JSC, military and commercial to support the Shuttle Program, commercial, and DoD missions. The $8 B in Florida's space activity represents 3% of the global space activity which includes public and private investment, currently reported to be more than $250 B.

A study completed by SRI International, of the Northwest Florida Aerospace & Defense Industries, found that there were 1,900 businesses and government establishments directly involved in the aerospace and defense industries in Northwest Florida. They categorized aerospace and defense into three components: 1) the region's major aerospace and defense engines (the military missions and the commercial and general aviation operations) 2) private firms in key aerospace and defense sectors which are increasingly attracted to NW Florida due to the opportunities associated with those engines, and 3) a series of specialized foundations that support and nurture growth and competitiveness of the industry. The three sectors of: 1) IT, Systems Integration, Network Solutions, Telecommunications, 2) Consulting Services and 3) Engineering, Testing, R&D, and Industrial Design comprised over 68% of the aerospace industry in Northwest Florida.

[9] Space Foundation's Space Report: Economic Impact of Space in Florida, 2008

Purpose of Study

The Florida State University Center for Economic Forecasting and Analysis (FSU CEFA) was recently awarded a contract by Space Florida, to conduct an economic impact analysis of the aerospace industry in Florida, using a two tiered approach. The first phase, or Phase One, will provide relevant details for the Legislative meetings in March 2011. Phase Two is expected to be more detailed in scope and provide a complete analysis or profile of the aerospace industry in Florida. The following Phase One report will highlight the following:

- Development of a clear definition of aerospace industries, by sector and NAICS code.
- Datasets compilation and validation.
- Initial statistical analysis with results for: employee numbers, wage figures, salary versus capital outlay, reported revenues, asset holdings, and other economic indicators.
- Incentive Analysis: outline and compare current public and private financial incentives currently used, and available, in Florida.
- Economic Impact Analysis: using advanced economic models.

Previous studies of aerospace in Florida provide a good starting point, but a detailed framework for conducting economic analyses is yet to be developed.[3] To highlight some of these studies, in 2003, FSU issued a 57 question survey to aerospace businesses including the following six sections: identification, nature of business, employee skills, and barriers to growth, business needs, and opportunity awareness, among others. In 2006, a report was released by the Governor's Commission on the Future of Space and Aeronautics in Florida. In 2008, the Federal Aviation Administration estimated the economic impact of commercial space transportation on the U.S. economy. In 2009, the Brevard County *Aerospace Workforce Outlook Report* was published. These are examples of previous studies that have been aerospace-sector and location-specific in Florida.

The study will help clarify the economics behind the aerospace industry's impact and linkages on the Florida economy[4] at a time when support for the space industries is declining – the shuttle program is scheduled to shut down in 2012 which is anticipated will result in thousands of lost jobs and billions of dollars in state revenue.

[3] Space Economic Data, 2002 pg. 1

[4] The Space Economy: A Public-Private Relationship. March 16, 2009.

Economic Analysis Framework

The following Figure depicts the working definition of the Space Florida aerospace categories numbering from 1 to 12. Those include categories as defined by Space Florida and include:

Figure 2. Florida Aerospace-Related Industries as Defined by Space Florida

Source: http://www.spaceflorida.gov/index.php/en/2020-vision

- Space Transportation and Technologies Support Systems
- Satellite Systems and Payloads
- Ground and Operations Support Systems
- Agriculture, Climate and Environmental Monitoring
- Civil Protection and Environmental Monitoring
- Life Sciences and Biotechnology
- Communication, Cyber security and Robotics
- Clean Energy
- Adventure Tourism
- Advanced Materials and New Products
- International Space Station
- Business and Other Services

FSU CEFA staff compiled the North America Industry Classification System (NAICS) codes that pertain to the aerospace industries currently in Florida by Space Florida categories. The following aerospace industry data was obtained through the most recent Dun and Bradstreet business data, or "Selectory" data, for Florida. The following table provides the aerospace-related industries 1) number of firms 2) number of employees (including part time) and 3) sales/revenues by NAICS ode for the aerospace-related industries in Florida for Year 2010.

Table 6. Economic Data of Aerospace-Related Industries in Florida in $2010*

Number	Sectors	Subsector	NAICS	Company Number	Employment	Sales
1	Space Transportation and Technologies Support Systems					
		Transportation equipment and Suppliers Merchant Wholesalers	423860	1,407	9,968	$3,072,338,097
		Missiles and Space Vehicle Manufacturing	336414	8	1,353	$381,209,260
		Guided Missiles and Sp Propulsion	336415	8	2,037	$354,676,460
		Spaceports	336419	5	153	$21,902,440
2	Satellite Systems and Payloads					
		Satellite Telecommunication/ Broadband/ Mobile	517410	15	95	$58,837,320
		Satellite Video/ Satellite Radio(DARS)	517919	2,597	10,128	$1,045,654,879
		Satellite Manufacturing	237130	129	2,561	$1,340,249,489
3	Ground and Operations Support Systems					
		Apparatus	334511	140	4507	$479,072,985
		Products and Parts manu.	3364*	204	4859	$1,267,192,899
		Radio and TV Broadcasting & Wireless Communications	334220	172	6349	$1,382,708,793
4	Agriculture, Climate and Environmental Monitoring					
		Agriculture	541360	-	-	$0
		Climate and Environmental Monitoring	541370	1,082	8,568	$518,531,741
5	Civil Protection and Emergency Management					
		Civil Protection	928110*	704	90,258	$0
		Emergency Management	922190*	133	5,730	$0
6	Life Sciences and Biotechnology					
		Biotechnology Research	541711	40	373	$20,416,508

		Other Physical and Life Sciences Research	541712	1,026	18,710	$842,994,781
7	Communication, Cyber security and Robotics					
		Communication	517210	1,824	11,430	$988,385,190
		Cybersecurity and Robotics	541330	274	3,370	$547,094,282
		Flying-Spot Scanner(FSS)	334119	168	1,718	$364,003,136
8	Clean energy					
			221119	46	156	$19,379,796
9	Adventure Tourism					
			481219	268	1,922	$224,987,018
10	Advanced Materials and New Products					
			927110*	9	464	$0
11	International Space Station					
		Veterinary Services	541940	2	330	$35,029,000
		Biological Product (except diagnostic) Manufacturing	325414	44	354	$50,360,622
		Medical and Botanical Manufacturing	325411	66	1,347	$208,056,749
12	Business and Other Services		541720	685	7,981	$1,559,806,348
		Finance				
		Engineering				
		Insurance				
	Market / Promotion / Planning					
	Integration Services / Saic / Astrotech					
		Law	Intel Property			
		Law	Patents			
Total				**11,056**	**194,721**	**$14,782,887,793**

All company records by NAICS code[10] from D&B Selectory for Florida aerospace companies. Sales of non-benefit government/non-government agents are equal to zero. The four-digit NAICS Code 3364 includes the following NAICS aerospace-related industries: 336411, 336412 and 336413.

Aerospace Industry by Space Florida Category and Associated NAICS codes

Table 7. Space Transportation and Technologies Support Systems

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employment	Sales
1.Space Transportation and Technologies Support Systems					
Launch Vehicles	336414	Guided Missile and Space Vehicle Manufacturing	8	1,353	$381,209,260
	423860	Transportation Equipment and Supplies Merchant Wholesalers	1,407	9,968	$3,072,338,097
	336415	Guided Missile and Space Vehicle Propulsion Unit	8	2,037	$354,676,460
Spaceports	336419	Other Guided Missile and Space Vehicle Parts and Auxiliary	5	153	$21,902,440

[10] North America Industry Classification System. See: http://www.census.gov/eos/www/naics/

Figure 3 Economic Data of the Space Transportation and Technologies Support Systems Sectors

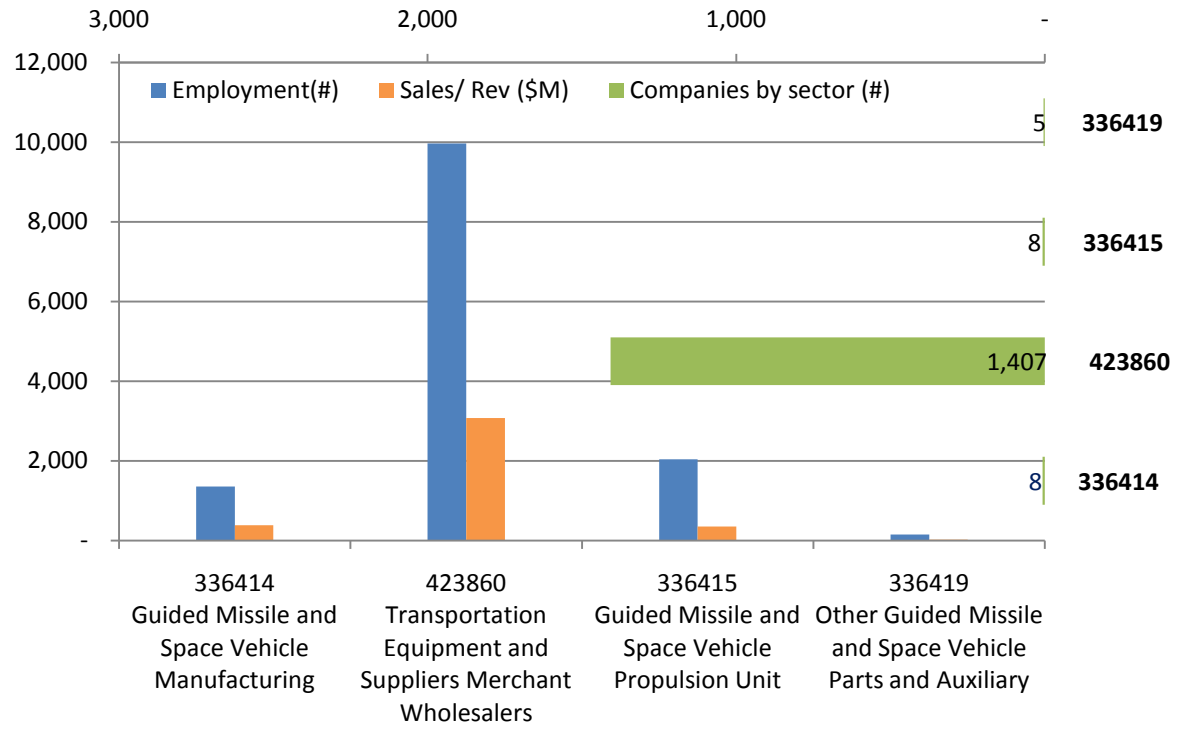


Table 8 Satellite Systems and Payloads

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
2. Satellite Systems and Payloads					
Satellite Telecommunication/ Broadband/ Mobile	517410	Satellite Telecommunications	15	95	$58,837,320
Satellite Video/ Satellite Radio(DARS)	515111	Radio Network	0	0	$0
	517919*	All other Telecommunications	2,597	10,128	$1,045,654,879
Satellite Manufacturing	237130	Power and Communication Line and Related Structures Construction	129	2,561	$1,340,249,489

Figure 4 Economic Data of the Satellite Systems and Payloads Sectors

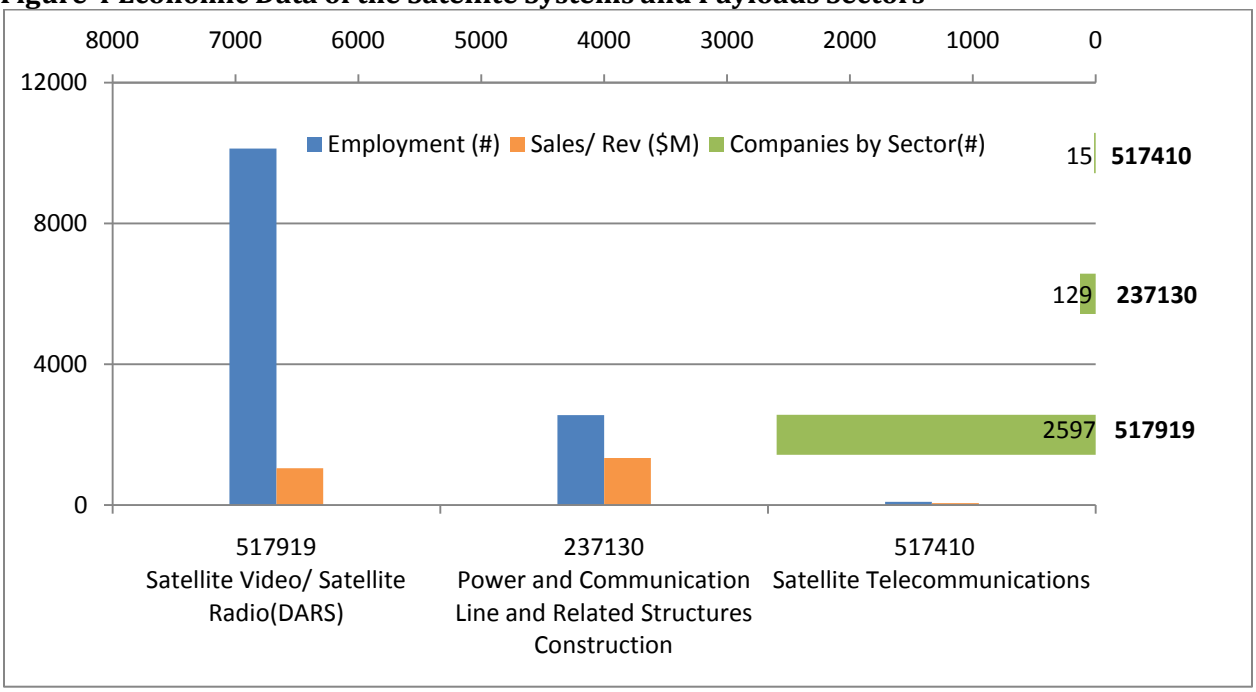


Table 9 Ground and Operations Support Systems

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
3. Ground and Operations Support Systems					
Apparatus	334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	140	4,507	$479,072,985
Products and Parts Manu	3364*	Aerospace Product and Parts Manufacturing	204	4,859	$1,267,192,899
Radio and TV Broadcasting & Wireless Communications	334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	172	6,349	$1,382,708,793

