Regional Economic Impact Study

of the UCF Business Incubation Program Since its Inception in 1999

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A Review of the University of Central Florida Business Incubation Program Economic Impacts from July 01, 1999 through June 30, 2014

To

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FOREWORD

I have previously reviewed economic impact analyses by Dr. Lasrado regarding the incubator facilities in summer of 2013 and his analysis of the GrowFL economic gardening program earlier this year. As a result, I have grown increasingly confident that he has a sound understanding of the IMPLAN v3 model as a tool for completing these analyses. I also believe he is very conscientious about fact-checking his model inputs and double-checking his model results. The updated analysis for 1999-2014 prepared by Dr. Vernet Lasrado is a thorough and credible report regarding the continuing growth and effectiveness of the UCF Business Incubation Program as it has expanded and matured. In fact, the approach to calculating what might be considered the *cumulative impacts* of the program since its inception yield simply stunning conclusions. In my judgment, the results of the 15-year impacts assessment meld closely with the periodic impacts summarized in both his and my earlier analyses.

SUMMARY OF OBSERVATIONS

As I have stated before, there is no denying the remarkable success of the UCF Business Incubation Program (UCFBIP) – not only as a very productive sustainer of new jobs in high technology and other quality industries, but also as a model for focused and cost-effective economic development. Not only is UFCBIP a model for cooperative partnerships between the higher education system, local government, private enterprise, and a myriad of support agencies, it has accomplished its mission by leveraging public investment at a rate of $5.70 returned in taxes for every $1.00 invested *over the past 15 years*. While that return-on-investment began modestly at just over $2.00 during the early, start-up years, the leverage continues to increase as the system matures and produces more and more graduated firms. For the most recent fiscal year under study (2013-2014), the annual public ROI is *almost eight times the annual funding* ($7.95 for every $1.00 invested).

When the total public investment over fifteen years beginning in 1999 – ($13,334,636 in 2014 dollars; see Table 2-3) is compared to the cumulative level of tax revenues returned to state and local governments in the same period ($75,942,624; see Table 3-4) – it can be seen that the cumulative return on investment (ROI) is almost 570%. Not many public investment initiatives (or private for that matter) can even dream of such cost-effectiveness.

Again - repeating my earlier observations - there is no denying that UCFBIP is a job-sustaining "machine" of the highest order. As of June 30, 2014, UCFBIP has directly or indirectly produced and sustained almost 3,700 full-time, permanent, high quality jobs within the central Florida regional economy. This estimate does not even consider the thousands of jobs that are associated with firms that graduated the program and moved out of the five counties of the central Florida study area during the same period of time through acquisition or in pursuit of venture capital funding. Following graduation of client firms from UCFBIP, these new jobs are compensating

employees at an average exceeding $67,000 annually. Even more remarkable, this new job creation has occurred during one of the most challenging economic periods in U. S. history. Such growth could not have occurred without the thoughtful nurturing of the UCFBIP.

The total economic output of the firms sustained by the UCFBIP has now exceeded $2.5 BILLION in Central Florida alone. As documented in the current report, this "output" includes a combination of employee wages and earnings; business sales and purchases; research grant awards; imports and exports; resource development; and taxes paid to state and local government – through direct impacts, as well as induced and indirect impacts throughout the regional economy.

This current update once again demonstrates 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. With a network of eight (formerly eleven) incubators now operating within five Central Florida counties, the UCFBIP has built a solid foundation and track record of success with its local economic development efforts and has provided a platform for aspiring entrepreneurs to conceive, develop, nurture, and grow their business dreams. The UCFBIP is an excellent model for any community working with a thoughtful institution of higher education to build a productive, modern economy from the ground up.

