



***The Brandow Company***

**ANALYSIS OF BUSINESS FORMATION, SURVIVAL  
AND ATTRITION RATES OF NEW AND EXISTING  
FIRMS AND RELATED JOB FLOWS IN APPALACHIA**

*Prepared for:*

**Appalachian Regional Commission  
1666 Connecticut Avenue, NW  
Washington, DC 20235**

*Prepared by:*

**Brandow Company, Inc.**  
2601 Market Street suite 2  
Camp Hill, PA 17011  
717-909-6000 fax: 717-763-1232  
www.brandow.com info@brandow.com

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## **Executive Summary**

In the interest of enhancing its understanding of the actual experience of entrepreneurs and existing businesses in the Appalachian Region, the Appalachian Regional Commission (ARC) commissioned a longitudinal economic analysis of business formation, survival and attrition rates for new and existing firms. Detail is provided by industry and employment size classes for the region, its Local Development Districts (LDDs), and major metropolitan areas.

The Brandow Company's longitudinal methodology includes the ability to track individual firms and business demographic categories—including industries, startup and survival rates, years of operations, as well as sales and employment.

The report provides economic vitality measures for the Appalachian Region, the seventy-one Local Development Districts, and forty-four metropolitan areas linked to various LDDs.

The full report includes detail broken out by industry, including:

### ***Analysis of Existing Businesses***

- 1996-2001 overall business survival, and retained firms rates compared to the 1996 pool;
- 1996-2001 retained business sales vitality;
- 1996-2001 retained business job vitality, including change in average employment and job replenishment rates (net change in jobs due to expansion and jobs lost due to failures);
- 1996 average and current retained business sales per employee by industry;
- 1996-2001 business out-migration levels.

### ***Analysis of Startups***

- 1996-2001 business formation rates;
- 1996-2001 startup survival and retained firm rates from the 1996 pool;
- 1996-2001 retained startup business sales vitality;
- 1996-2001 retained startup business job vitality, including change in average employment and job replenishment rates;
- 1996 average and current retained startup sales per employee;

### ***Analysis of High Growth Firms by Firm Size***

- number and employment size of high growth firms (relative measure by subregion and breakout by five employment-size classes).

Benchmarks in each of the above categories are presented in the form of an index using the US as yardstick (e.g., U.S.=1.00), allowing for easy comparisons of each LDD and metro area with US and Regional results.

## **Key Findings for The Appalachian Region**

As the conventional wisdom suggests, Appalachia has made some strides, but remains caught in a cycle of low levels of entrepreneurship, low growth among existing firms, and a continued over-reliance on branch facilities as economic engines. In aggregate, the Region exhibited high business retention rates, but the highest retention rates seemed to occur most often in low-growth areas. In addition, the overall positioning of retained firms, as indicated by the sales per employee index, is fully 6 percent below the US average.

Seventy-two of 73 major industries have retention rates at or above the US industry average. Only coal mining registered a below average five-year retention rate, probably due to the relatively high concentration of coal-mining in the region and its steady decline nationally. However, it is misleading to assess the Region's stellar retention performance alone. For instance, only 19 major industries show job vitality patterns among surviving firms that are higher than US trends, and only a handful of these are in locally controlled industries. Only a dozen industries have sales per employee rates among surviving firms that top their peers across the US. Thus, the Region is relatively weakly positioned in many industries. Regional technology industries lag quite seriously in most retained firm vitality measures.

On the positive side of the Region's performance, fewer than 400 firms of all sizes—less than 0.05 percent—migrated outside the region over the five years studied, about on par with the three-year US interstate average.

Startups in the region tended to survive at slightly higher rates than the US average. Surviving startups also tended to add jobs at a very good clip, but sales per employee among surviving startups is low. Most importantly, startup activity rates—the measure of raw Regional entrepreneurial activity—are 13 percent below the national average.

Startup activity rates are above average in only thirteen of seventy-three major industries. The leaders include several manufacturing industries critical to Regional vitality: primary metals, fabricated metal, transportation equipment, plastics, and furniture. Startups in the technology-oriented instrument group are just under US norms. Business Services startups (including computer-related services) run 12 percent below US trends, while communications starts—the national leader—are 27 percent below par. Among technology startups Appalachia is falling further behind. Only five significant technology industries indicate higher than average startup rates.

Startup rates showed strength in 27 detailed (4-digit SIC) manufacturing industries that had at least fifty startups on a Region-wide basis. Startup activity is impressively high in several value-added wood industries, including the high performing millwork, wood cabinets and wood furniture. The strong northern plastics industry outperforms the national startup activity rate by 18 percent. And a variety of heavy industries, including steel mills, fabricated structural metal, sheet metal and auto components also outperform the US average. In spite of very large existing concentrations, tool and die startup activity is only 6 percent under the US pattern.

While the Region falls 10 percent behind US patterns in high growth firms by employment measures, performance is better than anticipated. Among the smallest class measured (firms which began with fewer than five employees and grew to more than ten over five years), regional performance trailed national patterns by only 5 percent. Among larger firms, regional ratings lagged US rates by 11 percent to 18 percent.

**Key Findings for LDDs**

In order to assess how well the individual districts performed, a classification scheme was developed based on four performance indices outlined in the table below. Twenty Districts could be classified according these “vitality quadrants”. All other Districts fell between these quadrants, most between the Low Vitality and Low-Moderate Vitality Patterns. All three high vitality Districts are linked to sizeable MSAs.

- High Vitality Patterns: Sales per Employee >0.85, all other measures indexing over 0.95. Three districts (AL 1E, GA 2C, TN 11B).
- High-Moderate Vitality Patterns: Startup >0.95; High Growth >0.79<0.95; SPE >0.85; Retention >1.00. Two Districts (GA 2A, GA 2B).
- Low-Moderate Vitality Patterns: Startup >0.79<0.95; High Growth >0.95; SPE >0.85; Retention >1.00. Three Districts (KY 3B, SC 10A, TN 11C).
- Low Vitality Patterns: Startup <0.80; High Growth <0.80; SPE <0.80; Retention >1.00. Twelve Districts (KY 3I, MS 5D, MS 5E, NY 6B, PA 9C, PA 9D, TN 11D, VA 12B, VA 12C, VA 12E, VA 12F, WV 13H).

<p><u><i>Hi-Moderate Vitality Patterns</i></u></p> <p>High Startup Activity          Low-Moderate Hi-Growth Index          Moderate Sales Per Employee          In-Range Retention</p>	<p><u><i>High Vitality Patterns</i></u></p> <p>High Startup Activity          Strong Hi-Growth Index          High Sales Per Employee          In-Range Retention</p>
<p><u><i>Low Vitality Patterns</i></u></p> <p>Low Start Activity          Low-Moderate Hi-Growth Index          Low-Moderate Sales Per Employee          High Retention</p>	<p><u><i>Low-Moderate Vitality Patterns</i></u></p> <p>Low-Moderate Startup Activity          Strong Hi-Growth Index          Moderate Sales Per Employee          In-Range Retention</p>

A summary index was also developed, averaging four vitality measures, including the overall retention index, the startup activity index, the aggregate high growth firm index and the retained firm sales per employee index. The summary attempts to integrate stability, new growth, economic engines and overall positioning of each area relative to

national patterns. The indices were averaged, yielding a final, unweighted rate which can be compared to the standard US index (US= 1.00).<sup>1</sup>

Most LDDs and MSAs did not do well in the Summary Index. Only four LDDs—two of them in Georgia and linked to the booming Atlanta MSA—scored above the national average.

Twenty-one LDDs (37 percent) scored within 10 percent of the national score, as did the Region itself. But eleven LDDs (15 percent) showed a summary index more than 20 percent below the national average, and another 33 (46 percent) scored 11-20 percent below average. The lowest rated LDDs tended to be clustered: five in Virginia, two in Mississippi, two in Alabama. The median score of the seventy-one LDDs was 12 percent below the national average.

## **Policy Implications**

### **1. Retention programs and resources should be targeted.**

High regional retention rates may reflect a focus in most Districts on economic maintenance rather than on spurring vitality. A focus on service delivery to core local industry clusters, high vitality industries, and high growth firms would pay off much more handsomely than broad-ranging retention programs.

### **2. Focus on the Regional lag in entrepreneurial activity.**

The lag in entrepreneurial activity is clearly Appalachia's weakest link, one exposed with chilling clarity by this analysis. This problem is truly region-wide and cuts across all sorts of industries, core and otherwise.

### **3. Branch facilities create entrepreneurial opportunities that should be exploited.**

While many supporters of the Region are aware of the mixed blessings of branch facilities, some of the Region's booming Districts owe much of their good fortune to the recent development of large branches. However, the task of identifying and nurturing entrepreneurial startup opportunities associated with core branch facilities has received relatively less attention as a development strategy.

### **4. Appalachian technology industries need targeted assistance for the Region to catch up.**

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<sup>1</sup> Readers who wish to assign greater or lesser weights to various indices will conclude with different final scores. The consultant's view would be to downplay the value of the retention index and cap the value of any given measure.

The region hosts many strong technology firms and industries. Nonetheless, many technology industries lag behind national vitality indices. Startup activity rates in almost all technology sectors (strong and weak, plentiful and scarce) are uncomfortably low. More needs to be done to help existing firms advance, and new ones to start up and flourish.

#### **5. Metro areas are irrevocably linked.**

District economies appear to be increasingly linked to nearby MSAs. In most cases, Districts should take their cues for attraction and startup efforts from their MSA neighbor, which are outperforming District economies.

#### **6. Business migration is not a major issue.**

In general, the Region and its Districts do not exhibit major problems with business out-migration. Indeed, most districts were at or below the average for business out-migration. While new branch attraction (not analyzed in this report) is a larger issue, non-branch business out-migration from ARC Districts is rarely a problem.

## **I. Introduction**

In the interest of enhancing its understanding of the actual experience of entrepreneurs and existing businesses in the Appalachian Region, the Appalachian Regional Commission (ARC) commissioned a longitudinal analysis of the trends in business startups, survival rates, and the attrition of new and existing establishments by industry and establishment. The analysis provides additional detail by establishment, industry and employment-size for the region, its Local Delivery Districts and major metropolitan statistical areas (MSAs).

The project incorporates the use of proprietary databases derived from private sector credit reporting services.<sup>2</sup> The Brandow Company's longitudinal methodology includes the ability to track individual firms and business demographic categories—including industries, startup and survival rates, years of operations, as well as sales and employment.

This report develops economic vitality measures for the Appalachian Region, the 71 Local Development Districts (LDDs), and 44 metropolitan areas linked to various LDDs.

The following analytical “package” was developed for each area with industry detail, including:

### ***Analysis of Existing Business Establishments***

- 1996-2001 overall business survival and retained firms rates from the 1996 pool;
- 1996-2001 retained business sales vitality;
- 1996-2001 retained business job vitality, including change in average employment and job replenishment rates (net job changes due to expansion and jobs lost to failures);
- 1996 average and current retained business sales per employee by industry;
- 1996-2001 business out-migration levels.

### ***Analysis of Startups***

- 1996-2001 business formation rates;
- 1996-2001 startup survival and retained firm rates from the 1996 pool;
- 1996-2001 retained startup business sales vitality;
- 1996-2001 retained startup business job vitality, including change in average employment and job replenishment rates;
- 1996 average and current retained startup sales per employee.

### ***Analysis of High Growth Firms by Establishment Size***

- number and employment size of high growth firms (relative aggregate measure by LDD and breakout by five employment-size classes).

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<sup>2</sup> The analysis in this report is drawn from a variety of raw data sources, including Dun and Bradstreet, Info USA and government publications including County Business Patterns, none of which are responsible for either final statistics or conclusions drawn.

Benchmarks in each category are presented in the form of an index using the US as a yardstick (e.g., US=1.00), allowing for easy comparisons of each LDD and metro area with US and Regional results.

The report includes:

- a detailed discussion of methodology;
- a narrative of Regional performance and policy implications indicated by the analysis;
- summary findings for each of the 116 areas benchmarked against US business vitality patterns, including an indexed chart of key measures, statistical tables and a brief text discussion of each area;
- detailed statistical appendices of the data analyses, including a query-capable electronic database.

## II. Methodology

### The Longitudinal Analysis: Data and Methodology Issues

#### Overview

The databases which form the raw source of information utilized for the longitudinal analyses are collected by the nation's most acknowledged business reporting agencies.<sup>3</sup> The data is extremely timely (time lags are estimated at 0-9 months), highly detailed, devoid of most confidentiality restrictions and are regularly updated. The analyses are not based on computer models or historical projections—they are developed from financial and informational reports from 11 million individual firms at any given time. The Brandow Company's proprietary methodology creates links between the databases in a time series to track firms or any category of firms by location, industry, employment, sales and other criteria.

The overall coverage of the databases ranges from about 9.8 million private sector firms in 1996 to more 11.7 million firms in 2001. These totals are comparable to the numbers of firms covered by County Business Patterns. Data on approximately 17 million different firms was analyzed over the five-year time series.

Specific information on some firms is lacking in the database. While 100 percent data-field coverage is desirable for analysis purposes, the greatest value of the analysis rests in discerning patterns of activity from the large samples used to develop the analysis.

Unidentified data components in the databases include:

- unidentified employment: 3.7% of all business facilities
- unidentified sales: 19.6% of all business facilities  
5.2% of all non-branch business facilities \*\*
- both employment and sales unidentified: 3.1% of all business facilities
- both employment and sales unidentified: 1.9% of all non-branch business facilities \*\*

\*\* **note:** As discussed below, analysis of startup and sales-related measures exclude branch facilities in order to create clean data sets.

**Confidentiality Restrictions:** Although some data segments are withheld by individual reporting firms, the databases are not subject to most confidentiality restrictions such as those that commonly apply to government business databases. Detailed information on firms that occupy dominant roles in an area economy are included, as are sole proprietorships and industries of limited scale.

**Business Sales Reporting:** Determination of sales volume through longitudinal analysis may be distorted by centralized revenue reporting procedures of multi-site firms (but not

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<sup>3</sup> The analysis in this report is drawn from a variety of raw data sources, including Dun and Bradstreet, Info USA and government publications including County Business Patterns, none of which are responsible for either final statistics or conclusions drawn.

franchises). This common reporting method distorts sales figures for multi-site firms by indicating headquarters as the source of all revenue while none is attributed to branch facilities. The longitudinal analysis in this report minimizes this concern by basing sales and sales growth figures on single-site establishments, which comprise 86 percent of the firms in the databases. Some distortions can occur, however, as a result of faulty reporting and occasional erroneous classification of business facilities as single-site firms.

**Business Migration: “survivors” vs. “retained”:** Firms can survive and grow without being retained—simply by moving out of the jurisdiction under analysis. Filters were developed for each geographic area to assure that retention, sales and employment data reflect only firms that remain in the location under review. This methodology identifies sets of “retained survivors”. The screening procedure also revealed the percentage of out-migrant firms from each area, which is reflected in the final tabulation and text discussion of each area. Business migration rates tend to be low in rural areas, but more significant in metro and adjacent counties and Local Development Districts.

**Branch facility classification:** The methodology employed for the project sorts out branch from single-site and headquarters facilities. This delineation is particularly useful for two reasons. First, it permits the development of minimally distorted sales analyses of single-site firms—an issue in the Retention and Startup vitality analyses of sales, retained sales, sales change, and sales per employee. Second, in the business formation analysis and analysis of startup activity, survival and growth, this classification of business facilities allows the analyst to target true entrepreneurial activity rather than the development of facilities originated by established outside firms. One should note, however, that the elimination of headquarters and branch facilities from sales-related measures and of branch facilities from startup activity analysis may depress the vitality indices of areas with large and/or vigorous business populations of either or both.

**Data timeliness:** The data employed for this report used databases nominally covering the first quarter of 1996 to the first quarter of 2001. Reporting time lags indicate that the actual five years of activity analyzed was from the last half of 1995 to the last half of 2000.

**Data accuracy:** As is the case with any database this large, some errors are inevitable. The analyses are based on information supplied largely by business owners and representatives to private credit reporting services. That information is regularly checked through phone surveys, balance sheet reviews, and information from suppliers and creditors. Survival rates assume that the discontinuation of a facility's presence among the credit reporting databases reflects the discontinuation of operations of that facility. In addition, faulty sales or employment reports, or the misclassification of business facilities as single site rather than branch or headquarters, could distort the analysis, with significant impact on smaller jurisdictions.

### **Measures Used for the Analysis of Existing Business Establishments**

- **Overall business retention rates:** Establishments identified in each of the 117 geographic areas were tracked for five years through the end of 2000. Establishments still

operating after five years were identified as a percent of the original population. This created a set of “survivor” firms. Filters were then applied to exclude out-migrant surviving firms. The resulting *Retention Rate* was indexed based on the US norm.

- **Retained firm sales vitality:** Average sales of single site establishments for which sales data was reported in the first analysis year were tracked through the through the end of 2000. Filters were applied to exclude out-migrant surviving firms. Average sales of firms still operating after five years were compared to sales of the original “snapshot” to ascertain the change in average sales volume of retained firms. The resulting *Retained Firm Sales Vitality Rate* was indexed based on the US norm.

- **Retained firm job vitality:** Average employment of firms for which sales data was reported in the first analysis year was tracked through the end of 2000. Filters were applied to exclude out-migrant surviving firms. Average employment of firms still operating after five years was compared to average employment of the original “snapshot” to ascertain the change in average employment supported by retained firms. The resulting *Retained Firm Job Vitality Rate* was indexed based on the US norm.

- **Retained firm job replenishment:** Total employment of firms in the first analysis year was tracked through the end of 2000. Filters were applied to exclude out-migrant surviving firms. Total employment of firms still operating after five years was compared to total employment of the original “snapshot” to ascertain the net change in employment due to job expansion of retained firms and job losses due to failures among firms in each jurisdiction and industry. The resulting *Retained Firm Job Replenishment Rate* was indexed based on the US norm.

- **Retained firm sales per employee:** As a measure of industry performance, sales per employee rates for retained firms were developed for each industry and location and indexed based on the US norm. Filters were applied to exclude out-migrant surviving firms. This index was used as a measure of stability and positioning, rather than growth-related vitality.

## Measures of Entrepreneurial Activity, Survival and Growth

Analysis in this phase covers only business facility startups which are **not** branches of multi-site firms. Consequently, this analysis is focused on true entrepreneurial activity. Analyses were broken out at the specific industry level for all locations.

- **Startup activity (entrepreneurial business formation) rates:** Non-branch starts (defined as single-site firms or headquarters with one year or less of operation) were tracked through the end of 2000. Screens were developed to assure non-duplication of startup activity. Retained startups were summed and compared to the total current in January 2001 for the non-branch business population in each area for which an age could be identified (about 82% of the sample). The resulting percentage constituted the entrepreneurial business formation rate, which was indexed based on the US norm.

- **Startup retention rates:** Non-branch starts in the first analysis year were tracked for five years through the end of 2000. Firms still operating after five years were identified as

a percent of the original startup population. Filters were applied to exclude out-migrant surviving firms. The resulting *Startup Retention Rate* was indexed based on the US norm.

- **Retained startup sales vitality:** Average sales of non-branch starts for which sales data was reported in the first analysis year were tracked for five years through the end of 2000. Filters were applied to exclude out-migrant surviving firms. Average sales of firms still operating after five years were compared to sales of the original “snapshot” to ascertain the change in average sales volume of retained firms. The resulting *Retained Startup Sales Vitality Rate* was indexed based on the US norm.

- **Retained startup job vitality:** Average employment of non-branch starts in the first analysis year for which sales data was reported in the first analysis year were tracked for five years through the end of 2000. Filters were applied to exclude out-migrant surviving firms. Average employment of firms still operating after five years was compared to average employment of the original “snapshot” to ascertain the change in average employment supported by retained firms. The resulting *Retained Startup Job Vitality Rate* was indexed against other analyzed locations and industries based on the US norm.

- **Retained startup job replenishment:** Total employment of non-branch starts in the first analysis year was tracked through the end of 2000. Filters were applied to exclude out-migrant surviving firms. Total employment of firms still operating after five years were compared to total employment of the original “snapshot” to ascertain the net job change due to expansions among retained firms and losses due to failures among startups in each jurisdiction and industry. The resulting *Startup Job Replenishment Rate* was indexed based on the US norm. This rate was essentially used as a “check” against the Startup Job Vitality Rate.

- **Retained startup sales per employee:** As a measure of industry performance, sales per employee rates developed for retained firms were developed for each industry and location and indexed based on the US norm. Filters were applied to exclude out-migrant surviving firms.

### **Employment Class Analysis: Survival and Growth:**

Six employment-size classes were analyzed for each location:

- Class I: Firms beginning the analysis period with fewer than five employees, and ending the analysis period with at least ten employees;
- Class II: Firms beginning the analysis period with fewer than ten employees, and ending the analysis period with at least twenty-five employees;
- Class III: Firms beginning the analysis period with fewer than twenty-five employees, and ending the analysis period with at least fifty employees;
- Class IV: Firms beginning the analysis period with fewer than fifty employees, and ending the analysis period with at least one hundred employees;

- Class V: Firms beginning the analysis period with fewer than one hundred employees, and ending the analysis period with at least two hundred and fifty employees.

**Aggregate High Growth Rate.** An aggregate high growth rate was developed for each location to measure the total number of high growth firms. Since some firms qualified for multiple Classes, the aggregate number of high growth firms in some areas differs from the sum of the high growth firms in the individual class breakouts (I-V above).

**Employment class high growth rates:** Firms falling in each original category were then tracked for each location. An analysis of high growth firms was developed for each class in each area and indexed against the US rate. The resulting measures help indicate the economic base and strength of economic engines in each location.

### Using the Measures

The importance of various vitality measures varies widely depending on a number of considerations, including:

- The preferences of the reader, whose interests may be limited to one or two measures;
- The characteristics of the analyzed location, where the scale or condition of an industry may elevate the importance of certain measures, distort others and render some insignificant due to the number of firms analyzed for a given index;
- The importance of firms in a given area that may be excluded from the development of certain measures; for example, of branch facilities excluded from sales-related analyses
- The relative value of the selected time series to a given area; for example, this time series would favor areas that generally experienced higher retained firm vitality from a 1996 beginning point, rather than an area which experienced intensified vitality beginning after that mark.

Given these and other problems inherent in assessing the importance of any measures, four indices were selected as summary measures for the brief reports on each area covered by this report:

- retention (stability);
- entrepreneurial startup activity;
- concentrations of high growth firms (dynamism), and;
- current sale per employee index for firms retained from 1996 (positioning).

These measures were chosen not because they were deemed most applicable to each and every area, but because they integrated a series of indices that reflected stability, competitive positioning and dynamic economic activity.

Despite the dangers of potential oversimplification inherent in such summary scores, and distortions caused by varied industry mixes, these provide the best thumbnail sketch. The author’s view is that growth engines—high growth firms and entrepreneurship—are at the heart of this analysis. The retention rates, and corresponding measures of retained firm vitality (aside from high growth concentrations) are secondary measures of vitality for most areas. Because of the implications for future growth, we suggest that the startup activity rate is paramount—and it is precisely here that Appalachia falls short.

It would also be wise to point out that, especially in most LDD-sized jurisdictions, measures based on average sales or employment figures are subject to undue influences due to the vigor or weaknesses of large firms—or by distortions caused by faulty data reporting. It is for this reason that no single measure, especially at industry levels, should be considered in isolation. To some degree, the measures used in the report have “cross-checks” built in: the job vitality rate is balanced by the job replenishment rate, and; the sales vitality rate is balanced by the sales per employee rate. As readers of the area briefs will quickly see, retention rates may reflect stability or moribund performance; a look at the vitality factors is necessary to discern the difference.

### III. Overview of Results

#### Summary Index of the Districts

Since summary ratings always make assumptions about how to weight scores and which scores to include, they are always open to question. Despite their weaknesses, however, summary measures create a useful quick barometer of performance.

As readers review the summary measures for individual areas, the Quadrant Vitality Approach shown in Figure 1 provides a guide for interpreting the summary scores.

**Figure 1. Vitality Quadrant**

<p><u><i>Hi-Moderate Vitality Patterns</i></u></p> <p>High Startup Activity          Low-Moderate Hi-Growth Index          Moderate Sales Per Employee          In-Range Retention</p>	<p><u><i>High Vitality Patterns</i></u></p> <p>High Startup Activity          Strong Hi-Growth Index          High Sales Per Employee          In-Range Retention</p>
<p><u><i>Low Vitality Patterns</i></u></p> <p>Low Start Activity          Low-Moderate Hi-Growth Index          Low-Moderate Sales Per Employee          High Retention</p>	<p><u><i>Low-Moderate Vitality Patterns</i></u></p> <p>Low-Moderate Startup Activity          Strong Hi-Growth Index          Moderate Sales Per Employee          In-Range Retention</p>

Based on these summary scores, 20 LDDs could be classified. All other LDDs fall between these quadrants, most between the Low Vitality and Low-Moderate Vitality Patterns. Note that all three high vitality Districts are linked to sizeable MSAs:

- High Vitality Patterns: Sales per Employee >0.85, all other measures indexing over 0.95. Three districts (AL 1E, GA 2C, TN 11B).
- High-Moderate Vitality Patterns: Startup >0.95; High Growth >0.79<0.95; Sales per Employee >0.85; Retention >1.00. Two Districts (GA 2A, GA 2B).
- Low-Moderate Vitality Patterns: Startup >0.79<0.95; High Growth >0.95; SPE >0.85; Retention >1.00. Three Districts (KY 3B, SC 10A, TN 11C).
- Low Vitality Patterns: Startup <0.80; High Growth <0.80; SPE <0.80; Retention >1.00. Twelve Districts (KY 3I, MS 5D, MS 5E, NY 6B, PA 9C, PA 9D, TN 11D, VA 12B, VA 12C, VA 12E, VA 12F, WV 13H).

As Table 1 below shows, a summary index was also developed, averaging a range of vitality scores, including the overall retention index, the startup activity index, the aggregate high growth firm index, and the retained firm sales per employee index. The summary index attempts to provide an integrated measure of stability, new growth, economic engines and overall positioning of each area relative to national patterns. To develop summary scores, these four indices were summed and divided by four, yielding a final, unweighted rate which can be compared to the standard US index (US= 1.00). The summary rating includes vitality measures in which the Region is traditionally weak (i.e., entrepreneurial activity) but also its strengths (overall business establishment retention).<sup>4</sup>

Generally LDDs did not do well in the Summary Index. Only four LDDs—two of them in Georgia and linked to the booming Atlanta MSA—scored above the national average. A third, AL 1E, is in the heart of the Birmingham MSA, another growth center. And the last, in West Virginia, is buoyed by high retention and sales per employee rates, both of which are heavily influenced by industry mix—and which in this case obscure much weaker retention vitality among most industries, and entrepreneurial activity in general.

Twenty-one LDDs (37 percent) scored within 10 percent of the national score, as did the Region itself. But eleven LDDs (15 percent) showed a summary index more than 20 percent below the national average, and another 33 (46 percent) scored 11-20 percent below average. The lowest rated LDDs tended to be clustered: five in Virginia, two in Mississippi, two in Alabama. The median score of the seventy-one LDDs was 12 percent below the national average.

In each of the following tables, as well as in the indices included in the Section IV briefs on each LDD, negative indices are shown as zero values.

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<sup>4</sup> Naturally, readers who wish to assign greater or lesser weights to various indices will conclude with different final scores. The consultant's bias would be to downplay the value of the retention index and cap the value of any given measure.

T-1. Summary Vitality Index					
Area	Summary Index	AggHGIndex	Retention Index	SPEIndex	Start Rate Index
Appalachian Region	0.95	0.90	1.08	0.94	0.87
ARC Alabama 1A	0.81	0.56	0.94	0.88	0.84
ARC Alabama 1B	0.95	0.95	1.07	0.96	0.83
ARC Alabama 1C	0.95	0.77	0.99	0.99	1.04
ARC Alabama 1D	0.95	0.95	1.03	0.89	0.94
ARC Alabama 1E	1.05	1.02	1.00	1.11	1.08
ARC Alabama 1F	0.88	0.73	1.01	0.86	0.9
ARC Alabama 1H	0.75	0.55	0.70	0.80	0.96
ARC Alabama 1I	0.72	0.51	0.85	0.65	0.87
ARC Georgia 2A	0.96	0.91	1.02	0.88	1.03
ARC Georgia 2B	0.99	0.89	1.03	0.90	1.14
ARC Georgia 2C	1.05	1.11	1.00	0.97	1.13
ARC Georgia 2D	1.20	1.19	0.86	1.33	1.43
ARC Georgia 2E	0.89	0.80	1.10	0.81	0.85
ARC Georgia 2F	0.98	1.09	1.08	0.97	0.79
ARC Kentucky 3A	0.87	0.79	1.14	0.99	0.57
ARC Kentucky 3B	0.96	1.02	1.09	0.92	0.8
ARC Kentucky 3C	0.92	0.85	1.16	0.79	0.86
ARC Kentucky 3D	0.89	0.85	1.14	0.81	0.77
ARC Kentucky 3E	0.86	0.88	0.96	0.90	0.71
ARC Kentucky 3F	0.83	0.90	1.07	0.71	0.65
ARC Kentucky 3H	0.84	0.77	1.05	0.82	0.73
ARC Kentucky 3I	0.80	0.78	1.06	0.71	0.63
ARC Kentucky 3J	0.83	0.36	1.09	1.43	0.42
ARC Maryland 4A	0.99	0.96	1.12	1.08	0.78
ARC Mississippi 5A	0.83	0.68	0.99	0.78	0.88
ARC Mississippi 5B	0.87	0.83	1.02	0.88	0.74
ARC Mississippi 5C	0.88	0.81	1.13	0.73	0.86
ARC Mississippi 5D	0.68	0.28	1.10	0.57	0.76
ARC Mississippi 5E	0.70	0.32	1.04	0.72	0.7
ARC New York 6A	0.84	0.86	1.11	0.80	0.6
ARC New York 6B	0.82	0.79	1.07	0.70	0.72
ARC New York 6C	0.82	0.83	1.06	0.79	0.59
ARC North Carolina 7A	0.84	0.80	1.08	0.67	0.82
ARC North Carolina 7B	0.90	0.96	1.06	0.78	0.81
ARC North Carolina 7C	0.88	0.79	1.12	0.88	0.71
ARC North Carolina 7D	0.89	0.95	1.11	0.74	0.77
ARC North Carolina 7E	0.87	0.90	1.09	0.78	0.71
ARC North Carolina 7I	0.90	0.95	1.00	0.89	0.76
ARC Ohio 8A	0.85	0.85	1.12	0.73	0.7
ARC Ohio 8B	0.86	0.92	1.16	0.72	0.64
ARC Ohio 8C	0.97	1.10	1.19	0.98	0.62
ARC Pennsylvania 9A	0.90	1.01	1.19	0.79	0.61
ARC Pennsylvania 9B	0.90	0.97	1.20	0.82	0.62
ARC Pennsylvania 9C	0.72	0.47	1.14	0.79	0.49
ARC Pennsylvania 9D	0.83	0.74	1.13	0.79	0.64
ARC Pennsylvania 9F	0.88	0.87	1.17	0.91	0.55
ARC Pennsylvania 9G	0.83	0.78	1.16	0.81	0.57
ARC Pennsylvania 9H	0.96	0.99	1.12	1.07	0.65
ARC South Carolina 10A	0.96	0.96	1.03	0.90	0.94
ARC Tennessee 11A	0.89	0.90	1.15	0.76	0.74
ARC Tennessee 11B	0.98	0.99	1.05	0.91	0.97
ARC Tennessee 11C	0.85	0.84	1.11	0.76	0.69
ARC Tennessee 11D	0.83	0.72	1.10	0.75	0.73
ARC Tennessee 11E	0.91	0.90	1.04	0.77	0.94
ARC Virginia 12A	0.79	0.55	0.99	0.82	0.78
ARC Virginia 12B	0.74	0.75	0.99	0.59	0.61
ARC Virginia 12C	0.71	0.49	1.11	0.67	0.55
ARC Virginia 12D	0.97	0.97	1.09	1.06	0.77
ARC Virginia 12E	0.70	0.37	1.03	0.74	0.67
ARC Virginia 12F	0.72	0.28	1.26	0.61	0.72
ARC West Virginia 13A	0.83	0.80	1.10	0.67	0.76
ARC West Virginia 13B	0.89	0.84	1.06	0.89	0.75
ARC West Virginia 13C	0.99	0.99	1.03	1.09	0.85
ARC West Virginia 13D	0.85	0.87	1.12	0.72	0.7
ARC West Virginia 13E	0.86	0.80	1.10	0.80	0.75
ARC West Virginia 13F	0.90	1.10	1.01	0.77	0.71
ARC West Virginia 13G	0.86	1.02	1.12	0.68	0.61
ARC West Virginia 13H	0.78	0.65	1.15	0.73	0.6
ARC West Virginia 13I	0.83	0.92	0.98	0.56	0.84
ARC West Virginia 13J	0.94	1.19	1.12	0.78	0.68
ARC West Virginia 13K	1.04	1.10	1.13	1.23	0.68

**Retention:** As the results in Table 2 indicate, the region’s LDDs did best in the retention vitality analysis, primarily in the measure of raw retention. In the most vital areas, higher retention scores can indicate stability in the face of ongoing dynamism. But in many weak Districts, high retention rates are largely due to the tendency of low and modest growth areas to retain larger numbers of firms, probably because of lower competitive pressures from new market entries. This conclusion also aligns with the low levels of entrepreneurial vitality identified in the Region.

In the overall retention measure, the Region’s LDDs ranged from a low of a 35 percent five-year retention rate in AL 1H to a high of 63 percent in VA 12F. Fifty-two of the Region’s LDDs (73 percent) registered retention rates at or above the US average. Twenty-eight LDDs (39 percent) had scores at least 10 percent higher than the national rate.

**Out-migration:** A secondary factor accounting for the high retention rates is the low level of business out-migration (relocation) found in most LDDs. Over the five-year analysis period, forty-five LDDs (over 63 percent) showed business out-migration rates of less than 1 percent. While basic out-migration rates vary depending on the type and configuration of measured jurisdictions, the Region’s rates are low-to-average. The overall rate of migration outside the Region is extremely low. In Table 2, the out-migration rate is shown as a percent of the total business establishment population, rather than as an index relative to US performance (as are all other figures). Out-migration rates varied from 0 in MS 1D to a very high 4.33 percent in GA 2D ( a score which may have been distorted by zip code boundary changes over the course of the time series).

**Sales Vitality:** Twenty-nine of seventy-one LDDs (41 percent) showed a sales vitality index at or above the US average, leaving 59 percent below the US mark. It should be emphasized that the sales vitality index includes only single-site firms.<sup>5</sup> The sales index also measures only the change between surviving firms and original pool. Finally, index rates in areas that indicated lowered average sales over the five-year time series might reflect changes in industry mix rather than actual downturns among existing firms.

**Job Vitality and Replenishment:** By contrast, only nineteen LDDs—15 percent of the total—registered job vitality rates at or above the national average (as did the Region overall). Job vitality rates were 25 percent or more below the national average in 31 LDDs or 44 percent of the total group. The Region did better in the *Job Replenishment Rate*, which measures jobs lost to business failures against those gained by surviving firms: on this score, 39 LDDs or 55 percent did better than average. As is the case with the *Sales Vitality* measure, the *Job Vitality index* measures only the change between surviving firms and original pool.

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<sup>5</sup> As noted, the Region’s many branch facilities cannot be measured for sales, and headquarters sales reports are distorted by agglomeration of branch revenues.

**T-2. Retention Vitality Indices**

<b>Area</b>	<b>Out Migration **</b>	<b>Retention Index</b>	<b>Sales Index</b>	<b>Job Index</b>	<b>Replenishment</b>	<b>Sales/Employee</b>
Appalachian Region	0.10%	1.08	1.14	1.00	1.00	0.94
ARC Alabama 1A	0.65%	0.94	1.21	0.74	0.85	0.88
ARC Alabama 1B	0.98%	1.07	1.43	0.74	0.96	0.96
ARC Alabama 1C	0.63%	0.99	1.28	0.74	0.88	0.99
ARC Alabama 1D	0.65%	1.03	1.38	1.48	1.11	0.89
ARC Alabama 1E	0.66%	1.00	1.93	1.29	1.04	1.11
ARC Alabama 1F	0.54%	1.01	1.34	0.87	0.97	0.86
ARC Alabama 1H	2.69%	0.70	1.36	0.00	0.49	0.80
ARC Alabama 1I	1.09%	0.85	0.91	0.00	0.62	0.65
ARC Georgia 2A	1.12%	1.02	0.95	1.09	1.01	0.88
ARC Georgia 2B	1.05%	1.03	0.92	1.20	1.07	0.90
ARC Georgia 2C	1.16%	1.00	1.17	0.87	0.98	0.97
ARC Georgia 2D	4.33%	0.86	2.00	1.31	0.94	1.33
ARC Georgia 2E	1.94%	1.10	0.00	0.72	1.00	0.81
ARC Georgia 2F	1.06%	1.08	0.79	0.80	1.00	0.97
ARC Kentucky 3A	1.57%	1.14	0.77	0.60	0.95	0.99
ARC Kentucky 3B	0.78%	1.09	1.04	0.96	1.02	0.92
ARC Kentucky 3C	0.88%	1.16	1.18	0.87	1.12	0.79
ARC Kentucky 3D	0.98%	1.14	0.46	0.80	1.10	0.81
ARC Kentucky 3E	1.02%	0.96	1.28	1.20	0.95	0.90
ARC Kentucky 3F	0.74%	1.07	1.01	0.87	1.00	0.71
ARC Kentucky 3H	1.11%	1.05	0.63	0.96	1.02	0.82
ARC Kentucky 3I	1.41%	1.06	1.16	1.20	1.03	0.71
ARC Kentucky 3J	3.16%	1.09	2.00	0.72	1.01	1.43
ARC Maryland 4A	0.62%	1.12	2.32	0.80	1.05	1.08
ARC Mississippi 5A	0.96%	0.99	0.00	0.65	0.82	0.78
ARC Mississippi 5B	0.75%	1.02	1.27	0.92	0.92	0.88
ARC Mississippi 5C	0.58%	1.13	0.48	0.55	0.96	0.73
ARC Mississippi 5D	0.00%	1.10	0.00	0.00	0.76	0.57
ARC Mississippi 5E	1.18%	1.04	0.64	0.72	0.86	0.72
ARC New York 6A	0.56%	1.11	0.73	0.87	1.05	0.80
ARC New York 6B	0.47%	1.07	0.98	2.03	1.37	0.70
ARC New York 6C	0.71%	1.06	0.79	0.60	0.92	0.79
ARC North Carolina 7A	0.70%	1.08	1.11	0.48	0.92	0.67
ARC North Carolina 7B	0.55%	1.06	0.66	1.00	1.06	0.78
ARC North Carolina 7C	1.19%	1.12	1.07	0.80	1.03	0.88
ARC North Carolina 7D	0.66%	1.11	0.92	0.92	1.07	0.74
ARC North Carolina 7E	0.78%	1.09	0.87	0.86	1.01	0.78
ARC North Carolina 7I	1.14%	1.00	1.02	1.28	1.04	0.89
ARC Ohio 8A	1.36%	1.12	0.89	0.87	1.06	0.73
ARC Ohio 8B	1.00%	1.16	0.88	1.20	1.17	0.72
ARC Ohio 8C	0.75%	1.19	1.49	0.65	1.08	0.98
ARC Pennsylvania 9A	0.54%	1.19	1.02	0.80	1.07	0.79
ARC Pennsylvania 9B	0.94%	1.20	0.42	0.65	1.06	0.82
ARC Pennsylvania 9C	1.05%	1.14	0.72	1.07	1.05	0.79
ARC Pennsylvania 9D	0.57%	1.13	0.98	0.65	1.00	0.79
ARC Pennsylvania 9F	0.64%	1.17	0.57	0.65	1.03	0.91
ARC Pennsylvania 9G	0.61%	1.16	0.51	0.80	1.06	0.81
ARC Pennsylvania 9H	0.33%	1.12	1.65	1.00	1.11	1.07
ARC South Carolina 10A	0.56%	1.03	0.75	0.80	0.93	0.90
ARC Tennessee 11A	0.41%	1.15	0.79	0.87	1.04	0.76
ARC Tennessee 11B	0.39%	1.05	1.27	0.74	0.95	0.91
ARC Tennessee 11C	0.34%	1.11	0.72	0.51	0.89	0.76
ARC Tennessee 11D	0.84%	1.10	0.61	0.20	0.83	0.75
ARC Tennessee 11E	0.66%	1.04	0.61	1.03	1.02	0.77
ARC Virginia 12A	1.03%	0.99	0.78	1.07	0.96	0.82
ARC Virginia 12B	0.62%	0.99	0.00	1.09	0.95	0.59
ARC Virginia 12C	0.94%	1.11	0.91	0.44	0.90	0.67
ARC Virginia 12D	0.61%	1.09	2.44	0.75	0.99	1.06
ARC Virginia 12E	3.19%	1.03	0.42	0.60	0.90	0.74
ARC Virginia 12F	1.08%	1.26	0.81	1.11	1.28	0.61
ARC West Virginia 13A	1.25%	1.10	0.49	0.65	0.98	0.67
ARC West Virginia 13B	1.15%	1.06	1.45	0.74	1.02	0.89
ARC West Virginia 13C	1.15%	1.03	1.67	0.51	0.89	1.09
ARC West Virginia 13D	0.80%	1.12	1.25	0.96	1.08	0.72
ARC West Virginia 13E	0.97%	1.10	0.93	0.74	0.95	0.80
ARC West Virginia 13F	0.74%	1.01	0.98	0.55	0.82	0.77
ARC West Virginia 13G	0.68%	1.12	0.67	0.72	1.00	0.68
ARC West Virginia 13H	0.41%	1.15	0.32	1.09	1.18	0.73
ARC West Virginia 13I	1.12%	0.98	0.05	0.72	0.87	0.56
ARC West Virginia 13J	0.90%	1.12	1.47	1.00	1.08	0.78
ARC West Virginia 13K	1.41%	1.13	0.68	0.28	0.88	1.23

As a result, the *Sales Vitality* and *Job Vitality* measures should be viewed in the context of the *Sales per Employee* (SPE) rate for surviving firms. The SPE index gives the reader a sense of competitive position of an area by industry. The findings for the SPE Index is troubling indeed. Only eight LDDs (11 percent) rated above the national average. Another twelve (17 percent) were within 10 percent of the national trend. But the median SPE Index for ARC LDDs was only 80 percent of the national average. The Region overall scored 0.94.

***Entrepreneurial Vitality:*** As Table 3 shows only six LDDs had a startup rate higher than the US average. This double whammy—low sales per employee among retained firms, and low levels of entrepreneurial vitality—creates a problematic picture for the Region and most of its LDDs. It is not a picture which is dramatically changed by the relatively high levels of startup survival in most LDDs, 37 of which performed above the national average.

In addition to the low entrepreneurial activity (68 percent of LDDs had startup activity rates 20 percent or more below the national average), the performance of startups in the most LDDs is below average. Only 12 of 71 LDDs (17 percent) show a higher *Sales Vitality Index* than the US measure, and the Region overall registers 0.66. The startup job vitality picture is better, but still only 44 percent of all LDDs attain national standards, and the same percentage falls 20 percent or more below the norm. Only 15 percent of LDDs have a higher than average *Startup Job Replenishment Index*. And most telling, the Region's low overall retained firm sales per employee rate is matched by equally poor performance among startups in the LDDs; only five LDDs (7 percent) are above the national rate, while a whopping 55 (77 percent) fall more than 20 percent below average. The Regional score is 0.75, much lower than its overall retained firm SPE Index of 0.94.

### T-3. Startup Vitality Indices

Area	Start Rate Index	Retention Index	Sales Index	Job Index	Replenishment	Sales/Employee
Appalachian Region	0.87	1.02	0.66	1.13	0.98	0.75
ARC Alabama 1A	0.84	0.78	0.35	1.50	0.93	0.48
ARC Alabama 1B	0.83	0.92	2.15	1.93	1.27	1.96
ARC Alabama 1C	1.04	0.84	0.76	0.75	0.65	0.76
ARC Alabama 1D	0.94	0.92	0.34	1.25	0.91	0.47
ARC Alabama 1E	1.08	0.94	1.11	1.17	1.02	0.79
ARC Alabama 1F	0.90	0.91	1.12	0.12	0.56	0.96
ARC Alabama 1H	0.96	0.94	1.17	0.00	0.47	1.13
ARC Alabama 1I	0.87	1.19	4.92	2.70	2.30	0.36
ARC Georgia 2A	1.03	1.02	1.01	1.31	1.07	0.79
ARC Georgia 2B	1.14	0.95	0.46	1.75	1.30	0.59
ARC Georgia 2C	1.13	0.99	0.00	0.90	0.83	0.70
ARC Georgia 2D	1.43	0.79	0.36	0.75	0.69	0.87
ARC Georgia 2E	0.85	1.06	0.00	0.90	0.95	0.42
ARC Georgia 2F	0.79	1.00	0.10	0.00	0.34	0.88
ARC Kentucky 3A	0.57	0.82	1.00	1.50	0.78	0.75
ARC Kentucky 3B	0.80	0.99	0.43	0.75	0.87	0.64
ARC Kentucky 3C	0.86	1.03	0.00	1.25	1.15	0.61
ARC Kentucky 3D	0.77	1.07	0.44	1.50	1.12	0.82
ARC Kentucky 3E	0.71	0.67	0.16	0.30	0.45	0.71
ARC Kentucky 3F	0.65	0.96	0.03	0.90	0.86	0.55
ARC Kentucky 3H	0.73	1.02	0.97	0.75	0.95	0.75
ARC Kentucky 3I	0.63	0.63	0.00	1.00	0.64	0.21
ARC Kentucky 3J	0.42	1.71	0.55	1.13	1.74	0.39
ARC Maryland 4A	0.78	1.12	0.48	1.50	1.12	0.77
ARC Mississippi 5A	0.88	0.99	0.00	0.90	0.97	0.68
ARC Mississippi 5B	0.74	0.92	0.10	0.50	0.65	0.77
ARC Mississippi 5C	0.86	1.18	0.42	1.07	1.18	0.64
ARC Mississippi 5D	0.76	0.53	0.00	0.00	0.34	0.18
ARC Mississippi 5E	0.70	0.36	0.72	0.00	0.07	1.45
ARC New York 6A	0.60	1.15	0.08	0.50	0.85	0.72
ARC New York 6B	0.72	0.93	0.00	0.75	0.84	0.44
ARC New York 6C	0.59	1.13	0.50	1.25	1.10	0.90
ARC North Carolina 7A	0.82	1.15	1.52	0.30	0.90	1.21
ARC North Carolina 7B	0.81	1.00	0.31	0.67	0.79	0.43
ARC North Carolina 7C	0.71	0.99	0.00	0.00	0.36	0.67
ARC North Carolina 7D	0.77	1.16	0.58	0.90	1.18	0.63
ARC North Carolina 7E	0.71	1.06	0.03	1.27	1.07	0.88
ARC North Carolina 7I	0.76	0.97	0.65	1.00	0.96	1.07
ARC Ohio 8A	0.70	1.12	0.25	1.05	1.08	0.61
ARC Ohio 8B	0.64	1.23	0.20	0.75	0.96	0.84
ARC Ohio 8C	0.62	1.14	1.34	1.50	1.26	0.68
ARC Pennsylvania 9A	0.61	1.22	0.18	0.75	1.06	0.91
ARC Pennsylvania 9B	0.62	1.31	0.00	0.41	1.04	0.54
ARC Pennsylvania 9C	0.49	0.99	0.00	0.00	0.65	0.47
ARC Pennsylvania 9D	0.64	1.10	0.00	0.00	0.67	0.68
ARC Pennsylvania 9F	0.55	1.16	0.36	1.00	1.19	0.60
ARC Pennsylvania 9G	0.57	1.19	0.32	0.38	0.87	0.78
ARC Pennsylvania 9H	0.65	1.12	0.42	1.31	1.17	0.80
ARC South Carolina 10A	0.94	0.91	0.28	2.00	1.15	0.63
ARC Tennessee 11A	0.74	1.01	0.85	0.67	0.88	0.40
ARC Tennessee 11B	0.97	0.98	0.45	1.50	1.11	0.70
ARC Tennessee 11C	0.69	1.05	0.20	1.65	1.25	0.62
ARC Tennessee 11D	0.73	1.13	0.00	0.67	0.96	0.63
ARC Tennessee 11E	0.94	0.91	0.93	1.27	0.97	0.92
ARC Virginia 12A	0.78	1.11	0.00	0.30	0.79	0.37
ARC Virginia 12B	0.61	1.00	0.00	0.19	0.65	0.54
ARC Virginia 12C	0.55	1.08	4.62	1.29	1.15	0.63
ARC Virginia 12D	0.77	1.22	0.05	0.30	0.80	0.51
ARC Virginia 12E	0.67	0.97	0.00	0.00	0.41	0.54
ARC Virginia 12F	0.72	1.52	0.11	1.13	1.58	0.40
ARC West Virginia 13A	0.76	0.99	0.00	0.94	1.01	0.73
ARC West Virginia 13B	0.75	0.95	0.08	0.86	0.87	0.42
ARC West Virginia 13C	0.85	0.99	1.52	2.55	1.62	0.74
ARC West Virginia 13D	0.70	0.96	0.27	0.56	0.88	0.58
ARC West Virginia 13E	0.75	0.89	0.97	0.21	0.59	0.67
ARC West Virginia 13F	0.71	0.87	0.00	1.25	0.91	0.41
ARC West Virginia 13G	0.61	1.17	0.75	1.07	1.17	0.66
ARC West Virginia 13H	0.60	1.36	1.14	1.00	1.35	0.94
ARC West Virginia 13I	0.84	1.05	0.00	0.30	0.71	0.36
ARC West Virginia 13J	0.68	1.14	0.00	0.50	0.83	0.61
ARC West Virginia 13K	0.68	0.69	0.18	0.00	0.31	0.62

***High growth firm concentrations:*** The High Growth Indices measure relative concentrations of high growth firms in each area (see Section II, Methodology). While high growth firms constitute very small percentages of the overall count of business establishments in virtually any area, the long term impact they bring to an area—direct and indirect wages, stability, workforce development efforts and aura of confidence—extend beyond their raw numbers. Thus, as an indicator of area vitality, collections of high growth firms generally occupy an important place. Notably, the high growth measures include both branch and headquarters facilities, so LDDs hosting disproportionate concentrations of either or both are not at a disadvantage in this scoring.

As Table 4 indicates, most of the Region’s LDDs trail in this rating. The lag is of particular concern when coupled with lackluster entrepreneurial activity, since the two sets of measures comprise the best new vitality indicators employed by this analysis.

Only eleven of 71 LDDs (15 percent) evidenced aggregate high growth firm concentrations above the national average. About half of these were very small LDDs, showing fewer than 100 high growth firms. Forty-six LDDs (38 percent) registered high growth concentrations 20 percent or more below average. The Regional average was 0.90, or ten percent below the national average.

The best LDD performances were among the largest classes of firms examined; nineteen LDDs (27 percent) demonstrated higher than average concentrations for firms which began with fewer than fifty employees and ended the period with more than one hundred. Twenty-five percent showed higher than average rates for the largest class measured: firms that began the analysis period with fewer than one hundred employees and ended with more than two hundred fifty. However, the number of firms involved in these classes is small, just under twelve hundred Region-wide. Notably, 412 of these—35 percent of the Regional total—are branch facilities, a type of establishment on which much of the Region has traditionally relied. Nationally, just 30 percent of high growth firms in these classes are branch facilities.

The Region’s disproportionate reliance on branch facilities poses some long-term challenges and opportunities. In one sense branch facilities are bolstering the Region, as the development of large manufacturing facilities and branch facility component suppliers in North Carolina and, most recently, Mississippi suggest. However, these positive developments may not be fully mined for entrepreneurial spin-off efforts which could anchor local economic vitality in a way not traditionally experienced in most of Appalachia.

<b>Table-4. LDD High Growth Ratings by Establishment Employment Size</b>						
<b>Establishment Class Employment Size</b>	<b>Class I &lt;5&gt;10</b>	<b>Class II &lt;10&gt;25</b>	<b>Class III &lt;25&gt;50</b>	<b>Class IV &lt;50&gt;100</b>	<b>Class V &lt;100&gt;250</b>	<b>Aggregate</b>
Above US average	28%	17%	17%	27%	25%	15%
Lagged by 20%-plus	31%	49%	49%	54%	65%	39%

More telling is how many LDDs lagged. Twenty-eight percent of the LDDs did well in the smallest high growth employment class measured (began with fewer than five employees, ended with more than ten), registering rates above the national average, However, 31 percent of the LDDs performed at least twenty percent below the national rate, and in every other high growth class, with lagging LDDs far outnumbering those that held their own.

**T-5. High Growth Firm Index (class definitions in Section II)**

Area	Aggregate	Class I	Class II	Class III	Class IV	Class V
		<5>10 jobs	<10>25 jobs	<25>50 jobs	<50>100 jobs	<100>250 jobs
Appalachian Region	0.90	0.95	0.87	0.85	0.89	0.82
ARC Alabama 1A	0.56	0.55	0.43	0.58	0.70	0.77
ARC Alabama 1B	0.95	0.98	0.91	0.81	1.02	0.57
ARC Alabama 1C	0.77	0.79	0.74	0.85	0.61	0.11
ARC Alabama 1D	0.95	1.08	0.82	0.81	1.36	0.85
ARC Alabama 1E	1.02	1.12	0.93	0.98	1.00	0.99
ARC Alabama 1F	0.73	0.74	0.71	0.61	0.68	0.76
ARC Alabama 1H	0.55	0.64	0.13	0.00	0.00	0.00
ARC Alabama 1I	0.51	0.48	0.00	0.70	0.00	0.00
ARC Georgia 2A	0.91	0.84	1.11	0.96	0.97	1.28
ARC Georgia 2B	0.89	0.89	0.68	0.78	0.68	1.13
ARC Georgia 2C	1.11	1.19	0.68	0.79	0.91	1.51
ARC Georgia 2D	1.19	1.23	1.19	1.17	1.04	0.73
ARC Georgia 2E	0.80	0.85	0.79	0.60	0.41	0.68
ARC Georgia 2F	1.09	1.13	0.75	1.06	1.06	0.70
ARC Kentucky 3A	0.79	0.67	1.00	0.42	0.00	0.00
ARC Kentucky 3B	1.02	1.11	0.83	0.86	0.86	0.48
ARC Kentucky 3C	0.85	0.80	0.67	1.11	1.47	1.47
ARC Kentucky 3D	0.85	0.92	0.53	0.58	0.29	0.00
ARC Kentucky 3E	0.88	0.94	0.58	0.57	0.63	0.84
ARC Kentucky 3F	0.90	0.84	1.01	0.93	0.80	0.45
ARC Kentucky 3H	0.77	0.83	0.99	0.91	0.76	0.00
ARC Kentucky 3I	0.78	0.71	0.73	0.80	0.80	0.66
ARC Kentucky 3J	0.36	0.42	0.00	0.00	0.00	0.00
ARC Maryland 4A	0.96	1.05	1.07	0.80	1.13	0.25
ARC Mississippi 5A	0.68	0.71	0.88	0.46	0.46	0.00
ARC Mississippi 5B	0.83	0.86	0.80	0.56	0.90	1.24
ARC Mississippi 5C	0.81	0.90	0.84	0.59	0.24	0.79
ARC Mississippi 5D	0.28	0.00	0.00	0.00	3.10	0.00
ARC Mississippi 5E	0.32	0.19	0.50	0.86	0.00	0.00
ARC New York 6A	0.86	0.86	0.78	0.94	1.15	0.58
ARC New York 6B	0.79	0.82	0.80	0.77	0.90	1.35
ARC New York 6C	0.83	0.86	0.70	0.55	0.85	0.44
ARC North Carolina 7A	0.80	0.82	0.58	0.56	0.41	0.34
ARC North Carolina 7B	0.96	1.01	0.85	0.69	0.62	0.47
ARC North Carolina 7C	0.79	0.75	0.72	0.83	0.92	0.61
ARC North Carolina 7D	0.95	0.86	0.96	0.86	0.86	0.32
ARC North Carolina 7E	0.90	0.76	1.09	1.20	1.42	2.16
ARC North Carolina 7I	0.95	0.98	0.84	0.75	0.75	0.99
ARC Ohio 8A	0.85	0.85	0.87	0.95	1.11	1.11
ARC Ohio 8B	0.92	0.99	0.88	0.74	1.04	0.87
ARC Ohio 8C	1.10	1.19	0.93	0.95	0.91	0.58
ARC Pennsylvania 9A	1.01	1.07	0.96	0.81	0.90	0.72
ARC Pennsylvania 9B	0.97	0.95	0.77	0.98	1.06	0.70
ARC Pennsylvania 9C	0.47	0.49	0.57	0.42	0.29	0.00
ARC Pennsylvania 9D	0.74	0.76	0.66	0.71	0.70	0.58
ARC Pennsylvania 9F	0.87	0.92	0.88	0.89	0.82	0.74
ARC Pennsylvania 9G	0.78	0.85	0.76	0.66	0.48	0.44
ARC Pennsylvania 9H	0.99	1.04	1.05	0.95	1.19	1.26
ARC South Carolina 10A	0.96	1.03	0.94	1.04	1.00	1.04
ARC Tennessee 11A	0.90	0.93	0.78	0.79	0.51	0.48
ARC Tennessee 11B	0.99	1.07	0.92	0.93	1.12	1.05
ARC Tennessee 11C	0.84	0.90	0.83	0.82	0.80	0.84
ARC Tennessee 11D	0.72	0.78	0.44	0.62	0.42	0.00
ARC Tennessee 11E	0.90	0.96	0.84	0.96	0.91	1.08
ARC Virginia 12A	0.55	0.66	0.92	0.27	0.00	0.00
ARC Virginia 12B	0.75	0.88	0.92	1.26	0.91	2.26
ARC Virginia 12C	0.49	0.47	0.41	0.31	0.42	0.70
ARC Virginia 12D	0.97	1.12	0.79	0.91	0.75	1.50
ARC Virginia 12E	0.37	0.31	0.26	0.14	0.29	0.00
ARC Virginia 12F	0.28	0.17	0.30	1.00	0.00	0.00
ARC West Virginia 13A	0.80	0.92	0.75	0.81	0.85	0.00
ARC West Virginia 13B	0.84	1.08	0.90	0.45	0.71	1.17
ARC West Virginia 13C	0.99	1.04	1.16	1.23	1.19	0.83
ARC West Virginia 13D	0.87	0.90	1.04	0.62	0.88	0.58
ARC West Virginia 13E	0.80	0.82	0.62	0.66	0.91	0.43
ARC West Virginia 13F	1.10	1.13	1.18	1.38	0.84	0.50
ARC West Virginia 13G	1.02	1.05	0.63	0.94	0.37	0.00
ARC West Virginia 13H	0.65	0.56	0.82	1.17	0.67	1.12
ARC West Virginia 13I	0.92	0.95	0.91	0.56	0.38	0.00
ARC West Virginia 13J	1.19	1.29	1.55	1.31	1.22	1.16
ARC West Virginia 13K	1.10	1.14	1.24	1.62	1.60	1.32

## **The Appalachian Region**

Appalachian businesses totaled 692,876 establishments in 1996, and by the beginning of 2001 totaled 850,427—an increase of 22.7 percent.<sup>6</sup> During the same period, Regional jobs increased from about 7.9 million to 9.8 million. Over the five-years there were 97,717 new entrepreneurial firms created in the Region that were still operating at the beginning of 2001. These startups accounted for 17 percent of firms for which ages could be identified. By contrast, the US had more than 1.5 million business starts US, accounting for 19.5 percent of firms for which ages could be identified.

At the end of 2000, Regional manufacturing firms comprised 5.7 percent of the business establishment population, but accounted for 20.9 percent of the jobs. Nationally, the manufacturing segment comprised about the same percentage of firms (5.6 percent) but a much lower proportion of total employees (16.1 percent). Business services, the most well-populated technology segment, accounted for 5.3 percent of Regional business establishments and 4.3 percent of the Region's jobs, substantially below the US level of 7.4 percent of firms and 6.4 percent of jobs. Much of this gap can be attributed to lower than average entrepreneurial vitality among technology firms, as well as lower entrepreneurial vitality in the general business population.

Key findings from the analysis of the Region as a whole indicate that Appalachia has done well in retaining existing firms, but remains caught in a cycle of low levels of entrepreneurship, low growth among existing firms, and a continued over-reliance on branch facilities. Yet, even the Region's high retention rate presents cause for concern as these high retention rates are often found in non-value added retail and services in low-growth areas.<sup>7</sup> While vitality among retained firms in the Region is quite good in aggregate, overall positioning of retained firms, as indicated by the sales per employee index, is fully 6 percent below average. Indeed, if the retention rate component were to be excluded from the summary index depicted in Table 1, Appalachia's summary score would be ten percent below the national benchmark—not the five percent shown in the tables.

### ***Analysis of Regional Business Retention and Vitality***

Given the potential two-sided interpretation of high retention rates, it would be misleading to assess the Region's economic conditions based solely on its stellar retention performance. On the positive side, 72 of 73 major industries were at or above the US industry retention average, with only coal mining having a five-year retention rate below the US industry average. Sixteen industries, including printing, chemicals and engineering, had retention rates more than 10 percent above average. Existing business services establishments, which rated 8 percent above national retention rates, probably benefit from the scarcity of such business services in many rural ARC districts. However, only 19 major industries show job vitality patterns among surviving firms that are higher than US trends, and only a handful of these tend to be in locally controlled industries. Seven are manufacturing industries, not in any discernable grouping, but include

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<sup>6</sup> Due to gaps in the databases at various points in time, this does not imply a corresponding net growth in the number of Regional firms over the same time period.

<sup>7</sup> The retention index is most valuable in conjunction with high growth and good positioning.

important and often cyclical, regional industries such as primary metals and paper goods production. And only a dozen industries have sales per employee rates among surviving firms that top their peers across the US. Thus, on balance most sectors are relatively weakly positioned compared to their national peer industries.

Nonetheless, as Table 6 makes clear, many firms in the Region have done relatively well on average since 1996, based on sales and employment barometers. Sales vitality for those firms that have survived over the five-year period outpaced US norms considerably. Job growth and expansions among retained firms seem to have kept pace with US trends. However, retained firm sales vitality has lagged in some critical industries, including technology industries (business services, communications, health care) and manufacturing industries that are core to various districts (paper, instruments, printing, electronics, apparel, textiles, food products, oil products). One major concern is that sales per employee rates are higher than average in only a handful manufacturing industries—wood products, leather and fabricated machinery—suggesting lagging positioning in other sectors.

<b>T-6. Regional Retention Vitality Indices: Top 25 Detailed Industries</b>						
<b>SIC</b>	<b>Industry</b>	<b>Retained Firms</b>	<b>US = 1.00</b>			
			<b>Retention Index</b>	<b>Sales Index</b>	<b>Job Index</b>	<b>SPE Index</b>
2273	Carpets and rugs	431	1.06	2.35	0.15	1.06
2411	Logging	859	0.96	0.86	1.00	0.79
2421	Sawmills and planing mills, general	1,082	1.01	0.64	2.95	0.82
2426	Hardwood dimension and flooring mills	310	1.06	0.87	0.96	0.97
2431	Millwork	534	1.03	1.58	1.16	1.13
2434	Wood kitchen cabinets	436	1.06	0.26	1.31	0.96
2448	Wood pallets and skids	352	1.12	1.26	0.47	1.17
2499	Wood products, nec	379	1.10	0.52	1.48	0.82
2511	Wood household furniture	487	0.99	0.76	0.55	0.96
2512	Upholstered household furniture	335	1.07	0.56	0.79	0.88
2711	Newspapers	1,110	1.09	0.42	0.29	0.98
2721	Periodicals	350	1.05	1.27	0.73	0.87
2741	Miscellaneous publishing	313	1.02	0.76	0.97	0.84
2752	Commercial printing, lithographic	2,436	1.11	0.84	0.80	0.92
2759	Commercial printing, nec	1,148	1.16	0.66	0.73	0.72
3089	Plastics products, nec	712	1.06	0.92	0.96	0.99
3272	Concrete products, nec	378	1.04	1.08	0.40	0.91
3273	Ready-mixed concrete	567	1.08	0.87	0.62	0.93
3441	Fabricated structural metal	570	1.11	0.52	0.18	0.94
3444	Sheet metalwork	324	0.96	0.59	0.29	0.93
3544	Special dies, tools, jigs, and fixtures	569	1.12	0.72	0.56	0.78
3599	Industrial machinery, nec	2,446	1.08	0.65	0.68	0.90
3949	Sporting and athletic goods, nec	315	1.01	0.02	0.75	0.76
3993	Signs and advertising specialties	1,029	1.12	0.90	1.00	1.06
3999	Manufacturing industries, nec	305	1.13	1.26	1.63	0.69

As Table 6 indicates, twelve manufacturing industries in the region each had at least five hundred retained firms from the 1996 pool traced through the beginning of 2001. These accounted for 13,062 firms, about 30 percent of the total population of surviving manufacturing establishments. Among the largest of these industries, the retention rates were higher than average in all but one (logging). Conversely, sales and job changes

among surviving firms trailed US averages in most of these large industries. Millwork was a standout, reflecting higher than average vitality ratings in every category, including sales per employee. Plastics molding and sawmills were the other leading performers. Among slightly smaller industries (300-499 employment-size establishments) wood cabinets and other value-added wood products were among the high performers. Vitality in other traditional Regional industries—fabricated metals, wood furniture and even tool and die—was mixed.

### ***Regional Technology Retention and Vitality***

As depicted in Table 7, Regional technology industries lag quite seriously in most retained firm vitality measures. Taken alone, technology retention rates are themselves quite high, with a few exceptions in only a handful of smaller industries. However, the pattern is largely reversed in both sales and job vitality categories, where Regional performance falls significantly behind US patterns in most industries, particularly those with the largest numbers of establishments. In addition, larger technology industries also exhibit lower than average sales per employee rates among retained firms, suggesting a lagging competitive position.

<b>T-7. Selected Appalachian Technology Retention Indices</b>						
SIC	Industry	Retained Firms	US = 1.00			
			Retention	Sales Index	Job Index	SPE Index
3571	Electronic computers	82	1.06	0.22	1.30	0.75
3572	Computer storage devices	7	2.06	7.46	1.73	1.18
3575	Computer terminals	19	1.10	0.68	0.00	1.26
3577	Computer peripheral equipment, nec	83	1.09	3.00	2.12	1.08
4822	Telegraph/ other communications	68	0.86	0.00	0.00	0.34
4899	Communication services, nec	85	1.12	0.81	1.50	0.69
7371	Custom computer programming	1,211	1.05	0.70	0.98	0.90
7372	Prepackaged software	569	1.08	0.35	0.83	1.00
7373	Computer integrated systems design	498	1.11	3.34	0.42	1.72
7374	Data processing and preparation	481	1.10	0.61	0.65	0.93
7375	Information retrieval services	46	0.96	0.00	0.00	1.13
7376	Computer facilities management	17	1.11	2.01	0.38	0.87
7377	Computer rental and leasing	39	0.81	0.59	0.00	1.00
7378	Computer maintenance & repair	394	1.06	0.46	4.00	0.93
7379	Computer related services, nec	554	1.01	0.67	0.63	0.76

On the positive side of the Region’s performance, fewer than 400 firms of all sizes migrated outside the region over the five years under review—about on par with the three-year US average. In general, firm out-migration is not an overriding concern for the region. In addition, because of differences in migration patterns on larger geographic scale, the Regional rates should not be used as a barometer for more localized relocation data. That is to say, LDD migration levels may be higher than the regional overall, yet still in line with corresponding jurisdictions, since local and small-scale regional migration activity is invariably higher than among larger geographical entities; for

example, interstate migration is always less intensive than migration within MSAs or between county jurisdictions.

### ***Regional Startup Activity and Vitality***

The Region's relatively good retention index should be viewed in the light of entrepreneurial vitality, including measures of the experience of startup firms and overall startup activity. Both present problems for the region.

First the good news: Startups in the region tended to survive at slightly higher rate than the US average over the five-year period. Surviving startups also tended to add jobs at a very good clip. But the loss of jobs by failed startups outpaced US norms, and sales vitality was low among retained firms, suggesting a tendency among startups to grow jobs without being able to sustain them. Sales per employee among surviving startups is low. And, perhaps most importantly, Appalachian startup activity rates—the measure of raw entrepreneurial activity—are 13 percent below national levels.

Startup activity rates are above average in only 13 of 73 major industries. The leaders include several manufacturing industries critical to Regional vitality: primary metals, fabricated metal transportation equipment, plastics and furniture. Startups in the technology-oriented instrument group are just under US norms. Business Services startups (including computer-related) run 12 percent below US trends, while communications starts—the national leader—are 27 percent below the US rate. Business Services startups also reflect a low survival rate, although communications startup survival is 14 percent higher than average.

Non-branch sales vitality patterns among surviving startups appear quite positive in core manufacturing industries, including primary metals, industrial machinery (including tool and die), plastics, wood products and furniture and motor freight transport (trucking). Local and regional rail services also did well. On the down side, electronics, instruments, fabricated metals, foods, professional services, business services and communications startups all showed sales vitality problems among retained firms. Poor entrepreneurial performance in Appalachia is underscored by low sales vitality among startups and low aggregate sales per employee for retained startups. Notably, however, sales per employee rates were high among wood and furniture, primary and fabricated metals.

<b>T-8. Selected Appalachian Technology Startup Rate</b>				
SIC	Industry	Starts	Start Rate	Index (US = 1.00)
3571	Electronic computers	26	28.9%	0.88
3572	Computer storage devices	2	11.1%	0.32
3575	Computer terminals	10	37.0%	0.99
3577	Computer peripheral equipment, nec	26	33.3%	1.21
4822	Telegraph/ other communications	7	26.9%	0.88
4899	Communication services, nec	47	43.1%	1.01
7371	Custom computer programming	558	32.5%	0.88
7372	Prepackaged software	110	21.2%	0.95
7373	Computer integrated systems design	220	29.0%	0.99
7374	Data processing and preparation	325	35.0%	0.86
7375	Information retrieval services	61	45.9%	1.02
7376	Computer facilities management	7	35.0%	1.45
7377	Computer rental and leasing	11	52.4%	2.38
7378	Computer maintenance & repair	219	35.5%	0.89
7379	Computer related services, nec	531	27.4%	0.94

In selected technology industries depicted in Table 8, Appalachia is falling further behind. While the startup rates for these selected technology industries exhibit higher levels of entrepreneurial vitality than in most other Regional industries, the Region's overall startup rate is 13 percent behind the US average. But of the fifteen technology-related industries examined in Table 8, only five indicate higher than average startup rates. While many of the others, including relatively large manufacturing and computer service industries, do better than the regional average, they still trail US patterns, leaving the Region with lower than average performance in both entrepreneurial and key retention indices.

<b>T-8. Regional Startup Rates: Manufacturers &gt;50 Startups</b>				
<b>SIC</b>	<b>Industry</b>	<b>Startups</b>	<b>Start Rate</b>	<b>Start Rate Index US = 1.00</b>
2395	Pleating and stitching	111	30.41%	1.06
2411	Logging	107	9.18%	0.93
2421	Sawmills and planing mills	66	7.71%	0.71
2431	Millwork	93	18.24%	1.03
2434	Wood kitchen cabinets	65	14.64%	1.25
2448	Wood pallets and skids	63	16.15%	0.95
2452	Prefabricated wood buildings	52	21.67%	0.98
2499	Wood products, nec	76	15.20%	0.87
2511	Wood household furniture	73	18.48%	1.04
2512	Upholstered household furniture	53	21.03%	1.06
2711	Newspapers	94	13.26%	0.86
2721	Periodicals	61	20.00%	0.86
2731	Book publishing	75	21.49%	0.90
2741	Miscellaneous publishing	88	26.04%	0.88
2752	Commercial printing, lithographic	264	13.17%	0.95
2759	Commercial printing, nec	253	20.64%	0.88
3089	Plastics products, nec	151	24.84%	1.18
3272	Concrete products, nec	59	17.61%	1.05
3312	Blast furnaces and steel mills	52	21.14%	1.02
3441	Fabricated structural metal	116	19.93%	1.05
3444	Sheet metalwork	76	24.13%	1.36
3544	Special dies, tools, jigs, and fixtures	67	12.25%	0.94
3599	Industrial machinery, nec	367	14.63%	0.98
3714	Motor vehicle parts and accessories	63	29.72%	1.34
3949	Sporting and athletic goods, nec	59	17.30%	0.75
3993	Signs and advertising specialties	275	21.38%	0.97
3999	Manufacturing industries, nec	109	25.17%	0.87

In the larger picture, startup rates showed strength in 27 manufacturing industries that had at least fifty startups on a Region-wide. Startup activity is impressively high in several value-added wood industries, including the high-performing millwork, wood cabinets and wood furniture. The strong northern plastics industry outperforms the national startup activity rate by 18 percent. And a variety of heavy industries, including steel mills, fabricated structural metal, sheet metal and auto components also outperform the US average. In spite of very large existing concentrations, tool and die startup activity is only 6 percent under the US pattern.

### ***High Growth Concentrations***

While the Region falls 10 percent behind US patterns in concentrations of high growth firms by employment measures, performance is better than anticipated. Among the smallest class measured (firms which began with fewer than five employees and grew to more than ten over five years), regional performance trailed national patterns by only 5 percent. Among larger firms, regional ratings lagged US patterns by 11 percent to 18

percent. Significant portions of regional high growth firms appear to be concentrated in a handful of high vitality districts, leaving most at much lower ratings levels.

## **Policy Implications**

It is always risky to suggest policy direction based on a single analysis which cannot reflect the totality of the economic and social conditions in Appalachia or any other region or subdivision. Moreover, the policy implications of this analysis will necessarily differ in direction, emphasis and value among the Districts. With those caveats, the broad results of the vitality analyses developed in this report suggest a number of general issues for current and future policy consideration:

### **1. Retention programs and resources should be targeted.**

It is clear that the Region is already a retention rate leader in virtually every major industry. Yet high retention rates have done little to spark new growth in many Districts. The lesson learned from the analysis is that retention alone does not constitute a basis for robust growth. In the case of most areas, retention reflects more economic maintenance than vitality. A focus on specific assessment of needs and service delivery to core local industry clusters, high vitality industries, and high growth firms would pay off much more handsomely than broad-ranging retention outreach programs.

### **2. Focus on the Regional lag in entrepreneurial activity.**

The lag in entrepreneurial activity is clearly Appalachia's weakest link, one exposed with chilling clarity by this analysis. This problem is truly region-wide and across all types of industries, core and otherwise. While some Districts have traditionally left entrepreneurial issues to Small Business Development Corporations and SCORE chapters, others have become heavily engaged in sparking and sustaining entrepreneurial startups. It would be important to review these findings within the context of the existing entrepreneurial infrastructure and policies within each of the districts. The results of the analyses suggest that these efforts should likely be intensified and replicated, and that added resources may need to be allocated to support them.

### **3. Branch facilities create entrepreneurial opportunities which should be exploited.**

While many supporters of the Region are aware of the mixed blessings of branch facilities, and of Appalachia's traditional and double-edged reliance on these large absentee-owned facilities, the reality is that some of the Region's booming Districts owe much of their good fortune to the recent development of large industrial (and to a lesser extent, service sector) branches. Some of these areas have developed full-blown recruitment programs to attract additional branch facilities in supplier capacities for core branch establishments. However, the more complex task of identifying and nurturing entrepreneurial startup opportunities that could be realized as a result of these same core branch facilities has received less attention. Given the clear need for home-grown

entrepreneurial activity throughout the Region such opportunities shouldn't go unexploited.

**4. Appalachian technology industries are far from an oxymoron¾ but need targeted assistance for the Region to catch up.**

The region hosts many hundreds of strong technology firms and vital industries across hardware, software and telecommunications sectors. Other technology industries lag behind national vitality indices. Startup activity rates in almost all —strong and weak, plentiful and scarce—are uncomfortably low. Simply put, if the Region is to catch up, more needs to be done to help existing firms advance, and new ones to start up and flourish.

**5. LDDs and metro areas are irrevocably linked.**

For better or worse, LDD economies appear to be increasingly linked to nearby MSAs. In most cases, MSAs are outperforming the District's linked to them, suggesting that Districts should increasingly take their cues for attraction and startup efforts from their MSA neighbors. In particular, strong levels of MSA startup and high growth concentrations provide opportunities, now and later, for long-term District development efforts.