Figure 5 Economic Data of the Ground and Operations Support Systems Sectors

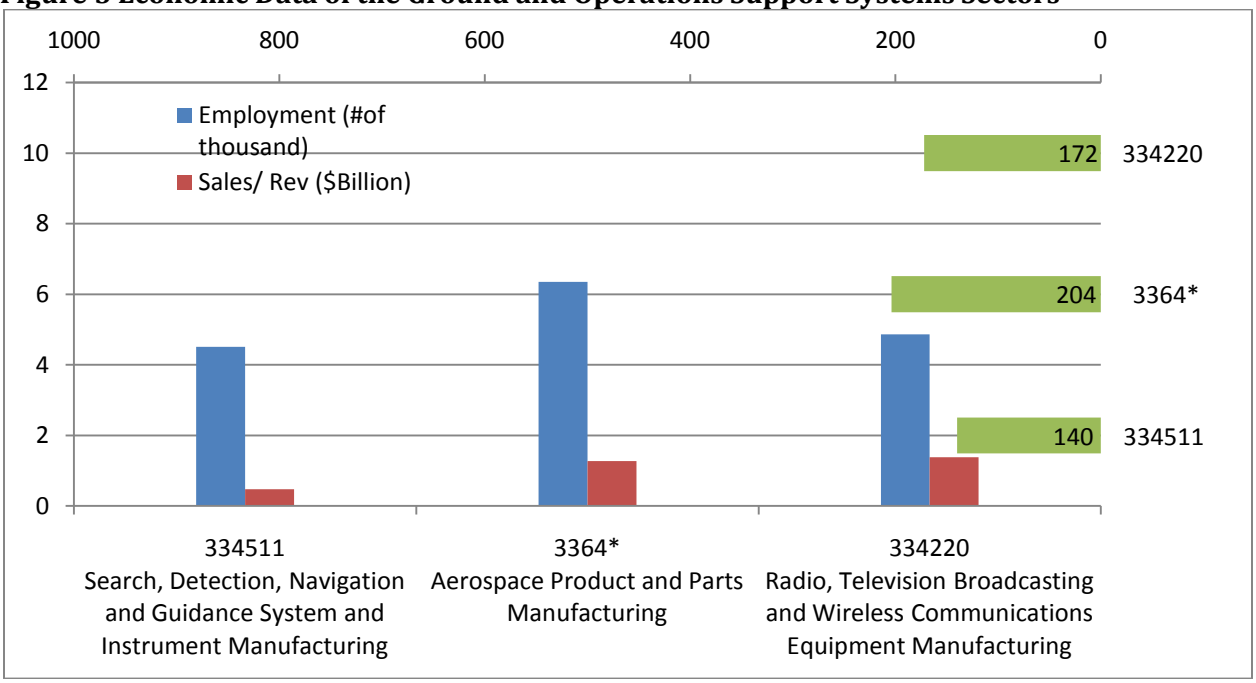


Table 10 Agriculture, Climate and Environmental Monitoring

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
4. Agriculture, Climate and Environmental Monitoring					
Agriculture	541360	Geophysical Surveying and Mapping Services	0	0	$0
Climate and Environmental Monitoring	541370	Surveying and Mapping (except Geophysical) Services	1,082	8,568	$518,531,741

Figure 6 Economic Data of the Agriculture, Climate and Environmental Monitoring Sectors

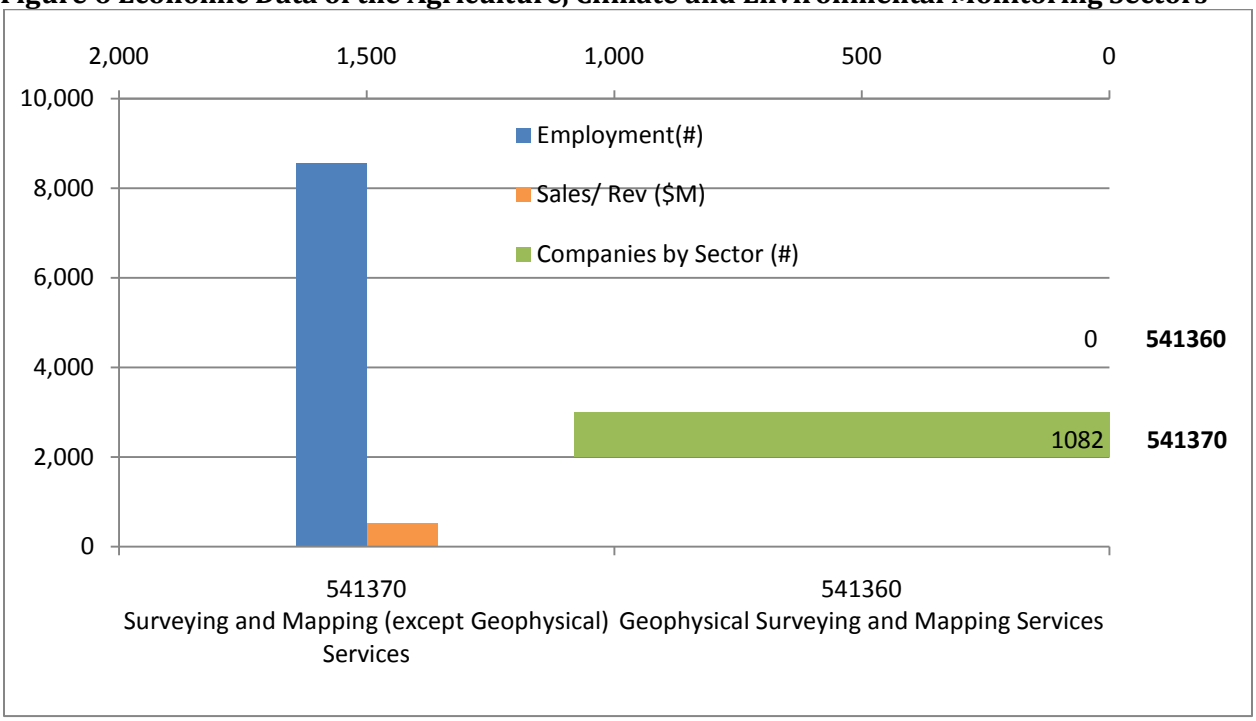


Table 11 Civil Protection and Emergency Management

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
5. Civil Protection and Emergency Management					
Civil Protection	928110*	National Security	704	90,258	$0
Emergency Management	922190*	Other Justice, Public Order, and Safety Activities	133	5,730	$0

Figure 7 Economic Data of the Civil Protection and Emergency Management Sectors

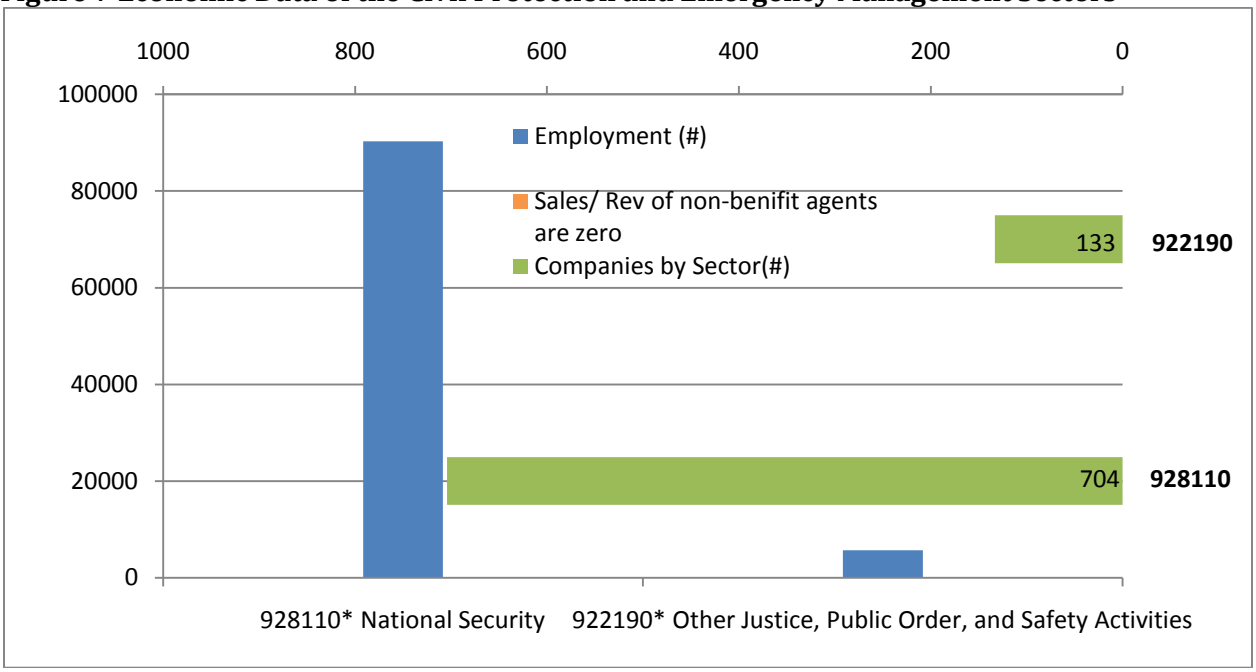


Table 12 Life Sciences and Biotechnology

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
6. Life Sciences and Biotechnology					
Biotechnology Research	541711	Research and Development in Biotechnology	40	373	$20,416,508
Other Physical and Life Sciences Research	541712	Research and Development in the Physical, Engineering, and Life Sciences (except biotechnology)	1,026	18,710	$842,994,781

Figure 8 Economic Data of the Life Sciences and Biotechnology Sectors

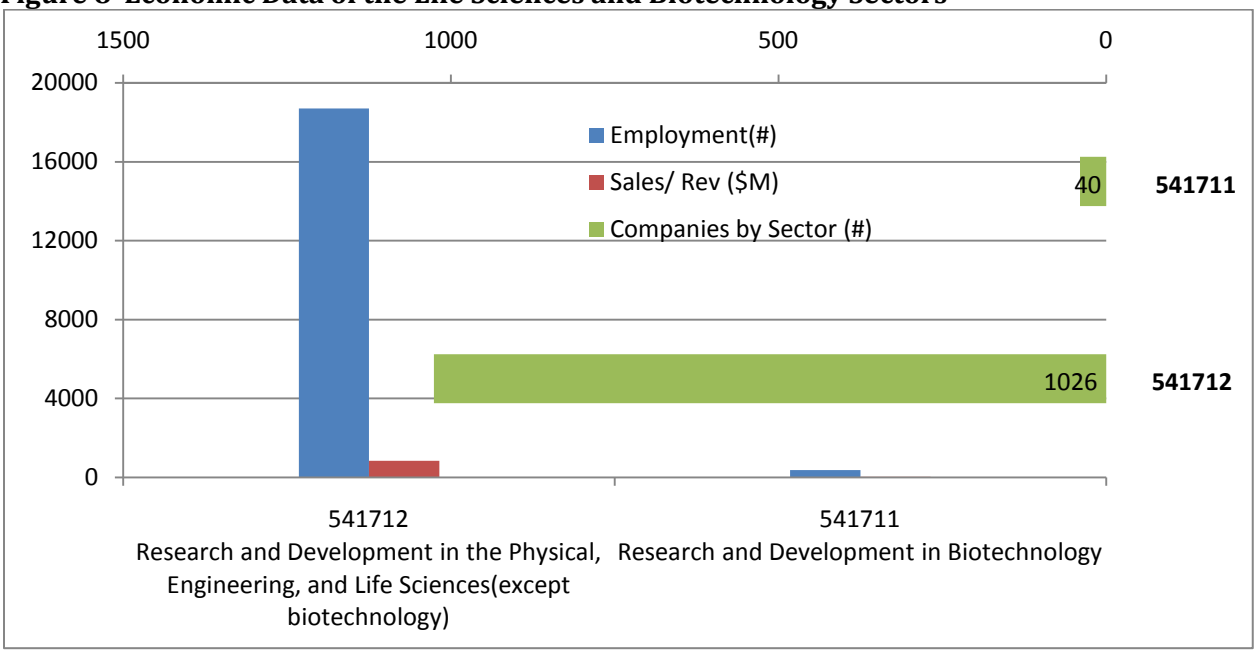


Table 13 Communication, Cyber security and Robotics

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
7. Communication, Cyber security and Robotics					
Communication	517210	Wireless Telecommunication Carries(except Satellite)	1,824	11,430	$988,385,190
Cyber security and Robotics	541330	Engineer Services	274	3,370	$547,094,282
Flying-Spot Scanner(FSS)	334119	Other Computer Peripheral Equipment Manufacturing	168	1,718	$364,003,136

