Regional Economic Impact Study

of the UCF Business Incubation Program

July 2016 to June 2018

UCF

Prepared for

THE CORRIDOR
FLORIDA HIGH TECH

A Review of the University of Central Florida Business Incubation Program Economic Impacts from July 01, 2016 through June 30, 2018

To

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FOREWORD

The University of Central Florida Business Incubation Program (UCFBIP) continues to prove its value to East Central Florida as a job-creating "machine" of a high order. As documented in this latest economic impact analysis prepared by Dr. Vernet Lasrado – following a decade of reporting the substantial positive impacts of UCFBIP – it can be seen that the direct job creation, business volume, and return on public investments nurtured within the dynamic programs of the incubator network continue to expand and multiply throughout the region. The increasing maturity of the companies currently participating in the network, as well as those which have already graduated and established themselves within the region, demonstrates the effectiveness of good management; careful client selection and training; focused education of clients; and on-going follow-up support.

This updated analysis for 2016-18 prepared by Dr. Lasrado is another thorough and credible report regarding the continuing growth and effectiveness of the UCF Business Incubation Program more than fifteen years after its inception. Once again, the analysis updates the reported business data using IMPLAN v3 – a highly regarded and oft-used input-output model that allows for impact analysis at a local and regional level, using primary data collected locally, as well as national trends within specific industry groups.

While remaining careful and conservative, the analysis allows accurate comparisons between the current impact findings and estimates that were provided as the products of earlier analyses in 2009, 2011, 2013, 2014, and 2016. Because he and the program staff rigorously secure and validate local, "real-world" data from participating and graduating companies and provide a straightforward presentation of the data incorporated, the methodology employed, and the summary findings of his analysis - the observations and conclusions of the report are very useful for understanding and appreciating the effectiveness of the UCFBIP.

There is no denying the remarkable success of the UCF Business Incubation Program (UCFBIP) – not only as a very productive creator of new jobs in high technology and other quality industries, but also as a model for focused and cost-effective economic development. Based on the ongoing research by Dr. Lasrado, by the summer of 2018, UCFBIP clients through their operations have directly or indirectly sustained at least *6,725 full-time, permanent, high quality jobs* within the central Florida regional economy. UFCBIP is a model for cooperative partnerships between the higher education system, local government, private enterprise, and a myriad of support agencies, and it accomplishes its mission by leveraging local public investment at a rate of *more than $12.00 returned in local taxes for every $1.00 invested*. That leverage continues to increase as the system matures and produces more graduated firms in high technology industry sectors. This has been especially true over the recent two years addressed in this report.

When the total public investment over two years beginning in July 2016 – ($3.7 million; see table 2-3) is compared to the level of tax revenues returned to state and local governments in the same two-year period ($44.7 million; see table 3-4) – it can be seen that the system-wide return on public investment is about ***1,200%*** - representing outstanding cost-effectiveness. Dr. Lasrado also points out in Section 3 that each $1.00 of public investment also produces $118 of additional regional GDP (value added) and $226 of regional sales (output). These returns are more than 60% greater than those reported in the previous two-year analysis (2014-2016).The total economic output of the firms sustained by the UCFBIP is now almost $1.6 Billion in Central Florida, up 22% from the previous report. This is admirable success in the field of economic development, and it can be largely attributed to producing more high technology jobs in the region compared to prior reporting periods, as well as better capture of business data from graduated companies.

While not included in this current report for 2016-2018, the addition of the Life Sciences incubator at Lake Nona within the network promises to enhance the regional impacts – direct and indirect – in coming years as the high technology sectors supported by the UCFBIP grow even larger and more productive. With an ever-maturing network of nine incubators now operating within five Central Florida counties, the UCFBIP has built a foundation of success for local economic development efforts and has provided a platform for aspiring entrepreneurs to conceive, develop, nurture, and grow their business dreams.

EXECUTIVE SUMMARY

Since its formation in 1999, the University of Central Florida Business Incubation Program (UCFBIP) has provided over 300 early stage companies with the enabling tools, training and infrastructure to create financially stable high growth/impact enterprises. With multiple locations across Central Florida, the UCFBIP is supported by a number of partners including city and county governments and the Florida High Tech Corridor Council. These partners commissioned the previous studies of the UCFBIP's economic impact in 2009, 2011, 2013, 2014, and 2016. ***This study quantifies the impact of the UCFBIP from July 01 2016 through June 30, 2018.***

This study spans from **July 01, 2016 through June 30, 2018**, and reveals that the operations of the client firms[1] of the UCFBIP program have:

1. Sustained a total[2] of 6,275 jobs[3] at the end of study period
    a. Directly[4] sustained 3,409 Jobs in the region at the end of study period, and
    b. Indirectly[5] sustained an additional 2,866 jobs throughout the region;
2. Had a total impact on regional GDP of over $888.72 million[6],
    a. Direct regional GDP of over $440.97 million, and
    b. Indirectly impacted over $447.75 million of additional regional GDP
3. Had a total impact on regional sales of over $1.59 billion,
    a. Direct regional sales of over $0.84 billion, and
    b. Indirectly impacted over $0.75 billion of additional regional sales
4. Had a total impact on State and Local taxes of over $44.72 million
5. <u>For every $1 invested</u> it is estimated[7]
    a. Over $118 is generated in direct regional GDP ROI[8]
    b. Over $226 is generated in direct regional sales ROI [9]
    c. $12.03 is generated in total State and Local taxes ROI [10]