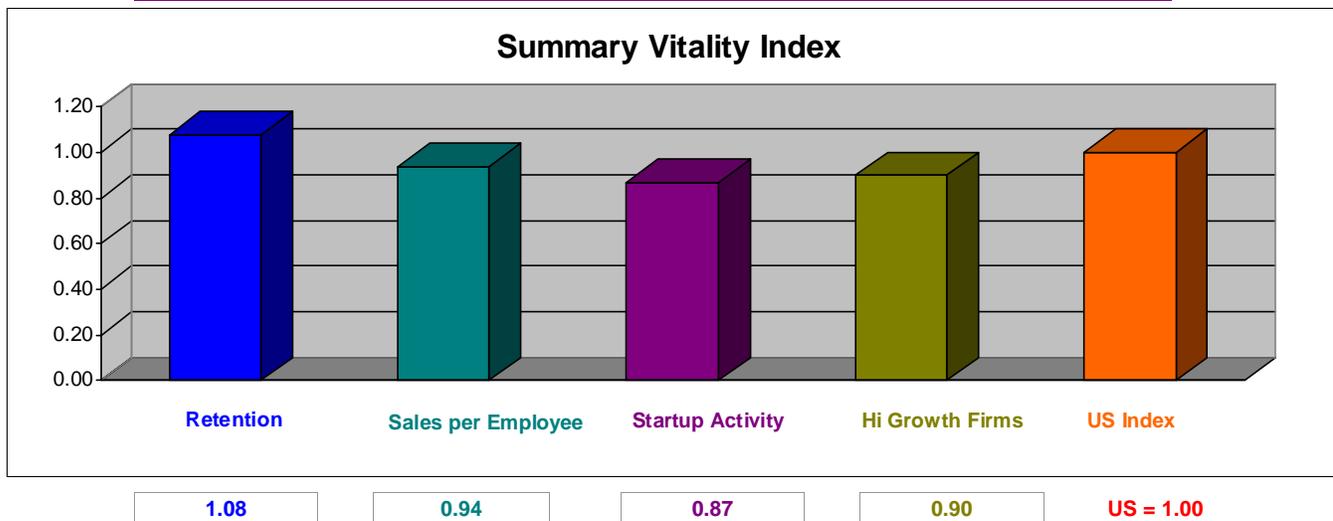
**6. Business migration is not a major issue.**

While new branch attraction is a larger issue not analyzed in this report, actual business out-migration from ARC Districts is rarely among the top concerns revealed by the analysis. In general, the Region and its Districts indicate business out-migration at or below the average for areas of their type. In general, the same is true to MSAs linked to the Region. While individual relocations may cause major problems, there is no wholesale exodus that demands special attention.

# Appalachian Region

2001 firms analyzed:

850,427



While the Region includes vastly disparate economies, the general economic character of many local areas is mirrored in regional data. Overall high retention rates apparent in the summary figure do not necessarily reflect solid economic performance, since many low growth areas retain stable but less than dynamic firms in large numbers. In fact, there is often an inverse dynamic between high levels of retention and low entrepreneurial vitality, especially when coupled with low growth patterns among surviving firms. Such is the case in the Region, although the problem is not compounded by low startup survival rates as it is in low-growth districts. Overall sales per employee figures are dependent not only on productivity but (like other summary measures) are linked to specific industry mix. And while the summary sales per employee measure in the Region is reasonably close to the US norm, healthier and more vital manufacturing concentrations might have contributed to even better performance. Concentrations of high growth firms run about 10% below the national level, and much lower in many of the Region's districts. Bottom line: The Region continues to trail US averages in each overall vitality measures except retention, which as a stand-alone category represents an ambiguous achievement.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	692,876	377,528		
Retained Firms		377,165	54%	1.08
Sales	494,617	779,287	57.6%	1.14
Avg Jobs	12	17	42%	1.00
Replenishment	7,935,795	6,135,401	77%	1.00
Sales/Employee	82,436	97,411	18%	0.94

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Given the potential two-sided interpretations of high retention rates, it is misleading to assess the Region's stellar retention performance by itself; of 73 major industries, only one (coal mining) reflects a five-year retention rate below the US industry average. Sixteen industries, including printing, chemicals and engineering, reflect retention rates at least 15% above average. (Existing business services firms probably benefit from the scarcity in many rural ARC districts.) However, the retention analysis is conditioned by vitality patterns among survivors, and here the evidence is more mixed. Only 19 major industries show job vitality patterns among surviving firms better than US trends, and only a handful of these tend to be in locally controlled industries. Seven are manufacturing industries, not in any discernable grouping but including important (and often cyclical) traditional regional industries such as primary metals and paper goods production. And only a dozen industries have sales per employee rates among surviving firms which top their peers across the US, indicating relatively weak regional positioning among many industries.

Nonetheless, it seems clear that longer term firms in the Region are, on average, have done relatively well since 1996. Sales vitality between 1996 firms and those which have survived from the beginning of that measurement period outpace US norms considerably. Job growth and expansions among survivors seem to have kept pace with US trends. However, survivor sales vitality has lagged in some critical industries, including both technology industries (business services, communications, health care) and manufacturing industries core to various Regional districts (paper, instruments, printing, electronics, apparel, textiles, food products, oil products). One concern: sales per employee rates are higher than average in only a handful manufacturing industries – wood products, leather and fabricated machinery, suggesting lagging positioning among others. In addition, the sales per employee rate in wood products was likely elevated by increased hardwood prices which disproportionately benefited portions of Appalachia.

Notably, fewer than 400 firms of all sizes -- less than 0.05% -- migrated outside the region over the five years under review, about on par with the three-year US interstate average. In general, firm out-migration is not an overriding concern for the region. In addition, because of differences in migration patterns on larger geographic configurations, the Regional rates should not be used as a barometer for more localized relocation data.

## Appalachian Region

2001 firms analyzed:

850,427

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	20,937	10,161		
Retained Firms		10,042	48%	1.02
Sales	571,157	1,032,959	80.9%	0.66
Avg Jobs	8	14	75%	1.13
Replenishment	167,662	136,228	81%	0.98
Sales/Employee	95,193	103,296	9%	0.75

### Startup Activity

96-01 Starts	97,717
Start Rate	17.0%
US Index	0.87

The Region's relatively good retention index should be viewed in the light of entrepreneurial vitality, including measures of both the experience of startup firms and overall startup activity. Both present problems for the region.

First the good news: Startups in the region tended to survive at slightly higher levels than the US average over the five-year period. Surviving startups also tended to add jobs at a very good clip. But the loss of jobs by failed startups outpaced US norms, and sales growth was low among survivors, suggesting a tendency among startups to grow jobs without the financial support needed to sustain them. Sales per employee among surviving startups is low. And, perhaps most importantly, startup activity rates – the measure of raw entrepreneurial activity – are 13% below average for the region; if a handful of Regional entrepreneurial centers were to be filtered out, this figure would drop dramatically.

Startup activity rates are above average in only 13 or 73 major industries, but these include several manufacturing industries critical to Regional vitality: primary metal, fabricated metal transportation equipment, plastics and furniture. Startups in the technology oriented instrument group are just under US norms. Business Services startups (including computer-related) run 12% below US trends, while communications starts – the national leader – are 27% below par. Business Services startups also reflect a low survival rate, although communications startup survival is 14% higher than average.

Sales vitality patterns among surviving startups appear quite positive in core manufacturing industries, including primary metals, commercial machinery (including tool and die), plastics, wood products and furniture and motor freight transport (trucking). Local and regional rail services also did well. On the down side, electronics, instruments, fabricated metals, foods, professional services, business services and communications startups all showed sales vitality problems among survivors. This seems to pinpoint a key problem of entrepreneurial vitality throughout the region, also reflected in the low aggregate sales per employee for retained startups. However, sales per employee rates were high among wood and furniture, primary and fabricated metals.

### High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	645,212	11,844	1.84%	0.90
Class I : < 5 Jobs>10 Jobs	432,840	9,399	2.17%	0.95
Class II : <10 Jobs>25 Jobs	539,901	3,398	0.63%	0.87
Class III : <25 Jobs>50 Jobs	605,162	2,037	0.34%	0.85
Class IV : <50 Jobs>100 Jobs	631,107	1,069	0.1700%	0.89
Class V : <100 Jobs> 250 Jobs	645,212	295	0.0500%	0.82

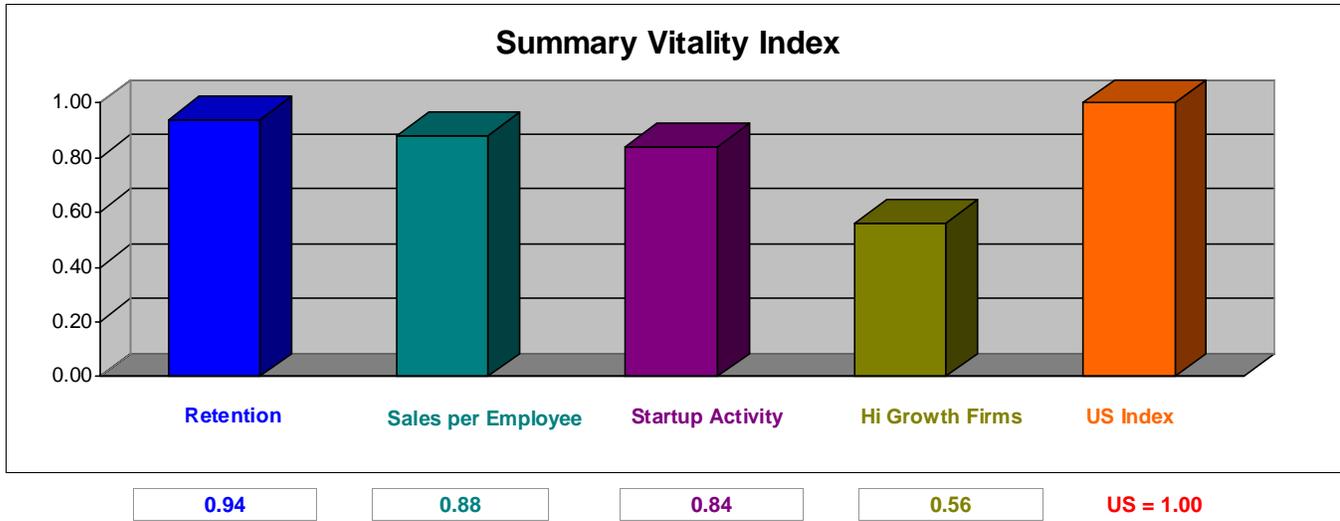
While the Region falls 10% behind US patterns in concentrations of high growth firms by employment measures, performance is better than anticipated. Among the smallest class measured (firms which began with fewer than five employees and grew to more than ten over five years), regional performance trailed national patterns by only 5%. Among larger firms, regional ratings lagged US patterns by 11%-18%. Significant portions of regional high growth firms appear to be concentrated in a handful of high vitality districts, leaving most at much lower ratings levels.

It is important to bear in mind that these high growth firms represent only a small fraction of area vitality, accounting for less than 2% of all firms.

# ARC Alabama 1A

2001 firms analyzed:

7,993



The Northwest AL Council of Local Governments covers ARC District 1A, including Colbert, Franklin, Lauderdale, Marion and Winston Counties.

District 1A indicates below average vitality ratings in all aggregate measures. Overall retention fall 6 percent below national norms, while retained firm sales per employee ratings are slightly below the Appalachian average. Startup survival rates are considerably lower, a concern heightened by the 16 percent lag in startup activity across the District. Concentrations of high growth firms are only slightly more than half of national concentrations. Summary scores generally correspond to lackluster performance of the Florence MSA, which covers two counties in the District, Colbert and Lauderdale.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	7,413	3,545		
Retained Firms		3,522	48%	0.94
Sales	564,349	910,833	61.4%	1.21
Avg Jobs	13	17	31%	0.74
Replenishment	88,800	58,194	66%	0.85
Sales/Employee	80,621	91,083	13%	0.88

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While aggregate retention rates fall below national levels, sales vitality among retained firms (change in average survivor sales from the 1996 pool) is substantially above average. However, low sales per employee rates (and low job vitality measures over the same period) evidence that the District's raw sales still lag behind national patterns. Business out-migration from the District is 0.3 percent from the 1996 group of firms analyzed, and 0.6 percent among survivors – not a general cause for concern. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differ by the number of area firms that ceased operations in the interim.

Both job change and replenishment measures are substantially below national norms. However, vitality rates among retained construction firms appear quite high in both sales and job vitality measures. Multiple vitality ratings are also good in several manufacturing industries, including food products, paper, printing, chemicals, transport equipment and instruments. Fabricated metals measures are particularly solid across the board, while high sales vitality in industrial machinery and electronics contrast to lower job vitality ratings among retained firms. Retention indices are quite high in most of these same industries, and sales per employee levels, contrasting the current measure among survivors in the District and nationally industry by industry, are high in both fabricated metals and transport equipment.

Motor freight vitality measures lead national patterns, but technology-driven services like communications and business services trail in all vitality ratings. Professional support services (engineering and research) scored well. Findings generally correspond to those in the Florence MSA.

# ARC Alabama 1A

2001 firms analyzed:

7,993

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	246	91		
Retained Firms		90	37%	0.78
Sales	780,412	1,112,821	42.6%	0.35
Avg Jobs	9	18	100%	1.50
Replenishment	2,053	1,595	78%	0.93
Sales/Employee	86,712	65,460	-25%	0.48

### Startup Activity

96-01 Starts	898
Start Rate	16.5%
US Index	0.84

Aggregate startup activity rates are 16 percent below average, a single per cent higher than in the MSA. Activity is weak almost across the board, although small numbers of startups were still enough to push rating beyond national levels in food products, textiles, chemicals and fabricated metals – some of the same industries which generated relatively high retention vitality ratings. Vitality measures among retained startups in fabricated metals and textiles are also solid. Startups in some construction industries, wood products, printing and motor freight did well, also retention rates lagged vitality measures among both construction trade contractors and wood products entrepreneurs.

In fact, the combination of very low startup activity and low startup retention in the District is an uncommon and concerning pattern, suggesting the need for overt focus on entrepreneurial generation and assistance in the area. Those startups which are retained seem to develop reasonable job vitality ratings, but sales vitality measures lag considerably overall, and after five years, the aggregate sales per employee rating among retained starts is very low.

## High Job Growth Firms:

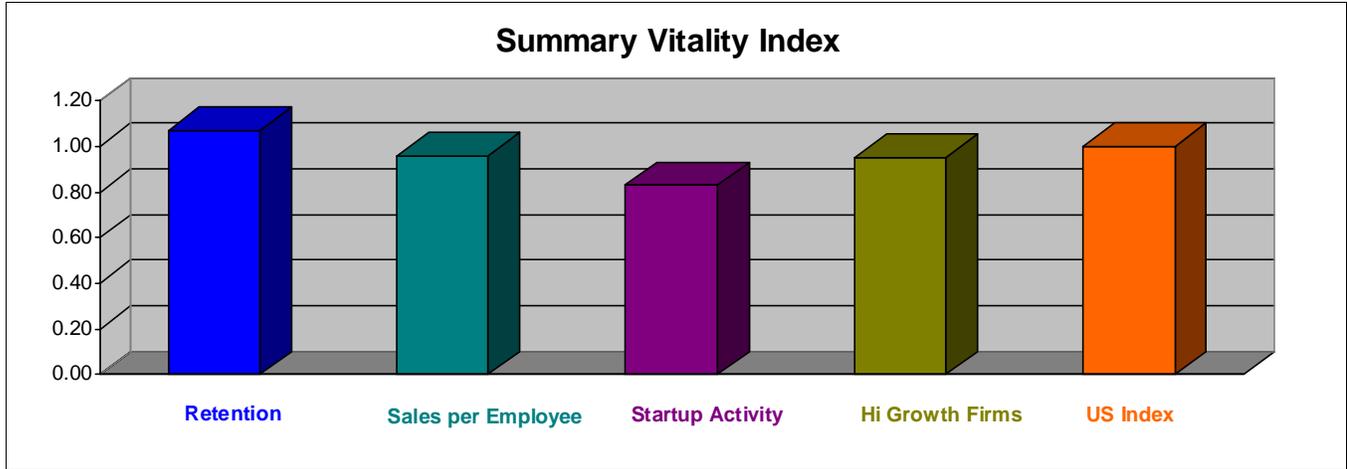
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	6,924	79	1.14%	0.56
Class I : < 5 Jobs>10 Jobs	4,594	58	1.26%	0.55
Class II : <10 Jobs>25 Jobs	5,783	18	0.31%	0.43
Class III : <25 Jobs>50 Jobs	6,500	15	0.23%	0.58
Class IV : <50 Jobs>100 Jobs	6,767	9	0.1300%	0.70
Class V : <100 Jobs> 250 Jobs	6,924	3	0.0400%	0.77

Not only is entrepreneurial activity quite low, but other possible engines for the district, more mature high growth firms, exist in concentrations far below national averages in each employment class analyzed. In larger classes, high growth firm concentrations are apparent at about three-quarters of the US levels, but this represents a small number of firms. Among smaller employment classes, patterns suggest high growth concentrations only about half or less of the US average. The combination of low concentrations in this category, low entrepreneurial activity and low startup retention is concerning, suggesting a District focus on entrepreneurial and technical assistance to high opportunity firms.

# ARC Alabama 1B

2001 firms analyzed:

8,057



1.07      0.96      0.83      0.95      US = 1.00

The North Central AL Regional Council of Governments covers ARC District 1B, including Cullman, Lawrence and Morgan Counties. Both Lawrence and Morgan Counties are within the Decatur AL MSA.

The District shows high overall retention rates, and an impressive level of retained firm sales per employee. However, lower than average startup survival levels coupled with low entrepreneurial activity rates are a cause for concern. While high growth firm concentrations are higher than startup activity levels, they still lag US concentrations, suggesting that these local engines are not able to adequately compensate for the lack of entrepreneurial vitality. The sales change index among retained firms overall are positive, and those startups which are retained tend to do well. This may suggest that the area is moving ahead based on some generally solid performance rather than traditional entrepreneurial growth drivers.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	6,735	3,668		
Retained Firms		3,632	54%	1.07
Sales	519,603	895,583	72.4%	1.43
Avg Jobs	13	17	31%	0.74
Replenishment	83,686	61,811	74%	0.96
Sales/Employee	74,229	99,509	34%	0.96

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall retention rates run 7 percent above the US average, but job vitality indices are somewhat below par. Replenishment rates, suggesting expansion activity, are only 4 percent under US patterns, however. Sales vitality over the five-year period was excellent in aggregate, but low sales per employee rates suggest that the District remains behind average sales patterns throughout the US, but on a par with the Appalachian region. Business out-migration rates are 0.5 percent from the 1996 pool of firms tracked, and 1.0 percent of survivors, somewhat high relative to other areas. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differ by the number of area firms that ceased operations in the interim.

Construction firms reflect good job vitality rates, but sales vitality is low, as is sales per employee, suggesting a longer-term industry lag. Food products retention rates are low, but retained firms show high sales vitality and seem to be well-positioned in valued added and/or productivity with high sales per employee levels for the industry. Retained wood products and furniture firms indicate high vitality ratings in both sales and job vitality measures despite relatively low retention indices. Sales per employee rates in both industries are excellent. Retained chemicals firms are generally strong. Fabricated metals stands out as a top manufacturing performer in an industry with a sizeable number of firms, showing high retention rates coupled with leading sales change and job replenishment measures and higher than average sales per employee rates among retained firms. While retained electronics firms score well in vitality measures including sales per employee ratings, retention rates are extremely low. Sales vitality and retention in communications are strong, but the industry appears to be just entering nationally competitive levels and continues to lag sales per employee ratings despite low job vitality measures. Technology-driven business services performance is strong across the board, matching good MSA vitality indices.

## ARC Alabama 1B

2001 firms analyzed:

8,057

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	197	88		
Retained Firms		85	43%	0.92
Sales	1,116,168	4,038,750	261.8%	2.15
Avg Jobs	7	16	129%	1.93
Replenishment	1,268	1,342	106%	1.27
Sales/Employee	186,028	269,250	45%	1.96

## Startup Activity

96-01 Starts	869
Start Rate	16.2%
US Index	0.83

Aggregate startup activity rates are 17 percent behind national levels, and slightly behind the Appalachian Region. Startup survival rates are also disturbingly low – below both the Decatur MSA and Appalachian trends. The aggregate vitality performance of the small number of retained startups is, however, quite good, with leading scores in all job and sales vitality measures, as well as the sales per employee rate. Startup activity is strong among small trades contractors, but not the sector's drivers, as well as wood products. By far, however, the District entrepreneurial engines appear to be in heavy manufacturing, where primary metals, fabricated metals, industrial machinery, electronics and transport equipment all indicate higher than average entrepreneurial activity rates, and instruments activity is on a par with US patterns. Communications, business and professional service activity rates are all low, further highlighting the leading role of manufacturing entrepreneurs.

While retention patterns are mixed, retained startups in primary metals, fabricated metals and industrial machinery all indicate high vitality levels in both sales and job measures – although it's important to emphasize the small size of the sample. While business services startups struggled to maintain operations and failed more than usual, those which succeeded display high vitality ratings across the board (but low sales per employee levels).

## High Job Growth Firms:

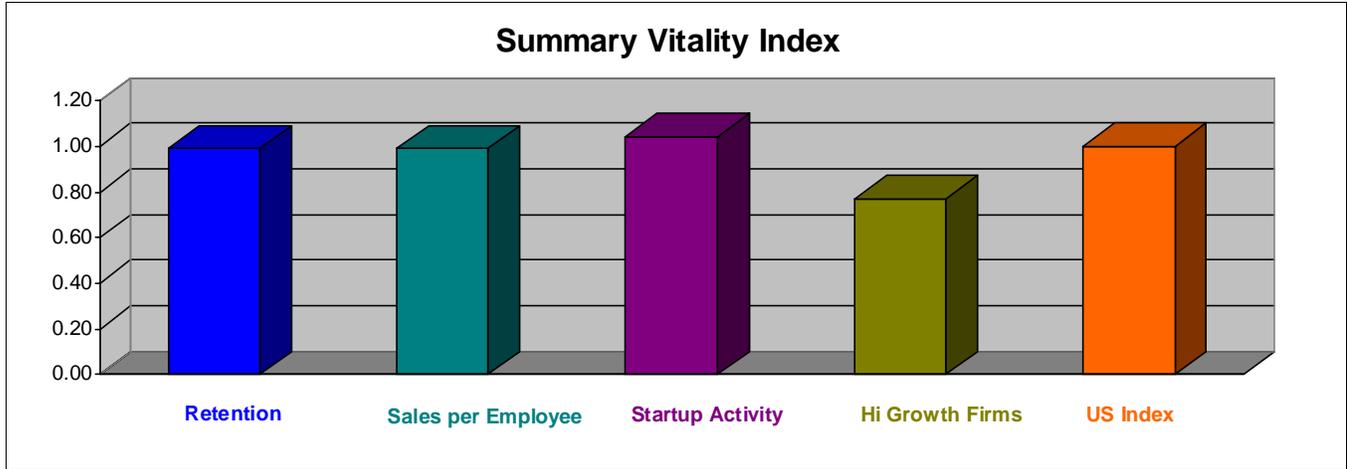
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	6,317	122	1.93%	0.95
Class I : < 5 Jobs>10 Jobs	4,233	95	2.24%	0.98
Class II : <10 Jobs>25 Jobs	5,297	35	0.66%	0.91
Class III : <25 Jobs>50 Jobs	5,898	19	0.32%	0.81
Class IV : <50 Jobs>100 Jobs	6,166	12	0.1900%	1.02
Class V : <100 Jobs> 250 Jobs	6,317	2	0.0300%	0.57

Concentrations of high growth firms, which are the area's most reliable engines in the absence of good entrepreneurial activity, are reasonable, lagging US patterns by only 5 percent. The District shows slightly leading concentrations in Class IV, firms which began with fewer than 50 jobs in 1996 and employed more than 100 by the beginning of 2001. But the handful of high growth firms overall, most of them small, should be developing in tandem with new growth from entrepreneurs – which is currently hard to see at the levels needed to generate substantial new vitality in the District.

# ARC Alabama 1C

2001 firms analyzed:

20,871



0.99      0.99      1.04      0.77      US = 1.00

The Top of Alabama Regional Council of Governments covers ARC District 1C, including DeKalb, Jackson, Limestone, Madison and Marshall Counties. Both Madison and Marshall Counties are within the Huntsville AL MSA. The District shares some of the MSA's impressive entrepreneurial vitality, but still lags behind the MSA's scores in all summary measures except retention.

Summary retention rates are 1 percent below US averages, matching the District's retained firm sales per employee level. Very low startup survival rates are less of a concern than elsewhere due to above average entrepreneurial activity rates, although vitality measures among retained starts lag. Importantly, the District's proportion of high growth firms not only lags US patterns by 23 percent, but is far behind rates in the Huntsville MSA, providing the potential for spin off and spillover benefits through marketing efforts.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	16,914	8,463		
Retained Firms		8,410	50%	0.99
Sales	499,359	823,688	64.9%	1.28
Avg Jobs	13	17	31%	0.74
Replenishment	210,517	142,311	68%	0.88
Sales/Employee	71,337	102,961	44%	0.99

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The District's summary retention index is just below US trends, but vitality ratings lag both the US and the nearby Huntsville MSA. High aggregate sales vitality ratings appear to have brought retained district business in line with national sales per employee patterns, suggesting positive performance in the future. Lower job vitality ratings may be a sign of some weakness – or of realignments to enhance productivity across the District. Business out-migration levels are a stable 0.3 percent of the 1996 pool of firms analyzed, and 0.6 percent of survivors, not a cause for undue concern.

Both retention and vitality rates in construction appear close to average in the construction sector, with low rates in some industries offset by others. Vitality indices in several non-durable industries appear to outpace durable goods – in food products, wood products, furniture, paper, chemicals and plastics. Heavier industries appear to have realigned, showing high levels of sales vitality but lower job measures – with continuing low sales per employee rates that may indicate that the process is not over. This trend includes the large number of retained firms (over 400) in primary metals, fabricated metals, industrial machinery, electronics and transport equipment. Instruments manufacturers reflect better job vitality ratings and a sales per employee rate only 9 percent below average for retained firms in the industry. Performance in technology-based services was mixed – poor in communications, with better experience in business services and leading rates in engineering and research, in line with expertise development throughout the Huntsville MSA.

## ARC Alabama 1C

2001 firms analyzed:

20,871

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	789	312		
Retained Firms		309	39%	0.84
Sales	436,610	839,223	92.2%	0.76
Avg Jobs	6	9	50%	0.75
Replenishment	4,935	2,652	54%	0.65
Sales/Employee	72,768	104,903	44%	0.76

## Startup Activity

96-01 Starts	2,860
Start Rate	20.3%
US Index	1.04

While startup activity is strong (4 percent above US averages and 17 points ahead of the Appalachian region), overall vitality of retained startups is not high. Aggregate retention rates are below US trends in every measurement category, including job and sales vitality and sale per employee among survivors. Retained startup vitality trends are, however, better than those in the MSA, and specific industries do reflect impressive ratings.

Startup activity rates are especially notable in agricultural services (14 percent above average), the construction sector (34 percent among special trades contractors) and a variety of light and heavy industries, including food products, wood products, stone-clay-glass, fabricated metals, transport equipment and instruments. Vitality of retained startups is particularly strong in wood products, transportation equipment and instruments. Technology services startups show less vitality, possibly as a result of strong competition. The five-year tracking method also excludes startups which began operations between 1997 and 2000.

## High Job Growth Firms:

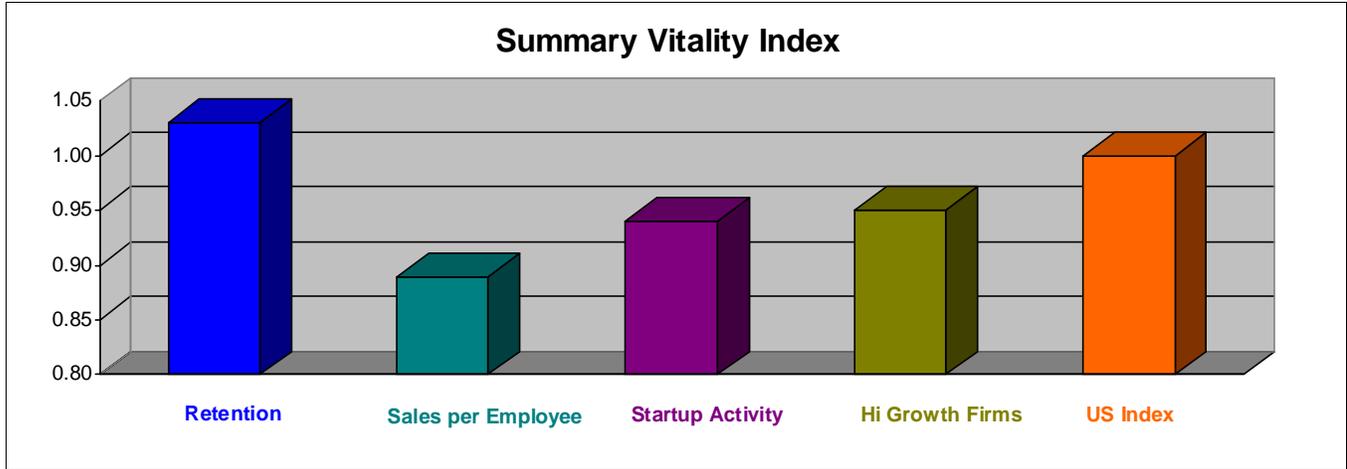
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	15,884	249	1.57%	0.77
Class I : < 5 Jobs>10 Jobs	10,435	189	1.81%	0.79
Class II : <10 Jobs>25 Jobs	13,267	71	0.54%	0.74
Class III : <25 Jobs>50 Jobs	14,921	50	0.34%	0.85
Class IV : <50 Jobs>100 Jobs	15,550	18	0.1200%	0.61
Class V : <100 Jobs> 250 Jobs	15,884	1	0.0100%	0.11

Concentrations of high growth firms in the District lag those in the MSA. These figures also track firms operating 1996; the exclusion of newer firms likely depresses local figures here and in the MSA. However, the lag between the MSA and the District are real, and particularly noteworthy among smaller high growth firms – the ones most likely to come from the entrepreneurial population.

# ARC Alabama 1D

2001 firms analyzed:

8,248



1.03      0.89      0.94      0.95      US = 1.00

The West Alabama Planning and Development Council covers ARC District 1D, including Bibb, Fayette, Hale, Lamar, Pickens and Tuscaloosa Counties. Tuscaloosa County is within the Tuscaloosa AL MSA.

With the exception of overall retention, summary vitality rates in the District are significantly lower than the MSA. Retained firm sales per employee positioning is 89 percent of the national index, one point below Appalachia. Startup activity is 7 percent above the US average in the MSA, but 6 percent below in the District overall. (The District measure includes Tuscaloosa County, which elevates the District's rate.) Startup retention rates are also lower in the District than the MSA (both below average, not a major concern for an area, like the MSA, with high activity rates). Finally, the high growth firm index in the MSA is 11 index points above the District, where the rating drops to 5 percent below national patterns – again, despite the elevating influence of Tuscaloosa County.

**Retention:**

	1996	5 Year Survivors	Change Rate	US Index
All Firms	6,768	3,542		
Retained Firms		3,519	52%	1.03
Sales	490,623	833,693	69.9%	1.38
Avg Jobs	13	21	62%	1.48
Replenishment	85,063	72,624	85%	1.11
Sales/Employee	70,089	92,633	32%	0.89

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The issue for the District is internal – business out-migration rates are only 0.3 percent from the original 1996 group of firms tracked, 0.6 percent of survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differ by the number of area firms that ceased operations in the interim. Vitality measures of retained firms are high in aggregate, although not as high as rates in the MSA. But positive summary vitality rates in the District are in the context of sales per employee measures 11 percent below average, suggesting that high vitality ratings are an attempt to catch up rather than lead – while the MSA's sales per employee rate is 2 percent above US averages.

The area's most vital industries are those which reflect high vitality ratings coupled with strong sales per employee measures among retained firms. These include wood products, industrial machinery and instruments. Retained firms in food, plastics, primary and fabricated metals and transport equipment also indicate leading vitality ratings in at least one category and generally high retention rates. Communications and business services are weak although health and legal, as they are in the MSA's scores, indicate high vitality measures.

## ARC Alabama 1D

2001 firms analyzed:

8,248

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	196	86		
Retained Firms		84	43%	0.92
Sales	455,556	642,308	41.0%	0.34
Avg Jobs	6	11	83%	1.25
Replenishment	1,208	914	76%	0.91
Sales/Employee	65,079	64,231	-1%	0.47

## Startup Activity

96-01 Starts	979
Start Rate	18.3%
US Index	0.94

Although higher than the Appalachian average, startup activity rates remain low enough to hurt (8 percent) below average – and clearly much lower in non-MSA counties within the district. Aggregate vitality scores for retained startups are low in most measures, particularly sales vitality and sales per employee.

Startup activity is strong in only a handful of industries, most of them comprised of a relative handful of firms, including textiles, apparel and plastics. Fabricated metals and instruments rate highly for startup activity, as does agricultural services, where startup retention and vitality among retained startups are poor. Business services startups (including computer-related) run 13 percent above average, although most professional services are lower. The value of industry breakdowns for retained startups is questionable due to the small number of firms involved.

## High Job Growth Firms:

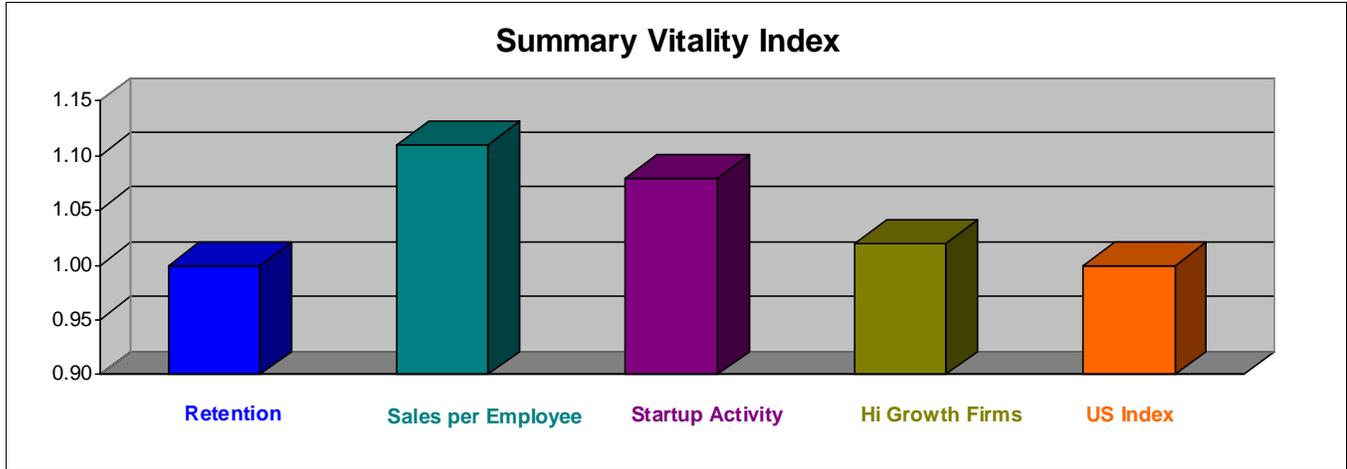
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	6,309	121	1.92%	0.95
Class I : < 5 Jobs>10 Jobs	4,061	101	2.49%	1.08
Class II : <10 Jobs>25 Jobs	5,202	31	0.60%	0.82
Class III : <25 Jobs>50 Jobs	5,893	19	0.32%	0.81
Class IV : <50 Jobs>100 Jobs	6,176	16	0.2600%	1.36
Class V : <100 Jobs> 250 Jobs	6,309	3	0.0500%	0.85

High growth firm concentrations in the district lag national patterns by 5 percent and the Tuscaloosa MSA by 11 index points. The District shows high concentrations of growth firms in the smallest class, Class I, which is helpful in supplanting the gap in entrepreneurial activity. However, performance among middle and larger employment classes is slower, failing to compensate for the entrepreneurial gap. District efforts could look to the MSA's strength to take advantage of expansion opportunities, working to fulfill their needs in outlying counties of the District.

# ARC Alabama 1E

2001 firms analyzed:

38,875



1.00      1.11      1.08      1.02      US = 1.00

The Birmingham Regional Planning Commission covers ARC District 1E, including Blount, Chilton, Jefferson, St. Clair, Shelby and Walker Counties. All but Chilton and Walker are in the Birmingham MSA.

Summary vitality scores for the District are quite positive. To the extent that scores fall at or just below those of the MSA, lags seem to occur among small non-MSA counties. Retention rates are right at US levels, and retained firm sales per employee indicators lead US rates. Entrepreneurial activity remains high (8 percent above average, two points below the MSA). Startup survival rates dip below average, a common pattern among high activity areas. Finally, the concentration of high growth firms is actually slightly higher in the District than the MSA; the difference is concentrated in the smallest employment class of firms analyzed.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	34,766	17,620		
Retained Firms		17,504	50%	1.00
Sales	580,918	1,150,820	98.1%	1.93
Avg Jobs	13	19	54%	1.29
Replenishment	425,096	339,560	80%	1.04
Sales/Employee	82,988	115,082	39%	1.11

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

There is so much overlap between the MSA and the District that vitality rates are difficult to separate out. Like the MSA, the District indicates very high aggregate vitality ratings among retained firms – across the board and reinforced by leading sales per employee rates. Business out-migration from the District is at fairly standard levels – 0.3 percent from the original 1996 group traced for the analysis, and 0.7 percent of survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

The most consistent levels of vitality are in construction, apparel, wood products, primary metals and industrial machinery, all of which indicate good retention patterns, high vitality measures and correspondingly high sales per employee rates, suggesting that high vitality is leading, not just an effort to make up from lagging levels. Food products, furniture, electronics and instruments reflected some high vitality measures, but mixed retention and lower sales per employee indices. These scores indicate vitality, but at a less leading level. Communications performed at a reasonable level for vitality measures, but sales per employee ratings are low. Business services did somewhat poorly, mirroring the MSA.

# ARC Alabama 1E

2001 firms analyzed:

38,875

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,299	579		
Retained Firms		572	44%	0.94
Sales	602,863	1,416,766	135.0%	1.11
Avg Jobs	9	16	78%	1.17
Replenishment	10,931	9,241	85%	1.02
Sales/Employee	86,123	108,982	27%	0.79

### Startup Activity

96-01 Starts	5,406
Start Rate	21.1%
US Index	1.08

While lower than the MSA, District startup activity rates are still 8 percent above average. Startup rates among technology drive communications and business services industries are near average levels, but more focus here might result in enhanced industry performance overall. Notably, these industries had higher levels of startup activity in the MSA. Startup rates in almost every manufacturing industry are excellent, with particular emphasis on heavy industry and metalworking. Construction startups performed well in vitality measures over the analysis period. Retained startup vitality rates were excellent across the board and backed by average to high sales per employee rates in furniture, primary metals, fabricated metals and electronics. As in the MSA, retention rates among business services startups are relatively low, but vitality among retained firms in the industry lead national patterns in every measure except sales per employee.

## High Job Growth Firms:

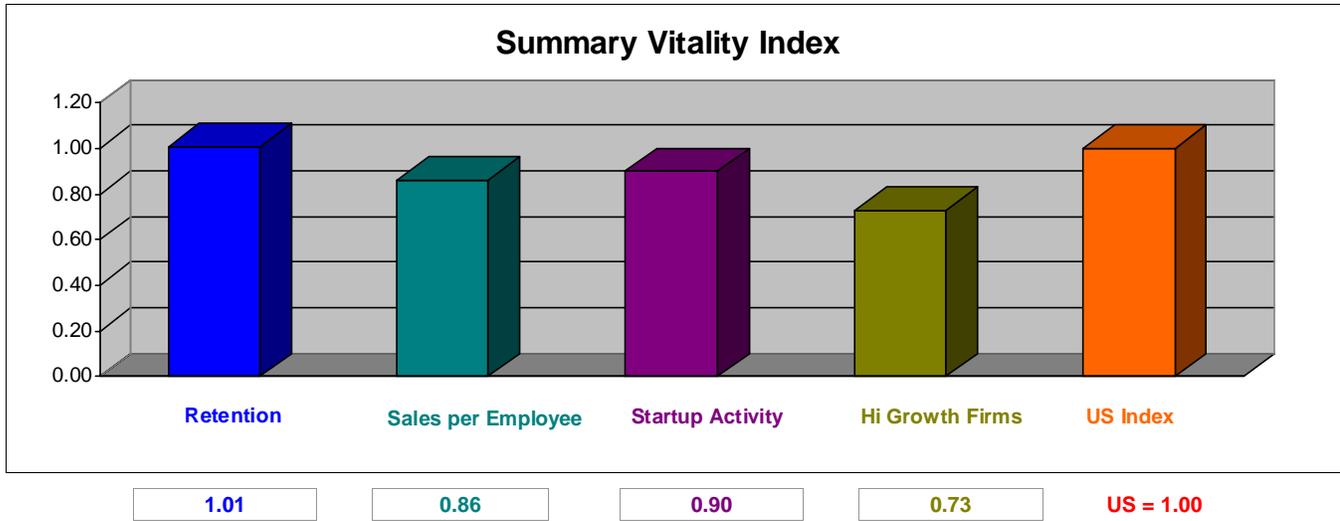
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	32,505	674	2.07%	1.02
Class I : < 5 Jobs>10 Jobs	21,124	545	2.58%	1.12
Class II : <10 Jobs>25 Jobs	26,501	178	0.67%	0.93
Class III : <25 Jobs>50 Jobs	30,107	117	0.39%	0.98
Class IV : <50 Jobs>100 Jobs	31,662	60	0.1900%	1.00
Class V : <100 Jobs> 250 Jobs	32,505	18	0.0600%	0.99

Concentrations of high growth firms in the District are slightly above national levels, and particularly high among the smallest class of firms, possibly reflecting high vitality among District startups in specific industries. But even in larger employment classes, concentrations are at or approaching US averages – high for an ARC district. The District is successfully building on the strengths of the MSA, but outlying counties are still lagging.

# ARC Alabama 1F

2001 firms analyzed:

14,236



The East AL Regional Planning and Development Commission covers ten counties in ARC District 1F: Calhoun, Chambers, Cherokee, Clay, Cleburne, Coosa, Etowah, Randolph, Talladega and Tallapoosa. Etowah County is also in the Gadsden MSA, while Calhoun County is in the Anniston MSA.

District rates tend to reflect the lowest scores of each MSA linked to it. The District indicates the retention rate of Anniston (1.01); startup activity levels, at 0.90 only a point above Gadsden and well under Anniston's 0.97 rating; startup survival rates between the two and a high growth index a low as Anniston's in contrast to Gadsden's slightly higher level and the much better Appalachian regional score. The District retained firm sales per employee rate is 14 percent below the national average, four index points behind Appalachia.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	12,551	6,448		
Retained Firms		6,413	51%	1.01
Sales	425,928	716,078	68.1%	1.34
Avg Jobs	11	15	36%	0.87
Replenishment	126,450	94,198	74%	0.97
Sales/Employee	70,988	89,510	26%	0.86

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While the two MSAs linked to District 1F are important, the district is a much larger entity than either the Anniston or Gadsden MSAs, making the influence of MSAs one that conditions rather than determines. The District's aggregate retention indices reflect high sales vitality and relatively low levels of job vitality among retained firms. In the face of this performance, the low retained firm sales per employee rate suggests originally sluggish positioning in 1996 from which the area has not fully caught up. The District's business out-migration rate of 0.3 percent is about average, and the 0.5 percent rate among surviving firms somewhat lower than most areas. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Within their industries nationally, top vitality performers in the district include food products, wood products, furniture and motor freight, all of which reflected good vitality ratings within the context of high sales per employee rates among retained firms. Other industries indicated high vitality included textiles, printing, plastics, primary metals, industrial machinery, transport equipment and instruments, all of which reflected some high vitality ratings. Plastics, printing and instruments also showed high retention ratings.

Although sales per employee levels among retained firms remain low, retained communications firms performed well in vitality indices as well as retention, leading US patterns in survival, sales and job vitality measures. Business and professional services did less well, mirroring experience in both the Anniston and Gadsden MSAs.

# ARC Alabama 1F

2001 firms analyzed:

14,236

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	335	142		
Retained Firms		142	42%	0.91
Sales	613,830	1,453,731	136.8%	1.12
Avg Jobs	13	14	8%	0.12
Replenishment	4,224	1,980	47%	0.56
Sales/Employee	102,305	132,157	29%	0.96

## Startup Activity

96-01 Starts	1,661
Start Rate	17.6%
US Index	0.90

Aggregate startup indices in the district are mixed. The startup activity rate falls 10 percent behind US patterns, but significantly ahead of most Appalachian areas. Vitality among startups suggest very positive sales vitality rates, and lagging job vitality, but the sales per employee measure (just 4 percent below average) suggests that sales growth essentially caught up to employee levels among retained startups over the analysis period. This is in contrast to experience in the MSAs, where job vitality among startups was high in Anniston and Gadsden sales per employee rates rose above the US average on the basis of high sales vitality. The district's performance isn't worse – just different. More concerning is the district's lackluster startup survival rate, coupled with a below average startup activity index.

While startup activity was low overall in the district, leading performance was seen in a number of industries which scored highly on at least some vitality indices: food products, apparel, lumber, furniture, chemicals, plastics and transport equipment. Startup activity in fabricated metals was also high, and although the industry overall did not shine in retention vitality indices, it seems well position with a high sales per employee rate among retained firms (although retained startups lagged in the same measure). Other high startup activity industries tended to show at least some leading vitality scores as well, but with low sales per employee rates in all except furniture.

Startup activity rates in technology-driven communications and business services lagged national rates, but only by 5 percent-10 percent. While retention was above average in business services, retained startups did not register high on various vitality indices.

## High Job Growth Firms:

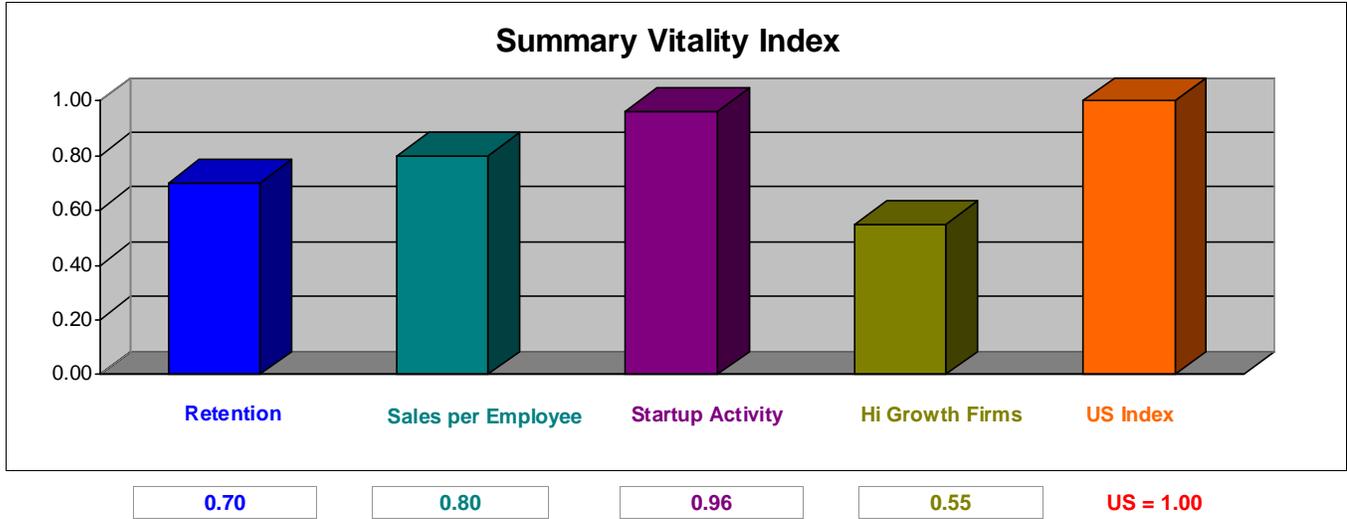
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	11,791	174	1.48%	0.73
Class I : < 5 Jobs>10 Jobs	8,274	140	1.69%	0.74
Class II : <10 Jobs>25 Jobs	10,132	52	0.51%	0.71
Class III : <25 Jobs>50 Jobs	11,121	27	0.24%	0.61
Class IV : <50 Jobs>100 Jobs	11,561	15	0.1300%	0.68
Class V : <100 Jobs> 250 Jobs	11,791	5	0.0400%	0.76

High growth firm concentrations are not the engines they should be in the district. Concentrations lag US and Appalachian regional patterns across the board, and trail MSA concentrations in various employment classes as well. While not always a problem, in the context of low entrepreneurial activity and survival rates and a retained business population which is doing better but still catching up, high growth firms which could have brought dynamism are sorely missed.

# ARC Alabama 1H

2001 firms analyzed:

1,820



ARC District 1H is administered by the Central AL Regional Planning and Development Commission, covering Elmore County. Elmore is also part of the Montgomery MSA, accounting for more than 10 percent of its business establishments.

Startup activity rates and startup survival – both below national averages – are virtually the same in the District and the Montgomery MSA of which it is a part. However, district summary vitality rates are considerably lower than the MSA's in both overall business retention and concentrations of high growth firms. Sales per employee ratings among retained firms lag US patterns by 20 percent.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,229	446		
Retained Firms		434	35%	0.70
Sales	296,505	501,152	69.0%	1.36
Avg Jobs	6	6	0%	0.00
Replenishment	7,435	2,786	37%	0.49
Sales/Employee	59,301	83,525	41%	0.80

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The district's aggregate retention rate is an unusually low 0.70, compared to the MSA rate, still low, of 0.92. While aggregate vitality scores among retained firms in the MSA more or less hold their own against national standards, they lag far behind in the district with the exception of sales vitality; however, it is clear that average sales patterns in the district are struggling to catch up to US average, placing the higher sales vitality rates in context. In fact, both the MSA and the district reflect quite low sales per employee measures. The tiny district experienced out-migration from only a handful of firms during the five-year analysis period – far from its biggest concern.

Retention vitality was low in the district. Only a few industries reflected vitality across the series of measures and these (paper, fabricated metals) involved only a handful of firms. In general, industries indicating high sales vitality rates also had very low sales per employee, indicating catch up efforts with industry averages – not a bad thing, but not leading activity, either. However, the Montgomery MSA of which Elmore County is part evidenced higher vitality ratings in fabricated metals, industrial machinery, electronics, transport equipment and instruments, and high retention rates (but not vitality measures) in communications. Investigation into creating benefits from these value added industries could pay off.

# ARC Alabama 1H

2001 firms analyzed:

1,820

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	43	20		
Retained Firms		19	44%	0.94
Sales	257,576	623,529	142.1%	1.17
Avg Jobs	5	4	-20%	0.00
Replenishment	193	75	39%	0.47
Sales/Employee	64,394	155,882	142%	1.13

### Startup Activity

96-01 Starts	232
Start Rate	18.6%
US Index	0.96

Startup activity in the district was on a par with the MSA and higher than Appalachian regional patterns, although still lagging the US by 4 percent. Sales vitality among retained startups was also strong, particularly noteworthy since the high retained startup sales per employee rate suggests that the sales vitality was a leading, not a catch-up position. However, the number of retained startups from the 1996 pool in the district is so small as to make the aggregate analysis open to question.

Startup activity rates were above industry averages in heavy construction and wholesale trades, and at national levels in communications. Specific manufacturing had high paper activity rates, but often with only one or two firms creating the "surplus" due to the small scale economy of the district.

## High Job Growth Firms:

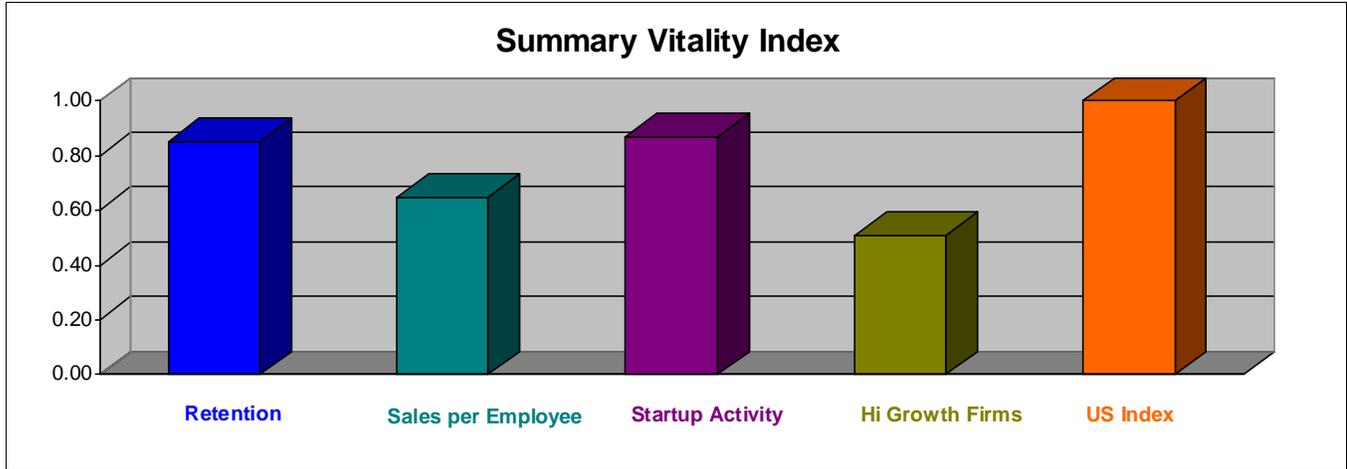
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	1,161	13	1.12%	0.55
Class I : < 5 Jobs>10 Jobs	888	13	1.46%	0.64
Class II : <10 Jobs>25 Jobs	1,051	1	0.10%	0.13
Class III : <25 Jobs>50 Jobs	1,122	0	0.00%	0.00
Class IV : <50 Jobs>100 Jobs	1,146	0	0.0000%	0.00
Class V : <100 Jobs> 250 Jobs	1,161	0	0.0000%	0.00

Concentrations of high growth firms are very low, and non-existent in the three largest employment classes, Class III, IV and V. By contrast, MSA concentrations lag US trends but are considerably higher than in the district. MSA high growth concentrations lead national averages in the smallest employment class, Class I – probably among many of the MSA's vital young firms, among the least likely to relocate or expand to new branches. Instead, the district can look to more mature MSA firms in industry reflecting high vitality indices to create spillover benefits.

# ARC Alabama 11

2001 firms analyzed:

533



0.85      0.65      0.87      0.51      US = 1.00

The South Central AL Development Commission covers a single county, Macon, in ARC District 11. This ARC district has a small economy, making meaningful analysis difficult in more than aggregate scores.

The district reflects very low overall retention rates, about 15 percent below average, coupled with low sales per employee positioning relative to both US and Appalachian trends. Conversely, startup summary survival rates are 1.19 in the index, significantly ahead of US patterns, even for an area, like this one, with a relatively low startup activity index (0.87). Concentrations of high growth firms are only slightly over one-half of the US average.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	421	183		
Retained Firms		181	43%	0.85
Sales	366,975	536,429	46.2%	0.91
Avg Jobs	12	12	0%	0.00
Replenishment	4,660	2,217	48%	0.62
Sales/Employee	61,163	67,054	10%	0.65

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Vitality scores among retained firms mirror the low rates developed in the retention index. Low sales vitality is compounded by very low sales per employee rates among retained firms. Both jobs change and replenishment indices rate far below US trends. Although the district's small scale makes meaningful industry-specific analysis very difficult, there seems to be a hint of vitality among retained construction firms and their possible suppliers in the building materials retail industry (increasingly co-mingled with wholesale), and in trucking.

## ARC Alabama 1I

2001 firms analyzed:

533

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	9	5		
Retained Firms		5	56%	1.19
Sales	100,000	700,000	600.0%	4.92
Avg Jobs	5	14	180%	2.70
Replenishment	36	69	192%	2.30
Sales/Employee	50,000	50,000	0%	0.36

## Startup Activity

96-01 Starts	59
Start Rate	17.0%
US Index	0.87

Startup activity rates are 13 percent below average. Retention and vitality of retained starts are extremely high, although patterns of retained firms are not very meaningful given the tiny scale of the sample involved. Notably, despite high sales and job change indices, the handful of retained startup firms tracked from 1996 evidence very low sales per employee rates, perhaps a more meaningful barometer of the local economy. Startup activity is high in a number of industries, including construction, trucking (which also showed some positive retention patterns) and business services – but again, the number of startups required to push indices above national averages is so small as to be almost meaningless.

## High Job Growth Firms:

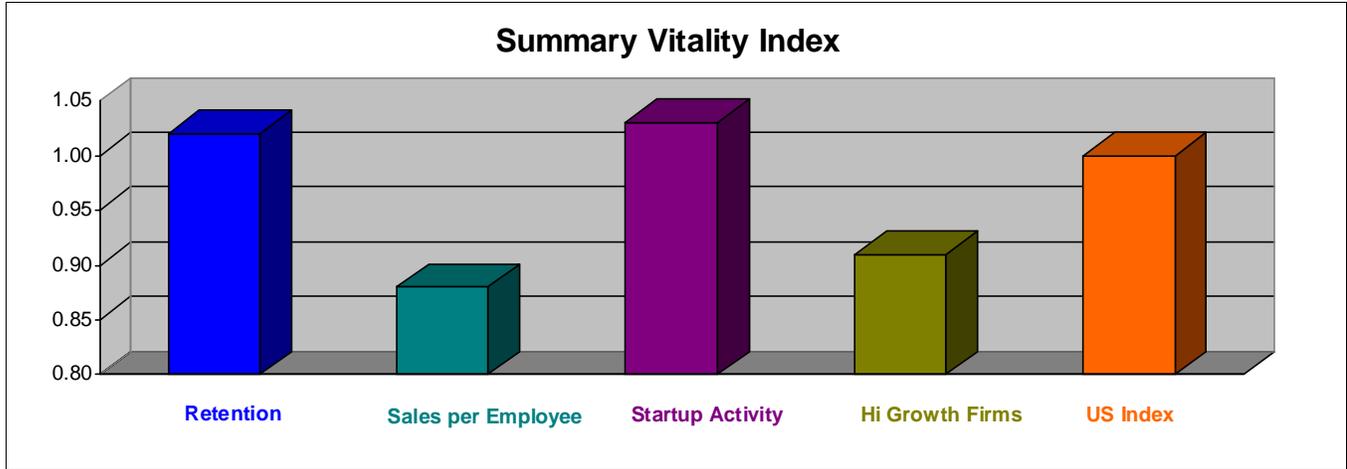
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	390	4	1.03%	0.51
Class I : < 5 Jobs>10 Jobs	270	3	1.11%	0.48
Class II : <10 Jobs>25 Jobs	331	0	0.00%	0.00
Class III : <25 Jobs>50 Jobs	363	1	0.28%	0.70
Class IV : <50 Jobs>100 Jobs	385	0	0.0000%	0.00
Class V : <100 Jobs> 250 Jobs	390	0	0.0000%	0.00

High growth concentrations are extremely low in all classes, and only four high growth firms were identified in aggregate.

# ARC Georgia 2A

2001 firms analyzed:

15,358



1.02      0.88      1.03      0.91      US = 1.00

ARC District 2A is administered by the Coosa Valley Regional Development Center, covering Bartow, Catoosa, Chattahoochee, Dade, Floyd, Gordon, Haralson, Paulding, Polk and Walker Counties. Bartow and Paulding Counties comprise a small portion of the Atlanta MSA, while Catoosa, Dade and Polk fall within the Chattanooga TN MSA.

Solid vitality indications seem to be appearing in this ARC district, at least partially from the influence of the two related MSAs. Summary retention rates are 2 percent above average, and backed by generally positive performance in most retention vitality measures, although sales per employee rates lag 12 percent behind national averages, slightly lower than the Region. Entrepreneurial activity is high (3 percent above US patterns and much higher than in the Appalachian region overall). Startup activity is complemented by an above average startup survival rate. While the current proportion of high growth firms is 9 percent below the US average, solid job and sales vitality rates among retained firms may be compensating. Both startup activity and high growth firm concentrations are considerably higher in the vital Atlanta MSA, which should provide a source of future vitality for the district.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	11,954	6,186		
Retained Firms		6,117	51%	1.02
Sales	432,891	641,131	48.1%	0.95
Avg Jobs	11	16	45%	1.09
Replenishment	129,308	100,058	77%	1.01
Sales/Employee	72,148	91,590	27%	0.88

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Higher than average aggregate retention scores are backed by leading ratings in both job change and replenishment measures, as well as a sales vitality score which is within 5 percent of the national average. The positive effect of these scores is somewhat diminished by low sales per employee ratings (88 percent of the US average) which suggest that the area is just now catching up with the positioning of firms across the nation. One concerning note: Business out-migration is relatively high, measuring 0.6 percent from the pool of 1996 firms tracked, and 1.1 percent among survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

The district's most consistently high job and sales change ratings among manufacturers are in furniture, plastics and fabricated metals, all of which combine high ratings across the board with high retained firm sales per employee rates, suggesting a leading edge in vitality patterns. Retention rates were, however, low in fabricated metals. Textiles, leather, electronics, transport equipment and instruments reflect more ambiguous vitality patterns, often positioned with weaker sales.

Retention levels in technology-driven communications were high, but sales and job change rates and survivor sales per employee were lower. Business services (including computer) reflected high retention and sales vitality rates, as well as a high survivor sales per employee index.

## ARC Georgia 2A

2001 firms analyzed:

15,358

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	401	194		
Retained Firms		192	48%	1.02
Sales	436,538	973,295	123.0%	1.01
Avg Jobs	8	15	88%	1.31
Replenishment	3,264	2,906	89%	1.07
Sales/Employee	72,756	108,144	49%	0.79

### Startup Activity

96-01 Starts	2,035
Start Rate	20.0%
US Index	1.03

Startup activity was very strong in construction, as were vitality rates among retained building construction firms. Among manufacturers, startup rates were above average in food products, lumber, fabricated metals and instruments. Although the sample is small, vitality rates for retained startups in fabricated metals and instruments appear particularly high, with good sales per employee rates among the fabricated metals firms as well.

Startup activity rates in motor freight and transport services were also quite high, although surviving startups did not do as well in vitality ratings. Following the pattern of the ratings for the industries overall, business services firms evidenced high startup rates and good sales per employee levels among retained startups. Startup rates among communications firms were sluggish.

### High Job Growth Firms:

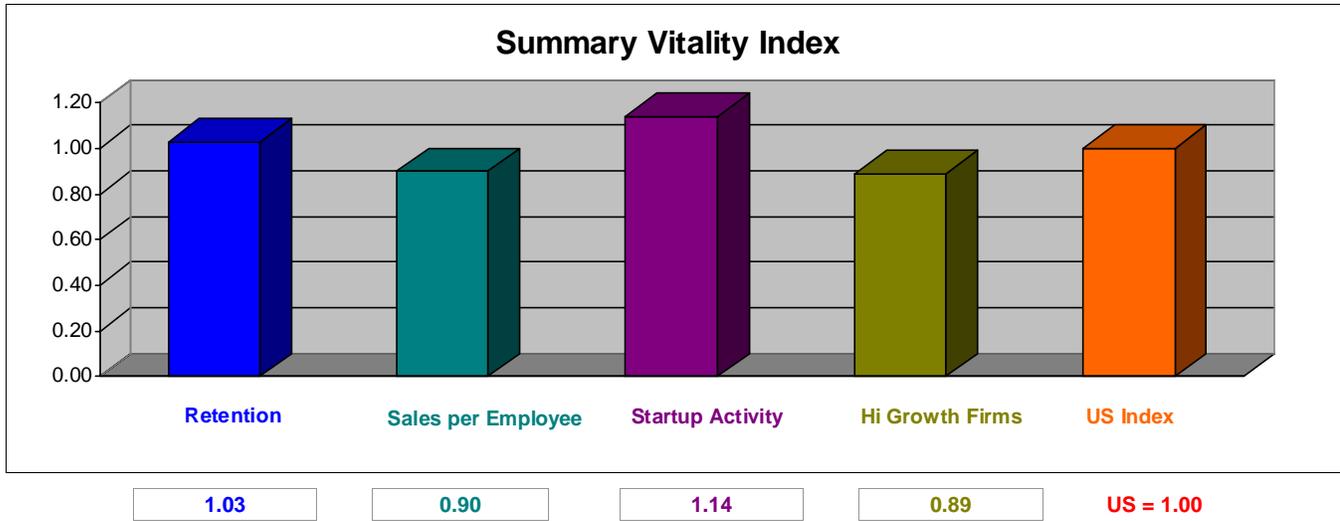
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	11,131	206	1.85%	0.91
Class I : < 5 Jobs>10 Jobs	7,961	154	1.93%	0.84
Class II : <10 Jobs>25 Jobs	9,624	77	0.80%	1.11
Class III : <25 Jobs>50 Jobs	10,516	40	0.38%	0.96
Class IV : <50 Jobs>100 Jobs	10,903	20	0.1800%	0.97
Class V : <100 Jobs> 250 Jobs	11,131	8	0.0700%	1.28

High growth concentrations in the district were 9 percent below average, yet several points higher than overall Appalachian levels. Weak performance in the smallest employment classes dragged down the aggregate score, but Classes II, III, IV and V reflected concentrations near or above average levels. Thus, high growth firm concentrations probably have a significant impact on area employment levels. Assessed in combination with vitality levels among the high number of retained firms and excellent startup activity, vitality ratings suggest that this district is emerging as one of the recovering areas within the Appalachian region.

# ARC Georgia 2B

2001 firms analyzed:

18,075



ARC District 2B is administered by the Georgia Mountains Regional Development Center, covering Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpkin, Rabun, Stephens, Towns, Union and White Counties.

Like the Atlanta MSA which includes Forsyth County, the district's high startup activity rate helps lead the way for area vitality. Supported by a summary retention score 3 percent above average, good job change scores and sales per employee positioning among retained firms right at the Appalachian index (90 percent of the US level), the district's main weakness appears to be in a relatively small concentration of high growth firms.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	10,127	5,318		
Retained Firms		5,262	52%	1.03
Sales	507,213	744,872	46.9%	0.92
Avg Jobs	10	15	50%	1.20
Replenishment	97,348	80,111	82%	1.07
Sales/Employee	84,535	93,109	10%	0.90

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The district's above average retention index is the start of good news which extends into most vitality ratings for retained firms. Both job change and replenishment measurements rate highly; retained firm sales vitality over the five year period reviewed was lower than average by 8 percent, accounting in large part for a sales per employee index among retained firms of 0.90 – about four points lower than the Appalachian average and substantially below the adjoining Atlanta MSA. Business out-migration tallied 0.6 percent of the 1996 pool of firms tracked and almost 1.1 percent of survivors – a relatively high rate for rural areas. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Among manufacturers, the highest consistent vitality indices were found in paper products, fabricated metals and transport equipment, where retained firms scored well on all vitality categories while maintaining high sales per employee rates. But several other manufacturing industries scored well across multiple indices while often showing lower sales per employee rates: food products, apparel, wood products, chemicals, primary metals, industrial machinery and electronics. Plastics showed well in sales vitality and sales per employee measures, while vitality measures in agricultural services were high, as they were in motor freight transport.

Communications indicated low retention rates but good sales and job measures among retained firms – but with low survivor sales per employee rates at the end of the period. Vitality in the technology-driven business services industry was low. By contrast, both job and sales vitality rates and final retained firm sales per employee indices for communications and business services were very high in the Atlanta MSA. This District should look to "borrow and build" from Atlanta strengths where possible.

## ARC Georgia 2B

2001 firms analyzed:

18,075

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	402	183		
Retained Firms		179	45%	0.95
Sales	519,414	812,883	56.5%	0.46
Avg Jobs	6	13	117%	1.75
Replenishment	2,166	2,352	109%	1.30
Sales/Employee	86,569	81,288	-6%	0.59

## Startup Activity

96-01 Starts	2,745
Start Rate	22.2%
US Index	1.14

The district's high level of entrepreneurial activity is evident across the board. Both agricultural services and the most important construction sector industries show high rates, as do a raft of basic and high technology-oriented manufacturing industries, including apparel, furniture, paper, printing, chemical, plastics, stone-clay-glass, primary metals and electronics. Motor freight startups are high, as are business services – but communications startups lag US trends.

While job change rates are high among retained startups, sales vitality and current sales per employee indices among retained startups are considerably lower. Although Atlanta's sales and sales vitality indices are higher, the patterns are similar.

Even though final sales per employee rates among survivors are low, high vitality indices among retained startups are evident in textiles, apparel, metalworking industries including primary metals, fabricated metals and electronics, motor freight and wholesale durables. Communications and business services startups did not fare as well, although retention rates among communications startups are high.

## High Job Growth Firms:

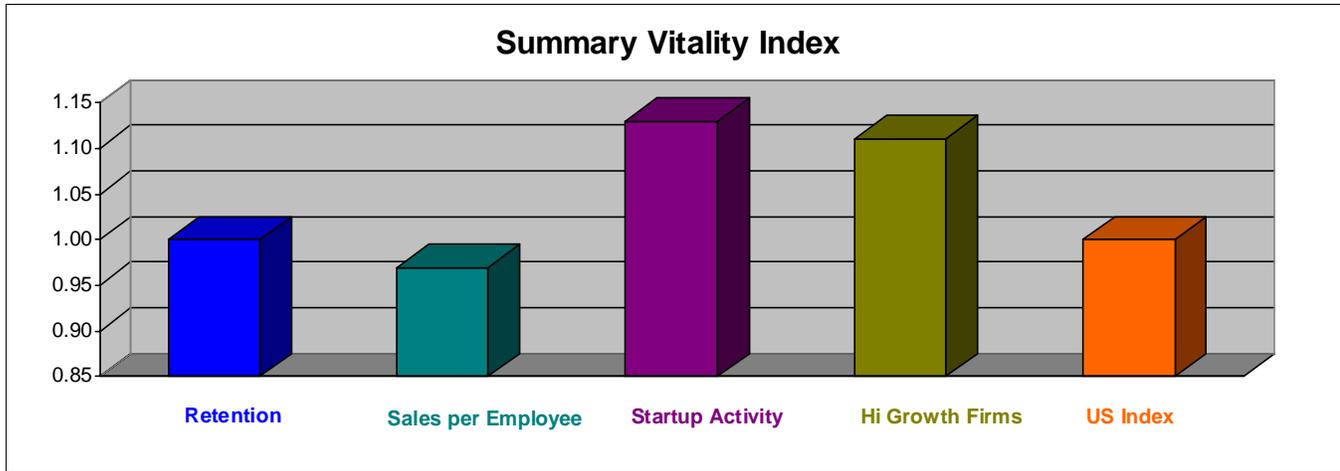
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	9,504	172	1.81%	0.89
Class I : < 5 Jobs>10 Jobs	6,582	134	2.04%	0.89
Class II : <10 Jobs>25 Jobs	8,157	40	0.49%	0.68
Class III : <25 Jobs>50 Jobs	9,005	28	0.31%	0.78
Class IV : <50 Jobs>100 Jobs	9,318	12	0.1300%	0.68
Class V : <100 Jobs> 250 Jobs	9,504	6	0.0600%	1.13

Concentrations of high growth firms are below the US and Appalachian averages. In spite of this gap, solid job vitality scores among several industries, among both longer term firms and startups, underscores the basic solidity of economic vitality in the district. One source of opportunity might be encouraged by more attention to technology-driven service firms, industries which excel in the MSA.

# ARC Georgia 2C

2001 firms analyzed:

3,434



1.00      0.97      1.13      1.11      US = 1.00

ARC District 2C is administered by the Chattahoochee-Flint Regional Development Center, covering Carroll and Heard Counties. Carroll County is covered by the Atlanta MSA.

This is a small district indicating reasonably high levels of vitality. Summary retention rates and sales per employee are right at the US average, and startup retention falls only a point below. The solid startup survival rate is significant despite the small size of the sample because of the district's unusually high levels of startup activity, 13 percent above US trends and 26 index points higher than the Appalachian region. Both sales and job vitality rates for the small sample of retained startups are, however, disappointing. Although the number of firms involved is quite small, the proportion of high growth firms (close to US levels) no doubt compensate for some of the weakness.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,543	1,296		
Retained Firms		1,281	50%	1.00
Sales	443,572	707,622	59.5%	1.17
Avg Jobs	11	15	36%	0.87
Replenishment	25,422	19,107	75%	0.98
Sales/Employee	73,929	101,089	37%	0.97

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Sales vitality is 17 percent above average, although sales per employee rates remain slightly below US standards, suggesting that firms in the area have recently ratcheted sales levels up to competition elsewhere. Job change rates are below average, but replenishment figures suggest good expansion activity in the district, which the high growth index supports. At 0.5 percent of 1996 firms and 1.2 percent of survivors, business out-migration is a concern, but one overshadowed by the district's more positive ratings. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

The economic scale of this district is very small, making industry-specific sales difficult to assess meaningfully. Both paper and plastics industries appear to be high performers in the sales vitality indices as well as leaders in sales per employee rates, but each industry only maintains a handful of firms. Building construction also shows high sales and job indices across the board; its larger number of firms create a more valid assessment and an indication of confidence in ongoing local development. Fabricated metals and industrial machinery also indicate some high vitality measures, but retention and sales per employee rates among them are low. Communications firms are virtually absent, and business services rate highly for retention but low in vitality indices.

## ARC Georgia 2C

2001 firms analyzed:

3,434

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	86	41		
Retained Firms		40	47%	0.99
Sales	617,742	483,333	-21.8%	0.00
Avg Jobs	5	8	60%	0.90
Replenishment	453	311	69%	0.83
Sales/Employee	123,548	96,667	-22%	0.70

## Startup Activity

96-01 Starts	507
Start Rate	22.0%
US Index	1.13

While the district's startup rates are high, performance among the very small number of retained startup firms is extremely modest. Although startup survival rates are just below average, both sales and job measures are below US and Appalachian standards, some significantly. Sales vitality among retained startups is especially troublesome, intensifying the current low sales per employee rate among retained startups.

Startup activity is strong in agricultural services and construction. Most durable manufacturers reflect high industry startup activity rates, but the number of firms in each is very small. Among metalworking industries, startup rates in both industrial and transport machinery are high, as they are in motor freight. Following economy wide patterns in the district, business services startup activity is also high, but not so communications. Job and sales vitality scores among small numbers of retained startups are highest in building construction, industrial machinery and motor freight. Retention rates are very strong among business services starts – but again, the number of startup firms identified and analyzed is very small.

## High Job Growth Firms:

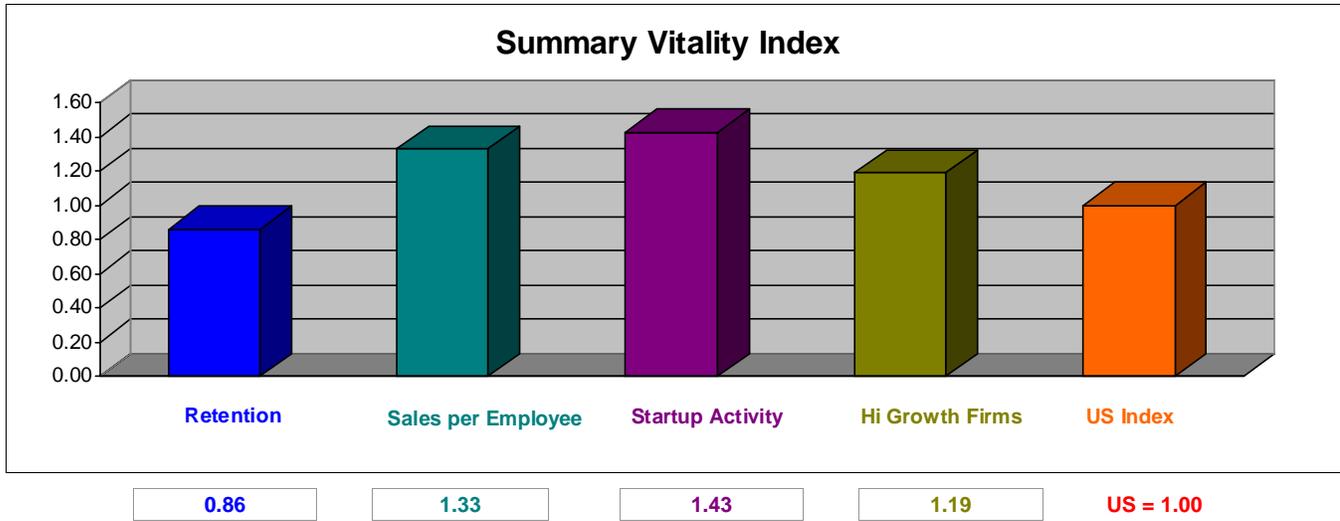
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,359	53	2.25%	1.11
Class I : < 5 Jobs>10 Jobs	1,688	46	2.73%	1.19
Class II : <10 Jobs>25 Jobs	2,046	10	0.49%	0.68
Class III : <25 Jobs>50 Jobs	2,241	7	0.31%	0.79
Class IV : <50 Jobs>100 Jobs	2,310	4	0.1700%	0.91
Class V : <100 Jobs> 250 Jobs	2,359	2	0.0800%	1.51

High growth concentrations are high, almost entirely due to leading rates in the smallest employment class, Class I. Rates in larger classes range as low as 68 percent of the national average. The small number of firms involved in this select group at high employment class levels makes meaningful analysis difficult.

