

Startup FIU

Economic Opportunity and Competitive Assessment

The Florida International University Metropolitan Center



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METROPOLITAN CENTER

Study Author

Kevin T. Greiner, MUP, JD

Senior Fellow, FIU Metropolitan Center

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1. Introduction

The US Innovation Economy

The concept of driving economic growth through innovation is as old as Adam Smith, yet the purposeful harnessing of the *process* of developing new knowledge for commercial purposes continues to evolve. The *industrialization* of innovation — the commercialization of new ideas, science, technology, and business models in a structured, as opposed to random way — firmly took root in Thomas Edison’s first labs in New Jersey. The structured, institutional production useable knowledge, as well as the businesses to commercialize them, took another leap forward with the launch of the first business incubator in 1959 in Batavia, New York. The growing capacity of regions to create economies with high rates of product, process and business model innovation, and the ability to quickly launch and grow business around inventive talent is the foundation of the modern ***Innovation Economy***.

The ***Seed Accelerator***, first launched in 2005 in Cambridge Mass, represents the latest evolutionary step in the innovation economy. In a short period of time, accelerators have produced real, significant economic results, fundamental business innovation, and may be changing the level, structure, and diffusion of innovation across the US.

StartUP FIU

Miami-Dade County’s leadership has made growing businesses and employment in advanced technology sectors and occupations a regional priority. The rapid development of Miami-Dade’s fledgling regional technology and venture capital industries have been a local economic bright spot, but the region’s tech, STEM, and advanced industry employment lags behind its metro area competitors.

To help build the region’s STEM and Tech job growth performance, Florida International University (FIU) has launched ***Startup FIU***, a collaborative business accelerator initiative for FIU students, faculty and early-stage startup entrepreneurs in South Florida to create and grow traditional companies, high-tech ventures and social enterprises.

The centerpiece of StartUP FIU’s model is the ***Empower Accelerator Program*** — a comprehensive, 14-week program to develop scalable traditional **and** social entrepreneurship ventures. The program provides coaches, skills training, advisors, access to speakers, cutting-edge work space and a wide range of additional resources to first-time as well as more accomplished entrepreneurs. The program combines best practices from accomplished entrepreneurs and veteran academics. Unlike traditional accelerator programs, StartUP FIU charges no fees, nor takes an equity position in its client companies.

The Empower Accelerator Program has accepted two classes of start-ups in two accelerators across a wide range of industries, supported by mentors and a technical support staff from FIU. The University’s goal is to scale up Startup FIU quickly, and expand its operations to provide a significant pipeline of new companies for the region.

Purpose

Universities form the foundation of regional innovation economies, and have evolved their research and development, commercialization, and technology transfer capabilities to respond to market realities. Universities have now firmly embraced the accelerator business model, and like the private sector, are seeing newly energized levels of commercialization and investment flowing out of University accelerator programs.

Yet launching any accelerator is a high risk and complicated undertaking, and as shown in this study, success is not guaranteed. University accelerators, regardless of mission, need to achieve results. StartUP FIU, and FIU, are entering an increasingly competitive local, national and global accelerator market. Like Metro Miami, they are playing catch-up in the innovation economy.

StartUP FIU is seeking to scale-up its operations quickly, yet according to a carefully considered plan that maximizes its performance and minimizes downside risk. The purposes of this study are to take a thoughtful look at the dynamics of the national and regional innovation economy, FIU's strengths and industry best practices, providing a data-driven competitive assessment and strategic policy recommendations.

Study Structure

This study treats StartUP FIU as any other venture seeking to enter a market, from a competitive perspective. It is also written to address a number of different audiences, including StartUP FIU's management, FIU's Administration, potential funders, and local leadership. For that reason, it is not written as an academic tome, but boils its findings down to a set of succinctly stated and clearly detailed key findings, followed by directly stated strategic recommendations.

Notes on Data Resources

The accelerator market space is young and rapidly evolving. Detailed, accurate and comprehensive data regarding investment performance, business practices and industry structure are also evolving. The findings of this study are derived from a literature search of hundreds of research documents and news reports, direct information from accelerator operators, and trusted original public and private data sources.

Notes on Geographic Terminology

This Study looks at the economies of the Miami Metropolitan Statistical Area (Miami MSA), and its three component counties — Miami-Dade County, Broward County, and Palm Beach County. For consistency, the terms "Miami Metro", "Metro Miami, or "Miami Metro Area" are used when describing the Miami MSA. Individual County names are used when discussing the particulars of each County.

Key Findings

2. Startup FIU's Larger Context

The development, goals and future success of StartUP FIU takes place in the context of Miami Metro's regional economy. Fundamentally, the creation, function and growth of StartUP FIU addresses the need of all economic regions to adopt formal innovation policies and structures to compete the 21st Century global economy, and second, address the specific weaknesses and strengths of the Miami Metro economy. Understanding this bigger picture, and the Miami Metro's comparative position to the rest of the nation is crucial to forming StartUP FIU's forward looking strategic plan.

2.1 Why Innovation Matters

Driving innovation is a key element of regional competitiveness, and competitive innovation economy regions have the following characteristics:

- A higher rate of creation of new products, processes, services and business models that compete or create entirely new markets, generating businesses and jobs;
- Highly innovative regional economies have higher wages and incomes across the industry and occupational spectrum, raising median household incomes;
- Greater opportunity for entry into jobs with faster vertical income mobility, as well as greater horizontal mobility (the ability to move from job to job within an economy);
- Greater economic stability and resiliency — better resistance to national and global business cycle fluctuations;
- Stronger growth in “mature” industry sectors, as innovation can be critical to changing the competitive position of older industrial sectors through the adoption of new technology and business models, and add value to low value products and services. Regions can look to upgrade older sectors as an important growth strategy, further increasing job opportunity, wages, incomes, and skills;
- Stronger, more sustained growth in the service and supply sectors that support a region's core innovation and knowledge complex industries, with the attendant income and skill improvement benefits.

Lastly, jobs at the core of the innovation economy benefit the entire region. A host of recent studies note the greater economic multipliers generated by higher technology incorporating, higher-skilled, and higher wage jobs and occupation. Most notably, Enrico Moretti's research makes this point:

With only a fraction of the jobs, the innovation sector generates a disproportionate number of additional local jobs and therefore profoundly shapes the local economy. A healthy traded sector benefits the local economy directly, as it generates well-paid jobs, and indirectly as it creates additional jobs in the non-traded sector. What is truly remarkable is that this indirect effect on the local economy is much larger than the direct effect...for each new high-tech job in a metropolitan area, five additional local jobs are created outside of high tech in the long run. [Moretti, p. 86]

2.2 Benchmarking Metro Miami

From its origins as a collection of somewhat sleepy tourist towns and winter enclaves, Metro Miami has grown as few other regions have in North America since the 1950's and 1960's. The 8th largest metropolitan area in the US, Metro Miami has grown from 1.5 Million in 1960 to over 5.5 Million. If rapid growth is a hallmark of Miami's economic history, then its ability to rapidly evolve its economic structure is another. Metro Miami has seen fast-moving, significant, large-scale waves of tourism and hotel development, rapid growth propelling it into a leading international banking and finance hub, growth into a leading international cargo transshipment and passenger travel center, and a global magnet for investment in business, technology and real estate. A destination for businesses and families, hundreds of thousands have immigrated to, and prospered in Miami.

However, the size and scale of economic growth aren't the sole determinants of regional economic performance. Miami Metro's specific competitive strengths are addressed later in this report. Up front, two key questions need to be answered: 1) on broad indicators of economic performance, how does Metro Miami compare to competing regions, and 2) what are the most troubling issues facing the regional economy, in light of FIU's, and the region's considerable efforts to make it more competitive going forward? Understanding this broader perspective is critical to developing StartUP FIU's goals, operating procedures, performance metrics and growth strategies. Key indicators on which future policy will rest include the following.

3. Startup Growth Dynamics

StartUP FIU's mission is to drive the creation of new businesses (startups), and most of those startups will remain small businesses, defined by the US Small Business Administration (SBA) as businesses employing less than 500. Understanding current trends and patterns of small business behavior are crucial to StartUP FIU's strategic policy.

3.1 Small Business Share of the Economy

Though it is probably overstated, small business drives the American economy in terms of employment, growth, and dynamism. As a share of the economy:

- Small businesses (with fewer than 500 employees) account for 99.7% of all businesses in the US;
- The approximately 28 million small businesses in America account for 54% of all U.S. sales;
- Small businesses provide 55% of all jobs and provided 66% of all net new jobs since the 1970s;
- Franchised small businesses in the U.S. (approximately 600,000) account for 40% of all retail sales and provide 8 Million jobs; and
- Small businesses occupy 30 to 50 percent of all commercial space, approximately 20-34 billion square feet. [SBA; Fundera]

Small businesses also play a growing, critical role in job creation. Small businesses have since the 1990s accounted for nearly all net job gains in the US and continue to do so. Since 1990, business over 500 employees on average eliminated 4 million jobs annually while small businesses added 8 million new jobs each year. Micro businesses (employing 1 to 9 employees) make up 75.3 percent of all private-sector employers in 2013, and they provided 10.8 percent of the private-sector jobs.

3.2 Concentration by Industry

Small firm employment shows extensive differences in the share of employment, by industry. Small businesses employ 86, 82.7, 85.9, 69 percent of all jobs in Agriculture, Services, Construction, and Real Estate Rental and Leasing, respectively. In terms of total employment, the five sectors with the largest total number of jobs in small businesses are Healthcare and Social Assistance, Accommodation and Food Services, Retail Trade, Manufacturing and Professional, scientific, and Technical services — over ___ percent of total private employment.

SMALL BUSINESS EMPLOYMENT BY INDUSTRY

Table 2: US Employment by Industry and Firm Size, 2013
(sorted by small firm employment)

 Industry	 Small Business Employment	 Total Private Employment	 Small Business Employment Share
Health Care and Social Assistance	8,515,106	18,598,711	45.8%
Accommodation and Food Services	7,454,788	12,395,387	60.1%
Retail Trade	5,370,419	15,023,362	35.7%
Manufacturing	5,059,759	11,276,438	44.9%
Professional, Scientific, and Technical Services	4,869,277	8,275,350	58.8%
Other Services (except Public Administration)	4,536,340	5,282,688	85.9%
Construction	4,526,389	5,470,181	82.7%
Administrative, Support, and Waste Management	3,523,802	10,185,297	34.6%
Wholesale Trade	3,463,622	5,908,763	58.6%
Finance and Insurance	1,918,122	6,063,761	31.6%
Transportation and Warehousing	1,585,539	4,287,236	37.0%
Educational Services	1,532,214	3,513,469	43.6%
Real Estate and Rental and Leasing	1,361,352	1,972,105	69.0%
Arts, Entertainment, and Recreation	1,315,721	2,112,000	62.3%
Information	871,065	3,266,084	26.7%
Mining, Quarrying, and Oil and Gas Extraction	288,789	732,186	39.4%
Agriculture, Forestry, Fishing and Hunting	132,812	154,496	86.0%
Utilities	110,352	638,575	17.3%
Total	56,435,468	115,156,089	49.0%

3.3 How Startups Innovate

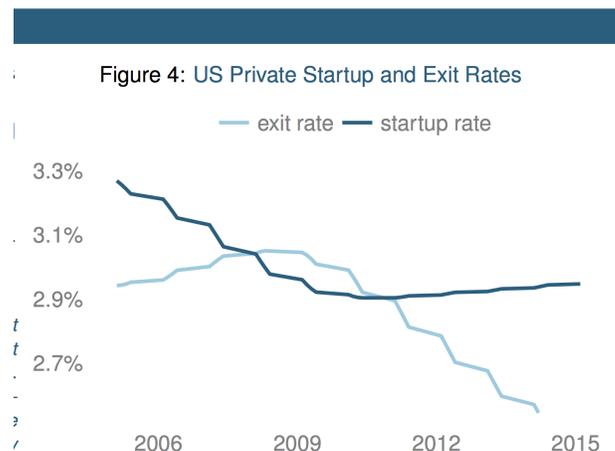
Innovation takes one or more of the four following forms:

- **Technological Breakthrough:** a major discrete improvement in performance and/or value created by a technology or product. This type of innovation usually requires larger resources to bring to market;
- **A Sustaining Innovation:** an incremental value gain over other solutions available to users. Many time this will take the form of on-going improvements to an existing product in the market;
- **New Market:** An existing product applied in a new way, but to new customers. This innovation usually is achieved by determining an alternative function, feature or capability of an existing product; and
- **Disruption:** A simple, easy to use product intended for the masses at a much lower cost, and increasingly, a new business model (sometimes aided by technology) that changes an established market, creating new value for new customers who never used the product or service before.

3.4 How Startups Drive Growth

Business firm Turnover — the pattern of job creation and destruction from firm births, “continuing” and “exiting” is the central dynamic of new job creation — a constant churn in which new employment depends critically on the creation of new business entities.

From the early 1990s, the pattern of job creation in the US shifted permanently to being driven by new firm creation. Tracked by the US Census Bureau and BLS, the pattern of job creation is that the largest source of new job creation comes from new firms (“firm “births”), than expansion of existing businesses. In fact, since 1977 the creation of new jobs at new firms has averaged almost 1 Million more than the net new jobs created by existing firms continuing in operation. New businesses account for nearly all 20 percent of gross job creation and companies less than one year old have created an average of 1.5 million jobs per year over the past three decades. [US Census Bureau, Longitudinal Business Database; Brookings, ____]



3.5 Startup Growth: A Decline in Dynamism?

Despite what seems to be a golden age of startups, StartUP FIU enters a national startup market that since 1977 has been in decline in terms of its dynamism:

- Nationally, the total number of startups created as a percentage of all firms - **startup density** has dropped 50 percent since 1977;
- The share of US employment in startups has shrunk by over 50%; and
- The share of the population choosing to start a new business — entrepreneurs — has also fluctuated around 310 out of 100,000 adults (.31 percent) since 1996

The result is that the share of jobs in firms older than 16 years has reached an all-time high — 73.6 percent.

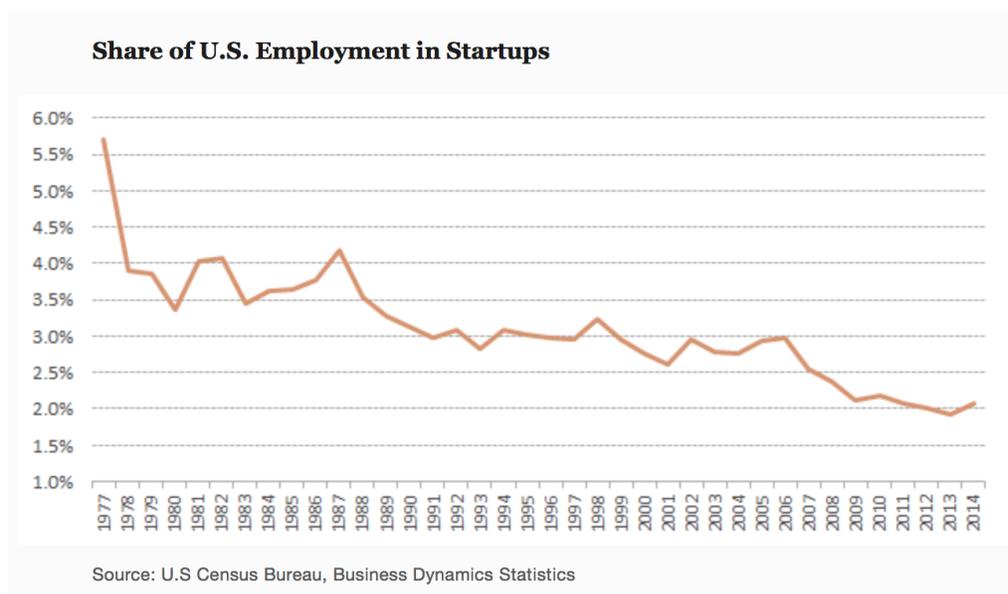
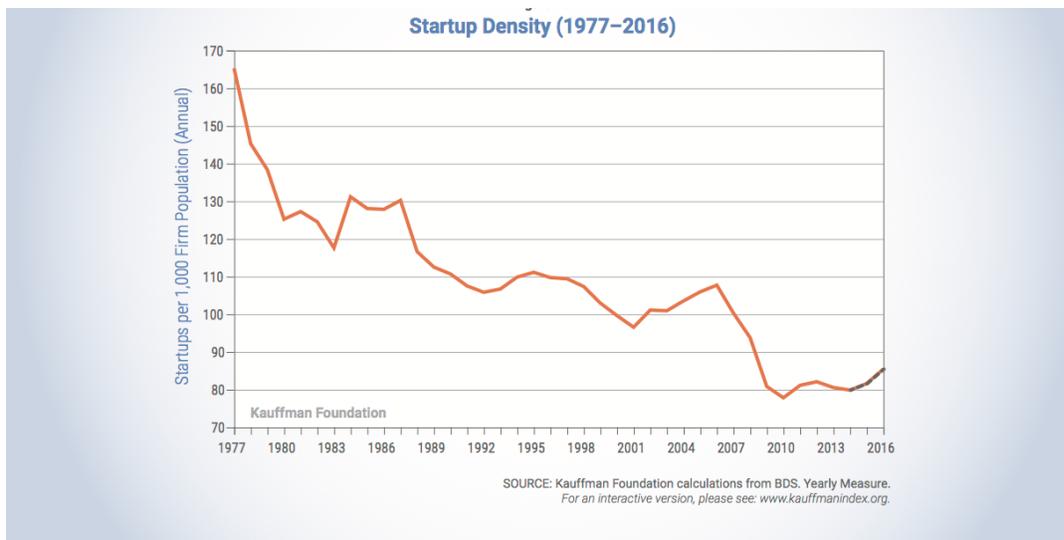
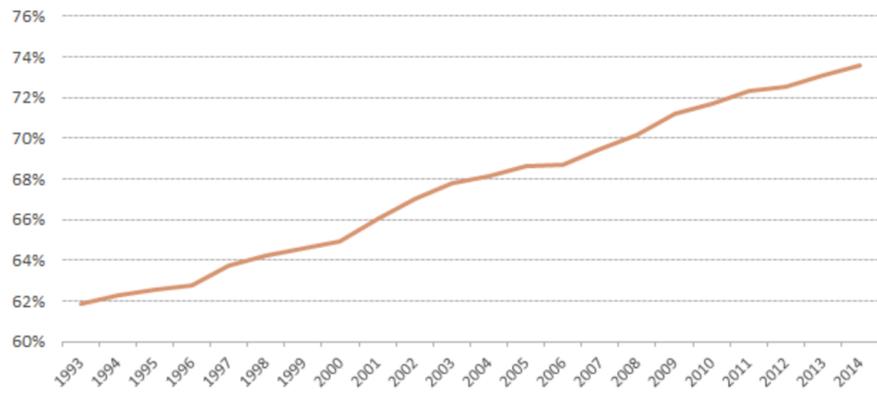


Figure 1A
Rate of New Entrepreneurs (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS.
For an interactive version, please see: www.kauffmanindex.org

Share of U.S. Employment in Firms Age 16 and Older



Source: U.S. Census Bureau, Business Dynamics Statistics

3.6 Startup Survival Rates

Industry Wide

Survival rates for startups change with business cycles. Current five-year survival rates have improved significantly since the last recession. According to BLS data, as of 2013, the last year data is available for 5-year estimates, for all establishments across all industries, 79.4 percent survive the first year, 69.3 percent to the third, and 56.3 percent survive to year 5. Only 33.5 percent survive 10 years or more.

82 percent of businesses that fail do so because of cash flow problems 27 percent of businesses surveyed by the NSBA claimed that they weren't able to receive the funding they needed. 40 percent of small businesses are profitable, 30 percent break even and 30 percent are continually losing money.

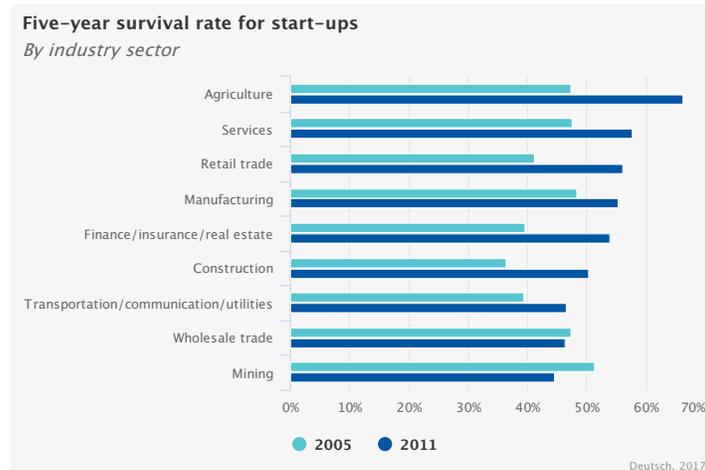
Wide Variation by Sector

Survival and failure rates do vary significantly by industry, from a five-year survival rate of 67 percent for Agriculture, to a low of 47 percent for transportation.

