HIGH-IMPACT FIRMS IN SOUTH CAROLINA

DEVELOPED BY:

DIVISION OF RESEARCH

MOORE SCHOOL OF BUSINESS

UNIVERSITY OF SOUTH CAROLINA

JULY 2011

STUDY PREPARED BY:

DR. DOUGLAS P. WOODWARD
DIRECTOR, DIVISION OF RESEARCH
WOODWARD@MOORE.SC.EDU
803-777-4424

DR. PAULO GUIMARAES
RESEARCH ECONOMIST, DIVISION OF RESEARCH
GUIMARAES@MOORE.SC.EDU

VERONICA WATSON
RESEARCH ANALYST, DIVISION OF RESEARCH
VERONICA.WATSON@MOORE.SC.EDU

RESEARCH ASSISTANT PAIGE BACHETY

With partners at S.C. Department of Commerce,
New Carolina – South Carolina's Council on Competitiveness, and
CTC Public Benefit Corporation

Funding provided by the U.S. Economic Development Administration, the South Carolina Research Authority and AdvanceSC. AdvanceSC was established by Duke Energy to support economic growth and public assistance agencies in Duke Power's South Carolina service area.

EXECUTIVE SUMMARY

This study analyzes private-sector firms and employment change in South Carolina from a new perspective. For years, it has been widely believed that small businesses create almost all jobs in the United States. Recent research has suggested that a small number of fast-growing firms (many small and medium-sized) are responsible for a majority of the employment gains in the United States. The research presented in this study assesses the scope of South Carolina's small-business and high-impact job creation over the past two decades.

High-impact firms are identified by strong sales growth and are restricted to those firms that are local (that is, they have a South Carolina headquarters). The effects of these firms on South Carolina's employment are gauged using a large database of the state's businesses.

The study begins with a review of the employment contributions of small and large firms. Next, the focus turns to the dimensions of high-impact firms, covering their overall contributions to employment, the distribution across sub-state regions, and industry clusters.

Among the principal findings are the following:

- Small firms (less than 20 employees) account for 26 percent of total employment in South Carolina, but 51 percent of all net employment gains in South Carolina during the period 2004-2008.

- Local, high-impact firms, which account for only 2.7 percent of private-sector firms analyzed for South Carolina during 2004-2008, contributed 66.8 percent of all net employment gains.

- During the 2004-2008 period, South Carolina experienced high employment growth among high-impact firms in the professional/technical services and construction-related industries.

- Local, high-impact firms (like all firms) are overwhelmingly small businesses (less than 20 employees). Yet, a select group of high-impact firms that are larger than 250 employees have been especially successful in net employment generation.

- 30 percent of high-impact firm employment resided in traded clusters. Firms in traded clusters tend to pay higher wages and are more innovative. This share in traded clusters is higher than the overall South Carolina and national average share of employment in traded clusters (about 27 percent).

- During the 2004-2008 economic expansion, high-impact firms experienced significant employment growth in machine tool products, distribution services, plastics, processed metals, and automotive products.

- While there are notable concentrations of high-impact firms in urban areas, they can be found through all regions of the states, including rural counties and distressed areas.

In summary, South Carolina appears to be outperforming other states in small business job creation. While the state has also stimulated employment through high-impact firms, as is true across the United States, it nevertheless appears that the state has had less success in nurturing larger local

companies to scale up sales. Since 2002, only 112 South Carolina companies started and grew beyond $25 million in sales. Yet these local firms that survive and scale-up are overwhelmingly found in traded clusters. The study found that 73 percent of large (local) firm employment in 2008 was in traded sectors, much higher than the 27 percent average for all South Carolina firms. These large, locally headquartered firms are likely to generate high quality employment opportunities. Firms with local headquarters tend to employ large numbers of well-compensated management, professional, and technical talent. South Carolina falls far below the national average in creating these types of jobs.

South Carolina also needs to augment the economic activity in traded clusters, including information technology, where it lags behind neighboring states. Although South Carolina does have relatively strong clusters in traded services, this is an area where employment growth is projected to expand at an above average rate at both the national and state levels.

TABLE OF CONTENTS

FIGURES

TABLES

INTRODUCTION

To investigate the types of firms that drive South Carolina's employment, New Carolina partnered with the University of South Carolina's Darla Moore School of Business, the South Carolina Department of Commerce, and *CTC* Public Benefit Corporation to secure a research grant from the U.S. Economic Development Administration. This study presents the results of the research, conducted during late 2010 and early 2011. The objective of the research was to profile high-impact firms (HIFs) in South Carolina, using the best available data. This information can be used to help discern the kinds of private-sector activity most likely to contribute to employment generation.

Following this introduction, the study presents trends in South Carolina's job creation, demonstrating the role played by small and large businesses. High-impact firm job creation is then covered in depth, including the distribution across industries, traded vs. non-traded sectors, sub-state regions, and distressed areas of South Carolina.

Since the Great Recession of 2007-09 and the moderate economic recovery that followed, job creation has been the paramount economic problem facing the United States. In South Carolina, as across the country, payroll expansion has remained far below trends experienced in previous upswings in the business cycle. In the three years since South Carolina's peak employment in 2008, the job base was still down by five percent. At the same time, the population has continued to grow. Assuming stepped-up economic activity and no double-dip recession, it will still take at least five years for the job base to reach its previous level. Not surprisingly, job creation remains paramount in the minds of the general public and policy makers across the state and around the country.

Understanding employment dynamics becomes even more critical as unprecedented government fiscal and monetary stimulus programs wind down in 2011. The large government-led spending and money creation put in place during the Great Recession will now be replaced by fiscal austerity. The easy money policies and emergency actions taken by the U.S. Federal Reserve since 2007 will end.

With the withdrawal of public-sector support, vigorous private-sector activity alone will be needed to ensure employment growth. It is crucial to understand what kinds of private-sector firms that have the potential to produce increased job growth.

Since the 1980s, the conventional wisdom has repeated a simple message: Small businesses create most jobs in the United States. This common argument is buttressed by the seminal work of MIT economist David Birch. His writing in the 1980s drew considerable attention on the role of small business in job creation. Notably, Birch (1981) claimed small firms created 66 percent of all new jobs, while Birch (1987) claimed an even higher percentage: 82 percent. These findings have been used widely to advocate in favor of policies to bolster small business development.

The research of David Birch, which relies on undependable Dun and Bradstreet data, has been often criticized. Fortunately, new research has emerged with more reliable results. In a scholarly paper published recently in a leading economics journal, Neumark et al. (2011) investigated small firms and U.S. job growth. This effort again uncovered that small business are the major sources of job creation across the nation. Recall, however, that the research of David Birch and associates claimed that more than 80 percent of U.S. jobs were created by small firms (defined as those with less than 20 employees). Among problems with this earlier work, however, is that growth rates are measured from a base year in which firms begin. This method leads to a biased high growth rate for small firms.

In turn, Neumark et al. (2011) modified the method used by Birch using an average firm size over the period of study to measure job creation. The new, improved method again revealed that small firms create a disproportionate share of jobs, 35.1 percent of job creation compared with 27.2 percent of employment. Yet small firms also have a disproportionate share of job destruction: 33.9 percent. Considering the creation and destruction together, the authors find that small firms create jobs at a rate of 2.9 percent each year net of the jobs they destroy. Overall, this research finds that small firms create more net jobs than larger firms, though at a smaller level than previously thought.

The singular result contained in Neumark et al. (2011) that stands out as a new benchmark for research on employment is that small firms account for 27.2 percent of total employment in the United States overall, but they supply 45 percent of the net employment gains for the U.S economy. Using similar methods and time frame (1992-2004), this study discovered an even stronger role for small firms in South Carolina: 26.3 percent of total employment, but 51 percent of all net employment gains in the state.

Despite the ongoing work that demonstrates the crucial role of small business in job creation, public policy is perceived to favor large companies. Like many states, South Carolina's economic development efforts that often receive the most attention are those policies designed to lure large branch operations from out-of-state companies. Ribbon-cutting ceremonies for new plants with the promise of hundreds, if not thousands of new jobs, often get headlines in the press and photo-opportunities for politicians. This so-called "buffalo-hunting," however, can be controversial. The incentives used to snare the buffalo are often seen as favoritism and an attempt to "pick winners." At the same time, South Carolina has had remarkable success in large game hunting, attracting branch plants from both foreign and domestic companies, even during the Great Recession. Incentives have helped land trophy investments that include BMW in the Upstate region, Boeing in the Low Country, and Amazon in the Midlands.

Clearly, both large and small private-sector businesses can and do create employment. Large businesses help support small business development through local purchases and spending from their employees' earnings. Rather than viewing the world in terms of small vs. large firms, it is more useful to see the entire business ecosystem that spawns and sustains employment. Moreover, the employment imperative facing all regions today not only concerns stimulating new jobs, but firm growth and survivability that will sustain employment.

In any case, private-sector entrepreneurial activity is crucial. Recently, studies on employment generation have examined a previously overlooked segment of the business ecosystem—rapidly growing, high-impact firms (Acs et al., 2008; Strangler, 2011). This work builds on the foundation laid out in the early work of Birch, who found that fast growing firms, called "gazelles," generate most employment growth. Birch's definition of gazelles was based on their revenue growth. In the most recent work, Acs et al. (2008) examined firms with both significant revenue growth and expanding employment. Studies at the national level (Acs et al., 2008) suggest that these high-impact firms create the majority of the new jobs.