# ARC Georgia 2D

2001 firms analyzed:

36,599



ARC District 2D is administered by the Atlanta Regional Commission, covering Cherokee, Douglas and Gwinnett Counties, all in the Atlanta MSA.

Although summary retention indices for both the general business population and startup firms are weaker than might be desired, the performance of retained firms, extraordinarily high entrepreneurial activity rates and leading concentrations of high growth firms create an extremely positive picture for this district – in many ways mirroring the MSA itself.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	18,344	8,276		
Retained Firms		7,918	43%	0.86
Sales	549,010	1,105,133	101.3%	2.00
Avg Jobs	11	16	55%	1.31
Replenishment	186,614	135,206	72%	0.94
Sales/Employee	91,502	138,142	51%	1.33

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

As they are in the Atlanta MSA, retained firm job and sales vitality ratings in the district are very high. Moreover, aggregate sales per employee indices, as they are in the MSA, are well above US averages, indicating high growth patterns and industry leading firms in the district as well as the MSA. However, the difference in retention patterns in the MSA and the district appear to be entirely attributable to high business out-migration from the district – 2.0 percent of firms from the 1996 pool, and 4.3 percent of survivors. It is also possible that changes in zip code patterns, common in high areas, distort the data in this measure. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Retention vitality ratings are most consistently high among construction firms, and in wood, chemicals and industrial machinery within the manufacturing sector. All indicate high vitality in sales and job measures with leading sales per employee rates. Communications industries indicate lower retention rates, but very high job vitality. Wholesale trade, air and motor transport indicate high sales and job vitality rates. Five-year performance in technology-driven business services was not as impressive, but sales per employee remain at a high level. Other non-LDD sections of the MSA performed better in vitality measures and retained sales per employee ratings among technology-based services.

## ARC Georgia 2D

2001 firms analyzed:

36,599

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	883	358		
Retained Firms		326	37%	0.79
Sales	839,116	1,202,827	43.3%	0.36
Avg Jobs	8	12	50%	0.75
Replenishment	6,485	3,705	57%	0.69
Sales/Employee	104,890	120,283	15%	0.87

### Startup Activity

96-01 Starts	6,716
Start Rate	27.9%
US Index	1.43

Along with the performance of retained firms, startup activity is the high point of district performance. Startup rates are high in virtually every major industry, including technology based manufacturing (industrial machinery and electronics). In technology services, rates in communications, computer-driven business services and engineering and research were very high. Entrepreneurial activity in the entire FIRE sector boomed.

It is more difficult to pick out high vitality industries among retained startups; all vitality ratings tend to be lower.

### High Job Growth Firms:

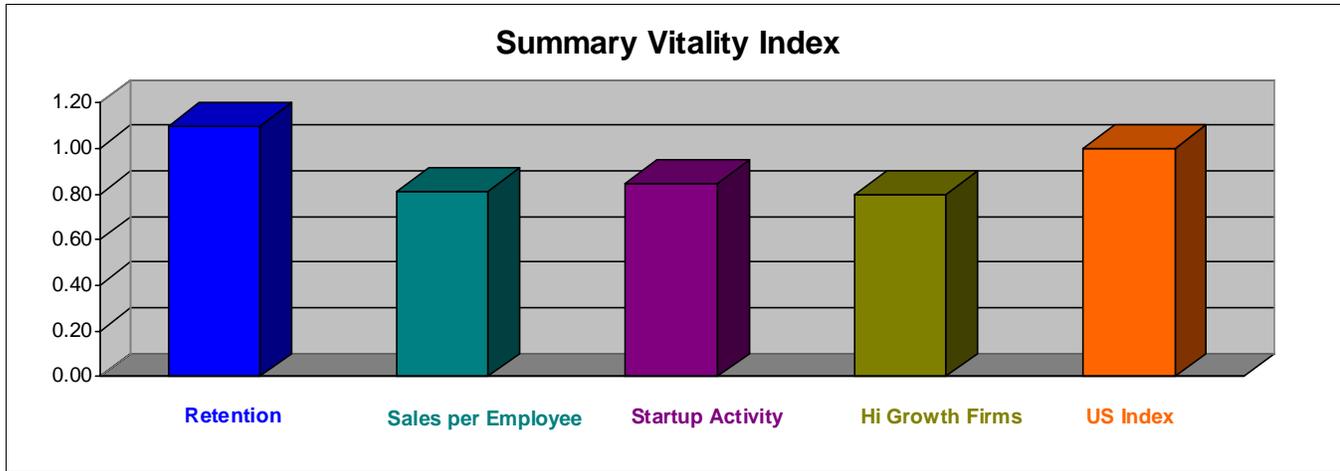
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	17,059	412	2.42%	1.19
Class I : < 5 Jobs>10 Jobs	11,251	318	2.83%	1.23
Class II : <10 Jobs>25 Jobs	14,150	122	0.86%	1.19
Class III : <25 Jobs>50 Jobs	16,029	74	0.46%	1.17
Class IV : <50 Jobs>100 Jobs	16,692	33	0.2000%	1.04
Class V : <100 Jobs> 250 Jobs	17,059	7	0.0400%	0.73

High growth firms are a major component of district vitality, running more than 20 percent above national patterns in smaller employment classes and 19 percent overall. While it is obvious that many of the high vitality retained firms in the district are small and feed into these numbers, it is also likely that significant portions of the district's entrepreneurial vitality create high growth startup firms which also appear here.

# ARC Georgia 2E

2001 firms analyzed:

4,539



1.10      0.81      0.85      0.80      US = 1.00

The Northeast GA Regional Development Center covers four counties in ARC District 2E: Barrow, Elbert, Jackson and Madison. Barrow County is also in the Atlanta MSA.

Unlike other ARC districts touching the Atlanta MSA, District 2E displays the markings of a relatively slow economy, and appears to be benefiting only marginally from dynamic growth in the Atlanta MSA. As is the case in many sluggish rural areas, summary retention rates are high (10 percent above average), matching high startup rates. However, retained firm sales per employee and startup activity rates are low (yet higher than this pattern usually suggests in northern ARC districts), as are concentrations of high growth firms.

**Retention:**

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,835	1,600		
Retained Firms		1,569	55%	1.10
Sales	960,763	502,516	-47.7%	0.00
Avg Jobs	10	13	30%	0.72
Replenishment	27,481	21,259	77%	1.00
Sales/Employee	160,127	83,753	-48%	0.81

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Despite a 10 percent advantage in the retention index, the District's vitality rates are low with the exception of job replenishment. Current sales per employee levels among retained firms run 19 percent below the national level and considerably below Appalachian averages as well. These aggregate measures are a far cry from the Atlanta MSA. Business out-migration in the district is 1.1 percent of 1996 firms tracked for the analysis, and 1.9 percent of survivors, suggesting some concern, although absolute numbers are low enough to limit the value of the analysis. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Vitality rates (including current sales per employee) among retained firms are consistently high in a limited but interesting set of industries: chemicals, fabricated metals and industrial machinery. The high rates in metalworking suggest the potential for firms in industries traditionally compatible with more rural settings. Vitality rates in other industries are generally low, but the scale of the district constrains industry-specific analysis.

## ARC Georgia 2E

2001 firms analyzed:

4,539

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	109	55		
Retained Firms		54	50%	1.06
Sales	1,960,000	401,887	-79.5%	0.00
Avg Jobs	5	8	60%	0.90
Replenishment	515	406	79%	0.95
Sales/Employee	326,667	57,412	-82%	0.42

### Startup Activity

96-01 Starts	498
Start Rate	16.5%
US Index	0.85

In contrast to the linked Atlanta MSA, startup activity rates are low, about 15 percent below average, and slightly less than Appalachian regional levels. Startup survival rates are above average, but this is not necessarily a sign of meaningful vitality in areas with low entrepreneurial activity. While the number of retained starts from the 1996 pool severely limits industry specific analysis, it is clear from aggregate numbers that vitality among them is low; vitality measures are all below average, and sales vitality is especially low, depressing the sales per employee rate among surviving starts to less than half of the national level.

Startup activity is high in building construction, wood products, fabricated metals and motor freight, and low in almost all other industries. Some, like electronics, indicate high activity rates, a good sign, but industry scale is so small that it's hard to draw meaningful conclusions.

### High Job Growth Firms:

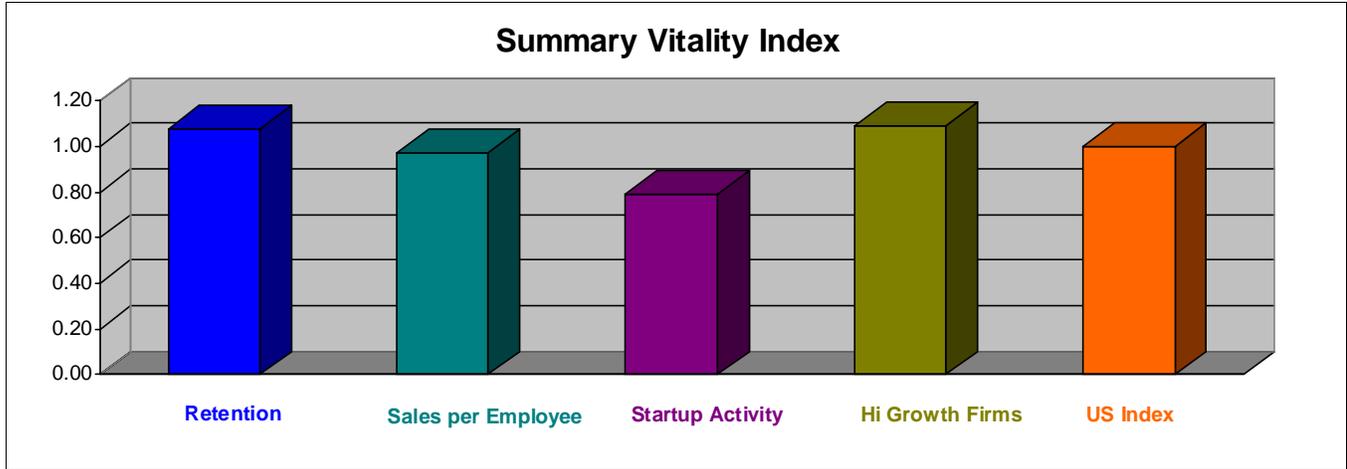
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,646	43	1.63%	0.80
Class I : < 5 Jobs>10 Jobs	1,842	36	1.95%	0.85
Class II : <10 Jobs>25 Jobs	2,287	13	0.57%	0.79
Class III : <25 Jobs>50 Jobs	2,508	6	0.24%	0.60
Class IV : <50 Jobs>100 Jobs	2,595	2	0.0800%	0.41
Class V : <100 Jobs> 250 Jobs	2,646	1	0.0400%	0.68

While high growth firms certainly enhance vitality in the district, their place is not as substantial as at national levels, which run 20 percent higher overall – and more in some larger employment classes. The lag in high growth firms among the retained business population acts as compensation for slow economies in some ARC districts – but the presence is less weighty here.

# ARC Georgia 2F

2001 firms analyzed:

6,920



1.08      0.97      0.79      1.09      US = 1.00

The North GA Regional Development Center covers Fannin, Gilmer, Murray, Pickens and Whitfield Counties in ARC District 2F: Pickens County is also in the Atlanta MSA.

The district appears to be benefiting only marginally from dynamic growth in the Atlanta MSA. Most noticeably, startup activity rates are low, and startup retention only average (overall retention rates run about 8 percent higher than the US average). Vitality measures among retained firms and the small group of retained startups appears relatively weak in aggregate, although retained firm sales per employee outpaces Appalachian rates. A cadre of high growth firms in relatively large concentrations is probably leading vitality in the district.

**Retention:**

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,512	3,030		
Retained Firms		2,998	54%	1.08
Sales	650,741	911,478	40.1%	0.79
Avg Jobs	15	20	33%	0.80
Replenishment	77,736	59,851	77%	1.00
Sales/Employee	92,963	101,275	9%	0.97

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Aggregate retention rates are high, as is common in sluggish economies. More tellingly, job and sales change measures are low, although better job replenishment ratings suggest expansions consistent with high growth concentrations in the district. Sales per employee rates among retained firms are below average, but only by 3 percent -- slightly above the Appalachian average. Business out-migration stands at 0.6 percent of the 1996 tracked pool of firms -- and 1.1 percent of survivors, relatively high rates. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

No valued-added industries attain high vitality ratings across the board -- social services and personal services come closest, including high sales per employee indices. The large textile industry indicates good positioning with high sales per employee among retained firms. The motor freight industry rates well overall, and a number of manufacturing industries score above average in one or two vitality indices: food products, furniture, primary metals and instruments. The transport services industry indicates some vitality, and retention rates and sales vitality in communications are good.

## ARC Georgia 2F

2001 firms analyzed:

6,920

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	224	109		
Retained Firms		105	47%	1.00
Sales	862,987	973,000	12.7%	0.10
Avg Jobs	22	13	-41%	0.00
Replenishment	4,825	1,359	28%	0.34
Sales/Employee	123,284	121,625	-1%	0.88

## Startup Activity

96-01 Starts	731
Start Rate	15.4%
US Index	0.79

Lagging startup rates spill over into the experience of retained startup firms; startup survival is average in aggregate, but vitality rates and sales per employee among survivors are low. Startup activity rates are high in furniture, plastics, electronics, and motor freight, and near US averages in industrial machinery, but the scale of several industries is too small to give much weight to the results. In aggregate numbers, it is worth noting that sales per employee rates among retained starts are higher than other vitality indices.

This is confirmed by a look at specific industries, where retained startups appear to lag in vitality measures. However, above average sales per employee are indicated, suggesting good positioning. These firms could be the growth engines for the district's future.

## High Job Growth Firms:

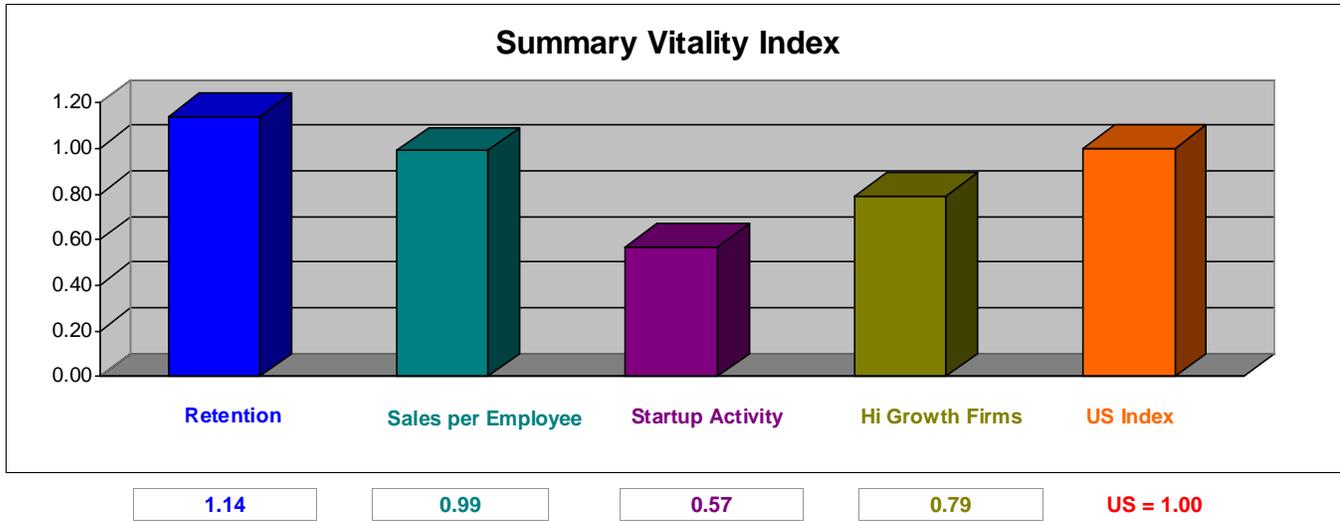
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	5,114	113	2.21%	1.09
Class I : < 5 Jobs>10 Jobs	3,375	88	2.61%	1.13
Class II : <10 Jobs>25 Jobs	4,225	23	0.54%	0.75
Class III : <25 Jobs>50 Jobs	4,741	20	0.42%	1.06
Class IV : <50 Jobs>100 Jobs	4,985	10	0.2000%	1.06
Class V : <100 Jobs> 250 Jobs	5,114	2	0.0400%	0.70

Some of the well-positioned retained startups discussed in the last section are probably already populating the district's high growth firm concentrations, which are best (13 percent above average) in the smallest employment category, Class I. These 113 firms may well be among the district's best near term opportunities to increase economic vitality overall.

# ARC Kentucky 3A

2001 firms analyzed:

910



ARC District 3A is administered by the Buffalo Trace Area Development District, including Fleming and Lewis Counties.

This very small district indicates a generally familiar pattern among more rural ARC districts with lackluster economies, including high overall retention rates coupled with low vitality measures in all other areas – startup activity, retention rates for startup firms and low concentrations of high growth firms. In a fairly unusual twist, this District also indicates a solid overall sales per employee rating.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	654	382		
Retained Firms		376	58%	1.14
Sales	445,677	620,134	39.1%	0.77
Avg Jobs	8	10	25%	0.60
Replenishment	4,923	3,603	73%	0.95
Sales/Employee	89,135	103,356	16%	0.99

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The scale of the district economy makes the value of business out-migration patterns hard to assess, but the area seems to indicate business out-migration levels somewhat higher than the norm; 0.9 percent from the pool of 1996 firms tracked and 1.6 percent of survivors from that group. This is a very small scale indication, but may point to problems in a lagging economy. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

While the high overall retention rate appears impressive at 14 percent above average, it can also be a sign of economic turgidity. In this case, that view is supported by low job vitality measures among retained firms. Sales per employee rates among retained firms are slightly better. Although the number of firms is so low as to diminish the value of industry-specific analysis, several industries indicate one or more higher vitality measures of various types: agricultural services, food products, plastics, stone-clay-glass, industrial machinery, motor freight and even communications.

## ARC Kentucky 3A

2001 firms analyzed:

910

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	13	5		
Retained Firms		5	39%	0.82
Sales	280,000	620,000	121.4%	1.00
Avg Jobs	3	6	100%	1.50
Replenishment	43	28	65%	0.78
Sales/Employee	70,000	103,333	48%	0.75

## Startup Activity

96-01 Starts	74
Start Rate	11.1%
US Index	0.57

Startup activity rates are only two-thirds of the US average, and substantially below regional averages. Only a handful of retained startups could be identified from the 1996 pool, although these seemed to indicate reasonably solid sales vitality and average job vitality rates among them (but lower current sales per employee than average).

Startup activity seems to be most pronounced in construction and various retail industries. In larger settings these can often indicate development and confidence – but in slow economies they can also suggest relatively low-key startup business efforts for those unable to find wage employment.

## High Job Growth Firms:

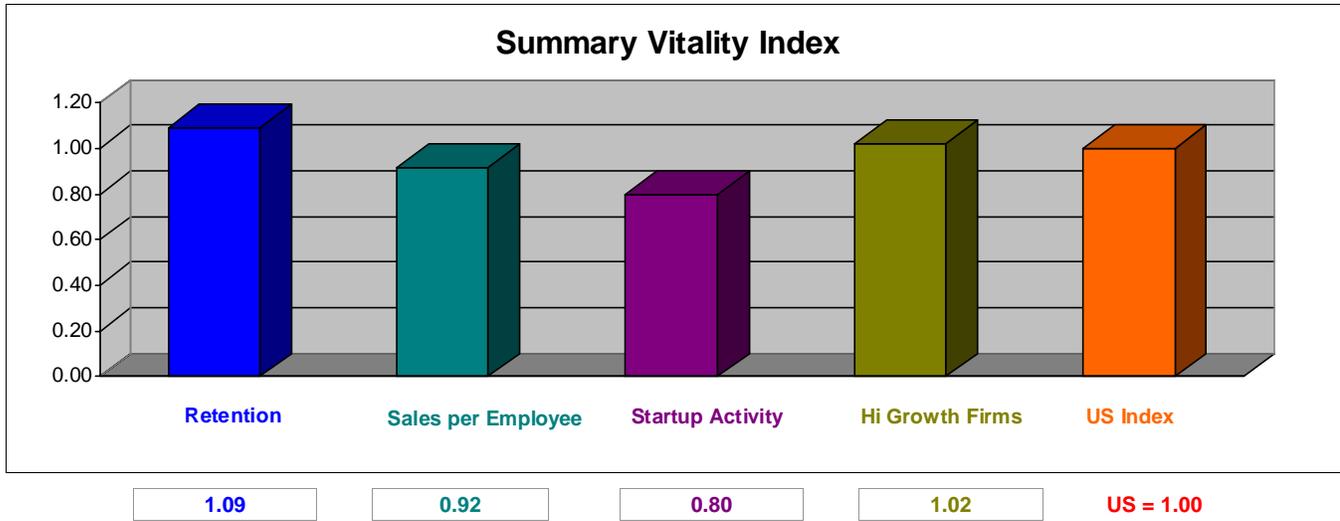
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	627	10	1.59%	0.79
Class I : < 5 Jobs>10 Jobs	453	7	1.55%	0.67
Class II : <10 Jobs>25 Jobs	552	4	0.72%	1.00
Class III : <25 Jobs>50 Jobs	598	1	0.17%	0.42
Class IV : <50 Jobs>100 Jobs	617	0	0.0000%	0.00
Class V : <100 Jobs> 250 Jobs	627	0	0.0000%	0.00

High growth firm concentrations are 21 percent lower than average and non-existent in higher employment classes. Data for Class II firms is indicated at average levels.

## ARC Kentucky 3B

2001 firms analyzed:

4,396



ARCD District 3B is administered by the FIVCO Area Development District, including Boyd, Carter, Elliott, Greenup and Lawrence Counties. Boyd, Carter and Greenup Counties are also within the Huntington MSA.

With variations in specific numbers, the district seems to follow many of the economic patterns set in the MSA. Overall retention rates are high, coupled with solid retention vitality and sales per employee indices. Startup activity is considerably weaker – in fact, weaker in the district than in either the MSA or the Appalachian Region. The vitality lag resulting from the lack in entrepreneurship is partially compensated by slightly higher than average concentrations of high growth firms.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,950	2,189		
Retained Firms		2,172	55%	1.09
Sales	440,580	672,466	52.6%	1.04
Avg Jobs	10	14	40%	0.96
Replenishment	38,441	30,141	78%	1.02
Sales/Employee	73,430	96,067	31%	0.92

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

All categories of vitality ratings among retained firms are reasonably good. High retention rates are complemented by leading sales and job replenishment measures among retained firms, and change in average job numbers among survivors only about 5 percent below average. Current retained firm sales per employee is about 8 percent below average – not bad for an area within the Appalachian Region. Over the five-year analysis period, business migration was 0.4 percent of the original pool of firms tracked, and 0.8 percent of survivors, not a serious cause for concern. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Retained firms in food products, furniture and chemicals indicate across leading sales and job vitality measures as well as high current sales per employee rates among retained firms. Several other industries, including building construction, wood products, plastics, fabricated metals and transport equipment indicate multiple high vitality measures but current positioning (sales per employee) which is not as impressive. The MSA appears to show high vitality ratings among most significant non-durable manufacturing industries, including foods and wood products, apparel, furniture, chemicals and plastics. The MSA's sales per employee positioning indicator is generally higher in these industries as well.

## ARC Kentucky 3B

2001 firms analyzed:

4,396

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	110	52		
Retained Firms		51	46%	0.99
Sales	520,313	791,304	52.1%	0.43
Avg Jobs	6	9	50%	0.75
Replenishment	622	449	72%	0.87
Sales/Employee	74,330	87,923	18%	0.64

### Startup Activity

96-01 Starts	449
Start Rate	15.6%
US Index	0.80

The combination of the limited scale of the district economy and low startup rates leave only a small number of retained startups to assess for vitality, and measures are uniformly low among their aggregate scores (except startup retention itself). However, the very small numbers of startups from 1996 showed at least one leading vitality rate each in both construction and industrial machinery. Industry scale constrained efforts to assess startup activity, but rates in construction and industrial machinery appear high, coupled with near-average startup levels in trucking.

### High Job Growth Firms:

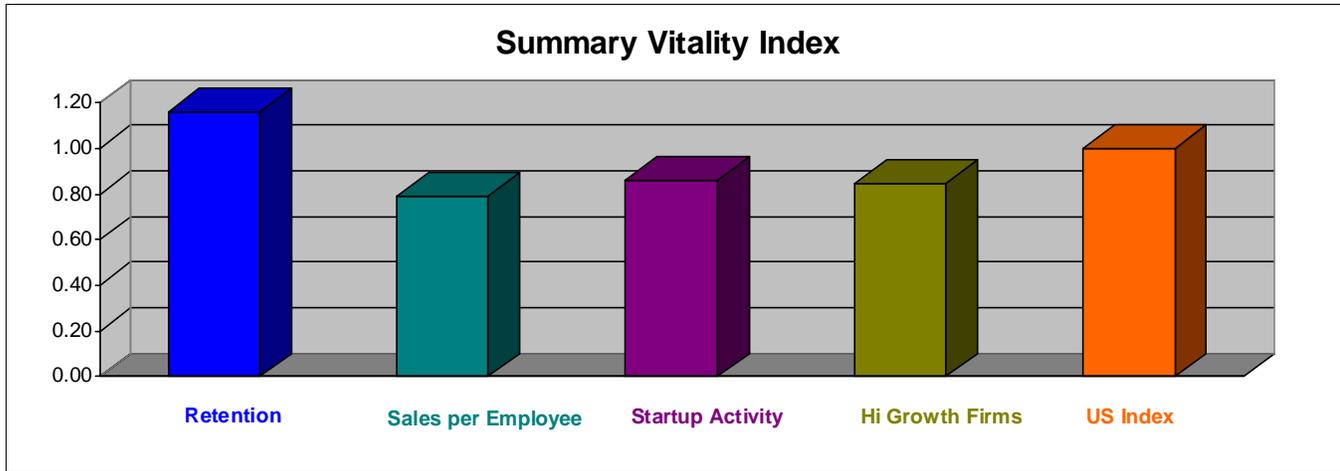
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,725	77	2.07%	1.02
Class I : < 5 Jobs>10 Jobs	2,556	65	2.54%	1.11
Class II : <10 Jobs>25 Jobs	3,165	19	0.60%	0.83
Class III : <25 Jobs>50 Jobs	3,505	12	0.34%	0.86
Class IV : <50 Jobs>100 Jobs	3,659	6	0.1600%	0.86
Class V : <100 Jobs> 250 Jobs	3,725	1	0.0300%	0.48

Concentrations of high growth firms were 2 percent above average in aggregate, and very concentrated in the Class I ratings, the smallest employment group. In conjunction with entrepreneurial activity and vitality ratings, this suggests a concentration of small, longer-term firms which have just begun to experience growth. Enhancing technical assistance to these firms as they try to manage new challenges might prove to be a useful allocation of development resources.

# ARC Kentucky 3C

2001 firms analyzed:

5,645



1.16      0.79      0.86      0.85      US = 1.00

ARC District 3C is administered by the Bluegrass Area Development District, including Clark, Estill, Garrard, Lincoln, Madison and Powell Counties. Clark and Madison Counties are included in the Lexington MSA.

Summary patterns in the district are considerably weaker than in the related MSA. While retention levels are high in both, the MSA's sales per employee rate for retained firms is somewhat higher. As well, the MSA's startup activity rate of 0.91 is five index points above the District, which is close to the (lower than US) Appalachian average. Startup survival rates are good in both areas. However, the MSA's commanding concentration of high growth firms dwarfs the districts ratings, which are 15 percent below US averages and, at 0.87, twenty-two index points below the MSA. The Appalachian region's indexed high growth firm concentration is 0.90.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,849	2,278		
Retained Firms		2,258	59%	1.16
Sales	409,322	653,833	59.7%	1.18
Avg Jobs	11	16	36%	0.87
Replenishment	40,563	34,878	86%	1.12
Sales/Employee	68,220	81,729	20%	0.79

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Vitality measures among the district's retained firms are generally solid, with above average ratings in retention, sales vitality and job replenishment. Aggregate sales per employee rates remain low, lower than levels in both the Appalachian region and the Lexington MSA. Business out-migration levels stand at 0.5 percent from the pool of firms tracked from 1996, and 0.9 of survivors, somewhat above average levels. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Vitality ratings stand out in all measures in the fabricated metals industry, which indicates leading measures in all categories including current sales per employee positioning. An impressive number of other manufacturing industries show high vitality ratings in multiple categories, although final sales per employee positioning among retained firms is not as high: food products, apparel, wood products, plastics, stone-clay-glass, primary metals, industrial machinery, electronics and transport equipment. (Some of these indicate only a handful of firms for analysis.)

## ARC Kentucky 3C

2001 firms analyzed:

5,645

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	139	68		
Retained Firms		67	48%	1.03
Sales	1,169,565	845,161	-27.7%	0.00
Avg Jobs	6	11	83%	1.25
Replenishment	766	731	95%	1.15
Sales/Employee	167,081	84,516	-49%	0.61

## Startup Activity

96-01 Starts	635
Start Rate	16.7%
US Index	0.86

Startup activity rates are high in some of the same industries evidencing high retained firm measures – a positive sign. These include food products, lumber, plastics, fabricated metals and transport equipment. Motor freight startup scores are high, as are technology-driven communications and business services, which did not show well in summary vitality indices. With the notable addition of electronics, these tend to be the same industries which reflected high startup activity rates in the MSA.

Retained startups from the 1996 pool were quite small in number, making industry-specific analysis very difficult. However, there were positive indications in both plastics and business services. In aggregate, retained startups evidenced high retention and job vitality measures, with weaker results in sales vitality and current sales per employee positioning. This is in some contrast to much higher sales vitality scores among retained startups in the MSA, and may contribute to the extreme difference in concentrations of small high growth firms.

## High Job Growth Firms:

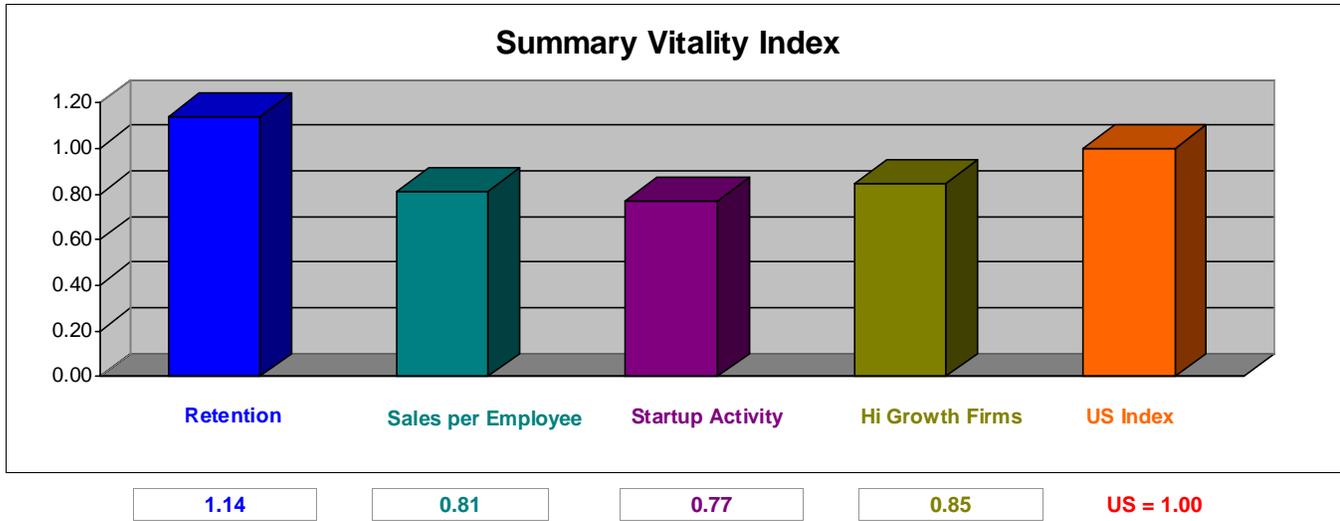
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,654	63	1.72%	0.85
Class I : < 5 Jobs>10 Jobs	2,493	46	1.85%	0.80
Class II : <10 Jobs>25 Jobs	3,098	15	0.48%	0.67
Class III : <25 Jobs>50 Jobs	3,417	15	0.44%	1.11
Class IV : <50 Jobs>100 Jobs	3,571	10	0.2800%	1.47
Class V : <100 Jobs> 250 Jobs	3,654	3	0.0800%	1.47

Combined lags in entrepreneurial activity and concentrations of high growth firms hold back progress in the district in spite of relatively solid performance among retained firms in a variety of important industries. In contrast to the MSA, concentrations of high growth firms trail especially in smaller employment classes, underscoring entrepreneurial weaknesses.

## ARC Kentucky 3D

2001 firms analyzed:

2,487



ARC District 3D is administered by the Gateway Area Development District, encompassing Bath, Menifee, Montgomery, Morgan and Rowan Counties.

This district reflects summary vitality patterns common to many lower-level economies. Retention rates are quite high, both among firms overall and startups tracked from 1996. However, job and sales change rates among retained firms, as well as the retained firm sales per employee indicator, are well below US averages. Startup activity rates are almost one-quarter below US levels and lag Appalachian averages as well. Concentrations of high growth firms trail both US and Appalachian patterns.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,941	1,122		
Retained Firms		1,111	57%	1.14
Sales	409,974	505,841	23.4%	0.46
Avg Jobs	9	13	33%	0.80
Replenishment	16,286	13,840	85%	1.10
Sales/Employee	81,995	84,307	3%	0.81

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While overall retention rates are high, job and sales change indicators for retained firms are much lower, lagging significantly while sales per employee rates among retained firms is about 19 percent below average. Job replenishment rates are, however, positive, suggesting some expansion activity or the retention of larger firms from the 1996 pool. Among value-added industries, only wood products appears to have leading indicators across all vitality measures, including retained firm sales per employee ratings. Other industries that do reflect specific high measures, include building construction, paper products, industrial machinery, instruments, motor freight and communications, which also indicates a high sales per employee score. (The scale of several of these industries is quite small). Business out-migration rates are 0.6 percent from the 1996 pool of firms tracked, and 1.0 percent of survivors; this is relatively high, but inconclusive given the small scale of the district economy. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

## ARC Kentucky 3D

2001 firms analyzed:

2,487

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	58	29		
Retained Firms		29	50%	1.07
Sales	730,000	1,125,000	54.1%	0.44
Avg Jobs	5	10	100%	1.50
Replenishment	294	274	93%	1.12
Sales/Employee	121,667	112,500	-8%	0.82

## Startup Activity

96-01 Starts	251
Start Rate	15.1%
US Index	0.77

Although the limited sample of startups suggests high retention rates, startup activity itself is ten index points below the Appalachian regional average and 23 percent below US patterns. There appear to be relatively strong startup activity patterns in metalworking industries. (The small number of establishments in these industries emphasizes the value of even a single startup.) Motor freight startup rates are high, and business services startups are not far below national averages (again, the number of firms overall is small, increasing the statistical impact of even minimal startup activity).

Retained startups indicate low sales vitality and low sales per employee (20 percent below average) but good job vitality. Startups in a number of retail industries appear to be the leading performers, although the absolute number of retained startups is so low as to make specific analysis difficult.

## High Job Growth Firms:

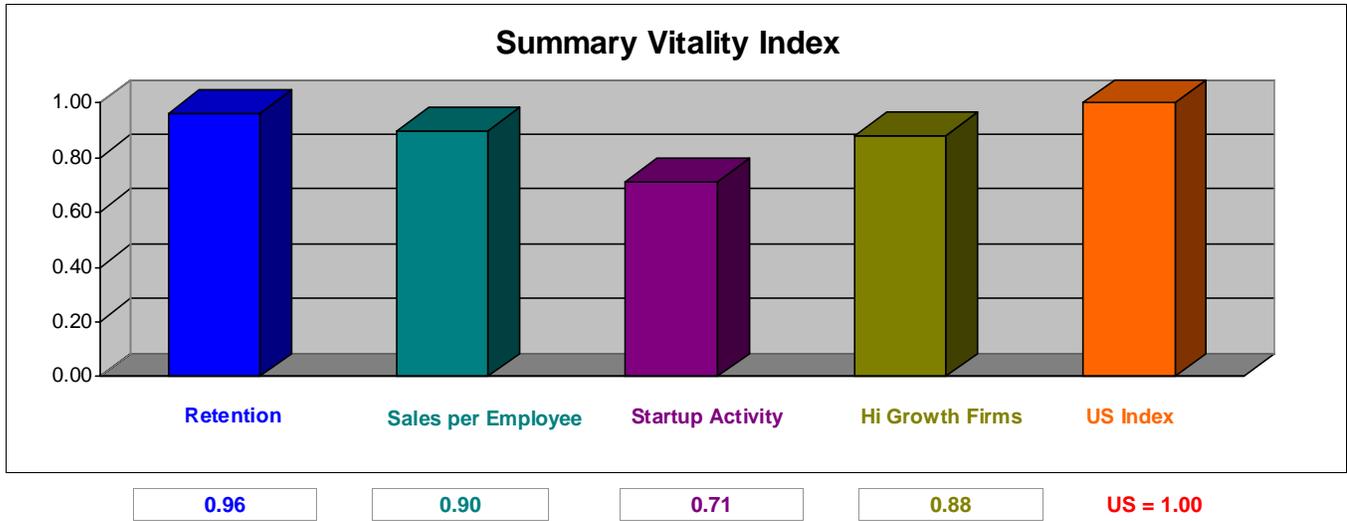
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	1,853	32	1.73%	0.85
Class I : < 5 Jobs>10 Jobs	1,282	27	2.11%	0.92
Class II : <10 Jobs>25 Jobs	1,573	6	0.38%	0.53
Class III : <25 Jobs>50 Jobs	1,755	4	0.23%	0.58
Class IV : <50 Jobs>100 Jobs	1,823	1	0.0500%	0.29
Class V : <100 Jobs> 250 Jobs	1,853	0	0.0000%	0.00

Concentrations of high growth firms are low across the board, below US and Appalachian averages in every employment class examined. In the absence of high entrepreneurial vitality rates, targeted technical assistance to industries showing high vitality measures might enhance economic centers of activity in the district.

# ARC Kentucky 3E

2001 firms analyzed:

4,921



ARC District 3E is administered by the Big Sandy Are development District, including Floyd, Johnson, Magoffin, Martin and Pike Counties.

This is one of the relatively scattered ARC districts which reflect vitality levels below US and Appalachian averages in every summary measure. Retention rates are, however, only 4 percent below the US average and vitality among retained firms is solid, even leading in some categories. The sales per employee indicator is right at the Appalachian average (90 percent of the US). High growth firm concentrations are low, but only two index points below the ARC average. The combination of very low startup activity and survival rates is most troubling among the area's summary measures, especially when low vitality of retained firms is factored in.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,619	2,260		
Retained Firms		2,237	48%	0.96
Sales	456,532	751,689	64.7%	1.28
Avg Jobs	8	12	50%	1.20
Replenishment	36,355	26,521	73%	0.95
Sales/Employee	76,089	93,961	24%	0.90

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Mildly high rates of business out-migration (0.5 percent of firms from the 1996 pool tracked, 1.0 percent of survivors) are more of a concern in the context overall low retention in the area (12 index points behind the Appalachian average in a district which cannot claim high levels of entrepreneurial activity). While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim. Although both sales and job vitality figures appear high, these (and sales per employee) are significantly distorted by correspondingly high levels in the large coal mining industry. Other industries reflect almost uniformly low vitality ratings; transportation equipment and stone-clay-glass, another resource based industry, are the only notable exceptions. No industries (including coal mining) achieve leading measures across the board.

## ARC Kentucky 3E

2001 firms analyzed:

4,921

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	122	38		
Retained Firms		38	31%	0.67
Sales	575,385	684,375	18.9%	0.16
Avg Jobs	5	6	20%	0.30
Replenishment	593	224	38%	0.45
Sales/Employee	95,897	97,768	2%	0.71

## Startup Activity

96-01 Starts	448
Start Rate	13.8%
US Index	0.71

Startup activity rates are very low, as is startup survival. Higher relative levels of (still small scale) startup activity were experienced in the metalworking group, including fabricated metals, transport equipment and some miscellaneous manufacturing. Although startups related to coal mining appeared to develop high sales vitality indices, there were too few retained startups to develop other industry-specific analyses. All (aggregated) vitality and sales per employee indices for retained startups were below both US and Appalachian averages.

## High Job Growth Firms:

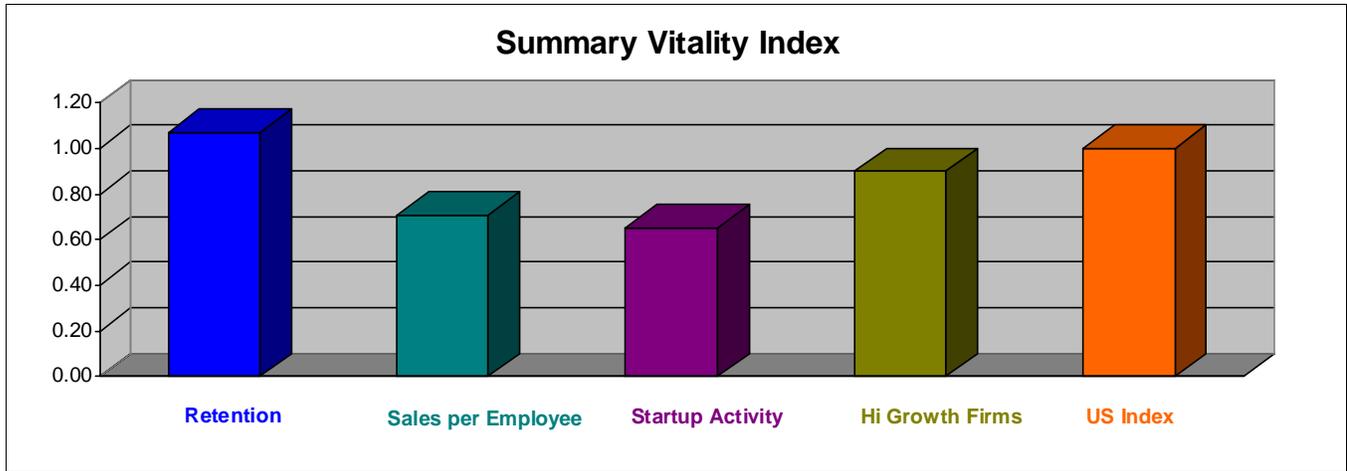
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	4,268	76	1.78%	0.88
Class I : < 5 Jobs>10 Jobs	2,910	63	2.16%	0.94
Class II : <10 Jobs>25 Jobs	3,588	15	0.42%	0.58
Class III : <25 Jobs>50 Jobs	4,004	9	0.22%	0.57
Class IV : <50 Jobs>100 Jobs	4,184	5	0.1200%	0.63
Class V : <100 Jobs> 250 Jobs	4,268	2	0.0500%	0.84

Concentrations of high growth firms were highest among the smallest employment class analyzed, Class I. Identifying and capitalizing on the value-added firms in this group is likely the quickest route to develop new economic generators for the district economy, and one likely means to spur additional and badly needed entrepreneurial vitality.

# ARC Kentucky 3F

2001 firms analyzed:

5,896



1.07      0.71      0.65      0.90      US = 1.00

ARC District 3F is administered by the Lake Cumberland Area Development District, and includes Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell and Wayne Counties.

While summary retention rates in this district are 7 percent above the US average, startup activity and survival trails both US and Appalachian patterns. Lagging vitality is also reflected in the District's very low retained firm sales per employee index. However, concentrations of high growth firms are at Appalachian levels (0.90 or ten per cent below US norms) and lead the Region in one employment class. Aggregate vitality measures among retained firm overall is solid, but very poor among retained startups.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,266	2,312		
Retained Firms		2,295	54%	1.07
Sales	387,954	586,860	51.3%	1.01
Avg Jobs	11	15	36%	0.87
Replenishment	45,233	34,743	77%	1.00
Sales/Employee	64,659	73,357	14%	0.71

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Unfortunately, the district's relatively high vitality measures among retained firms is coupled with a low average sales per employee rate suggesting a continuing lag in dynamism, despite a five-year pattern of progress. At 0.4 percent of the 1996 pool of firms tracked and 0.7 percent of survivors, business out-migration is more or less at normal levels. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Among retained firms, only the motor freight industry scored well in all vitality measures while demonstrating a high sales per employee rate among surviving firms. Retained firms in agricultural services, and the very small number of retained plastics and electronics firms, also indicate good sales per employee positioning. Other strong vitality indicators were also evident in specific categories among firms in agricultural services, building construction, wood products, furniture, printing, stone-clay-glass, fabricated metals, industrial machinery and transport equipment. Communications, business and professional services (except legal) seem to have lagged US patterns substantially.

## ARC Kentucky 3F

2001 firms analyzed:

5,896

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	105	48		
Retained Firms		47	45%	0.96
Sales	511,268	530,233	3.7%	0.03
Avg Jobs	5	8	60%	0.90
Replenishment	533	381	71%	0.86
Sales/Employee	102,254	75,748	-26%	0.55

## Startup Activity

96-01 Starts	530
Start Rate	12.7%
US Index	0.65

Startup activity rates are extremely low – less than two-thirds of the US average and twenty-two index points behind the Appalachian region – and retained startups are too few to assess meaningfully at most industry-specific levels. Aggregate startup retention and vitality rates are all low, below US and Appalachian averages. Sales vitality and sales per employee are of particular concern; the latter lags 45 percent below the US average.

Startup activity rates are high in primary metals, transport equipment and miscellaneous manufacturing, but very low among other manufacturing industries, communications and business services. The very small number of retained starts in transport equipment and miscellaneous manufacturing indicate some leading scores in various vitality ratings, but relatively low sales per employee for their industries.

## High Job Growth Firms:

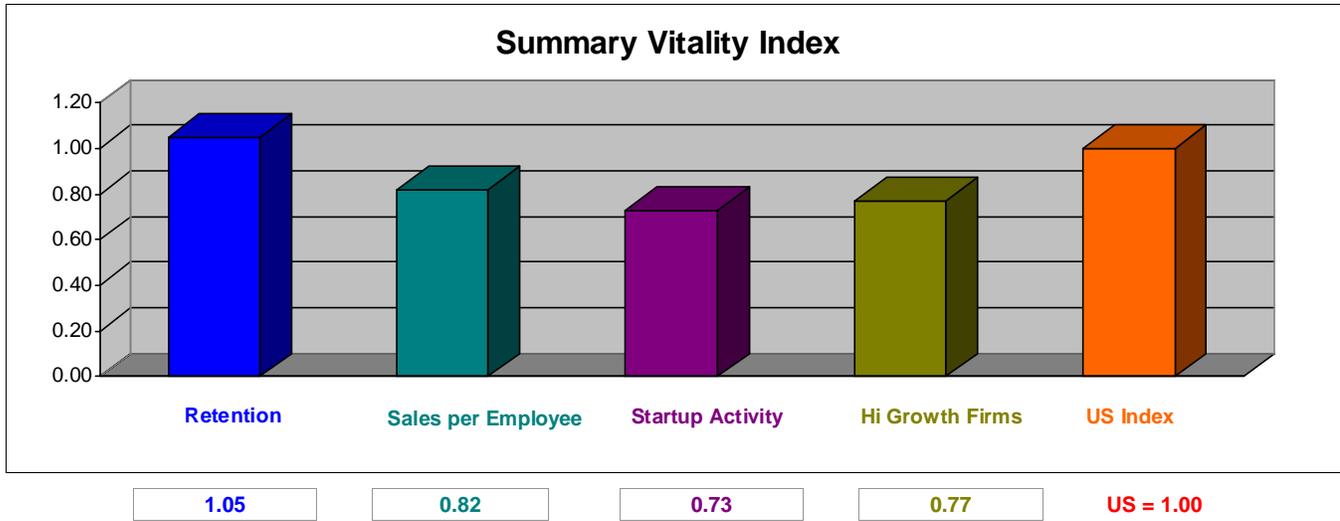
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	4,007	73	1.82%	0.90
Class I : < 5 Jobs>10 Jobs	2,787	54	1.94%	0.84
Class II : <10 Jobs>25 Jobs	3,420	25	0.73%	1.01
Class III : <25 Jobs>50 Jobs	3,781	14	0.37%	0.93
Class IV : <50 Jobs>100 Jobs	3,925	6	0.1500%	0.80
Class V : <100 Jobs> 250 Jobs	4,007	1	0.0200%	0.45

Aggregate concentrations of high growth firms are generally at the Appalachian average, about 10 percent below the US level. However, the district's high growth concentration is slightly above norm in Class II, firms which began the analysis period with fewer than 10 jobs and grew to more than 25 over five years. The solid number of firms in this and, slightly less so, the Class III category may provide future dynamism to a district lacking in entrepreneurial vitality.

# ARC Kentucky 3H

2001 firms analyzed:

6,832



ARC District 3H is administered by the Cumberland Valley Area Development District, including Bell, Clay, Harlan, Jackson, Knox, Laurel, Rockcastle and Whitley Counties.

Summary indices indicate patterns similar to other sluggish Appalachian economies, including relatively high retention and startup retention rates coupled with low levels of startup activity and skimpy concentrations of high growth firms. With the exception of scores for the startup retention index which match the Region's, the District trails Appalachia in every summary measure, including a low sales per employee index among retained firms.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	6,032	3,240		
Retained Firms		3,204	53%	1.05
Sales	454,667	598,816	31.7%	0.63
Avg Jobs	10	14	40%	0.96
Replenishment	58,459	45,973	79%	1.02
Sales/Employee	75,778	85,545	13%	0.82

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Despite high overall retention rates, sales vitality scores among retained firms are very low. While job change scores hover around average, this may not be entirely a good thing given the lag in sales vitality and, as importantly, in the current sales per employee index for retained firms. At 0.6 percent from the pool of 1996 firms tracked and 1.1 percent among survivors, business out-migration is relatively high, indicative of larger concerns. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Among substantial industries in the area, only the resource-based stone-clay-glass industry shows high vitality ratings in all indices including current sales per employee – and in this industry retention rates were relatively low. High sales vitality in building construction suggests some improved (but still lagging) positioning among industry firms. Furniture and plastics industries indicate high vitality ratings across the board in spite of low retained sales per employee rates. Vitality ratings are more mixed but with positive indicators in wood products, primary and fabricated metals and trucking. Surprisingly, sales vitality among retained firms is high in communications, while job vitality indicators are good in business services. Both, however, maintain very low sales per employee positioning.

## ARC Kentucky 3H

2001 firms analyzed:

6,832

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	142	68		
Retained Firms		68	48%	1.02
Sales	377,922	824,194	118.1%	0.97
Avg Jobs	6	9	50%	0.75
Replenishment	782	616	79%	0.95
Sales/Employee	75,584	103,024	36%	0.75

## Startup Activity

96-01 Starts	662
Start Rate	14.2%
US Index	0.73

Startup activity rates are extremely low in the district – more than one-quarter below US averages and twelve index points below trends in the Appalachian Region. At the same time, startup retention is above average (not unusual in low activity areas). More significantly, retained startup sales per employee rates are quite low.

Startup activity rates are at or above average in agricultural services, coal mining related industries and building construction. Several manufacturing industries – furniture, rubber, transport, instruments – indicate high rates, but the industries appear very small. Startup activity in value added services – communications, business services, engineering and research – is quite low.

All vitality measures among retained startups trail US patterns, but are within 5 percent in both sales and job replenishment ratings. Although the small number of retained firms constrains industry analysis, wood products, printing and fabricated metals indicate some high vitality ratings coupled with lagging sales per employee positioning. Business services indicates high sales per employee rates, probably due to a single large data processing firm.

## High Job Growth Firms:

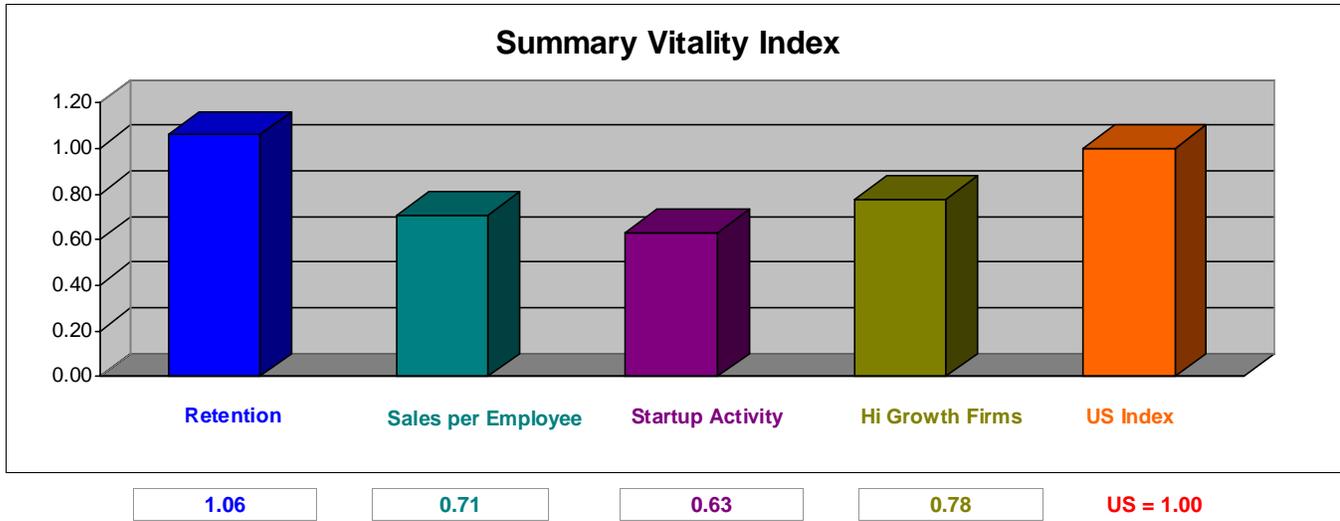
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	5,643	88	1.56%	0.77
Class I : < 5 Jobs>10 Jobs	3,762	72	1.91%	0.83
Class II : <10 Jobs>25 Jobs	4,723	34	0.72%	0.99
Class III : <25 Jobs>50 Jobs	5,283	19	0.36%	0.91
Class IV : <50 Jobs>100 Jobs	5,532	8	0.1400%	0.76
Class V : <100 Jobs> 250 Jobs	5,643	0	0.0000%	0.00

Concentrations of high growth firms are below average in all employment classes analyzed, but only 1 percent under US norms in Class II, firms which began the analysis period with fewer than 10 firms and grew to more than 25 over the five years tracked. This group of 72 firms could well form the nucleus of future growth in the absence of a sufficient ongoing core of entrepreneurial vitality.

# ARC Kentucky 3I

2001 firms analyzed:

3,162



ARC District 3I is administered by the Kentucky River Area Development District, encompassing Breathitt, Knott, Lee, Leslie, Letcher, Owsley, Perry and Wolfe Counties.

Summary vitality measures in this small district are lackluster. High retention levels, as is often the case in ARC districts, mask low levels of startup activity and low concentrations of high growth firms. In this district, startup survival rates are also low, as are vitality measures among retained startups. Overall retained firm vitality measures are much higher, but current sales per employee positioning is far behind average levels of both the US and the Appalachian region.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,884	1,555		
Retained Firms		1,533	53%	1.06
Sales	369,849	586,860	58.7%	1.16
Avg Jobs	8	12	50%	1.20
Replenishment	23,123	18,356	79%	1.03
Sales/Employee	73,970	73,357	-1%	0.71

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While retention rates and vitality measures are good in a relative sense, they also obscure rather low absolute figures. Snapshots of average firm employment and sales are well below US averages, providing important context for vitality measures. In addition, sales per employee levels remain less than three-quarters of the US average among retained firms. Business out-migration rates of 0.8 percent from the 1996 pool and 1.4 percent of survivors suggest a high level of relocation from the area. (While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.) Nevertheless, the retained firm vitality measures do suggest improvement that should not be overlooked.

Not a single industry for which individual data was available demonstrates high across the board vitality scores. However, some strong vitality measures (and low sales per employee positioning) are evident in building construction, apparel, wood products, industrial machinery and even business services.

# ARC Kentucky 3I

2001 firms analyzed:

3,162

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	61	19		
Retained Firms		18	30%	0.63
Sales	477,778	294,118	-38.4%	0.00
Avg Jobs	6	10	67%	1.00
Replenishment	345	183	53%	0.64
Sales/Employee	68,254	29,412	-57%	0.21

### Startup Activity

96-01 Starts	255
Start Rate	12.3%
US Index	0.63

Startup activity is very low, and equally low levels of startup retention don't help. Moreover, aggregate levels of vitality among the district's handful of retained startups from 1996 are all far under US and Appalachian levels with the exception of average retained startup job change, which is average. However, the scale of survivor startup firms is only two-thirds of the national average, and smaller than the average retained Regional startup as well.

Startup rates lag in every significantly scaled industry in the district except construction and industrial machinery. The population of retained startups is too small to develop meaningful industry-specific analysis.

## High Job Growth Firms:

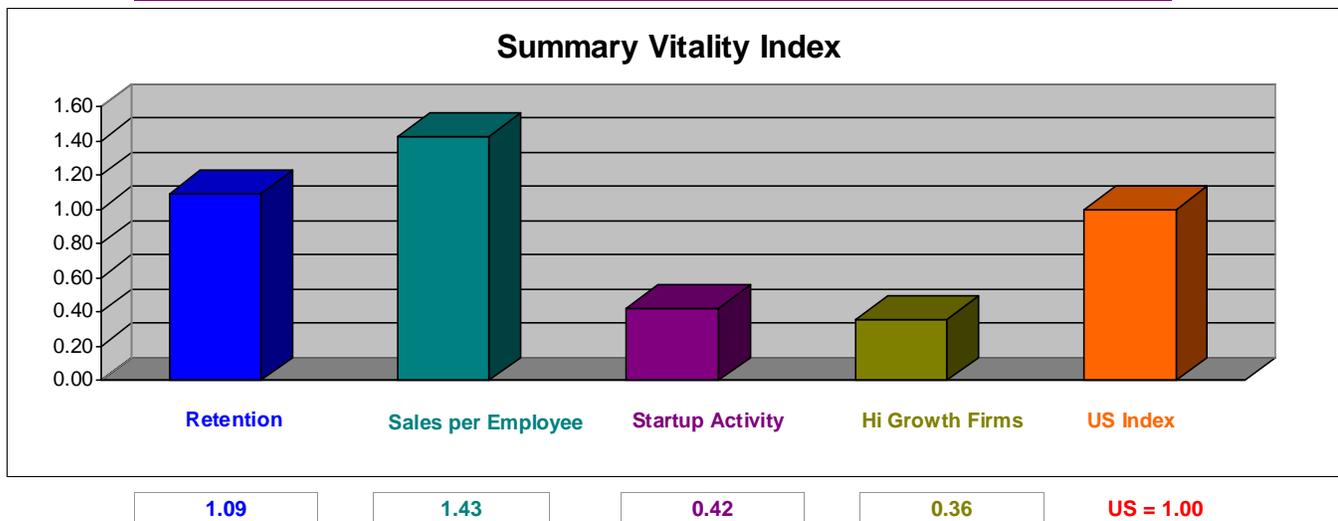
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,701	43	1.59%	0.78
Class I : < 5 Jobs>10 Jobs	1,835	30	1.63%	0.71
Class II : <10 Jobs>25 Jobs	2,262	12	0.53%	0.73
Class III : <25 Jobs>50 Jobs	2,524	8	0.32%	0.80
Class IV : <50 Jobs>100 Jobs	2,646	4	0.1500%	0.80
Class V : <100 Jobs> 250 Jobs	2,701	1	0.0400%	0.66

High growth firm concentrations are low in all employment classes analyzed, and do not range above 80 percent of the US average in any category. Aggregate rates are twelve index points behind the Appalachian region. In no segment do high growth firm concentrations indicate a trend large enough to capitalize upon.

## ARC Kentucky 3J

2001 firms analyzed:

503



ARC District 3J is administered by the Barren River Area Development District. It includes a single county, Monroe.

This district is so small as to make any conclusive analysis difficult. The summary retention index is well above average, as is startup retention – but number of identified retained firms is tiny. High growth firm concentrations are very small.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	445	253		
Retained Firms		245	55%	1.09
Sales	516,193	1,040,107	101.5%	2.00
Avg Jobs	10	13	30%	0.72
Replenishment	4,334	3,365	78%	1.01
Sales/Employee	86,032	148,587	73%	1.43

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Retention rates are high, and most vitality indices suggest high growth, but these appear to be a reflection of the scale of the district, including relatively outside wood products, industrial machinery, wholesale and health services firm sales which distort economy wide numbers. Notably, job growth vitality is quite low despite average retained firm size which is also below average.

## ARC Kentucky 3J

2001 firms analyzed:

503

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5	4		
Retained Firms		4	80%	1.71
Sales	225,000	375,000	66.7%	0.55
Avg Jobs	4	7	75%	1.13
Replenishment	18	26	144%	1.74
Sales/Employee	56,250	53,571	-5%	0.39

### Startup Activity

96-01 Starts	30
Start Rate	8.2%
US Index	0.42

Startup activity is too low to be assessed meaningfully at industry-specific levels, and trails far behind US and Appalachian patterns in aggregate. The few retained startups analyzed are in high value professional or high volume retail industries, skewing retained startup vitality numbers.

### High Job Growth Firms:

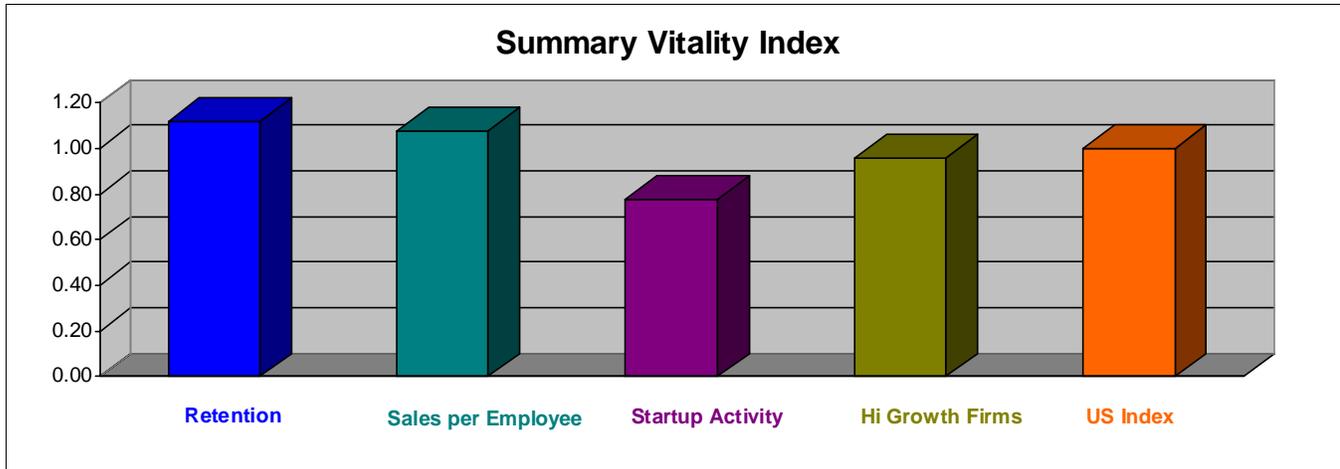
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	411	3	0.73%	0.36
Class I : < 5 Jobs>10 Jobs	313	3	0.96%	0.42
Class II : <10 Jobs>25 Jobs	361	0	0.00%	0.00
Class III : <25 Jobs>50 Jobs	391	0	0.00%	0.00
Class IV : <50 Jobs>100 Jobs	399	0	0.0000%	0.00
Class V : <100 Jobs> 250 Jobs	411	0	0.0000%	0.00

Concentrations of high growth firms are very low, and non-existent in employment categories larger than Class I (firms which began with fewer than five employees and grew to more than ten).

# ARC Maryland 4A

2001 firms analyzed:

9,266



1.12      1.08      0.78      0.96      US = 1.00

ARC District 4A is administered by the Tri-County Council for Western Maryland, and includes Allegany, Garrett and Washington Counties. Allegany County also comprises the whole of the Cumberland MSA, while Washington County is within the Washington DC-Baltimore MSA.

The very modest vitality performance of the Cumberland MSA, which accounts for about one-third of the business establishments in the district, makes it clear that the bulk of the district's apparent economic vitality emanates from other counties, and is in part influenced by spillover benefits from the Washington DC-Baltimore MSA. While retention indices are high in both the district and the Cumberland MSA – and startup activity rates low – the concentration of high growth firms in the district is almost twice that of the Cumberland MSA. Vitality indices and sales per employee positioning are also significantly lower in the Cumberland MSA (Allegany County).

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	7,629	4,327		
Retained Firms		4,300	56%	1.12
Sales	464,648	1,011,886	117.8%	2.32
Avg Jobs	12	16	33%	0.80
Replenishment	85,819	69,499	81%	1.05
Sales/Employee	66,378	112,432	69%	1.08

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall, the district indicates a strong vitality showing. High retention rates are matched by very strong sales and job replenishment vitality. Average retained job change rates are lower. As very positive context, retained firm sales per employee levels are 8 percent above national norms; by contrast, in Allegany County they are 35 percent below, with correspondingly lagging sales and job change vitality indices.

Positive vitality ratings and sales per employee positioning are indicated in textiles, wood products, stone-clay-glass and motor transport. Weaker sales per employee positioning coupled with strong vitality indicators relative to their industries are evident in coal mining, building construction, food products, furniture, paper products, chemicals, industrial machinery, electronics and transport equipment. Communications reflects high retention and job replenishment scores.

Business out-migration stands at 0.4 percent among firms from the 1996 pool that was tracked, and 0.6 percent of survivors, a relatively low rate of loss. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

## ARC Maryland 4A

2001 firms analyzed:

9,266

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	170	92		
Retained Firms		89	52%	1.12
Sales	468,142	741,772	58.5%	0.48
Avg Jobs	6	12	100%	1.50
Replenishment	1,072	1,002	93%	1.12
Sales/Employee	66,877	105,967	59%	0.77

## Startup Activity

96-01 Starts	975
Start Rate	15.2%
US Index	0.78

Low startup rates across the district are almost a virtual match with the Cumberland MSA, showing little influence from the Washington DC MSA's above average activity rates. This would suggest that the district's higher retention vitality ratings result more from the relocation of core MSA firms into Washington County and the district than from an infusion which has taken root and generated its own offshoots.

Startup activity is relatively solid in metalworking (primary and fabricated metals), but there are few other significantly scaled industries that show good startup rates. Larger groups of startups, in construction, motor freight, wholesale goods, business and personal services, all reflect activity rates significantly below US levels, though above the district's average rate.

While job vitality rates are good among retained startups – the sample is less than 100 – sales vitality and current sales per employee rates of retained startups from 1996 are quite low. In fact, very few industries indicate good retained startup sales per employee rates. However, a few appear to be making advances (from the limited data) in other vitality ratings, including paper products, business services and several retail industries.

## High Job Growth Firms:

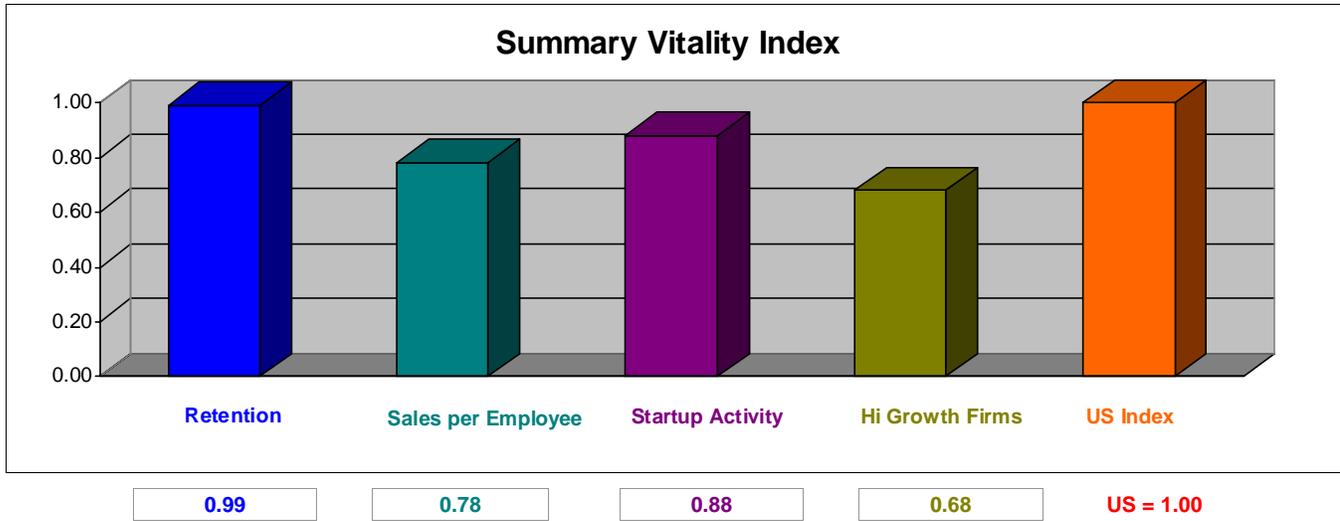
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	7,133	139	1.95%	0.96
Class I : < 5 Jobs>10 Jobs	4,531	109	2.41%	1.05
Class II : <10 Jobs>25 Jobs	5,837	45	0.77%	1.07
Class III : <25 Jobs>50 Jobs	6,653	21	0.32%	0.80
Class IV : <50 Jobs>100 Jobs	6,961	15	0.2200%	1.13
Class V : <100 Jobs> 250 Jobs	7,133	1	0.0100%	0.25

Unlike the Cumberland MSA, the district nears US average levels for concentrations of high growth firms, leading the Appalachian region by six index points as well. The district indicates leading concentrations in two small job classes (Class I and II) as well as Class IV. In the absence of strong entrepreneurial vitality in the district, these firms offer the best near term opportunity to focus on real economic generators and expand their influence throughout the weaker sections of the district, e.g., Allegany County.

# ARC Mississippi 5A

2001 firms analyzed:

4,632



ARC District 5A is administered by the Northeast Mississippi Planning and Development District, including Alcorn, Benton, Marshall, Prentiss, Tippah and Tishomingo Counties.

The district has a weak set of economic vitality indicators, including retention indices which are slightly below average (both overall and startup), startup activity rates 12 percent below average and a very low concentration of high growth firms. Vitality indices among retained firms, both longer term and startups – are correspondingly low, as are the retained firm sales per employee indicators for both groups.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,712	1,867		
Retained Firms		1,849	50%	0.99
Sales	1,382,469	566,575	-59.0%	0.00
Avg Jobs	11	14	27%	0.65
Replenishment	40,961	25,876	63%	0.82
Sales/Employee	92,165	80,939	-12%	0.78

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Modest retention rates are not enough to compensate for low vitality measures among retained firms in this small district. Vitality indices are all significantly below US and Appalachian levels. Concerns are re-emphasized by low sales per employee ratings among retained firms. Business out-migration – 0.5 percent of the firms tracked from the 1996 pool and 1.0 percent of survivors – is high, but more indicative of problems than the root of them. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Only the small miscellaneous manufacturing industry indicates high vitality indices across the board, including good sales per employee positioning. Agricultural services, heavy construction, wood products and personal services are the only industries to evidence good sales per employee positioning among retained firms. And only a few industries – plastics, primary metals industrial machinery and transport equipment – show leading vitality indices in more than one category. The absence of high sales per employee industries among these could constitute additional cause for concern.

## ARC Mississippi 5A

2001 firms analyzed:

4,632

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	129	60		
Retained Firms		60	47%	0.99
Sales	994,737	753,448	-24.3%	0.00
Avg Jobs	5	8	60%	0.90
Replenishment	569	458	80%	0.97
Sales/Employee	165,789	94,181	-43%	0.68

### Startup Activity

96-01 Starts	545
Start Rate	17.2%
US Index	0.88

Startup activity is 12 percent below average, a single index point above the Appalachian average. Startups are retained at about average rates, and show job vitality scores just under average. However, aggregate sales vitality and sales per employee ratings among retained startups from 1996 are very low.

Although representing a small number of firms, startup activity rates are higher than average in a number of manufacturing industries, including food products, apparel, wood products, furniture and plastics among non-durable manufacturers, in transport equipment and business services. Although sales per employee positioning appears weak, many of these same industries reflect high vitality ratings among retained startups from 1996, including wood products, furniture, transport equipment and business services. Vitality measures among retained startups in industrial machinery are also high. Conclusions are constrained, however, by the small number of firms in the sample.

### High Job Growth Firms:

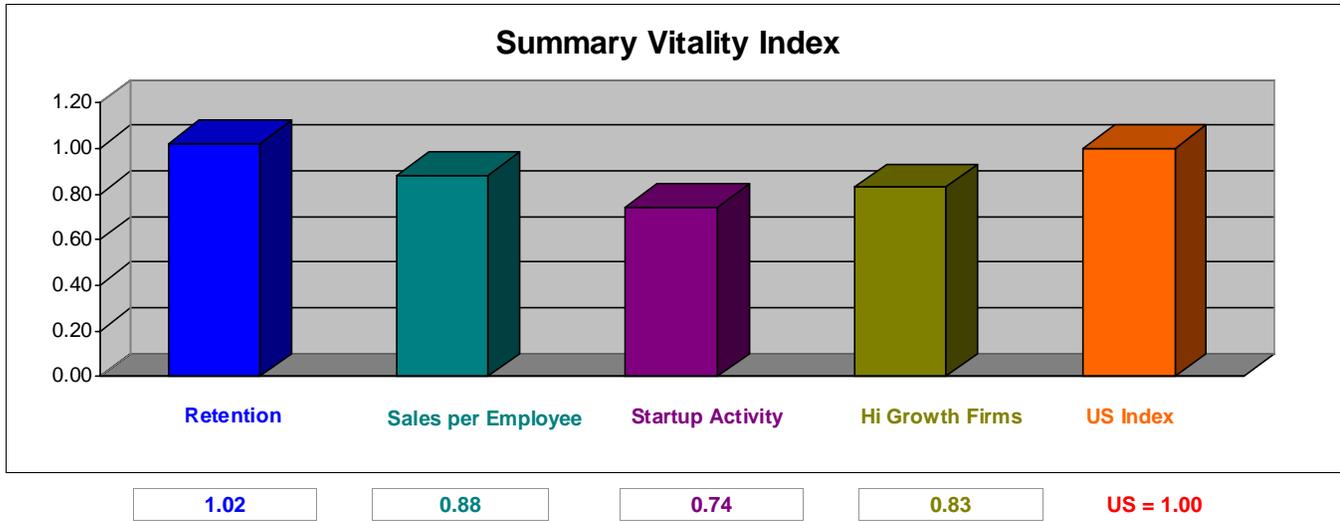
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,502	48	1.37%	0.68
Class I : < 5 Jobs>10 Jobs	2,444	40	1.64%	0.71
Class II : <10 Jobs>25 Jobs	2,977	19	0.64%	0.88
Class III : <25 Jobs>50 Jobs	3,290	6	0.18%	0.46
Class IV : <50 Jobs>100 Jobs	3,429	3	0.0900%	0.46
Class V : <100 Jobs> 250 Jobs	3,502	0	0.0000%	0.00

The district shows weak concentrations of high growth firms across all employment classes examined, ranging no higher than 88 percent of the national average in Class II, firms which began with fewer than 10 employees and grew to more than 25. In the absence of high concentrations of high growth firms, or of high levels of startup activity, the small number of dynamic retained startups in value added industries could provide a key to the district's economic future.