Figure 9 Economic Data of the Communication, Cyber security and Robotics Sector

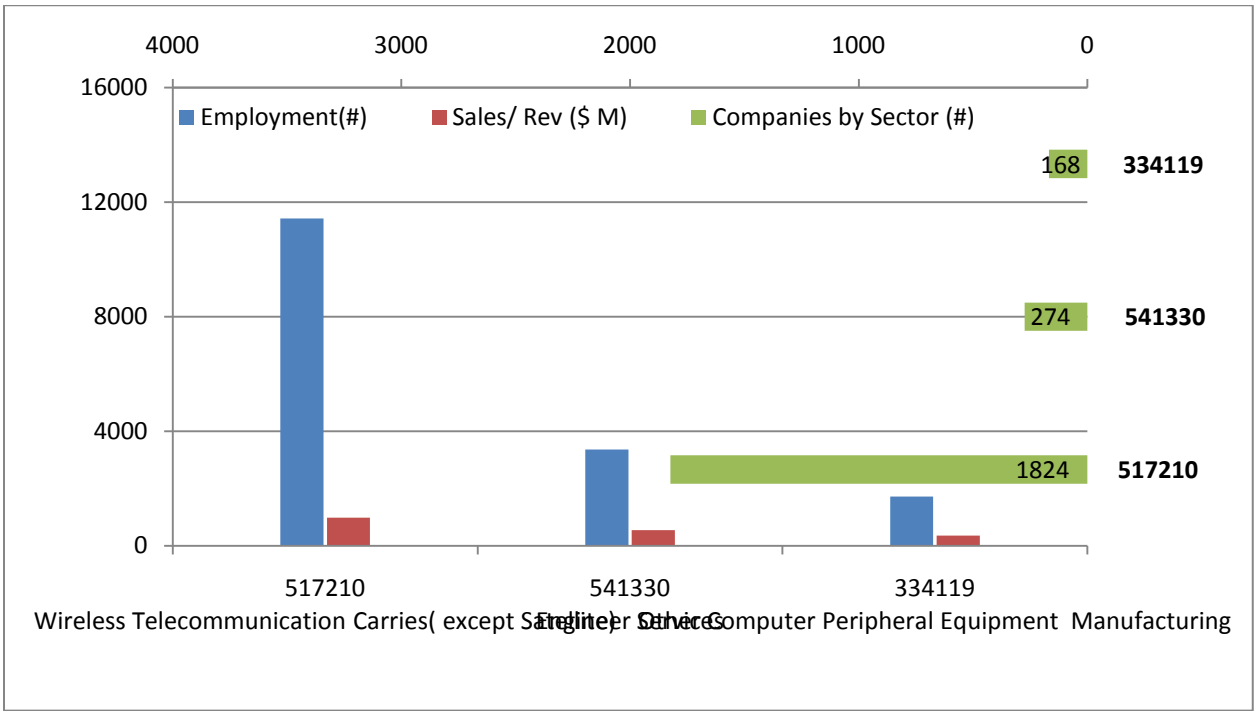


Table 14 Clean Energy

Industry Sectors/ Subsector	NAICS Code		Company Number	Employ-ment	Sales
8. Clean energy					
	221119	Other Electric Power Generation	46	156	$19,379,796

Figure 10 Economic Data of the Clean Energy Sector

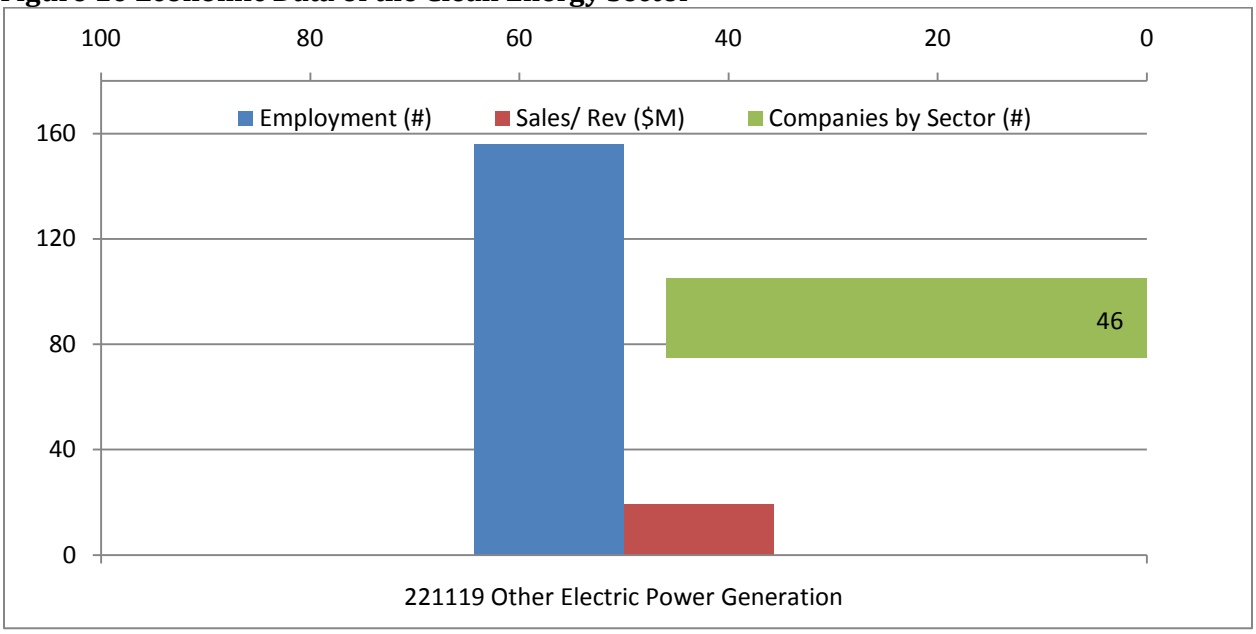


Table 15 Adventure Tourism

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
9. Adventure Tourism					
	481219	Other Nonscheduled Air Transportations	268	1,922	$224,987,018

Figure 11 Economic Data of the Adventure Tourism Sector

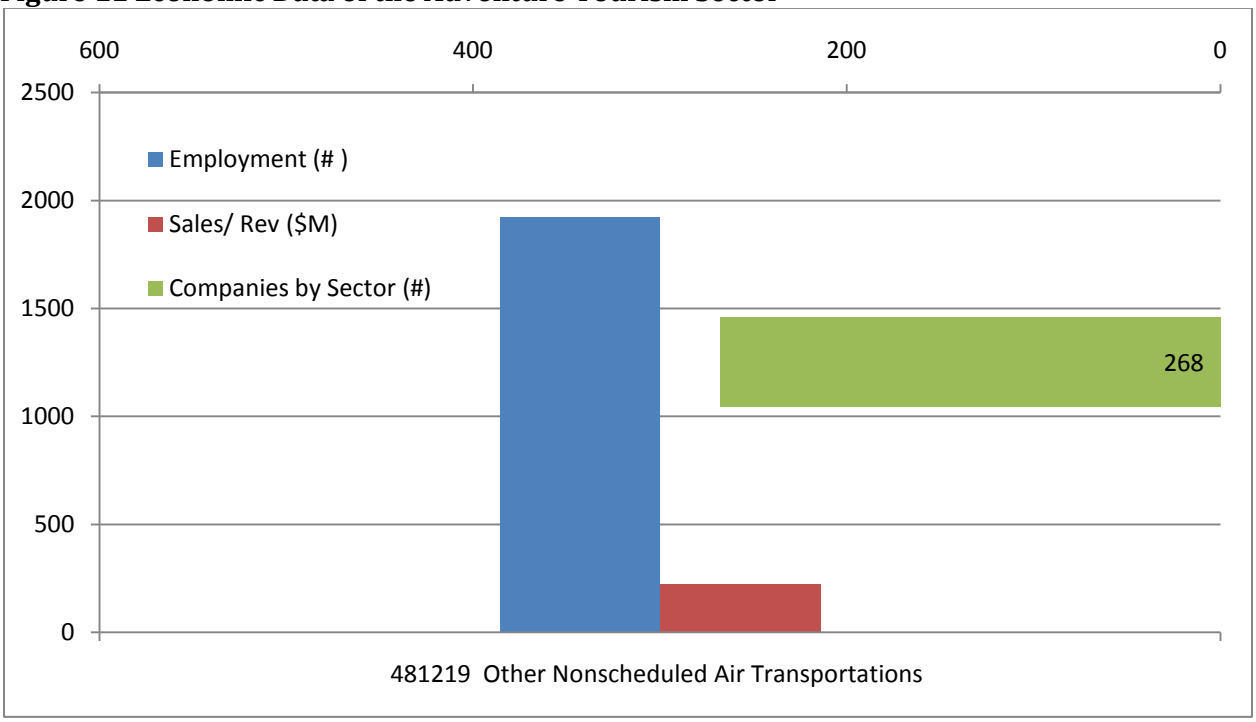


Table 16 Advanced Materials

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
10. Advanced Materials and New Products					
	927110	Space Research and Technology	9	464	$0

Figure 12 Economic Data of the Advanced Materials Sector

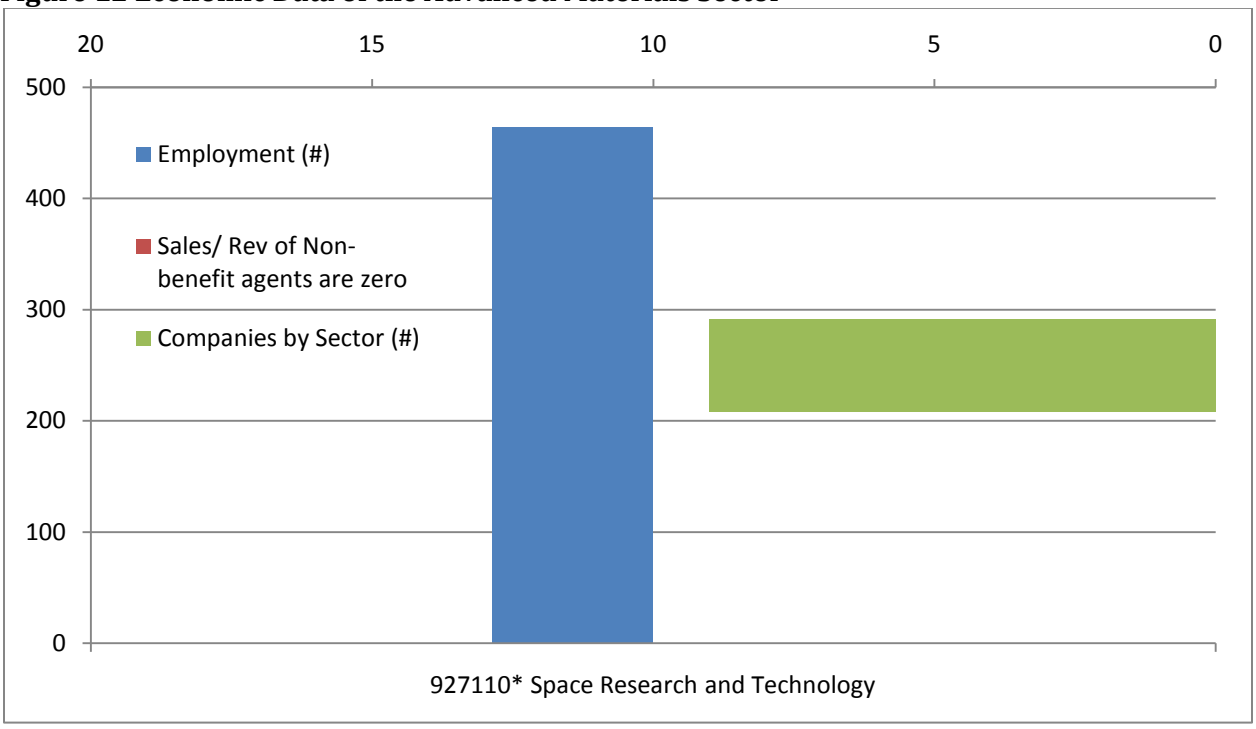


Table 17 International Space Station

Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
11. International Space Station					
Veterinary Services	541940	Veterinary Services	2	330	$35,029,000
Biological Product (except diagnostic) Manufacturing	325414	Biological Product(except diagnostic) Manufacturing	44	354	$50,360,622
Medical and Botanical Manufacturing	325411	Medical and Botanical Manufacturing	66	1,347	$208,056,749