Chart 3. Survival rates of establishments, by year started and number of years since starting, 1994–2015, in percent

Number of years since starting	Year																					
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2	79.6	78.8	78.2	78.5	80.1	79.1	78.4	75.7	78.4	79.3	78.9	80.1	78.3	77.3	75.2	76.7	78.6	79.4	79.2	79.6	79.9	--
3	68.1	67.9	66.9	68.3	68.5	67.0	66.0	64.7	67.4	68.4	69.1	68.7	66.3	64.0	63.3	66.4	68.6	69.3	68.7	69.3	--	--
4	60.6	59.8	59.7	60.2	59.6	58.5	58.2	57.6	60.0	61.4	61.2	60.2	56.7	55.5	56.5	59.9	61.6	61.9	61.5	--	--	--
5	54.3	54.1	53.4	53.0	53.0	52.7	52.8	52.3	54.8	55.3	54.5	52.6	49.8	50.2	51.7	54.8	56.0	56.3	--	--	--	--
6	49.6	48.8	48.1	47.6	48.1	48.2	48.1	50.1	50.0	48.4	46.8	45.4	46.4	47.8	50.1	51.4	--	--	--	--	--	--
7	45.2	44.4	43.9	43.7	44.4	44.4	44.7	44.2	45.9	44.8	43.7	43.2	42.3	43.1	44.2	46.3	--	--	--	--	--	--
8	41.5	40.7	40.5	40.5	41.2	41.4	41.6	40.9	41.8	40.9	40.5	40.5	39.6	40.1	41.1	--	--	--	--	--	--	--
9	38.3	38.0	37.8	37.7	38.7	38.6	38.6	37.4	38.4	38.1	38.2	38.2	37.1	37.5	--	--	--	--	--	--	--	--
10	35.7	35.7	35.4	35.6	36.2	36.1	35.5	34.5	36.1	36.0	36.1	35.9	34.9	--	--	--	--	--	--	--	--	--
11	33.6	33.4	33.4	33.5	34.0	33.2	32.9	32.4	34.2	34.2	34.0	33.8	--	--	--	--	--	--	--	--	--	--
12	31.8	31.6	31.5	31.5	31.5	31.0	31.2	30.9	32.5	32.3	32.1	--	--	--	--	--	--	--	--	--	--	--
13	30.3	29.9	29.7	29.3	29.5	29.4	29.8	29.5	30.8	30.8	--	--	--	--	--	--	--	--	--	--	--	--
14	28.7	28.4	28.0	27.6	28.1	28.2	28.6	28.1	29.4	--	--	--	--	--	--	--	--	--	--	--	--	--
15	27.2	26.6	26.3	26.2	26.9	27.0	27.3	26.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
16	25.5	25.1	25.1	25.1	25.7	25.8	26.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	24.1	24.0	24.1	24.1	24.7	24.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
18	23.0	23.0	23.1	23.2	23.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	22.0	22.2	22.2	22.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20	21.2	21.3	21.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
21	20.3	20.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22	19.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Note: Dashes indicate not applicable.



3.7 Start-Ups Overwhelmingly Stay Small

According to *The Kaufman Foundation Index of Growth Entrepreneurship*, fast growing companies that scale-up quickly are the far exception, and nowhere near the rule. According to the 2016 Index, for all start-ups, in all industries:

- **Nationally, the average size of a start-up at inception is six employees, and the average size by age five is 9.2 employees** — a 58.5 percent growth rate;
- **Scale-ups** — defined as a company that employs fifty in the first ten years of existence, is 1.1 percent. **Only just over 1 out of 100 start-ups will grow to fifty employees in ten years;** and
- **High Growth Companies**, defined by Kaufmann as any company reaching \$2 M in annual revenue, with three successive years of 20 percent revenue growth, comprise .08 percent (79.3 out of 100,000) of all private firms.

The share of high Growth Companies, as defined by Kaufmann, is highly concentrated by industry. **The top five ranked industries, led by IT services, have over 47 percent of all high growth companies.**

Table C | Industries by Share of High-Growth Companies (2015)

Rank	Industry	High-Growth Companies	Share (%)
1	IT Services	521	13.0%
2	Advertising & Marketing	397	9.9%
3	Business Products & Services	367	9.2%
4	Health	315	7.9%
5	Software	289	7.2%
6	Financial Services	195	4.9%
7	Construction	195	4.9%
8	Government Services	193	4.8%
9	Consumer Products & Services	188	4.7%
10	Human Resources	147	3.7%
11	Real Estate	134	3.3%
12	Retail	131	3.3%
13	Food & Beverage	123	3.1%
14	Logistics & Transportation	113	2.8%
15	Manufacturing	111	2.8%
16	Telecommunications	89	2.2%
17	Energy	88	2.2%
18	Security	71	1.8%
19	Engineering	63	1.6%
20	Education	58	1.4%
21	Insurance	55	1.4%
22	Travel & Hospitality	52	1.3%
23	Media	51	1.3%
24	Environmental Services	39	1.0%
25	Computer Hardware	23	0.6%

3.8 Key Entrepreneurial Demographic Characteristics

Opportunity Entrepreneurship Increasing

Nationally, the overwhelming majority of entrepreneurs are forming new ventures out of opportunity, not necessity. The Kaufmann Index reports that in 2016, 86.3 percent of the total number of new entrepreneurs are persons who are not unemployed and not looking for a job. This percentage continues to increase, up 10 percent from 2009.

Age: Entrepreneurs Are Getting Older

According to the Kauffman Firm Survey (KFS) a longitudinal survey of nearly 5,000 companies, the mean and median age of all founders of new ventures from 2004 onward are both 45 years old. According to the 2017 Kaufmann Entrepreneurial Index, the age distribution of entrepreneurs is spread almost evenly between 20-34, 35-44, 45-54, and 55-64 year olds. Notably, the percentage of 20-34 year olds has shrunk from 34 to 24 percent from 1996 to 2016, while the percentage of 55-64 year olds has increased during the same period.

Separate studies have confirmed that age is an importance determinant of success in certain industries requiring longer lead times and more complex technology or organizational components, and that the average age of a **high-growth venture is 40 years old**. High growth ventures are almost twice as likely to be launched by someone over 55 than 20 to 34. [Vivek Wadhwa, Kauffman Foundation 2017]

Home Based Businesses are important

According to a *Global Entrepreneurship Monitor Report 2012* survey, 69% of businesses now start in the home, and 59% of established businesses more than 3 and a half years old continue to operate from there. [GEM 2012]

Gender

At the national level, entrepreneurs are mostly men. The percentage of Men who become entrepreneurs has increased slightly since 1996, while shrinking 3 percent for women.

Race and Nativity

Whites still make up the majority of total entrepreneurs (55.6 percent), but the rate of participation among Latinos at 48 percent is 14 percent higher than any other racial group. The rate of entrepreneurs among African Americans is lowest. The share of opportunity entrepreneurs, as opposed to by necessity, is significantly higher for whites. Immigrant entrepreneurs have grown from 13.3 percent to 30 percent of all entrepreneurs. Immigrants are two times as likely to be entrepreneurs than native-born persons. [Kaufmann 2017]

Educational Background

Nationally, the percentage of entrepreneurs with college degrees have increased from 23.7 percent to 30.1 percent. High school graduates and persons with some college education make up 53 percent of all entrepreneurs. [Kaufmann 2017]

3.9 Regional Entrepreneurship Benchmarks

National start-up creation and growth numbers are skewed by great variation at the regional level. In fact, the US has been undergoing a large-scale regional shift in start-up dynamism since the late 1970s. What looks to be a decline in start-up dynamism at the national level is really a result of dramatic concentration and re-distribution of start-up growth among a small number of regional economies. Metro Miami is among the Nation's leading regions for small business and entrepreneurship.

Small Business Drive the Miami Metro Economy

Small businesses, micro businesses, and self-employment play an oversized role in the Metro Miami economy. According to the US Census Bureau County Business Patterns, in 2015 self-employed business represented 13.5 percent of all businesses in the region, a full 33 percent higher than the national average of 9 percent.

Including self-employed workers, small business employing less than 20 persons represent over 98 percent of all businesses, employing over 50 percent of the County's workers. Lastly, businesses employing less than 50 (including self-employed) have created an average of 51 percent of the region's net new jobs each year since 2010.

Metro Miami Startup Growth Patterns

Metro Miami has one of the most dynamic entrepreneurial economies in the US, relative to its size. While San Francisco and Santa Clara County, and the New York Metro areas dominate the total number of start-ups each year, Metro Miami, in terms of entrepreneurial density is among the nation's leading locations for start-ups.

The key indicators relative to Metro Miami's entrepreneurial growth are as follows:

- ***The nation's highest rate of entrepreneurial participation among all metro areas.*** According to the Kaufmann Foundation Index of Startup Activity, Metro Miami has been among the top three startup metros over the last five years, and finally took the top spot in its 2017 ranking. 560 out of every 100,000, or approximately **33,669** people, are becoming entrepreneurs in the Metro area annually. This is 1.8 times the national average.
- The region's share of opportunity entrepreneurs has been steadily rising over the last five years. Kaufmann's 2017 index rates the share of opportunity entrepreneurs at 81.09 percent, or 4 percent below the national average.
- Startup density in the region also tops the nation. ***At 107.8 startups per 100,000 employer businesses, the area produced approximately 20,156 startups in 2016.*** [Kaufmann 2017]
- High rate of startups drives a high share of employment in start-ups. Share of employment in startups - map

Survival and growth of the region's start-ups, however, is its major economic competitive weakness. Again, according to the Kaufmann Foundation:

- ***Metro Miami's rate of start-up growth is among the bottom among the nation's 40 largest metro areas.*** At 39.5 percent, its startups add the smallest amount of new employees in the nation. On average, a business starting at five employees

would have 6.9 employees after its first five years, compared to the national average of 9.2 employees, a 25 percent difference in growth rate.

- The Region's share of scale-ups — start-ups reaching 50 employees within their first 10 years of operation — is also among the smallest in the US. ***Metro's .81 percent of scale-ups means that only 8 out of 1,000, or 1,525 businesses out of the region's 188,379 employer establishments scale quickly.***
- The number of high-growth companies — businesses earning \$2M annually and experiencing three years of 20 percent annual growth — as a percentage of all businesses is relatively higher for the region, but still among the bottom 25 percent of the top 40 metros. ***At 88.4 high growth companies per 100,000 (.0088 percent) only 166 companies are high growth in Metro Miami.***

Metro Rankings—Startup Activity Index

Rank 2017	Index 2017	City (Main)	Metropolitan Area	Rank 2016	Change in Rank	Rate of New Entrepreneurs	Opportunity Share of New Entrepreneurs	Startup Density
1	4.47	Miami	Miami-Fort Lauderdale-Pompano Beach	2	1	0.56%	81.09%	107.8
2	3.95	Austin	Austin-Round Rock-San Marcos	1	-1	0.51%	84.73%	104.5
3	3.92	Los Angeles	Los Angeles-Long Beach-Santa Ana	3	0	0.56%	80.03%	92.3
4	3.19	San Diego	San Diego-Carlsbad-San Marcos	11	7	0.49%	82.54%	95.9
5	2.78	Las Vegas	Las Vegas-Paradise	5	0	0.42%	81.93%	120.7
6	1.95	San Antonio	San Antonio-New Braunfels	14	8	0.38%	89.97%	87.2
7	1.87	New York	New York-Northern New Jersey-Long Island	7	0	0.41%	84.43%	86.5
8	1.83	Phoenix	Phoenix-Mesa-Glendale	10	2	0.38%	87.15%	92.1
9	1.66	Houston	Houston-Sugar Land-Baytown	6	-3	0.40%	81.93%	92.6
10	1.59	Denver	Denver-Aurora-Broomfield	8	-2	0.39%	82.87%	92.3
11	1.55	Dallas	Dallas-Fort Worth-Arlington	12	1	0.37%	85.18%	94.2
12	1.44	Atlanta	Atlanta-Sandy Springs-Marietta	15	3	0.43%	75.49%	89.9
13	0.95	Riverside	Riverside-San Bernardino-Ontario	18	5	0.36%	80.93%	92.4
14	0.64	San Francisco	San Francisco-Oakland-Fremont	4	-10	0.37%	77.78%	86.5
15	0.56	Kansas City	Kansas City	19	4	0.37%	77.81%	83.6
16	0.13	San Jose	San Jose-Sunnyvale-Santa Clara	9	-7	0.26%	90.17%	86.9
17	0.06	Charlotte	Charlotte-Gastonia-Rock Hill	20	3	0.37%	71.21%	87.5
18	-0.03	Cincinnati	Cincinnati-Middletown	25	7	0.30%	89.73%	61.6
18	-0.03	Tampa	Tampa-St. Petersburg-Clearwater	17	-1	0.34%	74.69%	89.0
20	-0.21	Sacramento	Sacramento-Arden-Arcade-Roseville	27	7	0.31%	80.17%	81.0
21	-0.31	Boston	Boston-Cambridge-Quincy	20	-1	0.33%	79.85%	68.2
22	-0.42	Orlando	Orlando-Kissimmee-Sanford	23	1	0.25%	80.25%	105.5
23	-0.70	Columbus	Columbus	13	-10	0.28%	84.43%	66.2
24	-0.95	Seattle	Seattle-Tacoma-Bellevue	26	2	0.25%	80.84%	85.0
25	-1.10	Washington, D. C.	Washington-Arlington-Alexandria	24	-1	0.28%	76.51%	78.1
26	-1.24	St. Louis	St. Louis	36	10	0.23%	77.39%	96.7
27	-1.27	Portland	Portland-Vancouver-Hillsboro	32	5	0.26%	76.43%	82.8
28	-1.34	Cleveland	Cleveland-Elyria-Mentor	37	9	0.19%	95.99%	54.3
29	-1.51	Nashville	Nashville-Davidson-Murfreesboro-Franklin	16	-13	0.27%	72.43%	82.2
30	-1.75	Jacksonville	Jacksonville	28	-2	0.11%	95.90%	89.4
31	-1.80	Chicago	Chicago-Joliet-Naperville	30	-1	0.22%	80.40%	74.7
32	-1.98	Detroit	Detroit-Warren-Livonia	31	-1	0.25%	76.01%	71.1
33	-2.11	Virginia Beach	Virginia Beach-Norfolk-Newport News	29	-4	0.18%	86.54%	68.1
34	-2.16	Providence	Providence-New Bedford-Fall River	35	1	0.18%	87.32%	61.0
35	-2.46	Baltimore	Baltimore-Towson	22	-13	0.20%	81.02%	69.2
36	-2.50	Philadelphia	Philadelphia-Camden-Wilmington	34	-2	0.21%	75.89%	69.7
37	-2.63	Minneapolis	Minneapolis-St. Paul-Bloomington	38	1	0.20%	76.31%	72.5
38	-3.53	Indianapolis	Indianapolis-Carmel	33	-5	0.16%	71.70%	72.7
39	-4.42	Milwaukee	Milwaukee-Waukesha-West Allis	39	0	0.15%	67.53%	60.7
39	-4.42	Pittsburgh	Pittsburgh	40	1	0.13%	71.92%	57.2

Metropolitan Area Rankings for the Kauffman Index of Growth Entrepreneurship

Rank 2016	Index 2016	City (Main)	Metropolitan Area	Rank 2015	Change in Rank	Rate of Startup Growth	Share of Scaleups	High-Growth Company Density
1	14.38	Washington	Washington-Arlington-Alexandria, DC-VA-MD-WV	1	0	116.9%	2.34%	271.5
2	10.90	Austin	Austin-Round Rock-San Marcos, TX	2	0	81.2%	2.25%	234.7
3	8.04	San Jose	San Jose-Sunnyvale-Santa Clara, CA	4	1	128.1%	2.15%	109.6
4	7.05	Columbus	Columbus, OH	5	1	51.9%	2.68%	143.8
5	6.75	Nashville	Nashville-Davidson-Murfreesboro-Franklin, TN	9	4	71.5%	2.09%	153.3
6	6.20	Boston	Boston-Cambridge-Quincy, MA-NH	3	-3	74.3%	2.05%	138.7
7	5.77	San Diego	San Diego-Carlsbad-San Marcos, CA	7	0	73.0%	1.59%	162.1
8	5.70	San Francisco	San Francisco-Oakland-Fremont, CA	6	-2	71.5%	1.79%	147.9
9	5.37	San Antonio	San Antonio-New Braunfels, TX	20	11	85.8%	2.67%	58.8
10	5.03	Dallas	Dallas-Fort Worth-Arlington, TX	10	0	56.3%	1.98%	137.4
11	5.02	Charlotte	Charlotte-Gastonia-Rock Hill, NC-SC	13	2	45.5%	2.17%	137.0
12	4.76	Phoenix	Phoenix-Mesa-Glendale, AZ	16	4	63.9%	1.74%	137.8
13	4.65	Denver	Denver-Aurora-Broomfield, CO	14	1	70.5%	1.61%	135.7
14	4.17	Houston	Houston-Sugar Land-Baytown, TX	17	3	56.4%	2.02%	112.4
15	3.89	Atlanta	Atlanta-Sandy Springs-Marietta, GA	15	0	43.8%	1.29%	173.5
16	3.88	Cincinnati	Cincinnati-Middletown, OH-KY-IN	35	19	74.4%	1.51%	118.3
17	3.68	Minneapolis	Minneapolis-St. Paul-Bloomington, MN-WI	19	2	54.7%	1.78%	119.0
18	3.50	Baltimore	Baltimore-Towson, MD	8	-10	77.9%	1.90%	76.4
19	3.32	Cleveland	Cleveland-Elyria-Mentor, OH	26	7	71.7%	1.71%	93.4
20	3.30	Indianapolis	Indianapolis-Carmel, IN	11	-9	35.3%	2.26%	99.7
21	3.15	Philadelphia	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	26	5	66.7%	1.52%	108.6
22	2.87	Seattle	Seattle-Tacoma-Bellevue, WA	18	-4	67.0%	1.52%	101.2
23	2.82	Jacksonville	Jacksonville, FL	23	0	93.0%	1.35%	79.0
24	2.50	Kansas City	Kansas City, MO-KS	24	0	54.4%	1.81%	87.4
25	2.41	Virginia Beach	Virginia Beach-Norfolk-Newport News, VA-NC	22	-3	62.7%	1.86%	71.0
26	2.28	Tampa	Tampa-St. Petersburg-Clearwater, FL	30	4	56.8%	1.16%	125.1
27	2.23	Pittsburgh	Pittsburgh, PA	12	-15	54.4%	2.05%	62.9
28	1.48	Portland	Portland-Vancouver-Hillsboro, OR-WA	28	0	63.8%	1.21%	92.7
29	1.35	St. Louis	St. Louis, MO-IL	31	2	67.0%	1.44%	68.6
30	1.27	Chicago	Chicago-Joliet-Naperville, IL-IN-WI	25	-5	47.8%	1.28%	102.5
31	1.16	Milwaukee	Milwaukee-Waukesha-West Allis, WI	21	-10	52.7%	1.91%	48.0
32	0.91	Las Vegas	Las Vegas-Paradise, NV	29	-3	55.4%	1.59%	61.7
33	0.86	Los Angeles	Los Angeles-Long Beach-Santa Ana, CA	33	0	51.5%	1.20%	93.1
34	0.63	Orlando	Orlando-Kissimmee-Sanford, FL	36	2	37.3%	1.03%	117.2
35	0.25	New York	New York-Northern New Jersey-Long Island, NY-NJ-PA	32	-3	54.8%	1.04%	84.7
36	0.09	Providence	Providence-New Bedford-Fall River, RI-MA	37	1	56.2%	1.39%	53.8
37	-0.13	Sacramento	Sacramento-Arden-Arcade-Roseville, CA	34	-3	57.7%	1.47%	40.4
38	-0.68	Riverside	Riverside-San Bernardino-Ontario, CA	40	2	48.2%	1.41%	42.9
39	-1.03	Miami	Miami-Fort Lauderdale-Pompano Beach, FL	39	0	39.5%	0.81%	88.4
40	-1.34	Detroit	Detroit-Warren-Livonia, MI	38	-2	52.7%	0.79%	64.9

3.10 Entrepreneurial Capacity and Performance Varies Widely at the Community Level

Similar to the US, entrepreneurial behavior and small business growth at the local level is also not homogenous, and is subject to wide variation among individual communities. Previous research by the Metropolitan Center has measured wide variations in Labor Skills, education, self-employment, and new establishment rate formation even at the census tract level in Miami-Dade County.