# ARC Mississippi 5B

2001 firms analyzed:

9,328



ARC District 5B is administered by the Three Rivers Planning and Development District, and includes Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc and Union Counties.

Summary vitality rates in the district are lackluster, although not among the Appalachian region's lowest. As in many relatively sluggish economic areas, the retention index is above average, although in this case startup retention falls 8 percent below US patterns. Startup activity rates are less than three-quarters of the national level, and 13 index points below the Appalachian average. High growth firm concentrations are significantly below both as well. While retained firm job vitality rates trails US patterns, it is relatively solid. Positive measures are "catching up" as evidenced by the still lagging sales per employee indicator (just below the Appalachian average). All vitality rates among retained startups appear very low.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	7,769	4,014		
Retained Firms		3,984	51%	1.02
Sales	499,133	821,620	64.6%	1.27
Avg Jobs	13	18	38%	0.92
Replenishment	98,400	69,519	71%	0.92
Sales/Employee	71,305	91,291	28%	0.88

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The district boasts high aggregate rates both in the retention index and sales vitality among retained firms. However, despite the high sales change index, lower than average job vitality and lower than average annual sales, the aggregate sales per employee measure remains low among retained firms. Business out-migration rates are 0.4 percent from the pool of 1996 firms tracked, and 0.7 percent of survivors; this issue not the district's major problem. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Alone among the district's industries, the large rubber-plastics segment stands out for leading vitality indices all categories, including an above average sales per employee index among retained firms. The group appears strong enough to focus targeted development work. The often-linked industrial machinery group does not appear nearly as strong. Other industries with strong vitality indicators (but less commanding sales per employee position) include textiles, furniture, printing, chemicals and primary metals. Business services also scored high on multiple indices.

## ARC Mississippi 5B

2001 firms analyzed:

9,328

## Startups:

	1996	5 Year Survivors	Change Rate	US Index	Startup Activity	
All Firms	224	96			96-01 Starts	889
Retained Firms		96	43%	0.92	Start Rate	14.5%
Sales	854,605	958,025	12.1%	0.10	US Index	0.74
Avg Jobs	9	12	33%	0.50		
Replenishment	2,048	1,106	54%	0.65		
Sales/Employee	122,086	106,447	-13%	0.77		

Startup activity rates are quite low, as are aggregate vitality indicators among retained startup firms. Both sales vitality and sales per employee are well below national levels, suggesting patterns that are losing ground – as they are in the Appalachian region, although not as dramatically. The number of retained startup firms from 1996 is under one hundred, constraining industry-specific analysis.

Among industries with significant numbers of firms, startup rates are high only in furniture and chemicals. Plastics startup activity is very low, and printing about average. Among retained startups, only construction trades contractors show high across the board indices. Sales per employee measures are also high among retained startups in wholesale durables, personal and business services, where the sales vitality index was high as well. Other industries indicating multiple high vitality ratings included agricultural services, wood products, furniture and motor freight.

## High Job Growth Firms:

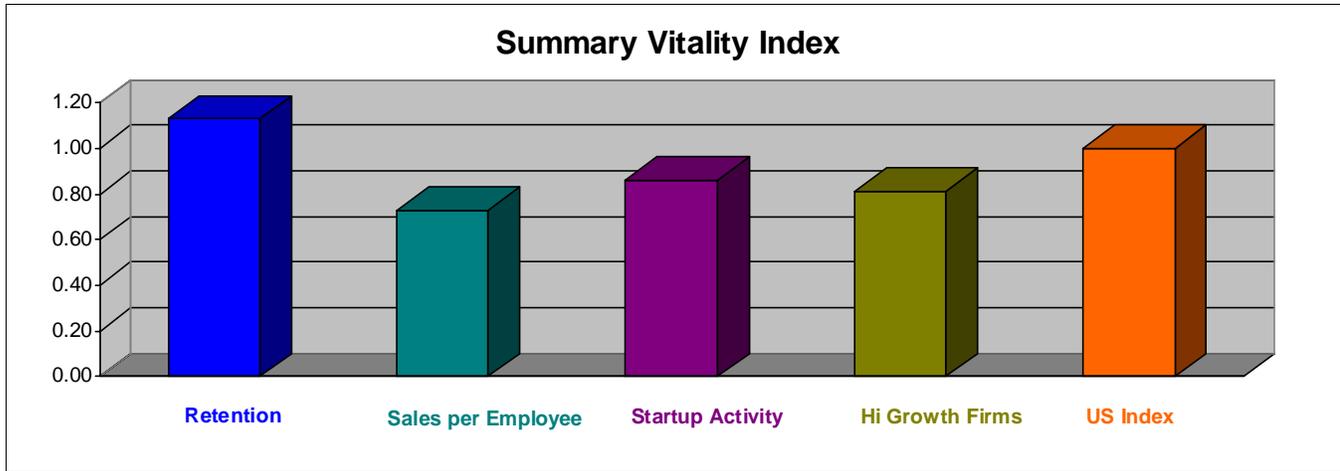
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	7,200	121	1.68%	0.83
Class I : < 5 Jobs>10 Jobs	4,924	97	1.97%	0.86
Class II : <10 Jobs>25 Jobs	6,055	35	0.58%	0.80
Class III : <25 Jobs>50 Jobs	6,763	15	0.22%	0.56
Class IV : <50 Jobs>100 Jobs	7,035	12	0.1700%	0.90
Class V : <100 Jobs> 250 Jobs	7,200	5	0.0700%	1.24

High growth firm concentrations lag US and Appalachian patterns across the board, with an aggregate score 17 percent below US patterns and seven index points behind the Appalachian average. Given these low concentrations of real economic engines and even lower entrepreneurial vitality rates, it would appear that spin off benefits from the district's most vital industry groups, including rubber-plastics and furniture, might present some of the district's best opportunities.

# ARC Mississippi 5C

2001 firms analyzed:

6,362



1.13      0.73      0.86      0.81      US = 1.00

ARC District 5C is administered by the Golden Triangle Planning and Development District, including Choctaw, Clay, Lowndes, Noxubee, Oktibbeha, Webster and Winston Counties.

This district follows a common pattern for relatively low-growth areas, including high retention rates (in this case among both the general business population and startup firms) coupled with low startup activity levels (24 percent below the US average) and weak concentrations of high growth firms. Retained firm sales and job vitality measures are weak, as is the sales per employee rate. Job related measures among retained startups are higher than average. Food and wood products seem to be the most consistently performing significant industries.

**Retention:**

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,850	2,774		
Retained Firms		2,758	57%	1.13
Sales	428,738	533,398	24.4%	0.48
Avg Jobs	13	16	23%	0.55
Replenishment	60,558	44,911	74%	0.96
Sales/Employee	71,456	76,200	7%	0.73

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

High overall retention rates are undercut by weak vitality measures in sales and job change categories, despite a relatively solid job replenishment performance. Adding to the low vitality image, aggregate sales per employee ratings among retained firms are more than one-quarter below US levels, and considerably lower than Appalachian levels as well. Aggregate average sales are significantly below US and Appalachian averages. Business out-migration was 0.3 percent of the 1996 business establishment population, and only 0.6 percent of survivors. This is relatively good news, but not all that unusual in rural, low vitality situations. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Plastics (only a handful of establishments) and railroad-related industries boasted the only high vitality ratings across the board, including high current sales per employee rates among retained firms. Other value-added industries with more than one high vitality measure but weaker sales per employee positioning included building construction and trades contractors, food products, wood products, chemicals, leather, fabricated metals and instruments.

## ARC Mississippi 5C

2001 firms analyzed:

6,362

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	143	79		
Retained Firms		79	55%	1.18
Sales	527,083	798,551	51.5%	0.42
Avg Jobs	7	12	71%	1.07
Replenishment	923	907	98%	1.18
Sales/Employee	58,565	88,728	52%	0.64

## Startup Activity

96-01 Starts	694
Start Rate	16.7%
US Index	0.86

Startup activity rates are only one index point below the Appalachian average, but 14 percent under national levels. Startup retention is very high. Retained startups from the 1996 pool indicate relatively high levels of job vitality, but sales vitality weakness is a concern, especially when viewed in the context of low sales per employee rates among retained startups.

Activity rates are high in selected industries, including food products, apparel and business services, which are often technology-driven. Both primary metals and furniture also indicate high rates of entrepreneurial vitality, but the raw numbers here are so low that the measures may not mean much. Among retained startups, leading performances were developed in building and special trades construction industries, food products and wood products. Retention rates were very high in business services, suggesting the possibility of pent-up demand.

## High Job Growth Firms:

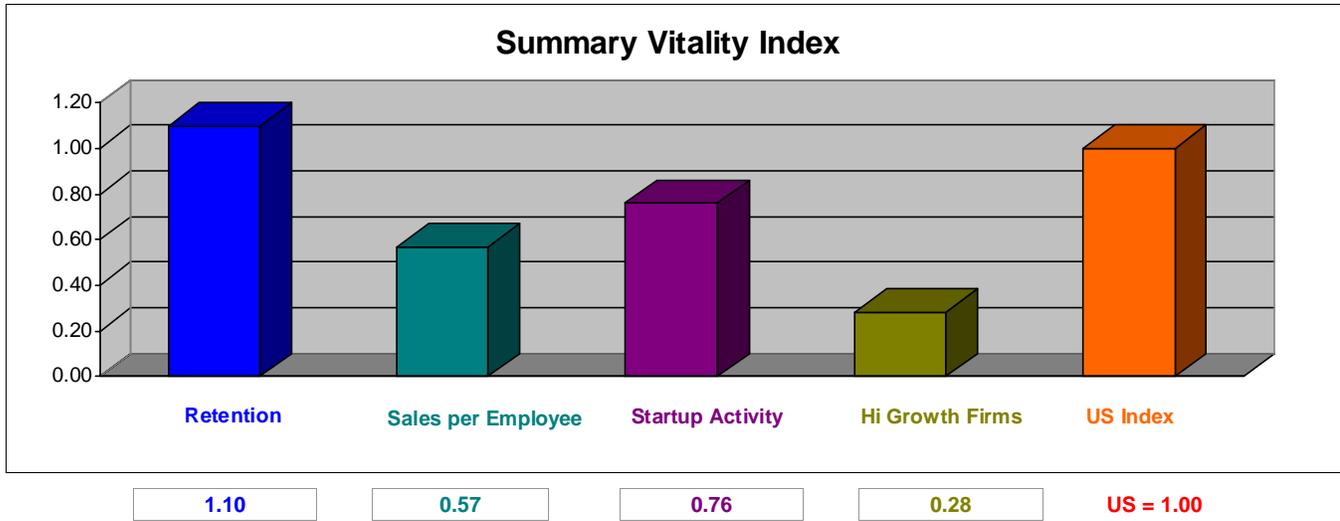
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	4,552	75	1.65%	0.81
Class I : < 5 Jobs>10 Jobs	3,013	62	2.06%	0.90
Class II : <10 Jobs>25 Jobs	3,799	23	0.61%	0.84
Class III : <25 Jobs>50 Jobs	4,269	10	0.23%	0.59
Class IV : <50 Jobs>100 Jobs	4,453	2	0.0400%	0.24
Class V : <100 Jobs> 250 Jobs	4,552	2	0.0400%	0.79

Concentrations of high growth firms are low in all employment classes, ranging from indexed scores of 0.24 in Class IV up to 90 percent of the US average in Class I, the smallest employment class. This is consistent with the high vitality ratings of retained startup firms in the business population overall.

# ARC Mississippi 5D

2001 firms analyzed:

231



ARC District 5D is administered by the East MS Planning and Development District, and covers Kemper County.

The small economic scale of this district makes meaningful analysis difficult. The general patterns of a low vitality area can be seen (including a higher than average overall retention rate), with correspondingly low rates in startup activity, startup retention and especially the high growth firm index. With the exception of overall retention rates (which are two index points higher), all summary measures are significantly below Appalachian averages.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	184	102		
Retained Firms		102	55%	1.10
Sales	315,646	297,403	-5.8%	0.00
Avg Jobs	11	11	0%	0.00
Replenishment	1,868	1,096	59%	0.76
Sales/Employee	39,456	59,481	51%	0.57

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Supporting comments elsewhere about the general lack of business relocations from even low vitality rural areas, it's worth noting that not a single firm from the 1996 pool of 186 firms was identified as an out-migrant from the district by the start of 2001. Other firms stayed and survived in relatively large numbers, but vitality rates among them were dismal. All vitality measures were extremely low, and aggregate average sales figures – already significantly below national and Appalachian averages – dropped during the time series. The positioning indicator of sales per employee among retained firms was just over one-half the national average, and 37 index points below Appalachian levels.

The wood products and rubber-plastics industries appear to indicate good performance, but the number of firms in each is too limited for very meaningful analysis. No other value-added industries indicate high vitality measures.

## ARC Mississippi 5D

2001 firms analyzed:

231

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4	1		
Retained Firms		1	25%	0.53
Sales	100,000	100,000	0.0%	0.00
Avg Jobs	4	4	0%	0.00
Replenishment	14	4	29%	0.34
Sales/Employee	25,000	25,000	0%	0.18

### Startup Activity

96-01 Starts	24
Start Rate	14.7%
US Index	0.76

The raw number of firms identified as engaged in startup activity over the five-year analysis period is so low as to make meaningful analysis a stretch. Suffice it to say that activity rates are very low, retained startups extremely rare, and those few industries which create high paper startup activity rates fail to do so in numbers from which any real conclusions can be drawn.

### High Job Growth Firms:

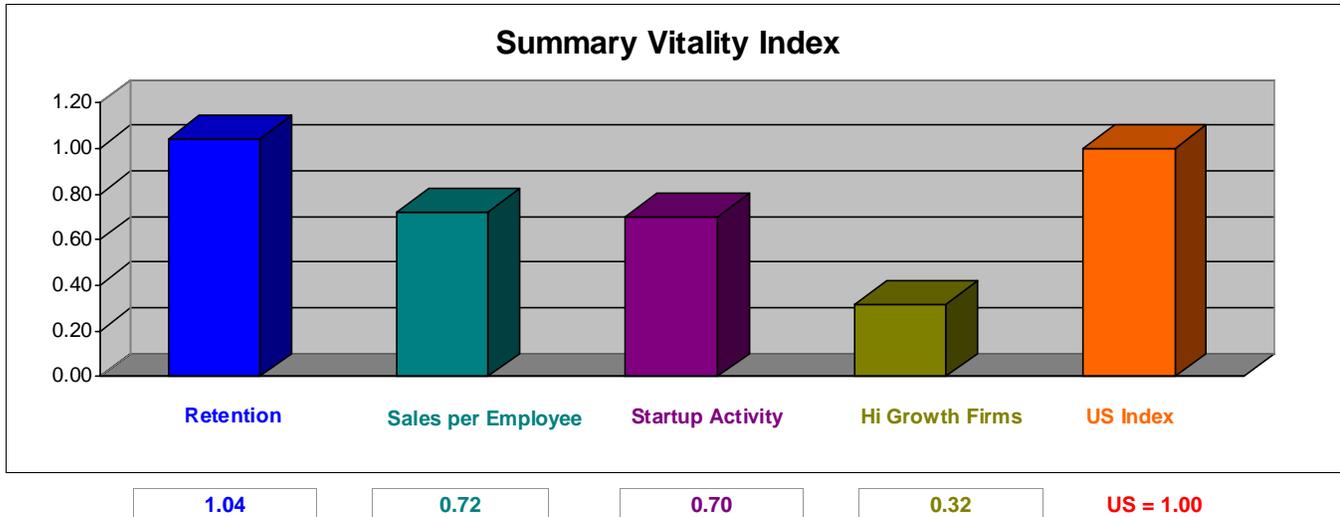
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	173	1	0.58%	0.28
Class I : < 5 Jobs>10 Jobs	127	0	0.00%	0.00
Class II : <10 Jobs>25 Jobs	150	0	0.00%	0.00
Class III : <25 Jobs>50 Jobs	157	0	0.00%	0.00
Class IV : <50 Jobs>100 Jobs	170	1	0.5900%	3.10
Class V : <100 Jobs> 250 Jobs	173	0	0.0000%	0.00

Only one firm in the district was identified as fitting defined high growth patterns, and this one was in Class IV, beginning with fewer than 50 jobs and ending the analysis period reporting more than 100.

## ARC Mississippi 5E

2001 firms analyzed:

417



ARC District 5E is administered by the North Central Planning and Development District, and covers Yalobusha County.

The small economic scale of this district makes meaningful analysis difficult. The general patterns of a low vitality area can be seen (including an above average retention rate), with correspondingly low rates in startup activity, startup retention and especially the high growth firm index. Sales per employee rates lag among retained firms. All measures, including the district's high retention rate, are below Appalachian averages.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	318	169		
Retained Firms		167	53%	1.04
Sales	340,079	451,145	32.7%	0.64
Avg Jobs	10	13	30%	0.72
Replenishment	3,210	2,132	66%	0.86
Sales/Employee	56,680	75,191	33%	0.72

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Two firms were identified as out-migrants over the analysis period, creating high out-migration rates (0.6 percent of the 1996 pool, 1.2 percent of survivors) which are not statistically meaningful. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim. Other firms stayed and survived in relatively large numbers, but vitality rates among them were weak. All vitality measures were extremely low, and aggregate average sales figures – already significantly below national and Appalachian averages – fell further behind. The positioning indicator of sales per employee among retained firms was less than three-quarters of the US level, and eighteen index points below Appalachian levels.

The number of firms in individual value-added industries is too low to develop much industry-specific analysis. Even so, rates appear low, especially in the sale per employee positioning category. Limited industries – building construction, wood products and stone-clay-glass – indicate scattered higher vitality measures.

## ARC Mississippi 5E

2001 firms analyzed:

417

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	6	1		
Retained Firms		1	17%	0.36
Sales	1,600,000	3,000,000	87.5%	0.72
Avg Jobs	45	15	-67%	0.00
Replenishment	269	15	6%	0.07
Sales/Employee	35,556	200,000	463%	1.45

### Startup Activity

96-01 Starts	37
Start Rate	13.6%
US Index	0.70

The raw number of firms identified as engaged in startup activity over the five-year analysis period is so low as to make meaningful analysis a stretch. Suffice it to say that activity rates are very low, retained startups extremely rare, and those few industries which create high paper startup activity rates usually do so based on a single startup or two – which by and large did not survive the analysis period. Meaningful analysis of retained startup firms is constrained by the small number of firms identified in specific industries.

### High Job Growth Firms:

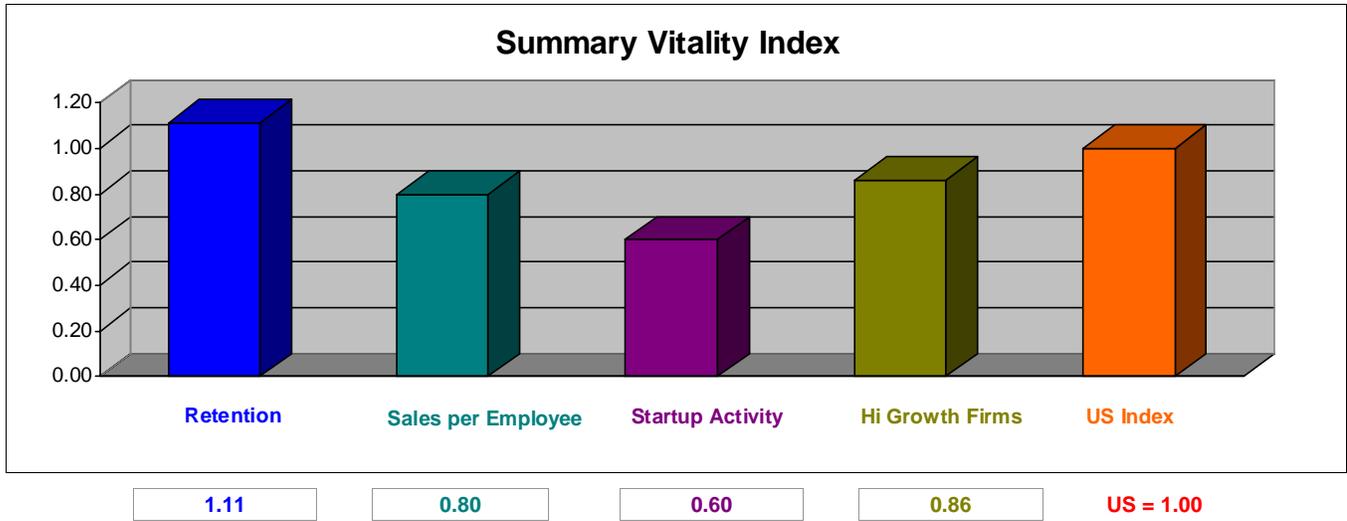
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	304	2	0.66%	0.32
Class I : < 5 Jobs>10 Jobs	226	1	0.44%	0.19
Class II : <10 Jobs>25 Jobs	278	1	0.36%	0.50
Class III : <25 Jobs>50 Jobs	294	1	0.34%	0.86
Class IV : <50 Jobs>100 Jobs	301	0	0.0000%	0.00
Class V : <100 Jobs> 250 Jobs	304	0	0.0000%	0.00

Only two firms in the district were identified as fitting defined high growth patterns, and these fit into definitions for three classes: Class I, II and III, since one of the firms leapfrogged into a second class by virtue of reported growth patterns.

## ARC New York 6A

2001 firms analyzed:

10,965



ARC District 6A is administered by the Southern Tier West Regional Planning and Development Board, and includes Allegany, Cattaraugus and Chautauqua Counties. Chautauqua County is contiguous with the Jamestown NY MSA.

The District's summary vitality measures fit patterns for many northern districts with relatively low vitality, including high retention rates coupled with low startup activity and below average concentrations of high growth firms. The summary retained firm sales per employee index lags US levels by 20 percent. Summary measures in the district all fall below those of the Jamestown MSA, indicating more serious problems in Allegany and Chautauqua Counties. Startup activity and growth firm concentrations are also below Appalachian averages.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	10,057	5,664		
Retained Firms		5,632	56%	1.11
Sales	422,438	579,542	37.2%	0.73
Avg Jobs	11	15	36%	0.87
Replenishment	100,509	81,382	81%	1.05
Sales/Employee	70,406	82,792	18%	0.80

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While aggregate retention rates in the district are high, vitality measures are significantly below average in all but the job replenishment category. Sales per employee positioning of retained firms is about 20 percent below average. While job vitality is stronger in the MSA, sales and sales per employee measures are not. Business out-migration is not a major concern: Out-migration rates were 0.3 percent of the 1996 pool of firms tracked, and 0.6 percent of survivors, a little below average. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Various vitality measures are high in several core industries, including wood products, furniture, paper, chemicals, plastics, fabricated metals, the plastics-linked industrial machinery segment and instruments. While both job and sales change measures are above average in various of these industries, sales per employee levels appear uniformly low. Although retention is average to above-average, all vitality measures in both communications and business services are low.

## ARC New York 6A

2001 firms analyzed:

10,965

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	214	117		
Retained Firms		115	54%	1.15
Sales	630,233	693,939	10.1%	0.08
Avg Jobs	6	8	33%	0.50
Replenishment	1,270	899	71%	0.85
Sales/Employee	78,779	99,134	26%	0.72

## Startup Activity

96-01 Starts	907
Start Rate	11.7%
US Index	0.60

Startup activity rates are distressingly low in the district, and only marginally higher in the Jamestown MSA. All aggregate vitality ratings among retained startups are also very low, causing the already weak sales per employee rate among retained starts to fall further behind.

Wood products and printing are the only value added industries indicating higher than average startup rates. Startup activity is surprisingly low in some of the district's core metalworking industries, especially fabricated metals, though only 6 percent below average in industrial machinery. Startup rates are extremely low in value-added communications and business services.

Although activity rates are low, retained startups in fabricated metals, motor freight transport and whole non-durables indicate high vitality scores. Business services startups reflect retention rates 40 percent above average, pointing to market gaps in the industry common to many northern ARC districts

## High Job Growth Firms:

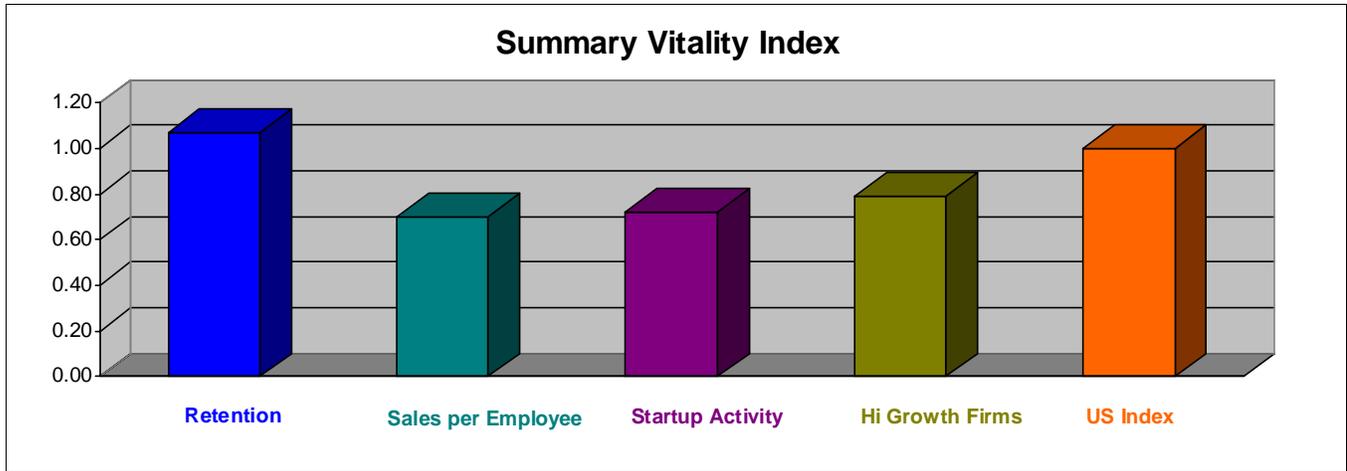
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	9,289	162	1.74%	0.86
Class I : < 5 Jobs>10 Jobs	6,486	128	1.97%	0.86
Class II : <10 Jobs>25 Jobs	7,951	45	0.57%	0.78
Class III : <25 Jobs>50 Jobs	8,833	33	0.37%	0.94
Class IV : <50 Jobs>100 Jobs	9,127	20	0.2200%	1.15
Class V : <100 Jobs> 250 Jobs	9,289	3	0.0300%	0.58

Concentrations of high growth firms in the district are 14 percent lower than the US average and four index points under the Appalachian region. Notably, both the Jamestown MSA and the Erie MSA directly to the south both host high growth firm concentrations somewhat closer to national levels. These concentrations could provide spillover opportunities for the district which would compensate, at least in part, for the lag in entrepreneurial vitality.

# ARC New York 6B

2001 firms analyzed:

7,528



1.07      0.70      0.72      0.79      US = 1.00

ARC District 6B is administered by the Southern Tier Central Regional Planning and Development Board, including Chemung, Schuyler and Steuben Counties. Chemung County is contiguous with the Elmira NY MSA.

The most apparent difference between summary vitality measures in the district and the Elmira MSA is the concentration of high growth firms, which is fifteen index points higher in the MSA. The MSA also indicates a much high startup retention index, one which is above average, while district rates are about 7 percent below national patterns. Other ratings – a high overall retention index, and startup activity rates which lag national trends by more than 25 percent -- are similar. The District's retained firm sales per employee indicator lags US patterns by 30 percent.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	7,087	3,855		
Retained Firms		3,837	54%	1.07
Sales	435,254	651,525	49.7%	0.98
Avg Jobs	13	24	85%	2.03
Replenishment	87,335	92,343	106%	1.37
Sales/Employee	72,542	72,392	0%	0.70

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While current sales per employee positioning is low in both the district and MSA, vitality measures in the district appear considerably higher among retained firms. Aggregate sales vitality measures are close to national levels, while both employment vitality rates lead US, Appalachian and Elmira MSA levels. At 0.3 percent of the 1996 pool of firms tracked and 0.5 percent of survivors, business out-migration rates are low. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Construction, wood products and furniture industries reflect high ratings across multiple measures, including high sales per employee position. But several other value-added industries also indicate multiple leading vitality measures, but lower sales per employee. These include agricultural services, stone-clay-glass, primary and fabricated metals. Business services retention is very strong, possibly indicating pent-up demand in an industry which often lags in northern ARC areas. Measures in communications are very strong in all categories except sales per employee among retained firms.

## ARC New York 6B

2001 firms analyzed:

7,528

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	151	68		
Retained Firms		66	44%	0.93
Sales	519,565	305,085	-41.3%	0.00
Avg Jobs	6	9	50%	0.75
Replenishment	804	560	70%	0.84
Sales/Employee	103,913	61,017	-41%	0.44

### Startup Activity

96-01 Starts	721
Start Rate	14.0%
US Index	0.72

While startup activity ratings are very low, specific core industries indicate leading measures, including wood products, stone-clay-glass, and metalworking industries, including primary metals, fabricated metal, electronics and instruments. Several of these also performed well in multiple vitality rankings among retained firms. Retained startups in construction, electronics and instruments also scored well in multiple vitality categories. However, aggregate vitality and sales per employee ratings among retained startups were quite low, corresponding to weak performance in the MSA.

### High Job Growth Firms:

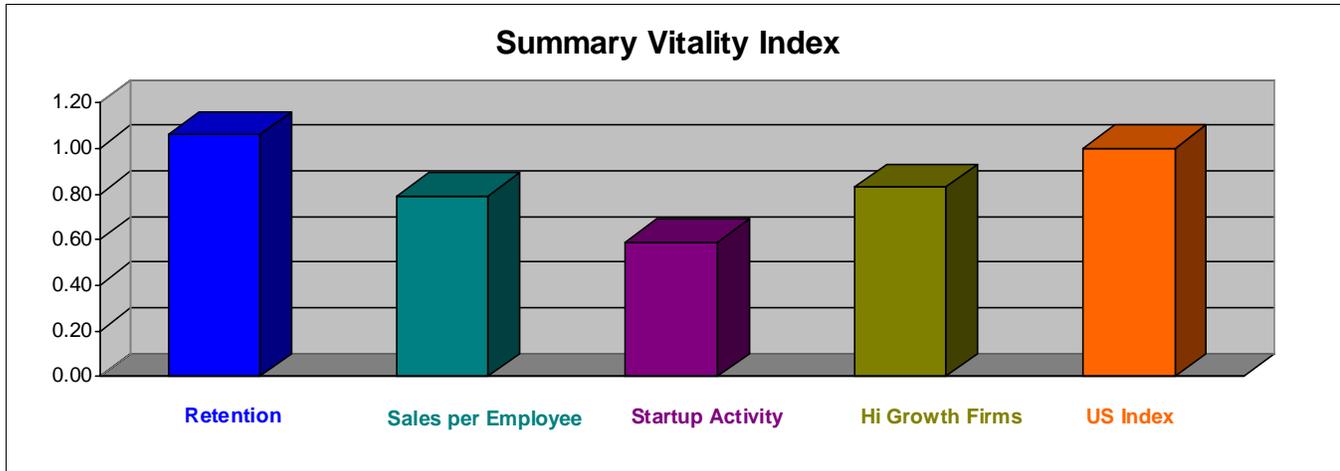
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	6,605	106	1.60%	0.79
Class I : < 5 Jobs>10 Jobs	4,407	83	1.88%	0.82
Class II : <10 Jobs>25 Jobs	5,543	32	0.58%	0.80
Class III : <25 Jobs>50 Jobs	6,196	19	0.31%	0.77
Class IV : <50 Jobs>100 Jobs	6,451	11	0.1700%	0.90
Class V : <100 Jobs> 250 Jobs	6,605	5	0.0800%	1.35

Concentrations of high growth firms in the district are well below levels in the US, Appalachia and the Elmira MSA. The district has lower than average concentrations in every employment class, reinforcing the vitality lag created by the gap in entrepreneurial vitality. As a result, the district depends on solid, even leading performance from a handful of industries, most of which still lag in sales per employee indicators among retained firms nationally.

# ARC New York 6C

2001 firms analyzed:

22,445



1.06      0.79      0.59      0.83      US = 1.00

ARC District 6C is administered by the Southern Tier East Regional Planning and Development Board, and includes Broome, Chenango, Cortland, Delaware, Otsego, Schoharie, Tioga and Tompkins Counties. Broome and Tioga Counties are in the Binghamton MSA, while Schoharie is covered by the Albany MSA.

Summary scores in the district suggest common patterns for relatively slow-growth areas, including high overall and startup retention rates, but coupled with very low entrepreneurial activity levels and low concentrations of growth firms. The retained firm sales per employee index lags both US and the Appalachian rate (0.90) significantly. Aggregate vitality scores in both MSAs linked to the district are considerably higher than the district's scores themselves. Traditional industries in both MSAs, including metalworking, exhibit at least some strong vitality ratings which could be mined for opportunities in the district.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	21,709	11,693		
Retained Firms		11,610	54%	1.06
Sales	409,722	574,381	40.2%	0.79
Avg Jobs	12	15	25%	0.60
Replenishment	249,759	177,328	71%	0.92
Sales/Employee	68,287	82,054	20%	0.79

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Despite high retention rates, every aggregate sales and job measure in the district falls below corresponding rates in each MSA, the US and the Appalachian region. The contrast with the Albany MSA is particularly sharp. Aggregate sales per employee positioning in the district is 21 percent below US levels, not far behind rates in the Binghamton MSA but trailing Albany by a considerable margin. However, district business out-migration levels are 0.4 percent of the 1996 pool of firms tracked and 0.7 percent of survivors, not much above standard levels. Out-migration from the Binghamton MSA (but not Albany) is much higher. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Despite lower overall vitality figures, the district evidences vitality in a number of the same industries as the linked MSAs, including wood products and furniture, as well as each of the metalworking industries – primary metals, fabricated metals, industrial machinery, electronics and transport equipment and instruments, although all except transport equipment indicate low sales per employee positioning. Retention rates are good in technology driven industries such as communications and business services, and each reflects some leading vitality measures as well. Vitality rates are weak in most wholesale, retail and service industries, accounting for much of the lag in aggregate scores.

## ARC New York 6C

2001 firms analyzed:

22,445

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	472	256		
Retained Firms		249	53%	1.13
Sales	772,924	1,240,789	60.5%	0.50
Avg Jobs	6	11	83%	1.25
Replenishment	2,883	2,632	91%	1.10
Sales/Employee	96,616	124,079	28%	0.90

## Startup Activity

96-01 Starts	1,822
Start Rate	11.5%
US Index	0.59

While startup activity is extremely limited – too limited to overlook as a major weakness – job measures among retained startup firms are good. Sales vitality is weak, but current sales per employee positioning is only 10 percent below par, above Appalachian and Albany MSA levels. Both job vitality indices among retained startups are strong.

Startup activity indicates leading levels in only a few value added industries with more than a handful of firms, among them plastics, stone-clay-glass, primary and fabricated metals. Retained startup job and sales measures are quite strong among metalworking startups as well, as it is among startups in industrial machinery. Both fabricated metals and industrial machinery startups also indicate good sales per employee positioning. Startups in motor freight transport and the technology-driven business services industry also demonstrate multiple high vitality ratings. Sales vitality in business services was weak, although ultimate sale per employee levels among retained firms were only 10 percent below national levels.

## High Job Growth Firms:

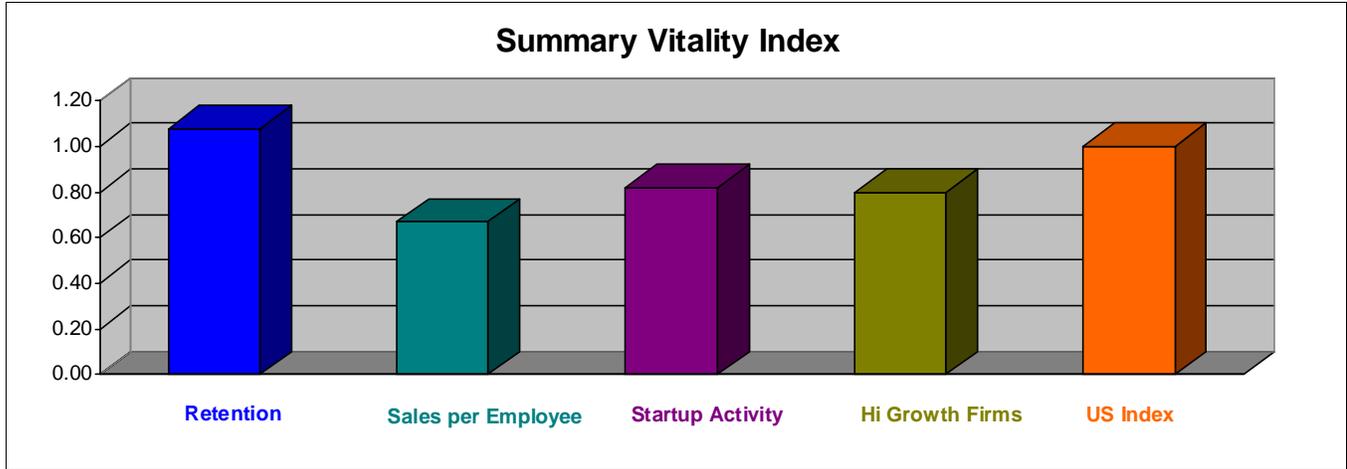
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	20,314	344	1.69%	0.83
Class I : < 5 Jobs>10 Jobs	14,091	280	1.99%	0.86
Class II : <10 Jobs>25 Jobs	17,173	87	0.51%	0.70
Class III : <25 Jobs>50 Jobs	19,174	42	0.22%	0.55
Class IV : <50 Jobs>100 Jobs	19,916	32	0.1600%	0.85
Class V : <100 Jobs> 250 Jobs	20,314	5	0.0200%	0.44

Concentrations of high growth firms in the district are 83 percent of the national norm. No single employment class showed higher than average concentrations, which ranged down to 55 percent of the US average in Class III and 44 percent in the largest class analyzed, Class V. High growth firms concentrations in the linked MSAs ranged five to eight index points higher, and were seven points higher in the Appalachian regional index.

# ARC North Carolina 7A

2001 firms analyzed:

7,728



1.08      0.67      0.82      0.80      US = 1.00

ARC District 7A is administered by the Southwestern NC Planning and Development Commission, including Cherokee, Clay, Graham, Haywood, Jackson, Macon and Swain Counties.

This district evidences summary measures which are often indicative of relatively sluggish economic vitality. High retention rates among the general business population and startup firms alike are coupled with low levels of startup activity and low concentrations of high growth firms. Job vitality measures among retained firms also tend to be low, and the retained firm sales per employee indicator is just two-thirds of the national average.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,484	3,007		
Retained Firms		2,986	54%	1.08
Sales	312,547	487,778	56.1%	1.11
Avg Jobs	10	12	20%	0.48
Replenishment	51,578	36,671	71%	0.92
Sales/Employee	62,509	69,683	12%	0.67

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The district's high retention rate is matched by an level of sales vitality which is about 11 percent above average. However, the sales vitality index measures the relative change in sales from the original pool to retained firms; the sales per employee index for retained firms, which compares current rates among survivors, is quite low, suggesting that recent sales vitality, while laudable, has still not raised local positioning to national levels. Job vitality indices are also lower than both US and Appalachian levels. Business out-migration rates are 0.4 percent among firms from the 1996 pool, and 0.7 percent among surviving firms, a very modestly higher loss rate than might be desired, but not a major concern. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Only two industries indicate high vitality measures in all categories and couple them with high sales per employee positioning: chemicals and the paper industry. Other industries indicating multiple leading vitality measures include heavy construction, apparel, furniture, printing leather and, alone among heavy manufacturers, industrial machinery. Value-added, often technology-driven services, including communications and business services, performed poorly.

## ARC North Carolina 7A

2001 firms analyzed:

7,728

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	219	120		
Retained Firms		118	54%	1.15
Sales	351,282	1,001,724	185.2%	1.52
Avg Jobs	5	6	20%	0.30
Replenishment	988	744	75%	0.90
Sales/Employee	70,256	166,954	138%	1.21

### Startup Activity

96-01 Starts	868
Start Rate	15.9%
US Index	0.82

Startup activity rates are 18 percent below the national average and five index points below the rest of Appalachia. Only a handful of industries indicate startup activity levels above the national average, including building construction, food products, stone-clay-glass, fabricated metals and electronics. Startup levels among value added services are low.

Retained startups do somewhat better. In addition to high survival rates, retained startups from the 1996 pool indicate not only high levels of sales vitality (as did retained firms overall), but a correspondingly high sales per employee index.

Retained startups in agricultural services, paper products, electronics, transport and legal services all indicate multiple high vitality ratings coupled with a high sales per employee index. Startup activity and retained startup vitality rates in valued-added business services and communications were weak.

### High Job Growth Firms:

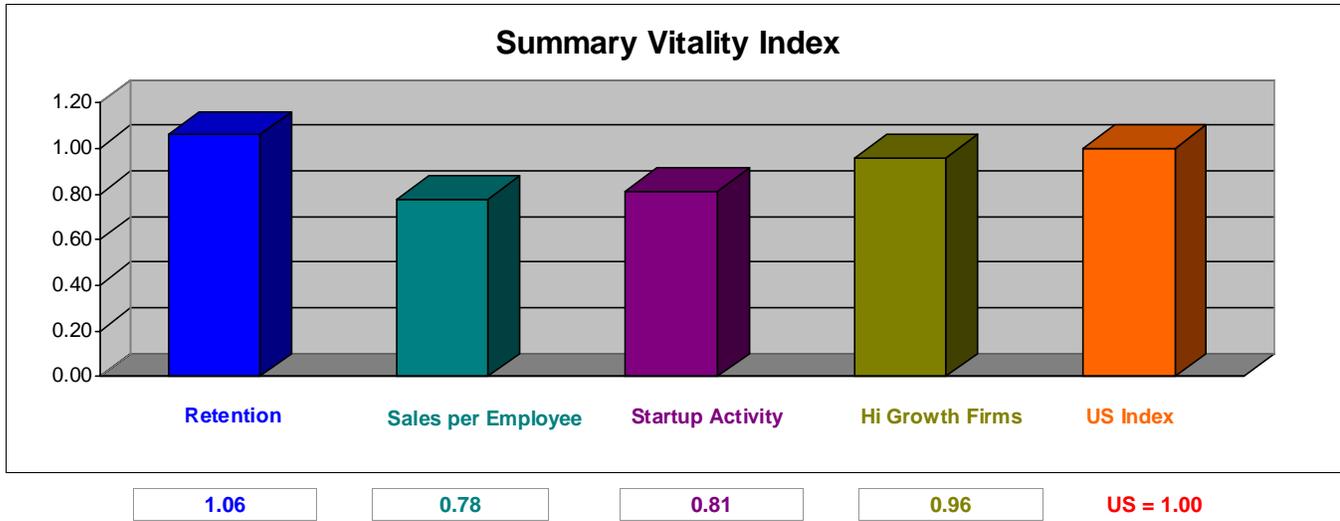
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	5,191	84	1.62%	0.80
Class I : < 5 Jobs>10 Jobs	3,603	68	1.89%	0.82
Class II : <10 Jobs>25 Jobs	4,510	19	0.42%	0.58
Class III : <25 Jobs>50 Jobs	4,952	11	0.22%	0.56
Class IV : <50 Jobs>100 Jobs	5,111	4	0.0800%	0.41
Class V : <100 Jobs> 250 Jobs	5,191	1	0.0200%	0.34

Concentrations of high growth firms were 20 percent lower than national patterns, and ten index points below the Appalachian average. Indices ranged as low as 34 percent of national ratings in Class V, and never higher than 82 percent of average levels in the smallest employment Class I. The influence of these limited numbers of small high growth firms is unlikely to compensate for the district's weak retained firm vitality and the lag in entrepreneurial activity.

## ARC North Carolina 7B

2001 firms analyzed:

15,105



ARC District 7B is administered by the Land-of-Sky Regional Council, including Buncombe, Henderson, Madison and Transylvania Counties. Buncombe and Madison Counties comprise the whole of the Asheville MSA.

The MSA comprises about two-thirds of the district's economy. While the correspondence between vitality measures in the MSA and district is high, differences do exist – and the most significant of these largely favor the MSA. The summary retention index in both is high, and startup survival rates in the district, which are at national average levels, surpass the MSA by nine index points, only slightly lower than the Appalachian average. District sales per employee lags both national and Regional patterns. Startup activity rates are 19 percent lower than national averages. Startup activity in the district trails Appalachian levels by six index points and the MSA by ten. More encouragingly, concentrations of high growth firms are only 9 percent below national levels.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	12,104	6,517		
Retained Firms		6,481	54%	1.06
Sales	488,675	652,297	33.5%	0.66
Avg Jobs	12	17	42%	1.00
Replenishment	132,955	108,115	81%	1.06
Sales/Employee	81,446	81,537	0%	0.78

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Retained firm vitality rates in the district are generally solid, buoyed by a high retention index and good job vitality scores. However, low sales vitality and a weak sales per employee index suggest other concerns. Moreover, The fact that job vitality ratings are higher in the MSA indicates weaker patterns within the two non-MSA counties in the district. Business out-migration patterns – 0.3 percent of firms from the 1996 pool tracked and 0.5 percent of survivors – are not a major concern. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Only a small number of industries in the district show higher than average sales per employee positioning – among them food products manufacturing and health services. The agricultural services industry, which also indicates some good vitality measures, comes close. Other industries with strong performances in at least two vitality measures include apparel, paper, printing, chemicals, fabricated metals, electronics and transport equipment. Air transport and transport services firms also performed well, although sales per employee positioning was weak in services. Vitality measures in the technology-driven communications and business services industries were low. The weak performance of business services, FIRE industries, engineering and several metalworking industries lagged behind MSA patterns.

## ARC North Carolina 7B

2001 firms analyzed:

15,105

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	445	210		
Retained Firms		208	47%	1.00
Sales	300,735	414,286	37.8%	0.31
Avg Jobs	9	13	44%	0.67
Replenishment	3,950	2,581	65%	0.79
Sales/Employee	50,123	59,184	18%	0.43

### Startup Activity

96-01 Starts	1,675
Start Rate	15.9%
US Index	0.81

Startup activity rates are 19 percent below national averages, and several points behind both the MSA and Appalachian levels. Aside from a handful of industries with few firms, startup activity rates are mainly positive only in the FIRE sector, reflecting MSA concentrations. While startup retention is average (and higher than the MSA index), all aggregate measures are uniformly low, with a dismal sales vitality rate dragging down an already low sales per employee index. Vitality rates (but not sales per employee) among retained startups are high in wood products, printing and industrial machinery.

### High Job Growth Firms:

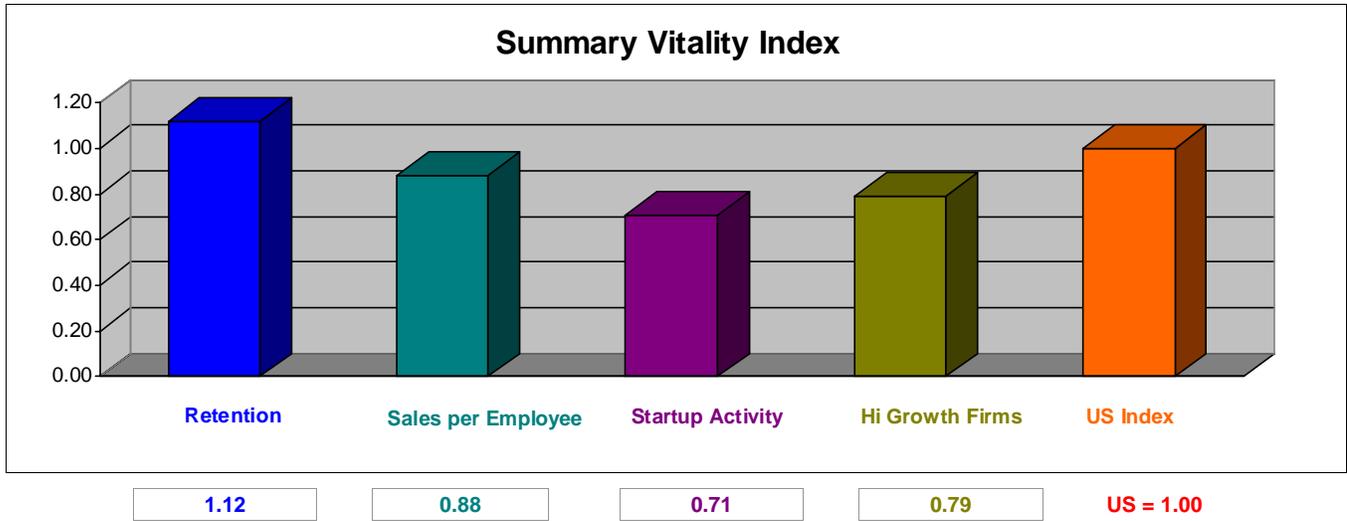
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	11,338	221	1.95%	0.96
Class I : < 5 Jobs>10 Jobs	7,661	178	2.32%	1.01
Class II : <10 Jobs>25 Jobs	9,549	59	0.62%	0.85
Class III : <25 Jobs>50 Jobs	10,658	29	0.27%	0.69
Class IV : <50 Jobs>100 Jobs	11,070	13	0.1200%	0.62
Class V : <100 Jobs> 250 Jobs	11,338	3	0.0300%	0.47

Concentrations of high growth firms are 96 percent of the US average, six points above the Appalachian index and twelve points more than the MSA. While the district's scores are quite low in larger employment classes, they consistently top those of the MSA, indicating higher concentrations in non-MSA firms. The assessment of high growth firms for spillover benefits to the harder hit counties in the district could be a glimmer of opportunity for the district's two non-MSA counties, which showed weak retention and startup vitality in comparison with the MSA.

## ARC North Carolina 7C

2001 firms analyzed:

4,433



ARC District 7C is administered by the Isothermal Planning and Development Commission, including McDowell, Polk and Rutherford Counties.

This district's relatively small economy indicates a pattern of relatively lackluster vitality common to many ARC districts. High overall retention rates are complemented by solid startup retention, but seriously undercut by a large gap in entrepreneurial vitality and a significant lag in concentrations of high growth firms. Startup activity, startup retention and high growth concentrations all trail Appalachian as well as US patterns. While some vitality indices are above average, they are within the context of lagging aggregate sales per employee indices.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,076	1,763		
Retained Firms		1,742	57%	1.12
Sales	416,660	641,988	54.1%	1.07
Avg Jobs	15	20	33%	0.80
Replenishment	43,875	34,831	79%	1.03
Sales/Employee	69,443	91,713	32%	0.88

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

In addition to high levels of retention, aggregate vitality scores are above average in two categories – sales and job replenishment. However, aggregate sales per employee rates are 12 percent below US averages and six index points below Appalachian levels, lending a “catch-up” rather than a “leading” context to the solid vitality scores. Business out-migration rates are 0.7 percent of the 1996 pool of firms tracked and 1.2 percent of survivors, a relatively high rate that reflects overall area concerns. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Only two significant value-added industries – wood products and fabricated metals – indicated above average sales per employee indices. Vitality scores in wood products are quite strong in all measures. While sales per employee positioning is low, a number of other industries indicate strong job and sales vitality patterns, including food products, paper, printing, chemicals, plastics and industrial machinery. Technology-driven service industries reflected weak vitality indices.

## ARC North Carolina 7C

2001 firms analyzed:

4,433

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	91	44		
Retained Firms		42	46%	0.99
Sales	1,332,787	1,015,000	-23.8%	0.00
Avg Jobs	16	10	-38%	0.00
Replenishment	1,426	429	30%	0.36
Sales/Employee	63,466	92,273	45%	0.67

### Startup Activity

96-01 Starts	425
Start Rate	13.9%
US Index	0.71

Startup activity rates lag national patterns by more than one-third and Appalachian levels by sixteen index points. The aggregate vitality performance of retained startups is quite weak in all vitality measures, as well as current sales per employee positioning among retained startups. The small number of retained startups precludes much industry-specific analysis, although solid sales per employee measures in wood products and business services should be mentioned, along with other high retained startup vitality rates in the wood products industry, printing and professional services.

While entrepreneurial activity is generally weak, relative startup rates are notably higher in food products, textiles, paper, chemicals, fabricated metals and industrial machinery – almost all among the stronger industries in overall retention vitality indices.

### High Job Growth Firms:

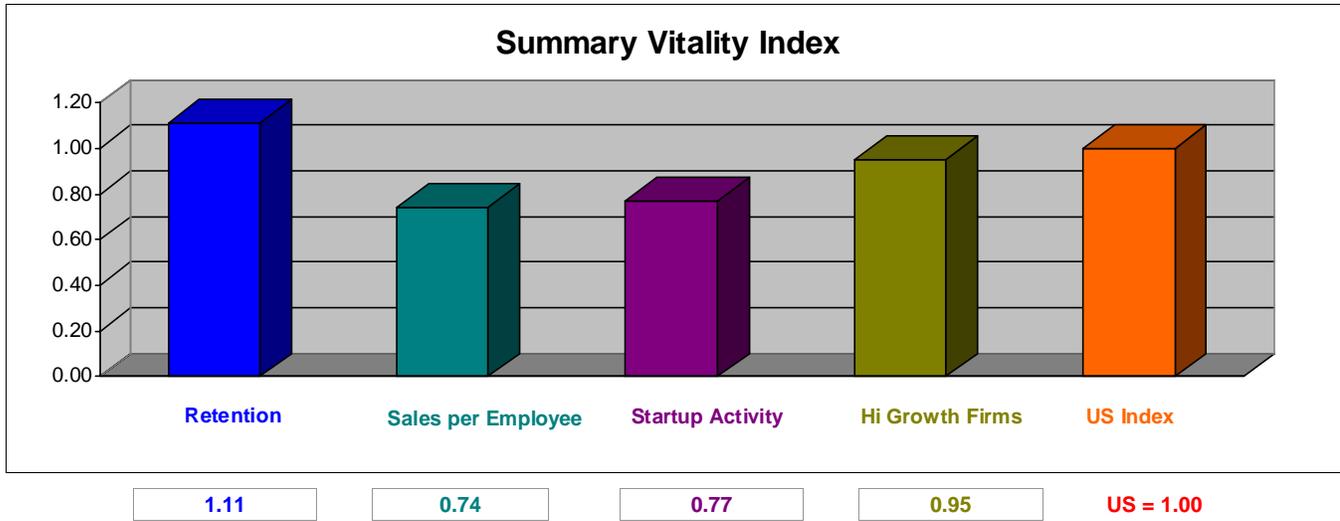
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,920	47	1.61%	0.79
Class I : < 5 Jobs>10 Jobs	1,979	34	1.72%	0.75
Class II : <10 Jobs>25 Jobs	2,484	13	0.52%	0.72
Class III : <25 Jobs>50 Jobs	2,741	9	0.33%	0.83
Class IV : <50 Jobs>100 Jobs	2,852	5	0.1800%	0.92
Class V : <100 Jobs> 250 Jobs	2,920	1	0.0300%	0.61

Concentrations of high growth firms are 21 percent below national averages and eleven index points behind Appalachia. The district trails high growth concentrations in each employment class examined, with lower scores in smaller classes (most likely entrepreneurial) and somewhat better performance in Class IV.

## ARC North Carolina 7D

2001 firms analyzed:

8,472



ARC District 7D is administered by the Region D Council of Governments, including Alleghany, Ashe, Avery, Mitchell, Watauga, Wilkes and Yancey Counties.

Vitality patterns in this district indicate a common Appalachian pattern of high retention rates (overall and startup) coupled with very weak entrepreneurial vitality levels and relatively low concentrations of high growth firms. However, job and sales vitality measures in the district are relatively strong, even if conditioned by lagging sales per employee positioning. In addition, concentrations of high growth firms, while trailing national averages by 5 percent, are stronger than average Appalachian trends. As a result, the outlook is somewhat better than in many other districts saddled with similar summary measures.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,921	3,320		
Retained Firms		3,298	56%	1.11
Sales	417,528	612,742	46.8%	0.92
Avg Jobs	13	17	38%	0.92
Replenishment	71,037	58,601	82%	1.07
Sales/Employee	69,588	76,593	10%	0.74

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The district's retention index is 11 percent above national averages, slightly above the Appalachian average. Vitality among the area's retained firms is relatively solid; all rates are within 8 percent of national averages and the job replenishment index is above both US and Appalachian scores. The sales per employee measure among retained firms is only 74 percent of the US average and twenty index points below Appalachia, suggesting a lag in competitive positioning among retained firms. Business out-migration rates are 0.4 percent of the original pool of 1996 firms tracked, and 0.7 percent among survivors – not a cause for alarm in its own right. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Among value-added industries and export services, only wood products indicates high across the board vitality ratings and couples them with a high sales per employee index. Food products and electronics miss the sales per employee mark by 10 percent or less, but all other vitality indicators are strong. Fabricated metals also indicated high sales per employee levels, but without strong vitality indicators. Other value-added industries reflecting multiple high vitality scores include building and special trades construction, chemicals, printing, plastics and industrial machinery, which was high in all vitality segments but showed weak sales per employee positioning. Notably, both technology-driven export services, communications and business services demonstrated high retention and vitality ratings in all categories except sales per employee.

## ARC North Carolina 7D

2001 firms analyzed:

8,472

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	219	120		
Retained Firms		119	54%	1.16
Sales	406,569	694,737	70.9%	0.58
Avg Jobs	5	8	60%	0.90
Replenishment	949	933	98%	1.18
Sales/Employee	81,314	86,842	7%	0.63

## Startup Activity

96-01 Starts	878
Start Rate	15.0%
US Index	0.77

While startup retention rates are high, startup activity rates – and vitality among retained startups – showed low ratings. Startup activity was almost one-quarter below US averages. Aggregate sales vitality and sales per employee among retained startups were both significantly lower than that, and higher job replenishment ratings among startups don't compensate for overall lackluster sales change and positioning among the group.

Although small establishment numbers make industry-specific analysis difficult, food products, textiles, stone-clay-glass and instruments all showed higher than average entrepreneurial activity ratings, while startup activity in other manufacturing industries and value-added services was quite low. Among retained startups, those in building construction and the handful in wood products and textiles indicated solid sales per employee positioning (wood) or sales and job vitality ratings.

## High Job Growth Firms:

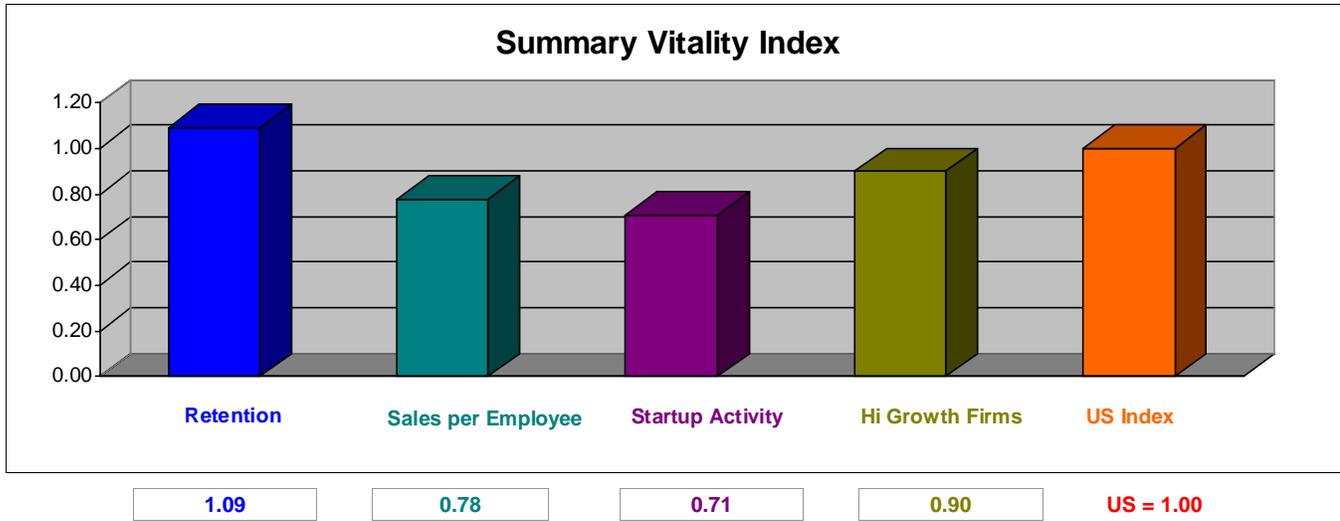
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	5,576	108	1.94%	0.95
Class I : < 5 Jobs>10 Jobs	3,777	75	1.99%	0.86
Class II : <10 Jobs>25 Jobs	4,759	33	0.69%	0.96
Class III : <25 Jobs>50 Jobs	5,281	18	0.34%	0.86
Class IV : <50 Jobs>100 Jobs	5,481	9	0.1600%	0.86
Class V : <100 Jobs> 250 Jobs	5,576	1	0.0200%	0.32

The district's aggregate high growth concentration of 0.95 is led by the Class II index, firms which began the analysis period with fewer than ten jobs and grew to more than twenty-five by the beginning of 2001. Other classes lag US averages by 14 percent and more, and (except for the largest Class V) tend to be at the same general level as scores for the Appalachian region. The region's Class V score is much higher.

## ARC North Carolina 7E

2001 firms analyzed:

6,206



ARC District 7E is administered by the Western Piedmont Council of Governments, including Alexander, Burke and Caldwell Counties. All three of the LDD counties are included in the Hickory-Morganton MSA.

Summary indicators in this LDD suggest a common pattern of high retention rates coupled with relatively low vitality. Startup activity rates are especially low, and although high growth concentrations are slightly above the Regional average, they fall 10 percent below US norms. Sales per employee positioning is only slightly more than three-quarters of the US level. District vitality indices correspond closely to those of the Hickory MSA with the exception of startup activity, which the District trails by nine points.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,291	2,935		
Retained Firms		2,912	55%	1.09
Sales	448,898	647,419	44.2%	0.87
Avg Jobs	14	19	36%	0.86
Replenishment	72,556	56,456	78%	1.01
Sales/Employee	64,128	80,927	26%	0.78

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The area's overall retention rate is 9 percent above average, although sluggish job and sales change patterns among retained firms suggest that a modest competitive environment may be a factor. Business out-migration is about 0.4 percent of the 1996 pool of firms tracked, and double that for the survivor group – about average. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim. While job replenishment is slightly above US levels, sales change, average employment change and sales per employee among surviving firms are all far below national trends.

At the same time, a number of value added industries demonstrate high vitality patterns. Food products, textiles, paper, stone-clay-glass, plastics, primary metals, fabricated metals and instruments all show good sales per employee rates and leading sales and/or job change indices among survivor firms. Although sales per employee measures are lower, furniture, industrial machinery and electronics also display leading indices in more than one vitality category. Motor freight and transport services perform well in vitality indices (despite lower retention rates), but communications and business services fare poorly.

## ARC North Carolina 7E

2001 firms analyzed:

6,206

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	151	77		
Retained Firms		75	50%	1.06
Sales	1,282,353	1,334,848	4.1%	0.03
Avg Jobs	13	24	85%	1.27
Replenishment	2,016	1,801	89%	1.07
Sales/Employee	85,490	121,350	42%	0.88

### Startup Activity

96-01 Starts	582
Start Rate	13.8%
US Index	0.71

Startup activity rates lag 29 percent below the national average and, although job growth among surviving starts is very positive, sales change in the same group – and startup survivor sales per employee rates – are very low.

Activity rates are high, in specific industries however, including agricultural services, furniture, instruments, miscellaneous manufacturing and transport services. Other industries with rates at or approaching national levels include construction, motor freight and professional services.

Among surviving startups, those in furniture, plastics, chemicals, fabricated metals and a few retail industries indicate high sales per employee positioning. Furniture, plastics and chemicals startup survivors also indicate other high vitality patterns. While surviving startups in the technology-driven business services industry show lagging sales per employee rates, other vitality patterns are good.

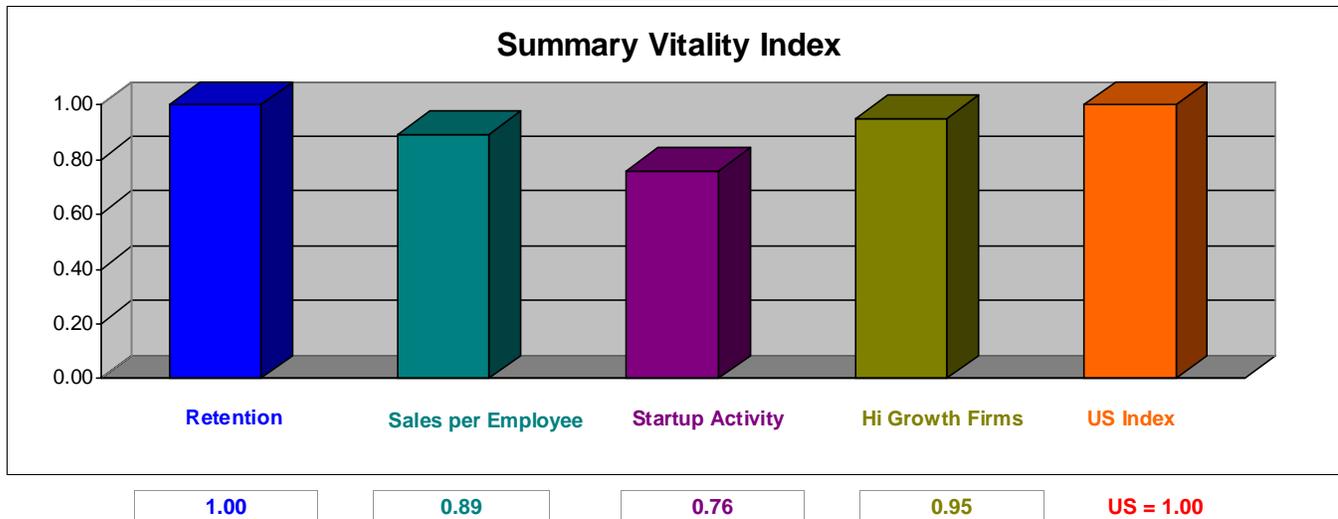
### High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	4,955	90	1.82%	0.90
Class I : < 5 Jobs>10 Jobs	3,360	59	1.76%	0.76
Class II : <10 Jobs>25 Jobs	4,185	33	0.79%	1.09
Class III : <25 Jobs>50 Jobs	4,625	22	0.48%	1.20
Class IV : <50 Jobs>100 Jobs	4,832	13	0.2700%	1.42
Class V : <100 Jobs> 250 Jobs	4,955	6	0.1200%	2.16

The area's aggregate high growth index is ten points below the national average. However, in all classes but the smallest (Class I), local high growth concentrations outstrip US norms, consistently and impressively. This suggests that the area lag in entrepreneurial vitality is at least partially compensated by the development of more mature growth engines which are making themselves felt, giving the area some time to intensify work on developing conditions for new growth and entrepreneurship.

# ARC North Carolina 7I

2001 firms analyzed: 19,085



ARC District 7I is administered by the Northwest Piedmont Council of Governments, including Davie, Forsyth, Stokes, Surry and Yadkin Counties. All counties in the LDD counties are included in the Greensboro MSA.

Summary scores in this area are somewhat ambiguous, and do not tell the story. Average retention rates are supported by high growth concentrations which are fairly impressive for an Appalachian area, and growth patterns among retained firms are quite good despite lagging sales per employee rates. Only startup activity trails national trends badly among summary indices. Higher MSA scores in both startup activity and high growth indices suggest an opportunity to derive spillover benefits from the rest of the MSA.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	15,363	7,823		
Retained Firms		7,734	50%	1.00
Sales	548,781	832,283	51.7%	1.02
Avg Jobs	15	23	53%	1.28
Replenishment	218,880	175,750	80%	1.04
Sales/Employee	78,397	92,476	18%	0.89

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Despite sales per employee positioning which is 11 percent below average overall (and about five points below the Regional average) the vitality of survivor firms in the district is positive in every other category; sales change, job change and even with national patterns in the retention index itself. Notably, the LDD lags startup activity in the Greensboro MSA of which it is a part. Business out-migration is about 0.6 percent of the original 1996 pool, and 1.1 percent of survivors – slightly high, but not an unusual level for an MSA. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Sales per employee indicators are particularly high in non-metallic mining, food products, furniture, chemicals, primary and fabricated metals, instruments, transport services, education and engineering-research. Mining, chemicals, primary and fabricated metals and educational services were also standouts across the board in other vitality measures. Plastics scored well in a other categories, but lagged in sales per employee positioning.

# ARC North Carolina 7I

2001 firms analyzed:

19,085

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	457	213		
Retained Firms		207	45%	0.97
Sales	742,581	1,328,497	78.9%	0.65
Avg Jobs	9	15	67%	1.00
Replenishment	3,809	3,054	80%	0.96
Sales/Employee	106,083	147,611	39%	1.07

### Startup Activity

96-01 Starts	1,891
Start Rate	14.8%
US Index	0.76

Startup activity rates are quite low, about three-quarters of the national average. Among significantly scaled industries, wood products, chemicals, plastics, primary metals and electronics display leading levels of startup activity, which also approached national levels in the communications industry but lagged seriously in technology-driven business services.

While sales per employee positioning among surviving startups is excellent and job vitality is at national levels, sales vitality among startup survivors is low, suggesting that good current sales per employee positioning may erode. That position is currently leading in construction, food products, textiles, furniture and wholesale, and close to US levels in several other industries. Vitality leads national levels in several categories among surviving startups in general construction contracting, food products and all major metalworking industries: primary metals, fabricated metals and industrial machinery.

## High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	14,435	278	1.93%	0.95
Class I : < 5 Jobs>10 Jobs	9,693	218	2.25%	0.98
Class II : <10 Jobs>25 Jobs	12,032	73	0.61%	0.84
Class III : <25 Jobs>50 Jobs	13,515	40	0.30%	0.75
Class IV : <50 Jobs>100 Jobs	14,081	20	0.1400%	0.75
Class V : <100 Jobs> 250 Jobs	14,435	8	0.0600%	0.99

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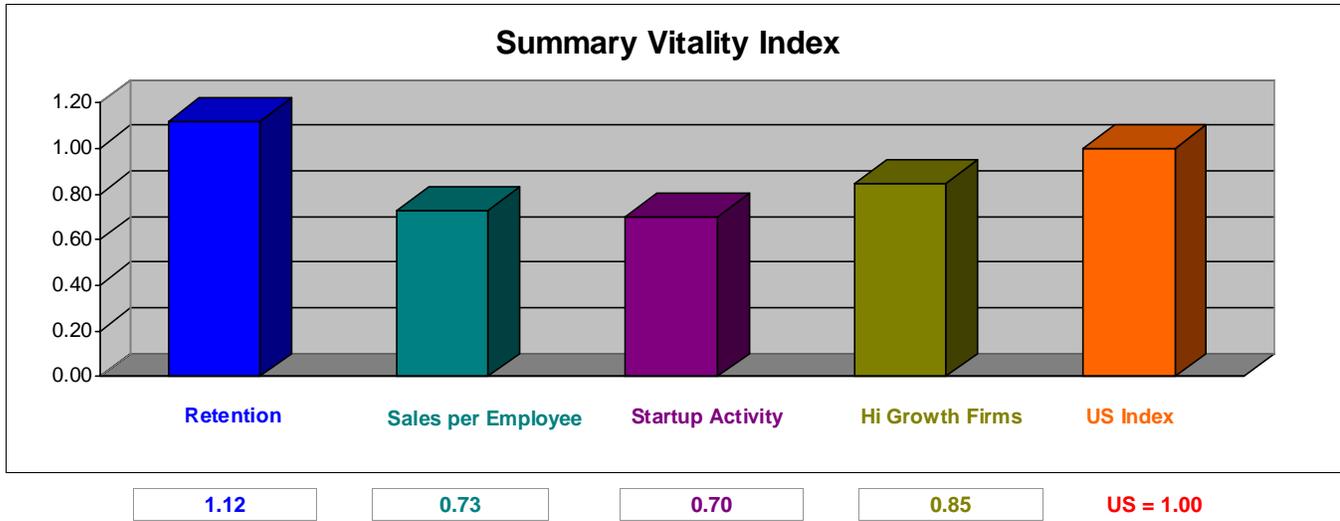
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# ARC Ohio 8A

2001 firms analyzed:

20,790

## Summary Vitality Index



ARC District 8A is administered by the Ohio Valley Regional Development Commission, including Adams, Brown, Clermont, Gallia, Highland, Jackson, Lawrence, Pike, Ross, Scioto and Vinton Counties. Two of the LDD counties are included in the Cincinnati MSA, and one in the Huntington-Ashland MSA.

Despite the proximity of the Cincinnati MSA (and the inclusion of two MSA counties in the District), the LDD lags the MSA significantly in almost all ratings. Most importantly, the District's startup activity rate is 30 percent below US averages – and trails the MSA score by 29 points. High growth concentrations, which compensate for low entrepreneurial patterns in some ARC Districts, also lag – the US by 15 percent and the Cincinnati MSA by almost twice that much. The District's high retention scores among both the general business population and startups are small consolation in the context.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	15,486	8,888		
Retained Firms		8,767	57%	1.12
Sales	416,681	605,193	45.2%	0.89
Avg Jobs	11	15	36%	0.87
Replenishment	156,387	127,603	82%	1.06
Sales/Employee	69,447	75,649	9%	0.73

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Although overall retention rates are 12 percent above national levels, sales and job vitality indices among retained firms lag 11 percent-13 percent below national trends and considerably further behind the Cincinnati MSA. Sales per employee positioning is more than one-quarter below US averages despite a corresponding rate in the MSA which trails the US by only 4 percent. Overall, the MSA's high retention rate prevails despite good startup vitality and dynamism among surviving firms, a combination which eludes the District.

Among arguably value-added industries, leading sale per employee rates are found only in non-metallic mining, transport equipment, miscellaneous manufacturing, transportation services, banks and engineering. Other high sales or job rates can be identified among survivor firms in food products, building construction, wood products, printing, industrial machinery, electronics, instruments and engineering-research. This range suggests that a number of industries in the District may be advancing to national level position. High vitality patterns in durable wholesale industries underscore this indication.

Business out-migration is 0.8 percent from the original pool of 1996 firms tracked and 1.4 percent of survivors, somewhat high for a District not entirely concentrated in a metropolitan area – but not the area's major cause for concern. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

## ARC Ohio 8A

2001 firms analyzed:

20,790

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	424	230		
Retained Firms		222	52%	1.12
Sales	389,680	507,538	30.2%	0.25
Avg Jobs	10	17	70%	1.05
Replenishment	4,103	3,687	90%	1.08
Sales/Employee	64,947	84,590	30%	0.61

### Startup Activity

96-01 Starts	1,897
Start Rate	13.7%
US Index	0.70

Startup activity lags national trends by 30 percent, but higher rates are discernible in food products, apparel, paper products, printing, chemicals, fabricated metals and instruments. Startup activity rates in plastics and communications also approach national levels, the former driven by strengths in the larger region.

Job vitality among surviving startups is strong, as is the startup survival rate. But sales vitality lags badly, 75 percent behind the US average and more than 120 index points below the Cincinnati MSA. Sales per employee positioning is one-third less than the national average and half of that in the MSA. Stronger sales per employee positioning is found in a handful of manufacturing industries, including wood products, plastics, fabricated metals, industrial machinery, electronics and wholesale durables. The handful of surviving startups in plastics and instruments also reflect high vitality ratings in several other measures.