EXECUTIVE SUMMARY

Since its formation in 1999, the University of Central Florida Business Incubation Program (UCFBIP) has provided more than 350 early stage companies[1] 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, which commissioned the previous studies of the UCFBIP's economic impact in 2009, 2011, and 2013. ***This study quantifies the cumulative impact of the UCFBIP since its inception in 1999.***

This study of the program's impact spanned from July 01, 1999 through June 30, 2014, and reveals that the operations of the firms participating in the UCFBIP program have:

1. Sustained a total[2] of 3698 jobs[3] in the Central Florida region at the end of study period
    a. Directly[4] sustained 1,993 Jobs in the Central Florida region at the end of study period, and
    b. Indirectly[5] sustained an additional 1705 jobs throughout the Central Florida region;
2. Had a total impact on regional sales in the amount of $1,512,223,900[6],
    a. Direct regional sales in the amount of $782,964,372, and
    b. Indirectly impacted almost $729,259,528 million of additional regional sales
3. Had a total impact on regional economic output (GDP) in the amount of $2,484,206,486,
    a. Direct regional economic output (GDP) in the amount of $1,287,384,543, and
    b. Indirectly impacted almost $1,196,821,943 million of additional regional economic output (GDP)

Had a total impact on State and Local taxes in the amount of $75,942,624 resulting in a return of $5.70 for every $1 of public investment in the UCFBIP for entire program since inception[7].

[1] Current Clients (152 firms), Exited Clients (100 firms), and Graduated Clients (106 firms) as of June 30, 2014

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

[3] Based on a snapshot of jobs as of June 30, 2014

[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 2014 dollars

[7] It is important to note that this ROI includes the ROI for the ramp up period of the program, i.e. the first 5 fiscal years, which was an overall ROI of $2.11 for every $1 of public investment. Fiscal years 6-15 had an overall ROI of $6.20 for every $1 of public investment.

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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, and 2013.

The review of the economic impact of the UCFBIP on the surrounding counties was first performed in 2009 by W. H. Owen while employed at Real Estate Research Consultants, Inc. (RERC). 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. These impact analyses measured the spending patterns and tax impacts of past UCFBIP clients.

The current study quantifies the cumulative impact of the UCFBIP since its inception in 1999. It is encompasses a 15 year period from July 1, 1999 through June 30, 2014. It does so by modeling the economic impact of the activities of the firms that have participated in the UCFBIP for each year since its inception in 1999.

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 this study only eight incubators are currently[8] 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	Active
Kissimmee	2010	Active
Daytona	2011	Active
Apopka	2012	Active

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

[8] As of June 30, 2014

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 its inception in 1999. 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.

2.1.2 Study Period

The current study encompasses the period of July 01, 1999 through June 30, 2014, referred to as the *study period*. A point to note is that this study runs from the 1999-2000 through the 2013-2014 fiscal years.

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 2013 study, 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[9] (MSAs) as the basis 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[10].

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
Downtown	Orlando	Orange	Orlando-Kissimmee-Sanford, FL
Orlando	Orlando	Orange	Orlando-Kissimmee-Sanford, FL
Kissimmee	Kissimmee	Osceola	Orlando-Kissimmee-Sanford, FL
Leesburg	Leesburg	Lake	Orlando-Kissimmee-Sanford, FL
Photonics	Orlando	Orange	Orlando-Kissimmee-Sanford, FL
Sanford	Sanford	Seminole	Orlando-Kissimmee-Sanford, FL
St. Cloud	St. Cloud	Osceola	Orlando-Kissimmee-Sanford, FL
Winter Springs	Winter Springs	Seminole	Orlando-Kissimmee-Sanford, FL

2.2.2 Use of 2014 Dollars for analysis

All the analysis performed reports any dollar amounts in 2014 dollars. This can be performed by using the Consumer Price Index (CPI) as a measure to indicate the amount of inflation or deflation (as presented at ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt). As it can be seen in Table 2-2, the multiplier column is the amount of inflation required to equate the corresponding year's dollar amount to 2014. This is derived by dividing the 2014 CPI by the corresponding years CPI. If the number is greater than 1 there is inflation, otherwise there is deflation. By way of illustration, $100.00 in 1999 would equate to approximately $142.40[11] in 2014 dollars.