In a study of entrepreneurial dynamics among 15 states, Guzman, et. al. developed the **Regional Entrepreneurship Cohort Potential Index** (RECPI). They noted that nationally, although entrepreneurs per capita has declined, the capital investment in start-ups has been growing quickly again, and that in their estimate, is because the overall **quality** of start-ups is improving.

However, a composite measure of employment growth and earnings, their study also noted wide variation, and change over time, in the growth, earnings, and growth potential for start-ups down to the zip code level. Miami-Dade County was included in the study, and it indicated both significant declines in start-up growth potential and a shift in where entrepreneurs are performing best. [Guzman, et. al.]

4. The Funding Landscape

4.1 The Low Average Cost of a Start-Up

Industry specific and local data is not readily available, but national averages derived through multiple surveys indicate that the average cost to start a new venture is still relatively low — \$15,000 to \$25,000. [SBA; US Bank 2017]

82 percent of start-ups are funded initially from the founders, family, and friends, with 77 percent of small businesses rely on personal savings for their initial funds. [SBA; US Bank 2017]

Lastly, debt used for start-up costs comes from a range of sources: In 2016, big banks approved 23% of funding requests, institutional lenders (which include savings banks and life insurance companies) approved 62.8%, small banks approved 48.7%, alternative lenders approved 60.7%, and credit unions approved 42% of loan applications. [Biz2Credit.com Survey]

4.2 Venture Capital: Increasing but Still Extremely Rare

The growing total investment generated by accelerators is impressive, but the numeric reality is that a significant venture capital investment is extremely rare — according to the SBA ***nationally only one in 1,000 entrepreneurs in the United States receive venture capital funding.***

National Trends

Total venture capital investment in the US is on the rise after the markets collapse in 2002. According to the Price Waterhouse (PWC) Coopers *Money Tree Report*, since Q1 2002, \$359.3 Billion in venture capital equity has been invested over 35,897 deals for an average of \$10.09 Million per deal. Total investment for 2016 reached 62.7 Billion over 5,004 deals for an average of \$12.5 Million per deal.

Venture capital concentrates significantly by region and by industrial sector. Although venture capital investment is growing outside of the established innovation economy leading regions, in the top five regions for venture capital investment — San Francisco (North Bay Area), New York Metro, Silicon Valley (South Bay Area), New England, and LA/Orange County capture over 75 percent of all national VC equity.

Investment by sector shifts with economic cycles, and can move quickly based on speculative trends. Over the last year (2016-2017) Internet, Healthcare and Mobile and Telecommunications technology investments have captured over 77 percent of all investments.

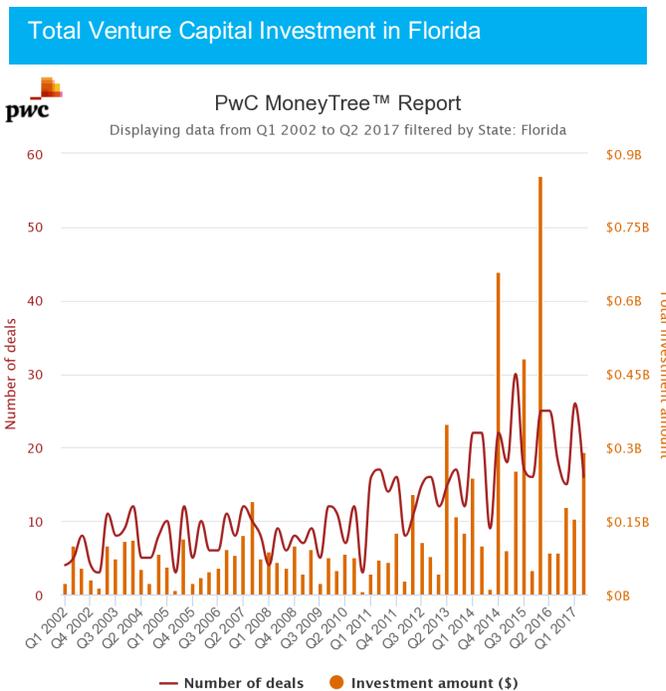
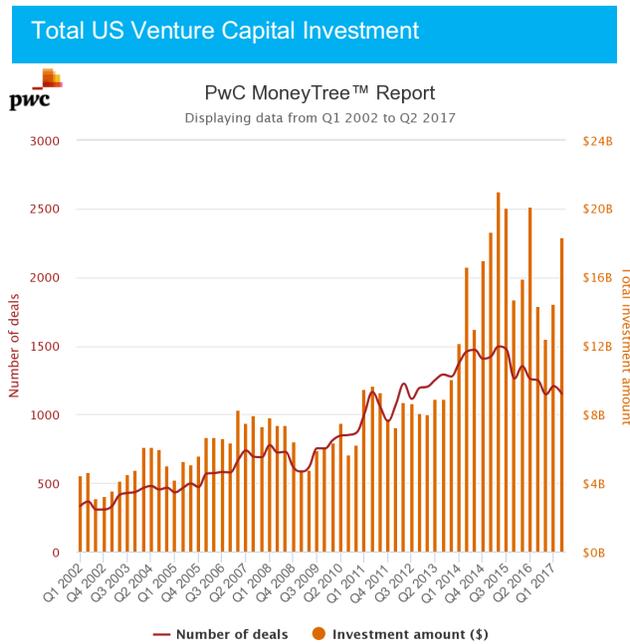
Florida

Florida and south Florida have been a rising star in the VC investment world. VC investment in Florida has moved from the 18th ranked state in 2013 to 7th in terms of total VC investment. Total VC investment in Florida in 2016 topped \$1.2 Billion, plead over 83 deals for an average of \$14.5 Million per deal. Total VC investment in Florida from 2010 to 2017 has reached \$5.1 Billion over 483 deals. However, according to crunchbase, a single company, Magic Leap

Inc., of Delray Beach accounts for the \$1.39 Billion of that total alone, raising it in three rounds from 15 investors.

Accurate data at the metropolitan level is unavailable at this time. South Florida has been claimed to account for 50 percent of all VC investment in the state, but this number may represent a single investment period (quarter) and not an entire trend.

Even as VC investment increases in the state, the reality is that start-ups and accelerators in Florida have been chasing on average, near \$1 Billion in VC funding over only 75 to 83 deals over the last three years.



Total US Venture Capital Investment By Sector, Q2 2017



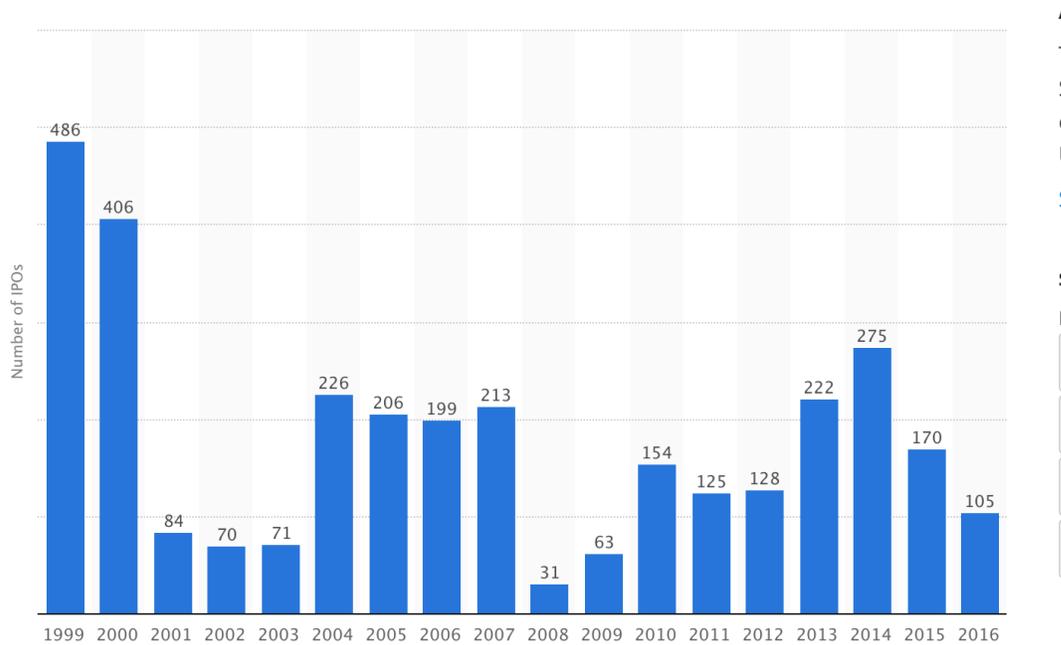
PwC MoneyTree™ Report
 Displaying investments by Sector in Q2 2017



4.3 Initial Public Offerings: Increasing, but Still Rare

As an exit or capital funding strategy, similar to VC funding, accelerators and startups are chasing a very small pool of IPOs that are regionally concentrated in three major metros: San Jose, San Francisco, and Boston. Since 2010 total 1,179 IPOs have been completed, averaging 168 per year.

Number of IPOs in the United States from 1999 to 2016



5. The Accelerator Value Proposition and Best Practices

The growing support from startup communities, economic development professionals, the growing level of investment flowing into and through accelerators, and the growing number of applicants to accelerator programs across the country indicate that they are generating real economic value. Understanding the fundamentals of the accelerator business model and its value proposition are key to understanding how high-performing accelerators work, especially outside the leading innovation regions.

If there is a single rule as to how accelerators work, there is no single rule. Broad agreement across the research literature indicates that accelerators don't copy well from one region to another, especially where there are significant differences in innovation capacity.

Core Business Model

The first recognized business incubator opened in 1959 in Batavia, New York. For most of economic development history, University and private research labs, as well as incubators, took a patient approach to fostering start-ups, and new business. That business model changed significantly with the opening of Y-Combinator, the first formally recognized business accelerator, 2005 in Cambridge, Massachusetts, quickly followed by TechStars in 2006.

The core business model of **Seed Accelerators**, also called business accelerators or start-up accelerators, are as follows:

- Focused Businesses development services to startups or early stage business ventures, both for-profit and non-profit;
- Time-limited support consisting of intensive education programs, intensive mentoring from experienced business professionals and educators, programmed events and continuous feedback regarding the client company's refinement of its model, products, services, and funding "pitch." Nationally, cohort sizes average 8 to 10 businesses and the average program length is 3 to 6 months. Most accelerators conduct 2 cohort sessions per year;
- Startups supported in cohort batches or 'classes' ranging in size from 10 to 120 companies at a time;
- An application process that is open yet highly competitive. Seed accelerators tightly limit the number of client companies in a cohort. Requirements vary — initial applications are typically submitted on-line, followed by interviews or presentations. Some require an initial video submission. Applications are reviewed by accelerator officers, augmented by mentors or outside expert reviewers;
- **Provision of pre-seed investment, usually in exchange for equity.** **Privately owned seed** accelerators typically invest between \$10,000 to \$25,000 in each company they accept. The cash equity investment, combined with the training services delivered are exchanged for equity in the client company, averaging 6 to 8 percent nationally;

- Accelerators make their earnings from the earnings from the equity stake taken in client companies; returns rise with the value of the company. In this way accelerators are themselves an at-risk investor vested in the growth and success of its clients;
- Central space which is crucial to the function of most accelerators. The accelerator experience is typically designed to be short and intensive. In addition to the contact, feedback and support from staff and mentors, peer support, feedback, and the exchange of ideas, shared problem solving or “collisions” from peer companies in the accelerator cohort are seen as critical to the program; and
- Culmination of the program in a demo or “Pitch Day.” During the program cohort client companies receive mentoring from experienced business founders and investors, with an emphasis on “pitching practice,” including practicing presentation skills, ad/or legal advice. Programs usually end with a demo day in which the teams pitch their products to investors.

According to the definition of Cohen and Hochberg (2014), an accelerator program is a fixed-term, cohort-based program, including mentorship and educational components, that culminates in a public pitch event, or demo day.

The goal of the accelerator is to have client companies obtain investment in the form of venture capital, debt, partnership, acquisition by an existing business, licensing agreements, and/or obtaining contracts on which the client can obtain financing or other investment.

Differences from Incubators are Important to the Accelerator Value Proposition

Although they may provide some of the same services to client enterprises, accelerators operate differently than incubators, and much of their success is based on those key operating differences.

- Incubators vary in size and mission, but take a much more patient approach to business development, providing working space for client companies for **1 to 3 years**, nationally averaging 22 client firms in residence at a time, and providing consulting and business development services that clients may or may not pay for. [U.S. EDA, 2011];
- Incubators earn revenue from rents, in-kind contributions, and on-going public support, rarely taking equity positions in clients, though that is changing also;
- Access to incubators is mostly non-competitive;
- Incubators are predominately non-profit entities. According to a study by the U.S. Economic Development Administration with the National Business Incubation Association (NBIA), 25% of incubators are sponsored by academic institutions, 19% by economic development organizations, (22%), by government entities, and only 4% are sponsored by for-profit entities; and
- The incubator model evolved to accommodate science and product based business development, with many focused on providing lab, product testing and working space that was out of reach for new business. The first “pure” seed accelerators were developed to operate inexpensively, and accommodate business with very low product and series development costs, typically software and web-based businesses. Though the model is changing, for the most part they still focus on lower cost of production ventures to keep their model profitable.

	Incubators	Angel investors	Accelerators	Hybrid
Duration	1 to 5 years	Ongoing	3 to 6 months	3 months to 2 years
Cohorts	No	No	Yes	No
Business model	Rent; non-profit	Investment	Investment; can also be non-profit	Investment; can also be non-profit
Selection	Non-competitive	Competitive, ongoing	Competitive, cyclical	Competitive, ongoing
Venture stage	Early or late	Early	Early	Early
Education	Ad hoc, human resources, legal	None	Seminars	Various incubator and accelerator practices
Mentorship	Minimal, tactical	As needed by investor	Intense, by self and others	Staff expert support, some mentoring
Venture location	On-site	Off-site	On-site	On-site

5.2 Evolving Business Models and Typologies

Accelerators themselves are undergoing innovation, evolving new business models and operating concepts. Significant variations in the accelerator business model include:

- Corporate accelerators, established and run by corporations, focusing on the development of new ventures that support or expand their business lines. Exit from Corporate accelerators more typically involves the corporation acquiring, licensing from, or making a subsidiary of, the startup client;
- University accelerators, which are either sponsored, owned, or hosted by a University, and tied into the University's existing research, commercialization, and tech transfer functions. University-based accelerators tend to emphasize education and entrepreneurial experience over financial returns, though this is changing quickly;
- International accelerators, which host ventures from around the world, either at multiple locations, or new models that host clients virtually from central location. International accelerators are changing transforming the competitive landscape, changing competition from local and regional to international;
- Social venture capitalists, also called social impact investors, are investors who pursue social venture capital and social impact investing — typically angel and seed level investments in social enterprises. Social impact investors share the same goals as social entrepreneurs, and make investments in enterprises making change to address critical societal issues. According to the Global Impact Investing Network (GIIN) / J.P. Morgan Chase: "Impact investments are investments made into companies, organizations, and funds with the intention to generate social and environmental impact alongside a financial return."
- There are a wide variety of social impact investing vehicles, including managed social impact venture capital funds, social impact investing networks, traditional

banks, bank investment funds, and traditional charitable foundations. Social impact investors have a variety of goals — while they balance financial return with social impact, according to GIIN / J.P. Morgan Chase, 55% of social impact investors expect market rate returns, 27% expect below market rate returns, and 18% invest with the intention of capital preservation. [The Global Impact Investment Network/JP Morgan Chase, 2014]

- Hybrid incubator-accelerators, combine elements of both to meet the needs of local entrepreneurs and markets.

5.3 Value Proposition to Client Ventures

The central value proposition of accelerators is that they:

- Combine essential and targeted services and infrastructure in one location that would otherwise be difficult and costly for new businesses to obtain on their own; and
- Improve and significantly speed up the funding cycle and growth rates of their client ventures, helping them obtain significant funding in a variety of forms much faster than they would on their own.

5.4 Value Proposition to Investors

Accelerators proved an increasingly important value proposition to a wide range of investors:

- Efficiency: Accelerators are helping to build a more efficient venture capital and business investment market by moving what was a more random process of matching businesses with investors into a formalized, streamlined, and limited set of locations. This shortens investor time cost, and risk significantly [citation];
- Accelerators provide critical business information investors need: by screening, then preparing client ventures for presentation and market readiness, they create “investor-ready” businesses, that by graduating from the accelerator have already received a seal of approval;
- Accelerators may be having a significant impact on scaling up the national level of venture capital, business investment, including initial public offerings, which had been dropping since the 1990s. As they grow in number and quality, they speed up the process of finding, sorting, training, certifying and matching start-ups with investors, a function carried out originally by angel and early seed investors at a smaller scale.

5.5 Value to the Regional Entrepreneurial Ecosystem

As they grow nationally, accelerators may be having an important function of diffusing innovation and investment out of the Santa Clara and New York dominated innovation capitals. Also, a growing body of research indicates that the presence of incubators and accelerators, especially as they grow in number within a region, has a significant positive impact on the regional economy, including: 1) attracting early stage funding for businesses, 2) bringing additional new investors to a community, 3) increasing overall venture capital investment, 4) stimulating regional employment and job creation, 5) increasing entrepreneurial activity and

new business formation rates, 6) providing immediate employment opportunities within the incubators and accelerators, and 7) provide local employment opportunities — the NBIA claims that 84% of companies that graduate from incubators stay in their communities. [NBIA, 2006]

5.6 Performance is Tied to Regional Economic Competencies

One of the key findings of nearly every major research work evaluating the best practices of high-performing accelerators is that they take a focused approach on local sector-specific businesses and enterprises. **Targeting regional economic clusters is one of the most important keys to accelerator and client success, especially for accelerators outside the established innovation leading regions.** Focusing accelerator services on a targeted set of industries is crucial for a number of reasons:

- Focusing accelerators on regional economic strengths provides a deeper, more qualified pool of potential entrepreneurs. It's basic numbers — strong performing local industries produce the largest number of experienced managers and technical talent. Casting a focused net on services to these industries means targeting the deepest business talent pool. Marketing accelerator services to workers and managers in the region's best performing industries improves the odds of a higher number of "startup ready" entrepreneurs — managers who bring extensive business networks, relationships, experience, and knowledge to their new venture. This is an especially significant consideration as the average age of new entrepreneurs continues to rise (currently 40);
- Working with client ventures in, serving, or innovating the region's strongest and established industries improves client post-graduation growth and survival rates. The network of services, product providers, and related supply chains in regionally high performing industries are the best developed. Startups depend on outsourcing many otherwise internal functions in the early stages. Established, high-performing local industries, especially those selling to national and international customer bases, have speedy, cost effective supply, service and expertise networks, as well as provide a ready pool of potential employees to increase growth rates. Startups needing to import product, services or employees face real growth challenges;
- Regional economies coalesce around a number of leading sectors, producing and attracting investors with expertise and risk management skills attuned to those industries. Despite growing total investment, VC capital is rare for startups, and corporations, other businesses, and a wide range of sources need to fill the early stage funding gap. Targeting the accelerator on high performing regional industrial sectors immediately aligns cohort clients with a broader pool of investors experienced in the industry and local operating conditions, improving the chances of a successful accelerator exit; and
- Targeting a limited set of business sectors for accelerator development makes more efficient use of internal resources and talents, and provides clients with a more intensive, knowledgeable experience. Mentors can be selected for their specific expertise, but serve a larger number of cohort clients if they are in a narrower band of related industries.

Accelerators using a targeted Industry approach they align their operations with economic strengths in the regional economy by:

- Selecting and screening for start-ups either in, or developing products and services for, industries that already have strong regional concentration and growth rates;
- Aligning staff, mentors, and programs with the needs, knowledge and expertise of those leading regional industry sectors;
- Targeting investors and sources of funding with the region's strongest sectors and industries; and
- Also aligning target industrial sector clusters regional occupational cluster strengths and labor pool strengths.