Figure 13 Economic Data of International Space Station Sector

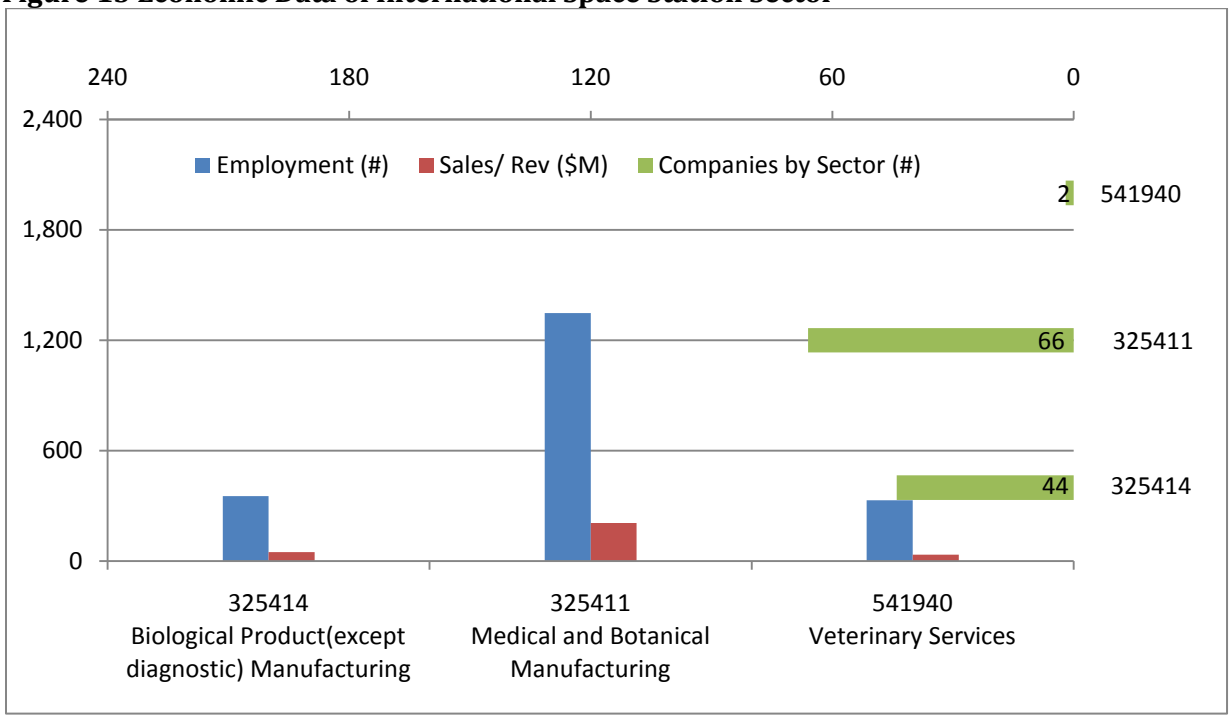
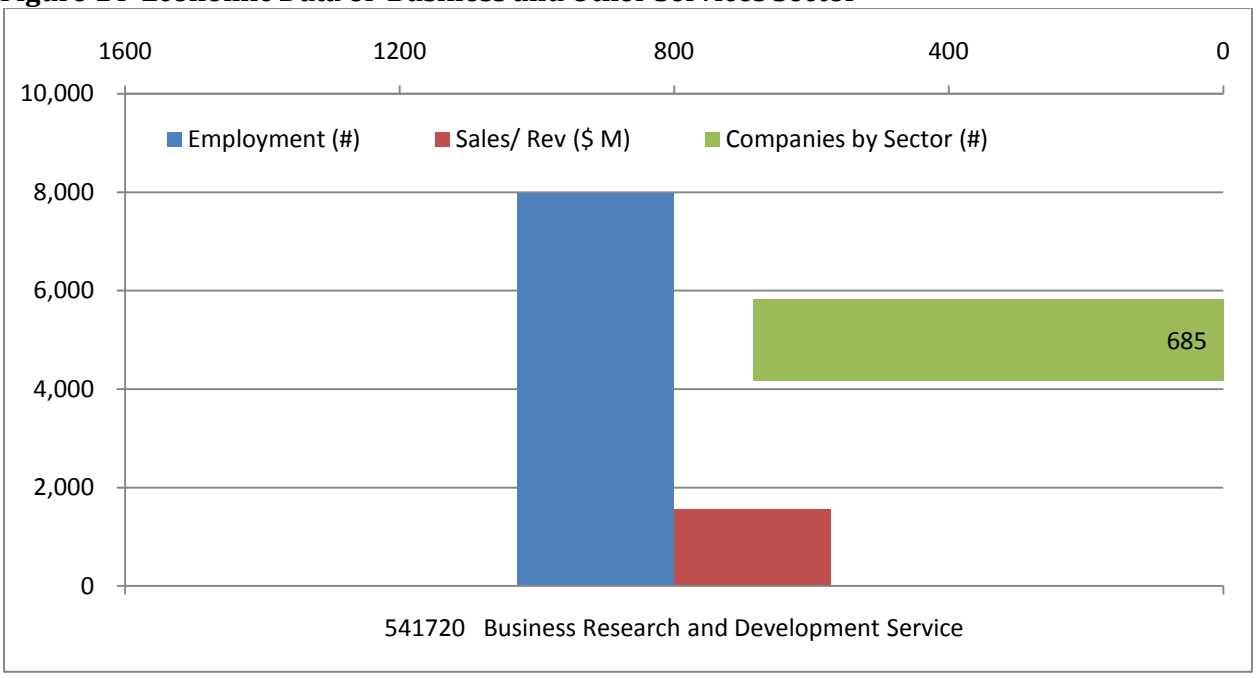


Table 18 Business and Other Services

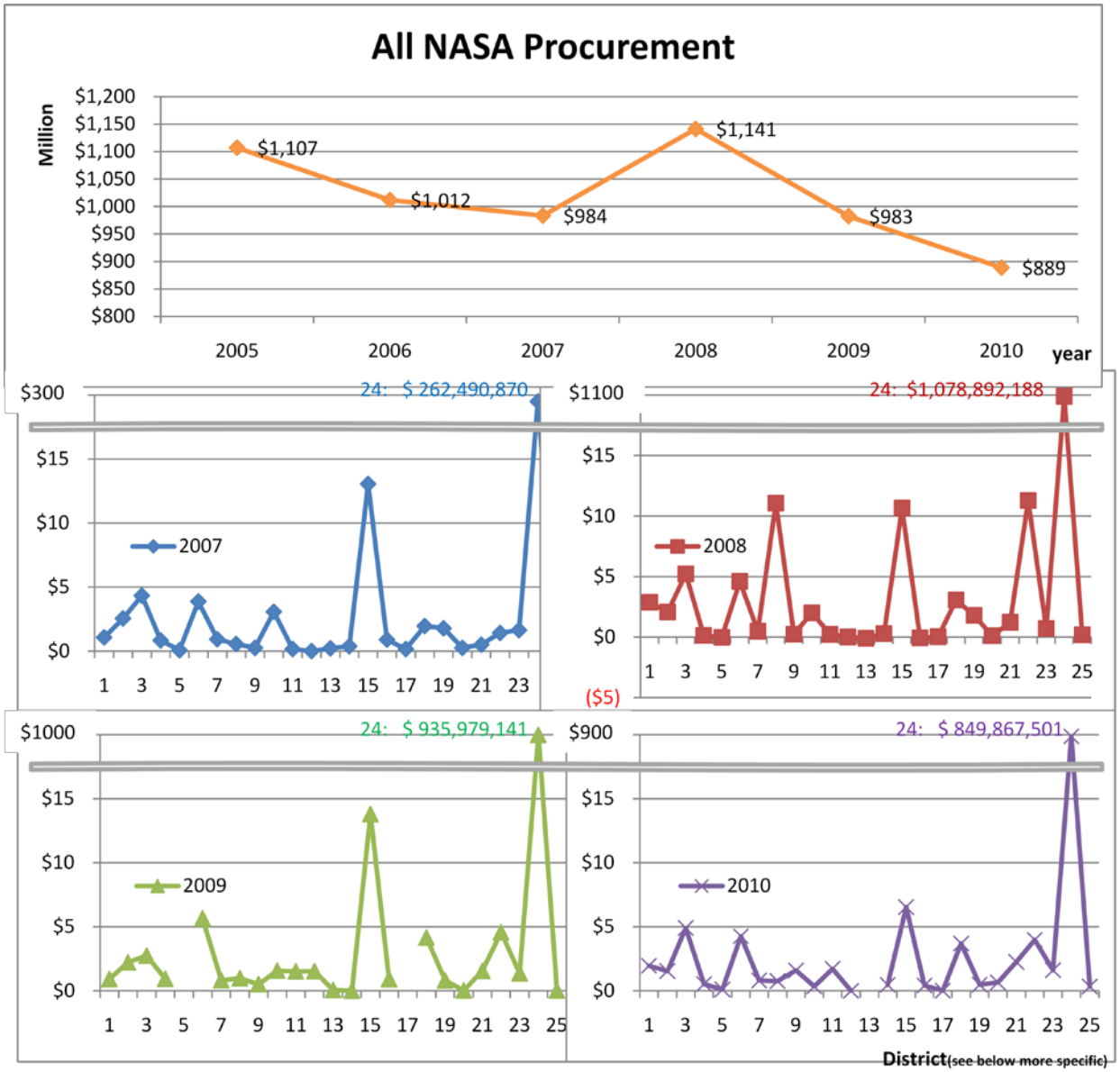
Industry Sectors/ Subsector	NAICS Code	NAICS Definition	Company Number	Employ-ment	Sales
12. Business and Other Services					
	541720	Business Research and Development Services	685	7,981	$1,559,806,348

Figure 14 Economic Data of Business and Other Services Sector



The following Figure shows the trend of procurement dollars that the aerospace industry in Florida received between fiscal year 2005-2010 from NASA.[5]

Figure 15 Distribution of NASA Procurement in Florida by Congressional District



[5] Source: NASA Acquisition Internet Service/ Federal Procurement Data System- Next Generation

The Economic Impact Model Methodology

In order to obtain estimates of the different types of macroeconomic effects of the aerospace scenarios on the Florida economy, a well-established analytical tool known as the Impact Analysis for Planning, or IMPLAN, model was used. IMPLAN is a widely accepted integrated input-output model. IMPLAN is used extensively by state and local government agencies to measure proposed legislative and other program and policy economic impacts across the private and public sectors. In addition, it is the tool of choice to measure these impacts by a number of universities and private research groups that evaluate economic impacts across the state and nation. There are several advantages to using IMPLAN:

- It is calibrated to local conditions using a relatively large amount of local county level and state of Florida specific data;
- It is based on a strong theoretical foundation; and
- It uses a well-researched and accepted applied economics impact assessment methodology supported by many years of use across all regions of the U.S.

The economic impact model used for this analysis was specifically developed for the counties of Florida, and includes 440 sectors, and latest dataset – year 2008 data. IMPLAN's principal advantage is that it may be used to forecast direct, indirect and induced economic effects for an initial economic stimulus.

Primary Input Data for Economic Impact Model(s)

The following table presents the primary input data for the economic impact model for the Phase One economic analysis.

- Dun and Bradstreet (D&B), or "Selectory", Year 2010 data[11] for Florida aerospace-related businesses, based on NAICS codes associated with the Space Florida categories (see Appendix A for a listing of "aerospace" industries and other standard definition/NAICS).
  - The Space Florida list of D&B aerospace-related businesses[12] was compiled by FSU CEFA, using the Selectory business database for Florida, and manually verified by Space Florida staff and Kennedy Space Center staff.
  - NASA procurement data for latest year of data availability; 2008 and business industry hard copy files (among other electronic files business inventory list) obtained from Space Florida were cross-checked/verified with the primary Selectory aerospace-related industries database.
- The amount of federal investment (NASA, DOD, etc.) to Florida for 2009 was estimated to be $3.33 B, based on the 2009 KSC Annual Report total annual investment and adjusted to $2011[13].