The thrust of this study is to probe the high-impact firm hypothesis in depth. HIFs were identified from a comprehensive census of South Carolina firms, the National Establishment Time-Series database or NETS, as explained in the next section.

THE NETS DATABASE

The NETS data that underlie this study provide the most up-to-date and accurate firm and establishment-level information available in a time-series for all states and sub-state areas (Walls, 2007). Essentially, the database is an annual time-series of business establishments from January 1990 to January 2009, reflecting the economic activity of the previous years (1989-2008). NETS links successive surveys of establishments, dating back to 1989, and assigns each firm a unique identifier. The latest edition of the NETS database consists of over 500,000 establishments throughout the state.

For each year that a firm is surveyed, employment and sales data are collected; this creates a time series for each firm and thereby offers a key resource for identifying high-impact firms. Each firm's identifying information, including its location, its line of business, and ultimate ownership is also provided. The ownership information can be used to determine which firms are truly local to South Carolina and to group establishments into firms. The industry information forms the criteria to identify which firms to include in the analysis and which to exclude; i.e. government, nonprofit, and highly regulated industries. While the data are based on surveys, which can lead to missing and inaccurate information, the NETS is unique and a serious effort was undertaken to ensure its integrity. It is now widely used in academic research on employment and firm growth in the United States. For the purposes of this study, the database is as close to an annual census of South Carolina business as exists. Accordingly, it allows for an analysis of the job growth in the state and sub-state regions over time, which is the primary goal of the research.

DEFINITION OF HIGH-IMPACT FIRMS

Before presenting the results of the research using the South Carolina NETS data, it is necessary to understand what is meant by high-impact firms. To classify high-impact firms, this study follows the method developed by Professor Zoltan Acs of George Mason University. The Acs et al. (2008) definition of a high-impact firm (HIF) is an enterprise whose sales have at least doubled over the most recent four-year period and has an Employment Growth Quantifier of two or greater over the same period. The "Employment Growth Quantifier" is the product of a firm's absolute change and percent change in employment.

The HIF definition used here varies slightly from Acs et al. (2008), however. Instead of calculating the changes on sales and employment (absolute and relative) using the end points of a four year-period, the calculations use the average of the changes calculated over the latest four years for all available four-year periods. By doing so, it is possible to smooth the data and avoid problems that have to do with errors and delays on the reporting of employment and sales. For example, to identify HIFs in the 1994-98 period, Acs (2008) computes the changes between the yearly values of 1998 and 1994. This study follows the same procedure, but (if available) it also computes the changes between 1993-97, 1992-96 and 1991-95 and averages these changes. Thus, the definition in this study can be described as an enterprise whose sales have *on average* at least doubled over the most recent four 4-year periods and which has an *average* Employment Growth Quantifier of two or greater over the same period.

Moreover, in this study, the definition of a firm includes only the sum of all establishments located in South Carolina. The analysis also excludes Non-Profit Organizations, Public Administration, Religious, Grantmaking, Civic, Professional, and Similar Organizations, Utilities, Banks and Credit Unions, Educational Services, Hospitals, Offices of Physicians, Offices of Dentists and Offices of Other Health

Practitioners. These sectors are left out because they do not reflect private-sector entrepreneurial activity, depend primarily on public-sector funding, and/or have sales patterns that distort the analysis.

NET JOB CREATION

The analysis begins with a profile of South Carolina employment by firm size. To get a sense of small vs. large business employment change, consider a comparison of South Carolina with U.S. national averages. Table 1 summarizes the average net job creation by firm employment size from 1992-2004 for South Carolina and the United States. This period was chosen to be consistent with the landmark U.S. study by Neumark et al. (2011) discussed earlier. In the first two columns, the average net job creation represents the average annual total for each class of firm size.

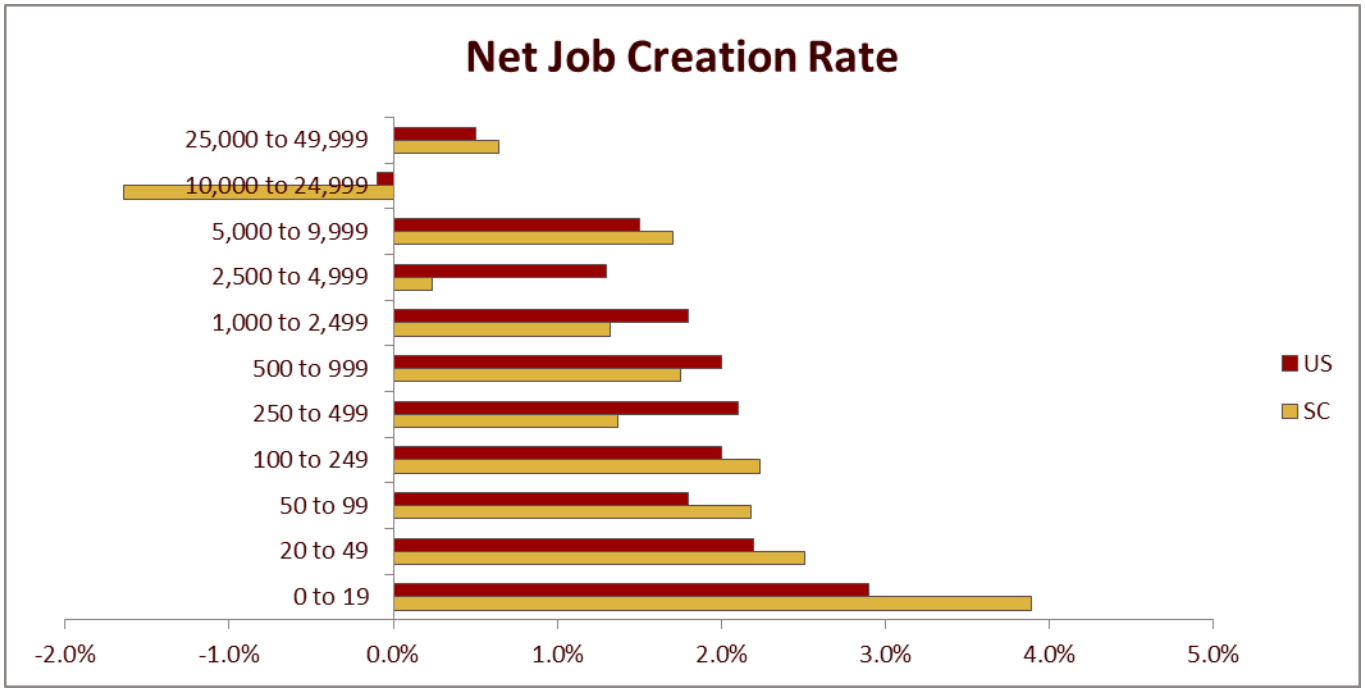
The net job creation rate shown in the last two columns is the difference between the gross jobs added and the gross jobs destroyed. A rate of 3.9 percent for firms 19 employees or less indicates than on average, 3.9 percent was added to their total employment. This is an average employment growth rate over the period.

Observe in Table 1 that small firms unmistakably add more jobs than larger firms relative to their total employment. Figure 1 visually demonstrates these employment trends, showing that South Carolina firms add more jobs at smaller size categories and less at larger firm sizes than the United States average. All figures are taken from the NETS database.

TABLE 1: AVERAGE NET JOB CREATION RATE BY FIRM SIZE, 1992-2004

	Average Net Job Creation		Average Annual Growth Rate	
Average Firm Size	SC	US	SC	US
0 to 19	18,440	1,132,487	3.9%	2.90%
20 to 49	4,497	308,704	2.5%	2.20%
50 to 99	2,896	178,759	2.2%	1.80%
100 to 249	3,667	212,421	2.2%	2.00%
250 to 499	1,881	149,733	1.4%	2.10%
500 to 999	2,145	133,398	1.8%	2.00%
1,000 to 2,499	2,181	171,130	1.3%	1.80%
2,500 to 4,999	-233	87,721	0.2%	1.30%
5,000 to 9,999	1,535	101,459	1.7%	1.50%
10,000 to 24,999	-1,080	-16,799	-1.6%	-0.10%
25,000 to 49,999	70	35,658	0.6%	0.50%

FIGURE 1: U.S. VS. SOUTH CAROLINA: AVERAGE NET JOB CREATION RATE BY SIZE, 1992-2004



SMALL AND LARGE BUSINESSES

Next consider Tables 2 and 3, which provide an alternative way to assess employment dynamics and the extent to which small businesses create jobs. Table 2 summarizes the distribution of total employment in South Carolina and the United States by firm size. South Carolina also has less employment in large firms (over 2,500) and more in medium-size firms (100 to 1,499) compared with the United States average.

TABLE 2: U.S. AND SOUTH CAROLINA EMPLOYMENT BY FIRM SIZE, 2004-2008

Firm Size	SC	US
0 to 19	26.3%	27.2%
20 to 49	10.2%	10.0%
50 to 99	7.7%	7.1%
100 to 249	9.7%	7.7%
250 to 499	8.2%	5.1%
500 to 999	8.2%	4.8%
1,000 to 2,499	12.0%	6.7%
2,500 to 4,999	7.6%	5.0%
5,000 to 9,999	5.8%	4.9%
10,000 to 24,999	3.0%	6.5%
25,000 to 49,999	1.3%	5.2%
Source: South Carolina NETS database and Neumark, et. al. (2011)		

Thus, small firms in South Carolina employ 26 percent of the total workforce, similar to the U.S. share (Table 2). Yet they contribute a disproportionately large share of new jobs in South Carolina through firm births (Table 3). Births are defined as new firms that appear in the economy during a given time period, where most jobs are often created. Jobs are also created through firm expansions. In contrast, jobs are lost through both firm contractions and closings. All these employment changes (expansions, contractions, births, and closings) are given in Table 3 for different firm sizes.