5.7 Other Key Best Practices

Research into the performance characteristics of high-performing accelerators continues to expand. A considerable body of research completed by the Rockefeller Institute, Aspen/Village Capital, the NBIA, U.S. Economic Development Agency, and Unitus Seed Fund, and a recent comprehensive study by GALI indicates that high-performing accelerators share the following traits:

- There seems to be no perfect cohort size. High-performing accelerators in the established innovation center regions admit as many as 120 businesses at a time in a single cohort, most accelerators in developing regions work with cohorts from 8 to 25 in size;
- Customizing support for client business, rather than on-size-fits-all services, by scoping the focus of the accelerator a defined set of industries or technologies;
- Permanent relationships with investor/partners and outside service providers who are directly involved dramatically increases graduate firm survival rate and investor returns, especially when these investors have a stake in the accelerator itself. Strong collaborations and permanent partnerships with investors [Kauffman Foundation, 2007];
- High quality experienced mentors who have a permanent relationship with the incubator or accelerator. High-performing incubators and accelerators also have highly experienced Corporate Boards, and access to high quality business support services either internally or externally;
- Stringent selection criteria for accepting accelerator clients;
- A focus on small teams not individuals. Most accelerators look for teams of partners to found and run start-ups. Viable high growth start-ups are too difficult for one person to launch. They rarely accept a single entrepreneur;
- Programs designed for more time for entrepreneurs to work on their own, rather than spending as much time as possible delivering program content;
- High-performing programs seek out applicant pools with more intellectual property and more educational, entrepreneurial and senior management experience;

- High-performing programs selected **ventures** that were younger on average (1.73 years), compared to ventures in low-performing programs (2.47 years);
- Less emphasis on finance, accounting, or formal business planning. They spend more time working on presentation and communication skills, networking, and organization structure and design;
- Creating a sense of urgency, and force development a working prototype, requiring entrepreneurs to develop the minimum viable product to determine customer acceptance and marketability;
- Utilizing the value of failing fast: accelerators can help expedite the “up or out” small business dynamic — a new venture either succeeds early, or exits the market. The value of not creating “zombie” small businesses (hanging on for existence), frees time, resources and funds for both entrepreneurs and investors if the business isn’t working; and
- ***Extensive post-graduation support. On average, accelerator graduates take a year after graduation to secure significant funding, and require 2 to 5 years to scale to significant size. High performing accelerators build post-graduate support networks including professionals and alumni.***

Accelerators function and grow more effectively when they operate in a regional market rich in other accelerators and incubators. A developed network of incubators and accelerators provides stronger investor connections, visibility, and third party business services support. Utilizing a discipline, best practices center approach is therefore even more crucial to accelerators operating in underdeveloped or emerging innovation ecosystems.

5.8 Permanent Funding: The Future of the Accelerator

In any industry, firms gain economies of scale and competitive advantages by vertically integrating core business functions. The very highest performing accelerators are creating their own seed, angel, and venture capital investment funds, rather than waiting for the process to play out with third party investors. Large funds have been created through wholly-owned funds, through long-term partnerships, and outside funds taking equity positions in the accelerator.

Accelerators of all kinds — private, non-profit, university, and social impact — have launched investment funds tied directly to their own cohorts. This trend is the future of the accelerator, and may, more than any other feature, distinguish high performing funds from low performing.

Industry Y-Combinator and TechStars have created no less than five funds under their direct control. Locally, Rokker3, Emerge, and TheVentureCity have launched independent venture funds of their own. No less than 40 Universities and University affiliated funds are currently in existence, led by UCLA’s \$240 Million Venture Fund.

5.9 Better, More Sophisticated Performance Metrics are Driving Greater Competition

Detailed tracking of results through the life of all client ventures provides a measurement of effectiveness, impact, and needed improvement. ***As an accelerator generates success, performance metrics become critical for distinguishing itself in the marketplace in order to attract the best new entrepreneurial talent and business ideas.***

Data compiled from Crunchbase, Seed-DB, and VentureSource indicate that successful accelerators, investors and entrepreneurs are looking most for three sets of tracking metrics:

- The quality and experience of the mentors and leadership team — what specific business creation results have the accomplished;
- The Pre-application, in-program, and post-graduation measures of 1) current customers and revenue per customer (for most that will be 0 at the start) that will work across revenue models: CAC, ARPU, churn rate, 2) sales funnel – do they have leads? How many? Are they qualified leads? What are they worth? and 3) average monthly user growth in the last month, and
- Survival ratio of graduating firms.

Internal performance metrics of successful accelerators use these same metrics, but also include:

- Detailed analysis of the characteristics of the applicants they didn't accept;
- Quantitative analysis of the pre-program characteristics of applicants, including the number of founders, years of experience, and all other qualifying conditions the accelerator used to evaluate them; and
- Individual performance statistics of each of their mentors — how many surviving graduates did they serve, growth rates, what role did they serve, and are they still involved with the firm post-graduation (Board seats, etc.)

In addition, University and non-profit accelerators track jobs created and local economic impact generated by graduating companies. including direct and indirect jobs created, salaries generated, and taxes generated.

Like any other start-up, significant results are rare right after launch. ***The very leading accelerators — Y Combinator, TechStars Boulder, TechStars Chicago, TechStars Seattle, and Dreamt — took an average of four years to show meaningful results.***

6. StartUP FIU's Competitive Landscape

6.1 A Growing and Dynamic National Accelerator Market

Y-Combinator's launch in 2005 set off a market rush of Seed Accelerators. The number of accelerators worldwide and nationally is difficult to determine exactly, because their numbers have grown so fast, and many have changed business form. According to Ian Hathaway, the number of accelerators in the US grew from 16 in 2008 to 179 in 2014. Seed-DB.com, one of the leading accelerators analytics and tracking databases, listed as many as 235 accelerator programs worldwide in 2016, and currently lists 188 programs worldwide, as many accelerators have converted to pure seed accelerator investment funds. [Hathaway; Seed-DB]

Definitional issues also complicate global, national and local counts. According to the National Business Incubation Association, as of October 2012, there were over 1,250 incubators in the United States, and over 7,000 incubation programs in operation around the world. Yet this number includes many that entities that identify as accelerators.

A recent Brookings Institution study reviewed nearly 700 U.S.-based organizations that were categorized as an "accelerator" or "accelerator/incubator," and found that fewer than one third met the true definition of an accelerator, discussed above. This definitional confusion complicates analyzing metrics, and creates market confusion with client business and potential investors, creating the appearance of greater confusion than they may really be at the local level.

University Accelerators/Incubators

Due to similar reporting issues a definitive count of the nation's university accelerators and incubators is equally unclear. Best estimates place the total number of US University incubators, accelerators and entrepreneurial development programs near 250 and growing. Florida's University incubators and accelerators include:

- Florida Atlantic University - Adams Center for Entrepreneurship
- Nova Southeastern - Huizenga School of Business and Entrepreneurship
- University of Florida - Center for Entrepreneurship & Innovation
- Florida Institute of Technology - Business-Center for Entrepreneurship
- Barry University - Entrepreneurial Institute
- University of Miami - The Launch Pad, CIC
- University of Central Florida - Center for Entrepreneurial Leadership
- Florida State University - The Jim Moran Institute for Global Entrepreneurship
- University of Tampa - Entrepreneurship Center
- University of South Florida - Center for Entrepreneurship

Geographic Concentration

Not surprisingly, according to Brookings, of the 172 accelerators they identified in 2015, 54 metro areas had at least one accelerator, but 91 (53 percent) of those were located in the nation's top eight leading innovation ecosystem regions. StartUP FIU was not included in this list, nor any other Miami area accelerators.

6.2 A Rapidly Growing State and Regional Market

Florida has been one of the fastest growing states for new accelerators. The Florida Business Incubator Accelerator lists over 70 incubators across Florida, but includes many entities that identify themselves as accelerators. Again, an exact count is impossible, but it is safe to say that the state is adding new accelerators or entities perceived to be competing in the accelerator space each year.

The growth of Miami-Dade's incubator and accelerator ecosystem has been a leading bright spot on the County's economic landscape and one of its real success stories since the recession. The County's Incubator and Accelerator ecosystem was virtually non-existent in 2008 – 2009. Since then it has built a growing cohort of accelerators, which is distinguished by its depth and breadth. Accelerators and incubators of note that have established in Miami-Dade include:

Private, non-profit and University Incubators and Accelerators:

- Venture Hive
- Rokk3r Labs
- Project Lift
- Eckert
- The LaunchPad
- Endeavor (Endeavor Miami)
- Startup Miami
- StartupBootcamp
- The Miami-Dade College **CREATE Accelerator**
- StartUP FIU
- TheVentureCity (announced 2017)

Social Impact Incubators and Accelerators:

- Radical Partners
- AT&T Aspire
- Babson College Women Innovating Now Lab
- The Center for Social Change

The region has become the destination for a host of 1 and 2 week events hosted by accelerators and investors from out of the area as well. Other projects of note include the **University of Miami Life Science and Technology Park** (UMLST), located in the University of Miami's

Health District in Over town, the second largest Health District in the USA. The UMLST has already landed world-class research institutions, and medical technology tenants.

The Metro area also has a growing list of co-working spaces, many of which advertise as entrepreneurial development centers. Whether they act as pure accelerators is uncertain. They include:

- The LAB Miami
- Pipeline Brickell
- Miami Shared
- MEC261
- Miami Innovation Center
- Büro
- Right Space 2 Meet
- HUBB Coworking

The newest addition to the UMLST includes **Converge Miami**, a co-working and entrepreneurial support center built by UM but operated by Cambridge Innovation Center of Boston, one of the nation's most established incubator operators. Companies originally based at CIC have raised over \$1.8 Billion in venture capital, which chose Miami as its second expansion location. The CIC charges rent, and has an education fellowship program, and will house as many as 500 startup companies, will eventually have wet laboratory space, and houses Venture Café, a non-profit, runs entrepreneurial related programming, but it is unclear if it will develop as a formal accelerator.

The County is also home to a wide range of support organizations that market, promote, support, and network accelerators, investors and entrepreneurs, including Ashoka South Florida, which has partnered formally with FIU.

6.3 Performance Benchmarks

Global and National

By any measure, accelerators are a booming sector. Seed-DB.com currently lists 177 accelerator programs worldwide. Collectively since each of their inception they have served 6,778 companies, of whom 927 have exited for \$5.7 Billion, raising a collective \$27.9 Billion in invested funding. That's 6 percent of all venture capital invested in the US from Q1 2005 to Q2 2017, and average of \$.1 Million per company accelerated. Both the total amount of funding invested in accelerator clients and average per company has been rising steadily since 2010. [PWC MoneyTree Report]

Again, these industry-wide results are skewed, as the top 10 accelerators (by funding invested) accounted for 84 percent of all funds invested through accelerators. For example, Y-Combinator secured \$15.3 billion since its founding, serving 1,276 companies for an average investment of \$12 Million each. According to Y-Combinator, the collective value of their graduated companies is over \$80 Billion. Y-Combinator has produced multiple companies with over a \$1 Billion valuation including DropBox, AirBNB, and Reddit.

The rest of the top 50 are close to the national averages. Only the top 114 accelerators on Seed-DB report any funding invested at all. The bottom 162 accelerators report a total of 4,509 companies accelerated, raising total of \$4.5 Billion, for an average raise of \$990,568 per start-up.

The difference accelerators make is considerable. According to a study completed by the Global Accelerator Learning Initiative (GALI) at Emory University, businesses that went through an accelerator raised almost eight times the investment money than non-accelerated businesses.

University Accelerator/Incubators

Just like the universe of private accelerators, preside data on the performance of University accelerators is difficult, and it too has leading “rock star” institutions.

According to PitchBook.com’s annual ranking of US University Entrepreneurial programs, the top 50 University on their list served 18,548 entrepreneurs (including non-students and non-faculty), graduating and/or servicing 16,632 companies, and raising \$2.46 Billion in invested funding for a per company average of \$14.8 Million. The list is topped by perennial leaders Stanford, Cal Berkeley, MIT, Harvard, Cornell, The University of Texas, and University of Illinois. As with all aspects of the Innovation economy, the top 10 Universities were responsible for raising 43 percent of all funds raised by the top 50.

Comparable Florida Incubators and Accelerators

Of the limited publically available performance data for Florida’s University incubators and accelerators, the two most comparable programs — the University of Florida’s **Innovation Hub**, since opening less than 6 years ago graduated 72 companies, with total investment of \$67M, for an average \$930,556 invested on graduation. The Innovation Hub also reports an 87 percent survival rate of its graduating start-ups after 5 years.

The University of South Florida’s **Tampa Bay Technology Incubator** (TBTI) has graduated 70 companies raising \$76.2M, an average of just over \$1M per company.

Client Funding Performance

The best research data indicates that on average, start-ups that graduate from accelerators raise on average 8 to 11.3 times the funding of start-ups who do not go through accelerator programs, and have better survival rates over the first 5 years since inception. **However, many report that on average, graduating start-ups take another year after graduation to complete their first significant fund raise.**

6.4 Current Regional Demand Far Exceeds Regional Accelerator Supply

Total annual client capacity of **all** metro area private, non-profit and University incubators and accelerators programs providing true accelerator-type services and investor relations serve 300 and 350 client firms annually, including short-term visiting events. Purely co-working spaces are not included in this count. That number increases significantly (by approximately 400) if UM’s Converge Miami adopts a full accelerator model.

The region's 33,669 entrepreneurs create over 20,000 start-ups each year. Given the growing results of programs around the country and the nation, interest in accelerator services will grow out of this base of potential clients. ***Therefore, current demand vastly exceeds regional supply, expressed in the number of cohort spaces available locally.***

6.5 Competition is Increasing Through Mobility, the Growing Availability of Performance Metrics and Sophistication of the Client Search Process

StartUP FIU operates in a relatively protected market space with overwhelming regional potential demand for accelerator services. However, that window will be closing fast, as competition from local, national and international accelerators increases, for four reasons:

- Start-ups may be constrained in terms of where they begin operations, but are very mobile in terms of receiving accelerator services. The most popular accelerators receive applications from around the world. Successful accelerators in the local market actively recruit, market, and serve, entrepreneurs from around the country;
- The rise of accelerators serving an international base of clients from Miami is growing quickly. Its international gateway position gives Miami a considerable competitive advantage in terms of marketing accelerator services to foreign clients. Among these accelerators, a number are beginning to offer their service virtually and remotely, so that clients can stay in their home city. International accelerators including emerge and the newly announce _____ promise to leverage considerable global mentorship skills and investment pools to compete in Miami's home market;
- The availability of performance metrics, although notoriously bad for public and University accelerators, is getting better every year for private accelerators. Multiple tracking sites, report services, and analyses for both investors and potential clients now actively rate and compare accelerators performance and their customer experience against one another. In addition, the production and use of comparative analytics, metrics and annual "best of" awards are driving even greater awareness of the differences between accelerators and helping develop accelerator brands in this still evolving market; and
- Client start-up use of analytical metrics is growing considerably in sophistication. Potential clients, have access to a wide range of start-up news, metric and information blog sites. Because initial equity awards are climbing, those with the best ideas and talent can shop for the accelerator that best suits their needs and best improves their odds of success.

Formal development of better standards, and detailed development of performance standards is underway by the Global Entrepreneurship Research Network (GERN), a coalition of institutions. The Aspen Network of Development Entrepreneurs (ANDE), Emory University, USAID, the Omiya Network, the Argidius Foundation and the Kauffman Foundation have made a \$2.3 million investment in the Global Accelerator Learning Initiative (GALI) at Emory University to develop global standards and systems to standardize and collect performance data for accelerators.

6.6 Increasing Selectivity is Key to High Performance

The pressure for delivering performance will only continue to grow as the industry becomes more competitive. As it does, one of the most important ways accelerators reduce risk and increase success rate is to be increasingly selective as to client start-ups. Data regarding the internal processes accelerators use to pre-screen and select clients in a competitive process is scant. However, as the numbers of applicants increase, high-performing accelerators are accepting smaller percentages of clients from their application pools. The Global Accelerator Network accepts only 2.1 percent of the 450 or so applications it receives for each cohort. The best-known accelerators are now accepting less than 1 percent of all applicants. [Emory University]

Sophisticated statistical and econometric models have been used in the investment community for decades to evaluate investment opportunity and risk, but based on a review of a small sample of applications from leading accelerators, many applications, it's not certain that these approaches are being used much across the accelerator industry. The research literature and recent opening announcements indicate new accelerators are incorporating data-driven and statistical analyses into their evaluation processes, but it is not clear yet what these are.

7. University Accelerators and Incubators

7.1 Value Proposition

Universities are the foundation on which regional innovation economies are built and critical to their success. The role of the University has changed significantly, and in the accelerator age is evolving even faster. The traditional role education, basic research, and commercialization and technology transfer (TTO) functions of the University are being compressed into a more seamless process with fewer steps, and even greater involvement with the business community and public. [Toddling, Franz]

Universities bring entirely different additional dimensions to the accelerator value proposition. Leveraging these inherent strengths offer significant competitive advantages in addition to serving critical public policy needs. High innovation ecosystem performing Universities engage in a wide variety of activities and strategies. However, relative to the development and operation of accelerators, three best practices stand out as universal among the best performers.

7.2 Flexibility in Adopting Business Models and Roles

High performing Universities match their accelerator/incubator business models to the local economy and innovation ecosystem, adopting a wide variety of roles in their business approach. The typical roles, in both non-profit and for-profit University accelerators the University can play are:

- **Sole Owner and Operator:** The University builds, owns and operates the accelerator with its own staff and resources. The accelerator is either dedicated to students and faculty or open;
- **Host:** The University builds and owns the physical facilities, but leases or turns over operation of the accelerator to a second party, preferably with significant expertise. The accelerator is either dedicated to students and faculty or open;
- **Partner:** The University enters can co-own facilities, and enter into a partnership with a second party or parties to jointly run the accelerator, and shares returns, if any. The accelerator is either dedicated to students and faculty or open;
- **TTO Engine:** The accelerator is dedicated to serving its own, internal commercialization and TTO functions, many of which are done through private partnerships. The accelerator is typically dedicated to students and faculty; and
- **Hybrid approaches,** combining aspects of all three.

The University commercialization and TTO processes typically have longer lead times and involve more complex science and technology than most accelerators are structured to deal with, including lab and assembly space. Universities have the advantage of 1) tiling a more patient approach to product development when the underlying technology requires.

Universities leading in the innovation space take a flexible approach to accelerator development, using pieces of the four basket models above to best suit the needs of the regional economy, internal capabilities, development timeline, and performance expectations.

7.3 Competitive Advantages Through the Power of Institutional Resources

If accelerators succeed by compressing all of the functions and expertise required for successful start-up launches, then Universities have through their standing institutional structure, even greater reach and capability to build high performing accelerator elements in a single place. All of the basic elements accelerators take years to build up all already present in a University setting, including:

- Technical expertise — through multiple departments;
- Access to a wide range of outside expertise, mentors, and post-graduation advisors through their alumni networks;
- Significant fundraising, resource building, and facilities acquisition and management skills;
- Access to, and experience capturing with a wide range of public and private funding sources, including grants and incentives;
- Typically, extensive corporate, business and technical partnerships and relationships.

7.4 Aligning with External Economic and Internal Institutional Competencies

The highest performing innovation and accelerator Universities take great care to align and limit their target industry focus on local economic strengths. They also align those targets with their own internal competency. Where that expertise is lacking, leading Universities in this space commit to invest in developing their internal competency to support accelerator services, or use partnership models to acquire expertise quickly.

Increasingly, internal competency includes dedicated investment funding raised by the University and focused on its innovation program, as evidenced by the number of universities of all sizes across the nation, state and region raising their own significant dedicated venture funding. The ability to raise real investment dollars focused on innovation programs is becoming a major competitive advantage and differentiator.

7.5 High Performing University Accelerators are supported by a Comprehensive Internal Innovation Ecosystem

It may seem obvious, but leading Universities in the market space invest in, and build entire internal innovation ecosystems to support the success of their accelerator/incubator programs. ***University accelerators are the focal point, or tip of the iceberg, of a much greater internal ecosystem. The University and its extended internal capabilities provide the significant competitive advantage against other accelerator types. In fact, given the increasing***

sophistication, funding and capacity of private accelerators, it is difficult to see how Universities that do not significantly invest in and build an extensive internal innovation ecosystem and support infrastructure will remain competitive in the accelerator space.

The leading Universities have consciously built up their internal faculty, staff, facility, program, and degree programs to provide a cohort of internal expertise, pipeline of qualified student entrepreneurs, and related support programs assisting clients during the pre, internal, and post accelerator program process.