[9] The most current and up to date list of MSAs and the corresponding counties is presented by the US Census Bureau at http://www.census.gov/population/metro/data/def.html.
[10] US Census Bureau website http://www.census.gov/population/metro/
[11] $100.00 x 1999 Multiplier = $100.00 x 1.424008 = $142.40

Table 2-2: Inflation Adjustment Multipliers

Year	CPI	Multiplier	Year	CPI	Multiplier
1999	164.3	1.424008	2007	202.42	1.155837
2000	168.7	1.386867	2008	211.08	1.108416
2001	172.2	1.358679	2009	211.14	1.108101
2002	177.10	1.321087	2010	216.69	1.079720
2003	181.70	1.287642	2011	220.22	1.062412
2004	185.20	1.263307	2012	226.67	1.032181
2005	190.70	1.226872	2013	230.28	1.016000
2006	198.30	1.179851	2014	233.96	1.000000

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 (as presented in Table 2-3), the CPI multipliers for each of the two years in a given fiscal year are blended to adjust the annual fiscal dollar amounts to 2014 dollar amounts.

Table 2-3: UCFBIP summary of public funding adjusted to 2014 dollars

Fiscal Year	Public Funding	FHTC	Adjusted 2014 Amount
1999-2000	$300,000		$421,631
2000-2001	$100,000	$85,000	$253,963
2001-2002	$250,000		$334,971
2002-2003	$250,000		$326,091
2003-2004	$250,000		$318,869
2004-2005	$250,000		$311,272
2005-2006	$250,000	$30,000	$336,941
2006-2007	$550,000	$30,000	$677,349
2007-2008	$875,000	$30,000	$1,024,574
2008-2009	$875,000	$50,000	$1,025,139
2009-2010	$1,097,000	$50,000	$1,254,715
2010-2011	$1,807,000	$50,000	$1,988,970
2011-2012	$1,694,569	$50,000	$1,827,081
2012-2013	$1,603,953	$50,000	$1,693,798
2013-2014	$1,476,858	$50,000	$1,539,072
Total	$11,629,379	$475,000	$13,334,438

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 suc-

cess 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.

2.4 Summary results as reported by the site managers

Table 2-4 through Table 2-6 present snapshots of the jobs sustained by the current and graduated firms in the program for the given years. As it can be seen, from year 1 through year 15 the jobs directly sustained by UCFBIP current and graduated firms rose from 14 jobs to 2218 jobs. Aside from 2008, the jobs sustained by the UCFBIP have grown steadily each year. The summary of the jobs sustained by UCFBIP current and graduated firms for all 15 years is graphically presented in Figure 2-1.

Table 2-4: Reported jobs sustained as a result of UCFBIP clients from year 1 through year 5

FY 1999-2004	2000	2001	2002	2003	2004
Current	12	31	49	105	102
Graduated	2	10	32	72	180
Total	14	41	81	177	282

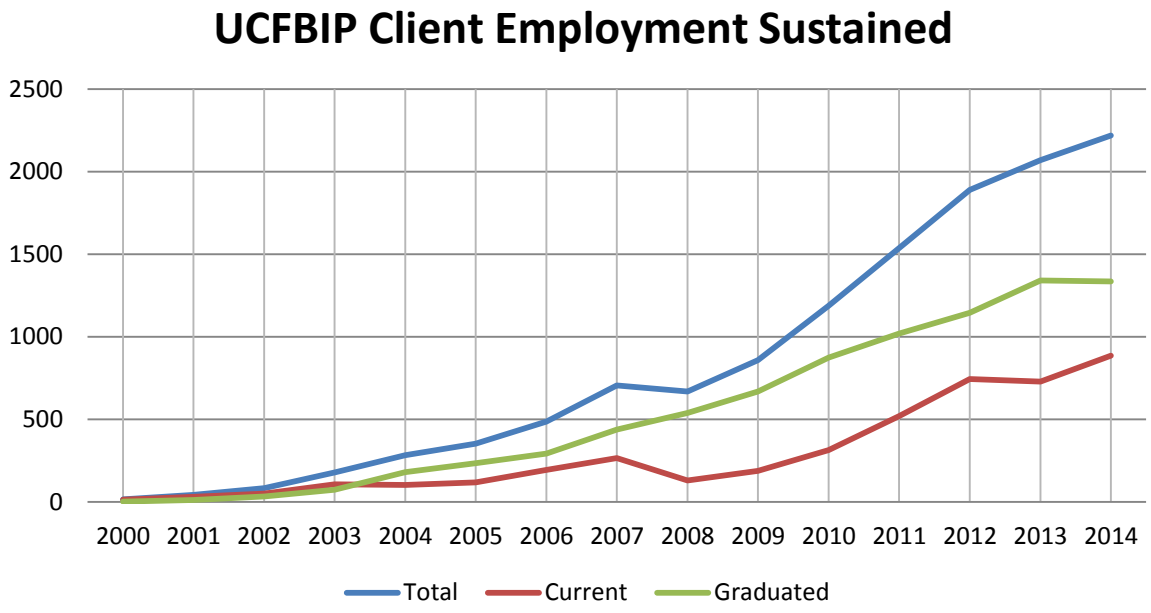
Table 2-5: Reported jobs sustained as a result of UCFBIP clients from year 6 through year 10