[11] D&B data is comprised of numerous sources including trade, banking, court and legal filings, business internet data, business registries, newspapers/publications, telephone interviews, company financials, and D&B customer experiences, among others.

[12] Primary Aerospace-related industries in Florida include: BAE Systems, Boeing, Bombardier, DRS Tech., EADS/Airbus, Embraer, General Dynamics, Harris Corp., Honeywell, Indra Systems, Jacobs Eng., L-3 Communications, Lockheed Martin, Northrop Grumman, Piaggio, Pratt & Whitney, Raytheon, SpaceX, Sikorsky, Thales, and United Space/Launch Alliance, among others.

Table 19 Selectory Input Data for Year 2010 by Space Florida Aerospace-Related Industries

Space Florida Aerospace-Related NAICS Industries*	Firm(s)	Employment	Sales/Revenues
Space Transportation and Technologies Support Systems	1,428	13,511	$3,830,126,257
Satellites and Payloads	2,741	12,784	$2,444,741,688
Ground and Operations Support Systems	516	15,719	$3,128,974,677
Agriculture/Climate/Environmental Modeling	1,082	8,568	$518,531,741
Life Sciences and Biotechnology	1,066	19,083	$863,411,289
Communications, Cyber security and Robotics	2,266	16,518	$1,899,482,608
Clean Energy	46	156	$19,379,796
Space/Adventure Tourism	268	1,922	$224,987,018
Advanced Materials and New Products**	9	464	0
International Space Station	112	2,031	$293,446,371
Aerospace-Related Business & Other Services	685	7,981	$1,559,806,348
Total	10,219	98,737	$14,782,887,793

*Note: Civil Protection and Emergency Management were not included
** Selectory data did not reveal sales/revenues figures for the Advanced Materials categories.

Results of Economic Impact of Aerospace in Florida for Year 2011

Once the inputs are entered and the economic modeling analysis has been performed, the economic model provided the following economic impacts, expressed as output (or sales/revenues), employment (or jobs), and income (or wages). The following table(s) presents the total economic impacts, and the direct, indirect, and induced economic impact results, respectively, in 2011 dollars.

Table 20 Economic Impact Results of the Aerospace-Related Industries in Florida, in Terms of Sales/Revenues, Jobs and Income

Economic Impact of Space Florida Aerospace Sectors	Output*	Employment	Income*
Aerospace in Florida	$26,733,162,151	147,365	$8,380,346,085

* in Jan 2011$

[13] www.nasa.gov/centers/kennedy/pdf/434273main_annrpt09.pdf
pp. 36

Table 21 Economic Impact Results the Aerospace-Related Industries in Florida, Including Direct, Indirect and Induced Impacts, in Terms of Sales/Revenues, Jobs and Income

Economic Impact of Space Florida Aerospace Sectors				
	Direct	Indirect	Induced	Total
Output (Sales/Revenues)	$12,936,380,970	$7,301,365,042	$6,495,416,139	$26,733,162,151
Jobs	51,168	46,766	49,430	147,365
Income	$3,830,119,832	$2,473,551,495	$2,076,674,758	$8,380,346,085

* in Jan 2011$

The output generated represents the value of final goods and services produced across the Florida economy as a result of the sales/revenues generated by the aerospace-related industries in Florida, in 2011 dollars. The direct impacts measure the immediate effects as a result of the aerospace-related industries sales/revenues in Florida; i.e., in employment and income. Indirect impacts are those that include changes to production, employment, income, etc., that occur as a result of the direct effects. Induced impacts are those further impacts of spending derived from direct and indirect activities – i.e., household purchases of consumer goods and services. The total input of $14.78 B into IMPLAN would generate $26.73 B in state economic output, and $8.3 B in income while generating 147,365 jobs annually.

Table 22 Benefit to Cost Ratio of Aerospace-Related Industries in Florida

Annual Economic Impact	Output*	Employment	Income*
Alternative Investment**	$7,556,247,008	64,775	4,484,771,018
Aerospace-Related Industries	$26,733,162,151	147,365	$8,380,346,085
Benefit to Cost Ratio	3.54	2.27	1.87

* in Jan 2011 $

** Alternative investment is the $3.33 B investment in aerospace and the state of Florida investment of $32,639,943 in Florida redistributed to other federal enterprises

Cost Benefit Analysis

The benefits to the state of Florida were defined as the economic impact resulting from the amount leveraged by the 2009 federal and state investment (the sales/revenues generated in aerospace-related businesses for 2010 based on contracts and grants, government and private sponsors, and other external sources). The state of Florida direct investment in aerospace activities for year 2010 totals: $32,639,943 for the following:

- $12.6 M to assist in mgt of facilities for space businesses
- $10 M financing assistance to space businesses
- $3.2 M job retraining workforce
- $3 million to fund targeted projects for business development
- $3,839,943 for Space Florida operations

The costs to the state of Florida were defined as the opportunity cost of the initial federal plus state investment redistributed to other federal-related enterprises. As described above, the IMPLAN model estimated the following:

- Benefit to the state = $26.73 B
- Cost to the state (opportunity cost, or alternatives investment, of annual input of $3.33 B federal investment plus state of Florida investment of $32.6 M) = $3.33 B
- Final benefit to cost ratio: 3.54

This B/C ratio implies that for each dollar that is invested in the aerospace-related industries in Florida, Florida will realize a return of $3.54.

Key Findings

- The aerospace-related investment will generate about $26.73 B in total output; $12.94 B in direct output (i.e., the value of goods and services produced), and $7.3 B, and $6.5 B, of indirect and induced output, respectively.
- For each dollar the invested in aerospace in Florida, Florida will realize a return of $3.54.
- There will be $3.83 B in direct income, and $2.47 B and $2.08 B of indirect and induced income, respectively. In addition, 51,168 direct, 46,766 indirect, and 49,430 induced jobs, or a total of 147,365 jobs, are generated across the Florida economy.
- The total amount of tax revenues (state, local and federal) collected annually from the aerospace-related industries annually is projected to be $2,812,421,529.

Incentives for the Aerospace industry in Florida

In general, in Year 2010, Florida had 14 incentive programs available for industries in the following five categories[14]:

1) Targeted Industry Incentives (4: QTI, QDSC, CITC, HIPI)
2) Workforce Training Incentives (2: QRT, IWT)
3) Infrastructure Incentives (1: EDTF)
4) Special Opportunity Incentives (4: Rural Incentives, Urban Incentives, Enterprise Zone Incentives, Brownfield Incentives)
5) 2010 New Program (3:JUTC, LDMG, MSII)

According to the Space Florida definition of aerospace-related industries, there are five applicable categories that would be eligible for the incentive program:

1) Relating to Guided Missile and Space Vehicle
2) Relating to Satellite Telecommunications, Radio Network, and Broadcasting
3) Relating to National Security
4) Relating to Biotechnology
5) Relating to Clean Energy

The aerospace industry can thus be eligible for tax incentives via the following eight programs:

The Targeted Industry Incentives (4: QTI, QDSC, CITC, HIPI):

(1) **Qualified Target Industry Tax Refund (QTI**)

The Qualified Target Industry Tax Refund incentive is available for companies that create high wage jobs in targeted high value-added industries. This incentive includes refunds on corporate income, sales, ad valorem, intangible personal property, insurance premium, and certain other taxes. Pre-approved applicants who create jobs in Florida receive tax refunds of $3,000 per net new Florida full-time equivalent job created; $6,000 in an Enterprise Zone or Rural Community (county). For businesses paying 150 percent of the average annual wage, add $1,000 per job; for businesses paying 200 percent of the average annual salary, add $2,000 per job; businesses falling within a designated high impact sector or increasing exports of its goods through a seaport or airport in the state by at least 10 percent in value or tonnage in each year of receiving a QTI refund, add $2,000 per job; projects locating in a designated Brownfield area (Brownfield Bonus) can add $2,500 per job. The local community where the company locates contributes 20 percent of the total tax refund. There is a cap of $5 million per single qualified applicant in all years, and no more than 25 percent

[14] http://www.eflorida.com/ContentSubpage.aspx?id=472

of the total refund approved may be taken in any single fiscal year. New or expanding businesses in selected targeted industries or corporate headquarters are eligible.

(2) **Qualified Defense and Space Contractor Tax Refund (QDSC)**
Florida is committed to preserving and growing its high technology employment base by giving Florida defense, homeland security, and space business contractors a competitive edge in consolidating contracts or subcontracts, acquiring new contracts, or converting contracts to commercial production. Pre-approved applicants creating or retaining jobs in Florida may receive tax refunds of $3,000 per net new Florida full-time equivalent job created or retained; $6,000 in an Enterprise Zone or rural county. For businesses paying 150 percent of the average annual wage, add $1,000 per job; for businesses paying 200 percent of the average annual salary, add $2,000 per job.

(3) **Capital Investment Tax Credit (CITC)**
The Capital Investment Tax Credit is used to attract and grow capital-intensive industries in Florida. It is an annual credit, provided for up to twenty years, against the corporate income tax. Eligible projects are those in designated high-impact portions of the following sectors: clean energy, biomedical technology, financial services, information technology, silicon technology, transportation equipment manufacturing, or be a corporate headquarters facility. Projects must also create a minimum of 100 jobs and invest at least $25 million in eligible capital costs. Eligible capital costs include all expenses incurred in the acquisition, construction, installation, and equipping of a project from the beginning of construction to the commencement of operations. The level of investment and the project's Florida corporate income tax liability for the 20 years following commencement of operations determines the amount of the annual credit.

(4) **High Impact Performance Incentive Grant (HIPI)**
The High Impact Performance Incentive is a negotiated grant used to attract and grow major high impact facilities in Florida. Grants are provided to pre-approved applicants in certain high-impact sectors designated by the Governor's Office of Tourism, Trade and Economic Development (OTTED). In order to participate in the program, the project must: operate within designated high-impact portions of the following sectors-- clean energy, corporate headquarters, financial services, life sciences, semiconductors, and transportation equipment manufacturing; create at least 50 new full-time equivalent jobs (if a R&D facility, create at least 25 new full-time equivalent jobs) in Florida in a three-year period; and make a cumulative investment in the state of at least $50 million (if a R&D facility, make a cumulative investment of at least $25 million) in a three-year period. Once recommended by Enterprise Florida, Inc. (EFI) and approved by OTTED, the high impact business is awarded 50 percent of the eligible grant upon commencement of operations and the balance of the awarded grant once full employment and capital investment goals are met.

(5) Workforce Training Incentives

Two categories are included: Quick Response Training (QRT), and the Incumbent Worker Training Program (IWT). The QRT is an employer-driven training program designed to assist new value-added businesses and provide existing Florida businesses the necessary training for expansion. The IWT is a program that provides training to currently employed workers to keep Florida's workforce competitive in a global economy and to retain existing businesses. The "target industries" receive priority. This program is customized, flexible, and responsive to individual company needs.

Infrastructure Incentive (1: EDTF)

(6) Economic Development Transportation Fund

The Economic Development Transportation Fund, commonly referred to as the "Road Fund," is an incentive tool designed to alleviate transportation problems that adversely impact a specific company's location or expansion decision. The award amount is based on the number of new and retained jobs and the eligible transportation project costs, up to $3 million. The award is made to the local government on behalf of a specific business for public transportation improvements.

Special Opportunity Incentives

If companies are located in a specific location, they can get some benefits; a sales and use tax credit, tax refund. There are four categories included; Rural Incentives, Urban Incentives, Enterprise Zone Incentives, and Brownfield Incentives. However, as these incentives are already included in the QTI category, it's not included in the overall aerospace incentive programs. For example, projects locating in a designated Brownfield area (Brownfield Bonus) can add $2,500 per job in the QTI.

2010 Incentive Programs (2: JUTC, MSII)

(7) Jobs for the Unemployed Tax Credit Program (JUTC)

The Jobs for the Unemployed Tax Credit Program provides incentives to businesses throughout Florida to hire qualified employees who were previously unemployed. The program is available to all businesses that are identified as a "target industry". The business may receive a tax credit of $1,000 for every employee hired as of July 1, 2010. The business may claim only new hires that were previously unemployed for a minimum of 30 days, and that remain employed after a 12-month period at an average of 36 hours per week. This program will run until June 30, 2012 with a limit of $10 million available for tax credits.