Entrepreneurial certificate and degree programs abound across the US. The leading programs are now completely integrating entrepreneurial education across almost every degree program, and accepting students from their first day into entrepreneurial degrees, majors, and minors. The leading example in Florida is UF's Innovation Academy — students from over 30 majors are accepted into a separate and distinct academy in which they take an enhanced curriculum, live in their own dorm, and graduate by developing a start-up and pitching real investors in the senior year. Departmental relationships, faculty responsibilities, and in Universities, innovation activity, support, and performance is being considered as an additional element to obtain tenure.

The scope, quality and results of University entrepreneurial programs are in themselves becoming a competitive necessity to attract students and faculty. The additional advantages of a highly developed internal innovation ecosystem are that it 1) delivers better prepared students into the regional labor force, 2) provides a more qualified pipeline of student entrepreneurs for the University's own accelerator, as well as the local economy, 3) increasingly attracts the best and brightest entrepreneurial minds, and 4) provides a highly skilled internal support staff for clients within its innovation programs.

8. Complexes, Clusters and Regional Economic Competencies

8.1 Selecting Target Industry Clusters

This study has discussed the critical importance matching accelerator programs and internal capabilities to local economic sector strengths. This is especially crucial outside the established innovation capital metros, where the local innovation economy ecosystem is less developed and margins for error are greater.

Picking startup winners isn't easy, and although a few claim they've developed predictive analytics to increase investment success, supporting the launch of startups is still a risk venture. Focusing on industry targets is a central strategy to reduce failure risk, improve funding odds, growth rates, and survival rates for cohort startups. This study offers a robust, inexpensive, easy to use methodology incorporating best practices of regional economic analysis, to target and analyze the region's strongest highest performing economic sectors, tailored for the specific needs of StartUP FIU.

The Industrial Competitiveness Analytical Matrix

At the risk of over simplification, startup success and growth is a function of the internal qualities of the entrepreneur, or founding team, and the market externalities, or economic conditions it operates within. Internal entrepreneurial qualities include the knowledge, skill, experience, and networks a startup's founder have or can create, as well as the qualities of their product and services, the type of innovation it represents, their business model, and the costs (investment) required to achieve above-average or rapid growth.

Yet market externalities, both barriers and opportunities, also play a large part in improving the odds of success. To recap, the local economy and its composition of industries support the success of startups in five ways:

- Providing a pool of experienced talent to become entrepreneurs;
- Providing access to competitive and experienced professional services and technical expertise the startup cannot build in-house;
- Providing supply chains and distribution channels with infrastructure and experience delivering needed inputs cost effectively and the capacity to move goods and services into national and international markets;
- Providing a large local consumer market for startups, on which most small business launch and then grow, which can also be in the form of purchase contracts for the startups products and services; and
- Providing a pool of potential investors with detailed knowledge regarding the industries being served, disrupted and/or improved by a startup's products and services.

StartUP FIU asked the Metropolitan Center to develop a way to select target industries, with an understanding of Miami's local economic context, that would help them target the most productive local industries from which to grow new startups. The **Industrial Competitiveness Analytical Matrix** provides more than that, serving as a decision tool to help answer three questions its directors deal with as it grows:

- What local industries provide the strongest platform to produce the largest numbers of experienced entrepreneurs and fast-growing, competitive startups?
- What industries are the best early consumer markets for its startup clients?
- Are the industries on which client startups will rely for inputs, distribution and services high performing, capable of supporting startup survival and growth? and
- Can an analysis of industry performance help client startups develop better business strategies to improve their odds of success?

StartUP FIU's goal is to reduce risk, provide the best advice possible for its clients, and hopefully outperform an increasingly competitive market space. Looking at the five ways the local industrial mix support startup performance, the Analytical Matrix uses eight measures to determine the area's **High Performing Industrial Sectors**. Each of the elements of the Analytical Matrix are general, high-level proxies for firm, establishment and industry behavior, but taken together and independently provide a helpful decision-making tool for a variety of uses. The components of the Matrix are as follows.

1. Traded versus Local Clusters and Industries

The analysis of industry clusters, or related complexes of industries that trade and serve with each other, is standard practice in economic development planning. However, rather than use clusters, the Analytical Matrix uses industries measured at the 6-digit North American Industrial Classification System (NAICS), for greater precision.

The important aspect of cluster analysis applied to the Matrix is the concept of **local** and **traded** industries. Regional economies are made up of local and traded industries and clusters. Local, or **non-traded** industries include those that provide products and services to the local market. Goods and services of local industries are sold or performed by workers on-site, in the local economy, mostly for local customers. Local, non-traded industries largely grow and contract in response to changes in the regional economy.

Traded industries are those that sell goods and services beyond the region, to national and international markets. These industries are more geographically mobile, and tend to concentrate where competitive advantages help them compete against competitors in other regions. Traded cluster industries can provide their goods or services from one or few locations to large markets, and for the most part do not need local employees to sell into a market.

Traded industries drive economic growth, bringing new dollars into a regional economy from outside it. Because they sell to larger markets, traded industry businesses tend to grow faster and larger than local industries. Most high-growth companies (as defined by the Kauffman Foundation) are in traded industries. Recent research sponsored by the Brookings Institute determined that 37 percent of all high-growth companies in the Kansas City Metro area sold only to the regional economy, while 67 percent of the area's high-growth companies got that way by selling to national and international markets.

The Competitive Analytical Matrix focuses on traded industries in determining the area's highest performing industries. Traded industries, because they operate in national and international markets, are naturally structured for higher rates of growth, have more developed, larger and geographically dispersed networks of supply chains, professional services, inputs, and revenues. In short, traded industries are better structured to provide entrepreneurs experienced in growing and operating larger, national scale businesses, as well as supporting startups entering those industries.

2. Share of the Regional Employment Market

Each industry is evaluated in terms of its share of the area's total employment market. Employment share is a gross measure of scale and size, indicative of a large network of support companies and industries, and large potential customers for startup products and services. The area's largest employment sectors for the most have pronounced impacts on the rest of the economy.

3. National Employment Growth Rate

The five-year growth rate in the total jobs for each industry is tabulated and included in the matrix. This indicates at a high level, the growth trajectory for each industry. Growing employment demand typically indicates greater demand and sales in an industry.

4. National Establishment Growth Rate

The five-year rate of growth for the total number of establishments in each industry is tabulated. This is a proxy measure for how well the industry supports new business establishments entering the industry. Combined with the national employment growth rate, an industry with growing employment but slow or declining numbers of establishments indicates growth through expansion or acquisition by larger firms. Conversely, employment growth aired with robust expansion in the number of establishments tends to indicate the industry is expanding through the addition of new businesses and startups.

5. Local Employment Growth Rate

The five-year growth rate in the total jobs for the local composition of each industry tabulated and included in the Matrix. Growing local employment indicates competitive advantages, growing firms, and in traded industries, is a possible indicator that local firms are growing national sales share.

6. Local Establishment Growth Rate

The five-year rate of growth for the total number of establishments in each local industry segment is tabulated. Again, comparison with the employment growth rate indicates gross business formation dynamics.

7. Local Employment Location Quotient

Location quotient (LQ) is a standard method of determining where an area has a higher concentration of employment in an industry than it does at the national level. An LQ above 1 means that the local industry segment has a higher proportion of employment than the nation. LQ's above 1,2 typically mean the area has a significant concentration in that industry, most

likely indicating other local competitive advantages — locational, financial, labor, embedded knowledge, etc. — that enable local companies to outcompete national competitors.

8. Business Survival Rate

Each industry is measured for the average US five-year business survival rate in that industry. High survival rate industries are those with 5-year rates above the national median.

Understanding the Matrix

Using the US Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) from 2012 to 2016, as well as business survival rates from the US Census Bureau's Center for Economic Studies Business Dynamics Statistics (BDS), the component data has been compiled for Miami-Dade County, and is shown on the following tables. The Analysis has been applied to the County's **traded** industries, as defined by the Harvard Business School and U.S. Economic Development Administration's **US Cluster Mapping Project**.

The Analytical Matrix is a baseline tool which is designed to be expanded and made more sophisticated over time. There are no absolutes regarding the Matrix, as it's designed to be a comparative tool in which each component indicator can be used in composition, alone, or combined with others. Each indicator provides a component of overall economic performance, especially applied to the potential success of startups working in, or selling to each industry. For purposes of relative overall performance comparison, the County and National totals are set to 1, and each indicator is set relative to the County and National baseline number. The composite index score represents the combination of each indicator relative to the national and county averages. A composite index score above 1 indicates the industry is outperforming the remainder of the County economy relative to the combination of input indicators.

The County's traded industries have been grouped into three categories:

- The County's highest performing large industries: Industries employing more than 1,000 employees, with composite performance index scores above 1.15. These are the industries with the highest growth rates, establishment creation, location quotients, and share of employment. Collectively they represent 18 percent of **all** employment in the County. These industries are the highest overall performing among large sectors, and because of their size have the largest impacts on growth, as well as the most developed networks of supply chains, distribution, and supporting industries and services. Most are also part of industries whose employment growth is also above the national average;
- The County's highest performing small industries: Industries employing less than 1,000 employees, with composite performance index scores above 1.01. These industries are individually smaller, have positive local employment, but generally low Location Quotients. These are traded, in some cases rapidly expanding industries, but are not as well developed as the leading large industries; and
- The County's **Underperforming Traded Industries**: These are the industries that for the most part is experiencing local employment decline, many with industry decline at the national level, and for many, low or declining establishment growth, and survival rates below the national average. A handful have composite index scores well above 1, but most are skewed by high Location Quotients.

What the Performance Index Means

The high performing industries, according to the matrix analysis, represent a wide swath of industries, including new, mature, hi-tech, low-tech, high and low wage, services and manufacturing. What they are **not** is a blanket recommendation for economic development investment, that is an entirely different calculus. What they **are** is the collection of industries, that based on the needs of startups, represent the best rated:

- Targets for the production of experienced, quality entrepreneurs;
- Targets within which new startups may have a better chance of success and growth;
- Targets that provide the best markets in which to grow the sales of innovative services and technology; and
- Targets around which StartUP FIU can build new programs in new locations, based on local to sell or develop innovative products

Applying the Matrix

The matrix analysis can be used by StartUP FIU in four ways.

1. Establishing New Accelerator Locations

StartUP FIU has embarked on an early stage strategy of establishing a network of accelerators throughout the County. It has two operating, and a third preparing to open. Each location can improve its draw of entrepreneurs, as well as provide its clients with local competitive advantages in the form of nearby businesses to sell and provide support, **by aligning the focus of each new accelerator location with the industry strengths the local community**. Economic performance, as well as entrepreneurial survival and growth, varies significantly at the community level, as do the skills and of the local labor force. Applied geographically at the micro level, the index can help align the industry focus of each new accelerator location with strengths in the surrounding community. This provides competitive advantage to the accelerator, as well as its graduates.

Using the matrix, this study recommends a target industry focused strategy for the West Kendall accelerator location, as well as two more for consideration in the future.

2. A Screening and Comparative Analysis for Incoming Client Startups

Used as the front-end of StartUP FIU's application process, the matrix analysis can provide a glimpse into the success potential of incoming applications in each cohort, and compare them to one another. A more comprehensive application process would include a questionnaire providing more detail regarding an applicant startup's internal characteristics — experience, age, product design, market size and share, business model, etc. The second half of the application process would be to match 1) the industries within which the applicant will be operating (software design, beverage manufacture, etc., and 2) the industries into which they are selling or innovating. Both analyses would provide perspective on the applicant's early success and growth potential — both strengths and weaknesses.

For example, the first step is to use the matrix as a look-up table. The first step is to determine if the applicant will be operating or selling into a traded sector. If not, its expectations for high

growth are considerably different. Later, assuming that StartUP FIU becomes more selective over time as demand grows, the index, applied to each applicant provides a way to select between competing applicants as part of a more data-driven comparison.

3. An In-Program Evaluation Tool

The matrix can be used to evaluate both end-user industry markets, which is typically done by new entrepreneurs, and evaluate the status of external support industries it may need to scale-up. In this way, it becomes a strategic evaluation tool for clients while in the accelerator program to adjust what could be major weaknesses in a business plan, and to continuously improve the value-added proposition the offer to various industry segments and customers, as well as growth dynamics, business size profiles, etc. Then Matrix is currently at an introductory level, but the data behind it can easily be compiled and updated to provide extremely robust industry analyses.

For example, a number of mature industries score relatively well on the composite index — deep sea passenger transportation (cruise lines) among them. This is not a recommendation to target startups looking to become the next Carnival Cruise Lines — the capital costs are enormous, and a brutal longshot. Even the spurt of single ship lines sailing to Cuba are expensive and high-risk.

What the use of the matrix does say regarding the various industries is that the region has some very dramatic competitive advantages that have resulted in permanent concentration and capture of major national industry segments. The key for new startup is not how to compete in those industries, but deliver value-added innovation that improves their operations. The sheer scale and reach of many of these home-based international competitors provides a local hometown competitive advantage in terms of early market, sales growth and eventual scale-up.

For example, any industry making daily use of warehousing, is going through quiet revolution. High-performing mature industries utilizing extensive warehouse services, include Scheduled Air Freight Services, Process and Logistics Consulting, and General Warehousing and Storage Industries. Currently warehouse development is the hottest sector of commercial real estate investment, driven by the industry's shift to shared, third-party, multi-tenant warehouses using high end computerized inventory systems, communications, and in some cases, robotics. The trend is begin driven by the rise in e-commerce and the desire of retailers and manufacturers to not own expensive warehouses that sit idle most of the day.

6. A Long-Term Performance Metrics Tool

StartUP FIU can use the index to measure its own performance at selecting clients and locations. The matrix analysis is not perfect, but using a quantitative, data-driven process to evaluate applicants, new locations, and its own selection of target industries provides measurable, rather than 'gut' feedback, and the means to make more reasoned performance course corrections over time. As it grows the use of these techniques, it can also be used to market yet another StartUP FIU competitive advantage — data driven analytics to improve client success rates.

High Performing Traded Industrial Sectors, Large Employment Industries (Greater than 1,000 Employees)

Miami-Dade County

NAICS	Industry	Total County Employment (Reporting Establishments)	Local Employment Share	National Employment Growth	National Establishment Growth	Local Employment Growth	Local Establishment Growth	Employment LQ	5-Year Business Survival Rate (US)	Compsite Index Score
All Industries		941,766	14.0%	9.0%	8.4%	12.9%	6.5%	1	55.4%	
483112	Deep sea passenger transportation	4,989	0.5%	4.5%	0.8%	9.9%	62.5%	70.29	53.7%	13.71
488320	Marine cargo handling	3,048	0.3%	33.2%	8.6%	173.4%	88.9%	6.46	53.7%	6.55
541199	All other legal services	1,072	0.1%	18.8%	21.7%	80.5%	104.8%	5.30	50.2%	5.55
522291	Consumer lending	1,437	0.2%	14.2%	8.2%	88.1%	128.8%	1.77	57.3%	5.35
541618	Other management consulting services	2,301	0.2%	2.2%	12.4%	106.0%	75.7%	3.11	50.2%	4.27
481112	Scheduled freight air transportation	1,734	0.2%	-7.3%	-2.2%	33.0%	23.0%	19.20	53.7%	4.20
454111	Electronic shopping	1,525	0.2%	85.0%	47.9%	22.6%	34.3%	0.85	61.1%	4.03
561330	Professional employer organizations	2,152	0.2%	-3.8%	0.1%	108.9%	92.1%	0.77	53.0%	4.00
541990	All other professional and technical services	1,534	0.2%	32.5%	51.6%	67.8%	41.0%	1.43	50.2%	3.95
711310	Promoters with facilities	1,281	0.1%	33.6%	18.7%	43.4%	35.6%	1.65	57.1%	2.92
711211	Sports teams and clubs	2,451	0.3%	17.3%	14.8%	11.7%	52.9%	3.63	57.1%	2.91
339999	All other miscellaneous manufacturing	1,055	0.1%	8.8%	31.0%	55.1%	31.0%	2.43	61.6%	2.88
561599	All other travel arrangement services	3,441	0.4%	17.0%	6.6%	43.7%	13.0%	4.96	53.0%	2.33
541890	Other services related to advertising	1,147	0.1%	41.5%	3.7%	20.0%	30.7%	1.55	50.2%	2.30
541613	Marketing consulting services	2,906	0.3%	30.9%	28.9%	10.7%	19.4%	1.64	50.2%	2.21
541614	Process and logistics consulting services	1,337	0.1%	19.6%	13.5%	47.9%	20.6%	1.48	50.2%	2.18
334510	Electromedical apparatus manufacturing	1,640	0.2%	9.9%	25.7%	0.0%	18.2%	3.77	61.6%	1.98
424930	Nursery and florist merchant wholesalers	3,666	0.4%	4.9%	-3.7%	3.4%	-2.8%	10.86	51.5%	1.96
541214	Payroll services	2,034	0.2%	-0.7%	2.8%	12.3%	51.8%	1.58	50.2%	1.95
524114	Direct health and medical insurance carriers	4,565	0.5%	3.2%	14.1%	11.5%	35.5%	1.65	57.3%	1.85
481211	Nonscheduled air passenger chartering	1,159	0.1%	0.6%	2.7%	42.6%	8.3%	5.10	53.7%	1.84
493110	General warehousing and storage	2,616	0.3%	42.4%	9.9%	25.8%	8.9%	0.41	53.7%	1.78
541512	Computer systems design services	3,377	0.4%	23.6%	19.7%	51.1%	0.2%	0.46	50.2%	1.72
611310	Colleges and universities	11,043	1.2%	3.1%	27.1%	12.0%	23.2%	1.16	58.1%	1.72
551114	Managing offices	8,174	0.9%	11.6%	14.4%	21.5%	24.6%	0.49	61.0%	1.68
541511	Custom computer programming services	2,547	0.3%	22.6%	20.9%	15.2%	16.6%	0.38	50.2%	1.67
561422	Telemarketing and other contact centers	3,757	0.4%	19.5%	21.8%	46.8%	-7.7%	0.98	53.0%	1.52
522320	Financial transaction processing and clearing	1,713	0.2%	10.6%	12.6%	34.9%	6.0%	1.72	57.3%	1.51
541611	Administrative management consulting services	5,238	0.6%	34.8%	15.4%	3.5%	4.9%	1.20	50.2%	1.48
424480	Fruit and vegetable merchant wholesalers	1,577	0.2%	12.6%	4.4%	15.8%	11.9%	2.09	51.5%	1.33
541310	Architectural services	2,075	0.2%	17.5%	3.6%	32.2%	4.9%	1.46	50.2%	1.33
512110	Motion picture and video production	1,460	0.2%	23.1%	13.3%	33.9%	-3.1%	0.74	46.5%	1.32
721110	Hotels and motels, except casino hotels	31,721	3.4%	7.7%	4.7%	15.7%	8.3%	2.59	58.8%	1.26
423610	Elec. equip. and wiring merchant wholesalers	1,610	0.2%	12.6%	9.4%	12.1%	11.4%	1.27	51.5%	1.24
713990	All other amusement and recreation industries	1,213	0.1%	31.0%	13.1%	11.3%	-2.8%	0.88	57.1%	1.23
332321	Metal window and door manufacturing	1,280	0.1%	21.6%	-3.9%	28.8%	-5.4%	2.70	61.6%	1.19
524126	Direct property and casualty insurers	2,656	0.3%	5.0%	-16.5%	36.9%	24.0%	0.71	57.3%	1.15
561510	Travel agencies	1,976	0.2%	10.4%	-5.9%	23.7%	0.5%	2.78	53.0%	1.02
423620	Appliances and electronics merch. whls.	1,080	0.1%	13.7%	5.2%	17.4%	-16.2%	4.98	51.5%	1.15