FY 2005-2009	2005	2006	2007	2008	2009
Current	117	193	265	129	187
Graduated	234	291	437	537	668
Total	351	484	702	666	855

Table 2-6: Reported jobs sustained as a result of UCFBIP clients from year 10 through year 15

FY 2010-2014	2010	2011	2012	2013	2014
Current	314	518	744	728	884
Graduated	873	1019	1145	1341	1334
Total	1,187	1,537	1,889	2,069	2,218

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



2.5 Analysis

For an in-depth explanation of IMPLAN, please refer to the appendix on IMPLAN presented on page 15. 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 complied and formatted so as to be entered into IMPLAN. Then, an impact scenario was created for each year for each MSA from 1999 through 2014 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

The results as presented henceforth are organized into three time periods (in 5 year increments) in the operations of the UCFBIP:

- Summary of fiscal year 1 through fiscal year 5
  - Year 01: 1999-2000
  - Year 02: 2000-2001
  - Year 03: 2001-2002
  - Year 04: 2002-2003
  - Year 05: 2003-2004
- Summary of fiscal year 6 through fiscal year 10
  - Year 06: 2004-2005
  - Year 07: 2005-2006
  - Year 08: 2006-2007
  - Year 09: 2007-2008
  - Year 10: 2008-2009
- Summary of fiscal year 11 through fiscal year 15
  - Year 11: 2009-2010
  - Year 12: 2010-2011
  - Year 13: 2011-2012
  - Year 14: 2012-2013
  - Year 15: 2013-2014

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 3,698 jobs in the study area at the end of study period of which 1,993 Jobs[12] were directly sustained by UCFBIP current and graduated firms.

Table 3-1: Estimate of Full-Time Jobs Sustained as a result of all[13] local UCFBIP clients

Fiscal Years	Direct Effect	Indirect Effect	Induced Effect	Total Effect
01-05	199	81	132	412
06-10	713	243	404	1,360
11-15	1,993	689	1,016	3,698

[12] This computed number for total direct job is approximately 10% lower than the figures in Table 2-6 as IMPLAN accounts for seasonal employees by Industry by area

[13] Current and Graduated clients

3.1.2 Regional Sales Impact

At indicated by Table 3-2, it is estimated that *since inception* the activities of the UCFBIP current and past graduated firms have generated a total of around $1.51 billion[14] in sales in the study area. Of this total, $782 million in sales can be directly attributed to the activities of the UCFBIP current and past graduated firms.

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

Fiscal Years	Direct Effect	Indirect Effect	Induced Effect	Total Effect
01-05	$37,669,353	$13,055,589	$21,998,556	$72,723,498
06-10	$213,050,856	$74,480,267	$120,835,376	$408,366,499
11-15	$532,244,163	$192,913,263	$305,976,477	$1,031,133,903
Total	$782,964,372	$280,449,119	$448,810,409	**$1,512,223,900**

3.1.3 Economic output generated

At indicated by Table 3-3, it is estimated that *since inception* in the study area the total economic output resulting from the activities of UCFBIP current and past graduated firms is $2.48 billion[15]. Of this total, $1.28 billion in economic output can be directly attributed to the activities of the UCFBIP current and past graduated firms.