[1] Current Clients (152) and Graduated Clients (185) as of June 30, 2018

[2] In economic impact lingo, we are referring to the Total Effect

[3] Based on a snapshot of jobs as of June 30, 2018

[4] In economic impact lingo, we are referring to the Direct Effect

[5] In economic impact lingo, we are referring to the Indirect Effect and the Induced Effect

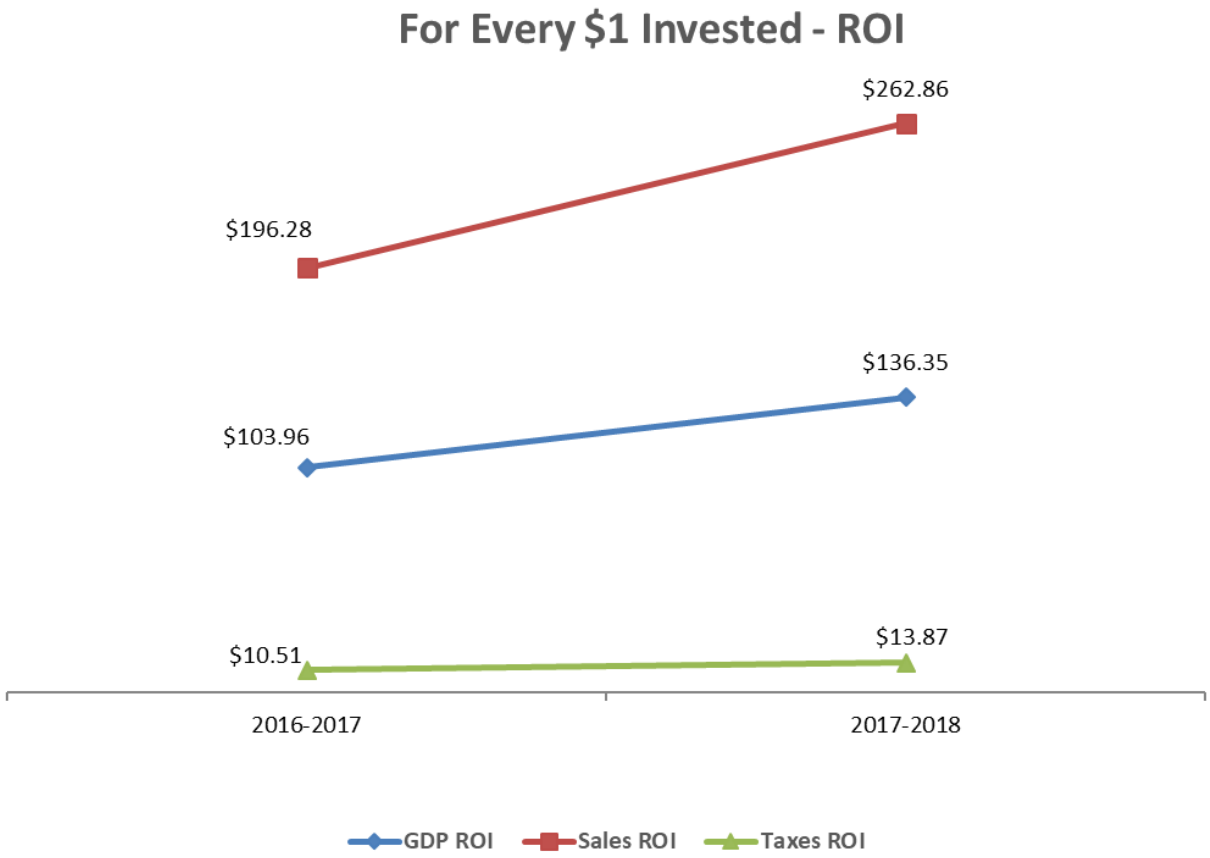
[6] All reported dollar amount have been adjusted to 2018 dollars

[7] $3.71 million is used as the Regional Total Adjusted Funding for FY 2016/17 and FY 2018/18.

[8] Derived by dividing Total Direct Regional GDP by Total Adjusted Funding for the study period. For this report, this figure represents the average of the 2 fiscal years analyzed

[9] Derived by dividing Total Direct Regional Sales by Total Adjusted Funding for the study period. For this report, this figure represents the average of the 2 fiscal years analyzed

[10] Derived by dividing Total State and Local Taxes by Total Adjusted Funding for the study period. For this report, this figure represents the average of the 2 fiscal years analyzed



Please note the 2017-2018 funding was reduced overall, which has the effect of inflating the impact numbers for the FY 17/18 fiscal year. Also, it should be noted that the Economic Impact measured does not included companies that have been acquired after were acquired. Further, any past companies that have moved out of the study area are excluded after they move.

Once again, the UCFBIP has demonstrated that it provides an extremely productive and efficient tool for creating and supporting quality jobs and economic activity for the Central Florida region and beyond. During a period of national economic recovery and robust growth, the UCFBIP has continued to be a job-producing "machine" bringing forth in the local economy a variety of businesses and employers that demonstrate sound management practices and potential for continued growth.

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1 INTRODUCTION

The goal of the UCF Business Incubation Program (UCFBIP) and its community partners is to facilitate smarter, faster startup and growth of emerging companies so those companies will become financially successful, high growth companies in the community. The mission is to have a University-driven community partnership providing early stage companies with the enabling tools, training and infrastructure to create financially stable high growth/impact enterprises.