High Performing Traded Industrial Sectors, Small Employment Industries

Miami-Dade County

NAICS	Industry	Total County Employment (Reporting Establishments)	Local Employment Share	National Employment Growth	National Establishment Growth	Local Employment Growth	Local Establishment Growth	Employment LQ	5-Year Business Survival Rate (US)	Composite Index Score
All Industries		941,766	2.8%	9.0%	8.4%	12.9%	6.5%	1	55.4%	
488999	All other support activities for transport.	278	0.0%	35.3%	33.8%	363.3%	114.3%	2.70	53.7%	9.57
519190	All other information services	175	0.0%	47.5%	94.8%	169.2%	109.7%	1.26	46.5%	8.12
517919	All other telecommunications	134	0.0%	3.6%	22.2%	362.1%	93.3%	0.64	46.5%	7.83
333111	Farm machinery and equipment manufacturing	34	0.0%	-9.0%	8.9%	385.7%	100.0%	0.07	61.6%	7.75
487110	Scenic and sightseeing transportation, land	109	0.0%	20.3%	18.5%	211.4%	100.0%	1.00	53.7%	6.37
541711	Research and development in biotechnology	380	0.0%	21.8%	26.8%	255.1%	72.0%	0.29	50.2%	6.28
237120	Oil and gas pipeline construction	63	0.0%	5.3%	17.1%	425.0%	0.0%	0.06	56.0%	6.10
481219	Other nonscheduled air transportation	145	0.0%	59.7%	13.3%	154.4%	56.3%	3.76	53.7%	5.60
511210	Software publishers	640	0.1%	24.7%	70.4%	137.9%	59.6%	0.23	46.5%	5.35
487990	Scenic and sightseeing transportation, other	33	0.0%	21.3%	0.8%	312.5%	14.3%	1.25	53.7%	5.18
333120	Construction machinery manufacturing	44	0.0%	-10.1%	3.5%	238.5%	75.0%	0.09	61.6%	5.09
311999	All other miscellaneous food manufacturing	60	0.0%	17.8%	40.0%	42.9%	122.2%	0.24	61.6%	5.05
562119	Other waste collection	126	0.0%	4.8%	-4.9%	260.0%	50.0%	1.46	53.0%	5.04
337124	Metal household furniture manufacturing	156	0.0%	-5.2%	2.4%	231.9%	50.0%	3.33	61.6%	4.97
334413	Semiconductors and related device mfg.	28	0.0%	-3.7%	3.7%	366.7%	0.0%	0.02	61.6%	4.92
484230	Other specialized trucking, long-distance	458	0.0%	13.6%	15.2%	260.6%	29.4%	0.43	53.7%	4.91
333515	Cutting tool and machine tool accessory mfg.	46	0.0%	-1.7%	0.0%	228.6%	60.0%	0.24	61.6%	4.63
321999	All other miscellaneous wood product mfg.	41	0.0%	17.3%	10.7%	24.2%	137.5%	0.22	61.6%	4.61
236210	Industrial building construction	243	0.0%	7.4%	3.7%	73.6%	113.8%	0.19	56.0%	4.29
333415	Ac, refrigeration, and forced air heating	421	0.0%	4.1%	11.7%	31.2%	126.7%	0.64	61.6%	4.26
333992	Welding and soldering equipment manufacturing	28	0.0%	6.3%	34.6%	115.4%	55.6%	0.24	61.6%	3.95
561210	Facilities support services	574	0.1%	14.4%	42.2%	145.3%	26.7%	0.51	53.0%	3.91
523999	Miscellaneous financial investment activities	309	0.0%	25.5%	23.0%	78.6%	60.5%	1.35	57.3%	3.90
562112	Hazardous waste collection	36	0.0%	16.0%	10.9%	125.0%	50.0%	0.43	53.0%	3.64
532490	Other machinery rental and leasing	440	0.0%	22.3%	18.0%	82.6%	47.8%	0.89	61.3%	3.40
611699	Miscellaneous schools and instruction	459	0.0%	33.6%	20.7%	45.3%	53.1%	0.90	58.1%	3.31
336350	Motor vehicle power train components mfg.	42	0.0%	26.3%	0.9%	61.5%	66.7%	0.07	61.6%	3.21
561920	Convention and trade show organizers	928	0.1%	19.0%	4.8%	182.1%	-6.4%	2.28	53.0%	3.17
561499	All other business support services	674	0.1%	14.3%	35.0%	36.2%	45.9%	1.06	53.0%	2.94
323120	Support activities for printing	106	0.0%	-16.6%	-11.3%	53.6%	92.3%	0.54	61.6%	2.81
522310	Mortgage and nonmortgage loan brokers	801	0.1%	29.7%	-0.5%	132.8%	6.7%	1.19	57.3%	2.80
541720	Social science and humanities research	119	0.0%	2.3%	1.6%	128.8%	27.6%	0.25	50.2%	2.64
611513	Apprenticeship training	47	0.0%	13.4%	4.2%	88.0%	33.3%	0.43	58.1%	2.57
512240	Sound recording studios	128	0.0%	-11.7%	2.6%	93.9%	29.4%	3.53	46.5%	2.53
523920	Portfolio management	957	0.1%	38.7%	24.6%	14.7%	31.5%	0.62	57.3%	2.48
424510	Grain and field bean merchant wholesalers	149	0.0%	2.6%	-0.4%	15.5%	77.8%	0.40	51.5%	2.46
311520	Ice cream and frozen dessert manufacturing	166	0.0%	1.2%	11.5%	22.1%	60.9%	1.02	61.6%	2.46
541513	Computer facilities management services	142	0.0%	25.7%	30.6%	59.6%	15.8%	0.28	50.2%	2.46
541410	Interior design services	903	0.1%	30.0%	9.6%	39.8%	19.8%	2.82	50.2%	2.39
221310	Water supply and irrigation systems	63	0.0%	4.2%	1.0%	125.0%	16.7%	0.20	61.1%	2.36
541712	Other physical and biological research	783	0.1%	3.5%	13.1%	42.4%	50.0%	0.22	50.2%	2.35
493120	Refrigerated warehousing and storage	403	0.0%	13.0%	4.8%	39.9%	43.8%	0.90	53.7%	2.29
424460	Fish and seafood merchant wholesalers	920	0.1%	17.1%	6.8%	46.5%	11.9%	4.46	51.5%	2.26
711410	Agents and managers for public figures	224	0.0%	35.4%	10.1%	49.3%	12.8%	1.04	57.1%	2.17
321214	Truss manufacturing	208	0.0%	51.7%	-2.7%	36.8%	16.7%	0.96	61.6%	2.16
336390	Other motor vehicle parts manufacturing	65	0.0%	17.2%	3.6%	32.7%	42.9%	0.05	61.6%	2.11
512220	Integrated record production and distribution	118	0.0%	19.2%	12.6%	53.2%	0.0%	3.91	46.5%	2.08
423820	Farm and garden equip. merchant wholesalers	312	0.0%	2.1%	0.4%	68.6%	35.5%	0.39	51.5%	2.07
541320	Landscape architectural services	385	0.0%	11.4%	2.5%	55.2%	26.8%	1.49	50.2%	2.06
327215	Glass product mfg. made of purchased glass	378	0.0%	16.3%	-1.6%	27.3%	40.0%	1.06	61.6%	2.01
711120	Dance companies	227	0.0%	19.2%	26.0%	26.8%	7.7%	2.51	57.1%	2.01
541820	Public relations agencies	926	0.1%	11.8%	7.3%	81.9%	2.9%	2.02	50.2%	1.98
611512	Flight training	279	0.0%	5.7%	6.7%	56.7%	18.2%	2.08	58.1%	1.96
334513	Industrial process variable instruments	34	0.0%	1.7%	7.7%	88.9%	16.7%	0.07	61.6%	1.96
336612	Boat building	830	0.1%	26.6%	3.9%	24.1%	15.4%	2.87	61.6%	1.94
485310	Taxi service	895	0.1%	11.0%	4.6%	41.6%	14.3%	3.08	53.7%	1.87
611710	Educational support services	823	0.1%	19.3%	26.1%	18.1%	17.6%	0.75	58.1%	1.86
512199	Other motion picture and video industries	34	0.0%	2.5%	8.5%	17.2%	40.0%	1.48	46.5%	1.85
561312	Executive search services	184	0.0%	15.5%	14.7%	32.4%	21.9%	0.58	53.0%	1.82
325199	All other basic organic chemical mfg.	5	0.0%	11.1%	11.4%	25.0%	33.3%	0.02	61.6%	1.80
322211	Corrugated and solid fiber box manufacturing	399	0.0%	3.7%	-2.1%	38.1%	37.5%	0.55	61.6%	1.76
311813	Frozen cakes and other pastries manufacturing	87	0.0%	12.3%	2.7%	55.4%	14.3%	0.88	61.6%	1.70
321920	Wood container and pallet manufacturing	129	0.0%	12.0%	0.2%	48.3%	23.1%	0.28	61.6%	1.68
311991	Perishable prepared food manufacturing	164	0.0%	38.5%	35.5%	19.7%	-10.0%	0.43	61.6%	1.67
333249	Other industrial machinery manufacturing	202	0.0%	8.6%	11.7%	27.8%	25.0%	0.48	61.6%	1.66
541519	Other computer related services	454	0.0%	3.0%	12.3%	45.0%	19.4%	0.52	50.2%	1.62
712110	Museums	520	0.1%	18.1%	8.9%	28.4%	16.1%	0.71	57.1%	1.59
711320	Promoters without facilities	143	0.0%	29.8%	19.5%	18.2%	5.1%	0.56	57.1%	1.57
532292	Recreational goods rental	183	0.0%	26.8%	17.1%	15.8%	1.8%	1.70	61.3%	1.55
423210	Furniture merchant wholesalers	516	0.1%	12.5%	5.3%	60.7%	1.2%	1.41	51.5%	1.54
512191	Teleproduction and postproduction services	151	0.0%	-1.4%	10.9%	24.8%	21.2%	1.24	46.5%	1.40
713930	Marinas	495	0.1%	10.6%	0.6%	26.6%	12.3%	1.82	57.1%	1.34
325620	Toilet preparation manufacturing	451	0.0%	4.3%	20.5%	21.6%	8.0%	1.09	61.6%	1.34
423910	Sporting goods merchant wholesalers	562	0.1%	11.2%	6.1%	17.8%	13.8%	1.36	51.5%	1.29
423440	Other commercial equip. merchant wholesalers	780	0.1%	9.6%	3.9%	37.1%	3.8%	1.88	51.5%	1.28
337110	Wood kitchen cabinet and countertop mfg.	556	0.1%	20.3%	-6.7%	33.7%	11.7%	0.62	61.6%	1.27
327331	Concrete block and brick manufacturing	286	0.0%	19.8%	-4.0%	18.2%	9.1%	1.88	61.6%	1.25
332312	Fabricated structural metal manufacturing	61	0.0%	4.9%	-1.0%	29.8%	22.2%	0.09	61.6%	1.23
541340	Drafting services	26	0.0%	15.3%	2.8%	30.0%	10.5%	0.39	50.2%	1.21
523140	Commodity contracts brokerage	48	0.0%	-14.5%	-5.1%	84.6%	5.9%	0.62	57.3%	1.15
524130	Reinsurance carriers	222	0.0%	-0.8%	1.6%	69.5%	-5.6%	1.13	57.3%	1.13
524127	Direct title insurance carriers	144	0.0%	9.6%	-2.9%	21.0%	19.4%	0.30	57.3%	1.11
325611	Soap and other detergent manufacturing	235	0.0%	8.4%	5.5%	35.1%	0.0%	1.17	61.6%	1.10
488330	Navigational services to shipping	131	0.0%	-7.2%	-2.6%	24.8%	23.1%	0.99	53.7%	1.05
314910	Textile bag and canvas mills	189	0.0%	-0.9%	-3.2%	45.4%	6.3%	0.98	61.6%	1.02
332323	Ornamental and architectural metal work mfg.	638	0.1%	16.9%	2.6%	19.9%	-5.4%	2.06	61.6%	1.01

Underperforming Traded Industrial Sectors, Large and Small Employment Industries

Miami-Dade County

NAICS	Industry	Total County Employment (Reporting Establishmen	Local Employment Share	National Employment Growth	National Establishment Growth	Local Employment Growth	Local Establishment Growth	Employment LQ	5-Year Business Survival Rate (US)	Compsite Index Score
All Industries		941,766	12.0%	9.0%	8.4%	12.9%	6.5%	1	55.4%	
522293	International trade financing	969	0.1%	-14.0%	1.6%	-13.7%	-2.0%	24.22	57.3%	3.75
311920	Coffee and tea manufacturing	178	0.0%	21.2%	49.5%	-2.7%	77.8%	1.09	61.6%	3.71
335122	Nonresidential electric lighting fixture mfg.	21	0.0%	16.3%	26.5%	-16.0%	66.7%	0.12	61.6%	2.54
519130	Internet publishing and web search portals	640	0.1%	64.5%	35.7%	-6.0%	11.5%	0.40	46.5%	2.33
483111	Deep sea freight transportation	925	0.1%	-11.2%	4.0%	6.8%	12.5%	11.12	53.7%	2.30
711190	Other performing arts companies	24	0.0%	6.4%	10.0%	-40.0%	85.7%	0.40	57.1%	2.25
481212	Nonscheduled air freight chartering	460	0.0%	3.5%	-2.0%	0.0%	26.1%	7.25	53.7%	2.07
485999	All other ground passenger transportation	427	0.0%	18.6%	19.3%	-12.3%	39.3%	1.66	53.7%	2.02
484121	General freight trucking, long-distance tl	717	0.1%	2.6%	13.7%	5.8%	53.3%	0.18	53.7%	1.96
237990	Other heavy construction	1,019	0.1%	8.8%	1.9%	-4.8%	56.1%	1.21	56.0%	1.95
532112	Passenger car leasing	169	0.0%	11.5%	1.2%	3.7%	40.6%	2.23	61.3%	1.89
324121	Asphalt paving mixture and block mfg.	759	0.1%	12.5%	5.8%	-20.3%	20.0%	6.60	61.6%	1.89
334515	Electricity and signal testing instruments	31	0.0%	-8.9%	6.7%	-35.4%	80.0%	0.11	61.6%	1.77
721214	Recreational and vacation camps	11	0.0%	15.8%	3.7%	-69.4%	80.0%	0.04	58.8%	1.71
311821	Cookie and cracker manufacturing	211	0.0%	4.2%	22.9%	9.9%	28.6%	0.79	61.6%	1.71
551112	Offices of other holding companies	1,006	0.1%	9.8%	6.4%	-7.2%	38.6%	1.75	61.0%	1.69
611630	Language schools	323	0.0%	1.1%	17.6%	11.4%	22.2%	2.13	58.1%	1.62
336611	Ship building and repairing	84	0.0%	-2.4%	5.5%	10.5%	46.7%	0.11	61.6%	1.61
488510	Freight transportation arrangement	9,192	1.0%	14.3%	5.2%	3.2%	0.7%	5.61	53.7%	1.52
336413	Other aircraft parts and equipment	484	0.1%	2.0%	6.6%	-0.2%	41.7%	0.58	61.6%	1.52
424820	Wine and spirit merchant wholesalers	1,409	0.1%	13.4%	22.0%	-11.3%	13.2%	2.17	51.5%	1.40
326112	Plastics packaging film and sheet mfg.	18	0.0%	35.3%	53.5%	-41.9%	0.0%	0.12	61.6%	1.38
523930	Investment advice	1,246	0.1%	27.1%	18.6%	-19.0%	17.1%	0.84	57.3%	1.38
561311	Employment placement agencies	990	0.1%	5.6%	13.9%	12.0%	21.5%	0.50	53.0%	1.33
488190	Other support activities for air transport.	3,436	0.4%	11.3%	6.6%	-0.1%	2.0%	4.14	53.7%	1.24
524298	All other insurance related activities	298	0.0%	26.4%	15.7%	-15.6%	13.4%	0.49	57.3%	1.20
541490	Other specialized design services	193	0.0%	19.4%	19.9%	-4.0%	2.4%	1.64	50.2%	1.19
721211	Rv parks and campgrounds	35	0.0%	12.9%	3.9%	9.4%	20.0%	0.15	58.8%	1.16
337920	Blind and shade manufacturing	210	0.0%	2.9%	-1.6%	11.7%	16.7%	2.12	61.6%	1.14
313220	Narrow fabric mills and schiffli machine emb.	136	0.0%	-17.5%	-4.1%	-9.3%	40.0%	2.61	61.6%	1.12
335121	Residential electric lighting fixture mfg.	306	0.0%	14.4%	4.0%	-8.1%	0.0%	4.13	61.6%	1.12
423860	Other transport. goods merchant wholesalers	2,014	0.2%	-3.0%	1.1%	-15.1%	-6.4%	7.99	51.5%	1.09
522220	Sales financing	328	0.0%	20.3%	5.2%	-16.5%	20.8%	0.44	57.3%	1.05
518210	Data processing, hosting and related services	766	0.1%	18.5%	32.8%	-14.4%	1.4%	0.33	46.5%	1.04
541830	Media buying agencies	126	0.0%	25.7%	2.9%	-3.1%	8.7%	0.98	50.2%	1.03
336211	Motor vehicle body manufacturing	82	0.0%	13.5%	5.0%	-4.7%	20.0%	0.18	61.6%	1.02
237130	Power and communication system construction	475	0.1%	17.7%	10.5%	-1.7%	10.0%	0.35	56.0%	1.00
522292	Real estate credit	1,569	0.2%	12.0%	11.5%	37.6%	-10.2%	0.86	57.3%	0.99
212313	Crushed and broken granite mining	10	0.0%	11.7%	-2.7%	0.0%	25.0%	0.27	44.6%	0.99
488991	Packing and crating	521	0.1%	0.3%	-3.3%	29.6%	-4.4%	3.60	53.7%	0.97
541870	Advertising material distribution services	191	0.0%	-10.7%	-2.6%	6.1%	23.5%	2.29	50.2%	0.97
339114	Dental equipment and supplies manufacturing	59	0.0%	-6.1%	9.8%	47.5%	0.0%	0.49	61.6%	0.96
541330	Engineering services	6,020	0.6%	4.9%	5.5%	32.2%	1.9%	0.83	50.2%	0.96
333993	Packaging machinery manufacturing	58	0.0%	15.7%	10.5%	16.0%	0.0%	0.36	61.6%	0.95
424310	Piece goods merchant wholesalers	302	0.0%	9.5%	4.3%	10.2%	5.7%	1.54	51.5%	0.95
541612	Human resources consulting services	211	0.0%	2.9%	6.2%	51.8%	-4.4%	0.35	50.2%	0.94
336214	Travel trailer and camper manufacturing	141	0.0%	36.1%	10.0%	23.7%	-20.0%	0.45	61.6%	0.92
424470	Meat and meat product merchant wholesalers	500	0.1%	16.0%	1.3%	56.7%	-21.2%	1.49	51.5%	0.91
481111	Scheduled passenger air transportation	12,727	1.4%	3.4%	-5.5%	14.6%	-2.1%	3.88	53.7%	0.90
325412	Pharmaceutical preparation manufacturing	920	0.1%	-1.3%	23.6%	-0.3%	6.7%	0.58	61.6%	0.89
423220	Home furnishing merchant wholesalers	695	0.1%	12.1%	3.5%	22.4%	-4.1%	1.48	51.5%	0.88
212312	Crushed and broken limestone mining	307	0.0%	1.6%	-3.2%	35.8%	0.0%	1.88	44.6%	0.88
423920	Toy and hobby goods merchant wholesalers	259	0.0%	3.1%	3.7%	4.4%	10.0%	1.61	51.5%	0.87
711130	Musical groups and artists	155	0.0%	4.9%	-2.5%	44.9%	-1.2%	0.56	57.1%	0.85
423940	Jewelry merchant wholesalers	1,422	0.2%	-6.9%	-3.8%	5.3%	4.0%	4.35	51.5%	0.85
541420	Industrial design services	79	0.0%	42.7%	5.3%	0.0%	-11.8%	0.58	50.2%	0.84
487210	Scenic and sightseeing transportation, water	216	0.0%	10.6%	0.6%	26.3%	-6.3%	1.77	53.7%	0.84
424110	Printing and writing paper merch. whls.	187	0.0%	-1.1%	-4.9%	24.7%	5.0%	2.09	51.5%	0.83
337125	Household furniture, exc. wood or metal, mfg.	148	0.0%	8.5%	7.9%	-1.3%	-10.0%	3.61	61.6%	0.83
424330	Women's and children's clothing merch. whls.	1,370	0.1%	10.8%	2.6%	14.2%	-6.4%	2.38	51.5%	0.82
711510	Independent artists, writers, and performers	387	0.0%	4.3%	13.0%	3.2%	3.3%	0.97	57.1%	0.80
337215	Showcases, partitions, shelving, and lockers	438	0.0%	4.3%	-7.1%	20.0%	7.7%	1.24	61.6%	0.79
532411	Transportation equipment rental and leasing	176	0.0%	-17.6%	-1.3%	-20.0%	19.5%	4.26	61.3%	0.78
333511	Industrial mold manufacturing	7	0.0%	10.0%	-5.6%	40.0%	0.0%	0.02	61.6%	0.78
512210	Record production	40	0.0%	10.7%	5.1%	-9.1%	0.0%	2.72	46.5%	0.78
561450	Credit bureaus	41	0.0%	4.5%	-2.7%	78.3%	-18.2%	0.26	53.0%	0.77
424210	Druggists' goods merchant wholesalers	3,190	0.3%	8.0%	12.2%	9.8%	-9.3%	2.02	51.5%	0.77
524128	Other direct insurance carriers	245	0.0%	5.5%	12.9%	-37.2%	13.0%	2.19	57.3%	0.75
424940	Tobacco and tobacco product merch. whls.	426	0.0%	-2.0%	9.7%	28.3%	-11.7%	2.27	51.5%	0.75
337127	Institutional furniture manufacturing	80	0.0%	13.0%	-0.6%	19.4%	0.0%	0.43	61.6%	0.74
327991	Cut stone and stone product manufacturing	90	0.0%	30.9%	10.1%	-9.1%	-6.7%	0.37	61.6%	0.73
488390	Other support activities for water transport.	129	0.0%	-15.5%	3.4%	40.2%	-3.2%	2.09	53.7%	0.73
334511	Search, detection, and navigation instruments	401	0.0%	-10.1%	5.2%	20.1%	11.1%	0.43	61.6%	0.72
339112	Surgical and medical instrument manufacturing	721	0.1%	-0.3%	21.2%	-28.7%	13.3%	0.77	61.6%	0.70
532412	Other heavy machinery rental and leasing	318	0.0%	5.0%	6.7%	22.3%	-4.0%	0.62	61.3%	0.70
424320	Men's and boys' clothing merchant wholesalers	763	0.1%	9.4%	5.8%	-24.0%	-1.8%	3.55	51.5%	0.68