(8) **Manufacturing and Spaceport Investment Incentive Program (MSII)**

The Manufacturing and Spaceport Investment Incentive Program encourages capital investment and job creation in manufacturing and spaceport activities in Florida. Applications are accepted by

eligible businesses from July 1, 2010 to June 30, 2012. A tax refund up to $50,000 will be given on the State Sales and Use Tax paid for eligible equipment purchases. Purchase cost must exceed a business' total expenditures on eligible equipment purchased and placed into service in Florida during the 2008 tax year.

Summary of the Incentive Program(s) Applicable to Aerospace in Florida

In the following section, a summary of the Florida incentive program(s) and additional information will be provided. The program summary will include the names, subjects, tools, details, and limitations of the Florida incentive system relating to the aforementioned Space Florida-defined aerospace categories. Additional information will include the QTI's target industry relating to the aerospace industry-related Space Florida category.

Table 23. Summary of the Incentive Programs in Florida

Program	Subject	Tool	Details	Limitations
Qualified Target Industry Tax Refund (QTI)	Companies that create high wage jobs in targeted high value-added industries.	Refunds on corporate income, sales, ad valorem, intangible personal property, insurance premium, and certain other taxes.	$3,000 per net new job $6,000 in an Enterprise Zone or Rural Community (county)	The local community where the company locates contributes 20 percent of the total tax refund.
			For businesses paying 150 percent of the average annual wage, add $1,000 per job	There is a cap of $5 million per single qualified applicant in all years, and no more than 25 percent of the total refund approved may be taken in any single fiscal year.
			For businesses paying 200 percent of the average annual salary, add $2,000 per job	
			businesses falling within a designated high impact sector or increasing exports of its goods through a seaport or airport in the state by at least 10 percent in value or tonnage in each year of receiving a QTI refund, add $2,000 per job	

Program	Subject	Tool	Details	Limitations
			projects locating in a designated Brownfield area (Brownfield Bonus) can add $2,500 per job	
Qualified Defense and Space Contractor Tax Refund (QDSC)	Florida defense, homeland security, and space business contractors	tax refund	$3,000 per net new job	For contract or subcontract consolidation projects an increase in employment of at least 25 percent or create at least 80 new Florida jobs
			$6,000 in an Enterprise Zone or Rural Community (county)	for defense production conversion projects a net increase in nondefense production jobs
			For businesses paying 150 percent of the average annual wage, add $1,000 per job	for reuse projects a creation of at least 100 jobs
			for businesses paying 200 percent of the average annual salary, add $2,000 per job	Pay an average wage of at least 115 percent of the state, metropolitan statistical area (MSA), or the local average wages
Capital Investment Tax Credit (CITC)	clean energy, biomedical technology, information technology, transportation equipment manufacturing	refund corporate income tax	One hundred percent, for a project with a cumulative capital investment of at least $100 million	up to twenty years
			Seventy-five percent, for a project with a cumulative capital investment of at least $50 million but less than $100 million	minimum of 100 jobs and invest at least $25 million in eligible capital costs
			Fifty percent, for a project with a cumulative capital investment of at least	

Program	Subject	Tool	Details	Limitations
			$25 million but less than $50 million	
High Impact Performance Incentive Grant (HIPI)	Among clean energy, life sciences, and transportation equipment manufacturing, designated by the Governor's Office of Tourism, Trade and Economic Development (OTTED)	grant	50 percent of the eligible grant upon commencement of operations and the balance of the awarded grant once full employment and capital investment goals are met	create at least 50 new full-time equivalent jobs (if a R&D facility, create at least 25 new full-time equivalent jobs) in Florida in a three-year period Make a cumulative investment in the state of at least $50 million (if a research and development facility, at least $25 million) in a 3-year period
Workforce Training Incentives	Employer-driven training program designed to assist new value-added businesses.	educational facility	Educational facilities assist with application, program development or delivery, and also serve as fiscal agent for the project.	This program is customized, flexible, and responsive to individual company needs.
Economic Development Transportation Fund	Specific business for public transportation improvements.	award	The actual amount funded is based on the cost of the necessary improvements and is limited to $7,000 per job created and/or retained. A waiver of the per-job limit may be granted if the project is located in an area experiencing severe economic distress.	The award amount is on the number of new and retained jobs and the eligible transportation project costs, up to $3 million.
Jobs for the Unemployed Tax Credit	target industry	tax credit	Tax credit of $1,000 for every employee hired as of July 1,	Only new hires that were previously unemployed for a

Program	Subject	Tool	Details	Limitations
Program (JUTC)			2010.	minimum of 30 days, and that remain employed after a 12-month period at an average of 36 hours per week.
				This program will run until June 30, 2012 with a limit of $10 million available for tax credits
Manufacturing and Spaceport Investment Incentive Program (MSII)	manufacturing and spaceport activities in Florida	tax refund	Up to $50,000 will be given on the State Sales and Use Tax paid for eligible equipment purchases.	eligible businesses from July 1, 2010 to June 30, 2012

QTI Tax Refund Target Industries (Effective January 15, 2009)

The QTI Tax Refund Target Industries comprises seven categories; manufacturing facilities, financial and insurance services, corporate headquarters, information industries, professional, scientific and technical services, wholesale trade and distribution, administrative and support services. Of these, three categories of Space Florida defined aerospace-related industries would be eligible, including the following:

Table 24. The QTI Tax Refund Target Industries Applicable to Space Florida Defined Aerospace-Related Industries in Florida

Target Industries	Relating to Space Florida	Specification
1) Manufacturing facilities	(1) Food & Beverage Products	
	(2) Chemicals	-Ethanol & Biodiesel Fuel Manufacturing -Pharmaceutical Manufacturing
	(3) Metal & Non-Metallic Mineral Products	-Ultra High Purity Silicon Manufacturing
	(4) Machinery	- Electronic Flight Simulator Manufacturing - Optical Instruments Manufacturing - Turbine and Turbine Generator Manufacturing
	(5) Electrical Equipment	
	(6) Computer & Electronic Products	- Electro medical Apparatus Manufacturing - Laser & Optoelectronics

		Manufacturing - Photovoltaic & Hydrogen Fuel Cells - Software Reproducing
	(7) Transportation Equipment	- Aircraft Manufacturing - Marine Manufacturing - Aerospace Manufacturing - Aircraft Maintenance, Repair & Overhaul
2) Information Industries	(1)Telecommunications	Satellite Communications
3) Professional, Scientific & Technical Services	(1) Professional, Scientific & Technical	- Computer Programming / Software Development - Computer System Design - Management, Scientific & Technical Services - Research & Development - Scientific & Technical Consulting Services - Simulation Training - Testing Laboratories
	(2) Space Launch Activities	
	(3) Flight Training Services	
	(4) Centralized Corporate Training Services	

Comparison with Incentive Programs in Other State(s)

Other states employ similar incentive programs to Florida's. However, Washington State was the only other state found that provides incentives to the aerospace sector, per se. The Washington state tax incentive program is outlined below (AFA 2010). Comparing with Florida, Washington state targets total tax rate reduction(s), and doesn't focus on the individual tax benefit(s). In addition, Florida's incentive program(s) are with jobs and/or job creation, whereas Washington State's incentive program(s) are connected with final product or are more performance-based than Florida's.

Table 25 Incentive Programs Available in Washington State[15]

Program	Specific Program	Details
Preferential B&O tax rate	Manufacturers & Processors for Hire	*Manufacturing -40% reduced rate *Wholesaling -40% reduced rate *Retailing –38% reduced rate *Commercial airplanes & their component parts, tooling specifically designed for use in manufacturing commercial airplanes & component parts
	Aerospace Product Development Businesses	*50% reduced rate (.9%) -40% reduced rate in July 2013
	Aerospace Products	*Commercial airplanes & their component parts *Machinery & equipment designed and used primarily for maintenance, repair, overhaul or refurbishing of commercial airplanes or their components by FAR Part 145 stations *Tooling specifically designed for use in manufacturing commercial airplanes or their components
	Certificated FAR Part 145 Repair Stations	*38% reduced rate *Retail sales exempt from tax under RCW 82.08.261, 262 and 263, made in Washington by certificated FAR part 145 stations
B&O tax credit for aerospace product development		B&O tax credit equal to the amount of qualified aerospace product development expenditures multiplied by 1.5%
Sales and use tax exemption on computers, hardware, and peripherals		*Computer hardware, software and peripherals used in the development, design and engineering of aerospace products & in providing aerospace services *Peripherals includes –keyboards, monitors, mouse devices, printers, plotters, routers, switches and hubs
B&O tax credit for property taxes/leasehold taxes paid		*Property tax fraction = ½ or 0.5 *Multiply property taxes paid on M&E equipment in 2009 by 0.5 to calculate amount of B&O tax credit

Table 28 shows comparing incentive programs and financial records of two states. Remember Florida does not suggest only Aero Space yet, therefore, CITC shows 2 billion. Actually, CITC includes whole tax refund in clean energy, biomedical technology, information technology, transportation equipment manufacturing sector, not only Aero Space.

[15] Source : http://dor.wa.gov/content/findtaxesandrates/taxincentives/incentiveprograms.aspx

Table 26. Comparing Incentive Programs and Financial Records

Florida(2008)[16]			Washington(2008)[17]		
Population	18,423,878		Population	6,549,224	
Real GDP (2005 standard)	$690,047		Real GDP (2005 standard)	$310,984	
Incentive Programs	Active Project (or Company)	Capital Investment	Incentive Programs	Participants	Tax Savings
QTI	49	420	Preferential B&O tax rate reduction	299	14.1
QDSC	8	36.7	B&O tax credit for aerospace product development	481	22
CITC	13	2000	B&O tax credit for property taxes/leasehold taxes paid		
HIPI	3	756.8	Sales and use tax exemption on computers, hardware, and peripherals	80	122.5
Workforce Training Incentives	886	27.864	Workforce Training Incentives	7	0.05
EDTF	5	102	Blank	Blank	Blank
JUTC	N/A	N/A			
MSII	N/A	N/A			
Total (in $M)	$964	$3,343.36	Total (in $M)	$867	$158.65
Controlled by Pop and Real GDP	0.01%	0.48%	Controlled by Pop and Real GDP	0.01%	0.05%

Final Conclusions

The results of the Phase One study help to clarify the economics behind the aerospace industry's impact and linkages on the Florida economy at a time when support for the space industries is declining.

The study provides a framework for definition and inventory of, the aerospace-related industries in the state. The aerospace-related industries are currently defined by Space Florida-defined sectors, with associated NAICS codes. The database has been compiled and broadly validated given the time period for the Phase One project. The data was statistically analyzed with results summarized by Space-Florida-defined categories. The incentive analysis was performed, with results pertaining to the current array of aerospace-related incentive offerings in the state.

[16] Source: Enterprise Florida, *2008 Incentives Report*

[17] Source: Washington State Department of Revenue, *Descriptive Statistics For Tax Incentive Programs 2010 Report Covering Activity During Calendar Year 2009*

The economic impact modeling analysis was performed using Florida based aerospace-specific industries data for year 2010 (based on Dun and Bradstreet/Selectory Business data). The economic model generated the economic impact results, expressed as output, employment, and income, in 2011 dollars.

In Summary:

- The aerospace-related investment will generate about $26.73 B in total output; $12.94 B in direct output (i.e., the value of goods and services produced), and $7.3 B, and $6.5 B, of indirect and induced output, respectively.
- For each dollar the invested in aerospace in Florida, Florida will realize a return of $3.54.
- There will be $3.83 B in direct income, and $2.47 B and $2.08 B of indirect and induced income, respectively. In addition, 51,168 direct, 46,766 indirect, and 49,430 induced jobs, or a total of 147,365 jobs, are generated across the Florida economy.
- The total amount of tax revenues (state, local and federal) collected annually from the aerospace-related industries annually are projected to be around $2.8 B.

Phase Two

The next steps in the economic analysis project for Space Florida will involve:

- Continuing to analyze and fine-tune the current Phase One aerospace-related industries Space Florida categories and associated NAICS codes, and the methodology regarding the assessment of the economic impact of each of Space Florida's core aerospace industries and their linkage(s) to other aspects of the Florida economy including:
  - Launch Systems and Support
  - Satellite Systems and Payloads
  - Ground Operations and Support Systems
  - Agriculture, Climate, and Environmental Monitoring
  - Civil Protection and Emergency Management
  - International Space Station and Human Life Sciences
  - Communications, Cyber security, and Robotics
  - Adventure Tourism
  - Clean Energy
  - Advanced Materials and New Products

- Review both national and global space initiatives and highlight comparisons and contrasts.

- List and review previous technologies developed by aerospace industry and provide detailed linkages between the aerospace and the Florida economy.

- Further analysis of current and proposed financial incentives and provide a series of policy options.