As seen in Table 3, firms in the 0-to-19 size category account for 72.7 percent of employment and a smaller share of employment cutbacks through closings (59.8 percent). At the same time, Table 3 indicates that the small firms account for a disproportionately low share of payroll expansion (16.5 percent) and contractions (17.6 percent).

Overall, Table 3 summarizes the employment dynamics within each firm size category. Firms with less than 500 employees (sometimes used to define small firms) contribute the majority of employment through expansions and births. Larger firms (more than 500 employees) add significantly less through births and expansions. Note that all shares presented in Table 3 are expressed in terms of employment.

TABLE 3: AVERAGE EXPANSIONS, CONTRACTIONS, BIRTHS, AND CLOSINGS BY SIZE, 2004-2008

Average Employment Firm Size	Average Share Expansions (Employment)	Average Share Contractions	Average Share Births	Average Share Closings (Employment)
0 to 19	16.5%	17.6%	72.7%	59.8%
20 to 49	10.5%	8.2%	11.0%	12.8%
50 to 99	8.9%	7.2%	4.7%	6.8%
100 to 249	12.7%	11.0%	5.4%	7.8%
250 to 499	11.0%	10.4%	2.6%	5.3%
500 to 999	10.4%	10.9%	2.0%	3.1%
1,000 to 2,499	15.2%	16.3%	1.6%	3.4%
2,500 to 4,999	6.5%	8.2%	0.0%	1.0%
5,000 to 9,999	5.9%	5.6%	0.0%	0.0%
10,000 to 24,999	1.5%	3.6%	0.0%	0.0%
25,000 to 49,999	0.9%	1.0%	0.0%	0.0%

HIGH-IMPACT FIRM EMPLOYMENT

HIGH-IMPACT FIRMS NET JOB CREATION

With this profile of employment change in small and large firms as background, the next consideration is the contribution of high-impact firms in South Carolina, as defined earlier in this study. Table 4 presents tabulations for three time periods. The periods were chosen to contrast the employment dynamics during the economic boom in the 1990s and the economic growth period in the first decade of the new century. Along with 2004-2008, which is the most recent period available, 2003-2007 calculations are presented because this period was analyzed for the United States in the study by Acs et al. (2008) and thus the results presented here allow for comparisons between the U.S. and South Carolina.

In each case, the results indicate that a relatively small number of firms, ranging from 2.7 to 3.9 percent of total firms, create the majority of jobs in South Carolina. For 2004-2008, high-impact firms created almost 67 percent of all net jobs created. During an earlier period, 1995-1999, the proportion is lower: 34.1 percent. The differences in net jobs contributed by HIFs during different periods have to do with the gains and losses occurring in non-HIFs. As shown in Table 4, non-HIFs sometimes destroy more jobs than they create, as seen in 2003-2007.

Observe in Table 4 that high-impact firms destroy almost no jobs in each period considered. This result confirms findings in the U.S. study of HIFs by Acs et al. (2008). High-impact firms in this study created virtually all U.S. jobs.

TABLE 4: NET JOB CREATION FOR SOUTH CAROLINA'S HIGH-IMPACT FIRMS

1995-1999				
	Total	**Non-HIF**	**HIF**	**Share**
Number of Firms	131,565	126,463	5,102	3.9%
Total Employment	1,607,358	1,540,159	67,199	4.2%
Net Job Creation	215,246	141,769	73,477	34.1%
Gross Job Creation	542,857	466,092	76,765	14.1%
Gross Job Destruction	327,611	324,323	3,288	1.0%
2003-2007				
Number of Firms	185,247	180,580	4,667	2.5%
Total Employment	1,817,948	1,768,840	49,108	2.7%
Net Job Creation	14,902	-32,559	47,461	318.5%
Gross Job Creation	424,504	375,821	48,683	11.5%
Gross Job Destruction	409,602	408,380	1,222	0.3%
2004-2008				
Number of Firms	193,435	188297	5,138	2.7%
Total Employment	1,807,061	1,755,594	51,467	2.8%
Net Job Creation	74,614	24,796	49,818	66.8%
Gross Job Creation	454,000	402,875	51,125	11.3%
Gross Job Destruction	379,386	378,079	1,307	0.3%

Table 5 summarizes the NETS data for three periods for which data are available; contrasting high-impact and non-high-impact firms and giving a sense of the job dynamics across the whole business ecosystem. The table gives the breakdown for total employment and employment change, which is gross job creation less gross job destruction.

The latest period analyzed is 2004-2008, shown at the bottom of Table 5. Note that high-impact firms, like all firms, are overwhelmingly small businesses, with less than 100 total firms larger than 100 employees. Yet the few high-impact firms that are larger than 250 employees have been especially successful in net employment generation. The net employment findings for 2004-2008 are highlighted in red. There is a sharp contrast with non-high-impact firms, where large firms shed employment, except in the highest category (over 10,000 employees). In other words, small businesses create jobs more than destroy them, along with very large (non-high-impact) firms. Yet for high-impact firms, net job creation is found across all firm sizes (although there are no HIFs with more than 1,000 employees during 2004-2008).

TABLE 5: SOUTH CAROLINA EMPLOYMENT BY FIRM SIZE

Employment by Firm Size (1995-1999)										
	Firms		Employment		Employment Chg		Gross Creation		Gross Destruction	
	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF
1-20	118,122	4,154	460,961	17,635	42,448	20,473	192,706	21,052	(150,258)	(579)
20-50	5,021	612	154,866	12,495	14,323	12,217	51,746	12,623	(37,423)	(406)
50-100	1,640	200	111,603	9,497	9,385	8,618	32,173	9,038	(22,788)	(420)
100-250	964	94	146,525	10,002	15,669	8,838	46,000	9,875	(30,331)	(1,037)
250-500	358	32	123,401	7,465	10,052	6,647	32,940	7,493	(22,888)	(846)
500-1000	191	4	122,753	1,483	24,938	1,817	41,117	1,817	(16,179)	-
1000-2500	116	4	169,386	2,012	22,613	4,199	40,040	4,199	(17,427)	-
2500-5000	36	-	123,846	-	(4,057)	-	13,466	-	(17,523)	-
5000-10000	11	2	73,848	6,610	7,565	10,668	11,503	10,668	(3,938)	-
10000-25000	4	-	52,970	-	(1,167)	-	4,401	-	(5,568)	-
Total	126,463	5,102	1,540,159	67,199	141,769	73,477	466,092	76,765	(324,323)	(3,288)
Employment by Firm Size (2003-2007)										
1-20	170,412	3,871	564,452	15,417	97,550	19,687	250,150	20,045	(152,600)	(358)
20-50	6,342	548	196,920	11,325	(5,997)	9,263	35,038	9,832	(41,035)	(569)
50-100	1,958	154	138,541	7,554	(12,490)	5,060	14,159	5,266	(26,649)	(206)
100-250	1,107	71	177,252	8,311	(17,199)	4,831	19,816	4,920	(37,015)	(89)
250-500	395	13	148,263	3,179	(23,027)	2,306	13,750	2,306	(36,777)	-
500-1000	213	10	153,150	3,322	(17,653)	6,314	19,719	6,314	(37,372)	-
1000-2500	114	-	193,849	-	(38,285)	-	6,441	-	(44,726)	-
2500-5000	28	-	103,587	-	(14,432)	-	6,946	-	(21,378)	-
5000-10000	9	-	63,418	-	(6,606)	-	4,222	-	(10,828)	-
10000-25000	2	-	29,408	-	5,580	-	5,580	-	-	-
Total	180,580	4,667	1,768,840	49,108	(32,559)	47,461	375,821	48,683	(408,380)	(1,222)
Employment by Firm Size (2004-2008)										
1-20	178,102	4,333	575,236	17,214	126,766	20,389	263,989	20,706	(137,223)	(317)
20-50	6,405	544	195,821	11,108	(2,858)	9,730	32,089	10,162	(34,947)	(432)
50-100	1,975	168	137,941	8,702	(11,240)	4,925	12,496	5,169	(23,736)	(244)
100-250	1,073	68	171,807	7,543	(19,226)	4,995	15,110	5,309	(34,336)	(314)
250-500	394	14	147,959	2,648	(23,287)	3,994	10,490	3,994	(33,777)	-
500-1000	195	11	144,461	4,252	(21,012)	5,785	16,506	5,785	(37,518)	-
1000-2500	112	-	181,380	-	(23,397)	-	15,581	-	(38,978)	-
2500-5000	28	-	100,865	-	(19,611)	-	4,687	-	(24,298)	-
5000-10000	10	-	66,880	-	(4,515)	-	7,852	-	(12,367)	-
10000-25000	3	-	33,244	-	23,176	-	24,075	-	(899)	-
Total	188,297	5,138	1,755,594	51,467	24,796	49,818	402,875	51,125	(378,079)	(1,307)

LOCAL VS. NON-LOCAL FIRMS

It is often argued that local ownership provides positive benefits for regional economies (for a review of the literature, see Fleming and Goetz, 2010). Local firms, as defined in this study, are those with a headquarters in the state. In South Carolina, the share of total employment in local firms has remained relatively stable over time, at approximately 66 percent of total employment.