Underperforming Traded Industrial Sectors, Large and Small Employment Industries
Miami-Dade County

NAICS	Industry	Total County Employment (Reporting Establishments)	Local Employment Share	National Employment Growth	National Establishment Growth	Local Employment Growth	Local Establishment Growth	Employment LQ	5-Year Business Survival Rate (US)	Composite Index Score
541930	Translation and interpretation services	225	0.0%	35.9%	17.9%	-33.2%	-8.2%	0.86	50.2%	0.67
512120	Motion picture and video distribution	113	0.0%	18.3%	11.4%	28.4%	-28.6%	1.97	46.5%	0.67
315240	Women's cut and sew apparel manufacturing	499	0.1%	-18.5%	-7.3%	35.6%	4.2%	2.41	61.6%	0.67
423810	Construction equipment merchant wholesalers	587	0.1%	7.5%	-1.0%	29.3%	-6.3%	0.88	51.5%	0.64
541810	Advertising agencies	1,855	0.2%	11.9%	3.8%	5.4%	-3.2%	1.19	50.2%	0.63
485320	Limousine service	295	0.0%	6.0%	10.8%	1.7%	-2.4%	0.88	53.7%	0.59
523130	Commodity contracts dealing	231	0.0%	8.8%	6.0%	3.6%	-10.4%	2.00	57.3%	0.56
311612	Meat processed from carcasses	444	0.0%	10.2%	2.9%	4.0%	0.0%	0.47	61.6%	0.56
541430	Graphic design services	601	0.1%	4.1%	0.1%	9.7%	-0.8%	1.21	50.2%	0.53
713110	Amusement and theme parks	97	0.0%	14.0%	14.7%	-15.7%	0.0%	0.07	57.1%	0.53
424610	Plastics materials merchant wholesalers	226	0.0%	7.1%	-2.8%	6.1%	0.0%	1.34	51.5%	0.53
541840	Media representatives	391	0.0%	-10.1%	-3.7%	8.6%	6.2%	2.12	50.2%	0.51
115114	Other postharvest crop activities	443	0.0%	8.1%	5.6%	35.5%	-20.0%	0.63	66.3%	0.51
315220	Men's and boys' cut and sew apparel mfg.	136	0.0%	-10.4%	-7.3%	18.3%	11.8%	0.66	61.6%	0.50
813920	Professional organizations	339	0.0%	7.8%	12.8%	1.2%	-8.8%	0.51	60.3%	0.46
423840	Industrial supplies merchant wholesalers	784	0.1%	8.8%	6.8%	0.5%	-7.8%	1.14	51.5%	0.45
424990	Other nondurable goods merchant wholesalers	1,454	0.2%	-3.9%	-0.9%	-9.0%	4.1%	2.35	51.5%	0.45
424440	Poultry product merchant wholesalers	43	0.0%	-3.1%	0.2%	-24.6%	22.2%	0.53	51.5%	0.44
333921	Elevator and moving stairway manufacturing	247	0.0%	19.7%	6.2%	21.7%	-42.9%	3.47	61.6%	0.43
424910	Farm supplies merchant wholesalers	143	0.0%	5.3%	3.2%	12.6%	-3.8%	0.16	51.5%	0.41
332813	Electroplating, anodizing, and coloring metal	301	0.0%	-3.5%	-7.2%	40.0%	-7.7%	0.64	61.6%	0.40
425110	Business to business electronic markets	308	0.0%	-11.1%	-11.0%	28.9%	3.7%	1.18	51.5%	0.39
454112	Electronic auctions	17	0.0%	15.9%	22.6%	-45.2%	0.0%	0.20	61.1%	0.38
423420	Office equipment merchant wholesalers	876	0.1%	-8.5%	2.3%	14.8%	-3.3%	1.30	51.5%	0.36
314999	All other miscellaneous textile product mills	277	0.0%	1.0%	-3.1%	0.0%	0.0%	1.14	61.6%	0.33
423450	Medical equipment merchant wholesalers	2,389	0.3%	5.1%	5.9%	4.0%	-13.2%	1.53	51.5%	0.33
562998	Miscellaneous waste management services	52	0.0%	15.2%	7.9%	-55.6%	14.3%	0.41	53.0%	0.32
325998	Other miscellaneous chemical product mfg.	76	0.0%	6.1%	8.2%	31.0%	-23.1%	0.26	61.6%	0.31
561591	Convention and visitors bureaus	107	0.0%	14.2%	0.8%	-51.4%	11.1%	1.49	53.0%	0.31
326140	Polystyrene foam product manufacturing	88	0.0%	20.6%	1.7%	-5.4%	-11.1%	0.37	61.6%	0.31
336310	Motor vehicle gasoline engine and parts mfg.	26	0.0%	12.9%	-0.2%	23.8%	-16.7%	0.05	61.6%	0.31
423830	Industrial machinery merchant wholesalers	3,142	0.3%	1.0%	0.6%	4.7%	-6.3%	1.34	51.5%	0.31
332999	Miscellaneous fabricated metal product mfg.	530	0.1%	2.7%	9.2%	-4.3%	-8.0%	0.88	61.6%	0.30
523120	Securities brokerage	2,876	0.3%	2.4%	-2.0%	7.6%	-7.7%	1.32	57.3%	0.30
515210	Cable and other subscription programming	1,824	0.2%	-26.0%	-10.8%	16.2%	-3.4%	4.23	46.5%	0.27
423490	Other professional equip. merchant wholesaler	130	0.0%	2.9%	2.5%	-30.5%	11.8%	0.59	51.5%	0.27
533110	Lessors of nonfinancial intangible assets	67	0.0%	-3.5%	0.9%	17.5%	-6.3%	0.37	61.3%	0.26
561520	Tour operators	525	0.1%	10.9%	3.9%	-42.6%	-1.1%	2.39	53.0%	0.26
541910	Marketing research and public opinion polling	482	0.1%	-8.9%	-2.4%	7.6%	2.5%	0.63	50.2%	0.21
561910	Packaging and labeling services	376	0.0%	8.1%	-3.5%	-14.5%	0.0%	0.86	53.0%	0.20
312230	Tobacco manufacturing	207	0.0%	-9.2%	42.2%	-19.8%	-29.4%	2.08	61.6%	0.19
611691	Exam preparation and tutoring	759	0.1%	-3.2%	7.6%	-18.2%	-1.2%	1.08	58.1%	0.18
337121	Upholstered household furniture manufacturing	42	0.0%	17.6%	-1.4%	-26.3%	0.0%	0.09	61.6%	0.16
423460	Ophthalmic goods merchant wholesalers	245	0.0%	2.9%	-2.7%	-1.2%	-9.7%	1.62	51.5%	0.16
337122	Nonupholstered wood household furniture mfg.	192	0.0%	-12.4%	-4.4%	-1.5%	6.7%	0.75	61.6%	0.14
424690	Other chemicals merchant wholesalers	593	0.1%	1.5%	0.0%	-7.6%	-3.7%	0.72	51.5%	0.11
523991	Trust, fiduciary, and custody activities	61	0.0%	2.1%	28.9%	-58.5%	0.0%	0.41	57.3%	0.10
423850	Service estab. equip. merchant wholesalers	269	0.0%	2.5%	-2.8%	11.2%	-12.7%	0.63	51.5%	0.07
339113	Surgical appliance and supplies manufacturing	166	0.0%	1.0%	2.7%	-17.8%	0.0%	0.21	61.6%	0.06
423690	Other electronic parts merchant wholesalers	2,230	0.2%	-6.5%	-3.6%	-9.1%	-7.5%	2.09	51.5%	0.00
339115	Ophthalmic goods manufacturing	225	0.0%	-4.3%	-5.7%	-13.8%	0.0%	1.10	61.6%	-0.00
321918	Other millwork, including flooring	151	0.0%	11.5%	-5.0%	12.7%	-21.4%	0.51	61.6%	-0.00
712130	Zoos and botanical gardens	570	0.1%	18.3%	8.2%	-11.4%	-33.3%	1.83	57.1%	-0.02
337910	Mattress manufacturing	104	0.0%	9.3%	0.6%	-23.5%	-7.7%	0.54	61.6%	-0.04
524291	Claims adjusting	505	0.1%	10.0%	-5.5%	-0.2%	-18.5%	1.12	57.3%	-0.04
331110	Iron and steel mills and ferroalloy mfg.	29	0.0%	-11.8%	1.4%	-6.5%	0.0%	0.05	61.6%	-0.08
532420	Office equipment rental and leasing	45	0.0%	4.3%	-5.4%	18.4%	-23.1%	0.70	61.3%	-0.08
424340	Footwear merchant wholesalers	346	0.0%	-11.7%	-0.7%	-7.2%	-9.9%	1.86	51.5%	-0.11
561421	Telephone answering services	286	0.0%	-7.4%	-3.5%	4.0%	-12.0%	1.02	53.0%	-0.13
423410	Photographic equip. merchant wholesalers	167	0.0%	2.4%	3.0%	-33.7%	-9.7%	1.47	51.5%	-0.18
541850	Outdoor advertising	117	0.0%	11.6%	0.0%	17.0%	-33.3%	0.40	50.2%	-0.20
454113	Mail-order houses	157	0.0%	-10.6%	-10.8%	-73.7%	35.7%	0.16	61.1%	-0.23
721310	Rooming and boarding houses	12	0.0%	-0.1%	-0.1%	-33.3%	0.0%	0.13	58.8%	-0.23
423430	Computer and software merchant wholesalers	2,653	0.3%	-3.2%	-4.2%	-11.9%	-16.3%	1.55	51.5%	-0.30
311615	Poultry processing	45	0.0%	3.4%	4.1%	0.0%	-25.0%	0.03	61.6%	-0.31
424720	Other petroleum merchant wholesalers	611	0.1%	0.0%	-5.3%	-9.1%	-17.4%	1.24	51.5%	-0.31
339910	Jewelry and silverware manufacturing	188	0.0%	-6.7%	-5.7%	9.3%	-20.9%	0.90	61.6%	-0.32
424710	Petroleum bulk stations and terminals	86	0.0%	3.8%	1.4%	2.4%	-26.7%	0.35	51.5%	-0.34
424120	Office supplies merchant wholesalers	275	0.0%	-0.4%	-10.3%	-11.3%	-10.0%	0.68	51.5%	-0.35
115116	Farm management services	150	0.0%	1.9%	11.8%	-43.6%	-16.7%	1.05	66.3%	-0.35
323111	Commercial printing (exc. screen and books)	2,021	0.2%	-4.6%	-9.5%	-1.8%	-17.2%	0.79	61.6%	-0.42
424130	Industrial paper merchant wholesalers	558	0.1%	1.5%	-3.6%	-14.7%	-21.4%	1.23	51.5%	-0.42
524113	Direct life insurance carriers	1,590	0.2%	-9.9%	-14.9%	-5.2%	-7.5%	0.84	57.3%	-0.43
336412	Aircraft engine and engine parts mfg.	606	0.1%	-2.0%	1.4%	-5.9%	-28.6%	0.99	61.6%	-0.47
424950	Paint and supplies merchant wholesalers	74	0.0%	6.8%	0.2%	-7.5%	-29.4%	0.47	51.5%	-0.49
511120	Periodical publishers	498	0.1%	-12.4%	-4.5%	-7.3%	-12.9%	0.66	46.5%	-0.49
541690	Other technical consulting services	673	0.1%	1.5%	3.6%	-27.6%	-19.9%	0.44	50.2%	-0.54
541860	Direct mail advertising	63	0.0%	-7.8%	-9.0%	-36.4%	0.0%	0.18	50.2%	-0.61
315280	Other cut and sew apparel manufacturing	41	0.0%	-5.5%	0.6%	-6.8%	-27.3%	0.39	61.6%	-0.63
115115	Farm labor contractors and crew leaders	381	0.0%	6.9%	7.5%	-45.6%	-24.0%	0.28	66.3%	-0.68
523110	Investment banking and securities dealing	1,729	0.2%	-2.2%	-11.2%	7.1%	-36.7%	1.52	57.3%	-0.69
517410	Satellite telecommunications	157	0.0%	-24.0%	-14.7%	-4.8%	-18.2%	2.58	46.5%	-0.70
335312	Motor and generator manufacturing	278	0.0%	-10.4%	-0.3%	0.4%	-33.3%	0.99	61.6%	-0.70
326212	Tire retreading	38	0.0%	-8.2%	-12.7%	0.0%	-25.0%	0.78	61.6%	-0.73
315210	Cut and sew apparel contractors	352	0.0%	-16.5%	-8.6%	-26.5%	-12.1%	1.18	61.6%	-0.75
713120	Amusement arcades	109	0.0%	21.9%	-2.0%	-37.7%	-35.7%	0.62	57.1%	-0.76
611210	Junior colleges	347	0.0%	-30.7%	-0.6%	-49.5%	0.0%	1.34	58.1%	-0.82
711110	Theater companies and dinner theaters	189	0.0%	8.7%	5.6%	-32.7%	-35.7%	0.37	57.1%	-0.84
339930	Doll, toy, and game manufacturing	60	0.0%	-6.7%	5.8%	-33.3%	-30.0%	0.70	61.6%	-0.91
517210	Wireless telecommunications carriers	651	0.1%	-21.2%	-12.8%	-35.9%	-8.3%	0.68	46.5%	-1.07
334290	Other communications equipment manufacturing	28	0.0%	-18.2%	4.1%	-44.0%	-20.0%	0.20	61.6%	-1.12
424920	Book and periodical merchant wholesalers	99	0.0%	-16.8%	-16.3%	-59.1%	0.0%	0.33	51.5%	-1.19
311710	Seafood product preparation and packaging	54	0.0%	-2.6%	0.8%	-21.7%	-44.4%	0.19	61.6%	-1.24
522210	Credit card issuing	87	0.0%	-19.0%	-46.1%	-1.1%	-15.4%	0.13	57.3%	-1.48
488310	Port and harbor operations	122	0.0%	-67.9%	6.7%	-47.4%	-14.3%	2.60	53.7%	-1.51
551111	Offices of bank holding companies	29	0.0%	-19.3%	-6.3%	16.0%	-58.8%	0.29	61.0%	-1.56
522390	Other credit intermediation activities	340	0.0%	-4.3%	-12.7%	-51.5%	-38.8%	0.52	57.3%	-1.73
213111	Drilling oil and gas wells	6	0.0%	-50.8%	-4.7%	-14.3%	-33.3%	0.02	44.6%	-1.94
522120	Savings institutions	1,196	0.1%	-30.9%	-26.5%	-44.4%	-35.1%	1.25	57.3%	-2.19
541360	Geophysical surveying and mapping services	10	0.0%	-17.6%	8.8%	-88.2%	-50.0%	0.09	50.2%	-2.41
525990	Other financial vehicles	31	0.0%	-65.6%	-14.6%	-70.8%	-50.0%	1.31	57.3%	-3.31

9. Conclusions and Strategic Recommendations

StartUP FIU's goal is grow the size of its program, its capacity, and its results as quickly as possible. The following are offered as strategies to meet those goals, especially focusing on the next three years of StartUP FIU's growth.

1. Why Startup FIU is Critical to Miami's Future

If Miami is to join the ranks of highly innovative, highly skilled regional economies, with greater economic resiliency, wider prosperity, and significantly increased opportunity, the singular economic challenge facing the region is to grow its proportion of businesses that successfully compete in the knowledge and innovation economy at a rate significantly higher than the rest of its economy.

It is hard to imagine, however, a leading knowledge and innovation regional economy without FIU, the State's largest University, taking a leading position in growing that economy. FIU's role in growing a more prosperous and innovative Miami economy may be the University's biggest collective legacy. ***StartUP FIU, as FIU's key innovation driving unit, will play a critical role in producing that future.***

2. Competitive Space Key Issues

At the moment, demand far exceeds the supply of accelerator capacity. Roughly 33,000 entrepreneurs create over 20,000 startups each year in Metro Miami, while "true" accelerator programs serve between 300 and 350 client firms annually. However, the protected space StartUP FIU operates in will get increasingly crowded. Major competitive threats over the next three years will come from:

- Converge Miami, in the University of Miami Life Science and Technology Park (UMLST), has the capacity to serve 400 client firms at a time, and will soon have wet lab space. It's popular as rentable co-working space, but if it does move toward an accelerator business model, it would eat up a big chunk of the market of local startups;
- The growing list of international accelerators, which draw a global market of clients. Endeavor, and now TheVentureCity are well funded, seem to draw on a global network of investors and mentors, and use interesting business models, including providing virtual services to clients in other cities. They seem to have the best capacity and resources to grow;
- The continuing market confusion between incubators, accelerators, and co-working space. StartUP FIU is caught in the area's general fuzziness about what true accelerator programs do. StartUP FIU's value proposition seems to get lost in the noise;
- Rising competition for the best, and most ready entrepreneurs. The entrepreneurial ecosystem gets lots of attention in Miami, even though hard results

are not clear. As more real success stories emerge, seasoned, ready entrepreneurs will make more discerning decisions as to which program they enroll in.

StartUP FIU has enormous potential competitive strengths and advantages, including:

- The inherent range, quality, and experience of faculty and departments who can play a major role serving and supporting StartUP FIU's startup clients, from business modeling, forecasting, product development and testing, funding, marketing — the University has virtually every service needed by a startup in-house. ***The scope of the institution is a permanent competitive advantage no independent accelerator/incubator can match;***
- A strong record of fundraising for a variety of creative uses; and
- A seemingly endless ability to secure new real estate and physical facilities across the metro area, as well as untapped undeveloped real estate.

However, as StartUP FIU is still in its early stage development, these major competitive advantages aren't readily discernable to the outside viewer, or potential customers. FIU can immediately differentiate itself in the market by:

- Anchoring all innovation related functions in StartUP FIU, and coordinating all innovation and entrepreneurial development activity through StartUP FIU;
- It's not clear to the outsider that the University's various entrepreneurial development function, offices, or Departmental related activities are related. Better messaging can relive this perception, and the University should consider clearer authority for StartUP FIU to take a stronger lead role;

3. Suggested Performance Goals

StartUP FIU is admittedly playing catch-up, and its first three years are critical to driving later success. Additionally, given the University's size, growth, student, faculty and alumni base, it's justifiable to make the case that it could, with a concerted effort, reach the top third of Universities in terms of innovation, commercialization and entrepreneurial development results. The University of Florida provides the best-case study in reaching the upper tier of innovation related performance in a short period.