Since its inception, UCFBIP clients have been provided an array of business development services and resources to help accelerate growth. The formal incubation process takes place through a series of strategic and tactical working sessions. The strategic sessions are designed to help define the company business, market and capital strategies and to build the business plan. Expertise and resources are identified for the company to utilize in addressing tactical needs as they are identified through the strategy sessions or through other informal interactions with Incubator staff and advisors. Regular education and networking programs also are designed to address the shared needs identified among UCFBIP clients. Graduation takes place when a client has achieved a level of financial and corporate growth that enables them to leave the incubator and enter the second stage of corporate growth.

With multiple locations across Central Florida, the UCFBIP is supported by a number of partners including city and county governments and the Florida High Tech Corridor Council, which commissioned the previous studies of the UCFBIP's economic impact in 2009, 2011, 2013, 2014, and 2016.

W. H. Owen while employed at Real Estate Research Consultants, Inc. (RERC) first performed the review of the economic impact of the UCFBIP on the surrounding counties in 2009. In 2011, a subsequent review was performed again by W. H. Owen with W. H. Owen Consulting, Inc. (WHO), retained by the Florida High Tech Corridor Council (FHTCC) to prepare an economic impact analysis of the UCFBIP. The latter study accounted for the impact of the UCFBIP up to October 2011. In 2013, a study was conducted to account for the impact of the UCFBIP from October 2011 through June 30, 2013. The study in 2014 quantified the cumulative impact of the UCFBIP since its inception in 1999 over a 15 year period from July 1, 1999 through June 30, 2014. The most recent prior study quantified the cumulative impact of the UCFBIP from July 1, 2014 through June 30, 2016. These impact analyses measured the spending patterns and tax impacts of past UCFBIP clients.

The current study quantifies the cumulative impact of the UCFBIP from July 1, 2016 through June 30, 2018. It does so by aggregating the modelled economic impact of the activities of the firms that have participated (current and graduated) in the UCFBIP for each fiscal year.

1.1 Review of the state of the UCFBIP for the study period

Table 1-1 below indicates the Incubators and their status for the duration of the study period and current status. It should be noted that for the purposes of this study, current client firms are included only for the years each incubator is active. Once an incubator is not an active participant of the UCFBIP network, its current client firms are excluded from the study unless they transferred to an active incubator in the UCFBIP network. While eleven incubators contributed to the impacts documented in past studies only eight incubators are currently[11] operated as the UCFBIP network.

Table 1-1: UCFBIP Incubator sites history and status

Incubator	Open Year	Status
Central Florida Research Park	1999	Active
Downtown	2004	Merged in 2009 with Orlando Incubator
Photonics UCF Campus	2007	Active
Orlando	2007	Active
Winter Springs	2008	Active
Leesburg	2009	Turned site over to city in December, 2012
Sanford	2009	Closed Site in 2012
St. Cloud	2010	Closed Site in 2015
Kissimmee	2010	Active
Daytona	2011	Active
Apopka	2012	Active
Lake Nona	2018	Active

A positive addition to the UCFBIP network is the recent opening of the Lake Nona Life Sciences Incubator in FY 17/18. This is the first new Incubator to be added to the network in the last six years. Given that the Lake Nona incubator opened so close to June 30, 2018, it has been excluded from this study. The next iteration of the economic impact of the UCFBIP will include the economic impact of the Lake Nona Incubator.

The remainder of the report will discuss the methodology used and present the outcomes of the current study.

[11] As of June 30, 2018.

2 METHODOLOGY

In essence, this study models the economic impact of the activities of the firms that have participated in the UCFBIP for each year since July 1, 2016 through June 30, 2018. These economic impacts are reported in the form of direct impact, indirect impact, and induced impact. The following section will detail the constraints of the study, the assumptions made, data collection endeavor, a summary of the collected/reported data, and the analysis technique.

2.1 Constraints of the study

2.1.1 Type of Firms modelled

In general, UCFBIP client firms fall into two categories: current firms and graduated firms. For a given fiscal year, current firms are those actively participating in the UCFBIP. Likewise, graduated firms are those that have successfully completed the UCFBIP curriculum in a prior fiscal year. There is also the case when some current firms exit the program prior to graduation. In this event, these firms are excluded from the study from that fiscal year onwards. Another point to note is that at any point of time, firms that leave the study area are excluded from the study post their departure year.

2.1.2 Study Period

The current study encompasses the period from July 1, 2016 through June 30, 2018.

2.1.3 Study Area

The individual incubators in the UCFBIP are located in various cities, counties, and MSA's across Central Florida. As described by Table 2-1, the five incubator counties fall under two MSA's (Orlando-Kissimmee-Sanford and Deltona-Daytona Beach-Ormond Beach) henceforth referred to as the *study area.*

2.1.4 Software Used

As in the most recent studies, the current study uses IMPLAN version 3. The use of IMPLAN reflects the general trend towards its application by multiple departments within the UCF Office of Research and Commercialization thereby leading to a more standardized output across the reports generated.