### High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	14,494	251	1.73%	0.85
Class I : < 5 Jobs>10 Jobs	9,895	194	1.96%	0.85
Class II : <10 Jobs>25 Jobs	12,231	77	0.63%	0.87
Class III : <25 Jobs>50 Jobs	13,593	51	0.38%	0.95
Class IV : <50 Jobs>100 Jobs	14,203	30	0.2100%	1.11
Class V : <100 Jobs> 250 Jobs	14,494	9	0.0600%	1.11

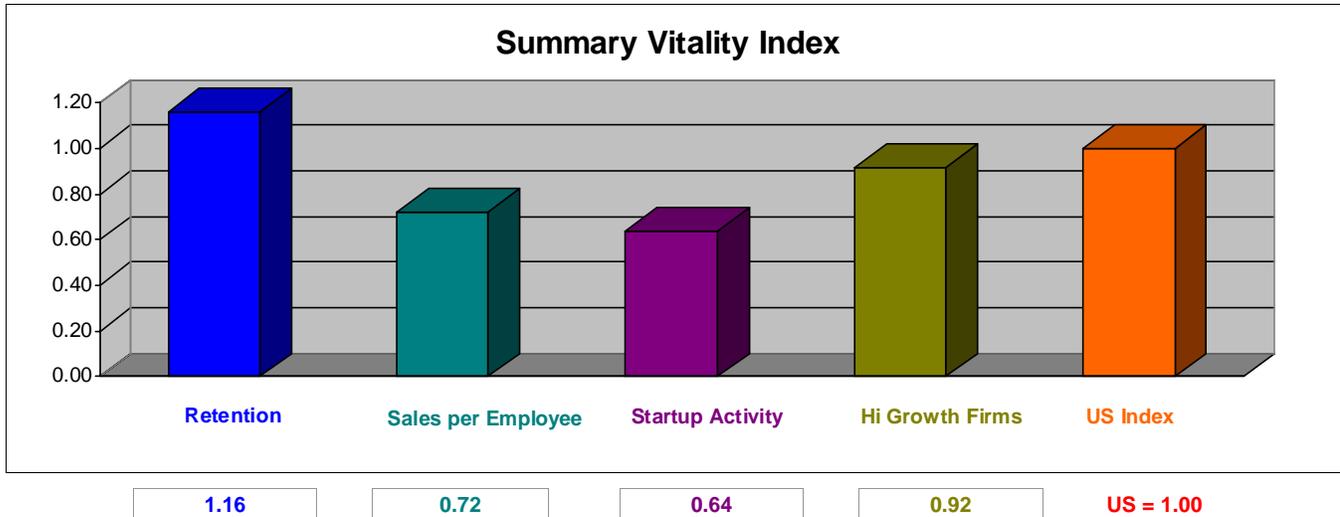
The proportion of high growth concentrations in the District is about 15 percent below national trends. However, they improve in larger employment categories and could provide some compensation for lower startup and vitality patterns elsewhere. However, high growth concentrations lag the Cincinnati MSA consistently, and suggest eventual branch development opportunities in the District if the proper groundwork is laid with high growth Cincinnati firms.

## ARC Ohio 8B

2001 firms analyzed:

9,225

### Summary Vitality Index



ARC District 8B is administered by the Buckeye Hills-Hocking Valley Regional Development District, including Athens, Hocking, Meigs, Monroe, Morgan, Noble, Perry and Washington Counties. One of the District counties, Washington, is included in the Parkersburg MSA.

The District is characterized by the common ARC pattern of high retention rates coupled with lower levels of new business vitality and mixed growth among existing industries. Startup activity rates are more than one-third below national levels and twenty-three index points below the region. Startup retention is very high, but growth among survivor startups is quite weak. Concentrations of high growth firms are within 8 percent of the national averages, mainly concentrated in the smallest employment classes. The area's vitality patterns closely track those in the Parkersburg MSA (although the latter's startup activity rate, while lagging, is considerably higher than the District's).

#### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	6,591	3,904		
Retained Firms		3,865	59%	1.16
Sales	360,281	520,662	44.5%	0.88
Avg Jobs	10	15	50%	1.20
Replenishment	63,269	56,806	90%	1.17
Sales/Employee	60,047	74,380	24%	0.72

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The overall retention rate is a full 16 percent above the national level, eight points higher than the Regional average. Job vitality patterns are positive in both job categories, but sales vitality is weak, prompting an overall sales per employee index more than one-quarter below the US average and twenty-two index points below the Region. Among value-added industries, leading sales per employee rates are evident in only a handful, including heavy construction (infrastructure), electronics and instruments. Both electronics and instruments also indicate consistently high vitality scores in other categories. Other industries with lower sales per employee indices but high scores in job and sales vitality include building construction, food products, apparel, plastics, stone-clay-glass, industrial machinery, personal and business services. Communications did not rate well. The area's vitality core is clearly aided by the Ohio regional plastics cluster, including plastics and industrial machinery operations.

Business out-migration tallied 0.6 percent from the 1996 pool of firms tracked, and 1.0 percent of survivors, slightly high for a District with this largely rural configuration. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

## ARC Ohio 8B

2001 firms analyzed:

9,225

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	149	88		
Retained Firms		86	58%	1.23
Sales	832,990	1,035,802	24.3%	0.20
Avg Jobs	6	9	50%	0.75
Replenishment	905	726	80%	0.96
Sales/Employee	92,554	115,089	24%	0.84

## Startup Activity

96-01 Starts	785
Start Rate	12.5%
US Index	0.64

Startup activity lags the national rate by more than one-third. While the survival rate of startups tracked from 1996 is high, all vitality rates among survivors trailed behind national and (with the exception of sales per employee) behind Regional averages.

Among value-added industries, startup rates were higher than average only in printing, primary metals, fabricated metals and health services. Communications, the technology-driven business services industry, professional and educational services were all quite weak. Not a single industry with more than one or two startup survivors indicated high sales per employee positioning. However, the number of surviving startups in specific industries was generally too low to develop conclusions regarding this or other startup survivor vitality measures.

## High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	6,180	115	1.86%	0.92
Class I : < 5 Jobs>10 Jobs	4,182	95	2.27%	0.99
Class II : <10 Jobs>25 Jobs	5,175	33	0.64%	0.88
Class III : <25 Jobs>50 Jobs	5,803	17	0.29%	0.74
Class IV : <50 Jobs>100 Jobs	6,059	12	0.2000%	1.04
Class V : <100 Jobs> 250 Jobs	6,180	3	0.0500%	0.87

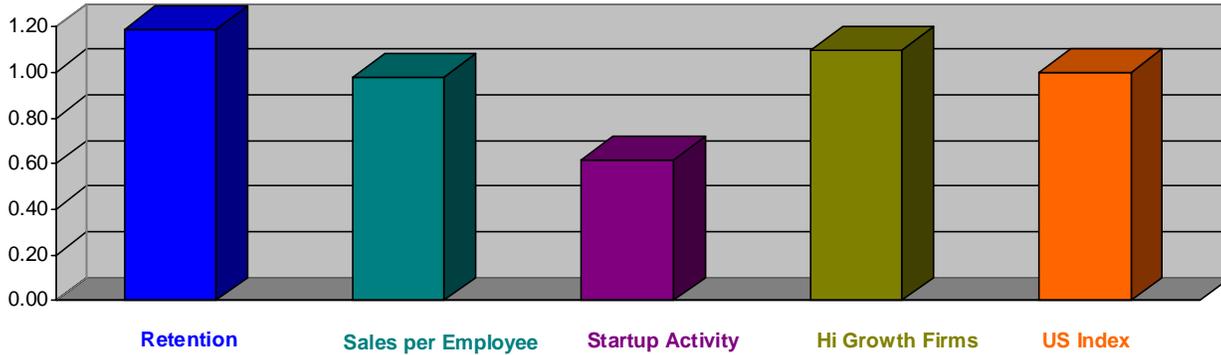
Concentrations of high growth firms were 8 percent below the national average in aggregate, but two index points above Appalachian rates. The difference lay in the smaller employment classes, where the District showed most of its strength (in addition to a leading Class IV score among firms which began the analysis period with fewer than 50 jobs and ended with more than 100). It would appear from this index that this relative handful of dynamic firms is driving the District economy and its high survivor vitality patterns, partially – but far from entirely – compensating for the gap in entrepreneurial activity.

# ARC Ohio 8C

2001 firms analyzed:

22,881

## Summary Vitality Index



1.19

0.98

0.62

1.10

US = 1.00

ARC District 8C is administered by the Ohio Mid-Eastern Governments Association, including Belmont, Carroll, Columbiana, Coshocton, Guernsey, Harrison, Holmes, Jefferson, Muskingum and Tuscarawas Counties. One county is included in each of four MSAs linked to the region: Steubenville, Youngstown, Wheeling and Canton.

The District exhibits an unusual pattern of low startup activity coupled with leading concentrations of high growth firms. Many of these are within the smaller employment classes, suggesting that they may be young, if not startups. High retention rates are also complemented by national level sales per employee positioning and top-flight performance among surviving startup firms. With an increased focus on entrepreneurial activity, the District would establish a well-rounded, vital economic environment.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	17,385	10,485		
Retained Firms		10,406	60%	1.19
Sales	462,142	810,766	75.4%	1.49
Avg Jobs	11	14	27%	0.65
Replenishment	178,859	149,196	83%	1.08
Sales/Employee	66,020	101,346	54%	0.98

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall business retention is 19 percent above national levels, and almost as high among startup firms. Impressive sales vitality indices have raised the District to sales per employee ratings within 2 percent of the national level. Job replenishment rates suggest good expansion activity among surviving firms.

Sales per employee positioning is particularly strong in food products, fabricated metals, industrial machinery and transport equipment. Technology service and professional industries lag in this measure, but the technology-driven business services industry leads in all other measures. Food, fabricated metals and industrial machinery also score well in a variety of other vitality indices, as do wood products, petroleum and instruments.

The business out-migration rate is 0.5 percent from the original pool of firms tracked, and 0.8 percent of survivors, a relatively low set of rates and not a cause for concern. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

# ARC Ohio 8C

2001 firms analyzed:

22,881

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	413	224		
Retained Firms		221	54%	1.14
Sales	353,901	933,333	163.7%	1.34
Avg Jobs	5	10	100%	1.50
Replenishment	2,062	2,160	105%	1.26
Sales/Employee	58,983	93,333	58%	0.68

### Startup Activity

96-01 Starts	1,867
Start Rate	12.2%
US Index	0.62

Although the overall startup activity rate is 38 percent below the national average and the sales per employee index lags among surviving startups, survivor startup firms score well in every other index, including both sales and job vitality measures, suggesting growth that is bringing them to national sales per employee levels. Among manufacturers, a number of key industries demonstrate startup activity rates above the national industry averages, including furniture, plastics fabricated metals, electronics and transport equipment. Leading performance in multiple vitality measures is also displayed by surviving startups in food, furniture, printing, industrial machinery, transport equipment, and business services.

## High Job Growth Firms:

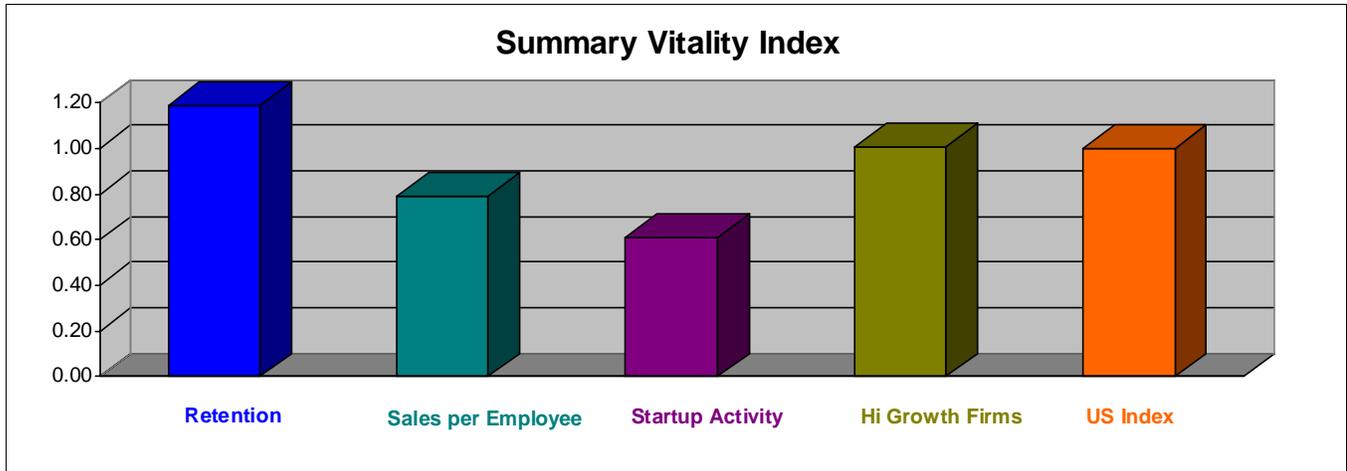
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	15,297	340	2.22%	1.10
Class I : < 5 Jobs>10 Jobs	9,945	272	2.74%	1.19
Class II : <10 Jobs>25 Jobs	12,713	86	0.68%	0.93
Class III : <25 Jobs>50 Jobs	14,286	54	0.38%	0.95
Class IV : <50 Jobs>100 Jobs	14,959	26	0.1700%	0.91
Class V : <100 Jobs> 250 Jobs	15,297	5	0.0300%	0.58

Aggregate concentrations of high growth firms run 10 percent above the national average and twenty index points ahead of the Appalachian Region. Concentrations peak in the smallest employment classes. Along with the strong performance of surviving startups, this may suggest that dynamism from newer firms may not be as bleak as the startup activity rates would indicate at first blush. While high growth concentrations drop with each succeeding (larger) employment class, they remain within 9 percent of the national level in all but the largest employment class (V) analyzed.

# ARC Pennsylvania 9A

2001 firms analyzed:

29,165



Retention: 1.19      Sales per Employee: 0.79      Startup Activity: 0.61      Hi Growth Firms: 1.01      US = 1.00

ARC District 9A is administered by the Northwest PA Regional Planning and Development Commission, including Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango and Warren Counties. The Erie MSA is contiguous with Erie County, and the Sharon MSA is contiguous with Mercer County.

Despite serious difficulties in most entrepreneurial measures, the District indicates reasonable levels of vitality in the combination of retention and vitality patterns among surviving firms, both overall and in core industries. Higher startup vitality in the District's two inclusive MSAs (still lagging national levels) suggest hope for district wide improvement down the road. The area's high growth firms elevate the District's aggregate high growth ranking just above the US average, and a major larger firm class (Class IV) is within 10 percent of the national target.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	23,824	14,376		
Retained Firms		14,298	60%	1.19
Sales	485,535	735,590	51.5%	1.02
Avg Jobs	12	16	33%	0.80
Replenishment	268,986	221,108	82%	1.07
Sales/Employee	69,362	81,732	18%	0.79

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The overall retention rate for the business population and for the small number of startups hovers about 20 percent above national levels. This leading performance combines the higher rates often found in areas with low-entrepreneurial activity and the results of intensive regional retention efforts since the mid-nineties. While sales per employee positioning is still about 20 percent below national levels, the sales change index is two percent above the national average, indicating that the area's position is improving. Job vitality levels among retained firms are mixed, and together suggest performance near the national level. Business out-migration is only 0.3 percent of the firms tracked from 1996, and 0.5 percent of surviving firms – slightly lower than might be anticipated in an area with this configuration. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

Among value-added industries, leading sales per employee positioning is evident in educational services, fabricated metals, oil and gas extraction, furniture, stone-clay-glass and instruments. Levels very close to the national index are also found in plastics, health services and wood products. Education, fabricated metals, stone-clay-glass and plastics also indicate other, consistently high vitality measures, as do textiles, apparel, printing, chemicals, industrial machinery, electronics and transport equipment. Both communications and business services (including computer) register several high vitality indices, although sales per employee are low. Engineering-research appears strong, although other professional and health services are mixed.

## ARC Pennsylvania 9A

2001 firms analyzed:

29,165

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	604	350		
Retained Firms		346	57%	1.22
Sales	920,253	1,123,642	22.1%	0.18
Avg Jobs	10	15	50%	0.75
Replenishment	5,636	4,989	89%	1.06
Sales/Employee	102,250	124,849	22%	0.91

## Startup Activity

96-01 Starts	2,457
Start Rate	12.0%
US Index	0.61

Startup activity in the district is a startling 39 percent below national levels. The Appalachian startup activity index is 26 points higher. Although this level is not unduly below the general range of a Pennsylvania context, is it nevertheless problematic for the District. Notably, the two MSAs linked to the District show startup activity rates 11-14 points higher, implying still lower levels of entrepreneurial activity in the District's more rural counties. Sales per employee positioning of surviving startups is within 9 percent of the US level, but both sales and job change indices are mainly low, suggesting that the sales per employee rate may be headed downward among startup survivors.

Higher startup rates can be found in some of the District's core industries, including primary metals and plastics. Apparel, textiles and non-depository financial institutions also score well. The District's core fabricated metals industry is within a few points of national startup levels, complementing high retention vitality scores. However, startup rates among electronics, instruments, communications, and business services – key technology driven industries – are low, as they are in most professional services.

Many of the same industries which score well in other categories also do well in retained startup measurements, including high sales per employee positioning in plastics and fabricated metal. Surviving startups in industrial machinery and the technology-driven business services industry (much in need regionally) also indicate multiple high vitality scores.

## High Job Growth Firms:

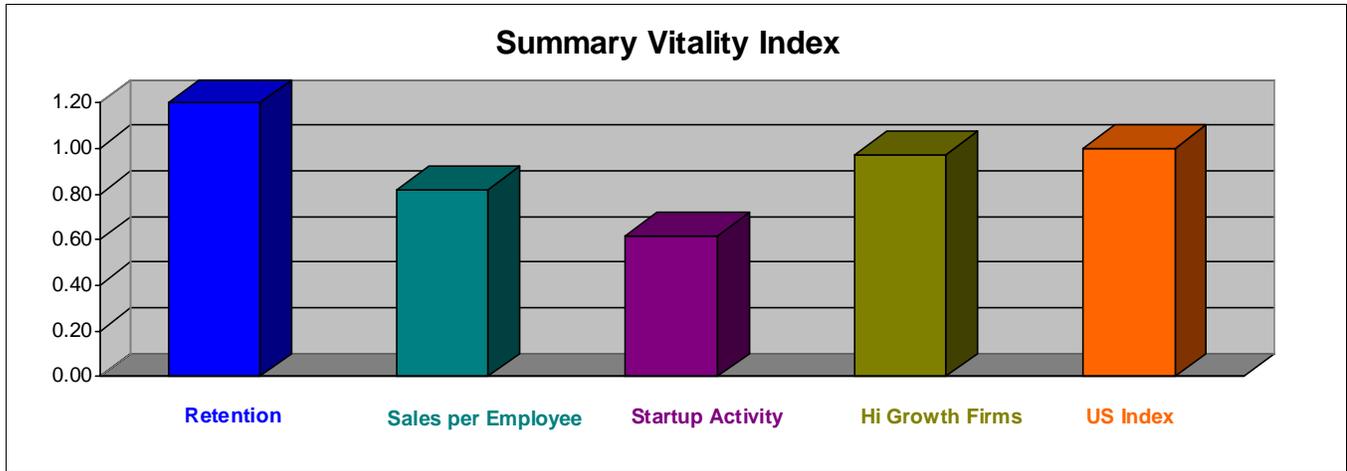
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	22,201	457	2.06%	1.01
Class I : < 5 Jobs>10 Jobs	14,604	360	2.47%	1.07
Class II : <10 Jobs>25 Jobs	18,409	128	0.70%	0.96
Class III : <25 Jobs>50 Jobs	20,753	67	0.32%	0.81
Class IV : <50 Jobs>100 Jobs	21,668	37	0.1700%	0.90
Class V : <100 Jobs> 250 Jobs	22,201	9	0.0400%	0.72

Aggregate concentrations of high growth firms are 1 percent above the national average, due entirely to high growth in the smallest employment class analyzed (starting with fewer than five jobs and ending with more than ten). However, indices are also close to national levels in both Class II and Class IV (starting with fewer than fifty jobs and ending with more than one hundred). These longer-term high growth firms appear to be keeping the District's head above water while focus on stimulating and nurturing entrepreneurial startups is developed.

# ARC Pennsylvania 9B

2001 firms analyzed:

9,509



1.20      0.82      0.62      0.97      US = 1.00

ARC District 9B is administered by the North Central PA Regional Planning and Development Commission, including Cameron, Clearfield, Elk, Jefferson, McKean and Potter Counties.

The area's unusual economic configuration creates some ambiguous indicators, since the District's many successful powdered metals firms occupy a statistical niche within several much larger industries which are not easily compared to more complete industry classifications. As a result, despite what are clearly high vitality firms, industry comparisons might lag. In general terms, however, the District indicates very high retention rates and positive replenishment rates, suggesting good expansion activity among surviving firms. Startup rates are a serious concern – as they are throughout Pennsylvania – but high growth concentrations are strong in aggregate and among three of five classes measured individually, reinforcing the notion that area vitality is carried by a set of mature high growth firms in core industries.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	8,171	4,990		
Retained Firms		4,943	61%	1.20
Sales	564,791	685,891	21.4%	0.42
Avg Jobs	11	14	27%	0.65
Replenishment	85,268	69,381	81%	1.06
Sales/Employee	80,684	85,736	6%	0.82

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The District's overall retention rate is 20 percent above the national average – and retention among the area's relatively scarce startup population is even higher. The stable strength and unusual classification of the area's dominant powder metals firms tends to depress some vitality scores, although overall job replenishment rates are high. Similarly, sales per employee rates are depressed by some of the District's vigorous but lower value-added powder metals firms. In addition, the transformation of some PM firms into branch facilities in recent years (excluded from the sales-related analyses) would tend to depress sales figures. Business out-migration is 0.6 percent of the original pool of 1996 firms, and 0.9 percent of survivors, slightly higher than what would be expected in a rural district like this one. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

The difficulty of applying standard measures to this District are focused by a look at the three industries which include the bulk of its powder metals operations – primary metals, fabricated metals and industrial machinery. All three reflect high retention and very high sales and job vitality among retained firms – yet low sales per employee rates, which is probably in part a reflection of very viable, yet low value value-added powder metals firms (just one component of the District's PM industry). Other industries which indicate consistent high vitality scores include furniture, electronics, instruments. Business services and communications vitality is poor, although sales per employee indicators are high in both industries.

## ARC Pennsylvania 9B

2001 firms analyzed:

9,509

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	186	116		
Retained Firms		114	61%	1.31
Sales	557,265	522,549	-6.2%	0.00
Avg Jobs	11	14	27%	0.41
Replenishment	1,857	1,611	87%	1.04
Sales/Employee	79,609	74,650	-6%	0.54

## Startup Activity

96-01 Starts	829
Start Rate	12.1%
US Index	0.62

The startup rate is 38 percent below national averages, and fully 25 points below that of the Region. However, startup activity is high in food products, primary and fabricated metals (again, these are key powder metals-related classifications). Startup rates in communications, business services, most retail and professional services (except legal) are low.

Surviving startups from the 1996 pool do not appear strong in aggregate measures. Top vitality performers among them include furniture and primary metals, and several retail industries as well as legal services. Only a handful of startup industries demonstrate high sales per employee positioning.

## High Job Growth Firms:

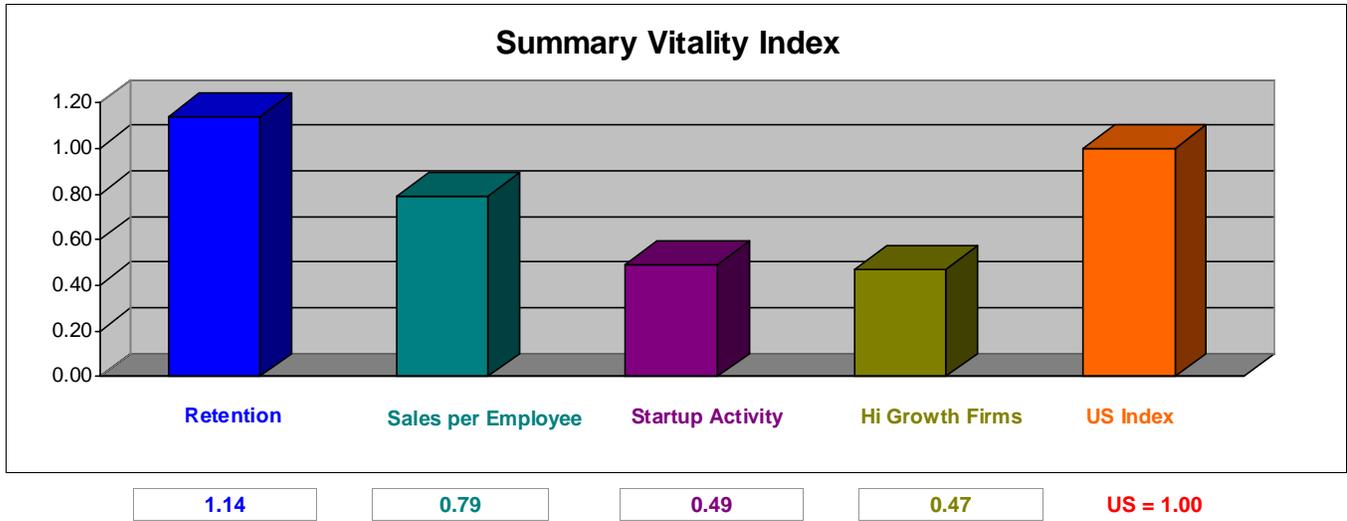
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	7,632	150	1.97%	0.97
Class I : < 5 Jobs>10 Jobs	5,288	116	2.19%	0.95
Class II : <10 Jobs>25 Jobs	6,490	36	0.55%	0.77
Class III : <25 Jobs>50 Jobs	7,207	28	0.39%	0.98
Class IV : <50 Jobs>100 Jobs	7,463	15	0.2000%	1.06
Class V : <100 Jobs> 250 Jobs	7,632	3	0.0400%	0.70

Aggregate high growth concentrations are only 3 percent below the national average and seven index points ahead of Appalachia. Concentrations are high in both small and larger employment classes analyzed, probably reflecting sustaining growth engines among the District's powdered metals clusters, including PM components producers and support industries, largely in industrial machinery classifications.

## ARC Pennsylvania 9C

2001 firms analyzed:

7,458



ARC District 9C is administered by the Northern Tier Regional Planning and Development Commission, including Bradford, Sullivan, Susquehanna, Tioga and Wyoming Counties. Wyoming County is also part of the Scranton-Wilkes Barre MSA.

This small District indicates a high overall business retention rate and startup retention just below national levels. However, sales vitality among retained firms is low despite good job growth rates, leading to marginal sales per employee positioning. Most importantly, both startup activity and growth firm concentrations lag quite seriously, raising the specter of a modest vitality outlook now and in future years.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,900	3,421		
Retained Firms		3,385	57%	1.14
Sales	359,801	491,609	36.6%	0.72
Avg Jobs	9	13	44%	1.07
Replenishment	52,506	42,388	81%	1.05
Sales/Employee	71,960	81,935	14%	0.79

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

At 14 percent above average, the District's overall retention is characteristic of many modest growth areas with correspondingly low entrepreneurial activity. Overall sales vitality is more than one-quarter below US levels and far behind the Region, dovetailing into a lagging sales per employee rate. Business out-migration is 0.6 percent of the 1996 pool of firms tracked, and 1.1 percent of survivors – a relatively high proportion for a rural area. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Sales per employee rates are higher than US levels, however, in a number of the area's core industries, including food, wood products, communications and educational services, which also reflect a string of high vitality measures. Chemicals, stone-clay-glass, fabricated metals and electronics also indicated multiple high vitality rates but low sales per employee. In most of these, job vitality measures outstrip sales vitality.

## ARC Pennsylvania 9C

2001 firms analyzed:

7,458

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	138	66		
Retained Firms		64	46%	0.99
Sales	259,091	260,656	0.6%	0.00
Avg Jobs	4	4	0%	0.00
Replenishment	505	273	54%	0.65
Sales/Employee	64,773	65,164	1%	0.47

### Startup Activity

96-01 Starts	526
Start Rate	9.5%
US Index	0.49

The overall startup activity rate troughs at 49 percent of the national average. Coupled with only average startup survival rates and extremely low vitality measures among the handful of startup firms, this is clearly a bad situation. Startup activity is high in electronics and low in virtually every other significant value added industry – at average levels in stone-clay-glass and 81 percent of the national average (still much higher than the District average) in industrial machinery. Startup activity rates in the nearby Scranton MSA lag US levels significantly – but still register 29 index points above the District.

The small scale of the surviving startup pool (under 100 firms) makes industry specific analysis of startup vitality difficult. However, of the lot, only food stores, restaurants, hotels and social services indicate leading sales per employee rates, and only restaurants and business services exhibit consistently high vitality scores. Solid job and sales vitality scores in business services are a good sign despite startup activity rates only slightly more than half of the national average.

### High Job Growth Firms:

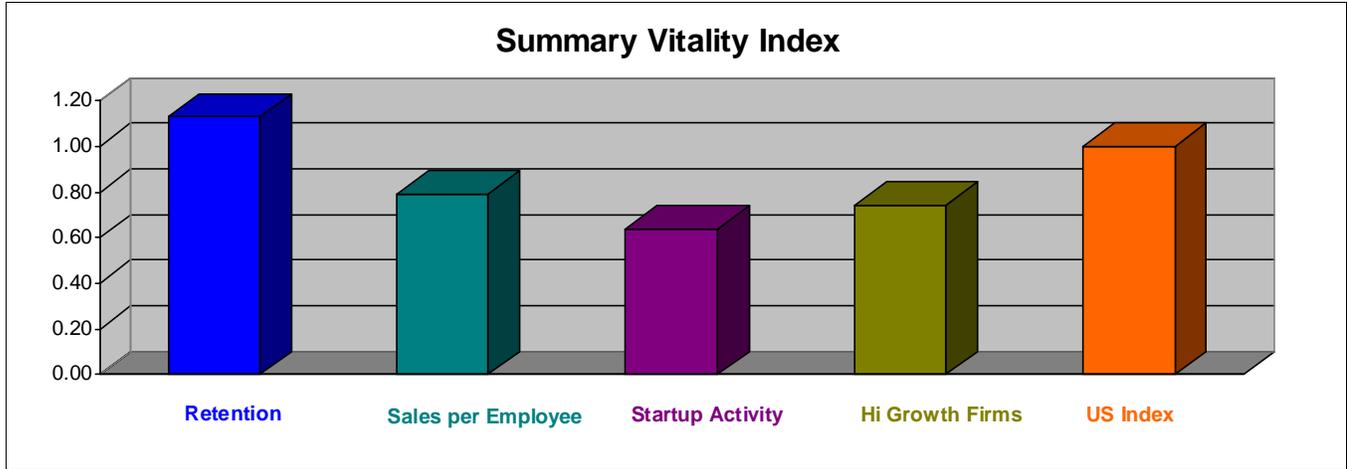
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	5,603	53	0.95%	0.47
Class I : < 5 Jobs>10 Jobs	4,072	46	1.13%	0.49
Class II : <10 Jobs>25 Jobs	4,874	20	0.41%	0.57
Class III : <25 Jobs>50 Jobs	5,366	9	0.17%	0.42
Class IV : <50 Jobs>100 Jobs	5,527	3	0.0500%	0.29
Class V : <100 Jobs> 250 Jobs	5,603	0	0.0000%	0.00

High growth firm concentrations are extremely low, 47 percent of the national level in aggregate. In no class does the District's index climb above 57 percent of the national average, leaving the area without an adequate cadre of either entrepreneurs or more mature high growth engines. Existing growth firms and specific vital industries seem to carry the District, but new drive is needed to forge ahead more rapidly.

# ARC Pennsylvania 9D

2001 firms analyzed:

39,163



1.13      0.79      0.64      0.74      US = 1.00

ARC District 9D is administered by the Economic Development Council of Northeastern PA, including Carbon, Lackawanna, Luzerne, Monroe and Pike Counties. Carbon County is included in the Allentown-Bethlehem MSA, Lackawanna and Luzerne include the largest portion of the Scranton-Wilkes Barre MSA, and Pike County is at the western edge of the New York-Northern New Jersey MSA.

This District's scores emphasize the strengths and weaknesses of the Region overall. Much like the Region, retention rates are high among startups and businesses overall – and higher than the Region's measures. And, like the Region, entrepreneurial activity and concentrations of growth firms lag the nation – but again, more intensively. At the same time, the District's growth indices among surviving firms paint a picture of solid, stable vitality which is slowly inching up on a lagging sales per employee rate.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	36,401	20,869		
Retained Firms		20,750	57%	1.13
Sales	439,316	656,807	49.5%	0.98
Avg Jobs	11	14	27%	0.65
Replenishment	365,875	280,328	77%	1.00
Sales/Employee	73,219	82,101	12%	0.79

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

High retention rates are coupled with nationally comparable levels of job replenishment and sale vitality in aggregate. Business out-migration is a low 0.3 percent of firms from the 1996 pool tracked, and 0.6 percent of survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim. Sales per employee rates are within a few points or above national levels in a variety of value-added industries, including wood products, furniture, paper, printing, chemicals, plastics, stone-clay-glass, primary metals and industrial machinery. Sales per employee rates are also high in the insurance industry and near US levels in motor freight and the array of professional services. Communications and business services lag.

Several industries also indicate high scores in multiple vitality indices, including building construction, chemicals, primary metals, electronics and transport equipment. The overall retention picture, while not overwhelmingly positive, is one of significant strengths in core industries, including several which indicate good sales per employee positioning. Many of the most positive indicators overlap from the three MSAs linked to the District.

## ARC Pennsylvania 9D

2001 firms analyzed:

39,163

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	925	483		
Retained Firms		475	51%	1.10
Sales	828,843	654,265	-21.1%	0.00
Avg Jobs	9	9	0%	0.00
Replenishment	7,693	4,301	56%	0.67
Sales/Employee	82,884	93,466	13%	0.68

### Startup Activity

96-01 Starts	3,364
Start Rate	12.5%
US Index	0.64

Startup activity rates are extremely low (64 percent of the US average), considerably lower than the still lagging Scranton-Wilkes Barre and Allentown MSAs linked to the District. (The New York MSA, also linked, has a startup activity rate comparable to the national average.) Rates are higher than average in only a handful of value added industries, including textiles and fabricated metals. (Because of the intensive concentration on branch recruitment in this area, it is worth pointing out that startup activity rates do not include branch facilities.) Startup rates in technology service industries (communications, business services) lag at about the level of the District overall.

Likewise, sales per employee positioning among surviving startups is weak. While aggregate measures among surviving startups appear very low, higher levels of sales or job change seem evident in textiles, industrial machinery, real estate, business, legal and educational services.

### High Job Growth Firms:

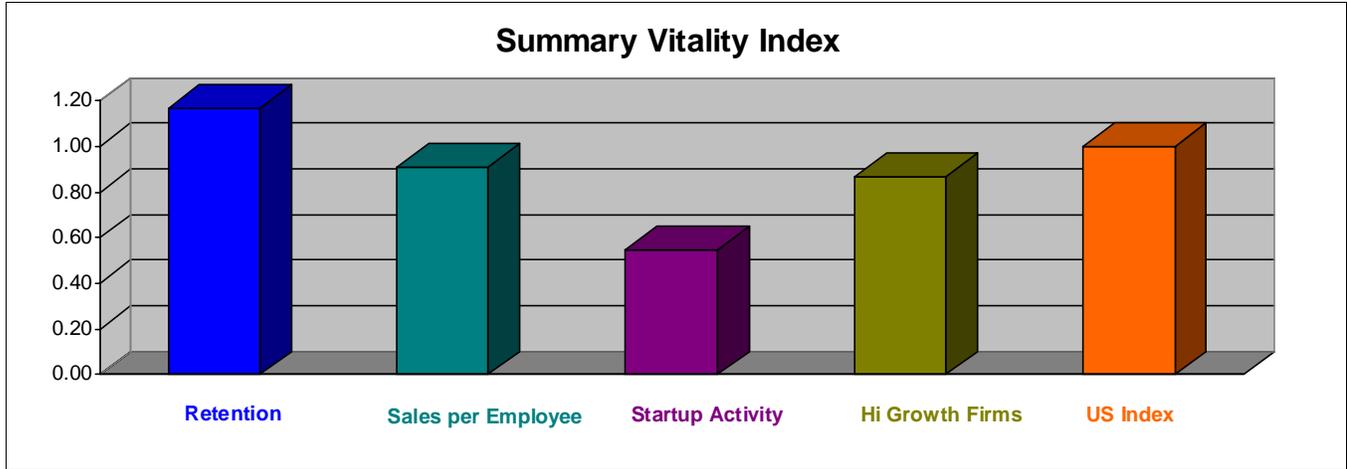
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	33,881	509	1.50%	0.74
Class I : < 5 Jobs>10 Jobs	23,904	419	1.75%	0.76
Class II : <10 Jobs>25 Jobs	28,910	139	0.48%	0.66
Class III : <25 Jobs>50 Jobs	32,014	90	0.28%	0.71
Class IV : <50 Jobs>100 Jobs	33,185	44	0.1300%	0.70
Class V : <100 Jobs> 250 Jobs	33,881	11	0.0300%	0.58

Aggregate high growth concentrations are 26 percent below national averages, a level that holds generally true throughout all employment classes. While still lagging US patterns, levels in the Allentown MSA are ten points or so higher and, while New York concentrations are lower than average, the sheer volume of firms involved provides opportunities for the District.

# ARC Pennsylvania 9F

2001 firms analyzed:

18,206



1.17      0.91      0.55      0.87      US = 1.00

ARC District 9F is administered by the Southern Alleghenies Regional Planning and Development Commission, including Bedford, Blair, Cambria, Fulton, Huntingdon and Somerset Counties. Blair County is contiguous with the Altoona MSA, while Cambria and Somerset Counties comprise the entire Johnstown MSA.

The District exhibits a vitality pattern common to modest growth areas, including high retention rates among startups and firms overall, coupled with very low startup activity rates. Lagging concentrations of high growth firms are mainly concentrated outside the two MSAs linked to the District, both of which trail US patterns but are within 2 percent-7 percent of US levels. District sales per employee positioning shows strength, only 9 percent below the national index.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	15,475	9,201		
Retained Firms		9,142	59%	1.17
Sales	516,668	665,082	28.7%	0.57
Avg Jobs	11	14	27%	0.65
Replenishment	161,618	128,757	80%	1.03
Sales/Employee	86,111	95,012	10%	0.91

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While retention rates throughout the District are high, vitality among retained firms appears sluggish. Lower sales vitality rates appear concentrated outside the Altoona MSA. The District's relatively good sales per employee positioning is particularly noteworthy in the context of weak sales vitality over the analysis period. Above average job replenishment rates suggest some good expansion activity among surviving firms. At 0.4 percent of the firms from the original 1996 pool and 0.6 percent of survivors, business out-migration is not a serious concern. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Sales per employee indices are high in both resource-based industries (mining and stone-clay-glass) and a string of metalworking industries, including fabricated metals, industrial machinery, electronics and transportation equipment. A large number of manufacturing industries display consistently high vitality rates among surviving firms, including wood products, furniture, paper products, chemicals, primary and fabricated metals, industrial machinery and electronics. Supplying many of these, the durable wholesale industry shows high ratings as well. Among value-added services, multiple high indices in engineering-research stand out. The retail resurgence in sections of the District is led by high vitality indices in the restaurant industry.

## ARC Pennsylvania 9F

2001 firms analyzed:

18,206

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	364	202		
Retained Firms		198	54%	1.16
Sales	457,466	657,865	43.8%	0.36
Avg Jobs	9	15	67%	1.00
Replenishment	2,993	2,971	99%	1.19
Sales/Employee	76,244	82,233	8%	0.60

## Startup Activity

96-01 Starts	1,392
Start Rate	10.7%
US Index	0.55

Startup activity rates are alarmingly low in the District and, although surviving startups tend to have levels of job growth at or above the US average, sales vitality is extremely limited and sales per employee rates quite low in aggregate. In general, this is a pattern carried through the District's MSAs.

Among manufacturers, startup activity leads US patterns in printing, primary metals, fabricated metals and transport equipment. Startup rates in industrial machinery lag US trends but are considerably higher than the District average, which is also the case for the technology-driven business services group. While retail startup rates are surprisingly low, this may be due to an influx of new branch retail facilities, which are excluded from this entrepreneurial startup measure.

Among those startups which did develop, the area's thirst for retail and services is clear. Surviving retail startups scored consistently well vitality indices, as did personal services and an array professional services, including engineering and legal. The core of manufacturing industries which led in startup activity and retention also scored well among those startups surviving from 1996: wood products, fabricated metals, industrial machinery and electronics. Surviving motor freight startups rated well in all vitality categories.

## High Job Growth Firms:

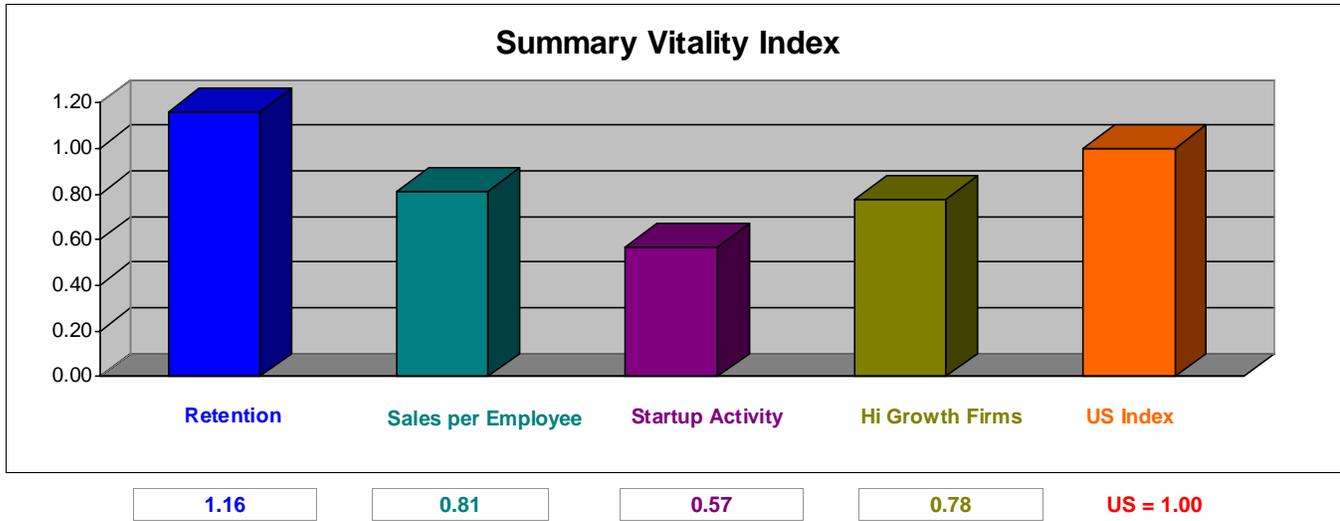
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	14,399	254	1.76%	0.87
Class I : < 5 Jobs>10 Jobs	9,826	207	2.11%	0.92
Class II : <10 Jobs>25 Jobs	12,211	78	0.64%	0.88
Class III : <25 Jobs>50 Jobs	13,597	48	0.35%	0.89
Class IV : <50 Jobs>100 Jobs	14,086	22	0.1600%	0.82
Class V : <100 Jobs> 250 Jobs	14,399	6	0.0400%	0.74

District high growth concentrations lag the US by about 13 percent. High growth indices are several points higher in each of the MSAs wholly included in the District, suggesting that at least some of the non-MSA counties indicate lower county scores. One of the strengths of the MSAs within the District is the spread of high growth firms throughout employment classes, producing a compensatory effect on the lack of new firm dynamism. However, this factor is not as evident in the District overall, suggesting opportunities to capture future expansion activity of high growth firms through branch development just outside the MSAs.

# ARC Pennsylvania 9G

2001 firms analyzed:

25,137



ARC District 9G is administered by the SEDA-Council of Governments, including Centre, Clinton, Columbia, Juniata, Lycoming, Mifflin, Montour, Northumberland, Perry, Snyder and Union Counties. Centre County is contiguous with the State College MSA and Lycoming County with the Williamsport MSA. Columbia County is included in the Scranton-Wilkes Barre MSA and Perry in the Harrisburg MSA.

This District evidences a common pattern of high business retention rates (among all firms and the startup breakout) with low levels of entrepreneurial activity and relatively weak concentrations of high growth firms. By far, the State College MSA (Centre County) is the strongest economic pole in the District, with substantially higher scores in every category. Indices in the other significantly linked MSA, Williamsport, correspond closely to District patterns.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	21,515	12,616		
Retained Firms		12,539	58%	1.16
Sales	464,868	586,248	26.1%	0.51
Avg Jobs	12	16	33%	0.80
Replenishment	245,002	200,579	82%	1.06
Sales/Employee	77,478	83,750	8%	0.81

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Retention rates in the District run 16 percent above the national average, 19 percent higher among startup firms. However, vitality indices among retained firms are considerably lower, especially in the sales category, yielding a correspondingly low (0.81) sales per employee rate overall. By contrast, retained firms in the State College MSA out-performed national levels in both sales and job vitality indices, making progress despite low sales per employee levels. Business out-migration is 0.4 percent from the original pool of firms tracked, and 0.6 percent of survivors, about average. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

On an industry-specific basis, District sales per employee rates were higher than average in only a handful of industries, but very concentrated in heavy manufacturing: in fabricated metals, industrial machinery, electronics and transport equipment, as well as in stone-clay glass and agricultural services. Vitality indices were high across multiple categories in a slightly larger range of industries, including wood products, furniture, paper products, chemicals, primary metals, fabricated metals, industrial machinery, electronics, motor freight transport, legal services and engineering. District vitality in communications and business services lagged leading rates in the State College MSA.

# ARC Pennsylvania 9G

2001 firms analyzed:

25,137

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	543	307		
Retained Firms		302	56%	1.19
Sales	697,264	970,588	39.2%	0.32
Avg Jobs	8	10	25%	0.38
Replenishment	3,975	2,870	72%	0.87
Sales/Employee	77,474	107,843	39%	0.78

### Startup Activity

96-01 Starts	1,934
Start Rate	11.1%
US Index	0.57

Startup activity in the District was only 57 percent of the national average. Slightly higher levels in the several linked MSAs suggest even lower rates in District counties outside the wholly included MSAs. While retained startup vitality in the Williamsport MSA is poor, State College's enormously vital retained startup group failed to create a major influence in the District, where overall startup vitality ratings are extremely weak.

In fact, startup activity itself rises above national averages in only a small number of industries, including printing, primary metals and transport equipment, the latter two with relatively small numbers of firms. Rates approach the national average in fabricated metals. Although startup activity in communications and industrial machinery are each more than 20 percent below national averages, they are substantially above the District average level.

Among surviving startups, electronics and legal firms stand out for leading indices across the board – sales per employee, sales and job change. Other industries with consistently high vitality indices (but lower sales per employee positioning) include wood products, fabricated metals, industrial machinery, motor freight and engineering-research. An array of retail industries and personal services also score well.

## High Job Growth Firms:

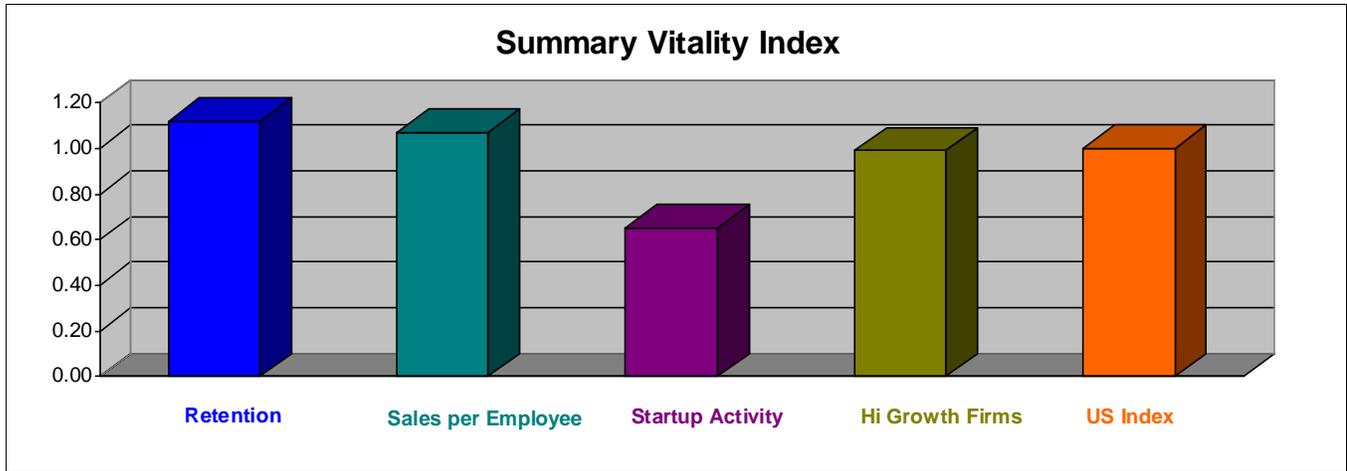
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	20,169	321	1.59%	0.78
Class I : < 5 Jobs>10 Jobs	14,015	273	1.95%	0.85
Class II : <10 Jobs>25 Jobs	17,162	95	0.55%	0.76
Class III : <25 Jobs>50 Jobs	19,055	50	0.26%	0.66
Class IV : <50 Jobs>100 Jobs	19,780	18	0.0900%	0.48
Class V : <100 Jobs> 250 Jobs	20,169	5	0.0200%	0.44

In contrast to the leading performance of the State College MSA, the District overall demonstrates high growth concentrations somewhat under both the national average and Regional levels. Scores range no higher than 0.85 in the smallest employment class, and descend as firms in employment classes become larger. As much as the retention vitality measures, this indicator suggest a need for the District to develop spillover opportunities from the State College area in an effort to more widely spread the economic vitality evident there.

# ARC Pennsylvania 9H

2001 firms analyzed:

101,985



1.12      1.07      0.65      0.99      US = 1.00

ARC District 9H is administered by the Southwestern PA Regional Development Council, including Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Washington and Westmoreland Counties. Allegheny, Beaver, Butler, Fayette, Washington and Westmoreland also comprise the Pittsburgh MSA.

Because of the almost complete overlap, vitality indices in the Pittsburgh MSA virtually mirror those in the District. The exception is in the startup activity index, which is 65 percent of the national average in the District, seven index points below the MSA level. In both areas, retention rates run more than 10 percent above average, and concentrations of high growth firm' are virtually even with the US average.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	93,746	53,280		
Retained Firms		53,102	57%	1.12
Sales	544,037	1,000,462	83.9%	1.65
Avg Jobs	12	17	42%	1.00
Replenishment	1,051,222	896,843	85%	1.11
Sales/Employee	90,673	111,162	23%	1.07

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The vitality of retained firms in the District – again, mirroring MSA rates – is remarkable. In addition to retention rates 12 percent above average, all vitality indicators lead US indices. The current sales per employee rate for retained firms beats the US average by 7 percent. Business out-migration is only 0.2 percent of the 1996 pool of firms tracked, and only 0.3 percent of survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Current retained firm sales per employee positioning is high in several construction industries (including heavy construction), as well as the District's traditional primary and fabricated metals industries. Plastics and electronics also register high sales per employee positions, as do motor freight, durable wholesale, banks, personal services and all professional and educational services (only engineering lags national levels about 10 percent). Consistently high vitality rates among retained firms are also evident in coal and other non-metallic mining, the several construction industries, textiles and apparel, furniture, chemicals, plastics, stone-clay-glass, industrial machinery, electronics, technology driven business services and less clearly, communications.

## ARC Pennsylvania 9H

2001 firms analyzed:

101,985

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,545	1,356		
Retained Firms		1,339	53%	1.12
Sales	727,246	1,098,663	51.1%	0.42
Avg Jobs	8	15	88%	1.31
Replenishment	20,062	19,470	97%	1.17
Sales/Employee	90,906	109,866	21%	0.80

### Startup Activity

96-01 Starts	8,694
Start Rate	12.6%
US Index	0.65

The weakest link in District performance, startup activity is only 65 percent of the national average, more than 20 index points below the average Appalachian level. Startup rates are low across the board; the only significant industry with rates approaching the national average is transport equipment. A number of the district's higher vitality industries score startup activity rates only in the range of 80 percent-85 percent of the industry average.

Vitality scores among surviving startups are generally stronger. While sales vitality lags far behind over the period analyzed, both job vitality measures are strong. The combination leads to a sales per employee index of 0.80, suggesting very strong original sales among the startup group which did not keep pace with national levels. At the same time, current sales per employee positioning of surviving startups in a number of core District industries is very strong, including primary and fabricated metals, industrial machinery, electronics and health. Vitality indices are strong across multiple categories in stone-clay-glass, primary metals, industrial machinery, motor freight and transport services, brokerages, health and legal services.

### High Job Growth Firms:

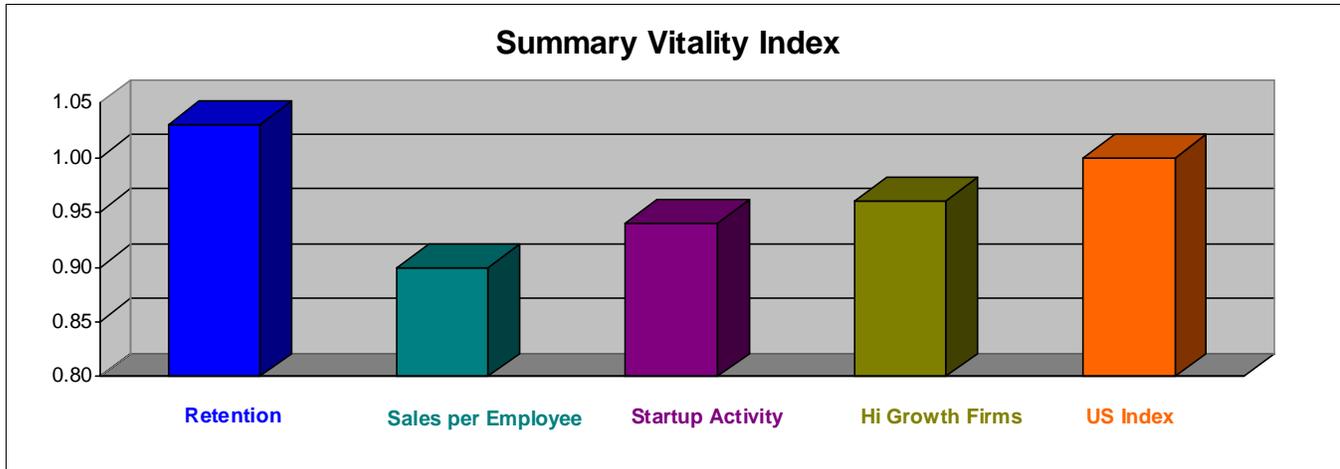
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	86,627	1,745	2.01%	0.99
Class I : < 5 Jobs>10 Jobs	57,775	1,381	2.39%	1.04
Class II : <10 Jobs>25 Jobs	72,051	547	0.76%	1.05
Class III : <25 Jobs>50 Jobs	81,149	306	0.38%	0.95
Class IV : <50 Jobs>100 Jobs	84,672	192	0.2300%	1.19
Class V : <100 Jobs> 250 Jobs	86,627	61	0.0700%	1.26

Mirroring strong retention vitality patterns and MSA performance, the District's high growth concentrations are strong across the board with an aggregate score of 0.99 and indices beating the national level in four of five employment classes, including the smallest and largest. The dynamism indicated by retained firms in the District (both high and "normal" growth) goes a long way toward compensating for the continued weakness in entrepreneurial activity.

# ARC South Carolina 10A

2001 firms analyzed:

39,138



Retention: 1.03      Sales per Employee: 0.90      Startup Activity: 0.94      Hi Growth Firms: 0.96      US Index: 1.00

ARC District 10A is administered by the South Carolina Appalachian Council of Governments, including Anderson, Cherokee, Greenville, Oconee, Pickens and Spartanburg Counties. All Districts counties except Oconee are also included in the Greenville-Spartanburg MSA.

The significant overlay between the District and the MSA creates corresponding close vitality images. In general, District indices run a few points lower than the MSA, suggesting some lag in Oconee County, but without a significant District-wide impact. All discussion of District and MSA vitality measures should be understood in the context of very significant branch development activity in the area. Due to the nature of the analysis, branch facilities are excluded from entrepreneurial, sales per employee and sales vitality figures – in this case effectively penalizing resulting District measures.

Even when branches are excluded from these measures, however, the District performs close to US levels. Entrepreneurial vitality runs six percent below the national average (and seven index points above the Region).

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	31,528	16,378		
Retained Firms		16,286	52%	1.03
Sales	610,212	841,809	38.0%	0.75
Avg Jobs	15	20	33%	0.80
Replenishment	453,780	326,232	72%	0.93
Sales/Employee	87,173	93,534	7%	0.90

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall retention rates are above national levels. Job and sales vitality among retained firms is lower, but the time series tracked firms from 1996, before some of the area's new growth had developed – and without the benefit of branch facilities. At the same time, the MSA shows substantially higher sales vitality patterns, suggesting lower scores in non-MSA District counties.

The District indicates excellent sales per employee positioning among retained firms in a host of non-durable industries: wood products, furniture, paper products, chemicals and stone-clay-glass. Among durables, electronics and transport equipment stand out, but several others, including fabricated metals and industrial machinery are within reach of national levels. Both air and motor freight transport are well-positioned, as are health and educational services. Reflecting strong development demand, building construction scores well in both job and sales vitality indices among retained firms, as do printing, chemicals, all metalworking industries, instruments, technology-driven business and legal services.

Business out-migration is 0.3 percent of firms tracked from the original 1996 pool and 0.6 percent of survivors – not a significant issue in the context of the District. While the number of migrant firms is the same in both calculations, the pool of firms to which they are compared differs by the number of area firms that ceased operations in the interim.

## ARC South Carolina 10A

2001 firms analyzed:

39,138

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,441	628		
Retained Firms		617	43%	0.91
Sales	586,622	784,882	33.8%	0.28
Avg Jobs	6	14	133%	2.00
Replenishment	8,699	8,293	95%	1.15
Sales/Employee	83,803	87,209	4%	0.63

### Startup Activity

96-01 Starts	4,671
Start Rate	18.3%
US Index	0.94

Startup activity rates approach national averages, but run ten index points behind the MSA. Like the MSA, job vitality among surviving startups is very strong, but sales vitality is much weaker. Sales per employee rates are low. Again, the area's strong branch facilities are not included in this analysis.

Aside from traditional strength in wood products, startup activity rates are highest in those manufacturing industries most likely to complement the area's large industrial complexes – in plastics, primary and fabricated metals, industrial machinery and, of course, transport equipment, including auto components. Startups lead national rates in all motor freight, air transport and transportation services. Not surprisingly, several banking industries and engineering-research are also strong.

Only a handful of industries reflect superior sales per employee positioning among surviving startups, but these are critical groups to the region: plastics, fabricated metals, industrial machinery, transport equipment, motor freight transport, and the technology-driven business services group. Along with many of these, surviving startups in several other industries show high job and sales vitality scores, including food products, textiles, furniture, chemicals and legal services.

### High Job Growth Firms:

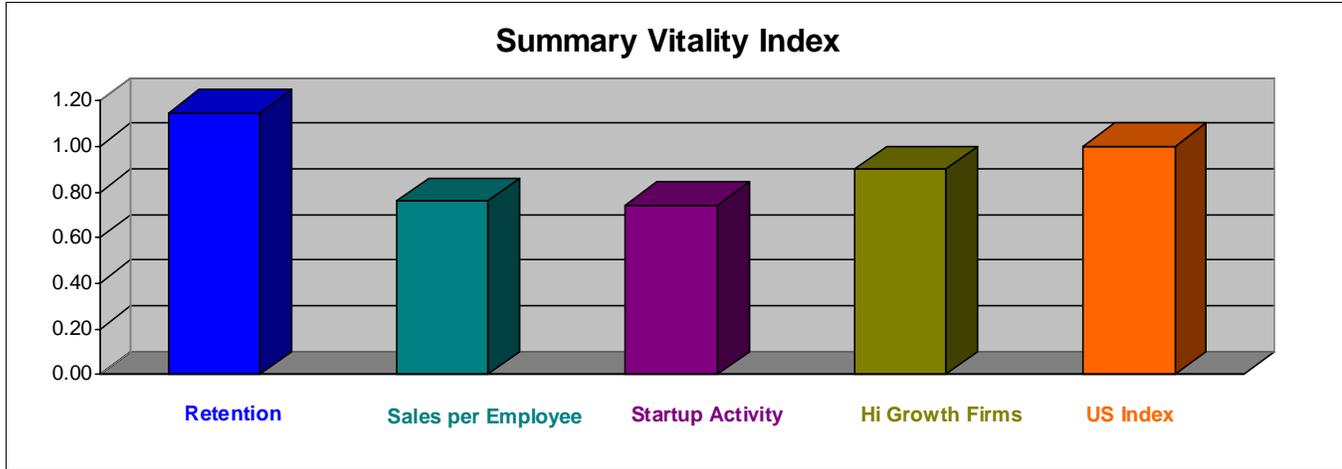
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	29,263	572	1.95%	0.96
Class I : < 5 Jobs>10 Jobs	19,355	459	2.37%	1.03
Class II : <10 Jobs>25 Jobs	24,216	165	0.68%	0.94
Class III : <25 Jobs>50 Jobs	27,308	112	0.41%	1.04
Class IV : <50 Jobs>100 Jobs	28,549	54	0.1900%	1.00
Class V : <100 Jobs> 250 Jobs	29,263	17	0.0600%	1.04

High growth concentrations are near national levels in all employment classes measured, never ranging more than 6 percent below or more than 4 percent above national averages. While not a real negative, the District's scores are significantly below those of the MSA, from which future high growth branch opportunities should be sought.

# ARC Tennessee 11A

2001 firms analyzed:

11,696



1.15      0.76      0.74      0.90      US = 1.00

ARC District 11A is administered by the Upper Cumberland Development District, including Cannon, Clay, Cumberland, De Kalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren and White Counties. None are linked to MSAs.

Although scores are slightly more elevated than is the case in other situations, the District's vitality indices follow the general pattern of modest growth Regional Districts, including high levels of business and startup retention coupled with low startup activity rates and low-to-modest concentrations of high growth firms. The District's overall sales per employee indicator is about three-quarters of the national level.

**Retention:**

	1996	5 Year Survivors	Change Rate	US Index
All Firms	7,954	4,633		
Retained Firms		4,614	58%	1.15
Sales	454,430	635,486	39.8%	0.79
Avg Jobs	11	15	36%	0.87
Replenishment	86,282	69,048	80%	1.04
Sales/Employee	64,919	79,436	22%	0.76

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The District's overall retention vitality measures are far better than those in many other LDDs, but still lag behind national levels and Regional averages. Both sales and job change vitality measures trail behind US and Appalachian rates, although the job replenishment score is slightly better than both. Business out-migration is a scant 0.2 percent of firms from the 1996 pool, and 0.4 percent of survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Among significantly-sized industries, only three -- fabricated metals, motor freight and personal services -- indicate higher than average sales per employee rates. Of the three, only fabricated metals reflects consistently high vitality scores in job and sales categories. However, large numbers of value-added industries outperform national averages in job and sales vitality ratings outside the sales per employee index, including heavy construction, wood products, paper products, chemicals, plastics, stone-clay-glass, primary metals, industrial machinery, electronics and transport equipment. Communications and business services also weigh in with very impressive performances for an area without metropolitan links.

# ARC Tennessee 11A

2001 firms analyzed:

11,696

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	235	111		
Retained Firms		111	47%	1.01
Sales	328,472	668,269	103.4%	0.85
Avg Jobs	9	13	44%	0.67
Replenishment	1,956	1,434	73%	0.88
Sales/Employee	41,059	55,689	36%	0.40

### Startup Activity

96-01 Starts	1,131
Start Rate	14.4%
US Index	0.74

Startup activity rates are 26 percent below the national average, and although startup retention is slightly above the US level, vitality among surviving startups is weak in all categories – and the sales per employee rate is very low. Among significant industries, the startup rate is high only in furniture, fabricated metals (a retention stronghold as well) and health services. The relatively low number of surviving startup firms (and their wide distribution) makes industry-specific analysis difficult.

## High Job Growth Firms:

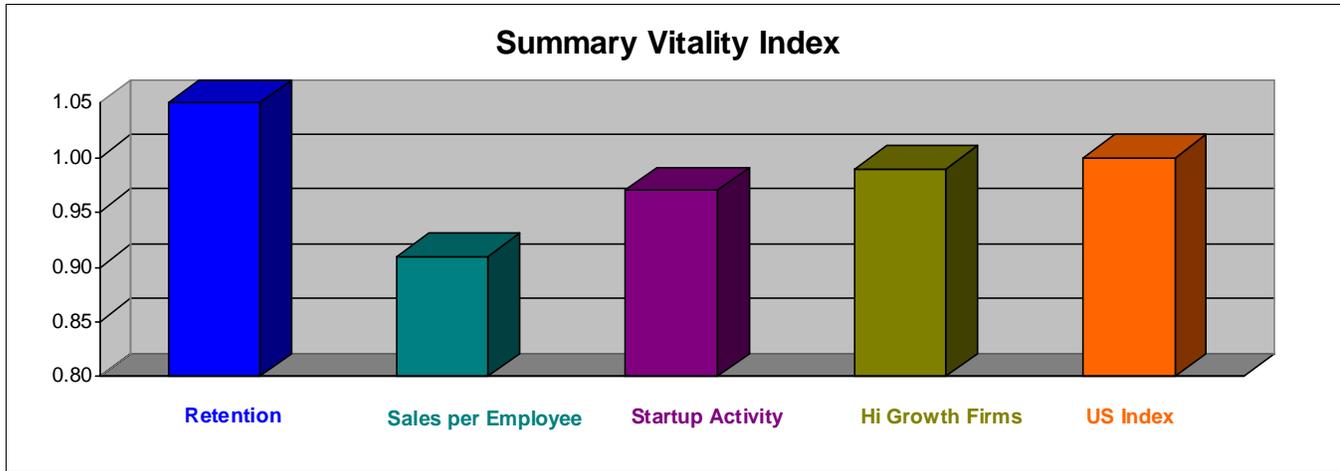
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	7,475	137	1.83%	0.90
Class I : < 5 Jobs>10 Jobs	5,232	112	2.14%	0.93
Class II : <10 Jobs>25 Jobs	6,358	36	0.57%	0.78
Class III : <25 Jobs>50 Jobs	7,033	22	0.31%	0.79
Class IV : <50 Jobs>100 Jobs	7,291	7	0.1000%	0.51
Class V : <100 Jobs> 250 Jobs	7,475	2	0.0300%	0.48

The aggregate concentration of high growth firms is about 10 percent below US levels, primarily concentrated in the smallest employment class (starting with fewer than five employees and growing to more than ten) where the District index was 0.93. Aggregate and small class scores are on a par with Appalachian rates.

# ARC Tennessee 11B

2001 firms analyzed:

41,408



1.05      0.91      0.97      0.99      US = 1.00

ARC District 11B is administered by the East Tennessee Development District, including Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen and Jefferson Counties. Anderson, Blount, Knox, Loudon, Sevier and Union are also included in the Knoxville MSA.

This large District includes very significant overlap with the Knoxville MSA, a correspondence easily viewed in the vitality ratings of the two. The District's indices all hover at or near US levels, creating an overall picture of economic solidity which leads Appalachian rates. However, the District lags significantly behind Knoxville's leading startup activity rate. Identification of opportunities to capture more of the MSA's entrepreneurial vitality is undoubtedly high on the District's to do list.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	30,944	16,438		
Retained Firms		16,374	53%	1.05
Sales	515,683	848,429	64.5%	1.27
Avg Jobs	13	17	31%	0.74
Replenishment	386,633	282,298	73%	0.95
Sales/Employee	73,669	94,270	28%	0.91

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall retained firm vitality measures are anchored by a retention rate 5 percent above the US average and very impressive sales vitality indices averaging 27 percent above the US level. This is especially notable as a complement to high job replenishment rates (but a somewhat lagging job vitality index). Sales per employee indicators are within 9 percent of national norms and rising. Retention vitality ratings track those of the MSA closely. Business out-migration is only 0.2 percent of the 1996 pool of firms tracked, and 0.4 percent of survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

High sales per employee indicators among survivor firms are found in food products, plastics, leather, stone-clay-glass, primary and fabricated metals and transport equipment. Wholesale operations and rail and motor freight transport are also positioned well, along with health and educational services. Aside from current positioning, a number of value added industries also delivered leading performance in both sales and job vitality measures, including building construction, food products, furniture, petroleum, plastics, stone-clay-glass, primary metals, industrial machinery, transport equipment and instruments.

## ARC Tennessee 11B

2001 firms analyzed:

41,408

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,103	512		
Retained Firms		508	46%	0.98
Sales	802,145	1,246,035	55.3%	0.45
Avg Jobs	8	16	100%	1.50
Replenishment	8,407	7,764	92%	1.11
Sales/Employee	100,268	95,849	-4%	0.70

## Startup Activity

96-01 Starts	5,166
Start Rate	19.0%
US Index	0.97

While lagging the linked Knoxville MSA by twenty-one index points, the District's startup activity rate is only slightly below the national average. National level and leading rates are found in most construction industries, apparel, paper products, plastics, stone-clay-glass, primary and fabricated metals, industrial machinery, transport equipment, instruments, motor and water transport as well as transport services, wholesale industries and engineering-research. Startup rates in the technology-driven business services industry lag US rates in the District considerably (but are higher in the MSA).

Retained startups tend to show high levels of job vitality but lagging sales vitality rates, yielding a low sales per employee score. This is also the case in the MSA, but there each of the scores is elevated beyond the District's level. Leading startup sales per employee rates in the District are found in several of the same industries which displayed high vitality in other categories, including food products, furniture and transport services. Business services is a welcome high performer in this measure. Both high job and high sales vitality scores are indicated for retained startups among special trades contractors, textiles, plastics, stone-clay-glass, primary metals, electronics, transport equipment, instruments and social services.

## High Job Growth Firms:

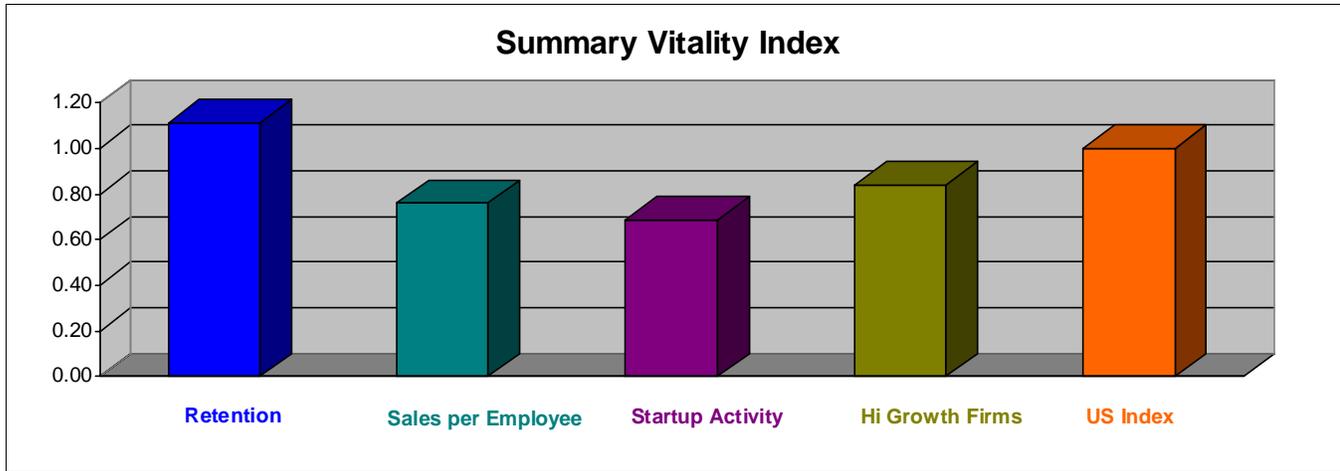
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	28,822	580	2.01%	0.99
Class I : < 5 Jobs>10 Jobs	18,680	461	2.47%	1.07
Class II : <10 Jobs>25 Jobs	23,702	158	0.67%	0.92
Class III : <25 Jobs>50 Jobs	26,940	99	0.37%	0.93
Class IV : <50 Jobs>100 Jobs	28,182	60	0.2100%	1.12
Class V : <100 Jobs> 250 Jobs	28,822	17	0.0600%	1.05

Concentrations of high growth firms are within range of US levels in aggregate scores, and high among Class II firms (began with fewer than ten jobs and end with more than twenty-five) and in Class IV (began with fewer than fifty jobs and ended with more than one hundred). This impressive distribution, coupled with solid startup activity and consistently high indices among a set of the District's core industries is encouraging indeed. Additional dynamism gleaned from the MSA's entrepreneurial base would significantly enhance overall performance.

# ARC Tennessee 11C

2001 firms analyzed:

15,797



1.11      0.76      0.69      0.84      US = 1.00

ARC District 11C is administered by the First Tennessee Development District, including Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi and Washington Counties. Carter, Hawkins, Sullivan, Unicoi and Washington are also included in the Johnson City-Kingsport MSA.

The District closely tracks vitality ratings in the MSA with the exception of the startup activity index. Although the index is quite low in both areas, the District's rating (69 percent of the national average) lags seven index points behind the MSA. Both trail the Region by a significant margin as well. Overall and startup retention both lead national rates, but concentrations of high growth firms trail the US level by 16 percent and Appalachia by six index points. The sales per employee index lags both national activity and Appalachia by considerable margins. The general vitality picture is one of an area with a core of stability but only modest patterns of new and dynamic activity.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	13,607	7,641		
Retained Firms		7,615	56%	1.11
Sales	465,840	635,872	36.5%	0.72
Avg Jobs	14	17	21%	0.51
Replenishment	183,300	125,546	68%	0.89
Sales/Employee	66,549	79,484	19%	0.76

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While the District's retention rate is high, vitality among retained firms is modest in overall scoring. Sales vitality, job vitality and replenishment all fall below national and Regional averages, contributing to a general sales per employee index about 24 percent below the national level.

Sales per employee positioning leads national trends in textiles, electronics and miscellaneous retail. A larger number of industries score well among survivors in both job and sales vitality indices, including building construction – a sign of local development confidence – wood and paper products, plastics, industrial machinery, industries related to all transportation modes and services, legal services and selected retail segments. The technology-driven business services industry is progressing and reflects high vitality measures in several categories, although communications lags. Business out-migration is slightly less than 0.2 percent from the 1996 pool, and 0.3 percent of survivors – not a cause for concern. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

## ARC Tennessee 11C

2001 firms analyzed:

15,797

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	404	201		
Retained Firms		199	49%	1.05
Sales	484,436	602,260	24.3%	0.20
Avg Jobs	10	21	110%	1.65
Replenishment	3,890	4,048	104%	1.25
Sales/Employee	80,739	86,037	7%	0.62

## Startup Activity

96-01 Starts	1,410
Start Rate	13.4%
US Index	0.69

The startup activity rate is a sluggish 31 percent below national levels, and eighteen index points behind Appalachia. While retention among startups is high (not uncommon in areas with modest entrepreneurial activity) sales vitality among surviving startups appears low overall, while job vitality measures are higher.

Startup activity rates are generally highest in industries which also indicate good general local positioning or high vitality measures among retained firms, including textiles, paper, plastics and electronics. Stone-clay-glass, primary metals and, to a lesser extent, furniture, also reflect solid startup activity ratings. Both communications and business services lag.

Surviving startups in furniture also indicate high sales per employee ratings, as do retained engineering starts from the 1996 pool. Paper products survivors show high levels of sales and job vitality, while engineering and business service survivors indicate good sales vitality levels. Personal services startups achieved high vitality ratings in several categories. A larger number of surviving startups showed leading job vitality scores.

## High Job Growth Firms:

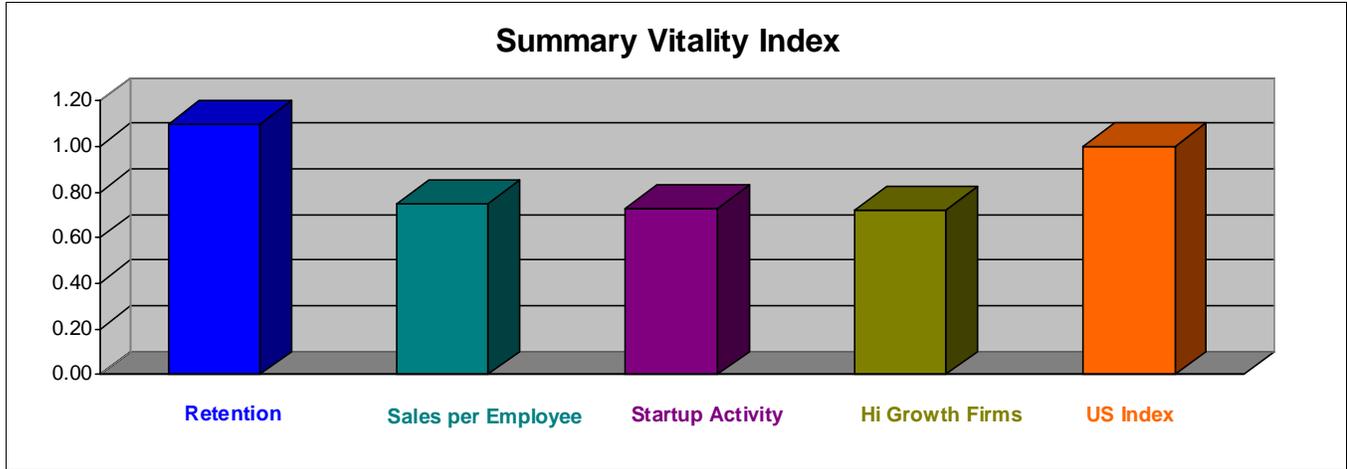
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	12,756	217	1.70%	0.84
Class I : < 5 Jobs>10 Jobs	8,524	177	2.08%	0.90
Class II : <10 Jobs>25 Jobs	10,684	64	0.60%	0.83
Class III : <25 Jobs>50 Jobs	11,977	39	0.33%	0.82
Class IV : <50 Jobs>100 Jobs	12,501	19	0.1500%	0.80
Class V : <100 Jobs> 250 Jobs	12,756	6	0.0500%	0.84

Aggregate concentrations of high growth firms trail US levels by 16 percent. The District's rating did not climb above 0.90 in any single category, nor did it fall beyond 80 percent of the national level. While a significant raw number of district firms are in the high growth bracket, most of these are quite small, and would have a hard time compensating for the lack of larger firm concentrations as well as the lag in the District's entrepreneurial activity levels.