Table 3-3: Total Economic Output generated by activities of all local UCFBIP clients

Fiscal Years	Direct Effect	Indirect Effect	Induced Effect	Total Effect
01-05	$60,226,706	$21,216,389	$36,078,605	$117,521,700
06-10	$340,586,479	$121,784,576	$198,175,224	$660,546,279
11-15	$886,571,358	$317,751,322	$501,815,827	$1,706,138,507
Total	$1,287,384,543	$460,752,287	$736,069,656	**$2,484,206,486**

3.1.4 Return on Investment for UCFBIP across all sites

As indicated by Table 3-4, all the UCFBIP clients have generated estimated State and Local taxes of over $75 million[16]. The return on investment (ROI) is a useful measure to determine how effectively a program returns back to its investing parties. In this analysis, the ROI is estimated by dividing the amount generated in state and local taxes (*$75,942,*624) from Table 3-4 by the amount invested by public funding (*$13,334,348*) from Table 2-3.

[14] Reported in 2014 dollars
[15] ibid
[16] ibid

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.

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

	Tax Sources				
Fiscal Years	Employee Compensation	Production and Imports	Households	Corporations	Total
01-05	$31,016	$3,233,920	$177,625	$51,183	$3,493,744
06-10	$170,689	$18,500,834	$975,425	$310,437	$19,957,385
11-15	$429,581	$48,823,346	$2,471,480	$767,088	$52,491,495
Total	$631,286	$70,558,100	$3,624,530	$1,128,708	**$75,942,624**

These results reflect ***an overall ROI of $5.70 for every $1 of public investment in the UCFBIP for the 15 year study period from July 01, 1999 through June 30, 2014. Furthermore, for the 2013-2014 fiscal year the ROI is $7.95 for every $1 of public investment in the UCFBIP*.**

It is important to note that the overall program ROI ($5.20) includes the ROI for the ramp up period of the program, i.e. the first 5 fiscal years. As indicated by Table 3-5, the ROI for the first 5 years is $2.11 for every $1 of public investment. If we consider the next 10 years, i.e. *the program at maturity from years 6-15*, the ROI is $6.20 for every $1 of public investment.

Table 3-5: Return on Investment of the UCFBIP

Fiscal Years	Taxes	Invested Funds	Return / $1
01-05	$3,493,744	$1,655,525	$2.11
06-10	$19,957,385	$3,375,277	$5.91
11-15	$52,491,495	$8,303,636	$6.32
Total	$75,942,624	$13,334,438	$5.70

3.1.5 Top 5 industries enhanced since inception

Table 3-6 below presents a summary of the Top 5 industries directly enhanced by the activities of all the UCFBIP clients. As it can be seen, the professional, scientific, and technical services industry sector is most heavily impacted by the direct activities of all the UCFBIP clients.

Table 3-6: Top 5 industries enhanced by activities of all Current and Graduated UCFBIP clients

Description	Employment	Value Added	Output
Professional, Scientific, and Technical Services	1197	$511,647,275	$823,871,372
Administrative and Waste Management Services	215	$31,276,287	$50,519,178
Manufacturing	130	$17,797,551	$64,382,107
Arts, Entertainment, and Recreation	121	$5,813,149	$11,013,777
Health Care and Social Assistance	115	$134,597,233	$199,477,199

4 CONCLUSIONS

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.

"*It is an outstanding economic development partnership that's producing real, tangible results*," said MJ Soileau, Ph.D., vice president for research and commercialization at UCF's Office of Research and Commercialization. "*The support provided by the program plays an important role in the success of these small companies, and this success has a significant ripple effect on our community*."

Structured as an economic development partnership between the University, private enterprises, and local governments throughout the region, the UCF Business Incubation Program 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.

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 UCF Business Incubation Program 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.

Once again the UCF Business Incubation Program 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 the most turbulent economic times in recent memory, the UCFBIP has been 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.

In the 15 years since the inception of this nationally-recognized program in 1999, participating client firms have sustained more than 3,600 local jobs and have had a cumulative impact of $1.51 billion on regional sales and $2.48 billion on regional economic output. It is also important to note that several UCFBIP graduates have moved out of Florida. These firms have created over 10,000 jobs since their departure from Florida. All of this success has been achieved with a huge positive return on investment for funding partners with a ROI of $5.70 for the 15 year period and a ROI of $7.95 for the 2013-2014 fiscal year.