For South Carolina across all time periods, the vast majority of high-impact firms (and firm employment) are local. As shown in Table 6, however, non-local, high impact firms in 2004-2008 have a disproportionate share of employment. While there are only twelve firms, or 0.2 percent of total high impact firms, they employ 1.2 percent of total high impact employment. This contrasts with non-high-impact firms, of which 35 percent of total employment is non-local.

TABLE 6: SOUTH CAROLINA'S LOCAL AND NON-LOCAL FIRMS

1995-1999				2003-2007				2004-2008			
Number of Firms				**Number of Firms**				**Number of Firms**			
	Non-HIF	HIF	Total		Non-HIF	HIF	Total		Non-HIF	HIF	Total
Local	122,032	5,081	127,113	**Local**	175,316	4,657	179,973	**Local**	183,268	5,126	188,394
Non-Local	4,431	21	4,452	**Non-Local**	5,264	10	5,274	**Non-Local**	5,029	12	5,041
Total	126,463	5,102	131,565	**Total**	180,580	4,667	185,247	**Total**	188,297	5,138	193,435
Total Employment				**Total Employment**				**Total Employment**			
	Non-HIF	HIF	Total		Non-HIF	HIF	Total		Non-HIF	HIF	Total
Local	951,075	65,733	1,016,808	**Local**	1,142,852	48,654	1,191,506	**Local**	1,130,426	50,866	1,181,292
Non-Local	589,084	1,466	590,550	**Non-Local**	625,988	454	626,442	**Non-Local**	625,168	601	625,769
Total	1,540,159	67,199	1,607,358	**Total**	1,768,840	49,108	1,817,948	**Total**	1,755,594	51,467	1,807,061

HIGH-IMPACT FIRMS AND AGE

High-impact firms are spread unevenly across the age spectrum (see Table 7). By and large, HIFs are either very young or older than nineteen years. This characteristic persisted in each period of analysis. Non-high-impact firms do not exhibit this characteristic. In 2004-2008, firms aged 1-4 years accounted for 50 percent of high impact firms, but only 36 percent of non-high-impact firms. This result makes sense. Most economics research finds that new firms grow faster than older firms, which suggests that high-impact firms (that is, fast-growing firms) tend to be biased toward new start-ups.

TABLE 7: SOUTH CAROLINA'S HIGH-IMPACT FIRMS AND AGE

Employment by Firm Age (1995-1999)										
	Firms		Employment		Net Change		Gross Job Creation		Gross Job Destruction	
Births	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF
0-1 years	30,380	944	132,036	5,207	-46,218	11,510	6,667	11,824	-52,885	-314
2-3 years	13,548	566	74,815	4,486	-19,033	5,324	7,218	5,424	-26,251	-100
4-6 years	19,448	798	189,821	10,134	-34,954	10,488	22,657	10,840	-57,611	-352
7-9 years	10,922	587	97,279	6,633	-7,971	6,336	13,295	6,648	-21,266	-312
10-13 years	11,695	619	101,553	8,521	-10,689	6,347	12,023	7,022	-22,712	-675
14-18 years	10,659	526	94,208	6,222	-6,007	5,901	13,721	6,054	-19,728	-153
>19 years	29,811	1,062	850,447	25,996	21,904	27,571	145,774	28,953	-123,870	-1,382
Total	126,463	5,102	1,540,159	67,199	141,769	73,477	466,092	76,765	-324,323	-3,288
Employment by Firm Age (2003-2007)										
	Firms		Employment		Net Change		Gross Job Creation		Gross Job Destruction	
Births	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF
0-1 years	34,636	1,233	96,594	3,981	-31,306	9,529	5,898	9,723	-37,204	-194
2-3 years	29,320	798	104,979	6,407	-29,276	7,844	8,489	8,112	-37,765	-268
4-6 years	22,262	693	118,003	7,334	-26,917	7,687	8,136	7,804	-35,053	-117
7-9 years	21,571	529	115,811	6,754	-17,020	5,471	7,615	5,618	-24,635	-147
10-13 years	15,174	373	109,481	4,385	-15,037	3,862	7,216	3,915	-22,253	-53
14-18 years	17,235	368	222,012	5,893	-42,759	4,008	13,934	4,091	-56,693	-83
>19 years	40,382	673	1,001,960	14,354	-124,399	9,053	70,378	9,413	-194,777	-360
Total	180,580	4,667	1,768,840	49,108	-32,559	47,461	375,821	48,683	-408,380	-1,222
Employment by Firm Age (2004-2008)										
	Firms		Employment		Net Change		Gross Job Creation		Gross Job Destruction	
Births	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF	Non-HIF	HIF
0-1 years	31,200	1,573	85,254	4,389	-15,764	12,600	5,708	12,709	-21,472	-109
2-3 years	35,944	986	108,639	6,506	-29,751	7,775	8,531	7,981	-38,282	-206
4-6 years	23,934	734	111,062	8,897	4,721	7,244	30,091	7,688	-25,370	-444
7-9 years	20,010	465	107,302	6,829	-16,265	5,136	4,666	5,363	-20,931	-227
10-13 years	18,223	383	123,556	4,674	-13,470	4,072	8,824	4,107	-22,294	-35
14-18 years	17,178	352	211,202	5,143	-39,688	4,514	11,070	4,535	-50,758	-21
>19 years	41,808	645	1,008,579	15,029	-134,577	8,477	64,395	8,742	-198,972	-265
Total	188,297	5,138	1,755,594	51,467	24,796	49,818	402,875	51,125	-378,079	-1,307

INDUSTRY DISTRIBUTION OF HIGH-IMPACT FIRMS

The next set of tabulations breaks down high-impact firms by size and industry in South Carolina. As Table 10 discloses, HIFs in the state exhibit a wide distribution across industries. It turns out that firm employment size does not determine any particular pattern across industries, except perhaps that found in the general economy. For example, larger firms, both high- and low-impact, are more likely to be in wholesale because of the nature of the industry. Small firms may be more involved with the social assistance industry, mostly in child and adult day care, than a large firm for the same reason.

Industries that appear consistent across firm employment size include Professional, Scientific and Technical Services, Specialty Trade Contractors, and Administrative and Support Services. Note that the largest industry, Professional, Scientific, and Technical Services, spans a wide range of economic activities, including legal representation, accounting and bookkeeping, engineering, research, photography, translation, and veterinary services, among others.

TABLE 8: SOUTH CAROLINA'S HIGH-IMPACT FIRMS, BY SIZE AND INDUSTRY, 2004-2008

Small Firms:	**42.5% of employment on top 5 industries**
1	Professional, Scientific, and Technical Services
2	Specialty Trade Contractors
3	Administrative and Support Services
4	Construction of Buildings
5	Social Assistance
Medium Firms:	**38.4% of employment on top 5 industries**
1	Professional, Scientific, and Technical Services
2	Administrative and Support Services
3	Specialty Trade Contractors
4	Food Services and Drinking Places
5	Real Estate
Large Firms:	**73.2% of employment in top 5 industries**
1	Administrative and Support Services
2	Professional, Scientific, and Technical Services
3	Merchant Wholesalers, Nondurable Goods
4	Specialty Trade Contractors
5	Ambulatory Health Care Services

HIGH-IMPACT FIRMS AND TRADED CLUSTERS

Firms in traded clusters are those that serve markets in other regions, as opposed to firms in local clusters that serve the regional market. For example, automotive manufacturers employ workers in South Carolina but sell automobiles outside of the state. Therefore, automotive manufacturing is a traded industry. Firms in these industries garner income from other regions and stimulate local demand and job growth. Industries in clusters are known to have stronger job growth, pay higher wages, and tend to be more inventive (Delgado et al., 2011). Importantly, new research has discovered that clusters have positive effects on the survival of new firms (Wennberg and Linqvist, 2010).

According to the Harvard Business School Cluster Mapping Project, led by Professor Michael Porter, 28.0 percent of South Carolina employment (2008) is found in traded clusters, compared with 27.4 percent for the United States. Local clusters account for 71.1 and 71.7 percent of jobs for South Carolina and the United States, respectively. Resource-base clusters comprise the rest of regional employment (approximately 0.9 percent).

The employment share in traded clusters is higher for high-impact firms than the average for South Carolina. As Table 9 shows, the total share of HIF employment in traded sectors is 30 percent, higher than the 27 percent South Carolina average for traded sector employment in 2008. For HIFs, the largest South Carolina traded clusters are business services, hospitality and tourism, and construction. A leading driver of economic growth during 2004-2008 was construction. Since the latter cluster of activities then witnessed a severe decline after 2008, it is likely that HIF growth in construction also declined. In other words, some clusters matter more in certain periods and are not likely to hold up over time. For 2008, other traded sectors are plastics, automotive manufacturing, and distribution services. The appendix lists the largest HIFs found in traded clusters for the 2008 analysis.