2.2 Assumptions

2.2.1 Use of MSAs

This study builds upon the use of Metropolitan Statistical Areas (MSAs) as the basic unit of measurement of the study area. Using just the county information assumes that all of the client employees and business takes place within the county. In reality, many of the client employees and business takes place across county boundaries and this is effectively captured by using MSAs as the basis of the study area. Each MSA area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core[12].
Table 2-1: UCFBIP Incubator sites, county and MSA information

Incubator	City	County	MSA
Apopka	Apopka	Orange	Orlando-Kissimmee-Sanford, FL
Central Florida Research Park	Orlando	Orange	Orlando-Kissimmee-Sanford, FL
Daytona	Daytona	Volusia	Deltona-Daytona Beach-Ormond Beach, FL
Orlando	Orlando	Orange	Orlando-Kissimmee-Sanford, FL
Kissimmee	Kissimmee	Osceola	Orlando-Kissimmee-Sanford, FL
Photonics	Orlando	Orange	Orlando-Kissimmee-Sanford, FL
Winter Springs	Winter Springs	Seminole	Orlando-Kissimmee-Sanford, FL

2.2.2 Use of 2018 Dollars for analysis

All the analysis performed reports any dollar amounts in 2018 dollars. This can be performed by using the Consumer Price Index (CPI)[13] as a measure to indicate the amount of inflation or deflation. As it can be seen in Table 2-2, the CPI multiplier column is the amount of inflation required to equate the corresponding year's dollar amount to 2018. This is derived by dividing the 2018 CPI value by the corresponding years CPI value. If the number is greater than 1 there is inflation, otherwise there is deflation. By way of illustration, $100.00 in 2015 would equate to approximately $106.03[14] in 2018 dollars. It is important that the funding is reported for the fiscal year (FY), i.e., July 1 (Current Year) though June 30 (Next Year). Hence, the CPI multipliers for each of the two years in a given fiscal year are blended to adjust the annual fiscal dollar amounts to 2018 dollar amounts.

[12] US Census Bureau website http://www.census.gov/population/metro/
[13] Retrieved from https://www.bls.gov/data/inflation_calculator.htm
[14] $100.00 x 2015 Multiplier = $100.00 x 1.06033= $106.03

Table 2-2: Inflation Adjustment Multipliers

Year	CPI Multiplier
2015	1.06033
2016	1.05910
2017	1.03600
2018	1.00000

Table 2-3: UCFBIP summary of public funding adjusted to 2018 dollars

Fiscal Years	Actual Funding	Adjusted Funding
2016-2017	$1,945,748	$2,038,271
2017-2018	$1,650,391	$1,680,098
Total	$3,596,139	$3,718,369

2.3 Data collection and assimilation

The site managers performed the arduous task of collecting/retrieving information on current and graduated client firms for all the fiscal years. The data collection endeavor was a great success in providing accurate and complete data for the analysis to be performed. *If available*, for each firm for each fiscal year the data collected included information on:

- Industry Classification
- Number of employees
- Sales
- Grants received
- investment received
- Year joined the UCFBIP
- Year graduated from the UCFBIP
- Employer Identification Number (EIN)
- DUNS Number

For the current or graduated firms for which no information was reported the EIN and DUNS numbers were used to search the ES202 and LEXISNEXIS databases for further information on the employment and sales of these firms. It should be noted that for most of the newer UCFBIP client firms, the site managers had reported most of the information as described above. However, for the older UCFBIP firms the information reported was sparse and generally included information only on employment as the firms were not obligated to respond to data collection efforts by the site managers. This is not an issue as the analysis software (to be discussed) IMPLAN v3 can accept either earnings or employment counts as inputs to determine the economic impact.

Summary results as reported by the site managers present snapshots of the jobs sustained by the current and graduated firms in the program for the given years. The summary of the jobs ***directly*** sustained by UCFBIP current and graduated firms since inception are presented in Tables 2.4 and 2.5.

Table 2-4: Reported jobs sustained as a result of UCFBIP clients from 2000 through 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Current	12	31	49	105	102	117	193	265	129	187
Graduated	2	10	32	72	180	234	291	437	537	668
Total	14	41	81	177	282	351	484	702	666	855

Table 2-5: Reported jobs sustained as a result of UCFBIP clients from 2010 through 2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Current	314	518	744	728	884	777	942	937	1328
Graduated	873	1,019	1,145	1,341	1,334	1431	1690	1923	2110
Total	1,187	1,537	1,889	2,069	2,218	2208	2632	2860	3438