- Design a survey instrument, distribute and conduct the survey analysis (using web-based and direct survey interview approaches) to collect and examine data on Space Florida-related aerospace industries such as economic, financial, demographic, and industry perceptions, among other data.

References

Aerospace Industries Association (AIA) Aerospace Research Center. Aerospace Facts and Figures 2008. Arlington, VA: Bill, Chadwick.
http://www.aia-aerospace.org/resource_center/economics/aerospace_facts_and_figures/previous_editions/

AIA Aerospace Research Center. 2010 Year-End Review and Forecast.
http://www.aia-aerospace.org/assets/YE_Analysis.pdf

Aerospace Industries Association. Security and Policy Review Handbook 4th Edition.
http://www.aia-aerospace.org/assets/security_handbook_07.pdf

Barr, Sonny, and B. General Robert Mansfield. Aerospace Economic Reports and Outlook for 2010: Manufacturing Indicators for the Aviation and Aerospace Industry. The Center for Aviation and Aerospace Leadership, Embry-Riddle Aeronautical University, 2010. http://www.erau.edu

Bureau of Labor Statistics, U.S. Department of Labor. Career Guide to Industries, 2010-11 Edition, Aerospace Product and Parts Manufacturing. http://www.bls.gov/oco/cg/cgs006.htm

Chmura Economics & Analytics, LLC in collaboration with Performance Management Group, Virginia Commonwealth University. Virginia's Aerospace Industry: An Economic Impact Analysis, November 2010.

Deloitte Consulting. Aerospace Industry Competitiveness Study. April, 2009. Prepared for the Economic Development Council of Snohomish County. April, 2009.

Dun & Bradstreet. Partner with D&B: Enhance Your Solutions with D&B Information & Insight on Millions of Businesses. Presentation, February 2011.

Florida Aviation Aerospace Alliance. FAAA Business Network Company index. 2010.
http://www.faaa.org/fbn_listings.asp

Florida's Great Northwest. SRI International. Northwest Florida Aerospace & Defense Industry. 2007.

Indigo Key, Inc., Aerospace Resource Center, Workforce Florida, Inc. 2006. Needs Assessment: Aerospace Industry Cluster.

National Aeronautics and Space Administration (NASA). Warren McHone, PhD, Transportation Economics Research Institute (TERI), and Kennedy Space Center (KSC) CFO Personnel. Economic Impact of NASA in Florida. 2008. http://www.nasa.gov/centers/kennedy/pdf/318131main_**economic-impact**08.pdf

Space Foundation. The Space Report 2009. Marty Hauser and Micah Walter-Range. Washington, DC: ISBN-13: 978-0-9789993-2-2.

Thomas, Cavanagh. And David, Metcalf. Advanced Learning Environment for the Aerospace Industry. http://www.astd.org/LC/2004/0204_metcalf.htm

Appendix A –Other Standard Definitions of Aerospace with Associated NAICS Codes

NAICS	Industry	Space Florida (CEFA)	Hamilton Sectors (Year 2011)	Florida's Aviation/Aerospace Cluster	Aerospace Industry Association	Department of Commerce	Federal Aviation Administration: Commercial Space Transportation
339113	Surgical Appliance and Supplies Manufacturing*					0	
334220	Radio and Television Broadcasting and Wireless Communication Equipment	0	0			0	0
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	0	0	0	0	0	
336411	Aircraft Manufacturing	0	0	0	0		
336412	Aircraft Engine and Engine Parts Manufacturing	0	0	0	0		
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing	0	0	0	0		
336414	Guided Missile and Space Vehicle Manufacturing	0	0	0	0	0	0
336415	Guided Missile and Space Vehicle Propulsion Units	0	0	0	0		
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment	0	0	0	0	0	
481212	Nonscheduled Chartered Freight Air Transportation		0	0		0	
517410	Satellite Telecommunications	0	0	0			
513220	Cable and Other Programs Distribution						0
541370	Surveying and Mapping (Except Geophysical)	0	0				0
927110	Space Research and Technology	0	0	0		0	
334290	Other Communications Equipment Manufacturing		0				
423130	Tire and Tube Merchant Wholesalers		0				
423860	Transportation Equipment and Supplies(except Motor Vehicle) Merchant Wholesalers	0	0				
481111	Scheduled Passenger Air Transportation		0	0			
481112	Scheduled Freight Air Transportation		0	0			
481211	Nonscheduled Chartered Passenger Air Transportation		0	0			
	<To be continued>						
	Total Number of Firms	**11,056**	**21,093**	**2,667**	**589**	**859**	**1,413**
	Total Number of Employees	**194,721**	**292,477**	**55,745**	**23,879**	**33,028**	**22,388**
	Total Sales of Firms	**$14,782,887,793**	**$34,341,603,465**	**$13,588,462,662**	**$9,982,826,823**	**$11,092,651,643**	**$3,649,510,881**

NAICS	Industry	Space Florida (CEFA)	Hamilton Sectors (Year 2011)	Florida's Aviation/Aerospace Cluster	Aerospace Industry Association	Department of Commerce	Federal Aviation Administration: Commercial Space Transportation
	<Continued>						
481219	Other Nonscheduled Air Transportation	0	0	0			
488111	Air Traffic Control		0	0			
488119	Other Airport Operations		0	0			
488190	Other Support Activities for Air Transportation		0	0			
541511	Custom Computer Programming Services		0				
541512	Computer Systems Design Services		0				
541519	Other Computer Related Services		0				
611512	Flight Training		0	0			
515111	Radio Network	0	0				
517919	All Other Telecommunications	0	0				
237130	Power and Communication Line and Related Structures Construction	0	0				
541360	Geophysical Surveying and Mapping Services	0	0				
928110	National Security	0	0				
922190	Other Justice, Public Order, and Safety Activities	0	0				
541711	Research and Development in Biotechnology	0	0				
541712	Research and Development in the Physical, Engineering, and Life Sciences(except biotechnology)	0	0				
517210	Wireless Telecommunications Carriers (except Satellite)	0	0				
541330	Engineering Services	0					
334119	Other Computer Peripheral Equipment Manufacturing	0	0				
221119	Other Electric Power Generation	0	**11 categories added in 2011**				
541940	Veterinary Services	0					
325414	Biological Product (except diagnostic) Manufacturing	0					
325411	Medical and Botanical Manufacturing	0					
541720	Business Research and Development Services	0					
	Total Number of Firms	**11,056**	**21,093**	**2,667**	**589**	**859**	**1,413**
	Total Number of Employees	**194,721**	**92,477**	**55,745**	**23,879**	**33,028**	**22,388**
	Total Sales of Firms	**$14,782,887,793**	**$34,341,603,465**	**$13,588,462,662**	**$9,982,826,823**	**$11,092,651,643**	**$3,649,510,881**

Appendix B1 –Number of Aerospace-Related Companies by County

Legend	
cat1: Space Transportation and Technologies Support Systems	cat8: Clean energy
cat2: Satellite Systems and Payloads	cat9: Adventure Tourism
cat3: Ground and Operations Support Systems	cat10: Advanced Materials and New Products
cat4: Agriculture, Climate and Environmental Monitoring	cat11: International Space Station
cat5: Civil Protection and Emergency Management	cat12: Business and Other Services
cat6: Life Sciences and Biotechnology	other county: the aerospace-related companies are located in Florida however their mailing address is listed as outside Florida

number of company	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Alachua	5	28	2	21	11	48	30	1	2		5	23	176
Baker	1			1				1					3
Bay	6	14	5	17	46	16	20		5			4	133
Bradford				2	3		1						6
Brevard	54	78	17	44	56	58	69		12	5	4	11	408
Broward	322	414	27	66	39	104	296	3	40		18	66	1,395
Calhoun		1		1									2
Charlotte	13	13	1	16	5	9	11				1	3	72
Citrus	10	13		12	6	3	14	1				7	66
Clay	4	20		10	9	10	19				2	4	78
Collier	24	39		29	2	12	29		8		1	14	158
Columbia	3	4		3	6		3	1				1	21
DeSoto	2	2		4	2	2	3		1				16
Dixie		1		2			1						4
Duval	44	97	5	43	82	32	92	2	9		5	33	444

number of company	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Escambia	10	25	3	19	70	14	28		2		4	4	179
Flagler	3	6		7		3	4					1	24
Franklin	1	1				3				1			6
Gadsden		2		3	2	2	2						11
Gilchrist				2	1	1							4
Glades							1					1	2
Gulf				1	1								2
Hamilton				2									2
Hardee		1		1	1	1							4
Hendry	3			1	3	1	2				2	1	13
Hernando	11	17		9		6	20		2			4	69
Highlands	4	6	1	7	2	1	5		1			1	28
Hillsborough	38	195	3	57	61	70	154	2	11	1	2	55	649
Holmes				3	1		1						5
Indian River	12	17	1	11	4	3	7		3			5	63
Jackson		5		5	6	1	7						24
Jefferson				1	1		1						3
Lafayette					2								2
Lake	11	27	1	20	12	5	14		2		1	8	101
Lee	33	62		44	6	20	82	1	6		1	19	274
Leon	3	41	1	13	16	33	37		2		1	25	172
Levy		2		5	1		2		1			1	12
Liberty				1	1								2
Madison		1		2				1					4
Manatee	19	23	5	13	10	16	24	1	4		2	9	126
Marion	15	39		29	4	14	33		2		1	11	148
Martin	18	12	2	22	3	4	17		5		1	5	89
Miami-Dade	393	466	12	101	62	157	421	1	38		16	108	1,775

number of company	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Monroe	11	6		10	18	9	13		6		1	9	83
Nassau		5	1	7		4	1						18
Okaloosa	11	19	11	13	74	27	30		2	1	1	5	194
Okeechobee		5		1	1		7					1	15
Orange	41	208	11	47	60	68	132	3	18	1	3	40	632
Osceola	11	32		7	1	7	30		1		4	5	98
Palm Beach	118	251	5	84	33	98	216	22	27		11	56	921
Pasco	16	44	3	23	2	14	39		4		2	15	162
Pinellas	44	158	7	42	25	74	104	1	18		15	34	522
Polk	19	36	2	29	10	11	56	1	4		1	7	176
Putnam	6	4		2	6		5		1				24
Santa Rosa	6	16	1	10	17	7	12		4		1	5	79
Sarasota	16	58	2	19	6	29	21		5			20	176
Seminole	13	96	3	8	12	30	55	2	3		3	25	250
Saint Johns	13	33	2	30	12	7	17	1	2			8	125
Saint Lucie	12	21	1	38	6	6	26		6			9	125
Sumter	4	7		5		2	4					1	23
Suwannee	1	1		5	1		2						10
Taylor	1	2		2			2						7
Union		1		4	1								6
Volusia	20	51	5	32	13	20	37	1	10		2	17	208
Wakulla	1			4		2							7
Walton	1	4		6		1	4					3	19
Washington	1	5		3	1		2						12
other	1	6		1	2	1	1		1			1	14
total	1,429	2,741	140	1,082	838	1,066	2,266	46	268	9	111	685	