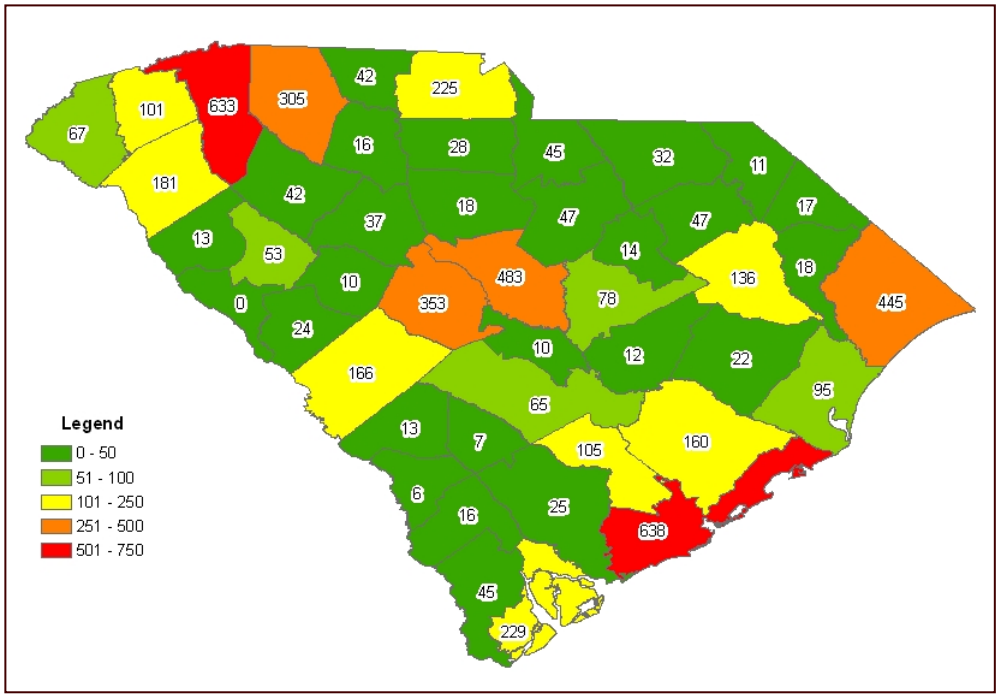
TABLE 9: SOUTH CAROLINA'S HIGH-IMPACT FIRMS IN TRADED CLUSTERS, 2008

	Totals			Shares		
	Firms	Employment	Sales (Mil)	Firms	Employment	Sales (Mil)
Traded Clusters Total	1201	30,332	$ 5164.24	24%	30%	34%
Business Services	388	8825	$ 966.48	20.91%	20.41%	14.50%
Hospitality and Tourism	105	3034	$ 223.78	6.55%	7.02%	3.36%
Distribution Services	58	2029	$ 385.72	3.01%	4.69%	5.79%
Heavy Construction Services	85	1694	$ 286.65	5.04%	3.92%	4.30%
Plastics	17	1470	$ 249.85	0.60%	3.40%	3.75%
Automotive	17	1301	$ 551.03	0.73%	3.01%	8.27%
Entertainment	78	1196	$ 76.24	3.81%	2.77%	1.14%
Production Technology	22	1077	$ 284.64	1.27%	2.49%	4.27%
Construction Materials	13	981	$ 315.26	0.91%	2.27%	4.73%
Metal Manufacturing	23	961	$ 171.22	1.47%	2.22%	2.57%
Financial Services	55	853	$ 179.47	2.65%	1.97%	2.69%
Transportation and Logistics	34	733	$ 109.15	1.44%	1.70%	1.64%
Textiles	23	711	$ 107.39	1.46%	1.64%	1.61%
Heavy Machinery	16	702	$ 87.52	0.97%	1.62%	1.31%
Aerospace Vehicles and Defense	1	536	$ 157.70	0.19%	1.24%	2.37%
Publishing and Printing	34	517	$ 51.48	2.69%	1.20%	0.77%
Furniture	11	457	$ 302.78	0.26%	1.06%	4.54%
Building Fixtures, Equipment and Services	27	443	$ 52.41	1.23%	1.02%	0.79%
Education and Knowledge Creation	34	368	$ 35.20	1.99%	0.85%	0.53%
Information Technology	21	312	$ 45.24	1.18%	0.72%	0.68%
Motor Driven Products	9	241	$ 71.87	0.62%	0.56%	1.08%
Forestry and Primary Wood Processing	16	239	$ 16.30	1.09%	0.55%	0.24%
Forest Products	12	233	$ 41.46	0.43%	0.54%	0.62%
Power Generation and Transmission	1	139	$ 52.00	0.20%	0.32%	0.78%
Agricultural Products	8	110	$ 75.23	0.31%	0.25%	1.13%
Chemical Products	9	105	$ 30.22	0.35%	0.24%	0.45%
Leather and Related Products	12	100	$ 6.51	0.30%	0.23%	0.10%
Medical Devices	6	97	$ 18.52	0.45%	0.22%	0.28%
Sporting and Recreational Goods	8	94	$ 8.05	0.37%	0.22%	0.12%
Lighting and Electrical Equipment	5	88	$ 21.32	0.37%	0.20%	0.32%
Prefabricated Enclosures	4	88	$ 11.34	0.04%	0.20%	0.17%
Apparel	8	87	$ 4.74	0.34%	0.20%	0.07%
Analytical Instruments	7	84	$ 9.32	0.31%	0.19%	0.14%
Communications Equipment	4	82	$ 2.72	0.27%	0.19%	0.04%
Processed Food	7	77	$ 11.19	0.44%	0.18%	0.17%
Biopharmaceuticals	5	76	$ 22.91	0.13%	0.18%	0.34%
Jewelry and Precious Metals	6	69	$ 7.25	0.44%	0.16%	0.11%
Oil and Gas Products and Services	5	31	$ 24.34	0.44%	0.07%	0.37%
Combination Energy Services	1	30	$ 8.75	0.03%	0.07%	0.13%
Tobacco	1	20	$ 1.00	0.02%	0.05%	0.02%
Nonmetal Mining	2	17	$ 2.20	0.04%	0.04%	0.03%
Fishing and Fishing Products	1	15	$ 1.88	0.01%	0.03%	0.03%
Coal Mining	1	6	$ 75.00	0.13%	0.01%	1.13%
Water Transport	1	4	$ 0.92	0.03%	0.01%	0.01%

GEOGRAPHIC DISTRIBUTION OF HIGH-IMPACT FIRMS

Based on data for the latest time period, high-impact firms are distributed across all regions of South Carolina. Figure 2 shows that the metropolitan centers of South Carolina host the largest numbers of HIFs.

FIGURE 2: TOTAL HIGH-IMPACT FIRMS IN S.C. COUNTIES, 2004-2008

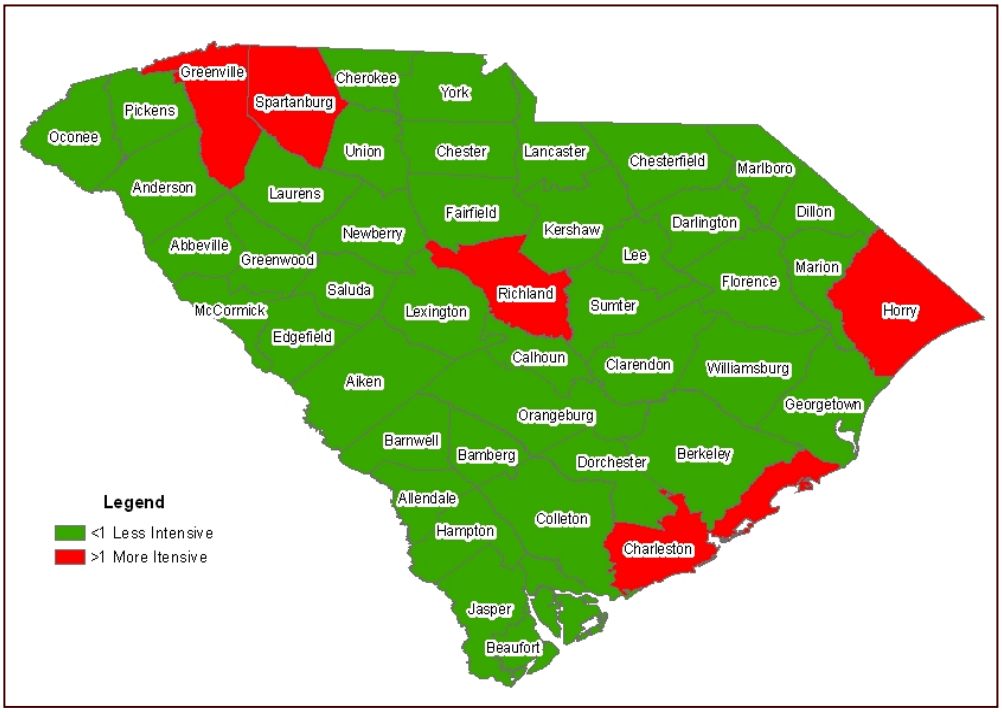


The urban orientation of high-impact firms can be seen clearer in Figure 3, which depicts location quotients for South Carolina counties. This measure is the ratio of the county share of HIFs relative to the county share of total employment. A location quotient ratio greater than one indicates a relative intensity of HIFs in the county—more than would be expected given the county share of overall employment. As the figure indicates, the principal metropolitan counties in the state—Greenville, Columbia, and Charleston—along with Horry County (Myrtle Beach) and Spartanburg have strong concentration of HIFs.