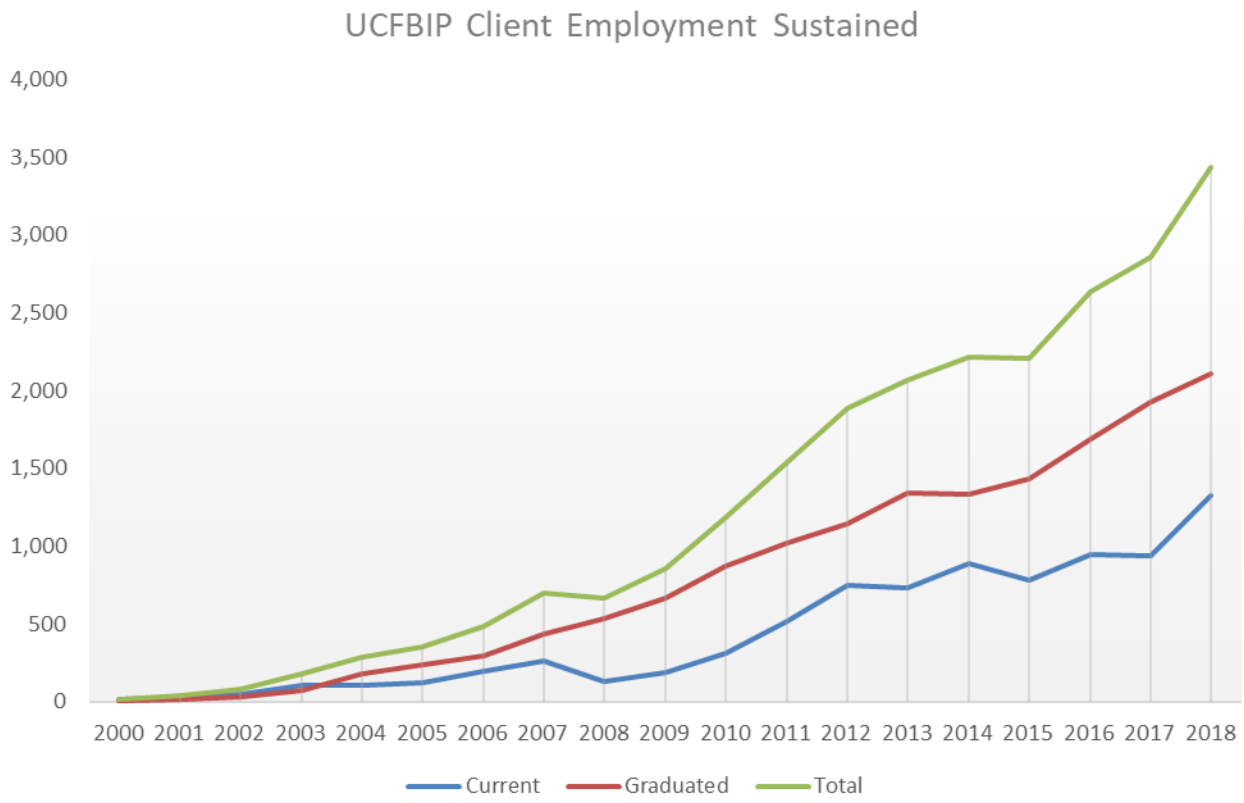

Figure 2-1: Summary of UCFBIP employment sustained since inception

2.4 Analysis

For an in-depth explanation of IMPLAN, please refer to the appendix on IMPLAN presented on page 13. The study was performed using IMPLAN Version 3. This software enables the user to define the study area (that may contain multiple counties). As discussed earlier, multiple counties have been grouped into MSAs. These MSAs in turn when grouped form the base unit of the study area. Furthermore, in order to accurately capture the impacts that occur in a particular study area, only expenditures resulting from the amount of demand or sales occurring locally should be considered in the study. This study leverages IMPLANs ability to isolate the impacts that occur only as a result of local expenditures, thereby providing a conservative estimate for the impact of the UCFBIP on the study area.

From the data collected and reported by the site managers, information was extracted for the current and graduated firms for each year of operation of the UCFBIP. This information was then compiled and formatted to be entered into IMPLAN. Then, an impact scenario was created for each fiscal year for each MSA for 2016/17 and 2017/18 to model the impact of the operations of the firms associated with the UCFBIP on the study area. As a result, multiple scenarios were analyzed and aggregated together to form the outcomes that represent the economic impact of these firms for the study period across the study area. IMPLAN v3 gives reliable estimates of jobs sustained, regional sales, total economic output generated, state and local taxes generated, and federal taxes generated.

3 RESULTS

3.1 Summary results as estimated by IMPLAN v3

3.1.1 Jobs Sustained

As indicated by Table 3-1, it is estimated that the activities of the UCFBIP current and past graduated firms have sustained 6,275 jobs in the study area at the end of study period of which 3,409 Jobs[15] were *directly* sustained by UCFBIP current and graduated firms.

Table 3-1: Estimate of Full-Time Jobs Sustained as a result of all[16] local UCFBIP clients

Fiscal Years	Direct Effect	Indirect Effect	Induced Effect	Total Effect
2016-2017	2,841	1,132	1,514	5,487
2017-2018	3,409	1,208	1,658	6,275

3.1.2 Regional GDP Impact

At indicated by Table 3-2, it is estimated that for the study period, the activities of the UCFBIP current and past graduated firms had a total impact of over $888 million[17] in regional GDP[18] in the study area. Of this, over $440 million in regional GDP can be *directly* attributed to the activities of the UCFBIP current and past graduated firms.

Further, for the study period, it should be noted that every $1 of public investment *directly* resulted[19] in an estimated $118 in regional GDP.

Table 3-2: Regional GDP impacted by activities of all local UCFBIP clients

Fiscal Years	Direct Effect	Indirect Effect	Induced Effect	Total Effect
2016-2017	$211,888,574	$89,805,502	$125,028,502	$426,722,578
2017-2018	$229,083,416	$96,185,188	$136,731,826	$462,000,430
Total	$440,971,990	$185,990,690	$261,760,328	**$888,723,008**

[15] This computed number for total direct job is approximately 1% lower than the figures in Table 2-5 as IMPLAN accounts for seasonal employees by Industry by area

[16] Current and Graduated clients

[17] Reported in 2018 dollars

[18] Regional GDP is defined as the Gross Domestic Product generated in the study area (Orlando & Daytona MSA's) as a result of the activities of the UCF BIP Clients

[19] Calculated by dividing Direct Regional GDP by Total Adjusted Funding from Table 2-3

3.1.3 Regional Sales Impact

At indicated by Table 3-3, it is estimated that for the study period, the activities of the UCFBIP current and past graduated firms had a total impact of over $1.59 billion in regional sales[20] in the study area. Of this, over $841 million in regional sales can be ***directly*** attributed to the activities of the UCFBIP current and past graduated firms.

Further, for the study period, it should be noted that every $1 of public investment ***directly*** resulted[21] in an estimated $226 in regional sales.