# ARC Tennessee 11D

2001 firms analyzed:

3,492



1.10      0.75      0.73      0.72      US = 1.00

ARC District 11D is administered by the South Central Tennessee Development District, including Coffee and Franklin Counties. Neither is within a related MSA.

This small District reflects a classic modest vitality pattern of high retention rates among both firms overall and startups, coupled with rather low startup activity, weak high growth firm concentrations and low sales per employee indices. In this case, all three of the latter are about one-quarter below US trend, and substantially below Appalachian averages as well.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,762	1,539		
Retained Firms		1,526	55%	1.10
Sales	417,761	547,252	31.0%	0.61
Avg Jobs	12	13	8%	0.20
Replenishment	30,752	19,561	64%	0.83
Sales/Employee	69,627	78,179	12%	0.75

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While overall retention rates are high, vitality among surviving firms is quite weak in job and especially sales vitality categories. The District's sales per employee index, at 0.75, has been weakened by 1996-2001 sales vitality. Business out-migration is 0.4 percent of the 1996 pool of firms tracked, and 0.8 percent of survivors, this last slightly high for an area with this configuration, but not it's biggest issue. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Throughout the District, only some agricultural production and services, leather and a single retail segment evidence leading sales per employee positioning. Agricultural services is also a consistent leader in other vitality indices. More encouragingly, a broad number of value added industries indicate high sales and job vitality indices among retained firms, suggesting that area vitality measures will progress as these industries gain strength and numbers. Consistently high scorers include wood products, chemicals, plastics, industrial machinery, electronics, transport equipment among manufacturers. Leading service segments include communications, personal and legal services.

## ARC Tennessee 11D

2001 firms analyzed:

3,492

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	74	40		
Retained Firms		39	53%	1.13
Sales	632,000	522,857	-17.3%	0.00
Avg Jobs	9	13	44%	0.67
Replenishment	633	506	80%	0.96
Sales/Employee	90,286	87,143	-4%	0.63

### Startup Activity

96-01 Starts	327
Start Rate	14.2%
US Index	0.73

The area's largest concern may be low startup activity rates. Because of the small scale of the District, measurements among some individual industries may not be meaningful. However, bright spots can be discerned in metalworking (industrial machinery, electronics and transport equipment), but is scattered among other industries. Notably, these industries also performed well in the retention vitality indices. However, both communications and the technology-driven business services industry rated poorly for startup activity. Health, legal and engineering services all rated highly.

Among surviving startups, vitality rates were generally low, especially in sales vitality and sales per employee indices. The low number of identified retained startups severely constrained industry-specific analysis. However, agricultural services and construction stood out for high sales per employee rates, while job and sales measures were very positive in metalworking industries.

### High Job Growth Firms:

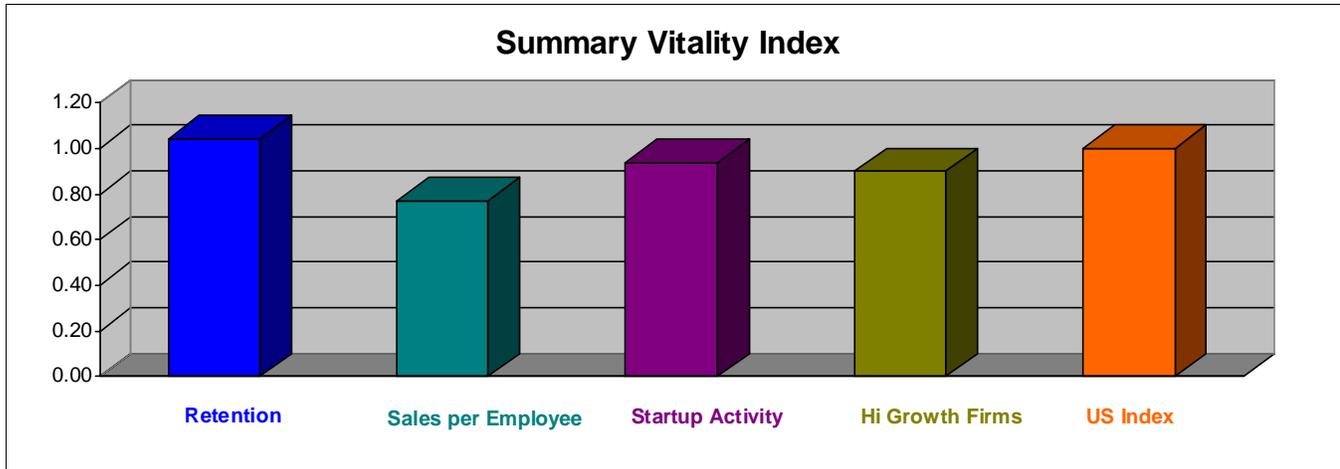
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,583	38	1.47%	0.72
Class I : < 5 Jobs>10 Jobs	1,780	32	1.80%	0.78
Class II : <10 Jobs>25 Jobs	2,218	7	0.32%	0.44
Class III : <25 Jobs>50 Jobs	2,429	6	0.25%	0.62
Class IV : <50 Jobs>100 Jobs	2,533	2	0.0800%	0.42
Class V : <100 Jobs> 250 Jobs	2,583	0	0.0000%	0.00

High growth concentrations lag significantly in the District. The aggregate index of 0.72 is near the top of the District ladder, which descends to below half of the national level of high growth firms in larger employment classifications. This vitality measurement offers little opportunity to compensate for the area's low levels of entrepreneurial activity.

# ARC Tennessee 11E

2001 firms analyzed:

23,337



1.04      0.77      0.94      0.90      US = 1.00

ARC District 11E is administered by the Southeast Tennessee Development District, including Bledsoe, Bradley, Grundy, Hamilton, McMinn, Marion, Meigs, Polk, Rhea and Sequatchie Counties. Hamilton and Marion Counties are also included in the Chattanooga MSA.

While linked to the MSA and despite overlap in some measures, the District reflects a distinct set of strengths and concerns. Retention rates are high overall. In the startup survival category, retention rates which would be adequate in a high growth area are borderline in the District, where the startup activity index is below national levels and eighteen index points behind the MSA's. Viewed from a more favorable vantage point, District startup activity still outpaces the Appalachian index by seven points. Despite lower startup rates in the District, other vitality measures and the dynamism of retained startups seem to compensate. Concentrations of high growth firms match Appalachia's, despite slightly lower scores in the MSA. Overall, the vitality picture is much more positive than in most Appalachian Districts.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	17,884	9,465		
Retained Firms		9,403	53%	1.04
Sales	607,388	795,530	31.0%	0.61
Avg Jobs	14	20	43%	1.03
Replenishment	231,796	182,833	79%	1.02
Sales/Employee	86,770	79,553	-8%	0.77

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While weak in both sales vitality indices and the corresponding sales per employee index, the District's retention performance is underpinned by strong survival and job vitality ratings. Business out-migration is 0.3 percent of firms from the original pool and 0.7 percent of survivors – not a real concern for an area closely linked to a sizable MSA. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Sales per employee positioning is particularly strong in building construction, plastics, leather, motor freight, communications, health and educational services. A number of value added industries turn in consistently high vitality job and sales vitality scores, including agricultural services, building construction (a good development indicator here coupled with high building material supply scores), paper products, leather, fabricated metals, instruments, personal services and engineering-research.

## ARC Tennessee 11E

2001 firms analyzed:

23,337

## Startups:

	1996	5 Year Survivors	Change Rate	US Index		
All Firms	558	242			Startup Activity	
Retained Firms		237	43%	0.91		
Sales	770,000	1,643,902	113.5%	0.93		96-01 Starts
Avg Jobs	13	24	85%	1.27		Start Rate
Replenishment	7,055	5,668	80%	0.97		US Index
Sales/Employee	96,250	126,454	31%	0.92		2,801
					18.3%	
					0.94	

Although slightly below national levels, the District's 0.94 startup index is welcome in the Appalachian context, including agricultural services, several construction segments, leather and engineering-research, all of which scored well in retention vitality ratings. Other startup activity leaders included wood products, printing, chemicals, leather, stone-clay-glass, industrial machinery and transport equipment.

While startup retention dipped below national rates, this was somewhat balanced by the District's relatively good levels of startup activity. As importantly, surviving startups evidenced high levels of vitality, ranking within 7 percent of the national level in all retained startup vitality ratings and leading US levels in job vitality. Sales per employee rates among retained startups was only 8 percent below national levels—a full 17 index points above the Appalachian average. The sales per employee level was supported by especially good showings in agricultural services, construction, apparel, durable wholesale, personal and business services (including computer services).

Among startup survivors, consistently high vitality ratings were identified in construction segments, textiles, chemicals, fabricated metals, industrial machinery, legal and engineering-research.

## High Job Growth Firms:

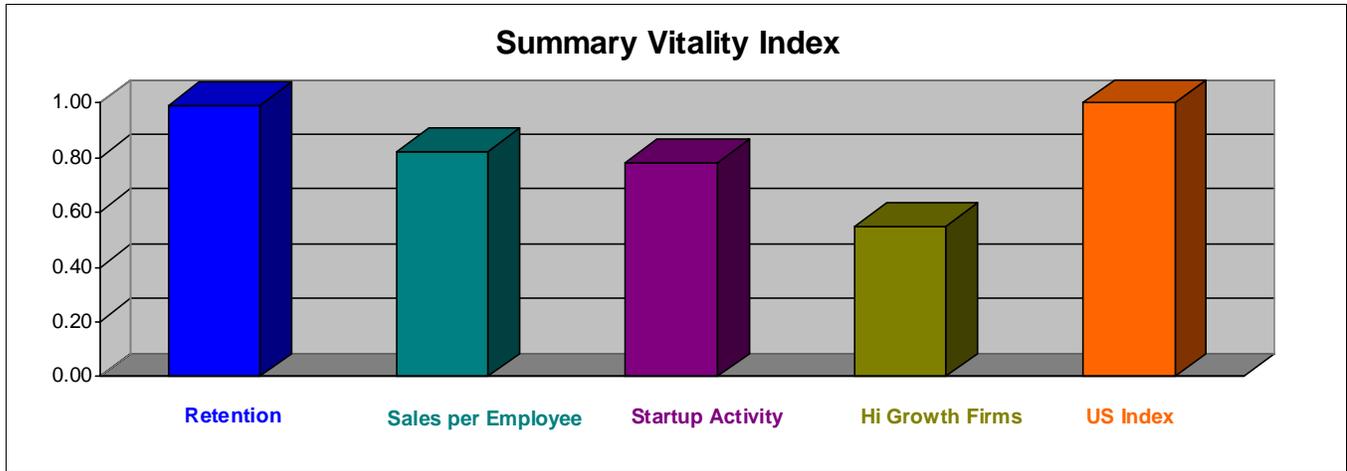
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	16,583	303	1.83%	0.90
Class I : < 5 Jobs>10 Jobs	10,746	238	2.21%	0.96
Class II : <10 Jobs>25 Jobs	13,588	83	0.61%	0.84
Class III : <25 Jobs>50 Jobs	15,434	59	0.38%	0.96
Class IV : <50 Jobs>100 Jobs	16,195	28	0.1700%	0.91
Class V : <100 Jobs> 250 Jobs	16,583	10	0.0600%	1.08

Concentrations of high growth firms are 90 percent of the national level, matching the Appalachian rate and scoring seven points above the Chattanooga MSA. Concentrations are close to US scores in every employment class except Class II (began with fewer than ten jobs and grew to more than twenty-five), and lead US averages in the largest segment, Class V. The strong concentration of growth firms, coupled with solid startup activity and leading retention scores, make for a District whose vitality outlook exceeds most in the Region.

# ARC Virginia 12A

2001 firms analyzed:

2,671



0.99      0.82      0.78      0.55      US = 1.00

ARC District 12A is administered by the LENOWISCO Planning District Commission, including Lee, Scott and Wise Counties. Scott County is also included in the Johnson City MSA.

This small District exhibits the common pattern of vitality scores of many modest-growth ARC areas, including high retention rates coupled with low startup rates and weak concentrations of high growth firms. Overall retention rates are lower than are usually found in Districts fitting this pattern. While high growth concentrations and retained firm sales vitality are weaker than in the linked Johnson City MSA, job vitality among average retained firms is considerably better.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,111	1,067		
Retained Firms		1,056	50%	0.99
Sales	427,621	597,586	39.7%	0.78
Avg Jobs	9	13	44%	1.07
Replenishment	18,682	13,818	74%	0.96
Sales/Employee	71,270	85,369	20%	0.82

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Retention stands almost even with national trends, while sales vitality among retained firms lags by 22 percent. Job vitality among the same group hovers around national levels. Weak sales vitality has reduced the District's survivor sales per employee indicator to 82 percent of the national level – just slightly ahead of the MSA but twelve index points behind the Appalachian average. At 0.5 percent of the original pool of firms tracked from 1996 and 1.0 percent of survivors, business out-migration is somewhat high for a rural area, although far from the most serious concern. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retained firm sales per employee rates are above national levels in only a handful of industries, including agricultural services, chemicals, electronics, wholesale durables and personal services. Industries indicating other consistently high vitality scores include non-metallic mining, several construction segments, electronics, wholesale durables, health, legal and social services. Several retail segments, including restaurants and general merchandise (department) stores also evidence high vitality ratings.

## ARC Virginia 12A

2001 firms analyzed:

2,671

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	54	28		
Retained Firms		28	52%	1.11
Sales	309,375	308,000	-0.4%	0.00
Avg Jobs	5	6	20%	0.30
Replenishment	263	172	65%	0.79
Sales/Employee	44,196	51,333	16%	0.37

## Startup Activity

96-01 Starts	266
Start Rate	15.1%
US Index	0.78

Startup activity lags 22 percent below national averages and nine index points below the Region. The number of startups is too small to take a significant measure in many industries. However, leading levels of startup activity were found in coal mining, heavy construction, wholesale non-durables, personal services and several professional service categories, all likely evidencing demand from underserved rural areas. These included health, legal, educational and social services.

While the retention of 1996 startups was quite high (1.11) this is not unusual in low growth, low competition areas. Moreover, the vitality measures among surviving startups were quite low, as was their overall sales per employee positioning. The very small number of identified surviving startups severely constrained industry-specific analysis. Among these, the mixed ratings for personal and legal services seemed to be the best of the lot.

## High Job Growth Firms:

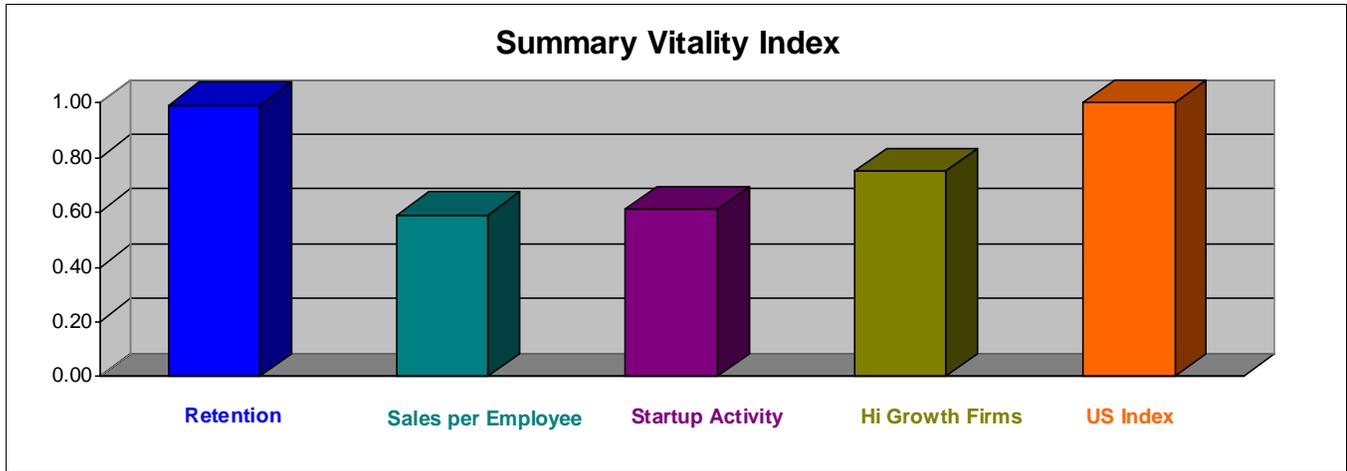
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	1,976	22	1.11%	0.55
Class I : < 5 Jobs>10 Jobs	1,256	19	1.51%	0.66
Class II : <10 Jobs>25 Jobs	1,650	11	0.67%	0.92
Class III : <25 Jobs>50 Jobs	1,845	2	0.11%	0.27
Class IV : <50 Jobs>100 Jobs	1,938	0	0.0000%	0.00
Class V : <100 Jobs> 250 Jobs	1,976	0	0.0000%	0.00

Concentrations of high growth firms register fully 45 percent below the national average, although the District index climbed as high as 0.92 in the Class II ratings (began with fewer than ten jobs ended with more than twenty-five). Nonetheless, weak high vitality coupled with low startup activity and very weak vitality among retained startups suggest a District in need of a larger and more sustained level of economic dynamism than can be spun off from the Johnson City MSA.

# ARC Virginia 12B

2001 firms analyzed:

3,240



0.99      0.59      0.61      0.75      US = 1.00

ARC District 12B is administered by the Cumberland Plateau Planning District Commission, including Buchanan, Dickenson, Russell and Tazewell Counties. None is included in any MSA jurisdictions.

This small District exhibits the common pattern of vitality scores for many modest-growth ARC areas, including solid retention rates coupled with low startup rates and weak concentrations of high growth firms. Overall retention rates are lower than usual in this pattern – just at the US average, rather than substantially above it. While high growth concentrations and retained firm sales vitality are weak, job vitality among average retained firms is considerably better.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,541	1,281		
Retained Firms		1,273	50%	0.99
Sales	1,089,847	739,625	-32.1%	0.00
Avg Jobs	11	16	45%	1.09
Replenishment	27,573	20,188	73%	0.95
Sales/Employee	83,834	61,635	-27%	0.59

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

With low startup rates and low concentrations of high growth firms, higher retention rates and retained firm vitality are necessary to sustain area dynamism, but the District's strengths do not seem to rise to the task at present. Job vitality hovers around national levels, but levels of sales vitality among retained firms are quite low. The District is not linked to any MSA, much less one which can spin off enough economic vitality for an outlying District to grasp. At 0.3 percent of firms from the original 1996 pool and 0.6 percent of survivors, business out-migration is not a correspondingly large problem. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Among retained firms, only personal services, health services and amusements indicate leading sales per employee rates. There is a correspondingly low level of industries which indicate both high sales and job vitality among survivors: only lodging and business services qualify in both categories. Not a single manufacturing industry or other value-added segment rates highly across both sales and job measures.

## ARC Virginia 12B

2001 firms analyzed:

3,240

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	66	31		
Retained Firms		31	47%	1.00
Sales	1,873,684	520,690	-72.2%	0.00
Avg Jobs	8	9	13%	0.19
Replenishment	494	267	54%	0.65
Sales/Employee	187,368	74,384	-60%	0.54

### Startup Activity

96-01 Starts	268
Start Rate	11.9%
US Index	0.61

Lagging national rates by 39 percent and the Region by twenty-six index points, startup activity is the District's weakest vitality link. Startup rates approach or lead national averages in extraction industries, wood products and furniture, fabricated metals, motor freight and social services. Despite high retained firm vitality ratings, business services startup levels are poor.

Likewise, vitality indices among the few identified surviving startups are weak (the sample analyzed is comprised of only 31 firms). Surviving startups trail US indices in every vitality measure. Sales per employee positioning is a little more than half the national score, and higher than average only in motor freight transport. The very small number of retained startups in motor freight, textiles and retail foods indicate consistently high industry vitality measures.

### High Job Growth Firms:

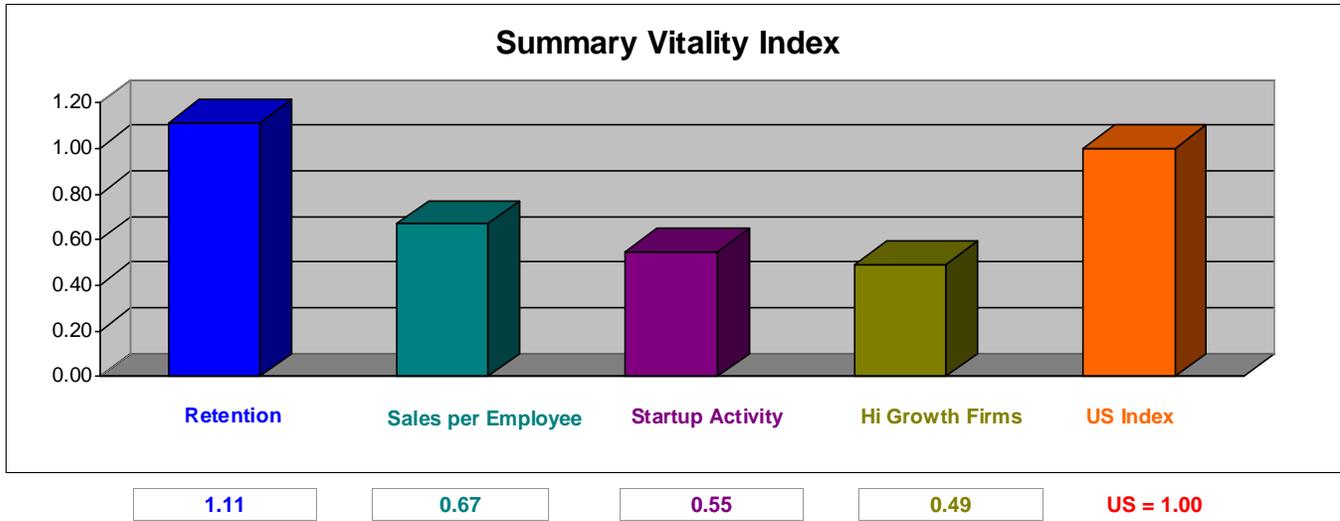
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,373	36	1.52%	0.75
Class I : < 5 Jobs>10 Jobs	1,478	30	2.03%	0.88
Class II : <10 Jobs>25 Jobs	1,947	13	0.67%	0.92
Class III : <25 Jobs>50 Jobs	2,210	11	0.50%	1.26
Class IV : <50 Jobs>100 Jobs	2,323	4	0.1700%	0.91
Class V : <100 Jobs> 250 Jobs	2,373	3	0.1300%	2.26

Aggregate concentrations of high growth firms are three-quarters of the US average, although employment class indices range considerably higher, buoyed by the small number of firms needed in a jurisdiction of limited scale. Aggregate figures can be lower than any of the employment class breakouts due to overlap of some firms which qualify as high growth in multiple classes.

# ARC Virginia 12C

2001 firms analyzed:

6,013



ARC District 12C is administered by the Mount Rogers Planning District Commission, including Bland, Carroll, Grayson, Smyth, Washington and Wythe Counties. Washington County is also included in the Johnson City MSA.

This District exhibits the common pattern of vitality scores for many modest-growth ARC areas, including high retention rates coupled with very low startup rates and extremely weak concentrations of high growth firms. Startup activity and high growth concentrations are weaker than in the linked Johnson City MSA, but vitality measures of retained firms are about on par with the MSA. High vitality ratings among startup survivors are insufficient compensation for broader weaknesses.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,890	2,761		
Retained Firms		2,735	56%	1.11
Sales	383,355	560,320	46.2%	0.91
Avg Jobs	11	13	18%	0.44
Replenishment	51,869	36,136	70%	0.90
Sales/Employee	63,893	70,040	10%	0.67

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Despite a leading retention rate, retained firm vitality is low in current sales per employee positioning. However, the District demonstrates relatively strong performance in the sales vitality index. Job vitality ratings are mixed. Business out-migration is 0.55 of firms from the original 1996 pool, and 0.9 percent of survivors, somewhat higher than in most similarly configured Districts. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Among the area's significant industries, non-metallic mining, textiles, furniture and plastics were the value-added industries indicating high sales per employee positioning. Higher vitality ratings include a number of industries which indicate leading indices in both sales and job categories. These include agricultural services, wood products, paper products, plastics, stone-clay-glass, fabricated metals, industrial machinery, engineering and at least three retail segments. Most services, including business services as well as communications, are weak.

# ARC Virginia 12C

2001 firms analyzed:

6,013

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	140	73		
Retained Firms		71	51%	1.08
Sales	537,778	3,564,179	562.8%	4.62
Avg Jobs	21	39	86%	1.29
Replenishment	2,897	2,774	96%	1.15
Sales/Employee	89,630	86,931	-3%	0.63

### Startup Activity

96-01 Starts	431
Start Rate	10.6%
US Index	0.55

Startup activity rates 45 percent below the US average, and thirty-two index points below Appalachia. Startup activity is below national levels in all significant industries except wood products and furniture, stone-clay-glass, primary and fabricated metals, and transport services. Indices for heavy construction, food products and the lodging industry are within 10 percent of national rates.

Although overall sales per employee rates among surviving startups remain low, this group appears to have developed good retention rates and leading vitality indicators in both sales and job categories. The small number of retained startups tracked from 1996 makes industry-specific comparison difficult, but startup survivors in fabricated metals, motor freight transport and non-durable wholesale stand out for high indices across both sales and job vitality categories.

## High Job Growth Firms:

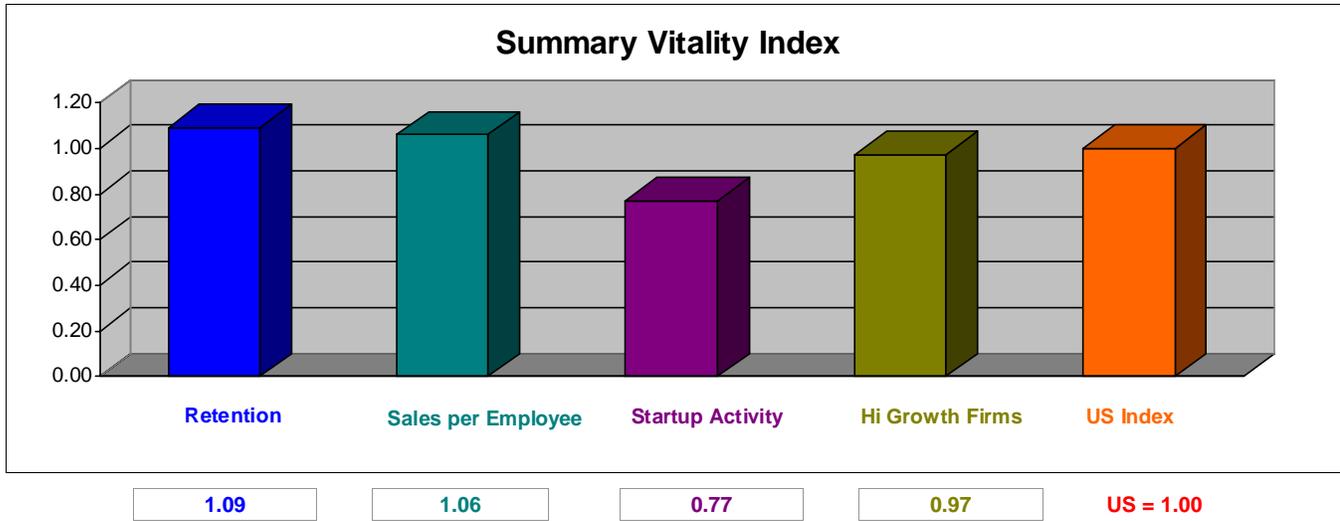
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	5,119	51	1.00%	0.49
Class I : < 5 Jobs>10 Jobs	3,482	38	1.09%	0.47
Class II : <10 Jobs>25 Jobs	4,392	13	0.30%	0.41
Class III : <25 Jobs>50 Jobs	4,840	6	0.12%	0.31
Class IV : <50 Jobs>100 Jobs	5,022	4	0.0800%	0.42
Class V : <100 Jobs> 250 Jobs	5,119	2	0.0400%	0.70

The District's high growth index lags national and Appalachian patterns by a significant margin. Aggregate concentrations of growth firms are only 49 percent of the US average and rates dip as low as 0.31 in Class III (beginning with fewer than twenty-five jobs and ending with more than fifty). The combined lag in high growth concentrations and entrepreneurial dynamism suggest needed areas for additional, focused stimulation and technical assistance.

# ARC Virginia 12D

2001 firms analyzed:

5,025



ARC District 12D is administered by the New River Valley Planning District Commission, including Floyd, Giles, Montgomery and Pulaski Counties. None is included in any MSA jurisdictions.

This District presents an interesting combination of vitality ratings. Although common patterns for low-growth areas are indicated by the high retention and startup retention rates coupled with low startup activity, the performance of retained industries is impressive and complemented by indices suggesting solid concentrations of high growth firms. The combination of measures may suggest an area which is compensating, at least in significant part, for its lack of new entrepreneurial energy.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,851	2,134		
Retained Firms		2,121	55%	1.09
Sales	394,220	882,185	123.8%	2.44
Avg Jobs	16	21	31%	0.75
Replenishment	57,195	43,720	76%	0.99
Sales/Employee	65,703	110,273	68%	1.06

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The overall retention rate is 9 percent above national levels. More importantly, aggregate rates among retained firms are quite high in sales vitality and current survivor sales per employee categories, in part due to large increases among some manufacturing industries. Job vitality ratings are solid when viewed in tandem, creating a rather positive vitality picture for the mature business community.

Retained firm sales per employee rates lead national levels in wood products, paper products and transport equipment – and are close to US rates in electronics. Major retail segments, investment firms, amusement and health services also indicate high retained firm sales per employee levels. Value added industries with high vitality ratings in both sales and job categories include agricultural services, wood products, furniture, stone-clay-glass, electronics, transport equipment, insurance and engineering-research. A number of retail segments also qualify as consistent vitality leaders.

Business out-migration stands at 0.3 percent of firms tracked from the 1996 pool, and 0.6 percent of survivors, not a cause for undue concern. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

## ARC Virginia 12D

2001 firms analyzed:

5,025

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	82	47		
Retained Firms		47	57%	1.22
Sales	398,387	421,739	5.9%	0.05
Avg Jobs	5	6	20%	0.30
Replenishment	447	299	67%	0.80
Sales/Employee	66,398	70,290	6%	0.51

### Startup Activity

96-01 Starts	481
Start Rate	14.9%
US Index	0.77

Entrepreneurial activity is by far the weakest link in the District's vitality picture, covering both low activity levels and weak vitality performance.

Startup activity rates lag 23 percent below national averages and ten index points behind the Region. In this overall context, startup activity leads national rates in agricultural services, furniture, chemicals, fabricated metals, electronics, and instruments; agricultural services, furniture and electronics also had high retained firm vitality ratings. Transport services, several retail segments and the financial sector also showed leading startup activity levels, as did personal services and amusements.

Vitality ratings among the small pool of retained startups were poor; levels were only a small fraction of US rates in sales vitality, job change and current levels of survivor sales per employee. Only retained engineering startups demonstrated higher than average sales per employee. And while the value of industry-specific analysis is severely limited by the small numbers involved, startup survivors in fabricated metals, banks and engineering, along with some retail operations, appeared to develop high ratings in both sales and job vitality indices.

### High Job Growth Firms:

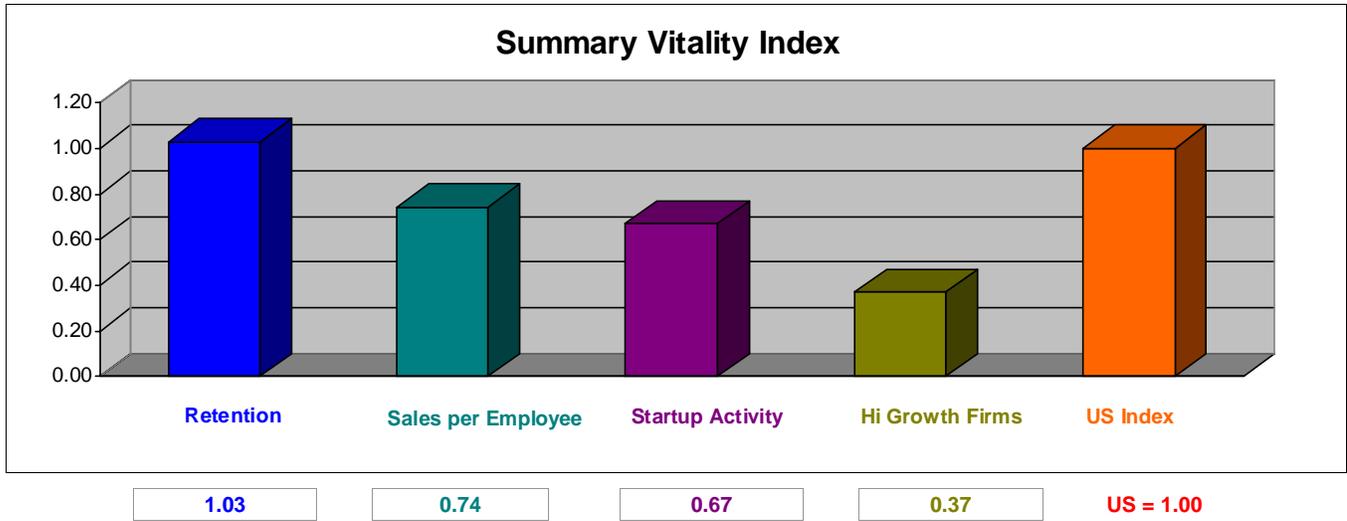
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,569	70	1.96%	0.97
Class I : < 5 Jobs>10 Jobs	2,363	61	2.58%	1.12
Class II : <10 Jobs>25 Jobs	2,984	17	0.57%	0.79
Class III : <25 Jobs>50 Jobs	3,345	12	0.36%	0.91
Class IV : <50 Jobs>100 Jobs	3,491	5	0.1400%	0.75
Class V : <100 Jobs> 250 Jobs	3,569	3	0.0800%	1.50

In concert with the area's very solid retention vitality ratings, concentrations of high growth firms appear to underpin local dynamism. The District's aggregate rating is just about at national levels, seven index points higher than the Appalachian score. The heaviest significant concentration is among the small Class I firms, those which began the measurement period with fewer than five jobs and ended with more than ten. The District's Class III index is also only 9 percent lower than the national average, although other classes fall below both US and Appalachian levels.

# ARC Virginia 12E

2001 firms analyzed:

2,538



ARC District 12E is administered by the Fifth Planning District Commission, including Alleghany, Botetourt and Craig Counties. Botetourt County is also included in the Roanoke MSA.

This is a very small District, making analysis quite difficult at more than aggregate levels. Attempts to discuss specific industry performance should be understood in that context. Aggregate indices suggest very modest vitality patterns, including the common thread of solid-to-high retention rates (overall and startups) coupled with low entrepreneurial vitality levels and weak concentrations of high growth firms.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,989	1,067		
Retained Firms		1,033	52%	1.03
Sales	443,420	538,131	21.4%	0.42
Avg Jobs	12	15	25%	0.60
Replenishment	22,818	15,814	69%	0.90
Sales/Employee	73,903	76,876	4%	0.74

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The overall retention rate is 3 percent above US averages, but indices lag significantly below national and Appalachian averages in both job and sales vitality categories. Job replenishment rates are only 10 percent below average, but the current survivor sales per employee indicator is less than three-quarters of the US rate and twenty index points below Appalachia's. Business out-migration is a concerning 1.7 percent of all firms from the 1996 pool tracked, and 3.2 percent of survivors. This is an unusually high rate for a District with this rural configuration. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retained firm sales per employee ratings are higher in a few traditional industries and some newer ones, including agricultural services, apparel, wood products, plastics, instruments, motor freight, communications and personal services. Several of these same industries are included in the list of those showing high scores in both sales and job vitality indices: agricultural services, lumber, furniture, instruments, motor freight transport, communications, non-durable wholesale, amusements and social services.

# ARC Virginia 12E

2001 firms analyzed:

2,538

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	42	20		
Retained Firms		19	45%	0.97
Sales	2,277,273	300,000	-86.8%	0.00
Avg Jobs	10	7	-30%	0.00
Replenishment	394	133	34%	0.41
Sales/Employee	151,818	75,000	-51%	0.54

### Startup Activity

96-01 Starts	215
Start Rate	13.0%
US Index	0.67

The District's startup rate is fully one-third below the national index. Rates are at or above national levels in only a handful of industries, including crops and livestock, wood products, fabricated metals, business services and some retail segments. The size of most of these industries is too small to conclude much from the specific analysis, but the number of business services startups appears significant.

Only a small group of retained startups could be tracked from the 1996 group. These scored very low in all aggregate vitality and sales per employee indicators. Among them, surviving startups in the restaurant, real estate and amusement groups suggested leading sales per employee levels, but none displayed high scores in both sales and job vitality indices.

## High Job Growth Firms:

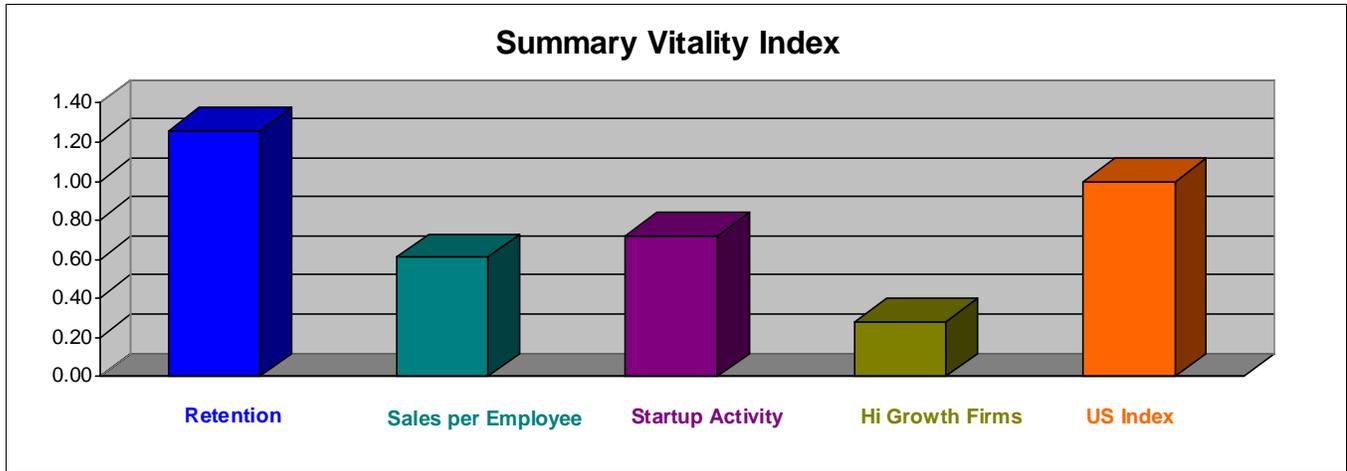
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	1,864	14	0.75%	0.37
Class I : < 5 Jobs>10 Jobs	1,268	9	0.71%	0.31
Class II : <10 Jobs>25 Jobs	1,588	3	0.19%	0.26
Class III : <25 Jobs>50 Jobs	1,758	1	0.06%	0.14
Class IV : <50 Jobs>100 Jobs	1,827	1	0.0500%	0.29
Class V : <100 Jobs> 250 Jobs	1,864	0	0.0000%	0.00

Concentrations of high growth firms are extremely low in aggregate and for all employment class breakdowns Short of an infusion of business recruitment success, the double whammy of limited dynamic engines and weak entrepreneurial vitality requires address if the District is to move forward .

# ARC Virginia 12F

2001 firms analyzed:

1,828



1.26      0.61      0.72      0.28      US = 1.00

ARC District 12F is administered by the Central Shenandoah Planning District Commission, including Bath, Highland and Rockbridge Counties. None is included in any MSA jurisdictions.

This is a very small District, making analysis quite difficult at more than aggregate levels. Attempts to discuss specific industry performance should be understood in that context. Aggregate indices suggest low sales-related patterns with much better job vitality performance. The area picture, including the common thread of very high retention rates (overall and startups) coupled with low entrepreneurial vitality levels and weak concentrations of high growth firms, suggest patterns common to a number of modest vitality ARC areas in need of sources of new dynamism.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,162	743		
Retained Firms		735	63%	1.26
Sales	359,775	507,931	41.2%	0.81
Avg Jobs	13	19	46%	1.11
Replenishment	13,983	13,740	98%	1.28
Sales/Employee	51,396	63,491	24%	0.61

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The area's high overall retention rate (26 percent above US averages) is complemented by leading aggregate job vitality indicators. However, lagging sales vitality and very low survivor sales per employee indicators suggest that the high retention rates are more indicative of common low growth patterns than anything else. Business out-migration is 0.7 percent of firms from the 1996 pool of firms tracked, and 1.1 percent of survivors, a relatively high rate for an area with this rural configuration. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Among value added industries and services, only wood products and engineering exhibit leading sales per employee indicators among retained firms. A somewhat more diverse group shows leading indicators in both sales and job vitality indices (without regard to current sales per employee standing), including building construction, wood products, industrial machinery, motor freight, real estate and an interesting set of services and retail segments, including personal services, health services and amusements. Engineering measures are also high.

## ARC Virginia 12F

2001 firms analyzed:

1,828

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	31	22		
Retained Firms		22	71%	1.52
Sales	386,957	438,095	13.2%	0.11
Avg Jobs	16	28	75%	1.13
Replenishment	471	620	132%	1.58
Sales/Employee	48,370	54,762	13%	0.40

## Startup Activity

96-01 Starts	171
Start Rate	13.9%
US Index	0.72

Startup activity rates are 28 percent below the national average and lag Appalachian levels by fifteen index points. However, startup rates are higher in a number of value added industries which – if the low numbers measured can be considered significant -- hold out some encouragement for future dynamism. These include agricultural services, building and heavy construction, food products, furniture, printing, fabricated metals, industrial machinery and electronics.

As is the case for retained firms overall, job vitality among retained startups looks solid, but sales vitality and sales per employee levels are quite low. Not a single value added industry shows retained startups with a leading sales per employee rating. Among surviving startups, only restaurants indicate high indices in both sales and job vitality categories, an interesting corollary to the high personal services startup activity rate in this low vitality area.

## High Job Growth Firms:

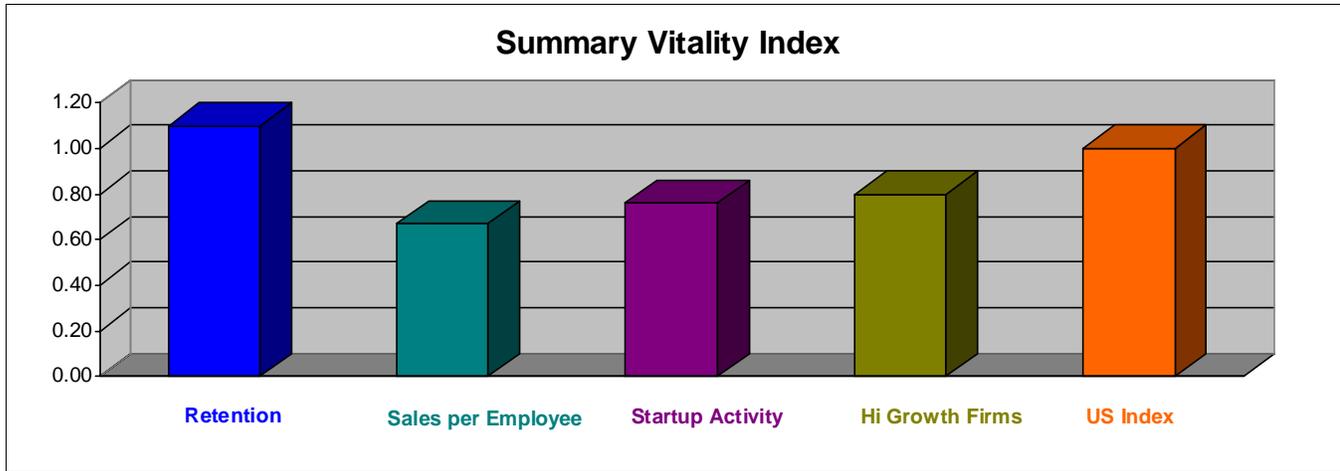
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	1,068	6	0.56%	0.28
Class I : < 5 Jobs>10 Jobs	747	3	0.40%	0.17
Class II : <10 Jobs>25 Jobs	913	2	0.22%	0.30
Class III : <25 Jobs>50 Jobs	1,007	4	0.40%	1.00
Class IV : <50 Jobs>100 Jobs	1,047	0	0.0000%	0.00
Class V : <100 Jobs> 250 Jobs	1,068	0	0.0000%	0.00

Concentrations of high growth firms are extremely low, 28 percent of the US level in aggregate and sixty-two index points lower than Appalachia as a whole. The scale of the District and the number of high growth firms identified for this index make the various employment class breakdowns somewhat less than useful as measures.

# ARC West Virginia 13A

2001 firms analyzed:

6,509



1.10      0.67      0.76      0.80      US = 1.00

ARC District 13A is administered by the Region 1 Planning and Development Council, including McDowell, Mercer, Monroe, Raleigh, Summers and Wyoming Counties. None is included in any MSA.

This small District reflects common patterns of low vitality areas, including higher than average overall retention and solid startup retention, both coupled with low levels of entrepreneurial activity, low retained firm sales per employee positioning and weak concentrations of high growth firms.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,408	3,042		
Retained Firms		3,004	56%	1.10
Sales	502,815	626,991	24.7%	0.49
Avg Jobs	11	14	27%	0.65
Replenishment	56,362	42,723	76%	0.98
Sales/Employee	62,852	69,666	11%	0.67

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Although overall retention levels are 10 percent above the national average, the survival rate is not matched by vitality indices of retained firms. While job replenishment rates are almost at national levels, sales vitality is only half of the US rate and job vitality only 65 percent of the average. Sales per employee among retained firms lags national levels by one-third. Business out-migration levels are 0.7 percent of firms from the original 1996 pool tracked, and 1.2 percent of survivors – a troublesome indicator for a rural area. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retained firm sales per employee levels rise above national levels in only a handful of value added industries, including electronics and health services. A larger number of industries post leading scores in both job and sales vitality measures, including coal mining, food and wood products, the small plastics and instruments groups, stone-clay-glass, industrial machinery and communications. Wholesale durables and several retail segments also score well.

## ARC West Virginia 13A

2001 firms analyzed:

6,509

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	160	76		
Retained Firms		74	46%	0.99
Sales	1,546,000	1,213,636	-21.5%	0.00
Avg Jobs	16	26	63%	0.94
Replenishment	2,275	1,919	84%	1.01
Sales/Employee	77,300	101,136	31%	0.73

## Startup Activity

96-01 Starts	647
Start Rate	14.8%
US Index	0.76

Startup activity trails US levels by 24 percent and Appalachia by eleven index points. Startup activity is strong in extraction industries, near national levels in wood products and higher than average in stone-clay-glass and industrial machinery.

The relatively small number of surviving startups constrains industry-specific assessment of retained startup vitality. However, while aggregate retention rates are at national levels, sales vitality is extremely low, producing (along with higher job vitality ratings) a retained startup sales per employee rate more than one-quarter below the national average. Startup sales per employee indices are higher in coal mining, wholesale durables, personal, business and social services, but not among any manufacturing industries. Retained special trades construction, wholesale durables, restaurant and lodging startups showed leading indices in both sales and job vitality. However, no manufacturing industries or value added services performed as well.

## High Job Growth Firms:

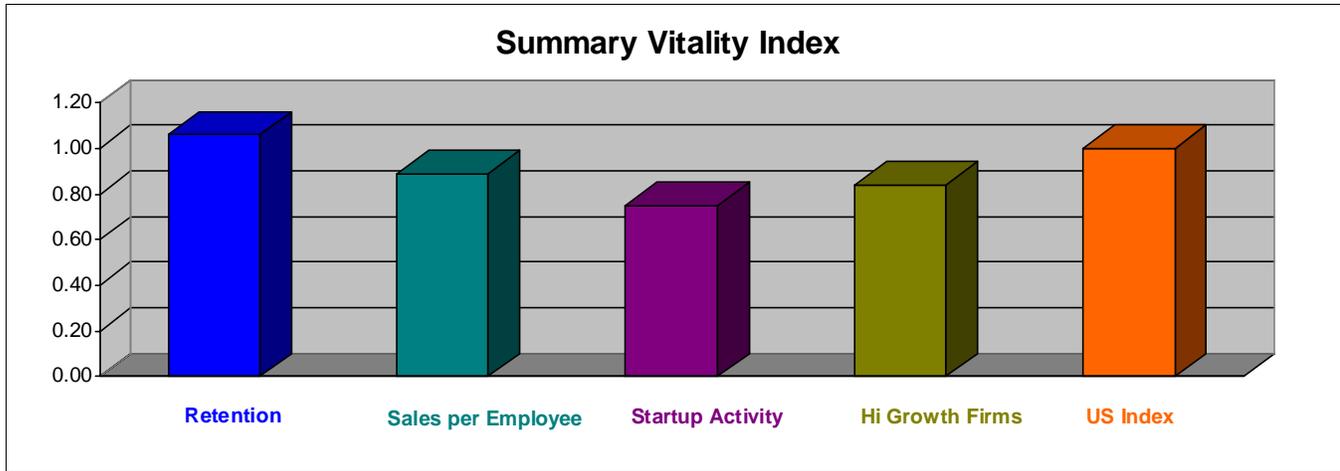
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	5,047	82	1.62%	0.80
Class I : < 5 Jobs>10 Jobs	3,127	66	2.11%	0.92
Class II : <10 Jobs>25 Jobs	4,077	22	0.54%	0.75
Class III : <25 Jobs>50 Jobs	4,696	15	0.32%	0.81
Class IV : <50 Jobs>100 Jobs	4,937	8	0.1600%	0.85
Class V : <100 Jobs> 250 Jobs	5,047	0	0.0000%	0.00

Aggregate concentrations of high growth firms were 20 percent below national levels and ten index points below the Appalachian score. District concentrations climbed to 92 percent of average for the Class I employment class (began with fewer than five jobs and ended with more than ten), but then dipped to 75 percent of average in Class II (firms beginning with fewer than ten jobs and ending with more than 25). The lackluster level of high growth firms seems insufficient to compensate for the area's low rate of entrepreneurial vitality as an engine of new economic dynamism.

# ARC West Virginia 13B

2001 firms analyzed:

7,313



1.06      0.89      0.75      0.84      US = 1.00

ARC District 13B is administered by the Region 2 Planning and Development Council, including Cabell, Lincoln, Logan, Mason, Mingo and Wayne Counties. Cabell and Wayne are also included in the Huntington MSA.

While evidencing most signs of the sluggish pattern of high retention and low vitality indices, the District performs somewhat better than the pattern anticipates in aggregate retention vitality indices, and generally outpaces Appalachian patterns, At the same time, the startup activity rate is twelve index points behind the Region's, and concentrations of high growth firms lag the Region by six points and the US by sixteen. Summary scores also trail those in the linked Huntington MSA, where startup rates are still low, but high growth concentrations rise to about the national level.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	6,584	3,571		
Retained Firms		3,530	54%	1.06
Sales	533,846	926,640	73.6%	1.45
Avg Jobs	13	18	31%	0.74
Replenishment	78,564	61,599	78%	1.02
Sales/Employee	76,264	92,664	22%	0.89

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall retention rates are 6 percent above the national norm. Encouragingly for an area with low concentrations of growth firms and even lower startup activity, aggregate retention vitality indices are generally positive, with leading scores in sales vitality and job replenishment, and a current survivor sales per employee rating of 0.89, only slightly below the Appalachian average. District sales and replenishment ratings are supported by correspondingly high levels in the MSA, Business out-migration levels are 0.6 percent of firms from the 1996 pool of firms tracked, and 1.1 percent of survivors, a somewhat disturbing, but not dominant, note. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Sales per employee positioning is buttressed by high ratings in coal mining and other extraction industries, food products, furniture, primary metals and health services. Several retail segments register high indices as well. A wide variety of industries show high ratings in both sales and job vitality indices, accounting for the District's solid aggregate scoring. These include non-metallic mining; food products, apparel, furniture, stone-clay-glass, primary metals, industrial machinery, electronics, transport equipment and instruments among manufacturers; health and social services. Again, several retail industries outperform national averages in multiple vitality ratings.

## ARC West Virginia 13B

2001 firms analyzed:

7,313

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	196	94		
Retained Firms		87	44%	0.95
Sales	530,303	580,263	9.4%	0.08
Avg Jobs	7	11	57%	0.86
Replenishment	1,214	882	73%	0.87
Sales/Employee	88,384	58,026	-34%	0.42

## Startup Activity

96-01 Starts	709
Start Rate	14.6%
US Index	0.75

Startup activity lags the US by a full one-quarter and Appalachian levels by twelve index points. However, relative activity rates are strong in mining, construction, food products, apparel, wood products and several metalworking industries, as well as educational services.

Startup retention is weaker than would be anticipated in an area with low levels of entrepreneurial activity. In addition, aggregate vitality indices among retained startups are quite low, especially sales vitality and sales per employee indicators. No value-added industries (except legal, if included as a value-added service) reflect high sales per employee indices. And although the value of industry-specific analysis is limited by the small number of firms analyzed, only a handful of retained startups appear to reflect high indices in both sales and job vitality categories, including apparel, fabricated metals, health and legal services, as well as two retail segments.

## High Job Growth Firms:

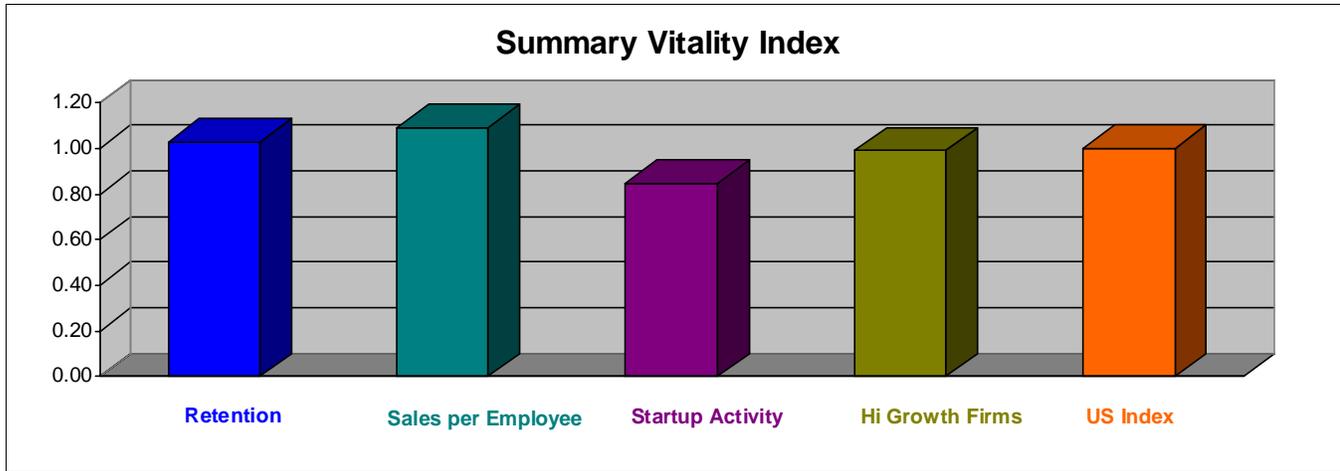
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	6,101	104	1.70%	0.84
Class I : < 5 Jobs>10 Jobs	3,757	93	2.48%	1.08
Class II : <10 Jobs>25 Jobs	4,893	32	0.65%	0.90
Class III : <25 Jobs>50 Jobs	5,638	10	0.18%	0.45
Class IV : <50 Jobs>100 Jobs	5,959	8	0.1300%	0.71
Class V : <100 Jobs> 250 Jobs	6,101	4	0.0700%	1.17

Aggregate concentrations of high growth firms are 16 percent lower than national levels, thirteen index points behind the MSA and six below the Regional score. Concentrations in the smallest employment class are actually higher than US norms, but drop thereafter. Higher concentrations in the MSA suggest possible opportunities to work with growth firms there toward eventual branch facility development inside the District.

# ARC West Virginia 13C

2001 firms analyzed:

10,366



1.03      1.09      0.85      0.99      US = 1.00

ARC District 13C is administered by the B-C-K-P regional Intergovernmental Council, including Boone, Clay, Kanawha and Putnam Counties. Kanawha and Putnam are also comprise the entire the Charleston MSA.

The District is dominated by the MSA, whose counties host over 95 percent of the District's business establishments. The area's summary vitality ratings are generally on a par with Appalachian levels, although concentrations of high growth firms are notably higher and virtually even with US levels.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	9,291	4,856		
Retained Firms		4,800	52%	1.03
Sales	550,662	1,015,697	84.5%	1.67
Avg Jobs	14	17	21%	0.51
Replenishment	121,424	83,191	69%	0.89
Sales/Employee	78,666	112,855	44%	1.09

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The overall retention index is 3 percent above US averages. Although job vitality levels trails US and Appalachian indices, sales vitality and retained firm sales per employee rates are higher. The sales per employee rating appears to be heavily influenced by extraction industries.

Sales per employee levels among retained firms are also lead in several construction segments, food products, textiles, wood products and furniture, stone-clay-glass, fabricated metals, non-durable wholesale, health and legal services. A wide range of industries score well in both sales and job vitality measures among retained firms: agricultural services, building construction textiles, industrial machinery, electronics, air transport, business services, and legal. An array of consumer industries -- retail segments, amusements and personal services, all indicate high rates in both sales and job vitality.

Business out-migration rates are 0.6 percent from the pool of firms tracked from 1996, and 1.2 percent among survivors, slightly high for an MSA dominated district. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

## ARC West Virginia 13C

2001 firms analyzed:

10,366

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	276	131		
Retained Firms		128	46%	0.99
Sales	923,077	2,633,058	185.2%	1.52
Avg Jobs	10	27	170%	2.55
Replenishment	2,556	3,449	135%	1.62
Sales/Employee	76,923	101,271	32%	0.74

### Startup Activity

96-01 Starts	1,072
Start Rate	16.5%
US Index	0.85

At 85 percent of the national rate, startup activity levels are about even with Appalachia as a whole (0.87). Activity rates lead US patterns in coal mining, most construction segments, the needle trades, wood products, chemicals, fabricated metals, industrial machinery and instruments. Communications startup rates are 3 percent above the national average. Retail and financial services segments follow suit. Although overall entrepreneurial activity lags, the combination of value added and consumer industries in which it is strong complement the District's notable levels of retention vitality.

Startup retention is virtually even with national norms, and aggregate scores are high across sales and job vitality indices. Only retained startup sales per employee rates are low and, at three-quarters of the national average, about even with Regional levels.

Strong sales per employee levels among retained starts are evident in coal mining, motor freight, transport services and amusements. (Sales data was difficult to develop for retained manufacturing startups in this District). With the addition of business services, the same industries tended to reflect consistently high vitality ratings.

### High Job Growth Firms:

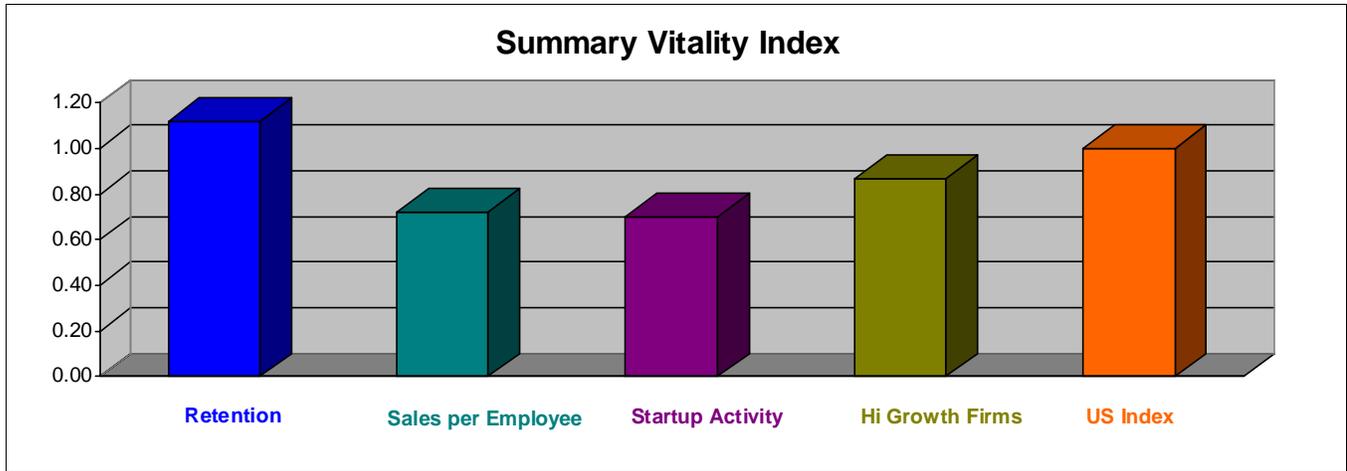
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	8,590	173	2.01%	0.99
Class I : < 5 Jobs>10 Jobs	5,405	129	2.39%	1.04
Class II : <10 Jobs>25 Jobs	6,997	59	0.84%	1.16
Class III : <25 Jobs>50 Jobs	7,986	39	0.49%	1.23
Class IV : <50 Jobs>100 Jobs	8,411	19	0.2300%	1.19
Class V : <100 Jobs> 250 Jobs	8,590	4	0.0500%	0.83

Aggregate concentrations of high growth firms rated even with national levels and surpassed Appalachian scores by nine index points. District rates lead US scores in all employment classes with the exception of the largest, Class V. In all, high growth concentrations make a worthy complement to the District picture of retention vitality and entrepreneurship, which is buttressed by impressive performance among retained startup firms.

## ARC West Virginia 13D

2001 firms analyzed:

4,249



1.12      0.72      0.70      0.87      US = 1.00

ARC District 13D is administered by the Region 4 Planning and Development Council, including Fayette, Greenbrier, Nicholas, Pocahontas and Webster Counties. None is also included in any MSA.

This small District exhibits a common pattern of modest vitality areas, including high retention rates coupled with low startup activity and lagging concentrations of high growth firms. High growth concentrations are, however, not far below the Appalachian average. The District's sales per employee indicator for retained firms is considerably weaker.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,304	1,873		
Retained Firms		1,858	56%	1.12
Sales	454,714	743,494	63.5%	1.25
Avg Jobs	10	13	40%	0.96
Replenishment	30,213	25,110	83%	1.08
Sales/Employee	64,959	74,349	15%	0.72

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

District retention rates are 12 percent above the national average, and supported by a leading sales vitality index among retained firms, as well as solid job vitality ratings. However, these vitality measures are within the context of a lagging indicator for overall sales per employee positioning, 28 percent below national levels and twenty-two index points behind the Appalachian score. Business out-migration rates are 0.5 percent of firms from the original 1996 pool, and 0.8 percent of survivors, both slightly high for a rural area, but not a major issue. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retained firm sales per employee ratings are weak across the board, leading in only miscellaneous manufacturing, personal services, amusements and retail building supplies. Underpinning aggregate indices, a larger number of industries demonstrate high scores in both sales and job vitality measures: agricultural services, wood products, printing, stone-clay-glass, industrial machinery, electronics, personal and educational services and engineering. Several retail segments also qualify.

## ARC West Virginia 13D

2001 firms analyzed:

4,249

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	98	47		
Retained Firms		44	45%	0.96
Sales	661,818	883,333	33.5%	0.27
Avg Jobs	8	11	38%	0.56
Replenishment	674	492	73%	0.88
Sales/Employee	110,303	80,303	-27%	0.58

### Startup Activity

96-01 Starts	403
Start Rate	13.7%
US Index	0.70

Aggregate startup activity rates lag national levels by 30 percent, placing the District seventeen points behind the Appalachian index. Among industries with significant numbers of establishments, startup rates lead national patterns in only a few, including agricultural services, printing, miscellaneous manufacturing, restaurants and miscellaneous retail, security brokers, real estate and legal services.

The very limited number of retained startups tracked from 1996 constrains industry-specific vitality analysis. However, aggregate rates are poor in every vitality category, compounding the gap in new growth dynamics created by low startup activity rates. Retained startups seem well positioned by the sales per employee indicator only in heavy construction, personal services and a few retail segments. And only retained startups in wood products and lodging demonstrate leading indices in both sales and job vitality measures; primary metals does almost as well. But again, these include very small industry samples.

### High Job Growth Firms:

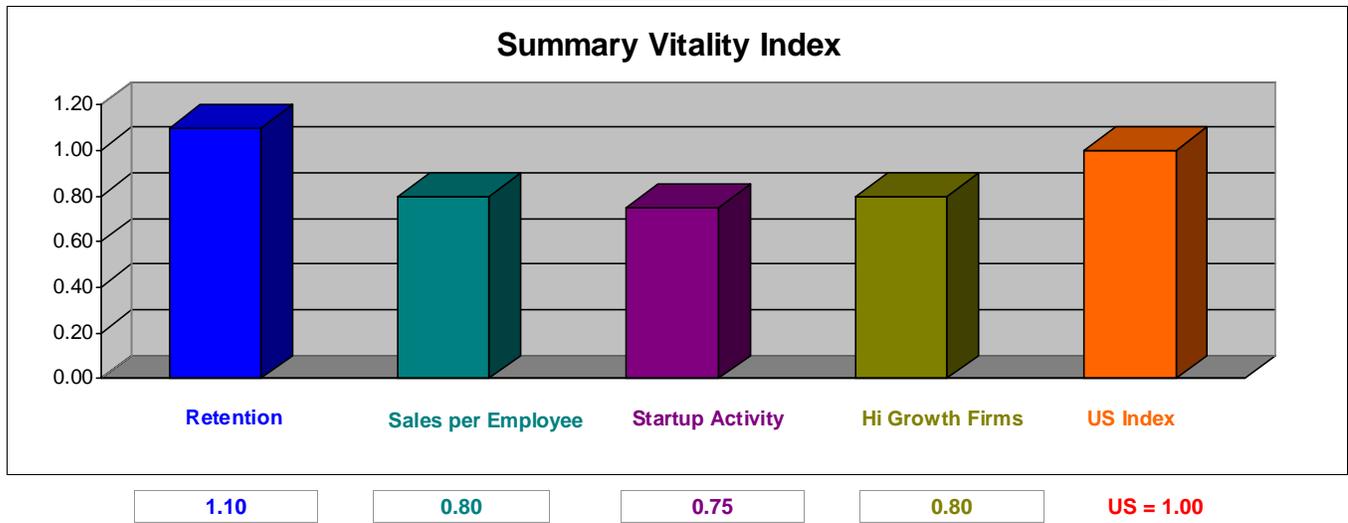
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,058	54	1.77%	0.87
Class I : < 5 Jobs>10 Jobs	1,985	41	2.07%	0.90
Class II : <10 Jobs>25 Jobs	2,514	19	0.76%	1.04
Class III : <25 Jobs>50 Jobs	2,840	7	0.25%	0.62
Class IV : <50 Jobs>100 Jobs	2,993	5	0.1700%	0.88
Class V : <100 Jobs> 250 Jobs	3,058	1	0.0300%	0.58

The District's concentration of high growth firms is more in line with its solid retention vitality performance. Aggregate scores are almost at Appalachian levels, and the two smaller employment classes analyzed (began with fewer than five job and grew to more than ten; and began with fewer than ten and grew to twenty five or more) show Districts ranges of 90 percent-108 percent of US levels, and 88 percent of the US rate in Class IV's rather small sample (started with fewer than 50 jobs, grew to more than 100). While the showing here and, more importantly, the overall advances in retained firm vitality, help mitigate low startup activity and vitality scores, that gap requires address.

# ARC West Virginia 13E

2001 firms analyzed:

5,265



ARC District 13E is administered by the Region 5 Mid-Ohio Valley Regional Council, including Calhoun, Jackson, Pleasants, Ritchie, Roane, Tyler, Wirt and Wood Counties. Wood County is contiguous with the West Virginia segment of the Parkersburg MSA, and accounts for about 60 percent of the business establishments in the District.

The pattern of summary scores in the District corresponds to those in the MSA. However, in every category reflecting a difference, the MSA leads. The two areas match overall retention rates (10 percent above average), but while the MSA rates at national levels for startup survival, the District lags by 11 percent. The District startup activity rate is three-quarters of the national level, and trails the MSA by six index points. Likewise, the MSA concentrations of high growth firms (91 percent of the national average) outpace the District by eleven index points. At 80 percent below the national level, the sales per employee indicator for retained firms is even between the two. In general, while Wood County displays some performance gaps, each appears more serious in the non-MSA counties of the District.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,438	2,486		
Retained Firms		2,462	56%	1.10
Sales	508,093	748,800	47.4%	0.93
Avg Jobs	13	17	31%	0.74
Replenishment	56,738	41,660	73%	0.95
Sales/Employee	63,512	83,200	31%	0.80

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The District's high aggregate retention index (1.10) is complemented by solid scores among retained firms in both sales and job vitality measures. However, this impressive recent performance (still under US or Appalachian levels) nevertheless leaves the District with a struggling sales per employee position. Business out-migration is 0.5 percent of firms from the 1996 pool, and 1.0 percent of survivors, a reasonable rate which should not be cause for alarm. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Only a handful of value-added industries demonstrate leading sales per employee positioning, including heavy construction, stone-clay-glass, air transport, health and educational services. Personal services and some retail segments also do well in this measure. A larger number of value added and consumer industries evidence top-level indices in both sales and job vitality ratings, including building construction, wood products, stone-clay-glass, industrial machinery, electronics, transport equipment, air transport, amusements and educational services. The appearance of construction industries in both lists and the strength of must metalworking industries appear to be encouraging signs.

## ARC West Virginia 13E

2001 firms analyzed:

5,265

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	115	49		
Retained Firms		48	42%	0.89
Sales	844,304	1,847,727	118.8%	0.97
Avg Jobs	28	32	14%	0.21
Replenishment	3,143	1,554	49%	0.59
Sales/Employee	76,755	92,386	20%	0.67

## Startup Activity

96-01 Starts	521
Start Rate	14.7%
US Index	0.75

Both startup activity and the vitality of retained startups appear quite a bit more limited in the District than the MSA, although both areas lag far behind US levels and, for the most part, well behind the Region as well. The District's startup rate is 25 percent below the national rate, although leading indices are found in apparel, plastics, stone-clay-glass and every metalworking industry (including instruments). Startup activity rates are also relatively high in health, legal and educational services. The distribution of startup activity constrains the value of the analysis for some smaller industries.

Vitality rates among the handful of surviving startups tracked from 1996 are weak except in the sales vitality measure, which is 97 percent of the national level. This solid performance – in concert with low job vitality – was not enough to raise retained startup sales per employee levels above 67 percent of the national average, fifteen index points below the MSA's rate. Startup sales per employee rates were notably higher in stone-clay-glass (a consistent District performer), personal services and some retail segments. Based on the very limited numbers of firms available for analysis, wood products and stone-clay-glass also indicated solid performance levels across both sales and job vitality measures.

## High Job Growth Firms:

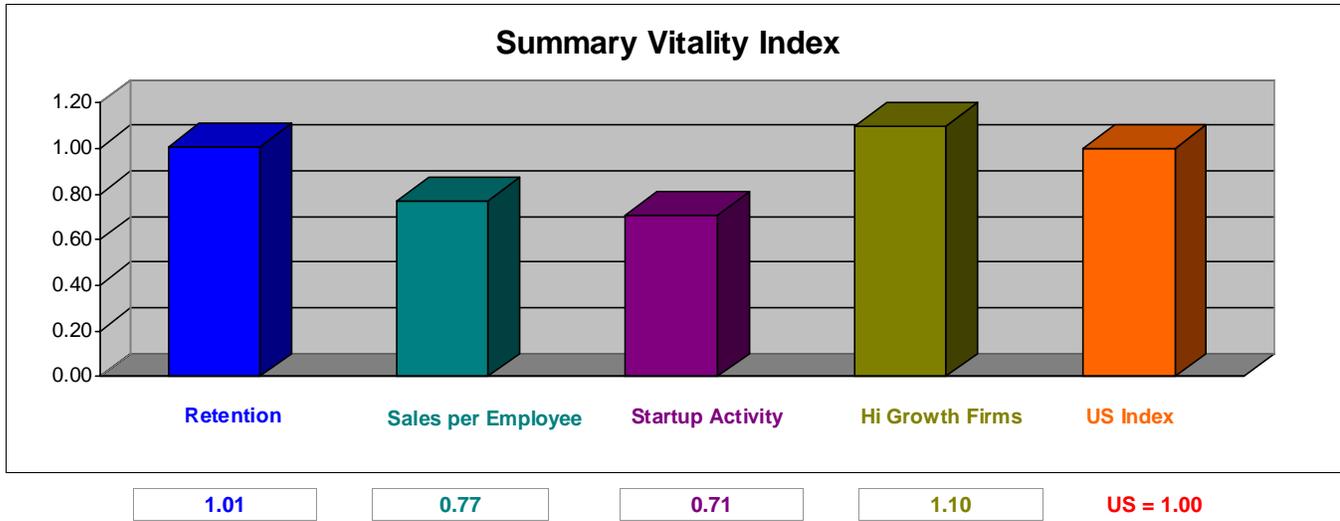
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	4,150	67	1.61%	0.80
Class I : < 5 Jobs>10 Jobs	2,599	49	1.89%	0.82
Class II : <10 Jobs>25 Jobs	3,334	15	0.45%	0.62
Class III : <25 Jobs>50 Jobs	3,808	10	0.26%	0.66
Class IV : <50 Jobs>100 Jobs	4,031	7	0.1700%	0.91
Class V : <100 Jobs> 250 Jobs	4,150	1	0.0200%	0.43

Aggregate high growth concentrations are 80 percent of the national level, and eleven index points lower than the index developed by the MSA. Concentrations are lower in Classes II and III, suggesting that this measure of District economic engines is unable at present to compensate for the District's lag in startup activity and vitality.

# ARC West Virginia 13F

2001 firms analyzed:

8,769



ARC District 13F is administered by the Region 6 Planning and Development Council, including Doddridge, Harrison, Marion, Monongalia, Preston and Taylor Counties. None are included in any MSA.

The District demonstrates an unusual vitality pattern which includes solid but not leading levels of retention, and leading concentrations of growth firms coupled with low rates for both startup retention and retained startup vitality. In addition, aggregate sales per employee positioning is quite low. The odd combination of scores focuses the issue of whether the District's high growth concentration is enough of an engine to sustain vitality in the face of lagging retention vitality overall and correspondingly modest entrepreneurial dynamism.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	7,646	3,925		
Retained Firms		3,896	51%	1.01
Sales	427,644	640,014	49.7%	0.98
Avg Jobs	13	15	23%	0.55
Replenishment	95,424	59,956	63%	0.82
Sales/Employee	71,274	80,002	12%	0.77

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The aggregate District retention rate is 1 percent over the US average, somewhat low for an area with trailing entrepreneurial patterns. Retained firm sales vitality over the five-year period analyzed is quite good, but low sales per employee indicators suggest that the sales growth figure reflect catch-up, not leading, performance – still a positive, but more ambiguous, achievement. Job vitality rates are low, a factor which would elevate the sales per employee measure over the five-year time-series. Business out-migration is 0.4 percent of firms from the 1996 pool, and 0.7 percent of survivors, not a cause for concern in and of itself. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

A true handful of industries demonstrate high sales per employee positioning, including coal mining, investment firms, personal services and engineering, along with some retail segments. A somewhat larger number of industries performed well in both sales and job vitality measures, including agricultural services, non-metallic mining, heavy construction, food products, textiles, wood products, chemicals, stone-clay-glass, primary metals and industrial machinery. Among consumer industries, amusements and several retail segments did well. Communications and business services lagged.