Appendix B2 - Aerospace Industries Employees by County

Legend	
cat1: Space Transportation and Technologies Support Systems	cat7: Communication, Cybersecurity and Robotics
cat2: Satellite Systems and Payloads	cat8: Clean energy
cat3: Ground and Operations Support Systems	cat9: Adventure Tourism
cat4: Agriculture, Climate and Environmental Monitoring	cat10: Advanced Materials and New Products
cat5: Civil Protection and Emergency Management	cat11: International Space Station
cat6: Life Sciences and Biotechnology	cat12: Business and Other Services
	other county: the aerospace-related companies are located in Florida however their mailing address is listed as outside Florida

number of employee	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Alachua	9	118	9	163	221	481	229	4	3		46	241	1,524
Baker	4			2				3					9
Bay	25	100	17	117	5,394	321	89		28			19	6,110
Bradford				19	3		2						24
Brevard	439	1,219	479	321	1,588	8,692	538		37	378	333	89	14,113
Broward	2,698	1,545	724	645	379	544	1,235	4	518		380	746	9,418
Calhoun		-		3									3
Charlotte	64	24	9	69	5	75	102				2	8	358
Citrus	22	28		60	206	11	32	-				15	374
Clay	7	91		96	39	383	58				4	11	689
Collier	142	145		343	11	170	99		59		3	68	1,040
Columbia	18	25		39	56		7	1				-	146
DeSoto	240	12		10	173	6	6		1				448
Dixie		2		8			2						12
Duval	292	397	5	631	10,188	253	1,279	29	41		14	245	13,374

number of employee	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Escambia	73	132	18	189	5,976	392	294		5		200	12	7,291
Flagler	12	8		78		12	12					1	123
Franklin	1	2				29				-			32
Gadsden		3		14	180	11	34						242
Gilchrist				13	21	1							35
Glades							4					1	5
Gulf				2	30								32
Hamilton				3									3
Hardee		2		2	150	3							157
Hendry	8			1	150	3	5				529	3	699
Hernando	30	38		42		37	54		12			67	280
Highlands	8	8	3	27	71	1	46		4			36	204
Hillsborough	124	1,021	339	458	2,954	494	1,408	3	107	2	3	2,350	9,263
Holmes				15	3		2						20
Indian River	43	35	4	91	36	7	27		15			25	283
Jackson		26		67	68	3	46						210
Jefferson				-	2		2						4
Lafayette					8								8
Lake	51	59	5	86	130	17	40		16		30	50	484
Lee	187	161		330	191	161	474	5	19		1	83	1,612
Leon	12	115	367	101	2,586	755	231		2		2	180	4,351
Levy		7		30	3		8		1			7	56
Liberty				2	2								4
Madison		2		11				9					22
Manatee	137	105	129	101	463	89	95	5	10		43	38	1,215
Marion	33	738		160	16	70	106		2		3	153	1,281
Martin	69	33	6	162	1	20	74		42		15	18	440

number of employee	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Miami-Dade	2,999	1,486	109	823	940	1,365	2,661	10	394		95	980	11,862
Monroe	49	24		31	3,161	78	37		28		1	206	3,615
Nassau		22	1	38		22	3						86
Okaloosa	34	80	364	157	50,761	577	287		2	4	1	63	52,330
Okeechobee		53		11	99		17					3	183
Orange	1,498	935	375	611	2,806	1,172	777	10	229	80	13	759	9,265
Osceola	27	63		52	3	33	84		2		14	31	309
Palm Beach	2,578	1,421	516	488	1,373	1,228	3,487	48	90		85	408	11,722
Pasco	43	392	80	144	3	69	118		17		7	139	1,012
Pinellas	211	694	639	416	409	467	683	1	68		187	297	4,072
Polk	46	86	1	216	239	65	212	1	16		1	18	901
Putnam	21	17		13	62		23		2				138
Santa Rosa	20	58	1	45	3,229	22	27		33		2	111	3,548
Sarasota	188	196	10	116	15	368	97		8			141	1,139
Seminole	46	308	7	98	487	354	948	7	5		14	136	2,410
Saint Johns	45	102	4	181	682	40	79	15	33			17	1,198
Saint Lucie	29	63	20	236	56	35	61		37			92	629
Sumter	8	20		12		16	10					1	67
Suwannee	5	135		28	4		7						179
Taylor	2	4		8			3						17
Union		8		19	3								30
Volusia	63	200	266	149	320	113	239	1	33		3	87	1,474
Wakulla	3			44		11							58
Walton	3	23		60		-	11					23	120
Washington	3	172		36	22		5						238
other	842	21		25	20	7	2		3			3	923
total	13,511	12,784	4,507	8,568	95,998	19,083	16,518	156	1,922	464	2,031	7,981	

Appendix B3 – Aerospace Industries Sales/Revenues by County

Legend	
cat1: Space Transportation and Technologies Support Systems	cat7: Communication, Cybersecurity and Robotics
cat2: Satellite Systems and Payloads	cat8: Clean energy
cat3: Ground and Operations Support Systems	cat9: Adventure Tourism
cat4: Agriculture, Climate and Environmental Monitoring	cat10: Advanced Materials and New Products
cat5: Civil Protection and Emergency Management	cat11: International Space Station
cat6: Life Sciences and Biotechnology	cat12: Business and Other Services
	other county: the aerospace-related companies are located in Florida however their mailing address is listed as outside Florida

(Thousand)

sales	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Alachua	$1,858	$6,128	$650	$10,636	$0	$94,596	$42,810	$1,000	$215	$0	$3,974	$15,771	$177,638
Baker	$560	$0	$0	$69	$0	$0	$0	$25	$0	$0	$0	$0	$654
Bay	$1,797	$6,597	$1,636	$6,799	$0	$2,240	$3,420	$0	$2,989	$0	$0	$1,150	$26,628
Bradford	$0	$0	$0	$1,140	$0	$0	$91	$0	$0	$0	$0	$0	$1,231
Brevard	$149,724	$64,201	$91,816	$19,999	$0	$15,695	$51,327	$0	$3,445	$0	$3,697	$15,720	$415,625
Broward	$790,312	$100,778	$73,638	$42,700	$0	$74,732	$119,971	$310	$91,438	$0	$39,361	$41,626	$1,374,866
Calhoun	$0	$0	$0	$200	$0	$0	$0	$0	$0	$0	$0	$0	$200
Charlotte	$18,910	$1,055	$960	$3,115	$0	$5,730	$16,985	$0	$0	$0	$99	$435	$47,288
Citrus	$2,671	$1,310	$0	$2,973	$0	$370	$1,604	$0	$0	$0	$0	$840	$9,768
Clay	$1,414	$6,154	$0	$5,912	$0	$72,798	$1,246	$0	$0	$0	$260	$550	$88,334
Collier	$33,431	$6,757	$0	$14,013	$0	$25,923	$5,642	$0	$5,596	$0	$900	$6,623	$98,885
Columbia	$6,326	$1,164	$0	$2,100	$0	$0	$90	$69	$0	$0	$0	$0	$9,749
DeSoto	$18,411	$657	$0	$379	$0	$112	$222	$0	$140	$0	$0	$0	$19,921
Dixie	$0	$80	$0	$260	$0	$0	$77	$0	$0	$0	$0	$0	$417

sales	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Duval	$80,769	$41,317	$1,344	$45,197	$0	$18,733	$142,922	$380	$3,660	$0	$828	$57,099	$392,249
Escambia	$19,630	$13,311	$2,160	$11,053	$0	$16,323	$11,035	$0	$300	$0	$94,447	$478	$168,737
Flagler	$1,580	$355	$0	$6,443	$0	$700	$452	$0	$0	$0	$0	$57	$9,587
Franklin	$100	$96	$0	$0	$0	$1,548	$0	$0	$0	$0	$0	$0	$1,744
Gadsden	$0	$142	$0	$550	$0	$640	$4,353	$0	$0	$0	$0	$0	$5,685
Gilchrist	$0	$0	$0	$410	$0	$81	$0	$0	$0	$0	$0	$0	$491
Glades	$0	$0	$0	$0	$0	$0	$512	$0	$0	$0	$0	$79	$591
Gulf	$0	$0	$0	$100	$0	$0	$0	$0	$0	$0	$0	$0	$100
Hamilton	$0	$0	$0	$129	$0	$0	$0	$0	$0	$0	$0	$0	$129
Hardee	$0	$80	$0	$120	$0	$200	$0	$0	$0	$0	$0	$0	$400
Hendry	$950	$0	$0	$99	$0	$120	$201	$0	$0	$0	$34,600	$77	$36,047
Hernando	$3,100	$3,151	$0	$1,956	$0	$5,236	$2,952	$0	$577	$0	$0	$4,370	$21,342
Highlands	$640	$364	$120	$1,448	$0	$54	$2,924	$0	$300	$0	$0	$0	$5,850
Hillsborough	$19,445	$73,786	$476	$27,127	$0	$42,159	$527,178	$220	$8,826	$0	$213	$1,091,486	$1,790,916
Holmes	$0	$0	$0	$1,240	$0	$0	$120	$0	$0	$0	$0	$0	$1,360
Indian River	$9,087	$1,808	$250	$4,849	$0	$343	$606	$0	$1,040	$0	$0	$1,571	$19,554
Jackson	$0	$2,693	$0	$3,190	$0	$160	$480	$0	$0	$0	$0	$0	$6,523
Jefferson	$0	$0	$0	$0	$0	$0	$68	$0	$0	$0	$0	$0	$68
Lafayette	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Lake	$5,237	$2,720	$330	$4,455	$0	$185	$2,211	$0	$6,884	$0	$3,500	$3,393	$28,914
Lee	$57,373	$13,118	$0	$23,058	$0	$9,559	$48,179	$220	$1,648	$0	$68	$15,241	$168,464
Leon	$7,007	$7,148	$63,537	$3,598	$0	$41,048	$14,420	$0	$600	$0	$110	$20,168	$157,636
Levy	$0	$217	$0	$1,434	$0	$0	$170	$0	$66	$0	$0	$595	$2,482
Liberty	$0	$0	$0	$100	$0	$0	$0	$0	$0	$0	$0	$0	$100
Madison	$0	$60	$0	$749	$0	$0	$0	$840	$0	$0	$0	$0	$1,649
Manatee	$47,274	$13,029	$21,531	$6,733	$0	$7,155	$5,297	$400	$822	$0	$4,500	$2,867	$109,608
Marion	$5,902	$5,884	$0	$7,461	$0	$3,293	$3,142	$0	$161	$0	$130	$11,085	$37,058
Martin	$13,060	$1,533	$625	$9,438	$0	$821	$7,710	$0	$5,076	$0	$0	$1,043	$39,306

sales	cat1	cat2	cat3	cat4	cat5	cat6	cat7	cat8	cat9	cat10	cat11	cat12	total
Miami-Dade	$776,519	$102,007	$15,724	$69,322	$0	$129,883	$219,913	$880	$31,974	$0	$12,485	$86,476	$1,445,185
Monroe	$8,479	$826	$0	$2,028	$0	$2,785	$1,144	$0	$2,040	$0	$110	$9,731	$27,142
Nassau	$0	$1,237	$173	$1,882	$0	$10,207	$140	$0	$0	$0	$0	$0	$13,639
Okaloosa	$5,031	$4,479	$31,591	$10,405	$0	$23,105	$37,826	$0	$186	$0	$61	$5,581	$118,265
Okeechobee	$0	$3,146	$0	$700	$0	$0	$717	$0	$0	$0	$0	$70	$4,633
Orange	$398,960	$61,471	$34,148	$26,850	$0	$30,579	$61,888	$1,285	$17,168	$0	$863	$65,607	$698,819
Osceola	$2,410	$3,071	$0	$2,503	$0	$2,038	$3,688	$0	$110	$0	$859	$2,499	$17,178
Palm Beach	$657,302	$1,615,758	$1,673	$31,342	$0	$122,890	$155,835	$9,285	$10,655	$0	$21,543	$22,117	$2,648,400
Pasco	$10,570	$31,611	$7,600	$7,789	$0	$4,703	$8,755	$0	$1,400	$0	$528	$9,066	$82,022
Pinellas	$76,030	$111,886	$114,063	$24,898	$0	$36,087	$253,533	$110	$7,173	$0	$37,413	$17,539	$678,731
Polk	$7,590	$8,059	$110	$12,496	$0	$4,620	$10,972	$60	$1,090	$0	$63	$5,275	$50,335
Putnam	$3,701	$963	$0	$520	$0	$0	$1,516	$0	$99	$0	$0	$0	$6,799
Santa Rosa	$1,480	$11,421	$130	$2,374	$0	$865	$1,194	$0	$2,216	$0	$220	$4,584	$24,484
Sarasota	$32,888	$17,864	$3,100	$7,340	$0	$28,751	$2,935	$0	$879	$0	$0	$11,832	$105,588
Seminole	$14,935	$20,747	$725	$6,037	$0	$12,922	$26,316	$407	$238	$0	$962	$5,549	$88,838
Saint Johns	$6,990	$5,486	$353	$11,690	$0	$3,190	$3,756	$3,822	$4,100	$0	$0	$813	$40,200
Saint Lucie	$3,590	$2,972	$1,500	$13,187	$0	$766	$2,780	$0	$5,032	$0	$0	$14,270	$44,097
Sumter	$710	$2,012	$0	$560	$0	$1,794	$460	$0	$0	$0	$0	$196	$5,732
Suwannee	$320	$13,900	$0	$1,279	$0	$0	$310	$0	$0	$0	$0	$0	$15,809
Taylor	$110	$194	$0	$340	$0	$0	$110	$0	$0	$0	$0	$0	$754
Union	$0	$700	$0	$891	$0	$0	$0	$0	$0	$0	$0	$0	$1,591
Volusia	$8,770	$16,693	$9,109	$7,863	$0	$6,191	$86,240	$67	$6,574	$0	$127	$5,084	$146,718
Wakulla	$190	$0	$0	$2,290	$0	$532	$0	$0	$0	$0	$0	$0	$3,012
Walton	$240	$1,455	$0	$1,237	$0	$0	$717	$0	$0	$0	$0	$944	$4,593
Washington	$30	$30,222	$0	$490	$0	$0	$188	$0	$0	$0	$0	$0	$30,930
other	$516,732	$870	$0	$990	$0	$950	$130	$0	$270	$0	$0	$250	$520,192
	$3,830,146	$2,444,742	$479,073	$518,532	$0	$863,411	$1,899,483	$19,380	$224,987	$0	$261,920	$1,559,806	