Table 3-3: Regional sales impacted by activities of all local UCFBIP clients

Fiscal Years	Direct Effect	Indirect Effect	Induced Effect	Total Effect
2016-2017	$400,080,840	$151,921,378	$210,245,054	$762,247,272
2017-2018	$441,628,068	$163,606,896	$229,978,351	$835,213,315
Total	$841,708,908	$315,528,274	$440,223,405	**$1,597,460,587**

3.1.4 State and Local Tax generated

IMPLAN also reports on the State/Local Taxes collected as a result of the modeled scenario. In the *Employee Compensation* field, IMPLAN reports on the amount of the employer collected and paid social security taxes on wages. For state/local taxes these values are mostly contributions to government retirement funds. Taxes on *Production and Imports* are collected by the businesses on behalf of the State and local governments. These taxes include sales tax, property tax, motor vehicle tax, severance tax, business licenses taxes, and documentary and stamp taxes. Taxes reported under *Households* include personal income tax (none for Florida), personal vehicle fee payments, personal property taxes, fines, donations, and licensing fees. Taxes on *Corporations* include corporate tax payments on profits and dividends paid to governments on government investments. As indicated by Table 3-4, the total State and Local taxes generated is over $44 million during the two years addressed in this impact analysis.

Table 3-4: Total State and Local Tax generated by activities of all local UCFBIP clients

	Total State and Local Tax				
Fiscal Years	Employee Compensation	Production and Imports	Households	Corporations	Total
2016-2017	$181,643	$19,910,987	$1,012,467	$323,714	$21,428,811
2017-2018	$200,697	$21,637,253	$1,109,215	$352,061	$23,299,226
Total	$382,340	$41,548,240	$2,121,682	$675,775	**$44,728,037**

[20] Regional Sales is defined as the sales generated in the study area (Orlando & Daytona MSA's) as a result of the activities of the UCF BIP Clients

[21] Calculated by dividing Direct Regional Sales by Total Adjusted Funding from Table 2-3

Further, for the study period, it should be noted that every $1 of public investment resulted[22] in an estimated $12.03 returned in taxes to state and local governments.

3.1.5 Return on Investment

For the study period, Table 3-5 report the estimated returns per $1 invested in the UCFBIP.

Table 3-5: Return on investment (ROI) for the UCFBIP for FY16/17 and FY17/18

	For Every $ 1 Invested		
Fiscal Year	GDP ROI	Sales ROI	Taxes ROI
2016-2017	$103.96	$196.28	$10.51
2017-2018	$136.35	$262.86	$13.87
Total	**$118.59**	**$226.37**	**$12.03**

Please note the 2017-2018 funding was reduced overall, which has the effect of inflating the impact numbers for the FY 17/18 fiscal year. Also, it should be noted that the Economic Impact measured does not included companies that have been acquired, after these companies were acquired. Further, any companies that move out of the study area are excluded after they move.

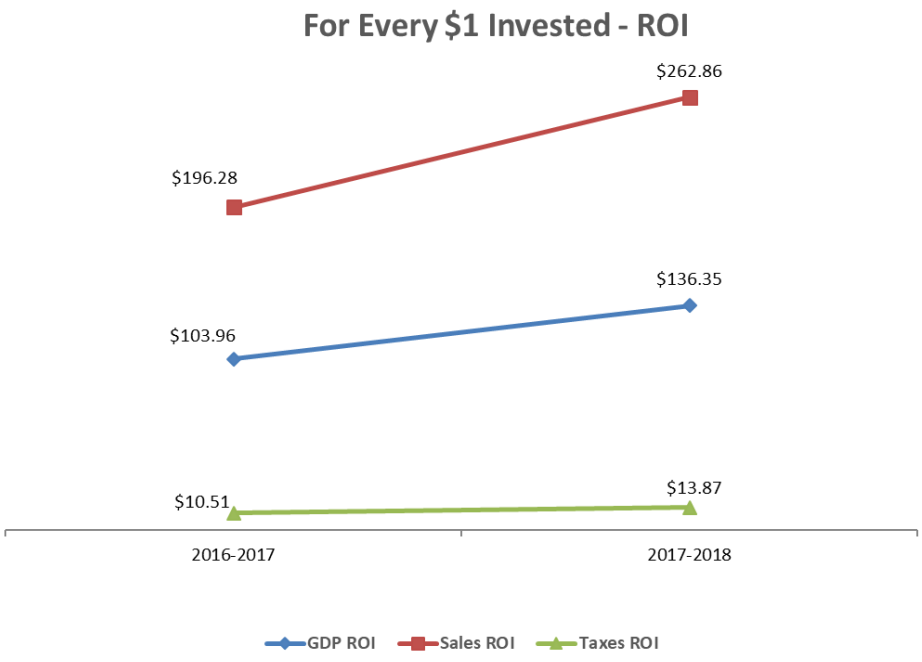

Figure 3-1: ROI for every $1 invested between FY 2016/17 and FY 2017/18

[22] Calculated by dividing Total State and Local Taxes by Total Adjusted Funding from Table 2-3

4 CONCLUSIONS

For the 2016/17 and 2017/18 fiscal years[23], participating client firms[24] have ***directly*** sustained at least 3,409 local jobs and have had a cumulative impact of over $440 million on regional GDP and over $840 million on regional sales.

The UCF Business Incubation Program provides client companies with the experience and insight needed to create successful companies through relationships it has created with its network of experienced entrepreneurs, professional service providers, economic development partners, small business service providers, university experts as well as a dedicated staff.

Tom O'Neal, Ph.D., founder and executive director of the UCFBIP also recognizes the importance of these partnerships. "*I would like to recognize and thank the economic development organizations and community partners in the counties we serve. The invaluable contributions they make toward helping us support emerging companies, stimulate job growth and strengthen local economies enable us to fortify the region's innovation culture by providing ready access to our incubation services. We could not achieve the caliber of impact or generate impressive fiscal returns year after year without their continued collaboration and support*," said Dr. O'Neal.