## ARC West Virginia 13F

2001 firms analyzed:

8,769

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	202	85		
Retained Firms		82	41%	0.87
Sales	454,918	398,667	-12.4%	0.00
Avg Jobs	6	11	83%	1.25
Replenishment	1,189	896	75%	0.91
Sales/Employee	56,865	56,952	0%	0.41

### Startup Activity

96-01 Starts	815
Start Rate	13.8%
US Index	0.71

Startup activity trailed US rates by 29 percent and Appalachia by sixteen index points. Startup rates were below average in all industries with significant numbers of establishments except heavy construction, stone-clay-glass, primary and fabricated metals, credit institutions and social services.

Vitality rates among startups were strong in job categories but weak in sales vitality. Sales per employee rates among the limited number of surviving startups were very low, and startup retention itself was only 87 percent of the national level, an unusually low rate for a low activity area. Although the low number of retained starts constrains the value of most industry-specific analysis, indicators in wood products, stone-clay-glass and personal services, as well as a handful of retail industries, show leading sales per employee positions. Among value added industries, only stone-clay-glass indicated high retained startup vitality levels in both sales and job measures.

### High Job Growth Firms:

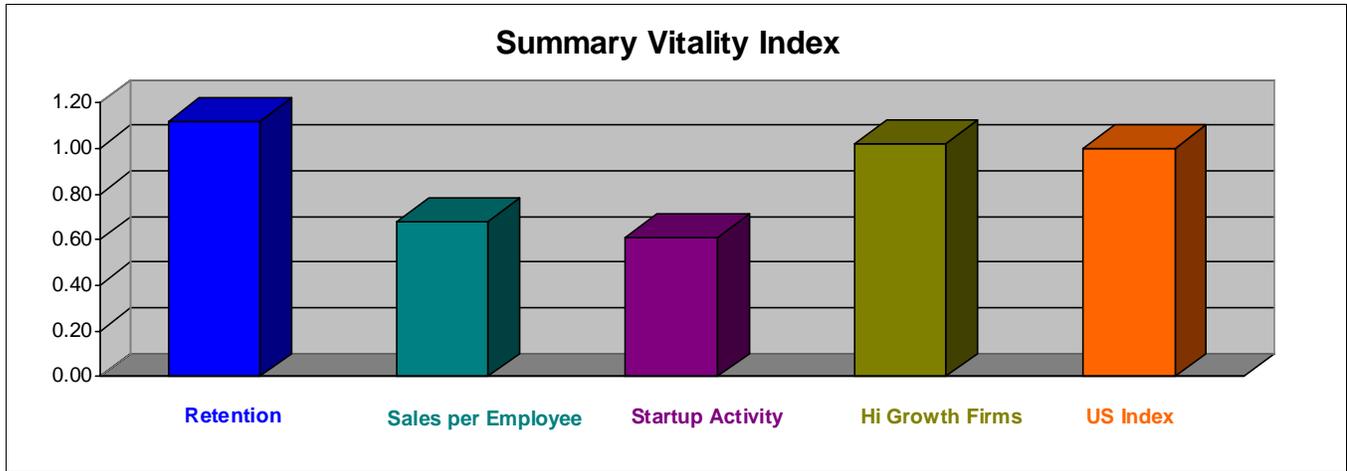
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	7,094	158	2.23%	1.10
Class I : < 5 Jobs>10 Jobs	4,460	116	2.60%	1.13
Class II : <10 Jobs>25 Jobs	5,735	49	0.85%	1.18
Class III : <25 Jobs>50 Jobs	6,606	36	0.54%	1.38
Class IV : <50 Jobs>100 Jobs	6,928	11	0.1600%	0.84
Class V : <100 Jobs> 250 Jobs	7,094	2	0.0300%	0.50

High growth concentrations are clearly a District strong point. The aggregate high growth index leads US patterns by 10 percent and Appalachia by sixteen index points. The District Index climbs to 1.38 in Class III (firms which began the analysis period with fewer than 25 jobs and grew to more than 50). This is impressive performance, even given the limited number of firms involved. Corresponding concern for the District is the level of dependence on this relatively small number of firms in the absence of adequate levels of new entrepreneurial activity or more robust overall retention vitality.

# ARC West Virginia 13G

2001 firms analyzed:

3,615



1.12      0.68      0.61      1.02      US = 1.00

ARC District 13G is administered by the Region 7 Planning and Development Council, including Barbour, Braxton, Gilmer, Lewis, Randolph, Tucker and Upshur Counties. None is included in any MSA.

This District exhibits a pattern with a twist; where high overall and startup retention rates most often go hand in hand with low levels of startup activity and modest high growth concentrations, the District indicates a slightly above average high growth index which could partially offset weaker entrepreneurial and retention vitality patterns. At the same time, the relatively small numbers of firms involved in any high growth index, and the high proportion of small ones, suggest that any offset is necessarily partial.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,099	1,764		
Retained Firms		1,752	57%	1.12
Sales	474,746	636,249	34.0%	0.67
Avg Jobs	10	13	30%	0.72
Replenishment	28,326	21,817	77%	1.00
Sales/Employee	67,821	70,694	4%	0.68

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The overall District retention rate is 12 percent above the national level, but two of three vitality measures, including both sales and job change rates, lag both the US and Appalachia significantly. The aggregate sales per employee indicator is only about two-thirds of the national average. Business out-migration is 0.4 percent of the pool of firms tracked from 1996, and 0.7 percent of survivors, not a significant issue. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Sales per employee positioning leads in only a handful of industries, including non-metallic mining, plastics, non-durable wholesale, personal and educational services. Retained firm vitality indices are high across both sales and job measures in livestock production, non-metallic mining, building construction, stone-clay-glass, several retail segments, insurance and personal and legal services.

## ARC West Virginia 13G

2001 firms analyzed:

3,615

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	53	30		
Retained Firms		29	55%	1.17
Sales	566,667	1,082,759	91.1%	0.75
Avg Jobs	7	12	71%	1.07
Replenishment	356	347	97%	1.17
Sales/Employee	70,833	90,230	27%	0.66

## Startup Activity

96-01 Starts	305
Start Rate	11.9%
US Index	0.61

Startup activity is the District's weakest link, showing a summary index only 61 percent of the US average, fully twenty-six points behind the Appalachian level. Rates are in leading brackets, however, in extraction and metalworking industries, as well as credit institutions and restaurants.

Vitality ratings are mixed among the small number of retained startups. While sales vitality and sales per employee levels are low, job vitality rates are above average. However, the small number of firms involved in the retained startup analyses could lead to undue influence of job vitality emanating from a handful of firms.

## High Job Growth Firms:

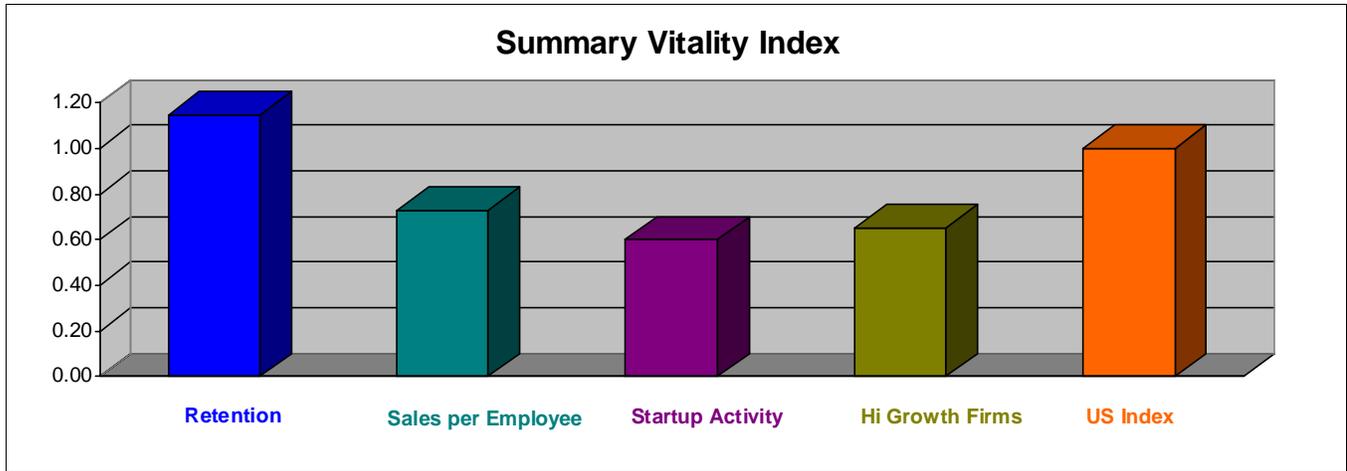
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,906	60	2.06%	1.02
Class I : < 5 Jobs>10 Jobs	1,948	47	2.41%	1.05
Class II : <10 Jobs>25 Jobs	2,428	11	0.45%	0.63
Class III : <25 Jobs>50 Jobs	2,695	10	0.37%	0.94
Class IV : <50 Jobs>100 Jobs	2,837	2	0.0700%	0.37
Class V : <100 Jobs> 250 Jobs	2,906	0	0.0000%	0.00

High growth concentrations in the District are slightly above national norms, with all of the leading numbers in the smallest employment class examined, Class I (began the analysis period with fewer than five jobs, ended with more than ten). While the Class I and aggregate indices are impressive performances, the scale and distribution is not enough to fill the gap created by modest retention vitality and, especially, low levels of entrepreneurial activity.

# ARC West Virginia 13H

2001 firms analyzed:

2,435



1.15      0.73      0.60      0.65      US = 1.00

ARC District 13H is administered by the Region 8 Planning and Development Council, including Grant, Hampshire, Hardy, Mineral and Pendleton Counties. Mineral is also included in the Cumberland MD MSA.

Scores in this District indicate classic patterns of modest economic vitality – high retention rates coupled with lower vitality among retained firms, weak startup activity and correspondingly low concentrations of high growth firms. The District’s link (through Mineral County) to the Cumberland MD MSA is of modest scale and assistance, since the MSA’s vitality performance is only marginally higher in critical categories, and lower in some.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,692	983		
Retained Firms		979	58%	1.15
Sales	456,895	531,266	16.3%	0.32
Avg Jobs	11	16	45%	1.09
Replenishment	17,575	15,947	91%	1.18
Sales/Employee	76,149	75,895	0%	0.73

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While overall retention rates are very high (and above Appalachian averages), the positive impact is partially lost in very low sales vitality ratings and low sales per employee indicators among retained firms. Job vitality measures are much higher and aggregate scores are in fact above national and Appalachian averages. While too small to be considered a meaningful measure, business out-migration is only 0.2 percent of firms from the 1996 pool, and 0.4 percent of survivors – far from the District’s most problematic issue. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retained firm sales per employee indicators are at or above national levels in a small number of industries, including non-metallic mining, wood products, stone-clay-glass, motor freight, personal and health services. Among industries with significant numbers of facilities, only a few outperformed national indices in both job and sales vitality measures, including several of the same industries with high sales per employee rates. These included crop production, non-metallic mining, wood products, real estate, personal and educational services.

## ARC West Virginia 13H

2001 firms analyzed:

2,435

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	41	26		
Retained Firms		26	63%	1.36
Sales	541,935	1,292,000	138.4%	1.14
Avg Jobs	6	10	67%	1.00
Replenishment	225	252	112%	1.35
Sales/Employee	108,387	129,200	19%	0.94

### Startup Activity

96-01 Starts	209
Start Rate	11.8%
US Index	0.60

Startup activity is the weakest link in the District, registering entrepreneurial rates 40 percent below the national average and twenty-seven points under the Appalachian index. While lagging the US and Appalachia itself, startup activity rates in the MSA also lead the district by seventeen index points. District startup activity rates are higher than US levels only in crop production, stone-clay-glass, industrial machinery and limited retail segments.

While vitality measures among retained startups are high in the District, the number of firms identified for the analysis is very limited, increasing the chances of data distortions. Both sales and job vitality indices lead US averages in all jobs and sales measures. Even sales per employee rates among retained startups approaches the national level and is even with the Region's. High rates in a small number of firms appear to impact the aggregate rating considerably. The same is true for leading vitality measures in the small number of wood products, construction, industrial machinery and retail industries which provide the major elements of high aggregate startup vitality scores. It is important to remember the limited number of firms – and impact – involved.

### High Job Growth Firms:

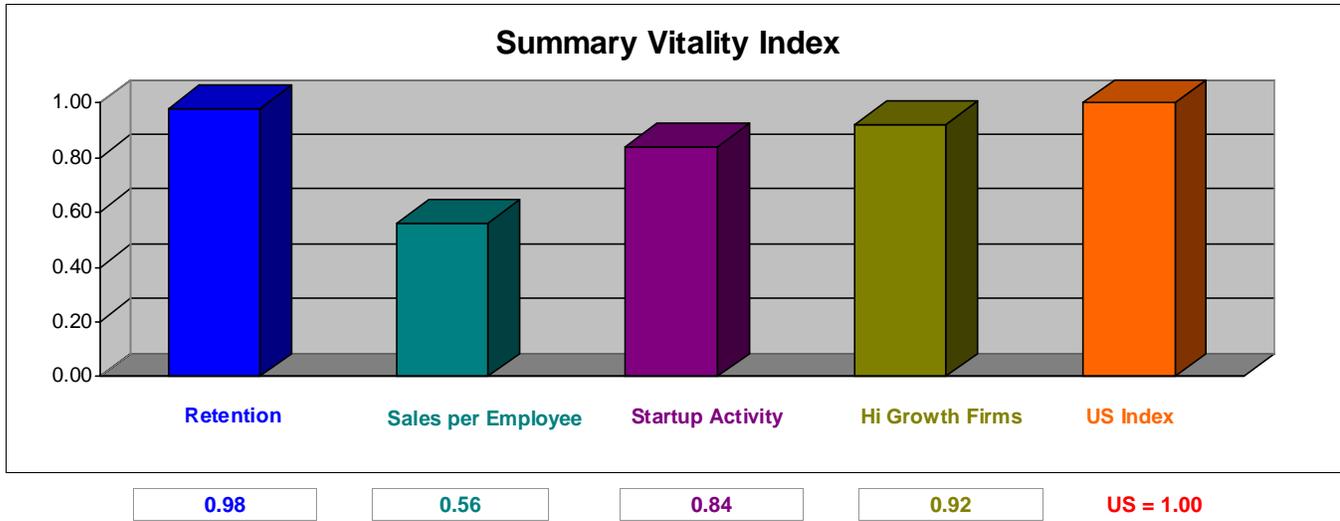
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	1,591	21	1.32%	0.65
Class I : < 5 Jobs>10 Jobs	1,082	14	1.29%	0.56
Class II : <10 Jobs>25 Jobs	1,342	8	0.60%	0.82
Class III : <25 Jobs>50 Jobs	1,508	7	0.46%	1.17
Class IV : <50 Jobs>100 Jobs	1,563	2	0.1300%	0.67
Class V : <100 Jobs> 250 Jobs	1,591	1	0.0600%	1.12

Growth firm concentrations fall far short of both national and Appalachian levels – and short of compensating in any significant way for gaps in the District's entrepreneurial and retention vitality. Aggregate high growth concentrations are 65 percent of the national average, and while the District rates highly in two larger employment classes, no more than a handful of firms are involved. The MSA provides little opportunity here; it's concentrations of high growth firms trails the District by thirteen index points.

# ARC West Virginia 13I

2001 firms analyzed:

3,941



ARC District 13I is administered by the Region 9 Eastern Panhandle Regional Planning and Development Council, including Berkeley, Jefferson and Morgan Counties. Berkeley and Jefferson, which host the bulk of the District's business establishments, are also at the far western end of the Washington DC MSA.

Although most of its economy is included in the Washington DC metropolitan area, vitality performance in the District suggests that much of the MSA's influence has yet to reach it. Summary District vitality ratings look much more like those of a struggling but viable rural LDD than an integral part of a thriving MSA, possibly a result of the five-year time series used for these analyses. While the District's retention patterns are modest (in line with many growth areas), the high indices which are common dynamic areas, including high entrepreneurial and growth firm measures, are hard to find.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,036	1,518		
Retained Firms		1,501	49%	0.98
Sales	397,355	407,986	2.7%	0.05
Avg Jobs	10	13	30%	0.72
Replenishment	29,282	19,565	67%	0.87
Sales/Employee	66,226	58,284	-12%	0.56

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Aggregate retention rates are just below the national average and, more importantly, job and sales vitality measures among retained firms are low across the board. By contrast, the MSA leads the nation and Appalachia in every retention vitality measure. Sales per employee levels are barely more than half of the national level. Business out-migration is 0.6 percent of firms tracked from the 1996 pool, and 1.1 percent of survivors, somewhat high for a District of this configuration. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Sales per employee rates appear to lead national averages in only a small number of industries, including agricultural services, transportation equipment, personal services and amusements. A handful of industries representing a limited number of retained firms also developed high indices in both sales and job vitality measures. These include food products, transport equipment, instruments and lodging.

## ARC West Virginia 13I

2001 firms analyzed:

3,941

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	77	38		
Retained Firms		38	49%	1.05
Sales	416,949	297,222	-28.7%	0.00
Avg Jobs	5	6	20%	0.30
Replenishment	352	209	59%	0.71
Sales/Employee	83,390	49,537	-41%	0.36

## Startup Activity

96-01 Starts	445
Start Rate	16.4%
US Index	0.84

At 16 percent below the national rate, startup activity is only slightly lower than the Regional index of 0.87. However, low levels of vitality among retained starts, coupled with relatively weak retention vitality measures, suggest that more is needed. However, in addition to value added manufacturing industries like food products, plastics and a number of metalworking industries, startup rates are above average in a variety of industries which can be indicators and sometimes drivers of new growth – business services, legal services, engineering-research and several financial segments. These could be indicators of a better economy beginning to spill over from the east.

At the same time, the vitality of startups tracked from 1996 – a time series which may not have captured recent metro-based spillover – is not encouraging. Leading sales per employee indicators are limited to retail and, more hopefully, business services and lodging. Building construction, lodging and business services all score well in job and sales change indicators – very good signs if this picture indeed represents the start of an economic influx which has since intensified.

## High Job Growth Firms:

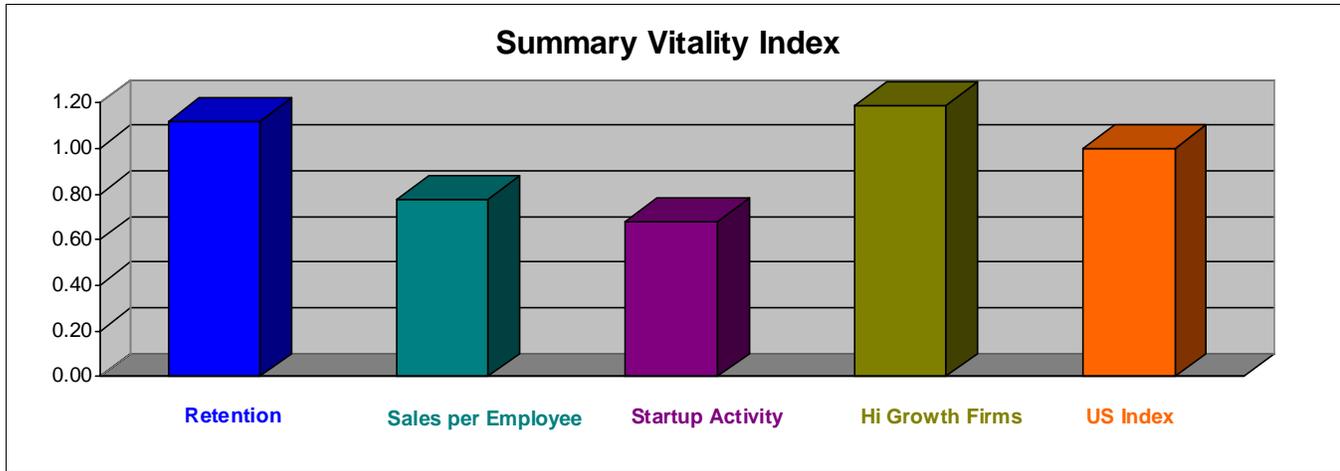
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,827	53	1.87%	0.92
Class I : < 5 Jobs>10 Jobs	1,934	42	2.17%	0.95
Class II : <10 Jobs>25 Jobs	2,421	16	0.66%	0.91
Class III : <25 Jobs>50 Jobs	2,682	6	0.22%	0.56
Class IV : <50 Jobs>100 Jobs	2,761	2	0.0700%	0.38
Class V : <100 Jobs> 250 Jobs	2,827	0	0.0000%	0.00

Concentrations of high growth firms are consistent with Appalachian levels, falling 8 percent short of national patterns. Concentrations peak in the smaller employment classes. Again, it is possible that intensified influence from the MSA has created a larger growth firm population since the 1996 pool, which would be missed by this time series.

# ARC West Virginia 13J

2001 firms analyzed:

3,543



1.12      0.78      0.68      1.19      US = 1.00

ARC District 13J is administered by the Region 10 Bel-O-Mar Regional Council and Planning Commission, including Marshall, Ohio and Wetzl Counties. Marshall and Ohio Counties also comprise about half the business population in the Wheeling MSA and the bulk of establishments in the District.

Vitality trends in the MSA track those in the District quite closely. High economy-wide and startup retention rates are matched by sluggish startup activity and low vitality rates among retained startups. However, solid vitality ratings among mature firms and leading high growth firm concentrations mitigate the effects of modest entrepreneurial activity.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,325	1,888		
Retained Firms		1,871	56%	1.12
Sales	461,293	805,976	74.7%	1.47
Avg Jobs	12	17	42%	1.00
Replenishment	38,552	32,098	83%	1.08
Sales/Employee	65,899	80,598	22%	0.78

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall retention rates are 12 percent above the national average and four index points ahead of the Region. This is a significant District advantage since, unlike many high retention areas, vitality indices among retained firms are also in leading positions. One discordant note: Aggregate sales per employee positioning is substantially below national and Appalachian levels, suggesting that 1996-2001 vitality indices reflect an effort to catch up, rather than lead. Nevertheless, the same measures suggest that the District is beginning to pull up even. Business out-migration rates are a modest 0.5 percent of the 1996 pool of firms tracked, and 0.9 percent of survivors, not a major cause for concern in an MSA-dominated district. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

The sales per employee index for retained firms is a real issue; among significant industries and value added services, only engineering-research leads national rates. The number of industries demonstrating high indices in both sales and job vitality measures is larger, including food products, wood products and furniture, paper products, printing, communications, non-durable wholesale, legal services and engineering-research.

## ARC West Virginia 13J

2001 firms analyzed:

3,543

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	88	48		
Retained Firms		47	53%	1.14
Sales	589,706	583,721	-1.0%	0.00
Avg Jobs	6	8	33%	0.50
Replenishment	550	380	69%	0.83
Sales/Employee	84,244	83,389	-1%	0.61

### Startup Activity

96-01 Starts	319
Start Rate	13.3%
US Index	0.68

Startup activity and retained startup vitality are the District's weakest links. Entrepreneurial activity rates are 32 percent below the US average and nineteen index points behind the Region. Leading rates of startup activity are limited to a handful of industries with significant numbers of establishments, including primary and fabricated metals, transport services, financial institutions and brokers, and legal services.

The vitality picture among surviving startups is not encouraging. Retained startup firms demonstrate low vitality indices across both sales and job categories, as well as a lagging sales per employee index; only retained restaurant startups appear to lead national patterns in the sales per employee measure. Good ratings are almost as infrequent in other categories; only motor freight, wholesale durables, automotive and legal services register high indices in both sales and job vitality measures.

### High Job Growth Firms:

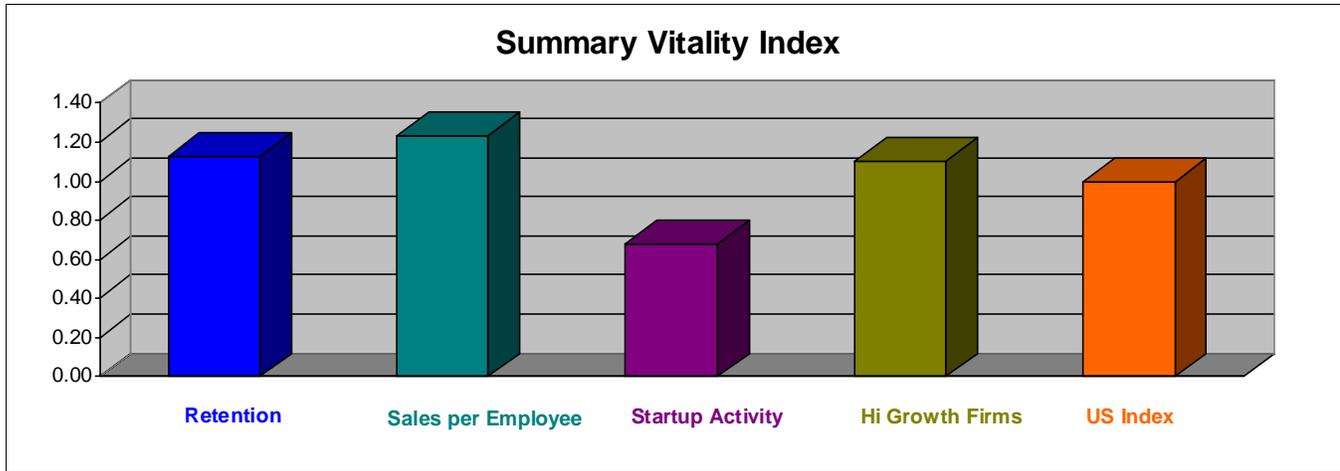
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,094	75	2.42%	1.19
Class I : < 5 Jobs>10 Jobs	1,960	58	2.96%	1.29
Class II : <10 Jobs>25 Jobs	2,500	28	1.12%	1.55
Class III : <25 Jobs>50 Jobs	2,880	15	0.52%	1.31
Class IV : <50 Jobs>100 Jobs	3,025	7	0.2300%	1.22
Class V : <100 Jobs> 250 Jobs	3,094	2	0.0600%	1.16

High growth concentrations in the area are excellent, leading the solid performance among retained firm vitality measures overall. The District leads US and Appalachian high growth concentrations in every employment class, as does the MSA. For now, these potential economic engines must be counted on to compensate for the District's serious lags in entrepreneurial activity and vitality.

# ARC West Virginia 13K

2001 firms analyzed:

1,648



1.13      1.23      0.68      1.10      US = 1.00

ARC District 13K is administered by the Region 11 B-H-J Metropolitan Planning Commission, including Brooke and Hancock Counties. The two counties are home to about half of the business establishments in the Steubenville-Weirton MSA.

Like a number of other West Virginia Districts, 13K indicates a generally unusual pattern of vitality indices, including strong aggregate retention rates coupled with high concentrations of growth firms and seriously lagging entrepreneurial activity and vitality measures. In this case, the gap in entrepreneurial vitality is compounded by generally sluggish vitality measures among mature retained firms.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,478	853		
Retained Firms		841	57%	1.13
Sales	761,589	1,022,504	34.3%	0.68
Avg Jobs	17	14	12%	0.28
Replenishment	22,725	15,449	68%	0.88
Sales/Employee	108,798	127,813	18%	1.23

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Business out-migration rates are 0.8 percent of the 1996 pool of firms tracked and 1.4 percent of the survivor population, slightly high for an MSA of this size, but not the major cause for concern. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim. District retention rates are 13 percent above the national average and five index points ahead of the Region. However, indices among retained firms lag significantly in all sales and job vitality measures, although the aggregate current retained firm sales per employee rate is well above national standards. This is clearly due to the disproportionate influence of the primary metals industry on the ratings. Aside from primary metals only a handful of industries, including apparel, wholesale non-durables, personal and educational services, evidence high sales per employee ratings.

A few industries outperform national ratings in both sales and job vitality indices: building construction, fabricated metals, industrial machinery, wholesale durables, health and educational services among them.

## ARC West Virginia 13K

2001 firms analyzed:

1,648

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	28	9		
Retained Firms		9	32%	0.69
Sales	210,000	257,143	22.4%	0.18
Avg Jobs	4	3	-25%	0.00
Replenishment	114	29	25%	0.31
Sales/Employee	52,500	85,714	63%	0.62

### Startup Activity

96-01 Starts	146
Start Rate	13.2%
US Index	0.68

Startup activity rates and startup retention both trail US and Appalachian levels by very significant margins; both are just a little less than two-thirds of average. Among industries with more than a single identified startup, only some retail segments, credit institutions and brokerages and the lodging industry lead national startup patterns. Among retained startups, only restaurants display higher than industry average sales per employee rates, and only retained startups in the motor freight and brokerage industries indicate leading scores in both sales and job vitality measurements.

### High Job Growth Firms:

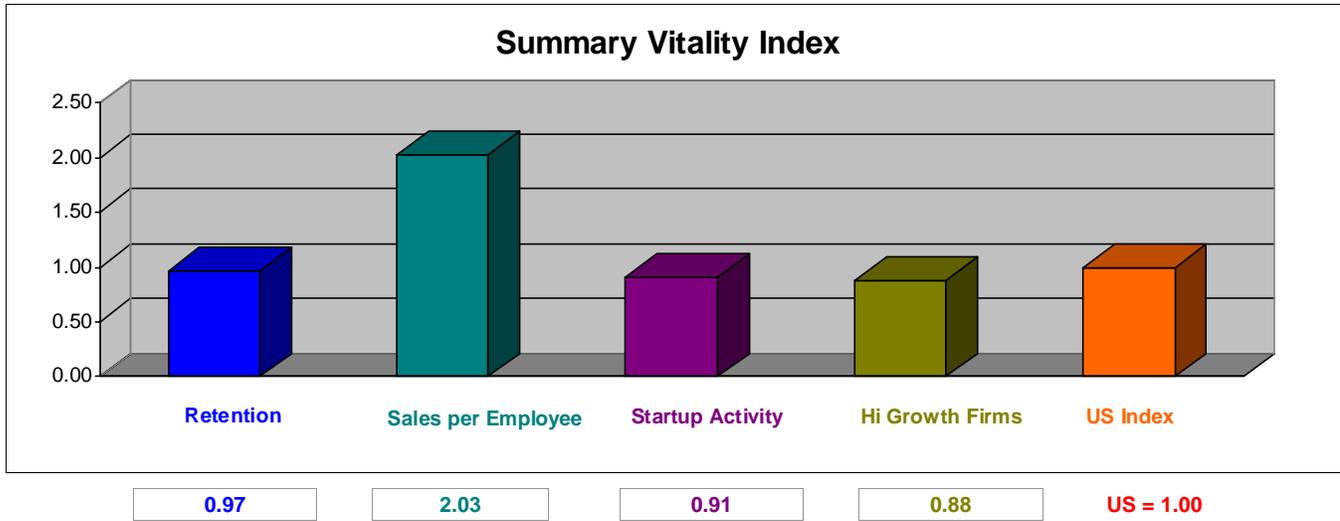
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	1,350	30	2.22%	1.10
Class I : < 5 Jobs>10 Jobs	875	23	2.63%	1.14
Class II : <10 Jobs>25 Jobs	1,117	10	0.90%	1.24
Class III : <25 Jobs>50 Jobs	1,250	8	0.64%	1.62
Class IV : <50 Jobs>100 Jobs	1,319	4	0.3000%	1.60
Class V : <100 Jobs> 250 Jobs	1,350	1	0.0700%	1.32

Like a number of other West Virginia Districts with unusual vitality patterns, District 13K also reflects leading concentrations of high growth firms in all employment classes. And as in the others, these potential economic engines must be counted on to compensate for the District's serious lags in other vitality measures.

# Metro Albany-Schenectady-Troy, NY

2001 firms analyzed:

35,047



Despite lags in most vitality measures against national averages, the Albany MSA is outpacing much of upstate New York. All summary growth measures come within 10 percent of US trends, some higher, although some of the positive statistics are more representative of a handful of firms or industries than overall vitality. Startup activity, at 9 percent below the national average, is still ahead of many northeast areas. Startup survival is 10 percent below national trends, a particular problem in an area with such low startup activity rates. Overall retention is at a virtual dead heat with national patterns and the aggregate high employment growth firm rate is significantly lower than US norms. The sales per employee rate for surviving firms appears excellent at first blush, but seems largely due to a data spike in a single industry. This MSA could generate future growth opportunities and clusters which could spill over to nearby ARC areas, especially Schoharie County and nearby counties in New York's Southern Tier East. Good vitality in several traditional manufacturing industries and insurance could be mined for opportunities nearby.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	32,369	15,967		
Retained Firms		15,859	49%	0.97
Sales	681,132	1,687,768	147.8%	2.91
Avg Jobs	12	17	42%	1.00
Replenishment	365,081	268,058	73%	0.95
Sales/Employee	97,305	210,971	117%	2.03

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Survival and retention rates for the MSA are strong, although slightly below US averages. Only a tiny fraction of firms (0.03 percent) migrated outside the area during the review period. Sales change among surviving firms was almost three times the US average, attributable to specific industries discussed below. At the same time, constrained job growth among survivor firms limited job change and replenishment figures to 95-100 percent of US patterns, yielding an impressive sales per employee rate among MSA firms retained during the 1996-2001 period.

Raw retention levels themselves were just below the US average. Higher retention patterns were evident in key industries, including transport services and motor transport as well as business services. While some manufacturing industries (rubber/plastics and fabricated metals) held their own in the retention category, most others rated below average. Communications showed very poor retention levels. However, survivors in some of the trailing industries performed quite well in other measures. Chemicals, transport equipment, wood, furniture, communications, plastics and petroleum related industries all performed well. Sales growth among surviving firms was poor in both business services and motor transport. Business services survivors also fared poorly in the job change measure, although professional services did well. Machinery, health services and electronics likewise rated high.

High sales per employee ratings were anchored by growth in the insurance industry, which caused an unusual data spike. High ratings are also apparent in social services, fabricated metals, chemicals, education, primary metals plastics and personal services.

## Metro Albany-Schenectady-Troy, NY

2001 firms analyzed:

35,047

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	772	346		
Retained Firms		343	44%	0.95
Sales	578,549	824,834	42.6%	0.35
Avg Jobs	8	13	63%	0.94
Replenishment	6,143	4,280	70%	0.84
Sales/Employee	96,425	103,104	7%	0.75

### Startup Activity

96-01 Starts	4,182
Start Rate	17.8%
US Index	0.91

Significant levels of startup activity were apparent in a variety of manufacturing industries and value added services, including chemicals, legal services, non-depository financial institutions, communications and food products. Most other manufacturers, including technology related instruments and plastics, were within 10 percent of national norms. Although fabricated metals reflected a lower rate, other metalworking industries – primary metals, industrial machinery, instruments and transportation equipment – all reflected robust startup activity. (The last three also had industry retention rates at or above 90 percent of the national average.) Both business and professional services indicated startup activity below national levels.

Startup survival, sales and job change rates were below national patterns. Retail, construction trades and motor freight transportation indicated very positive startup retention, but very few value-added industries showed good startup retention and significant levels of startup activity.

Job growth among startups in the professional services and various FIRE industries was strong, but weak virtually everywhere else. Likewise, replenishment rates in most industries looked weak, although good performance in professional and health services was encouraging. Sales per employee rates among surviving starts look particularly promising in fabricated metals (limited numbers), both business and professional services and construction.

### High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	29,101	519	1.78%	0.88
Class I : < 5 Jobs>10 Jobs	19,760	415	2.10%	0.91
Class II : <10 Jobs>25 Jobs	24,198	188	0.72%	1.07
Class III : <25 Jobs>50 Jobs	27,290	111	0.41%	1.03
Class IV : <50 Jobs>100 Jobs	28,495	44	0.1500%	0.81
Class V : <100 Jobs> 250 Jobs	29,101	12	0.0400%	0.74

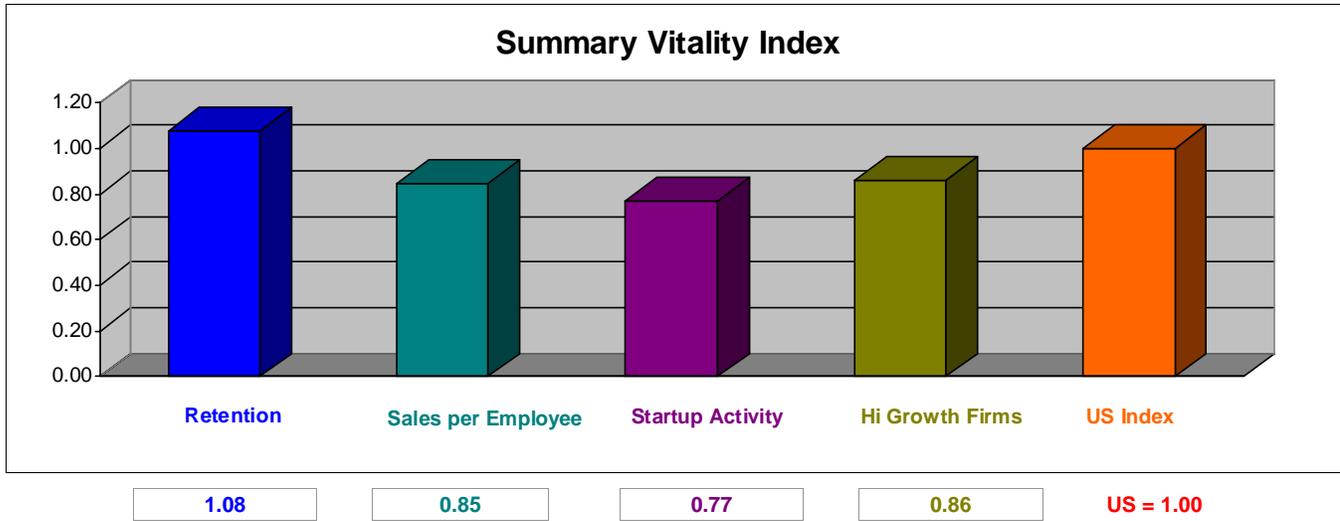
Despite low aggregate ratings, the MSA leads US patterns for high growth firms in two important small business categories: Classes II and III. These are sandwiched by lower high growth scores among both smaller and larger firms. The smallest firms rate 0.91, supporting the findings of lower growth trends among MSA startups. Scores are even lower among larger firm classes, where MSA rankings lag US patterns by 19 percent-26 percent.

It is important to bear in mind that while these high growth firms may develop as engines for future area growth, the high growth firm segment represents only a small fraction of area vitality, accounting for less than 2 percent of all firms.

## Metro Allentown-Bethlehem-Easton, PA

2001 firms analyzed:

25,107



Like a number of other northeast MSAs, Allentown sports a high business retention index which is not supported by other vitality measures. Startup activity is only about three-quarters of the national rate. Concentrations of high growth firms are significantly below US norms in every class size evaluated. While the MSA touches on ARC District 9D (Economic Development Council of PA), only Carbon County is actually a part of the Allentown MSA. Still, the MSA's strengths could enhance opportunities in the southern portion of the district.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	22,593	12,329		
Retained Firms		12,236	54%	1.08
Sales	464,175	710,154	53.0%	1.05
Avg Jobs	12	16	33%	0.80
Replenishment	247,011	190,718	77%	1.00
Sales/Employee	77,362	88,769	15%	0.85

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall, both retention and sales change among survivor firms are high. However, job growth among survivors and job expansion activity is low to modest, combined with a survivor sales per employee index which is 15 percent below the national average. The combination of factors suggests low sales rates to begin with that are beginning to catch up – but only just.

As in other areas, business out migration, at 3 firms (0.04 percent), is not a major issue.

At the same time, there is clearly a significant amount of budding development in the MSA: multiple segments of the construction industry reflect high retention rates, some coupled with high sales change patterns among survivors. Retention is mixed among manufacturers, but strong in traditional needle trades, where both sales and job growth patterns are keeping pace with the national industry, and surpassing it in some replenishment measures. The plastics industry shows high retention and good survivor sales growth. Metalworking is mixed and fabricated metals weak, but industrial machinery seems to be booming, with good retention and high sales and job indices. Transportation equipment and instruments also rate highly in multiple vitality categories.

Retention rates are also high in all transportation industries except rail in this traditional center, and include leaders in sales and job change indices among survivors. Solid retention ratings and leading job vitality in communications suggest telecommunications inroads. Both professional and business services, including computer-related, show high retention and survivor job growth ratings.

## Metro Allentown-Bethlehem-Easton, PA

2001 firms analyzed:

25,107

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	666	344		
Retained Firms		340	51%	1.09
Sales	558,759	1,017,152	82.0%	0.67
Avg Jobs	13	22	69%	1.04
Replenishment	8,261	7,318	89%	1.06
Sales/Employee	111,752	127,144	14%	0.92

### Startup Activity

96-01 Starts	2,576
Start Rate	15.1%
US Index	0.77

Mirroring the general Pennsylvania experience, startup activity rates are low across the board. Even in industries chock full of high sales change survivors, like construction, startup activity remains low. Among manufacturers, only food products (0.95) and electronics (1.14) show impressive levels of startup activity, which is likewise low in motor freight. Reflecting local attention, air services startup activity is high, though still modest in absolute terms. Communications and telecommunications startups are scarce. Activity levels are low throughout the FIRE and Services sectors, with the exception of health services, which is 3 percent above US levels.

While startup retention and survivor job change are quite good overall, sales levels of surviving starts are low and bring down the sales per employee rate of successful startups to about 8 percent below average. Growth among startups seems sluggish even in the dynamic construction industries. Job and sales change among surviving manufacturing startups appeared sluggish with the exception of instruments.

Startup experience in major service industries was positive, with high retention and growth patterns evident in personal services, business services and health.

### High Job Growth Firms:

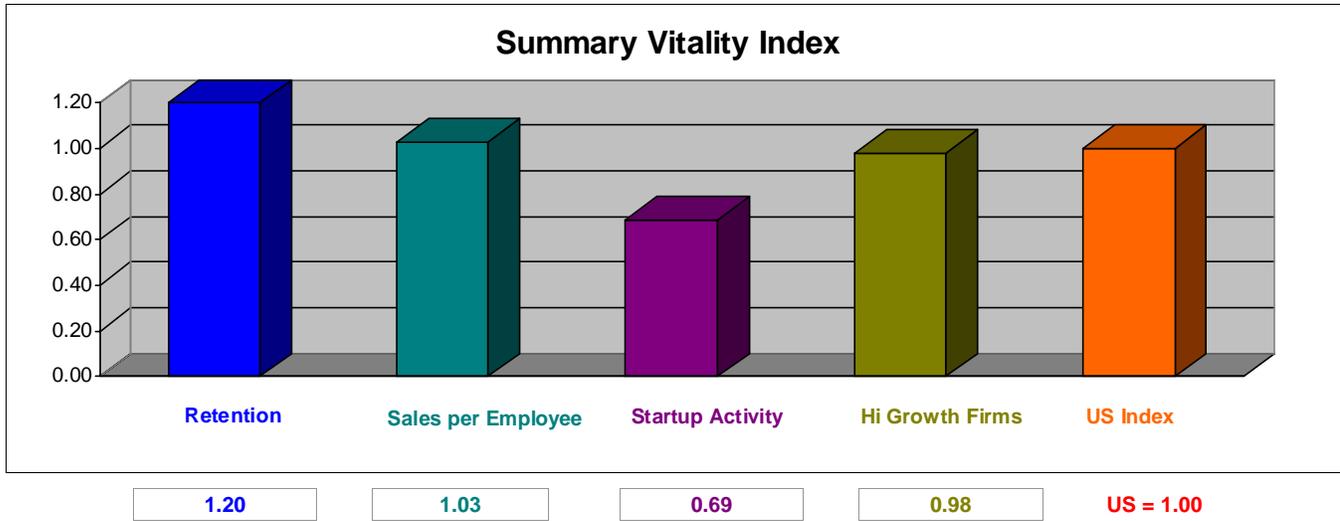
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	20,390	355	1.74%	0.86
Class I : < 5 Jobs>10 Jobs	13,777	275	2.00%	0.87
Class II : <10 Jobs>25 Jobs	16,968	88	0.72%	0.72
Class III : <25 Jobs>50 Jobs	19,146	62	0.32%	0.82
Class IV : <50 Jobs>100 Jobs	19,954	32	0.1600%	0.84
Class V : <100 Jobs> 250 Jobs	20,390	9	0.0400%	0.79

Allentown's weak concentration of high growth firms is spread fairly evenly across the five class sizes examined. The MSA hosts only a small number of firms which qualify for the high growth index, but is particularly weak in Class II, firms which began with few than ten employees and grew to more than 25. The MSA's somewhat better ratings are found among smaller firms, which could be plumbed for eventual expansion opportunities in ARC counties.

## Metro Altoona, PA

2001 firms analyzed:

5,116



Unlike many of the MSAs reviewed for this analysis, the Altoona MSA, contiguous with Blair County PA, is totally contained within an ARC district, one of two such metro areas within the Southern Alleghenies District. As an emerging regional commercial center, the MSA commands a very high retention rate among more mature firms and startups alike. Concentrations of high growth firms are very strong in every class except Class II – firms which began with under 10 jobs and grew to more than 25 over the five-year period. However, entrepreneurial vitality lags significantly, as startup rates are less than 70 percent of the US average. Bottom Line: Development agencies in the area are currently developing initiatives to address the issue of entrepreneurial vitality, which looms as a glaring weakness in an otherwise increasingly sound picture.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,616	2,812		
Retained Firms		2,794	61%	1.20
Sales	556,155	855,362	53.8%	1.06
Avg Jobs	13	17	31%	0.74
Replenishment	56,492	46,914	83%	1.08
Sales/Employee	92,692	106,920	15%	1.03

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Altoona's very strong retention rate is both a tribute to area stability and a lament over weak entrepreneurial vitality. MSA firms have expanded in concert with sales growth, leading to high sales change rates among survivors and correspondingly high sales per employee rates. Business out-migration from this small MSA is almost negligible.

Retention is particularly high among construction trades, suggesting dynamic ongoing development, although the sales change index for survivors is mixed. Metalworking industries reflect high retention and good job replenishment rates, suggesting numerous expansions. Transportation, communications and particularly retail industries seem very strong in most retention measures, as do business, health and the array of professional services. While data on average job change among survivors is ambiguous, replenishment data (indicating expansions) is very positive. The sales per employee index is only positive in nine major industries, but these are almost all among the largest services, and account for over 25 percent of all MSA firms. No manufacturers are included.

## Metro Altoona, PA

2001 firms analyzed:

5,116

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	125	73		
Retained Firms		73	58%	1.25
Sales	395,699	490,323	23.9%	0.20
Avg Jobs	12	14	17%	0.25
Replenishment	1,397	986	71%	0.85
Sales/Employee	79,140	81,720	3%	0.59

### Startup Activity

96-01 Starts	482
Start Rate	13.5%
US Index	0.69

Startup rates are low pretty much across the board. The MSA's manufacturing sector is small, and even a handful of startups in any given industry (printing, fabricated metals) pushes the startup activity rate beyond US trends. With the exception of restaurants, not a single industry with more than ten starts indicated a startup activity rating above US averages. Business service startups are very low and have been recommended to development agencies in the area as a focus of attention.

While startup survival is quite positive, the performance of those surviving startups is not. Indices for sales change, job change and sales per employee among surviving startups are all very low. Legal services, printing, electronics, personal and professional services all reflect performance bright spots in either sales or job change indices. In some major industries, including business services, no startups from 1996 were identified.

### High Job Growth Firms:

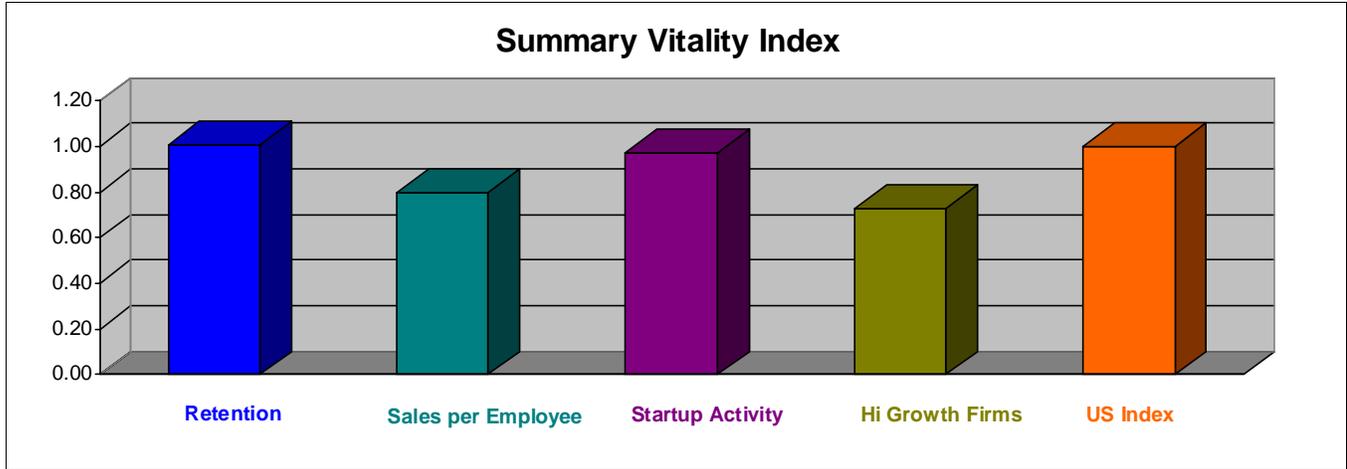
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	4,266	85	1.99%	0.98
Class I : < 5 Jobs>10 Jobs	2,840	69	2.43%	1.06
Class II : <10 Jobs>25 Jobs	3,553	23	0.72%	0.89
Class III : <25 Jobs>50 Jobs	4,009	19	0.47%	1.20
Class IV : <50 Jobs>100 Jobs	4,169	12	0.2900%	1.51
Class V : <100 Jobs> 250 Jobs	4,266	4	0.0900%	1.68

Although the MSA suffers from statewide lags, an added reason for entrepreneurial sluggishness in the MSA could be the relative dynamism of the area's engine firms. The MSA reflects an aggregate high growth firm concentration just under the US average, but the weakness is concentrated in Class II (beginning under 10 jobs and ending with more than 25). All other size classes show concentrations of high growth firms well above US averages, boding well for future dynamism from these existing engines. At the same time, the MSA's small size necessarily makes this exclusive club small as well – about 85 firms or just under 2 percent of the total.

# Metro Anniston, AL

2001 firms analyzed:

4,235



1.01      0.80      0.97      0.73      US = 1.00

The Anniston MSA touches on Calhoun County AL, part of the East AL Planning Commission (1E). It is a small MSA with solid summary scores in several vitality measures. MSA business retention runs slightly above the US norm, a stability factor underscored by a startup activity rate which is only three points below the national rate – a lag, but one which surpasses most ARC districts. Startup survival rates, too, register above national norms. Only the MSA’s aggregate high growth firm concentration rate lags badly, more than 25 percent below the US average. While this raises questions about the basis for MSA’s future drivers, the concern is mitigated by the combination of strong retention and adequate levels of entrepreneurial vitality and stability.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,021	2,061		
Retained Firms		2,047	51%	1.01
Sales	433,754	743,824	71.5%	1.41
Avg Jobs	11	15	36%	0.87
Replenishment	42,342	30,375	72%	0.93
Sales/Employee	72,292	82,647	14%	0.80

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Retention rates are just over US averages. Business out-migration is not a significant issue and sales change rates for survivors are significantly higher than US trends over the five-year period. At the same time, job change among survivor firms has been relatively slow, improving the sales per employee ratio for the MSA. (That index remains below the US average.)

Construction indices are high in both retention and sales change categories. The MSA also has a significant metalworking cluster (primary and fabricated metals, industrial machinery and transportation equipment) which scored highly in multiple vitality measures. The small communications industry also did well, but business services fared poorly. Professional and health services, on the other hand, appear vital.

## Metro Anniston, AL

2001 firms analyzed:

4,235

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	96	46		
Retained Firms		46	48%	1.02
Sales	1,282,716	2,700,000	110.5%	0.91
Avg Jobs	13	29	123%	1.85
Replenishment	1,239	1,351	109%	1.31
Sales/Employee	142,524	128,571	-10%	0.93

### Startup Activity

96-01 Starts	527
Start Rate	19.0%
US Index	0.97

Startup activity keeps pace with the vitality of longer-term firms. Activity rates are only 3 percent below the US average. Startup sales growth rates are slightly below US norms overall, but job change and replenishment among the same firms far outpaces national patterns. Startup sales per employee run somewhat below US levels.

The highest levels of startup activity are in various construction industries (still slightly below the US average) and in several retail groups. Construction startup job and sales change rates also run better than US trends. Business services starts (including computer-related) are on a par with US averages. Health and professional startup rates are high. Other industries do not provide any clear patterns relative to startup growth experience, and the scale of survivors is distributed widely enough among industries and low enough overall (fewer than 100 startup survivors from the 1996 group) to make conclusions difficult.

### High Job Growth Firms:

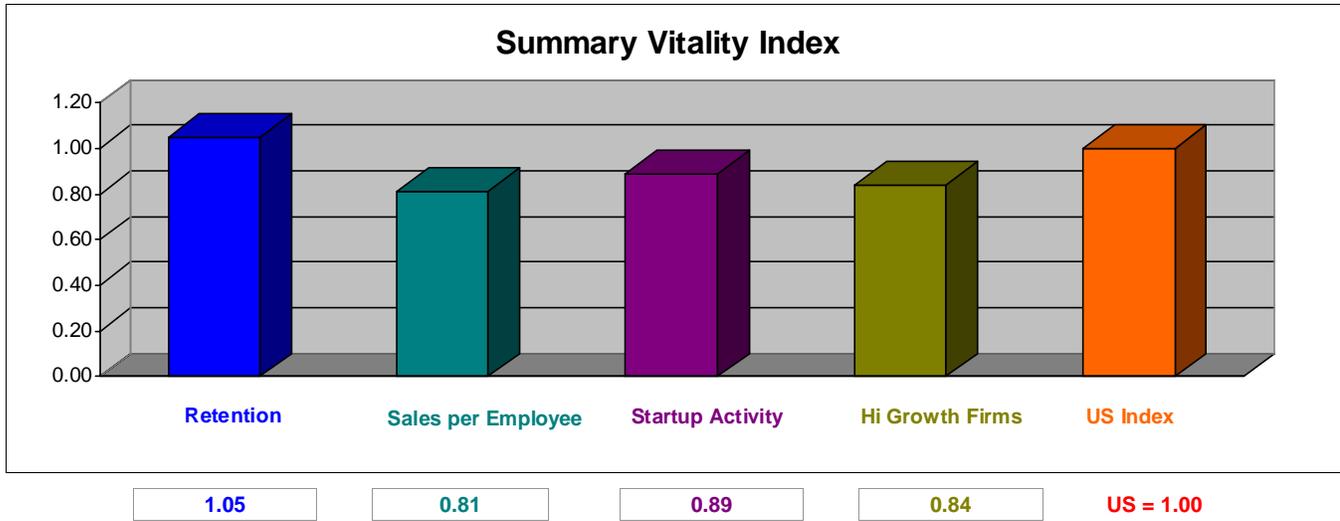
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,393	50	1.47%	0.73
Class I : < 5 Jobs>10 Jobs	2,227	40	1.80%	0.78
Class II : <10 Jobs>25 Jobs	2,837	14	0.72%	0.68
Class III : <25 Jobs>50 Jobs	3,175	8	0.25%	0.64
Class IV : <50 Jobs>100 Jobs	3,307	6	0.1800%	0.95
Class V : <100 Jobs> 250 Jobs	3,393	3	0.0900%	1.58

Concentrations of high growth firms are quite low in all classes except the larger Classes IV and V. Scores in Class I, II and III raise concerns about the level of dynamism among smaller (and in many cases, newer) firms in the MSA – and their ability to create spillover effects for nearby regional counties.

## Metro Asheville, NC

2001 firms analyzed:

9,971



The Asheville MSA includes two counties, Buncombe and Madison, within ARC 7B, the Land-of-Sky Regional Council. The MSA itself reflects mixed vitality ratings. Overall retention rates measure about 5 percent above US averages, while startup vitality is somewhat lower – 11 percent below US startup activity levels and 9 percent below startup survival rates. This combination is problematic for the MSA, since the combination of lagging entrepreneurial activity and survival compound each other. In addition, high growth firm concentrations run 16 percent below average.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	8,241	4,418		
Retained Firms		4,346	53%	1.05
Sales	536,249	674,386	25.8%	0.51
Avg Jobs	12	17	50%	1.20
Replenishment	93,527	76,806	82%	1.07
Sales/Employee	89,375	84,298	-6%	0.81

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While retention rates are themselves positive, the MSA indicates a higher than usual propensity to lose firms to out-migration rather than simple failure. While only 72 firms were identified as out-migrants from the 1996 analysis group, this still represents a relatively high number. Moreover, the sales change among the survivor group of firms in the MSA lags considerably behind US norms. At the same time, survivor job change is reported at high levels, depressing the sales per employee ratio among survivor firms from 1996 throughout the MSA. While sales per employee rates are affected by many factors, including industry mix, Asheville's 0.81 indexed rating is far below par.

Retention and growth patterns among survivor firms in various construction industries are quite good, suggesting that current development demand may be reflecting positive trends. Retention and survivor sales and job change rates among the several significant metalworking industries, especially fabricated metals, electronics and transportation equipment are impressive. Solid retention and survivor sales and job change among transportation industries, especially trucking, warehousing and transport services, suggest regional hub activity. Technology-based communications industries present a retention concern. However, business and professional services, including computer related, legal and engineering, have maintained positive retention and survivor vitality patterns.

## Metro Asheville, NC

2001 firms analyzed:

9,971

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	325	160		
Retained Firms		139	43%	0.91
Sales	274,249	456,115	66.3%	0.54
Avg Jobs	11	7	-36%	0.00
Replenishment	3,358	1,017	30%	0.36
Sales/Employee	54,850	65,159	19%	0.47

### Startup Activity

96-01 Starts	1,195
Start Rate	17.4%
US Index	0.89

Startup activity rates 0.89 on the US index, a particular concern because startup survival is likewise almost 10 percent below average. A significant proportion of startup firms from 1996 relocated from the MSA, despite the propensity of startups to stay in place for the first several years of operation. Sales and job vitality rates for startup survivors are low.

There are few concentrations of startup activity in the MSA. Activity rates in construction trades, industrial machinery, printing and trucking are below average. Retail reflects sluggish startup activity, although new firms through the FIRE sector – in banking and real estate alike – have a significant lead on US patterns. Technology-driven communications, business services (including computer-related) and engineering all lag. Only legal stands above the pack among potential value-added services. Health services startup activity is even with US trends.

Those industries showing significant numbers of surviving startups reflect somewhat sluggish vitality experience. Job and sales growth rates tend to be somewhat below average in construction, wholesale, retail trades and, although startup retention is excellent, in business services. Engineering is almost alone in consistent high vitality measures among surviving startups.

### High Job Growth Firms:

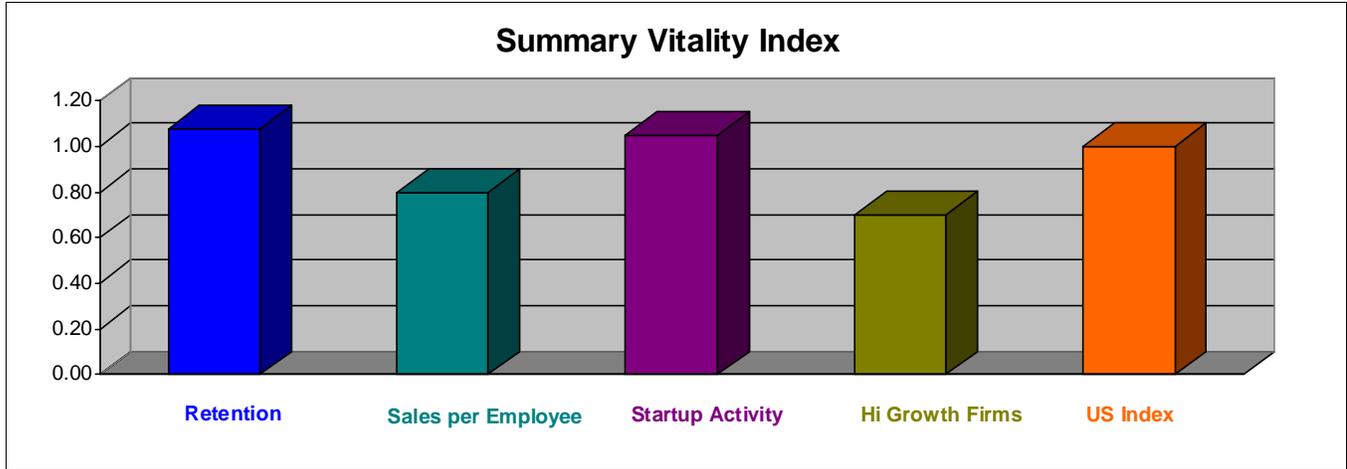
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	7,230	123	1.70%	0.84
Class I : < 5 Jobs>10 Jobs	4,678	100	2.14%	0.93
Class II : <10 Jobs>25 Jobs	5,932	39	0.72%	0.91
Class III : <25 Jobs>50 Jobs	6,726	20	0.30%	0.75
Class IV : <50 Jobs>100 Jobs	7,033	7	0.1000%	0.52
Class V : <100 Jobs> 250 Jobs	7,230	2	0.0300%	0.49

While there is a steep range of indexed scores that make up the MSA's aggregate score of 0.84 for high growth firm concentrations, the range is entirely below US trends. The MSA's biggest strength in this category – still 7 percent-9 percent below average – is in the small Class I and Class II firms.

## Metro Athens, GA

2001 firms analyzed:

5,856



1.08      0.80      1.05      0.70      US = 1.00

With the exception of a lagging High Growth Firm index, the Athens MSA, touching only Madison County in GA 2E's Northeast Georgia RDC, reflects extremely positive vitality ratings. Retention levels, entrepreneurial activity and entrepreneurial survival all run 5-8 percent above US patterns.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,129	2,289		
Retained Firms		2,255	55%	1.08
Sales	460,188	665,301	44.6%	0.88
Avg Jobs	13	19	38%	0.92
Replenishment	52,412	41,633	79%	1.03
Sales/Employee	76,698	83,163	8%	0.80

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Coupled with an overall retention index of 1.08, business out-migration rates are not a major concern. Sales and job change among surviving firms lag US patterns. By the same token, job replenishment is 3 percent above average, testament to expansion activity among surviving firms. The sales per employee index remains low despite the good replenishment rate, suggesting low average sales which are still catching up from 1996 levels.

Retention rates are high in significant clusters, including agricultural services and construction. Most manufacturing industries show retention rates below average. Vitality appears quite high in very transportation industry and mode, although employment replenishment appears to be outstripping the sales change among survivors. Financial institutions do well in vitality indices, but business services and communications retention and survivor growth is sluggish. Professional services appear strong across the board, as do health and legal, suggesting more demand for business services than is currently evident.

## Metro Athens, GA

2001 firms analyzed:

5,856

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	173	87		
Retained Firms		87	50%	1.07
Sales	381,379	737,500	93.4%	0.77
Avg Jobs	6	7	17%	0.25
Replenishment	926	642	69%	0.83
Sales/Employee	63,563	105,357	66%	0.77

### Startup Activity

96-01 Starts	776
Start Rate	20.5%
US Index	1.05

Although the index is high, the absolute scale of startup activity is modest, making specific industry analysis difficult. In general, while startup retention rates were extremely good, all vitality indicators for surviving startups suggests low growth – both jobs and sales – relative to other US starts.

High points of startup activity include agricultural services, transportation industries and communications, including telecommunications. Strong activity among eating establishments and miscellaneous retail indicate new levels of commercial dynamism. These are seconded by high activity levels among business services, personal services, health, legal and educational services. Among these, however, only surviving startups in agricultural services and retail showed real industry-wide vitality.

### High Job Growth Firms:

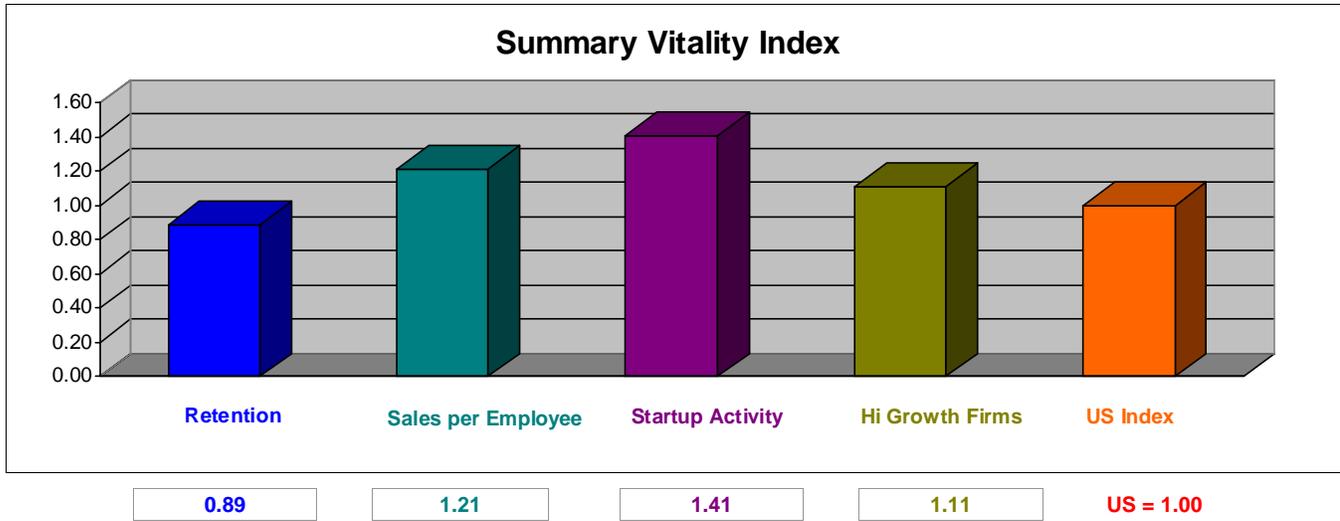
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,721	53	1.42%	0.70
Class I : < 5 Jobs>10 Jobs	2,291	45	1.96%	0.85
Class II : <10 Jobs>25 Jobs	2,970	13	0.72%	0.60
Class III : <25 Jobs>50 Jobs	3,438	7	0.20%	0.51
Class IV : <50 Jobs>100 Jobs	3,621	2	0.0600%	0.29
Class V : <100 Jobs> 250 Jobs	3,721	1	0.0300%	0.48

The MSA's 0.70 high growth firm index is led by the smallest (Class I) firms at 85 percent of the national average, those likely requiring the longest lead time to become regional engines. Performance among the larger employment classes lags by truly significant margins of 40-70 percent depending on the class. While individual firms may develop spillover effect for the nearby LDD, the likelihood of sustained and overall impact from a high growth sector is marginal relative to most US areas.

## Metro Atlanta, GA

2001 firms analyzed:

181,987



One of the largest MSAs touching on the Appalachian Region, Atlanta exhibits unmistakable vitality which could provide significant spillover effects to multiple ARC districts.

Atlanta's low retention rate is troubling at first glance, but deeper investigation suggests that the retention measure may be more a sign of newly emerging vitality and turnover than anything else. Startup activity rates are enormously high – 41 percent above US norms, far outpacing the churn reflected by lower startup survival rates. High startup activity is matched by significant advantage in the concentration of high growth firms. The sheer number of high growth firms in a MSA this size, coupled with their relative propensity, suggests spin off and branch development opportunities among outlying areas.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	124,349	55,849		
Retained Firms		55,428	45%	0.89
Sales	572,022	1,254,993	119.4%	2.35
Avg Jobs	12	20	67%	1.60
Replenishment	1,448,979	1,123,087	78%	1.01
Sales/Employee	95,337	125,499	32%	1.21

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While the general retention rate is low, the experience of surviving firms presents a more positive picture than in many areas which rate more highly. Out-migration is just over 400 firms from the 1996 pool, a very low loss-level for an MSA of almost 125,00 business establishments. Vitality measures for retained firms are strong across the board: sales change rates for survivors run more than twice the national average, while average job change and survivor replenishment indicate employment experience among stable firms well above the national average. Aggregated sales per employee rates are high.

Construction vitality is evident. Major construction industries indicate high sales and job vitality scores coupled with relatively low retention (and high startup activity rates). Atlanta's manufacturing sector experiences even lower retention rates overall, but almost all industries reflect high survivor sales and most look good in the job change and replenishment category. Electronics and industrial machinery, the two manufacturing industries most involved with the technology cluster, performed especially well in sales change and (for electronics) employment vitality categories. The technology industries themselves, especially communications, delivered impressive vitality measures across the board. The impact of lower retention rates is mitigated by high startup activity rates. Supporting this activity, professional and legal services also performed well in vitality measures, as did tourist and business related support areas such as hotels.

In general, surviving firms in the Atlanta MSA are pushing out very high levels of sales and employment vitality, creating the conditions for spin-off opportunity in almost every major industry, including the communications cluster.

## Metro Atlanta, GA

2001 firms analyzed:

181,987

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,491	2,242		
Retained Firms		2,198	40%	0.86
Sales	630,321	1,363,679	116.4%	0.95
Avg Jobs	8	16	100%	1.50
Replenishment	40,844	34,633	85%	1.02
Sales/Employee	105,054	104,898	0%	0.76

### Startup Activity

96-01 Starts	32,480
Start Rate	27.6%
US Index	1.41

Low overall retention rates and high survivor vitality find their complement in the MSA's astonishing startup activity rate, almost half again above the US average. Startup activity is well above the US level in almost every major industry, including every manufacturing group except tobacco. Over 500 new – and likely technology-oriented – manufacturers were identified in metalworking industries alone, with particularly high concentrations and raw number in industrial machinery and electronics. Corresponding molding industries also showed high activity. All transportation services and modes indicate high vitality levels, as does every finance, retail and service industry, including those (such as computer related business services) which appear relatively weak in the general retention vitality measures.

Surviving startups, face high competitive difficulties from the area's vibrant longer-term surviving firms, but still showed sales change levels only about 5 percent below average. These are coupled with high scores in both average job change among surviving startups and job replenishment rates indicating expansions. Sales per employee among surviving starts are disappointingly low in aggregate, possibly due to early job growth.

Leading construction startup vitality measures match those of longer-term construction firm survivors in both sales and job indices. Startups in traditional industries like apparel and wood furniture appear to be sparking a small scale revival in retention and growth measures. Surviving electronics startups show strong job and sales change figures, in tandem with surviving new firms in communications. (Startup survival in both industries is low.) But low startup survival, like low retention rates in general in the MSA, appear to go hand in hand with vibrant survivors. This is also the pattern for transportation and other value-added industries. Once again, the support industries – hotels, legal services and then like – appear to be benefiting across the board from the dynamism developed by core value-added sectors, through high retention, sales change, job change and replenishment rates.

### High Job Growth Firms:

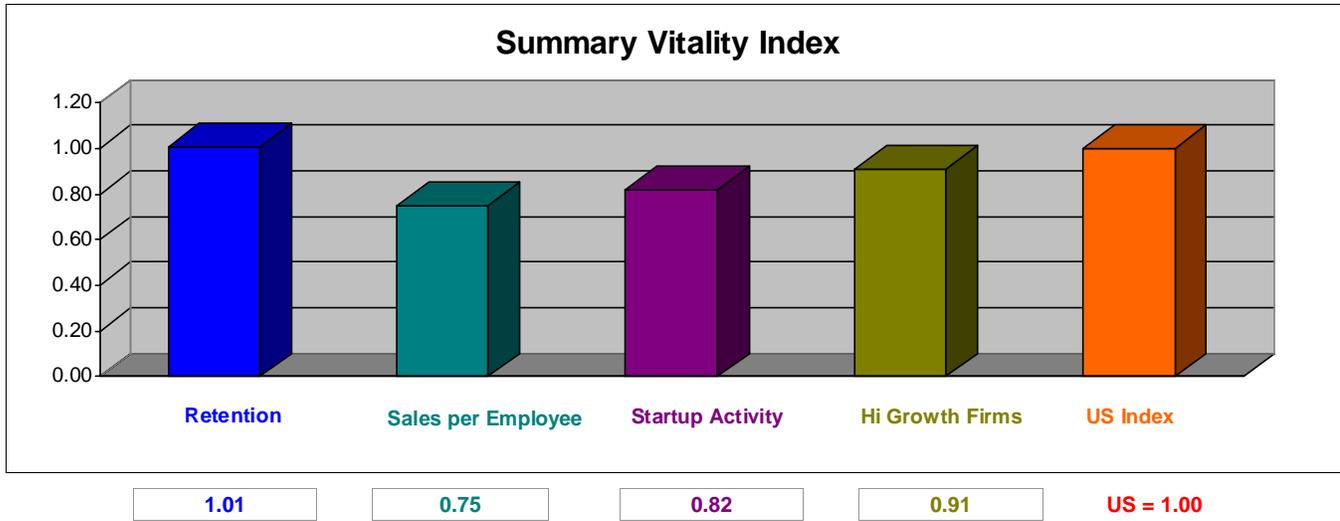
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	124,578	2,800	2.25%	1.11
Class I : < 5 Jobs>10 Jobs	82,821	2,086	2.52%	1.10
Class II : <10 Jobs>25 Jobs	102,740	851	0.72%	1.14
Class III : <25 Jobs>50 Jobs	116,414	563	0.48%	1.22
Class IV : <50 Jobs>100 Jobs	121,669	308	0.2500%	1.33
Class V : <100 Jobs> 250 Jobs	124,578	97	0.0800%	1.39

Atlanta's impressive concentration of five-year high growth firms (11 percent above average) varies upward with employment class size. Class I firms, the smallest, are just below the MSA average at 1.10, while the largest class, Class V, still holds almost 100 firms and rates 39 percent above US averages. Class II and III include over 1,400 firms; their concentration rates run 14-22 percent above average.

## Metro Binghamton, NY

2001 firms analyzed:

8,818



Situated by New York's Southern Tier East district, the Binghamton MSA reflects a retention rate slightly higher than US levels. However, the engine of high growth firm concentrations among survivors lags by about 9 percent. While startup survival rates are high, startup activity itself is significantly under par. This indication, coupled with the low concentration of high growth firms, suggests a concern about future area vitality. Focus might be on fabricated metals, electronics and machinery firms, which reflect some outstanding ratings for the area.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	9,155	4,715		
Retained Firms		4,666	51%	1.01
Sales	435,780	620,551	42.4%	0.84
Avg Jobs	13	19	46%	1.11
Replenishment	114,225	87,647	77%	1.00
Sales/Employee	72,630	77,569	7%	0.75

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Performance among surviving firms from the 1996 pool is solid. Retention overall runs about 1 percent above average, and is supported by high levels of average job change among survivors from the 1996 pool average as well as on-target job replenishment. These figures together indicate good expansion performance among survivor firms and the retention of both larger firms and smaller businesses which have grown over the analyzed period. The relative lag in high growth firms may be compensated for by this overall solid performance. General sales performance among survivors does not however, appear as positive, and sales per employee aggregate figures remain low.

Retention and survivor job vitality in the most important construction trades appear low, suggesting constraints ongoing development activity in the MSA. The most concentrated manufacturing industries are fabricated metals, industrial machinery and electronics, covering 160 surviving firms. All three industries show high retention and high replenishment rates, indicating solid expansion activity among survivor firms. Although relative sales per employee rates remain low, sales change among survivors in machinery and electronics are both very positive. Retention among communications firms is also high, although sales and job vitality among survivors is mixed. More positive is the survivor performance in business services, including computer, which reflects outstanding performance across the board – in retention as well as sales, job change and replenishment vitality categories. Retention and related vitality measures are mixed in support services with potential export capability – legal, health and engineering.