TABLE 10: COUNTY HIGH-IMPACT EMPLOYMENT, 2004-2008

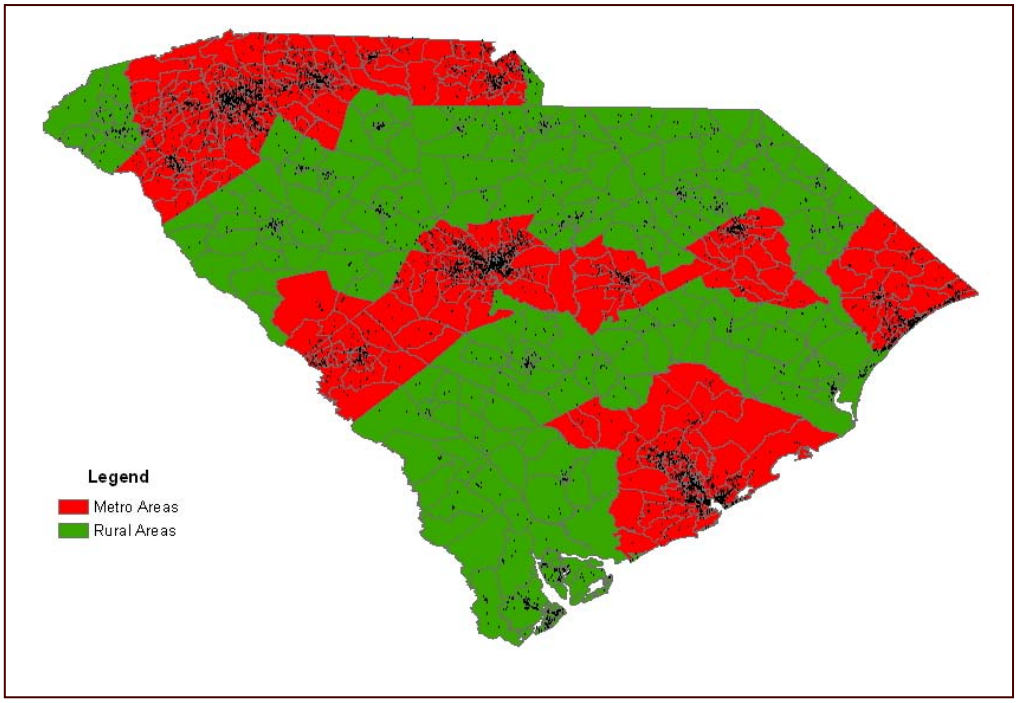
County	Total	High-Impact	Share High-Impact	Share Total	Location Quotient
Abbeville	4,654	210	0.21%	4.5%	0.05
Aiken	49,370	2,243	2.22%	4.5%	0.49
Allendale	1,896	69	0.07%	3.6%	0.02
Anderson	48,015	3,469	3.43%	7.2%	0.48
Bamberg	3,519	64	0.06%	1.8%	0.03
Barnwell	4,956	770	0.76%	15.5%	0.05
Beaufort	52,520	3,539	3.50%	6.7%	0.52
Berkeley	31,874	2,701	2.67%	8.5%	0.32
Calhoun	3,207	223	0.22%	7.0%	0.03
Charleston	170,847	12,660	12.50%	7.4%	1.69
Cherokee	17,157	1,346	1.33%	7.9%	0.17
Chester	7,526	347	0.34%	4.6%	0.07
Chesterfield	12,057	844	0.83%	7.0%	0.12
Clarendon	5,273	115	0.11%	2.2%	0.05
Colleton	8,399	353	0.35%	4.2%	0.08
Darlington	17,151	833	0.82%	4.9%	0.17
Dillon	7,366	199	0.20%	2.7%	0.07
Dorchester	24,788	2,140	2.11%	8.6%	0.24
Edgefield	4,217	724	0.72%	17.2%	0.04
Fairfield	3,985	542	0.54%	13.6%	0.04
Florence	49,194	2,556	2.52%	5.2%	0.48
Georgetown	20,010	1,216	1.20%	6.1%	0.20
Greenville	212,516	11,360	11.22%	5.4%	2.10
Greenwood	21,824	1,974	1.95%	9.1%	0.22
Hampton	3,523	236	0.23%	6.7%	0.03
Horry	102,088	8,141	8.04%	8.0%	1.01
Jasper	6,484	668	0.66%	10.3%	0.06
Kershaw	13,620	838	0.83%	6.2%	0.13
Lancaster	12,077	595	0.59%	4.9%	0.12
Laurens	13,649	1,120	1.11%	8.2%	0.14
Lee	2,473	153	0.15%	6.2%	0.02
Lexington	79,951	6,386	6.31%	8.0%	0.79
McCormick	1,059	-	0.07%	0.0%	-
Marion	5,305	100	0.10%	1.9%	0.05
Marlboro	5,662	170	0.17%	3.0%	0.06
Newberry	11,858	741	0.73%	6.3%	0.12
Oconee	17,945	773	0.76%	4.3%	0.18
Orangeburg	26,168	1,750	1.73%	6.7%	0.26
Pickens	28,299	3,792	3.75%	13.4%	0.28
Richland	163,128	11,882	11.74%	7.3%	1.61
Saluda	3,401	194	0.19%	5.7%	0.03
Spartanburg	101,381	6,846	6.76%	6.8%	1.00
Sumter	29,743	1,695	1.67%	5.7%	0.29
Union	5,009	422	0.42%	8.4%	0.05
Williamsburg	6,840	391	0.39%	5.7%	0.07
York	63,365	3,853	3.81%	6.1%	0.63

FIGURE 3: S.C. COUNTY LOCATION QUOTIENTS, 2008



Even so, it should be emphasized that high-impact firms are distributed across South Carolina's urban and rural counties, although they are less likely to be located in rural areas. The differences are not great: 17 percent of high-impact firms are located in rural areas, compared with 19 percent of all firms. In this study, rural areas are defined as those counties in South Carolina that are not included in a U.S. Census-defined metropolitan statistical area. As depicted in Figure 4, high-impact firms are clustered in the state's urban centers of Greenville-Spartanburg, Aiken, Myrtle Beach, Columbia, and Charleston.

FIGURE 4: URBAN-RURAL DISTRIBUTION OF HIGH-IMPACT FIRMS, 2004-2008



HIGH-IMPACT FIRMS IN SOUTH CAROLINA'S DISTRESSED AREAS

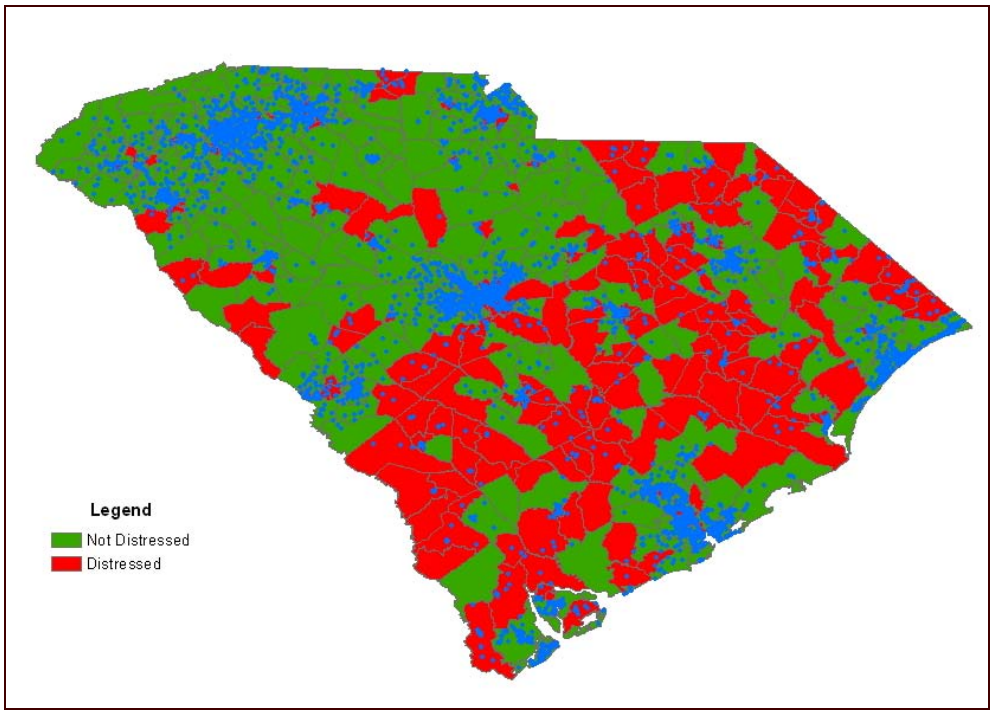
The NETS data were also used to evaluate the distribution of HIFs in South Carolina's distressed areas. In this case, distressed areas are defined as U.S. Census tracts that qualified for "New Markets Tax Credit," an investment program for firms locating in distressed areas.

As Table 10 reveals, HIFs mirror the overall distribution of firms: 30 percent of both high-impact and non-high-impact firms are located in distressed areas. There are slight differences in terms of employment. HIFs have an approximately three percent smaller share of employment in distressed areas compared with non-high-impact firm employment. Figure 5 provides a map of the distribution across distressed and non-distressed areas of South Carolina.

TABLE 11: HIGH-IMPACT FIRMS IN DISTRESSED AREAS, 2008

	Firms		Employment	
Total	**HIF**	**Non-HIF**	**HIF**	**Non-HIF**
Not Distressed	3,601	203,717	63,548	1,263,336
Distressed	1,527	89,105	30,013	701,584
Share	**HIF**	**Non-HIF**	**HIF**	**Non-HIF**
Not Distressed	70.2%	69.6%	67.9%	64.3%
Distressed	29.8%	30.4%	32.1%	35.7%

FIGURE 5: HIGH-IMPACT FIRMS IN DISTRESSED AREAS, 2004-2008



THE GROWTH OF LARGE FIRMS

So far, this study has examined the employment contributions of small businesses and high-growth firms. What about the scaling-up potential of South Carolina private-sector companies? Large, locally headquartered firms are likely to produce steady employment opportunities. Firms with local headquarters tend to employ large numbers of well-compensated management, professional, and technical talent. Both in the share of employment and average wages, South Carolina lags the national average in creating these types of jobs, as revealed in Table 12. While the state does comparatively well with architecture and engineering occupations, the job categories most likely to be associated with local headquarters (Management and Business and Financial Operations) fall below the national average.