With the wealth of talent and resources developed by UCF and the benefits of its prime locations, the UCFBIP is making a significant contribution to the economic development of the region. Combined with efforts by other organizations such as: Florida Angel Nexus, UCF Venture Accelerator; UCF Center for Entrepreneurship & Innovation, the Florida High Tech Corridor Council; the Metro Orlando Economic Development Commission, the National Entrepreneur Center; SBDC at UCF; and many others, the region is already recognized as one of the nation's premier locations for developing high growth/impact enterprises.

Structured as an economic development partnership between the University, private enterprises, and local governments throughout the region, the UCFBIP provides emerging companies with a wide variety of support and guidance to help facilitate their growth and success. Incubation team members and partners from the professional community provide expert help and insight in a variety of areas, including leadership training, market research, business plan development, and funding strategies.

It's these standards that have enabled UCFBIP receive numerous awards over the years.

- In 2004, UCFBIP was nationally recognized as the *Incubator of the year*.
- In 2012, UCFBIP client BDG Construction Services was nationally recognized as *Non–Tech Incubator Graduate of the year*.

[23] It is also important to note that several UCFBIP graduates have moved out of Florida since 2000. These firms have created thousands of jobs since their departure from Florida.

[24] Current Clients (152) and Graduated Clients (185) as of June 30, 2018

- In 2012, UCFBIP client Hometown Health TV was nationally recognized as *Non–Tech Incubator Client of the year*.
- In 2013, UCFBIP was nationally recognized as the *Incubator Network of the Year*.
- In 2014, UCBIP client Optigrate was nationally recognized as *Technology Incubator Graduate of the Year.*
- In 2014, UCFBIP was especially honored to have the representative from the City of Orlando and Orange County partners proclaim *October1, 2014 as UCF Business Incubation Program Day*.

Further, since 2014, the UCFBIP and its founder and executive director, Dr. Tom O'Neal, have received numerous awards.

- In 2018, the UCFBIP won the Editor's Choice Awards of Excellence for *Economic Diversity and Inclusivity in the Place + Innovation Category* from the University Economic Development Association (UEDA), Journal of Economic Development in Higher Education. This is a National Award where UCFBIP was one of 200 entrants to the *Place + Innovation* category.
- In 2018, Florida Trend Magazine voted Dr. O'Neal as *one of the 500 most influential business leaders in the entire State of Florida within information, tech, and media* for the work he does with UCFBIP, GrowFL, etc. in IT, Technology, and Media entrepreneurism.
- In 2018, the UCFBIP was awarded the *Outstanding Diversity Helping Hand,* by the Orlando Business Journal, for the number of women, minority, and veteran owned startups we support, and the diversity of our UCFBIP team.

This current update continues to document that through good management; careful client selection and training; focused education of clients; and on-going follow-up support, the UCFBIP has managed to develop a stabilized network of facilities while maintaining its high standards of accountability and success. UCFBIP has even become a strong role model and mentor for emerging incubator programs around the United States and in foreign territories such as Puerto Rico.

Once again, the UCFBIP has demonstrated that it provides an extremely productive and efficient tool for creating and supporting quality jobs and economic activity for the Central Florida region and beyond. During a period of national economic recovery and robust growth, the UCFBIP has continued to be a job-producing "machine" bringing forth in the local economy a variety of businesses and employers that demonstrate sound management practices and potential for continued growth.

5 APPENDIX: IMPLAN INFORMATION

What is IMPLAN?[25]

IMPLAN® is an acronym for IMpact analysis for PLANning. The IMPLAN® System is a general input-output model that is comprised of software and regional data sets. One of the most powerful aspects of IMPLAN®, is that input-output Models for specific regional economies can be created for the intervention for which the economic impact is being modelled.

The input for IMPLAN model is usually determined by the intervention being modelled. There are four requirements for the input: the location of the intervention, the time period for the intervention, the industry affected by the intervention, and the number of jobs and/or the revenue generated by the intervention being modelled. This input will represent the *direct* impact as described in the Table 1-1 below. Given this input IMPLAN will model the output which entails the *indirect* and *induced* impact while also informing on the regional impact of the intervention in the form of regional economic output (sales), regional value added (GDP), state and local taxes generated, and federal taxes generated.

Rather than extrapolating regional data from national averages, IMPLAN® measures economic impacts from data representing actual local economies. IMPLAN® data sets are available from the ZIP Code level to the national level, and regional files can be combined to create precise geographic definitions when calculating impacts. The analysis results provide the IMPLAN® user or client with a report that demonstrates the detailed effects of local changes on supporting industries and households. Reports can provide both detailed and summary information related to job creation, income, production, and taxes. IMPLAN® Version 3.0 can even track the impacts of a local change on surrounding regional economies.

Table 1-1: Definition of IMPLAN Terms

IMPLAN Term	Definition
Backward Linkages	The tracking of industry purchases backward through the supply chain.
Direct Impact	The initial expenditures, or production, made by the industry experiencing the economic change.
Indirect Impact	The effects of local inter-industry spending through the backward linkages.
Induced Impact	The results of local spending of employee's wages and salaries for both employees of the *Directly Impacted* industry, and the employees of the Indirectly affected industries.