This current update illustrates 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.

5 APPENDIX: IMPLAN INFORMATION

What is IMPLAN?[17]

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. 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.

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.

Table 5-1: 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.

Figure 5-1 illustrates the framework of the IMPAN model. Economic impact studies typically generate large amounts of information about local industries, employment, wages, profits, la-

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

bor 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.

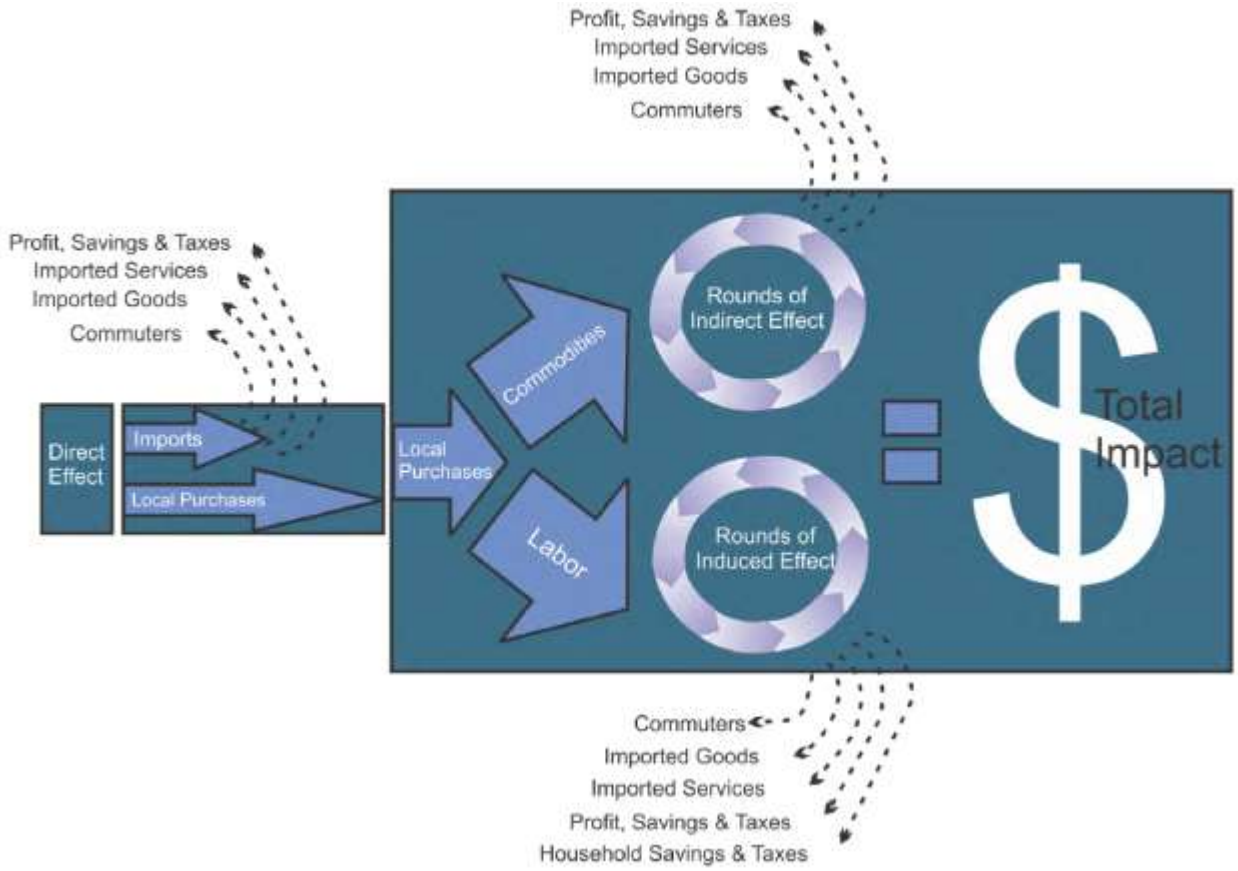


Figure 5-1: IMPLAN Model framework

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 re-

sultant 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.

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