TABLE 12: U.S. VS. SOUTH CAROLINA HIGH-SKILL OCCUPATIONS

Occupation Group	SC Employment Share May 2010	Average Wage	US Employment Share May 2010	Average Wage
Management	4.29%	$ 93,470.00	4.74%	$ 105,440.00
Business and Financial Operations	3.40%	$ 57,300.00	4.79%	$ 67,690.00
Computer and Mathematical	1.51%	$ 60,850.00	2.58%	$ 77,230.00
Architecture and Engineering	1.99%	$ 68,920.00	1.81%	$ 75,550.00
Source: U.S. Bureau of Labor Statistics, Occupational Employment Series				

A significant challenge for South Carolina is growing small enterprises that become successful large firms that maintain local headquarters and hire top managerial and technical talent. Accordingly, this study examined South Carolina's cultivation of large firms. In this study, large (local) firms are identified as having begun operations after 1989, reaching $25 million in sales before 2008, and maintaining operations until 2008. Table 13 gives the employment and sales trends. Like the small businesses analyzed at the beginning of this study, this select group of large (local) firms has annual employment growth and sales growth. The growth rates have slowed over time, however, as indicated in Figures 6 and 7. Also, note that the growth is significantly stronger in economic expansions and slows during recession years like 2001 and 2008.

Since 2002, moreover, an analysis of the NETS data finds only 112 companies that started and grew beyond $25 million in sales. Out of this total, 31 are identified as high-impact firms in 2004-2008. Examples of specific firms are given in the appendix. Interestingly, many of these large firms are found in traded clusters. Approximately 46 percent of these large firms formed in traded clusters. Further, 73 percent of large (local) firm employment in 2008 was in traded sectors. The dominance of traded employment is extraordinary. Recall that 27 percent of South Carolina employment overall resides in traded sectors and 30 percent in high-impact firm employment.

TABLE 13: LARGE FIRM TRENDS

	Employment		Cumulative Employment Growth Rates		Sales (Millions)		Cumulative Sales Growth Rates	
Year	Large Firms	Other Firms	Large Firms	Other Firms	Large Firms	Other Firms	Large Firm	Other Firms
1995	1,018	1,600,000	2.18	2.07	$ 118.20	$ 153,500	2.58	2.08
1996	1,939	1,600,000	2.90	2.00	$ 223.80	$ 161,300	2.89	2.05
1997	2,566	1,700,000	2.32	2.06	$ 366.50	$ 173,800	2.64	2.08
1998	3,825	1,700,000	2.49	2.00	$ 719.70	$ 188,300	2.96	2.08
1999	6,299	1,800,000	2.65	2.06	$ 1,602	$ 200,400	3.23	2.06
2000	8,641	1,800,000	2.37	2.00	$ 2,306	$ 208,500	2.44	2.04
2001	9,114	1,900,000	2.05	2.06	$ 2,541	$ 215,900	2.10	2.04
2002	9,668	1,900,000	2.06	2.00	$ 2,706	$ 218,500	2.06	2.01
2003	10,378	1,900,000	2.07	2.00	$ 3,038	$ 217,100	2.12	1.99
2004	10,941	1,800,000	2.05	1.95	$ 3,339	$ 210,300	2.10	1.97
2005	12,252	1,800,000	2.12	2.00	$ 4,216	$ 207,700	2.26	1.99
2006	12,887	1,800,000	2.05	2.00	$ 4,770	$ 211,600	2.13	2.02
2007	18,762	1,800,000	2.46	2.00	$ 6,415	$ 211,100	2.34	2.00
2008	19,958	1,800,000	2.06	2.00	$ 6,850	$ 209,800	2.07	1.99
2009	23,509	1,900,000	2.18	2.06	$ 7,338	$ 209,300	2.07	2.00

FIGURE 6: LARGE FIRMS EMPLOYMENT GROWTH RATES, 1995-2009

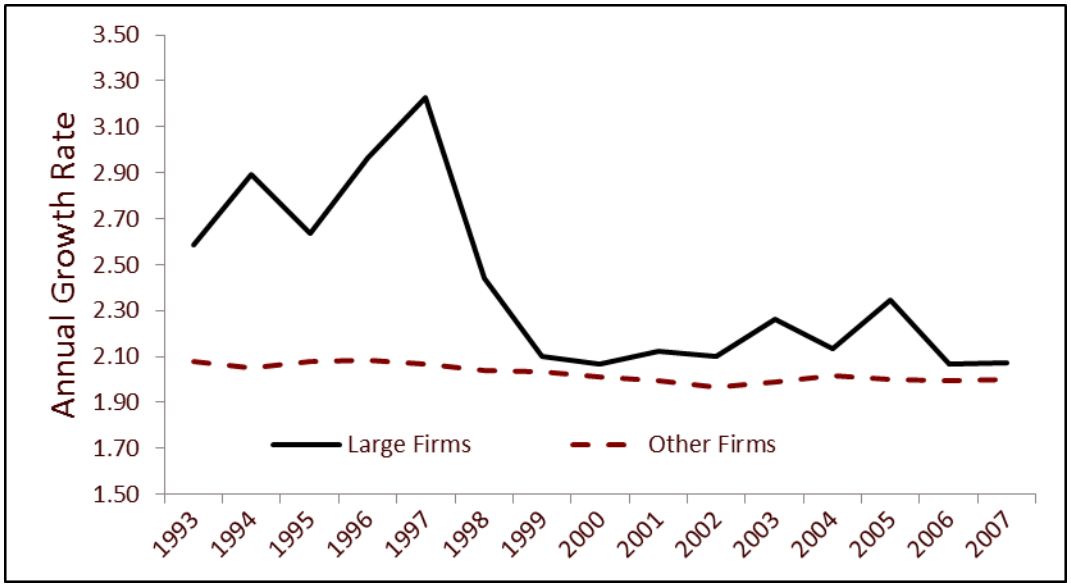
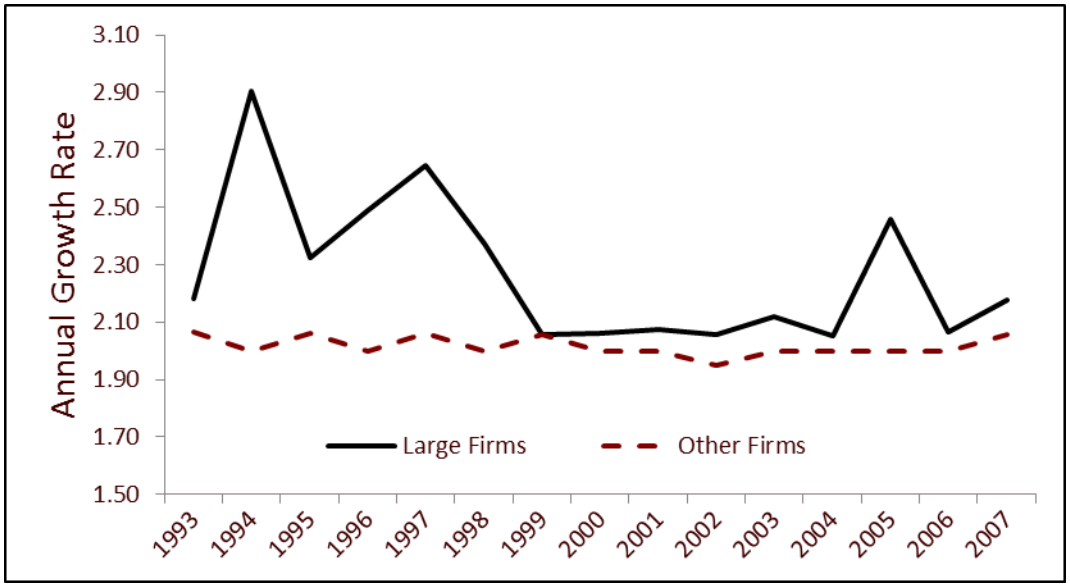


FIGURE 7: LARGE FIRMS SALES GROWTH RATES, 1995-2009



CONCLUSION

Like all states, South Carolina must find ways to create and sustain employment opportunities for its citizens. Since the Great Recession unfolded in 2007-08, the job base has eroded. Economic development efforts to lure large branch plants to the state have achieved some notable success. Yet new initiatives should be crafted to expand employment through support for successful, locally based firms. To broaden the available employment prospects for South Carolina residents, the state needs local firms that start up, grow, and develop into regional and national champions.

This study presents a comprehensive profile of small-business and high-impact firms and employment generation in South Carolina. The analysis is based on the NETS establishment-level data available for the state through 2008, scrutinized for the first time in published research and compared with national trends.