[25] The following section contains excerpts from various sections of "Day, F. (2012). *Principles of Impact Analysis and IMPLAN Applications*. Davidson, NC, USA: MIG"

IMPLAN® data tracks all the available industry groups in every level of the regional data. This permits detailed impact breakdowns and helps ensure accuracy of inter-industry relationships. If a study involves the introduction of an industry group that does not already exist in the local area, IMPLAN® provides tools to create a new industry. This new industry can be used as a proxy to estimate the likely impacts of the new industry's production to the local economy. And if the industry exists in IMPLAN®, but doesn't exactly match the sales and employment information for the industry being modeled, the IMPLAN® industry relationships may be updated to match the known values, while still maintaining the local regional sales and employment averages for examining the Indirect and Induced impacts.

Figure 1-1 illustrates the framework of the IMPAN model. Economic impact studies typically generate large amounts of information about local industries, employment, wages, profits, labor spending, and taxes that may be useful for a variety of purposes and circumstances. Most reports, therefore, seek to condense this information into a format that demonstrates the overall effect of the economic change as it relates to jobs or other monetary means, and in a manner that is meaningful to the report's intended audience. To generate the detailed background information that supports the overall affects economic factors have on the local region, or even on surrounding regions, economic impact analysis looks backwards rather than forwards through the economy. In other words, to determine the effect of increased production in a local industry, economic analysis looks at the industries which supply the producing industry with the items and services that industry incorporates into its production.

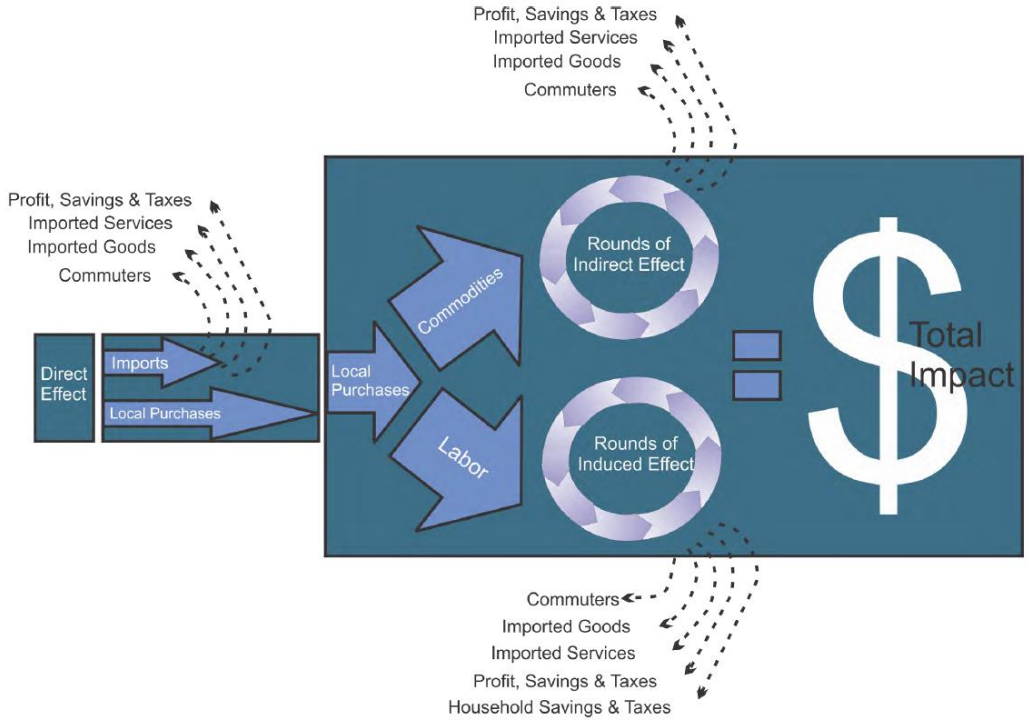

Figure 5-1: IMPLAN Model framework

So an increase in window production will result in the manufacturer purchasing a variety of supplies including wood, glass, and furnishings for the windows, all of which will be incorporated into the final product. Collectively, tracing the impacts back through the supply chain is tracing the *backward linkages*. Each supplier in the chain represents a backward linkage. Since each supplier of an industry has to purchase inputs from other suppliers in order to create their own products (e.g. the window furniture company has to purchase sheet metal from which it stamps out is parts), the accumulation of these backward linkages can be tracked until the resultant spending of the original impact is completely removed from the economy by imports, savings, taxes and profits.

These consecutive rounds of inter-industry spending traveling back through the supply chain are called the *Indirect Effects*. These impacts are "indirect" because the increase in these industry's production is stimulated by the increase of sales in another industry. Increases in production not only require an increase in purchases of supplies, but typically also require an increase in employment and/or labor spending. This increase in labor dollars also has traceable economic effects, because increased labor dollars typically translate into increased income spending. The pending of income earned by the employees, resulting from both *Directly and Indirectly affected* industries, contributes to the *Induced Effect*. The Induced Effect, therefore, is a measurement of employee spending of all employees of the *Directly affected* industry, and all the employees of subsequent Indirectly impacted industries in the supply chain, as long as these employees live within the defined geography of the study.

IMPLAN also reports on the State/Local Taxes collected as a result of the modeled scenario. In the *Employee Compensation* field, IMPLAN reports on the amount of the employer collected and paid social security taxes on wages. For, state/local taxes these values are mostly contributions to government retirement funds. Taxes on *Production and Imports* are collected by the businesses on behalf of the State and local governments. These taxes include sales tax, property tax, motor vehicle tax, severance tax, business licenses taxes, and documentary and stamp taxes. Taxes reported under *Households* include personal income tax (none for Florida), personal vehicle fee payments, personal property taxes, fines, donations, and licensing fees. Taxes on *Corporations* include corporate tax payments on profits and dividends paid to governments on government investments.