The following three-year performance targets are suggested, based on the assessment of Miami's accelerator competitive space, and comparable performance at the rest of the state's university accelerator/incubator programs. They are:

- Reach the capacity to serve 200 client firms each year, through 3 to 5 accelerator locations;
- Reach an overall 5-year survival rate of 65 to 70 percent for all cohort clients. Most Universities claim a survival rate of 80 to 85 percent, and the national average survival rate for all businesses in the US is 55.4 percent;
- Follow-on funding for 20 percent of all client startups. Top-tier private accelerators average close to 35 percent;
- Reach a rate of three out of one hundred clients reaching 50 employees within their first 5 years. The national average is one out of 100;

- A client employment growth rate of 70 percent. The national average is 58.5 percent employee growth over five years;
- Reach an average of \$8 Million per year in total invested capital by year five. The UF Innovation Hub and USF Tampa Bay Technology Incubator average over \$10 Million and \$6 Million, respectively; and
- Produce one high growth company, defined as a business reaching \$2 M in annual revenue, with three successive years of 20 percent revenue growth within three years.

Early Client Cohort Expectations

Over the next three years, based on national and regional averages, most graduating clients will remain small, hiring 5 or less employees and earning less than \$1 Million per year. Based on the *Industry Competitive Analysis Matrix*, evaluation of Metro Miami's industrial structure and dynamics, it is most likely that StartUP FIU's first significantly successful companies will be those that provide an innovative product or service to one of the area's mature, but leading traded sector industries.

4. Build Independent Investment Funding

The future of the accelerator is to develop independently controlled investment funding sources. One of the keys to StartUP FIU's early, and sustained growth and success will rely on FIU joining the growing ranks of accelerators and other Universities raising their own dedicated investment funds.

Startups in Metro Miami are chasing on average ___ B over 60 to 70 deals a year for the entire state, and despite growing levels of VC investment in south Florida, VC investments in startups are rare, given the number of startups each year.

Even starting small — \$5 to \$10 Million as an initial fund dedicated to StartUP FIU client graduates would go a long way to building the program, significantly differentiate it in the competitive market, help attract the best entrepreneurial talent and business ideas, and generate a financial return for the University.

Such a fund could be structured in any number of vehicles, from a charitable donation to a dedicated social venture fund, to a fully for-profit fund managed by a third party private manager, dedicated to StartUP FIU graduates. The fund could grow alongside StartUP FIU's capabilities and track record

Rapidly Build FIU's Internal Entrepreneurial Ecosystem Around StartUP FIU

StartUP FIU will be hard pressed to grow, meet the performance benchmarks detailed above, and compete without building the University's internal innovation ecosystem around it. The distinguishing feature, and strength of modern, competitive University incubators and accelerators is the staffing, resources, and entire programs dedicated to entrepreneurial development.

In the short term this means tying the University's existing lead innovation units — the Pino Center, the FIU Small Business Development Center (SBDC), business school, and assorted

incubators into tighter alignment, coordinating responsibility and coordinated “hand-off” of startup clients as they move through their early life cycle.

At the moment, entrepreneurial development within the University take place among a more scattered set of locations, now including the School of Engineering, and CARTA. Over the long term, the market trend, along with FIU’s size and location within a dynamic startup market, dictates that it will need to make a significant investment in developing a University-wide entrepreneurial development system.

Again, UF’s *Innovation Academy* is the best local model — a program that acts for all purposes as its own College within the University. Students from over 30 majors are accepted simultaneously into a department and the Innovation Academy, which then has its own curriculum, dorms, facilities, and academic schedule. Students graduate in their senior year by developing a product and pitching it to real investors.

In FIU’s context, an entrepreneurial program similar in scale to the Honors College is recommended, drawing students from all majors who minor in innovation/entrepreneurial development, have a separate parallel dedicated curriculum, and living facilities. On the institutional and staff side, the University needs to continue to rapidly build its internal formal service agreements for Departments and faculty to advise StartUP clients, including product testing, prototyping, engineering and design. Exploring an entrepreneurial support tenure track for faculty in key departments would also be recommended.

5. Post-Graduation Survival Support Network a Must

The best research data indicates that on average, start-ups that graduate from accelerators raise on average 8 to 11.3 times the funding of start-ups who do not go through accelerator programs, and have better survival rates over the first 5 years since inception. ***However, many report that on average, graduating start-ups take another year after graduation to complete their first significant fund raise.***

Miami has the distinction, documented above, of having the highest rate of startup creation, but one of the lowest startup survival rates among all major metro areas. Continuing post-graduation support is critical to improving and growing StartUP FIU’s performance metrics and the success rate of its clients.

Again, the FIU SBDC has already established a track record of funding and support for later stage small companies. Granting automatic access to the SBDC after graduation would be a tremendous incentive, competitive differentiator, and provide seamless continuing service to StartUP clients.

6. Geographic Expansion and Rapid Growth Through Hosted Partnerships

StartUP FIU’s early growth strategy is to develop a network of connected accelerators, each with a specific industry focus, across Miami-Dade County. This model has plenty of precedents, including USF, and UCF’s extended network of incubators across central Florida it has operated since 1998.

This study is recommending the pathway to rapid, early, sustainable growth of this network for StartUP FIU is to develop each new accelerator as a University hosted facilities in which FIU

owns or leases the property, and seeks out the highest quality third-party accelerator operator(s) to run each new accelerator. The benefits of this approach are:

- **Speed:** contracting with professional accelerator operators for StartUP's new accelerators is considerably faster than having to build internal staff;
- **Flexibility:** operating conditions, performance, and financial arrangements can be flexibly designed to meet the needs of the community and industry target startups in each accelerator;
- **Resource efficiency:** This approach could be extremely low cost, as the University would not have to absorb staff and personnel salaries. Instead, the partner operator would most likely earn its income from success investment fees and/or equity from StartUP clients;
- **Managerial efficiency:** StartUP FIU, after engaging its partner/contractors, need only manage for results and insure accurate metrics tracking, freeing StartUP directors to focus on big picture issues including developing dedicated investment funding;
- **Accelerated results:** contracting with operators with proven track records could dramatically accelerate Startup's reaching and/or exceeding its performance benchmarks; and
- **Competitive advantage:** FIU could contract with leading, recognized name accelerator operators, immediately going a competitive advantage in the market.

This model has numerous precedents across the US. The University of Miami has in fact used it to start its LaunchPad accelerator, and has contracted with Cambridge Innovation Centers to run its Converge Miami.

Location Strategies and Target Industries

This study recommends the development and operation of five to six possible locations over the next three years, including Empower and StartUP FIU Food. No recommendations or changes are contemplated for StartUP FIU Food. Each other location and its recommended industry target focus is detailed as follows.

Location 1: The Empower Accelerator Program, Headquarters Location

As StartUP expands, the Empower location should be dedicated to student and faculty entrepreneurs. Location, convenience and familiarity make it perfect to conveniently support the hopefully growing pipeline of student entrepreneurs developed by the University. Empower, as previously suggested, should be seen as the culminating experience for student entrepreneurs graduating from an expanded entrepreneurial curriculum at the University.

Location 2: Westend / West Kendall

Opportunity Analysis

The WestEnd accelerator/incubator, a shared space with Topp Solutions and Dell/Alienware, near the Tamiami Executive Airport, has been proposed as the next opening accelerator location. The opportunities present at the WestEnd accelerator location include:

- An extremely large workforce: Commission District 11, where the accelerator is located, is home to over 105,000 employed residents;
- Residents of the WestEnd earn more than the County Median, and is one of the most highly educated populations in the County;
- Residents of the WestEnd are overwhelmingly employed in educational, health and social services, professional, scientific and management industries, and a high percentage (34 percent) are employed in management occupations. the area also has a high rate of self-employment — 19 percent;
- However, over 80 percent of the workforce doesn't work in the Westend, which only has just over 20,000 jobs in it. Most of this highly trained, educated and well-paid workforce leaves the area to work in Downtown and Doral; and
- The WestEnd is home to three of the County's most significant economic assets including Baptist Health, FIU, and Kendall-Tamiami Airport.

Target Industry Recommendations

Given the area's high rate of managerial, professional, scientific, and health care employment, combined with the proximity to Baptist Health, a major hospital facility, and the residence of Topp Solutions and Dell/AlienWare in the facility already, the WestEnd Accelerator is best suited to operate as a business services/ medical service & technology accelerator, focusing on entrepreneurs serving the following high performing industries:

- Other management consulting services
- Electronic shopping
- All other professional and technical services
- Other services related to advertising
- Marketing consulting services
- Process and logistics consulting services
- Electromedical apparatus manufacturing
- Payroll services
- Direct health and medical insurance carriers
- Computer systems design services
- Custom computer programming services
- Financial transaction processing and clearing
- Administrative management consulting services

Location 3: Doral

Opportunity Analysis

Doral is suggested as a new Startup FIU location because Doral is one of the County's most important and significant sub-economies. Doral has an extremely talented resident workforce and diverse, rapidly growing economy. Given the potency of the Doral economy, a Doral

location represents a significant opportunity for StartUP to capture a significant share of some of the County's best paid and highly skilled workers as future entrepreneurs. The key competitive advantages and opportunities in Doral are as follows:

- Although Doral's population of 51,382 represents only 1.9% of the County's total population, its employment base is a full 7.3% of the County's total jobs base.
- With a growth rate over 21 percent from 2002 to 2014, Doral's employment grew over 2.6 times faster than the County, making it one of Miami-Dade County's fastest growing sub-economies over the last decade. ***In fact, the growth of Doral's total employment — 13,535 jobs since 2002 — represents over 17 percent of all new net jobs created in the County during the same period.***
- The City is home to 6,802 establishments employing 102,235 workers, with 2016 total sales revenue estimated at over \$69.4 Billion. This total volume of sales revenue, concentrated in such a small geographic area, represents \$679,634 per worker, or over \$1,35 Million per resident, and as such is one of south Florida's, and the State's, most productive local economies.
- Doral is also a significant, globally interconnected economy. 83.2 percent of Doral's businesses employ less than 20 people. However, Doral is home to 28 headquarters locations, many of which are global leaders in their respective industries. ***The scale and diversity of its leading companies makes Doral a nationally significant small city economy with considerable global reach.***
- The Region's Most Highly Educated Workforce: ***54.2 percent of the population of Doral 25 years of age and over have a bachelor's degree or higher. This is almost double the rate for Miami-Dade County, and 1.8 times the rate for the rest of the US.***
- A High Skilled, Well Paid Workforce: Doral's residents are among the highest paid in the County. Driven by the high percentage of residents employed in higher-skilled occupations, the median wage for residents of Doral, at \$41,104 far exceeds the County median wage of \$27,142. In fact, wages for Doral residents are significantly higher in 23 of 35 occupational categories than those for the rest of the County. Additionally, median wages by industry for Doral residents averaged 132 percent higher than comparable median industry wages across the County.
- Doral's median household income is \$72,933 compared to Miami-Dade County at \$43,129.
- Doral has concentrations of firms significantly greater than the County average in all of the area's leading clusters, including Aviation, Creative Design, Hospitality & Tourism, Medical Tourism, Tourism IT, Information Technology, International Banking & Finance, Life Sciences & Health Care, and Trade & Logistics.
- Doral is home to leading concentrations of business establishments in nearly every target sector, making it one of the most competitive sub-economies in the region.
- ***Doral has an exceptionally high proportion of business firms and establishments in the Advanced Industries Sector.*** The City is home to 775 establishments and firms within the Advanced Industries Sector. These business locations employ 11,727 workers, or just over 11 percent of the City's employment base, and generates over \$2 billion in local sales, and more globally. ***Given that Advanced***

Industries employment represents 9 percent of US employment, and only 3 percent of the state's total employment, the City of Doral has growing potential as a leading, high-concentration Florida location for the Advanced Industry Sector;

- Doral is home to the area; leading concentration of major international corporations, including Carnival Cruises, Univision, and numerous international air freight companies;
- A Resident Worker / Jobs Base Mismatch: Doral is a considerable economy, employing between 73,000 and 77,000 workers. However, despite the size and strength of Doral's economy, the vast majority of its up to 23,000 employed residents work elsewhere in the County. ***Only 4,473 residents, or 24.1 percent, of all workers who live in Doral, work in Doral, while 93.9 percent of the City's jobs base is filled by workers who live outside Doral.***
- Doral's percentage of self-employed workers is considerably higher than the County. ***Based on its economy-leading industry concentrations, Doral may be poised to further develop as a leading center of high-wage, high innovation industry.***

Target Industry Recommendations

Based on Doral's industry mix, leading concentration of internationally competitive corporations, and leading workforce, a location in Doral would be in one of the hottest and most sophisticated business and employment markets in Florida. Its focus would best be on business services, logistics, travel, and professional services industry clusters, and serve entrepreneurs servicing the following industries:

- Deep sea passenger transportation
- Other management consulting services
- Scheduled freight air transportation
- All other professional and technical services
- All other miscellaneous manufacturing
- All other travel arrangement services
- Other services related to advertising
- Marketing consulting services
- Process and logistics consulting services
- Payroll services
- Direct health and medical insurance carriers
- Nonscheduled air passenger chartering
- General warehousing and storage
- Computer systems design services
- Managing offices
- Custom computer programming services

- Telemarketing and other contact centers
- Financial transaction processing and clearing
- Administrative management consulting services
- Architectural services
- Motion picture and video production
- Direct property and casualty insurers
- Travel agencies
- Appliances and electronics merch. whls.

Location 4: Liberty City / North Central Miami-Dade

Opportunity Analysis

Based on Metropolitan Center detailed analysis of the Liberty city/North Central market area, the Center has previously located and an accelerator in Liberty City to serve its residents. Liberty City and North Central have surprisingly dynamic economies that are too often overlooked. Their residents have also ben underserved in terms of business development and training. The specific strengths of the market area include the following.

- Liberty City is a surprisingly diverse, dynamic, and growing business destination within Miami-Dade County. In fact, its industry composition, growth dynamics, performance, occupational mix and business community may be its single strongest asset, competitive advantage, and opportunity for broader redevelopment;
- Although just over 15,000 employed residents live in Liberty City, its 1,600 business establishments employ 18,526 workers. Liberty City's business economy is driven by small, locally owned businesses;
- Liberty City's business community also has tremendous regional market reach. The total annual sales of all business establishments located in Liberty City who report their annual sales is over \$8 billion. The purchasing power of Liberty City and its Market Area total \$6.9 Billion, meaning that its businesses are selling to an extended regional, and in some cases, national market of consumers and clients. A full 35 percent of its reporting businesses have sales over \$1M per year, with 8 establishments reporting sales over \$100 Million per year;
- The same can be said for Liberty City's Trade Area, defined as the four zip codes that encompass Liberty City, reaching slightly outside its borders. The immediate area including and surrounding Liberty represents is a major concentration of business, trade, shipment and employment within the County. The Liberty City Trade area includes over 5,200 business establishments employing over 49,000 workers, with total sales of over \$18 Billion. The Liberty City Trade Area includes a number of nationally significant businesses — leaders in their respective industries. ***In all, Liberty City and its immediate Trade Area represent one of the County's most dynamic and dense business and employment locations.***
- The Market Area added 933 new establishments from 2010 to 2014, a 7.7 percent increase. However, the largest number of new establishments created were in

generally higher wage industries, including professional, scientific, and technical services (160 new establishments), real estate and rental and leasing (130 new establishments), and retail trade (123 new establishments). The Market Area's fastest growing industries are educational services (22.8 percent growth), real estate and rental and leasing (22.3 percent growth), and professional, scientific, and technical services (12.6 percent growth).

- The Market Area added 24,475 jobs from 2010 to 2014, and total annual payroll grew over 16 percent for the same period. Key business characteristics for Liberty City, its Trade and Market Areas are shown below.
- Liberty City and its Trade Area have a significant mix of business in the Advanced Industries sector, especially in Advanced Industry manufacturing. Advanced Industry Employment in Liberty City and its Trade Area is at or above the state average of 3 percent and Miami-Dade County's average of 2.5 percent of total employment. ***Expansion of businesses in the Advanced Industries sectors in the Liberty City Area represents a significant opportunity to create higher skilled, high wage jobs for local residents.***
- The Liberty city larger market area includes numerous educational institutions, arts, and infrastructure assets;
- The market area is also home to the region's densest concentration of manufacturing industries, served by the active rail spine at the west edge of Liberty city and North Central.

Target Industry Recommendations

Based on Liberty City / North central, business and employment mix, it would be an outstanding location for targeting entrepreneurs serving manufacturing, assembly, and air logistics industry clusters. Specific recommended high performing industry targets from the Analytical Matrix include:

- Scheduled freight air transportation
- All other miscellaneous manufacturing
- Marketing consulting services
- Process and logistics consulting services
- Nonscheduled air passenger chartering
- General warehousing and storage
- Architectural services
- Elec. equip. and wiring merchant wholesalers
- All other amusement and recreation industries
- Metal window and door manufacturing
- All other support activities for transport.
- All other telecommunications
- Other nonscheduled air transportation

- Construction machinery manufacturing
- All other miscellaneous food manufacturing
- Metal household furniture manufacturing
- Semiconductors and related device mfg.
- Other specialized trucking, long-distance
- Cutting tool and machine tool accessory mfg.
- All other miscellaneous wood product mfg.
- Ac, refrigeration, and forced air heating
- Welding and soldering equipment manufacturing
- Motor vehicle power train components mfg.
- Portfolio management
- Truss manufacturing
- Other motor vehicle parts manufacturing
- Integrated record production and distribution
- Other industrial machinery manufacturing
- Ornamental and architectural metal work mfg.

Location 5: FIU at I-75

Opportunity Analysis

FIU has developed its I-75 location in Miramar to partner with Broward College and serve more residents of Broward County. The building is first rate office space, and would be a different opportunity for StartUP FIU to attract a significantly different client base from Broward County.

Broward has a significantly higher concentration of businesses and employment in the digital information, communications, and software hit-tech industries than Miami-Dade. It also home to the region's largest multi-national digital communications and processing firms.

Target Industry Recommendation

An I-75 location could be an outstanding way to attract entrepreneurs and students from Broward, and serve Broward County's rapidly growing digital tech industries. This accelerator location would best fit serving entrepreneurs serving information, digital, software, and information processing clusters. The specific high performing industries recommended for this focus include:

- Other management consulting services
- Electronic shopping
- Payroll services
- Computer systems design services
- Custom computer programming services

- Telemarketing and other contact centers
- Financial transaction processing and clearing
- Administrative management consulting services
- All other information services
- All other telecommunications
- Software publishers
- Computer facilities management services
- Educational support services
- Other computer related services

Location 6: Additional Suggested Location

CARTA has signed a letter of intent to develop programs with the Bauhaus, the internationally legendary German design institute. At the time of this writing the author is not sure what the terms of the agreement are, or what programs would be developed.

IF it has not already been contemplated, a product design focused accelerator, partnered with the Bauhaus would be an instantly internationally recognized facility. Ideally located in the Design district, it would serve entrepreneurs in the design, fashion, and furniture industries.

7. Long-Term Business Model Considerations

StartUP currently serves a broad mix of entrepreneurs in a wide range of industries at its Empower location. Access to the program is free, and StartUP is not taking equity from its clients. As StartUP grows, hovers, its directors might consider adopting some fundamental business model changes to remain sustainable and self-fund its operations as they grow. They include the following.

Competitive, Selective Screening

As StartUP grows in scale and popularity, it will need to become competitive and more selective in order to enhance client, as well as its own, performance. This study has provided the Analytical Matrix as a baseline to measure potential performance relative to external economic factors, but a more detailed analysis of each applicant's internal characteristics may be warranted as well.

Factoring Job Quality and Pay into Strategic Policy Considerations

Job Quality, including skills, educational requirements and pay — are important performance considerations that StartUP may want to factor into its metrics and eventually competitive application process. The County's fundamental economic problem is that it creates a high proportion low-wage, low skill jobs. Further on, StartUP may consider adding the quality of jobs produced as selection criteria. In fact, startups with higher pay, higher skill job creation have higher survival rates.

Consider Making Seed Investment and Taking Equity from Clients

If the University has contemplated, and is ok with running StartUP from grants and out of University funds, that's ok. However, it could be passing on considerable le opportunities to fund its own operations, or raise funds for other educational purposes. Even a small seed investment (\$10,000) goes a long way for many startups, and a small portion of equity — 2 to 3 percent could provide significant long-term returns for FIU.

Consider Development of an Innovation District in the Future

The end game for many University innovation economy strategies is to anchor an innovation District — a usually urban location that concentrates research, accelerator, housing, and other uses in a single community location. Recent examples include the Philadelphia Innovation District, built on a former Naval Yard, Cornell University's Innovation City in New York and Roosevelt Island, and the University of Miami Life Science and Technology Park.

FIU has the scale and internal capabilities to develop such a District. However, they usually only succeed when the University commits to locating a major research facility to anchor the District. Part of the Biscayne Bay Campus may also be an extremely attractive location for future Innovation District.