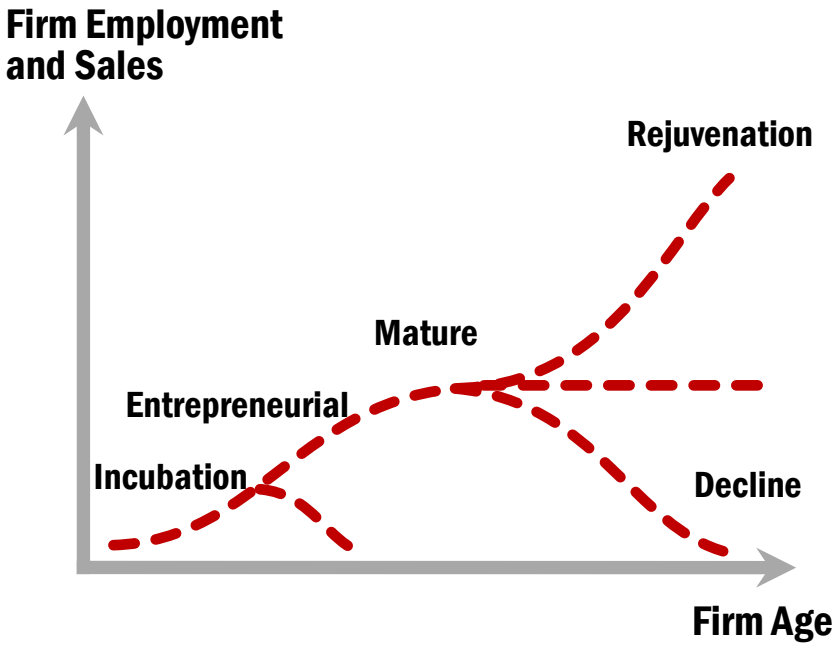
A careful investigation of the South Carolina business establishment data reveals that small businesses (less than 20 employees) account for approximately one quarter of all firms, but more than half of all net job generation. The state's small business employment growth compares favorably with the U.S. overall. Accordingly, South Carolina does not appear to be at a competitive disadvantage in small business job creation.

Interestingly, less than three percent of South Carolina firms contributed to approximately two-thirds of all net employment from 2004-2008. These high-impact firms have rapid sales growth. While it may seem circular to state that high-growth firms generate the majority of net jobs for South Carolina, it is astounding how few of these firms account for employment gains. Similar findings have been reported for the United States.

Where South Carolina seems to be at a disadvantage is in scaling up small enterprises to become thriving, locally headquartered firms with the capacity to create and retain managerial and technical occupations. Although the state has not had much success in cultivating high-revenue, local firms from small businesses, this study found that traded clusters have shown considerable promise in this regard.

Future research should concentrate on firm growth, employment, and survival, as depicted in Figure 8. This study suggests that South Carolina has done well in early firm formation; that is, incubation and entrepreneurial phases. As firms age and reach maturity (along the horizontal axis in Figure 8), having passed the incubation and entrepreneurial stages, the challenges in expanding employment and sales become more exigent for economic development policy. One hypothesis that deserves further scrutiny is that long-run success and rejuvenation is more likely to occur within traded clusters. In other regions, clusters have been shown to provide positive spillover effects, or synergies that help individual firms survive and grow. Regional clusters spur knowledge and information transfer and provide specialized services and labor, which help raise firm productivity and innovation. The potential role of clusters in small business growth and firm survival merits serious in-depth study.

FIGURE 8: STAGES OF FIRM GROWTH



REFERENCES

Acs, Zoltan J., William Parsons and Spencer Tracy. 2008. *High-Impact Firms: Gazelles Revisited*. Corporate Research Board, LLC. Report prepared for the Small Business Administration. Washington, DC. (June).

Birch, David L. 1981. ‘‘Who Creates Jobs?’’ *Public Interest* 65:3 (1981), 3–14.

Birch, David L., 1987. *Job Creation in America: How Our Smallest Companies Put the Most People to Work* (New York: Free Press, 1987).

Delgado, Mercedes, Michael E. Porter and Scott Stern. 2011. “Clusters, Convergence, and Economic Performance” http://www.isc.hbs.edu/pdf/DPS_Clusters_Performance_2011-0311.pdf. Accessed June 1, 2011.

Fleming, David and Stephan J. Goetz. 2010. Does Local Ownership Matter? Rural Development Paper No. 48. The Northeast Center for Rural Development. Forthcoming *in Economic Development Quarterly*.

Neumark, David, Brandon Wall, and Junfu Zhang. 2011. "Do Small Business Create More Jobs? New Evidence for the United States from the National Establishment Time Series." *The Review of Economics and Statistics*, February 2011, 93(1): 16-29.

Stangler, Dane, 2011. *High-Growth Firms and the Future of the American Economy*. Ewing Marion Kauffman Foundation. Kansas City, Mo. (March).

Walls, D. 2007. "National Establishment Time-Series Database: Data Overview." 2007 Kauffman Symposium on Entrepreneurship and Innovation Data. (November 2). Available at the Social Science Research Network (SSRN): http://ssrn.com/abstract=1022962. Accessed June 1, 2011.

Wennberg, Karl and Göran Lindqvist. 2010. “How do Entrepreneurs in Clusters Contribute to Economic Growth?” Stockholm School of Economics. SSE/EFI Working Paper Series in Business Administration No 2008:3

APPENDIX

TOP TRADED HIGH-IMPACT FIRMS IN SOUTH CAROLINA, 2004-2008

Company Name	Industry	City	Employment 2008	Sales 2008 ($millions)
FLUOR-CDM SPACE SERVICES LLC	Engineering Services	Greenville	3,000	$ 150.00
AMICK FARMS LLC	Animal Slaughtering	Batesburg	1,500	$ 93.75
CONTRACT ENVIRONMENTAL SERVICES	Scientific and Technical Consulting	Easley	1,200	$ 120.00
AGY HOLDING CORP	Broadwoven Fabric Mills	Aiken	704	$ 70.26
FORCE PROTECTION INC	Military Armored Vehicle and Components Mfg.	Ladson	536	$ 157.70
CHESTER WOOD PRODUCTS LLC	Softwood Veneer & Plywood Mfg.	Chester	400	$ 60.00
BEN ARNLD-SUNBELT BEV OF SC LP	Wine & Distilled Alcoholic Beverage Wholesalers	Ridgeway	332	$ 90.55
AVM INDUSTRIES LLC	Motor Vehicle Parts Mfg.	Mullins	300	$ 55.00
Q2 ADMINISTRATORS LLC	Medicare & Medicaid Claims Processing	Columbia	300	$ 119.50
LANG-MEKRA NORTH AMERICA LLC	Glass Product Mfg.	Ridgeway	278	$ 60.00
KRONOTEX USA HOLDINGS INC	Millwork, Including Flooring	Barnwell	265	$ 273.10
AMERICAN LAFRANCE SC LLC	Motor Vehicle and Parts Mfg.	Ladson	207	$ 249.60
BOILER TUBE COMPANY AMERICA	Power Boiler & Heat Exchanger	Lyman	205	$ 72.44
METROMONT CORPORATION	Concrete Product Mfg.	Greenville	200	$ 82.26
SPF NORTH AMERICA INC	Dog & Cat Food Mfg.	Hodges	168	$ 62.14
TRUCAST INC	Turbine Generator Set Units Mfg.	Newberry	139	$ 52.00
TRANSAXLE MFG AMER CORP	Motor Vehicle Parts Mfg.	Rock Hill	100	$ 54.97
CANAL INSURANCE COMPANY	Insurance Carriers and Related Activities	Greenville	240	$ 487.8
COX INDUSTRIES INC	Wood Product Manufacturing	Orangeburg	699	$ 280.1
PRESTAGE FARMS SC LTD LBLTY CO	Poultry Wholesalers	Cassatt	95	$ 65.51

NOTE: The companies listed include: (1) locally owned firms with South Carolina headquarters, and (2) wholly owned subsidiaries with headquarters in South Carolina but with parent companies that are headquartered outside of the state.

EXAMPLES OF LOCAL SOUTH CAROLINA LARGE FIRMS THAT STARTED AFTER 1984

Company Name	City	Sales 2009 $millions	Product Description
ScanSource, Inc.	Greenville	$2,115.0	Bar-coding technology
Force Protection, Inc.	Ladson	$977.1	Armored vehicles
KEMET Corporation	Simpsonville	$736.3	Capacitors
Exopack Holdings Corp.	Spartanburg	$673.7	Flexible packaging
Advance America	Spartanburg	$600.0	Pay-day Lending
JPS Industries, Inc.	Greenville	$232.0	Glass and plastic products
Carolina Auto Auction	Williamston	$231.0	Auto auctions
3D Systems Corporation	Rock Hill	$159.9	3-dimensional part building
BDI Pharma, Inc	Columbia	$125.0	Pharmaceuticals
Thompson Construction Group, Inc.	Sumter	$122.3	Industrial cleaning, supply, and construction
Advanced Technology International	North Charleston	$119.7	Technological research

Note: Companies that started after 1984, were still in business in 2009, and achieved $100 Million or more in annual sales.

NEW CAROLINA ENTREPRENEURSHIP TASK FORCE MEMBERS

Garry Powers, Task Force Chair
Director
Economic Development Initiatives
CTC Public Benefit Corporation

Michele Abraham
State Director
South Carolina Small Business Development Center

Vincie Albritton
Associate Director
Clemson University Research Foundation

Pennie Bingham
Senior Vice President
Charleston Metro Chamber of Commerce

Chuck Bundy
Senior Manager
South Carolina Department of Commerce

George Fletcher
Executive Director
New Carolina

Don Herriott
Director
Innovista Partnerships
University of South Carolina

Neil McLean
Executive Director
EngenuitySC

Dave McNamara
Senior Vice President and General Manager
SCRA

Brenda Laakso
Vice President, Entrepreneurship and Small Business,
The Greater Greenville Chamber of Commerce

Tom Ledbetter
Executive Director
Midlands Technical College Enterprise Campus Authority

Leo Richardson, Ph.D.
Executive Director
South Carolina
Institute on Poverty and Deprivation

Joel Stevenson
Director Emeritus
USC/Columbia Technology Incubator