## Metro Binghamton, NY

2001 firms analyzed:

8,818

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	196	104		
Retained Firms		99	51%	1.08
Sales	350,932	1,204,598	243.3%	2.00
Avg Jobs	7	11	57%	0.86
Replenishment	1,400	1,043	75%	0.90
Sales/Employee	70,186	133,844	91%	0.97

### Startup Activity

96-01 Starts	958
Start Rate	16.0%
US Index	0.82

Startup activity is the weakest element of the MSA's vitality index. Aggregate startup rates run about 18 percent below the US average. While aggregate data indicates significant positive sales change among startup survivors, the small number of those reporting sales data diminishes the weight of the finding. Almost 100 surviving startups reported employment figures, and here the news is not so good: Both job change and replenishment are 10 percent or more below US patterns for startup survivors, indicating low growth patterns among survivors from an original group which was smaller than it should have been.

Although widely spread by industry, startup survivors appear to have struggled across the board. Surviving startups appear to have begun on a large scale or experienced good expansion activity in transportation equipment and motor freight. Startup experience in fabricated metals appears very good, indicating high scores in all vitality measures.

### High Job Growth Firms:

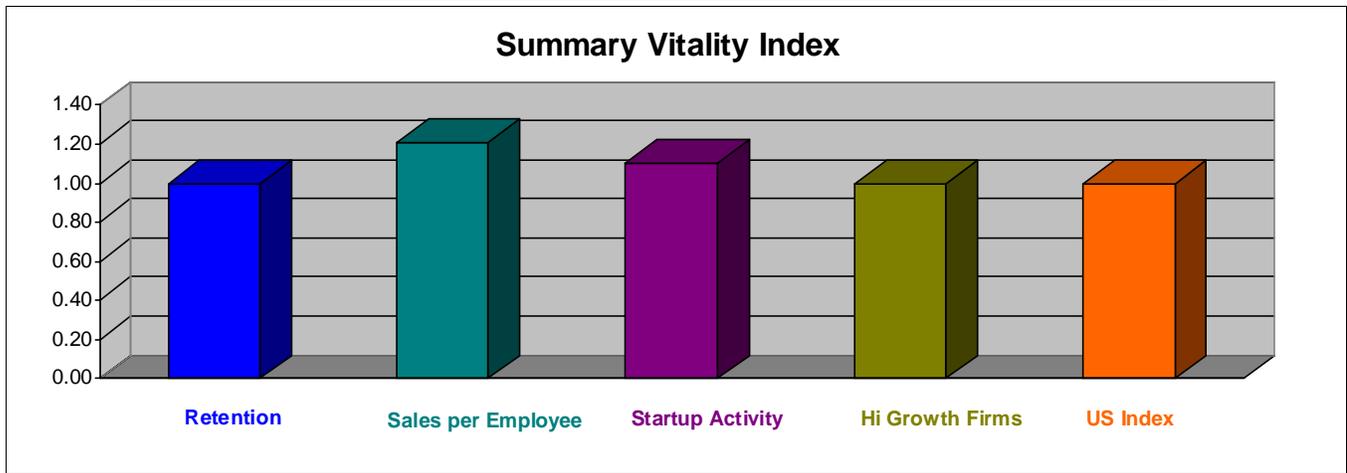
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	7,890	146	1.85%	0.91
Class I : < 5 Jobs>10 Jobs	5,335	113	2.12%	0.92
Class II : <10 Jobs>25 Jobs	6,541	46	0.72%	0.97
Class III : <25 Jobs>50 Jobs	7,405	21	0.28%	0.72
Class IV : <50 Jobs>100 Jobs	7,717	14	0.1800%	0.95
Class V : <100 Jobs> 250 Jobs	7,890	2	0.0300%	0.45

The MSA's high growth concentrations are best among small firms (Class I and II) and in Class IV, where small numbers of firms were still enough to push the Class rating to 0.95. Although these higher scores in small business groups slightly diminish concerns about sluggish entrepreneurial vitality, it is important to note that even in these classes high growth concentrations run 5-9 percent below average.

# Metro Birmingham, AL

2001 firms analyzed:

35,431



1.00      1.21      1.10      1.00      US = 1.00

The Birmingham MSA economy is central to ARC District 1E, the Birmingham Regional Planning Commission, and includes four of the district's counties. Fortunately, the MSA's economic engines appear to be the carriers of significant vitality ratings which could be increasingly felt in outlying counties.

Aggregate retention rates in the MSA are on par with national measures. As discussed below, this should be viewed as far better than average performance due to the growth experience of surviving firms. Startup activity runs 10 percent above average, pumping high concentrations of new vitality into the MSA (recent startup performance is even higher). Startup survival lags US patterns, but is not unduly low for an area with good retention and high startup activity. Finally, the concentration of high growth firms is at national levels. Combined with the MSA's startup vitality, the high growth concentration creates a vital economic engine in the MSA.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	31,802	16,064		
Retained Firms		15,950	50%	1.00
Sales	602,151	1,130,143	87.7%	1.73
Avg Jobs	13	20	54%	1.29
Replenishment	402,487	316,767	79%	1.02
Sales/Employee	86,022	125,571	46%	1.21

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

It would be hard to find a better set of aggregate retention scores. The MSA's pool of firms from 1996 not only were retained on a par with national rates, but performed significantly better than average surviving firms in other areas. Out-migration, at less than .04 percent, is very low. Sales change among survivors runs more than 70 percent above the national average, suggesting a combination of high growth and the survival of larger firms. Both average job change among surviving firms and replenishment are above national norms, indicating solid expansion activity and retention of larger firms as well. Aggregate sales per employee rates run 21 percent above the national average.

Food products and apparel both indicate positive vitality in both retention and job and sales change measures among surviving firms. Primary metals and industrial machinery are leaders in survivor job and sales change among metalworking industries, which also display high retention rates. The technology-oriented instruments industry is also a leader, while electronics appears to have experienced some retention and growth problems among survivors. Wholesale trades are booming by all vitality measures. Retention and growth among surviving financial institutions is significant. If there is a slightly troublesome area, it is in the technology sector, where the performance of both communications and business services firms (including computer-related) do not consistently attain average national levels. All vitality patterns among survivors in other export-oriented support sectors (legal, health, professional services) is excellent.

## Metro Birmingham, AL

2001 firms analyzed:

35,431

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,199	533		
Retained Firms		526	44%	0.94
Sales	628,945	1,292,795	105.6%	0.87
Avg Jobs	8	16	100%	1.50
Replenishment	9,456	8,081	85%	1.03
Sales/Employee	89,849	107,733	20%	0.78

### Startup Activity

96-01 Starts	4,968
Start Rate	21.4%
US Index	1.10

Beginning with an impressive startup activity rate (10 percent above the US average), Birmingham appears to be constantly replenishing its strengths. New construction starts and the demand they evidence are underpinned by high levels of startup activity in the MSA's core industries, including the needle trades, fabricated metals, industrial machinery and instruments. Even electronics, where surviving firms reflect some growth issues, displays a high startup activity rate. Transportation-related starts are very strong across the board. Most export services also reflect good startup activity, including communications and business services, which showed weaker retention experience. Support services are spawning high startup rates to keep up with demand.

Likewise, the area's core industries, including apparel, industrial machinery and instruments, are supporting high levels of startup survival. Retention and survivor sales and job change measures among retained electronics startup firms are impressive. All vitality rates among surviving business technology services are high, although startup retention rates in the industry are themselves below average.

### High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	30,517	622	2.04%	1.00
Class I : < 5 Jobs>10 Jobs	19,908	502	2.52%	1.10
Class II : <10 Jobs>25 Jobs	24,806	172	0.72%	0.96
Class III : <25 Jobs>50 Jobs	28,241	124	0.44%	1.11
Class IV : <50 Jobs>100 Jobs	29,712	62	0.2100%	1.10
Class V : <100 Jobs> 250 Jobs	30,517	17	0.0600%	1.00

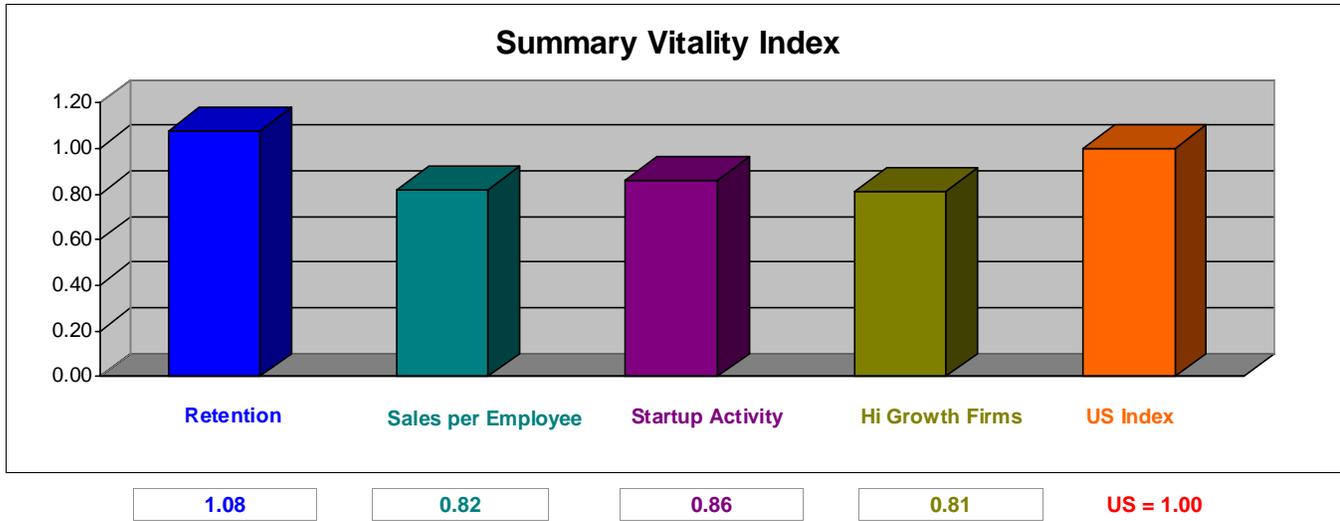
While the MSA's high growth firm concentrations score a solid 1.00, its highest levels are in Class I and Class II and IV – firms at different small and mid-size points on the spectrum. This mirrors the area's enviable vitality among retained firms in concert with the ability to generate a large stream of new, vital and growing smaller firms. This combination of old and new vitality patterns seems to ensure a dynamic future with which the LDD can benefit.

# Metro Canton-Massillon, OH

2001 firms analyzed:

14,441

## Summary Vitality Index



The Canton area reflects typical vitality scores for many heartland areas: Higher than average retention for both longer-term and startup firms, coupled with somewhat lower vitality engines in both startup activity and high growth firm concentrations. In Canton's case, retention rates 8 percent above average are muffled by startup activity which trails by 14 percent and concentrations of high growth firms which are almost 20 percent behind US averages. The MSA's combined gaps in overall entrepreneurial vitality and high growth concentrations suggest continued reliance on traditional industries and the leading performance within them.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	14,283	7,873		
Retained Firms		7,797	55%	1.08
Sales	531,397	849,705	59.9%	1.18
Avg Jobs	12	16	33%	0.80
Replenishment	165,351	126,919	77%	1.00
Sales/Employee	75,914	84,970	12%	0.82

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Supported by a high retention rate, the area's average sales change rate for survivors appears notably high. This could reflect outstanding performance among survivors, a possible product of changing industry mix among survivors or simply the survival of the largest firms from the original group. The low average job change rate is also inconclusive, although solid replenishment performance suggests expansionary growth among surviving firms. Despite the high sales change levels, sales per employee rates remain low.

Five-year performance by surviving construction firms indicates high levels of retention and good vitality patterns. Growth and expansion rates, as well as retention, are also impressive in the MSA's core plastic and related machinery industries. Both industries surpassed US trends in every retention vitality measure, often by significant margins. Together the two industries encompassed over 250 surviving firms from 1996. Vitality ratings were also high in the area's other traditional industry strongholds – fabricated metals, transportation equipment and instruments. Although the number of firms is limited, retention and vitality patterns in chemical industries appeared quite strong. Financial and especially insurance industries appeared strong in the FIRE sector. Telecommunications appeared weak while business services, including computer, reflected vitality patterns at or near national levels. This mixed picture is underscored by relatively low vitality growth patterns among business support industries, including legal and professional services.

## Metro Canton-Massillon, OH

2001 firms analyzed:

14,441

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	379	190		
Retained Firms		185	49%	1.04
Sales	616,254	1,581,366	156.6%	1.28
Avg Jobs	10	16	60%	0.90
Replenishment	3,648	3,038	83%	1.00
Sales/Employee	88,036	143,761	63%	1.04

### Startup Activity

96-01 Starts	1,682
Start Rate	16.8%
US Index	0.86

In a very modest show of startup activity, the chemical industry is an area leader. In contrast to industry retention vitality, construction firm startup activity is below par, as are entrepreneurial levels in wholesale durable trades. Alone among retail industries, miscellaneous retail outperformed national patterns, although surviving startups here did not seem to do well in vitality growth measures. Communications, business and professional support services were all weak in startup activity.

Most startups also had a difficult time with vitality growth measures. Despite overall good aggregate scores, construction starts did not do well in either job or sales measures, nor did most core manufacturing industries. Small numbers of startups survived and scored well in fabricated metals and instruments, but not in the area's leading industrial machinery group. Startup survival and vitality were poor in both communications and business services. While retention reached US levels in several business support services, vitality rates were lacking.

### High Job Growth Firms:

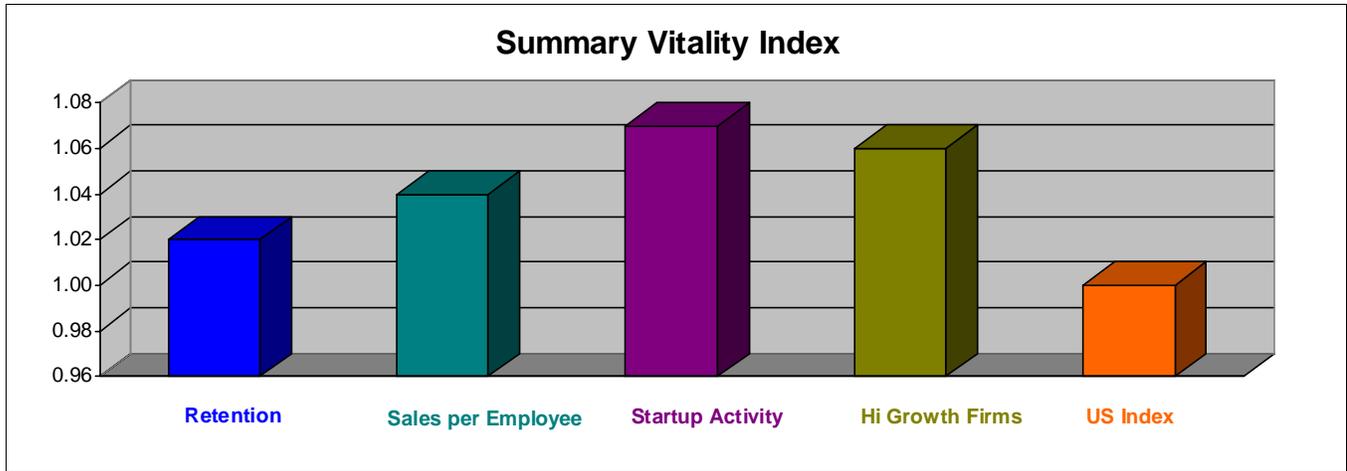
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	13,135	217	1.65%	0.81
Class I : < 5 Jobs>10 Jobs	8,588	174	2.03%	0.88
Class II : <10 Jobs>25 Jobs	10,781	49	0.72%	0.63
Class III : <25 Jobs>50 Jobs	12,222	28	0.23%	0.58
Class IV : <50 Jobs>100 Jobs	12,835	19	0.1500%	0.78
Class V : <100 Jobs> 250 Jobs	13,135	6	0.0500%	0.82

While the MSA achieved high growth concentrations of 88% of the national average among the smallest (Class I) firms, ratings diminished from there. All larger firm-size classes—with the exception of a handful of high growth firms in the largest class – scored between 53 percent and 78 percent of the national average high growth concentration. The MSA's combined gaps in overall entrepreneurial vitality and high growth concentrations suggest continued reliance on traditional industries and the leading performance within them. New sources of vitality continue to be an issue.

# Metro Charleston-North Charleston, SC

2001 firms analyzed:

20,565



1.02      1.04      1.07      1.06      US = 1.00

Summary measures paint a solid picture of economic vitality. Higher than average retention rates are backed by impressive startup vitality (7 percent above US averages) and leading concentrations of high growth firms in smaller business segments. Even startup survival, which could be anticipated to weaken in the face of strong competition, is almost on a par with national norms. The combination of startup activity and small firm growth suggest a dynamic future as these firms develop into engines for the MSA economy.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	8,750	4,567		
Retained Firms		4,513	52%	1.02
Sales	529,156	977,020	84.6%	1.67
Avg Jobs	14	17	21%	0.51
Replenishment	114,639	78,239	68%	0.89
Sales/Employee	75,594	108,558	44%	1.04

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Good aggregate retention performance is backed by high levels of sales change among surviving firms. Sales per employee rates are correspondingly high, in tandem with very modest job vitality among surviving firms.

Growth and expansion among survivor construction firms appears strong, backed by high vitality measures in the real estate industry. Retention in many industries is strong, but vitality – both sales and job change among survivors – does not appear to follow suit. Industrial machinery and electronics – two leading technology based industries – are exceptions, proving leading vitality rates in survivor sales change, job change and replenishment categories alike. The still-emerging nature of the MSA's dynamic economy is hinted at by the low sales per employee rate, even in these flagship manufacturing industries. Transportation Services likewise suggest high average job change and growth rates among survivors. While communications retention rates are strong, vitality of retained firms is not. Business services are strong in retention and sales change measures, but employment vitality has not kept pace. Support services (legal, engineering) do better.

## Metro Charleston-North Charleston, SC

2001 firms analyzed:

20,565

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	255	120		
Retained Firms		118	46%	0.99
Sales	771,875	2,226,126	188.4%	1.55
Avg Jobs	10	22	120%	1.80
Replenishment	2,430	2,544	105%	1.26
Sales/Employee	77,188	111,306	44%	0.81

### Startup Activity

96-01 Starts	2,733
Start Rate	20.9%
US Index	1.07

Startup activity overall runs 7 percent above the US average. But even this positive level of vitality masks the real dynamism of the area's core industries. Demonstrating vital development opportunities, construction trades all reflect startup activity rates of 1.10 or better. Entrepreneurial activity in manufacturing is impressive: 1.54 in food products, 1.11 in wood and furniture, and more than twice national levels in primary and fabricated metals. Industrial machinery rates are 22 percent above US averages, and instruments more than 50 percent higher. Communications and business services both lag by more than 15 percent, a significant concern. At the same time, activity rates for business and professional services are elevated.

Overall, startup retention is solid and retained startups lead national trends in every vitality measure – survivor sales change, job change and replenishment. Data on surviving startups is unfortunately limited for this MSA, although it is clear that even where start rates and startup survival are low (e.g., business services), the experience of surviving startups indicates high vitality measures.

### High Job Growth Firms:

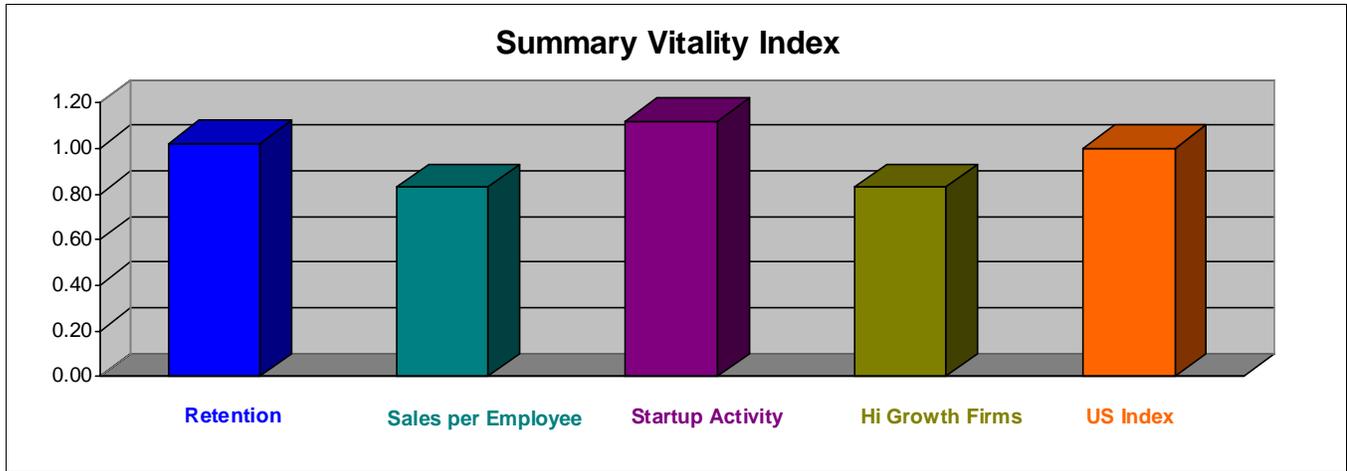
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	15,804	339	2.15%	1.06
Class I : < 5 Jobs>10 Jobs	10,194	272	2.67%	1.16
Class II : <10 Jobs>25 Jobs	12,952	102	0.72%	1.09
Class III : <25 Jobs>50 Jobs	14,784	64	0.43%	1.09
Class IV : <50 Jobs>100 Jobs	15,439	27	0.1700%	0.92
Class V : <100 Jobs> 250 Jobs	15,804	6	0.0400%	0.68

High growth firm concentrations are particularly strong in the smaller job classes (Class I, II, III), and somewhat under-performing in larger classes IV and V. This tendency fuels the notion that Charleston's best days are to come, as its small high growth firms and core of vital entrepreneurial activity matures.

# Metro Chattanooga, TN-GA

2001 firms analyzed:

19,239



1.02      0.83      1.12      0.83      US = 1.00

The Chattanooga MSA includes Hamilton and Marion counties in the Southeast Tennessee Development district (11E). The area shows a solid retention index, and a good level of job vitality among retained firms. Startup activity is very positive at 12 percent above national trends. But startup survival rates are very modest and concentrations of high employment growth firms run 17 percent below national patterns. However, the vitality of longer-term firms, startup survivors, and the aggressive startup activity rate all couple with leading concentrations of larger growth firms to produce an impressive image of area vitality.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	15,135	7,866		
Retained Firms		7,811	52%	1.02
Sales	625,042	779,725	24.8%	0.49
Avg Jobs	13	19	46%	1.11
Replenishment	191,595	148,596	78%	1.01
Sales/Employee	89,292	86,636	-3%	0.83

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While sales data may be low due to data distortions (and does not include headquarters and branch inputs), both average job change and job replenishment among retained firms leads national patterns. Taken together, the two suggest a combination of good retention rates among larger firms and good expansion rates overall.

Retention and survivor vitality are quite strong in a number of core industries including agricultural services and construction trades. Manufacturing industries with consistently high vitality measures include paper products, chemicals, and three metal-based industries – primary metals, industrial machinery and transport equipment. Although retention rates are low, survivor vitality is impressive in the instruments industry. Survivor job growth and expansion appear significant in trucking and warehousing. The technology-oriented communications and especially business services industries reflect high levels of vitality in the job growth measures, and the boom in personal services may reflect a new level of resulting disposable income. Support services are holding their own.

## Metro Chattanooga, TN-GA

2001 firms analyzed:

19,239

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	479	198		
Retained Firms		195	41%	0.87
Sales	652,747	1,737,647	166.2%	1.36
Avg Jobs	13	28	115%	1.73
Replenishment	6,279	5,325	85%	1.02
Sales/Employee	93,250	115,843	24%	0.84

### Startup Activity

96-01 Starts	2,723
Start Rate	21.8%
US Index	1.12

As was true for retention performance, startup activity rates are extremely positive in core industries. Agricultural services experienced a startup activity rate almost half again the US average. Construction ran 19 percent-34 percent over national levels. Among goods producers, wood products demonstrated entrepreneurial activity fully 11 percent-69 percent above average in various industries. Chemicals starts were 35 percent above average, and primary metals, industrial machinery and transport equipment also showed leading numbers. Among the core vital manufacturers, only paper did not lead in entrepreneurial activity. Transportation startup activity was high, and communications and business services, which lagged in retention measures, demonstrated entrepreneurial rates higher than US averages, as did support services like engineering.

Job vitality among startups was high as well; average survivor sales change, average survivor job growth and replenishment measures all led national patterns by significant margins. The level of entrepreneurial activity and vitality of retained startup firms more than makes up for the low startup survival rates in the MSA. Retained industrial machinery, instruments and transportation equipment firms were leaders in area vitality measures.

### High Job Growth Firms:

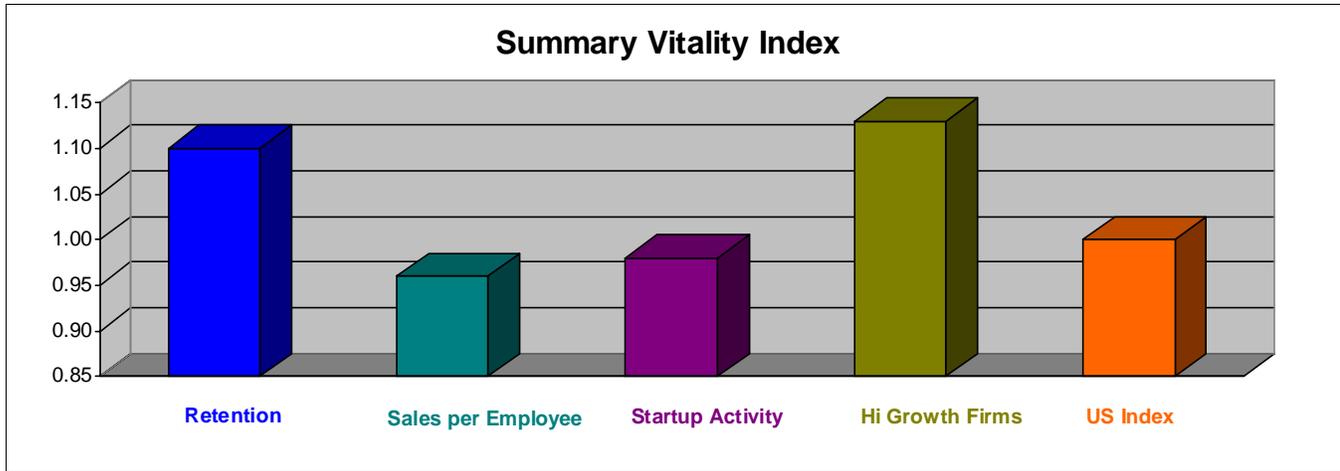
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	15,031	254	1.69%	0.83
Class I : < 5 Jobs>10 Jobs	9,937	201	2.02%	0.88
Class II : <10 Jobs>25 Jobs	12,411	79	0.72%	0.88
Class III : <25 Jobs>50 Jobs	14,025	54	0.39%	0.97
Class IV : <50 Jobs>100 Jobs	14,681	27	0.1800%	0.97
Class V : <100 Jobs> 250 Jobs	15,031	10	0.0700%	1.19

Interestingly, the area's high growth concentrations were led by larger employment classes (II, IV, V). While most classes and the aggregate score are below US averages, they are high enough (in conjunction with entrepreneurial measures and the performance of retained firms) to suggest a continuing flow of growth engines from core industries in the MSA, starting with today's growth firms and continuing through to tomorrow's maturing entrepreneurial startups.

# Metro Cincinnati, OH-KY-IN

2001 firms analyzed:

65,161



1.10      0.96      0.98      1.13      US = 1.00

The Cincinnati MSA includes a number of ARC counties throughout Ohio and Kentucky. This large MSA's influence will increasingly impact even outlying ARC districts and counties.

At the leading edge of heartland vitality, the metro's indexed scores are impressive both individually and as a group. The weakest among them, startup activity, is nonetheless almost at US average levels – an accomplishment for most heartland MSAs, and a distinct advantage over other Ohio areas covered by this analysis. Other ratings surpass national patterns, including an aggregate retention rate 10 percent above average, startup survival 11 percent above average, and concentrations of high growth firms 13 percent above national norms. Sales and job vitality measures support the overall picture of high retention and impressive growth engines. In the case of startup activity, slightly lagging area-wide patterns mask dynamism in specific industries.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	55,529	31,188		
Retained Firms		30,839	56%	1.10
Sales	569,358	900,086	58.1%	1.15
Avg Jobs	14	20	43%	1.03
Replenishment	737,937	606,553	82%	1.07
Sales/Employee	81,337	100,010	23%	0.96

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While a little over 500 firms from the 1996 universe left the MSA during the analysis period, creating a slightly higher out-migration total than other metros, the number is not a significant concern in light of Cincinnati's 1.10 retention index score. Much more important is the demonstrable vitality of retained firms, whose sales change index stands 15 percent above US patterns. Both survivor job change and expansion-related replenishment figures also suggest high levels of retained firm performance.

Vitality of retained firms shows across a wide array of durable and non-durable goods manufacturers. In addition to agricultural services which are likely already involved with rural areas, retained firms in a number of manufacturing industries demonstrate job and/or sales vitality which create prime candidates for cluster orientation in ARC counties, including textiles, paper, chemicals, plastic and related industrial machinery, electronics and instruments. Transport and transport services in all modes show high levels of retained firm vitality as well. Job change among retained communications firms leads US patterns by significant percentages, and booming vitality in survivor real estate and discretionary retail industries (e.g., restaurants) suggest a general aura of consumer activity. Business services, including the technology sector, are strong across the board.

## Metro Cincinnati, OH-KY-IN

2001 firms analyzed:

65,161

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,619	867		
Retained Firms		844	52%	1.11
Sales	589,031	1,755,925	198.1%	1.63
Avg Jobs	10	16	60%	0.90
Replenishment	15,359	13,179	86%	1.03
Sales/Employee	98,172	175,593	79%	1.28

### Startup Activity

96-01 Starts	8,079
Start Rate	19.1%
US Index	0.98

While startup activity is almost at national levels overall, it is weaker in important manufacturing industries dominated by healthy, more matured firms (e.g., plastics, industrial machinery). Startup activity rates are most aggressive in the MSA's emerging industries – communications and telecommunications and among financial institutions of several types. Startup rates in business services are puzzlingly low.

Those startups which survived the first five years of operation do well. Not only are startup survival rates good, but survivor sales change and job replenishment figures suggest dynamism and expansion. Startup survivors in chemicals, fabricated metals, electronics and instruments create impressive pictures of vitality in virtually all measures. Likewise, retained startups in transportation services appear quite dynamic, with high scores in both job vitality measures. Performance among retained startups in many service industries (including business services) is mixed, although support industries including legal and engineering score well across the board.

### High Job Growth Firms:

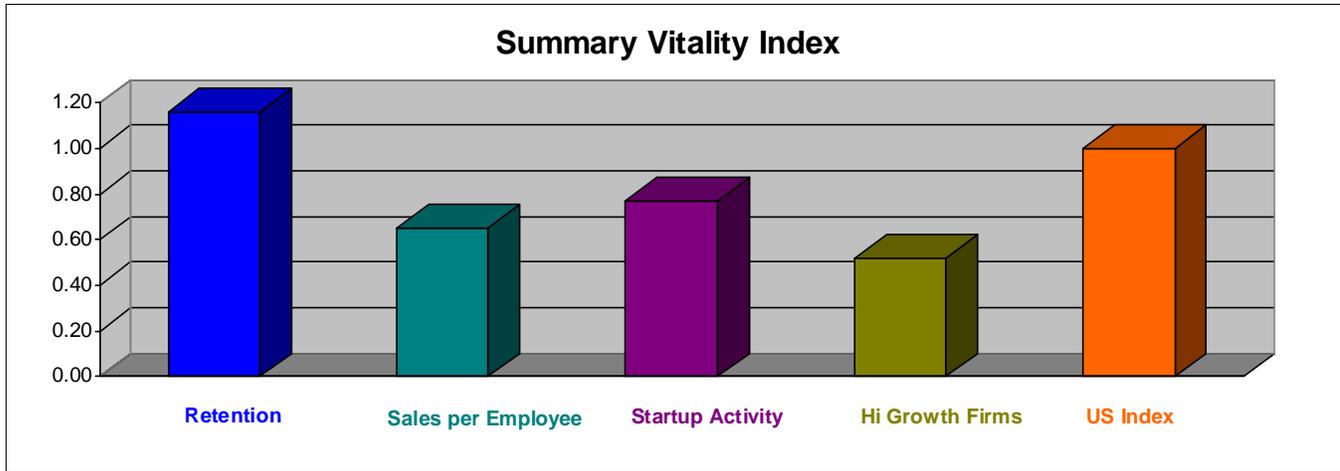
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	51,338	1,179	2.30%	1.13
Class I : < 5 Jobs>10 Jobs	32,905	929	2.82%	1.23
Class II : <10 Jobs>25 Jobs	41,543	389	0.72%	1.29
Class III : <25 Jobs>50 Jobs	47,547	261	0.55%	1.39
Class IV : <50 Jobs>100 Jobs	49,970	126	0.2500%	1.33
Class V : <100 Jobs> 250 Jobs	51,338	39	0.0800%	1.36

Finally, the MSA shows a high concentration of high growth engine firms. Interestingly, the aggregate High Growth score is lower than each of the class scores. This indicates that a number of firms qualified for inclusion in multiple categories due to extraordinarily high growth that ramped them through multiple classes (for example, a firm which began with fewer than five employees but grew to more than 25). This itself suggests the vibrancy generated by high growth engines, of which Cincinnati has more than its "share".

## Metro Cumberland, MD-WV

2001 firms analyzed:

3,403



1.16      0.65      0.77      0.52      US = 1.00

The Cumberland MSA is at the heart of ARC District 4A, the Tri-County Council for Western Maryland. It also includes Mineral County WV, part of West Virginia's Region 8 Planning and Development Council.

The Cumberland MSA's vitality rating indicate a common, if more pronounced version of vitality patterns common to sluggish areas. These include high retention, to some extent due to competitive lags, low growth rates among retained firms, coupled with slow startup activity and lagging startup survivor vitality rates. Following the same pattern, startup retention rates are slightly higher than average. In Cumberland's case, this pattern includes very low startup activity (23 percent below national averages) and very modest concentrations of high growth firms. Taken together, these measures reflect serious gaps in the MSA's economic vitality.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,824	1,663		
Retained Firms		1,654	59%	1.16
Sales	398,349	470,497	18.1%	0.36
Avg Jobs	12	15	25%	0.60
Replenishment	31,413	25,121	80%	1.04
Sales/Employee	66,392	67,214	1%	0.65

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Retention patterns are quite high (16 percent above national trends), but they are conditioned by very low vitality measures in most cases. Survivor sales change rates are low in both sales and job measures. Higher replenishment figures suggest that a handful of industries – health services appears to be one – have experienced significant vitality which affects overall measures.

Wood products and furniture industries show good vitality scores in job expansion and sales growth measures among retained firms, but most other manufacturers appear to be lagging US patterns. Some trucking firms seem to have experienced employment growth. But emerging industries in other areas, like communications, lag badly. Job and sales change patterns among retained firms in retail and banking are well below national trends. Business service trends, including computer related services, are sluggish.

## Metro Cumberland, MD-WV

2001 firms analyzed:

3,403

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	64	32		
Retained Firms		31	48%	1.04
Sales	354,717	400,000	12.8%	0.10
Avg Jobs	8	9	13%	0.19
Replenishment	458	275	60%	0.72
Sales/Employee	59,120	80,000	35%	0.58

### Startup Activity

96-01 Starts	342
Start Rate	14.9%
US Index	0.77

Startup vitality rates mirror the problems among retained firms. Only a handful of industries show startup levels even approaching US norms, and the scale of these is generally too small for meaningful analysis. Retail, which has significant numbers of starts, still under-performs US trends by a large margin. Services, both business and personal, also lag but less so. Engineering is one of the few industries reflecting startup activity rates above national norms.

Only 64 retained startups were identified for the five-year analysis, a number too small for meaningful breakouts. Miscellaneous retail did well and even with scant information, business services retention appeared high. Overall, however, retained startup firms exhibited extremely low vitality patterns in both sales and job measures.

### High Job Growth Firms:

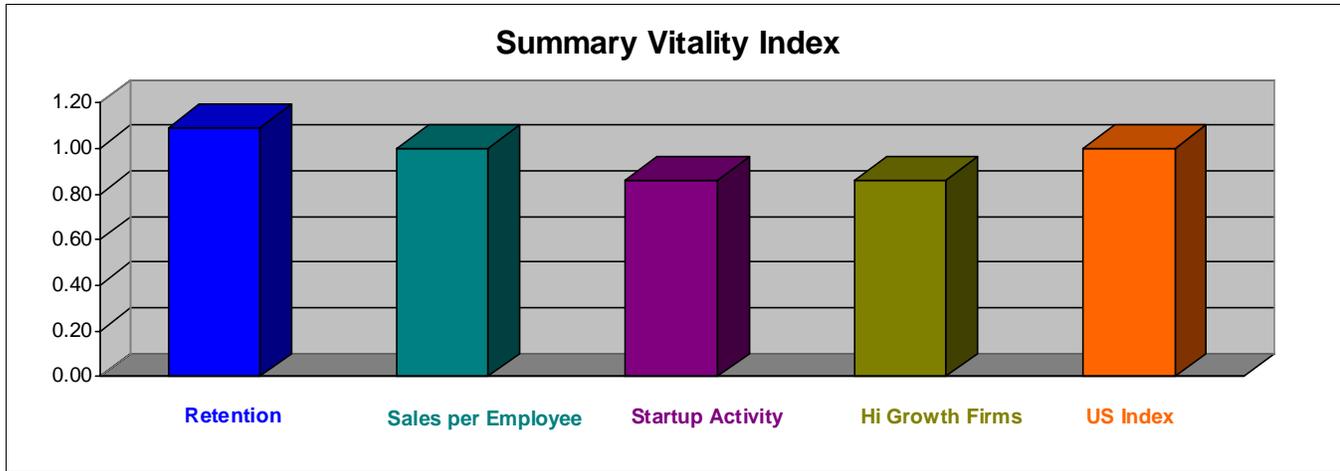
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,560	27	1.05%	0.52
Class I : < 5 Jobs>10 Jobs	1,581	22	1.39%	0.61
Class II : <10 Jobs>25 Jobs	2,081	8	0.72%	0.53
Class III : <25 Jobs>50 Jobs	2,413	6	0.25%	0.63
Class IV : <50 Jobs>100 Jobs	2,511	2	0.0800%	0.42
Class V : <100 Jobs> 250 Jobs	2,560	1	0.0400%	0.70

The MSA's high growth index is only about one-half the US average. Class I and Class III firms do slightly better, but high growth firm concentrations still trail by about 40 percent. The high growth engines in other nearby metros such as Altoona are virtually absent here.

# Metro Decatur, AL

2001 firms analyzed:

5,246



1.09      1.00      0.86      0.86      US = 1.00

The Decatur MSA covers two of the three counties in ARC District 1B, the North Central AL Regional Council of Governments. Despite its small scale, which in the Region often indicates a small rural MSA beset by numerous economic problems common to rural areas, the Decatur MSA seems to have created some small pockets of significant vitality despite shortfalls and concerns.

Summary indicators do not deliver any special sense of vitality. High overall retention rates, sluggish startup activity (in this case compounded by below par startup survival) and minimal concentrations of high growth firms all fit the mold of other low vitality metros. But the stability and modest strength of retained firms – both longer term and relatively new – may at least sustain the health of this MSA for the immediate future. In the long run, additional vitality from high growth engines and entrepreneurs is needed.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,463	2,490		
Retained Firms		2,457	55%	1.09
Sales	505,719	931,636	84.2%	1.66
Avg Jobs	14	18	29%	0.69
Replenishment	60,953	44,259	73%	0.94
Sales/Employee	72,246	103,515	43%	1.00

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The aggregate retention rate runs 9 percent above national averages. While sales change indicators among surviving firms are quite good, most of the change seems to have occurred in a handful of high volume, capital-intensive industries – primary metals, fabricated metals, chemicals and petroleum related. In general, job vitality scores are lower. However, in fabricated metals and chemicals, both of which contain significant numbers of the firms for the area, vitality measures led US trends in most categories. Transportation industries appeared generally strong, with weaknesses in trucking. Communications vitality was modest, but business services showed high performance in most measures, including retention, sales change and job replenishment; job change among survivor registered about 9 percent below average. Professional business support services were weak in all vitality measures.

## Metro Decatur, AL

2001 firms analyzed:

5,246

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	124	58		
Retained Firms		55	44%	0.95
Sales	1,436,190	5,677,358	295.3%	2.42
Avg Jobs	7	16	129%	1.93
Replenishment	839	899	107%	1.29
Sales/Employee	205,170	333,962	63%	2.42

### Startup Activity

96-01 Starts	570
Start Rate	16.9%
US Index	0.86

Overall startup activity rates fell significantly behind US trends (scoring 0.86), but some important MSA industries did well. All metal trades, electronics and instruments showed small numbers of startups, but enough to create activity rates above US levels. Trucking activity scored 1.11 and transportation services were 5 percent above the national average. But communications, business and professional services all rated low.

Although aggregate startup survival rates ran 5 percent below average, industries with a larger numbers of 1996 startups did well: major construction industries scored above average, as did machinery and miscellaneous retail. Startup vitality ratings were very high in aggregate, lending hope to a somewhat troublesome situation beset, among other things, with a lack of entrepreneurial vitality itself. However, the most significant elements of startup vitality, especially sales change among survivors but also job vitality, appeared to emanate from the retail sector, with smaller boosts from retained startups in primary metals and motor freight transportation.

### High Job Growth Firms:

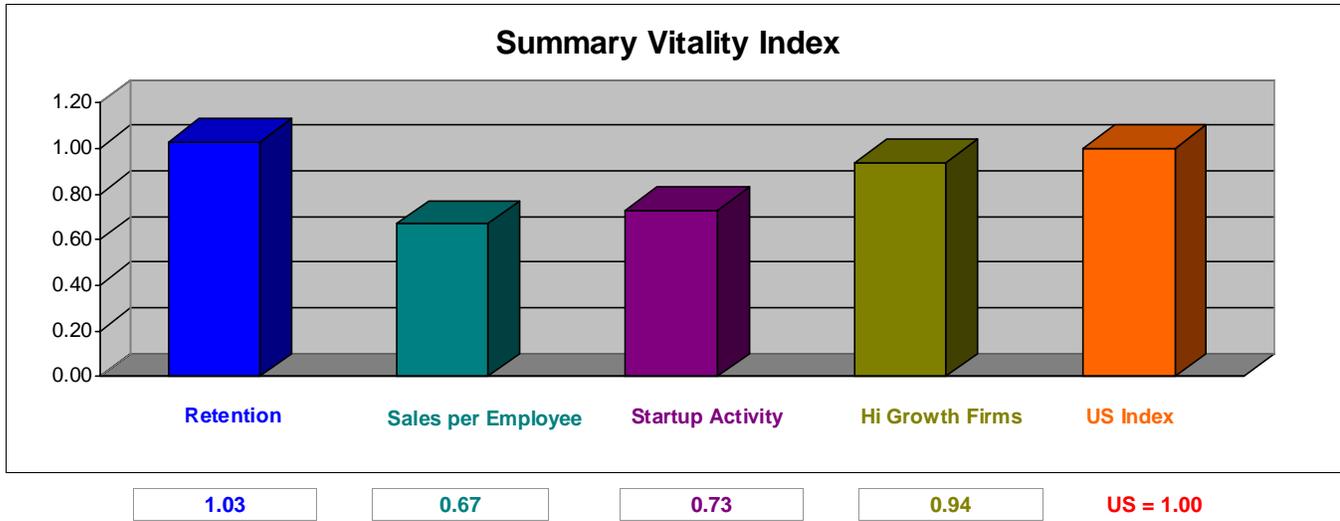
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes		69	1.75%	0.86
Class I : < 5 Jobs>10 Jobs	2,482	58	2.34%	1.02
Class II : <10 Jobs>25 Jobs	3,233	22	0.72%	0.94
Class III : <25 Jobs>50 Jobs	3,656	11	0.30%	0.76
Class IV : <50 Jobs>100 Jobs				
Class V : <100 Jobs> 250 Jobs				

Although aggregate concentrations of high growth firms are low and no Class V high growth firms could even be identified, smaller Class I firms are found in higher concentrations in the MSA than the rest of the nation. The concentration of Class II growth firms runs only 6 percent below national patterns. While too small to have a major current impact, these firms and others which emerge from the entrepreneurial pool could provide future vitality engines for the MSA and its ARC counties.

## Metro Elmira, NY

2001 firms analyzed:

3,270



Chemung County, part of NY's Southern Tier Central Regional Planning and Development Board (ARC District 6B) sits within the Elmira MSA. The MSA displays modest vitality indications typical for many northeast and heartland areas, including a high aggregate retention rate and high levels of startup retention, but extremely low startup activity rates and lower than average concentrations of high growth firms. In Elmira's case, summary high retention rates are coupled with poor vitality indications among both the general retained firm population and startup survivors.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,397	1,772		
Retained Firms		1,759	52%	1.03
Sales	539,849	557,381	3.3%	0.06
Avg Jobs	13	16	23%	0.55
Replenishment	41,207	28,483	69%	0.90
Sales/Employee	67,481	69,673	3%	0.67

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Even in this small MSA the tiny number of firms identified as out-migrants do not create a significant negative impact, and certainly do not present the level of problems engendered by low vitality among those which are retained. Despite higher than average retention rates, every survivor vitality measure falls significantly below US averages, including change in average survivor sales, change in average employment and a replenishment index 10 percent below US levels.

There are limited positive indications. Construction contractors exhibit good vitality rates, although this is more the case for special trades contractors rather than general contractors, a better bellwether for development. Commercial vitality is given a boost by good performance among restaurant and personal services firms. Fabricated metals, with only a dozen retained firms from the 1996 universe, also showed high vitality ratings. But the bulk of value added manufacturing and export services demonstrate low survivor scores in both sales and job vitality measures.

## Metro Elmira, NY

2001 firms analyzed:

3,270

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	51	26		
Retained Firms		26	51%	1.09
Sales	714,000	330,435	-53.7%	0.00
Avg Jobs	6	7	17%	0.25
Replenishment	328	182	55%	0.67
Sales/Employee	142,800	66,087	-54%	0.48

### Startup Activity

96-01 Starts	305
Start Rate	14.2%
US Index	0.73

Startup activity is less than three-quarters of the national rate. Both the MSA and numbers of startups are so small as to render specific industry analysis difficult, but it is worth noting that industries with more than ten startups over the period performed poorly in the indexed ratings. Construction startup activity was only a little more than half of the national average. Miscellaneous retail, home furnishing stores and eating places all exhibited start rates well below US patterns. Real estate and personal services approached US averages, but the lagging business services sector fell far behind.

Those startups which survived the five-year analysis period did not fare well as a whole. Sales and job vitality ratings were extremely low in aggregate. Especially notable was the low job replenishment score relative to the high percentage of retained starts, suggesting low job expansion patterns among survivors. Construction, miscellaneous retail and surviving business services firms (probably responding to gaps in supply) were the most notable exceptions to this negative picture.

### High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,951	57	1.92%	0.94
Class I : < 5 Jobs>10 Jobs	1,895	42	2.22%	0.96
Class II : <10 Jobs>25 Jobs	2,444	20	0.72%	1.13
Class III : <25 Jobs>50 Jobs	2,779	12	0.43%	1.09
Class IV : <50 Jobs>100 Jobs	2,911	6	0.2100%	1.08
Class V : <100 Jobs> 250 Jobs	3,951	2	0.0500%	0.90

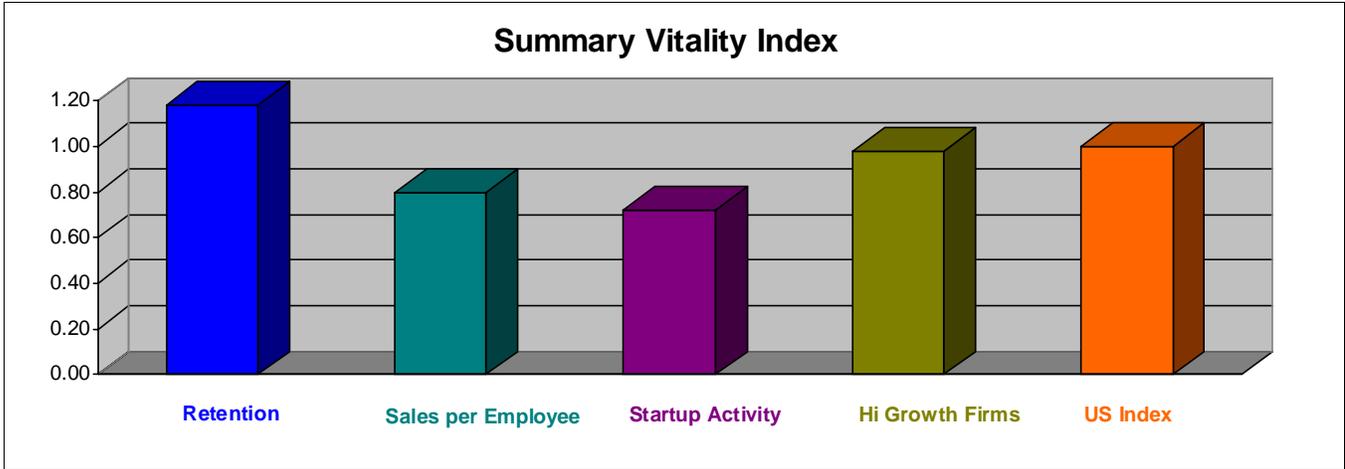
Elmira's best category performance is in its concentration of high growth firms which, while limited in number, are enough to place the MSA within shooting distance of US patterns. Class II, III and IV concentrations, covering more than 50 firms, actually lead national ratings by 8-13 percent.

# Metro Erie, PA

2001 firms analyzed:

10,769

## Summary Vitality Index



1.18      0.80      0.72      0.98      US = 1.00

The Erie MSA is contiguous with Erie County PA, the largest county within ARC District 9A, the Northwest PA Regional Planning and Development Commission.

Erie has very high retention patterns among both the universe of longer-term firms (18 percent above US averages) as well as startup survivors from the 1996 pool identified for this analysis (13 percent above). Like almost every major PA jurisdiction, the MSA also suffers from an extremely low startup activity rate (72 percent of average). But continuing stability in the area is helped by a healthy concentration of high growth firms, particularly among those in the larger analyzed classes.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	8,654	5,159		
Retained Firms		5,131	59%	1.18
Sales	571,284	836,074	46.4%	0.91
Avg Jobs	15	19	27%	0.64
Replenishment	120,090	94,541	79%	1.02
Sales/Employee	81,612	83,607	2%	0.80

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Broad vitality ratings patterns run behind US averages in average survivor sales and job change categories, but are slightly ahead of national trends in job replenishment.

Importantly for the MSA, high ratings are exhibited in a number of core industries, including fabricated metals, electronics and miscellaneous manufacturing. Retained firms in motor freight transport and transportation services also performed well in vitality ratings. Survivor vitality in communications and telecommunications industries appears very strong, as do both durable and non-durable wholesale segments. Disappointingly, the area's keystone plastics industry reflected only modest vitality. (Retention, sales and employment stability in this critical industry were very high, perhaps reflecting the relative maturity of many Erie firms.) Business services, a gap in the MSA and its LDD, demonstrated good retention but poor vitality ratings. An exception was engineering, which scored well across the board.

## Metro Erie, PA

2001 firms analyzed:

10,769

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	224	122		
Retained Firms		118	53%	1.13
Sales	770,370	1,239,048	60.8%	0.50
Avg Jobs	12	17	42%	0.63
Replenishment	2,459	2,001	81%	0.98
Sales/Employee	85,597	137,672	61%	1.00

### Startup Activity

96-01 Starts	1,056
Start Rate	14.0%
US Index	0.72

Startup activity rates were extremely low almost across the board. Notable and important exceptions were in plastics and transportation services. High levels of entrepreneurial vitality in the plastics industry are consistent with Erie's history, and serve as a very positive complement to high retention but constrained retained firm vitality noted in the last section. Communications and even more so, business services and all professional services, all reflected very low levels of entrepreneurial activity. Industrial machinery startups (often linked closely to plastics) were 10 percent lower than US averages but higher than other Erie patterns and should be understood in the context of the MSA's large industrial machinery group, against which relative startup activity is measured.

At the same time, startups in some of the same critical industries did well in vitality measures. The area's traditional big three industry clusters – plastics, fabricated metals and industrial machinery – all retained startup groups that rated highly in job and sales change measures, although industrial machinery starts failed at a high rate. Transport services and wholesale industries did well in both retention and job replenishment categories. Although business services lagged again, professional services did well in startup retention, survivor sales change and job replenishment categories. Surviving construction and personal services startups also reflected solid ratings.

### High Job Growth Firms:

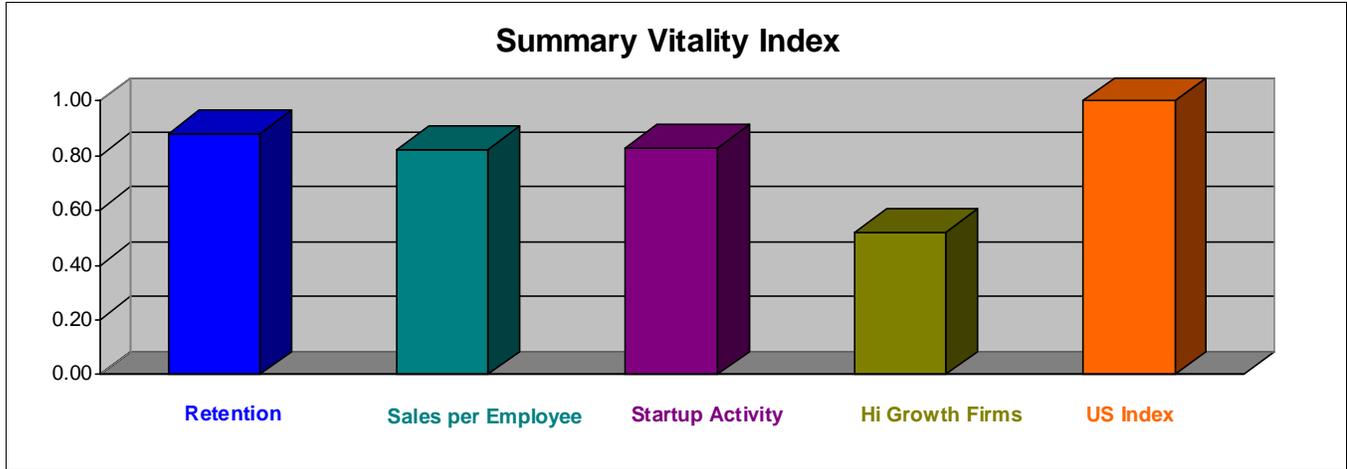
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,974	171	2.00%	0.98
Class I : < 5 Jobs>10 Jobs	5,505	128	2.33%	1.01
Class II : <10 Jobs>25 Jobs	6,967	55	0.72%	1.09
Class III : <25 Jobs>50 Jobs	7,971	33	0.41%	1.04
Class IV : <50 Jobs>100 Jobs	8,355	19	0.2300%	1.20
Class V : <100 Jobs> 250 Jobs	2,974	2	0.0700%	1.20

Underpinning Erie's vitality is a cadre of high growth firms. While aggregate high growth firm concentrations run about 2 percent under US averages, scores are higher than US trends in every individual class. This indicates that a number of firms qualified for inclusion in multiple categories due to growth that ramped them through multiple classes (for example, a firm which began with fewer than five employees but grew to more than 25). Erie's most concentrated group of high growth firms is Class IV, those which began the measurement period with fewer than 50 employees and ended with more than 100.

# Metro Florence, AL

2001 firms analyzed:

5,065



0.88      0.82      0.83      0.52      US = 1.00

The Florence AL MSA includes Colbert and Lauderdale counties in ARC's AL 1A district, the Northwest AL Council of Local Governments. The MSA reflects low vitality in all summary measures.

The area retention index stands at 0.88, 12 percent below national averages. This seems particularly troublesome in an MSA that also indicates a summary startup activity rate 17 percent below the national average. Although startup activity rates and survival often show up in inverse proportions, Florence's summary startup survival rate is also 30 percent below national levels. Finally, the area concentration of high growth firms is only a little over half of the US average. Most aggregate vitality measures within each major category rate low as well.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,081	2,274		
Retained Firms		2,259	44%	0.88
Sales	493,592	855,607	73.3%	1.45
Avg Jobs	12	16	33%	0.80
Replenishment	59,198	35,428	60%	0.78
Sales/Employee	70,513	85,561	21%	0.82

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Although sales change among retained firms is high overall, indications are that this is the result of specific firms and industries rather than generalized solid performance. Retained construction industries scored well in vitality indices. Among manufacturing groups with significant numbers of firms, printing, wood products, fabricated metals and the smaller instruments group performed extremely well in both retention and retained firm vitality analyses. Retained industrial machinery and plastics firms do not appear to have kept up with national vitality indices. Retention among both communications and business services firms was solid, but vitality measures were not. The professional services industry did well in retention and retained firm vitality across the board.

## Metro Florence, AL

2001 firms analyzed:

5,065

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	170	56		
Retained Firms		56	33%	0.70
Sales	689,600	1,302,128	88.8%	0.73
Avg Jobs	9	21	133%	2.00
Replenishment	1,451	1,139	79%	0.94
Sales/Employee	68,960	59,188	-14%	0.43

### Startup Activity

96-01 Starts	559
Start Rate	16.3%
US Index	0.83

Florence indicates a concerning combination of summary low startup activity and startup survival. The vitality ratings of retained startups are strong in job change and replenishment categories, but seem unlikely to overcome the lack of entrepreneurial activity and startup failures overall.

Startup activity is limited in absolute scale but relatively strong in needle trades and wood products. Although vitality ratings among startup survivors in these industries appear very good, the number of retained firms severely limits the value of the analysis. Startup activity is also solid in metalworking trades including fabricated metals and machinery, but here too, retention patterns are too weak over the five-year period to meaningfully ascertain the vitality of retained startups. Durable wholesale startup activity is good, but retention and retained startup vitality is not. FIRE startup activity is strong across the board – among financial industries as well as insurance and real estate. Startup retention and vitality only appear strong among insurance agents and brokers, one of the least economically significant industries.

### High Job Growth Firms:

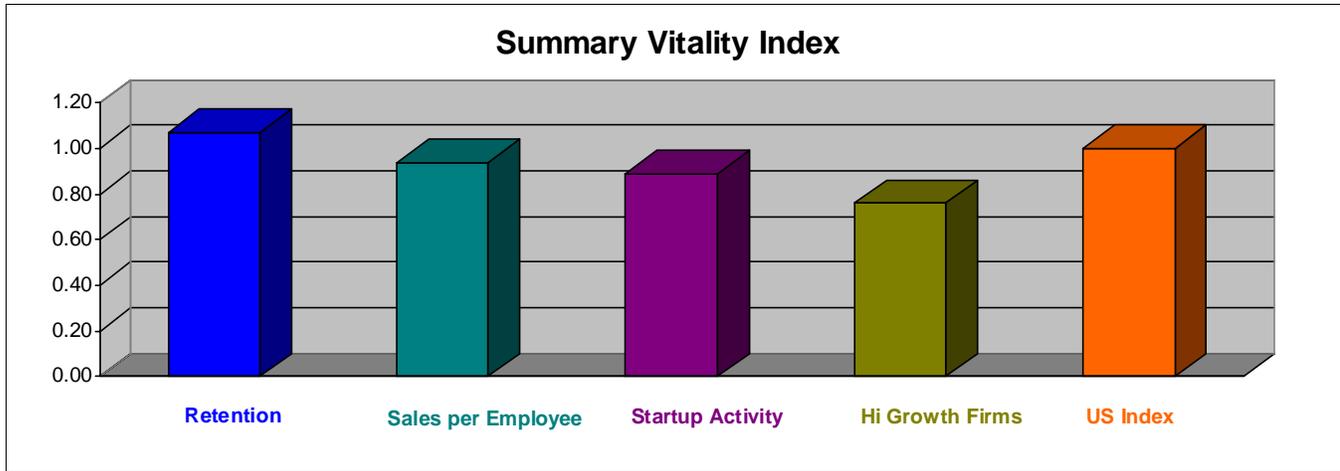
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	8,567	47	1.06%	0.52
Class I : < 5 Jobs>10 Jobs	2,848	34	1.19%	0.52
Class II : <10 Jobs>25 Jobs	3,651	13	0.72%	0.49
Class III : <25 Jobs>50 Jobs	4,152	10	0.24%	0.61
Class IV : <50 Jobs>100 Jobs	4,334	5	0.1200%	0.61
Class V : <100 Jobs> 250 Jobs	8,567	6	0.0700%	1.25

High growth concentrations are extremely low except in the small Class V, among a handful of relatively large firms. These have no doubt played a large role in sustaining local vitality since 1996, but without less mature firms moving into high growth ranks, added entrepreneurial activity and more potent retention, this MSA may have little to add to development efforts.

# Metro Gadsden, AL

2001 firms analyzed:

3,428



1.07      0.94      0.89      0.76      US = 1.00

The Gadsden AL MSA includes a single ARC county, Etowah, in ARC District 1F, the East AL Regional Planning and Development Commission.

The MSA contains an unusual mix of vitality measures just below the surface of the summary indices. The summary scores themselves create a somewhat low vitality picture of high overall retention coupled with low startup activity rates and unusually low startup survival. High growth firm concentrations run almost one-quarter below US averages. In short, the summary scores are themselves typical of somewhat depressed areas whose high overall retention rates mask low levels of economic activity and competition.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,246	1,770		
Retained Firms		1,756	54%	1.07
Sales	491,036	976,364	98.8%	1.95
Avg Jobs	11	16	45%	1.09
Replenishment	34,013	27,392	81%	1.05
Sales/Employee	70,148	97,636	39%	0.94

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The change in sales between the 1996 universe and retained firms at the beginning of 2001 suggests either high sales growth patterns among retained firms or high levels of survival among those with the highest sales volumes to begin with. Likewise, job change levels among retained firms run 9 percent above national patterns. Vitality appears strong among general construction contractors. Vitality patterns in a variety of manufacturing industries (many of them with only a handful of firms) appear quite good, including food products, wood products, chemicals, plastics, and a variety of metalworking industries including primary metals, industrial machinery, electronics, transportation equipment and miscellaneous manufacturing. Retained firms in motor freight and transportation services indicate high vitality rates, as do firms in the emerging communications industry. While firms in these industries are not developing high growth concentrations of the scale found elsewhere across the US, solid vitality ratings are spread more evenly than is the norm across these industries – especially for an area with low scores in other measures.

## Metro Gadsden, AL

2001 firms analyzed:

3,428

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	109	43		
Retained Firms		43	39%	0.84
Sales	307,368	1,282,927	317.4%	2.60
Avg Jobs	22	6	-73%	0.00
Replenishment	2,297	259	11%	0.14
Sales/Employee	61,474	213,821	248%	1.55

### Startup Activity

96-01 Starts	400
Start Rate	17.4%
US Index	0.89

Low startup activity rates are reinforced by two related categories – very low startup retention scores and correspondingly poor aggregate performance among retained startup firms identified for 1996. The low level of retained startups (16 percent below average) performed well in sales change rating, but the small number of firms measured for sales limits any conclusions. Based on a still small (but somewhat larger) sample of retained startups, job vitality among survivors appears extremely low – leaving the area to rely on a core of solidly performing longer-term firms.

At the same time, five-year startup activity rates were notably high in some important MSA industries, including furniture, fabricated metals and the emerging communications group. Both durable and non-durable wholesale industries scored high, as did building materials wholesale/retailers. Business services startups were only slightly lower than US averages – and retention of business services startups from 1996 outpaced national patterns by almost 50 percent. In every case, very small numbers of surviving startups made specific industry analysis difficult.

### High Job Growth Firms:

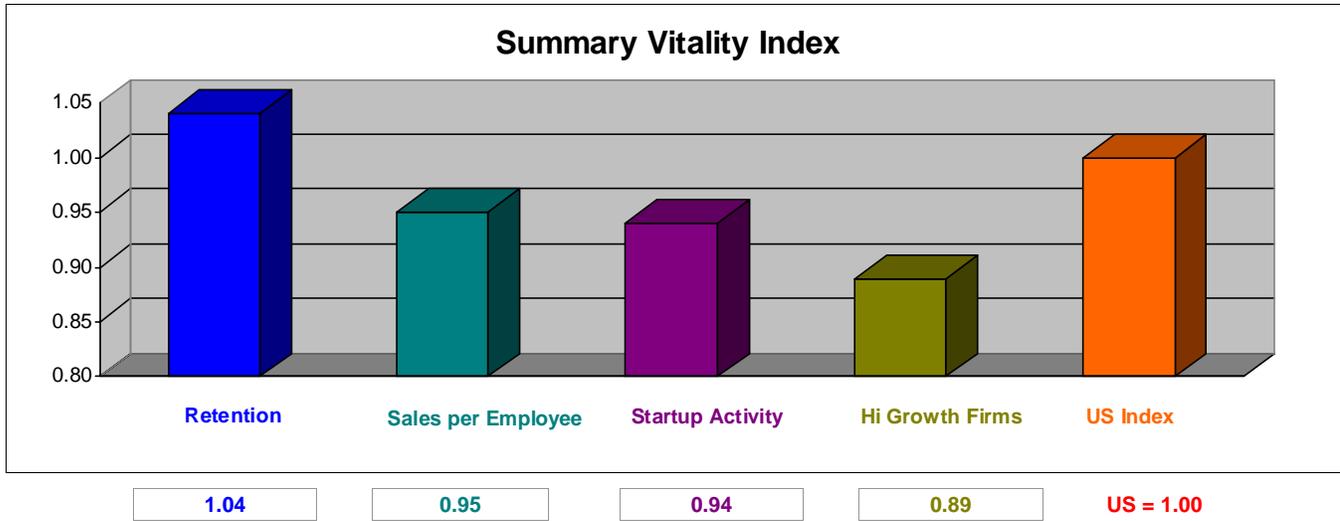
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	2,773	43	1.55%	0.76
Class I : < 5 Jobs>10 Jobs	1,782	34	1.91%	0.83
Class II : <10 Jobs>25 Jobs	2,280	13	0.72%	0.79
Class III : <25 Jobs>50 Jobs	2,579	9	0.35%	0.88
Class IV : <50 Jobs>100 Jobs	2,719	6	0.2200%	1.16
Class V : <100 Jobs> 250 Jobs	2,773	2	0.0700%	1.29

The MSA seems to host very low concentrations of high growth firms, despite doing quite well in the larger class size ratings (Class IV and V). These classes are so exclusive that only a small handful of firms are needed to elevate ratings in a MSA this size. In contrast to many other metros, though, vitality seems to rest more on the solid vitality performance of retained firms overall, rather than on the elevation of a few high growth engines or the development of new entrepreneurial efforts. This would seem to constrain spin-off opportunities to outlying areas, at least in the near future.

# Metro Greensboro-Winston-Salem-High Point, NC

2001 firms analyzed:

52,485



The Greensboro MSA covers three of four counties included in ARC District 71, the Northwest Piedmont Council of governments. Area vitality appears reasonably good. Retention rates among startups and longer-term firms alike are supported by entrepreneurial activity rates which, while below US averages, are significantly above most patterns within the ARC region. High growth firm concentrations lag, but are, again, higher than the ARC regional average. This generally positive outlook is reinforced by a solid set of vitality indices for new and older firms alike, and more positive high growth concentrations in larger firm classes. At 0.03 percent, business out-migration is not a major concern for this area.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	41,485	21,775		
Retained Firms		21,640	52%	1.04
Sales	584,141	887,404	51.9%	1.02
Avg Jobs	14	20	43%	1.03
Replenishment	564,786	434,226	77%	1.00
Sales/Employee	83,449	98,600	18%	0.95

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Greensboro is a sizeable MSA with a large number of significant industry concentrations, many of which reflect good vitality ratings. In aggregate, the population of retained firms is dynamic, supporting a better than average retention rate with survivor sales change, job change and job replenishment scores at or a few points above the US average. Construction industries show high rates in a number of categories, evidencing ongoing development vitality in the MSA.

Almost every major manufacturing industry rates highly in retention, sales and or job vitality measures, including the needle trades, wood and furniture products, chemicals, fabricated metals, industrial machinery and instruments. Retention rates are lower in primary metals, and the rubber and plastics industry seems to be experiencing difficulties with both high failure rates and very modest growth and expansion activity among surviving firms in the group. Multi-modal transport reflected high vitality measures across the board. Manufacturing industries appear to be area mainstays, since more emergent industries, such as communications, do not appear to show corresponding levels of vitality. Potential export services in FIRE, including non-depository institutions and securities dealers, reflect multiple high vitality indices. Business services (including computer) trail US patterns, although not badly in all categories, and the professional service support industries (engineering, legal) and health exhibit high survivor sales indices.

# Metro Greensboro-Winston-Salem-High Point, NC

2001 firms analyzed:

52,485

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,376	689		
Retained Firms		678	49%	1.05
Sales	513,374	1,239,016	141.4%	1.16
Avg Jobs	9	14	56%	0.83
Replenishment	12,168	9,279	76%	0.92
Sales/Employee	85,562	137,668	61%	1.00

## Startup Activity

96-01 Starts	6,244
Start Rate	18.2%
US Index	0.94

The high vitality of many of the area's core retained industries is reinforced by exceptional startup activity – not a common pattern. Furniture, primary metals, fabricated metals and numerous transportation industries have high levels of entrepreneurial activity. Other industries with lower industry-wide vitality scores among retained firms have picked up ground through entrepreneurial efforts – paper products and communications stand out. Some financial sectors (non-depository institutions and brokers) reflect high startup vitality indices as well. Business services activity remains low.

While startup retention indices are good for most core industries, several exhibit low retention patterns. But even these suggest high levels of vitality among survivors. In fact, high startup survivor vitality can be found in a long list of core industries, including paper, chemicals, fabricated metals, industrial machinery and transport equipment. Area vitality likely will continue to rest on these industries until further inroads are generated in communications, the financial sector or business services.

## High Job Growth Firms:

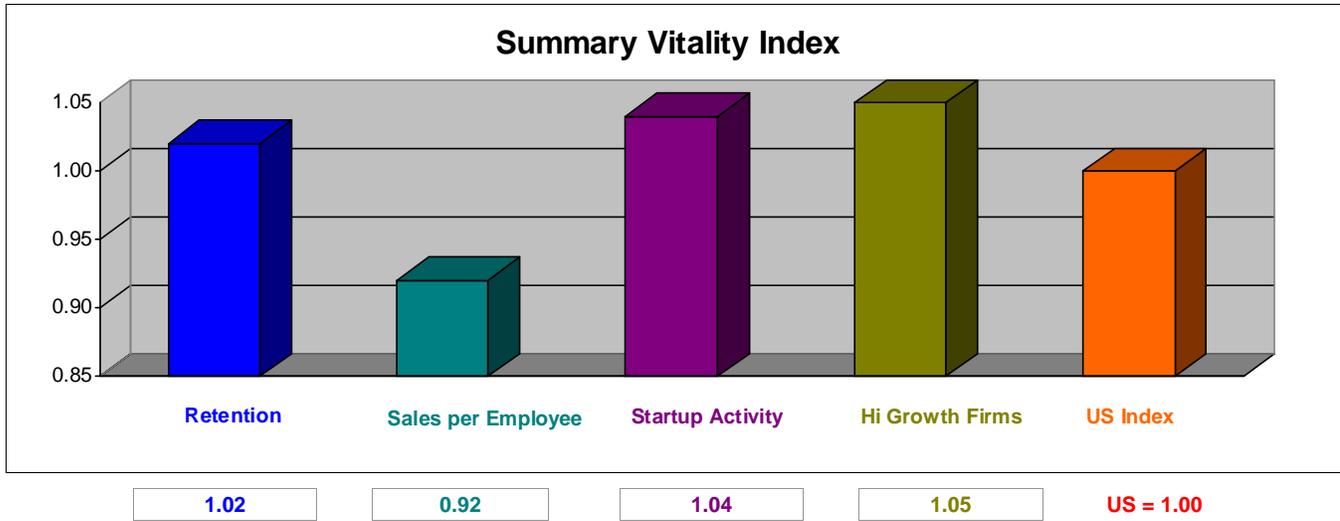
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	38,786	699	1.80%	0.89
Class I : < 5 Jobs>10 Jobs	25,602	539	2.11%	0.92
Class II : <10 Jobs>25 Jobs	31,951	210	0.72%	0.91
Class III : <25 Jobs>50 Jobs	36,059	126	0.35%	0.88
Class IV : <50 Jobs>100 Jobs	37,770	70	0.1900%	0.98
Class V : <100 Jobs> 250 Jobs	38,786	24	0.0600%	1.11

Greensboro's high growth concentrations are particularly strong among larger firms in Classes IV and V. These are no doubt reflected in the area's high retention vitality indices as well. Further development of less mature firms into high growth engines would enhance the advantages already developed in the MSA and, correspondingly, in outlying areas.

# Metro Greenville-Spartanburg-Anderson, SC

2001 firms analyzed:

36,832



The Greenville-Spartanburg MSA includes all five counties of the SC Appalachian Council of Governments, ARC District 10A. The MSA reflects higher than average summary vitality ratings in every category except startup survival, where trends are 9 percent below average. Modestly lower retention rates often go hand in hand with high entrepreneurial activity rates, and are not necessarily a cause for concern. Supporting the MSA's summary vitality index, aggregate concentrations of high growth firms run 5 percent above the national average. From a 1996 universe of more than 30,000 tracked firms, fewer than 100 relocated from the MSA by the beginning of 2001. Bottom line: Core industries show high retention and vitality ratings, enhanced by impressive ratings among startups.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	30,027	15,530		
Retained Firms		15,437	51%	1.02
Sales	558,352	860,253	54.1%	1.07
Avg Jobs	15	20	33%	0.80
Replenishment	431,334	307,551	71%	0.93
Sales/Employee	79,765	95,584	20%	0.92

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The area's above average retention rate is matched by superior aggregate survivor sales change vitality, indicating retention of larger firms as well as growth among survivors. It is worth mentioning that as in other areas, numerous branch facilities do not report sales, and would likely enhance sales vitality figures.

Aggregate job vitality measures lag somewhat. However, both traditional industry clusters and those responding to recent developments (e.g., the local BMW facility) exhibit high retention and vitality ratings. The MSA's traditional textile industries boast high retention and replenishment indices, but are bested by ratings among retained long term paper products firms. Printing and chemicals are also vitality leaders. However, metalworking and other industries more likely related to the BMW development show a commanding series of vitality ratings. These include fabricated metals, industrial machinery, electronics and transport equipment. Together these account for over 700 retained firms in the MSA, with high survivor sales change, job change and replenishment indices in every industry group. The technology-driven instruments group shows very low retention scores, but excellent vitality in all measures among surviving firms.

Whether independently or as a function of high local manufacturing vitality, business services, including computer-related, also suggest high retention and vitality measures. Professional services, as well as health and legal, follow suit.

## Metro Greenville-Spartanburg-Anderson, SC

2001 firms analyzed:

36,832

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	1,399	608		
Retained Firms		597	43%	0.91
Sales	507,940	800,943	57.7%	0.47
Avg Jobs	6	14	133%	2.00
Replenishment	8,351	8,047	96%	1.16
Sales/Employee	84,657	88,994	5%	0.65

### Startup Activity

96-01 Starts	4,832
Start Rate	20.2%
US Index	1.04

The summary startup activity rate of 1.04 is unusually high for the ARC region. Activity is enhanced by high levels of job vitality among retained startup firms. Job vitality ratings among retained starts are twice the national average, and job replenishment 16 percent above. The dual scores can indicate either the retention of larger starts and good expansion levels among them.

Startup activity rates are particularly strong in major construction industries, suggesting high ongoing development activity. Wood products and plastics/rubber also exhibit unusually high entrepreneurial activity. Fabricated metals and industrial machinery, already concentrated in the area, continue to experience high startup activity levels, as does transport equipment and all transportation modes and services. Communications lags, as it did in the retention vitality categories. Startup activity in all industries comprising the financial sector is quite strong, as it is in other business related services like legal and engineering.

Likewise, retention and vitality are strong among startups in the area's flagship industries. Construction industries exhibit strong retention and vitality scores, as do retained starts in traditional industries like textiles and furniture. Startup performance is also strong in chemicals, plastics, industrial machinery and transportation equipment. Startup retention is weak in motor freight, but positive among other transport modes. The financial industry indicates high startup vitality and retention ratings, and business services starts rate highly across vitality ratings, complementing good scores among longer-term firms.

### High Job Growth Firms:

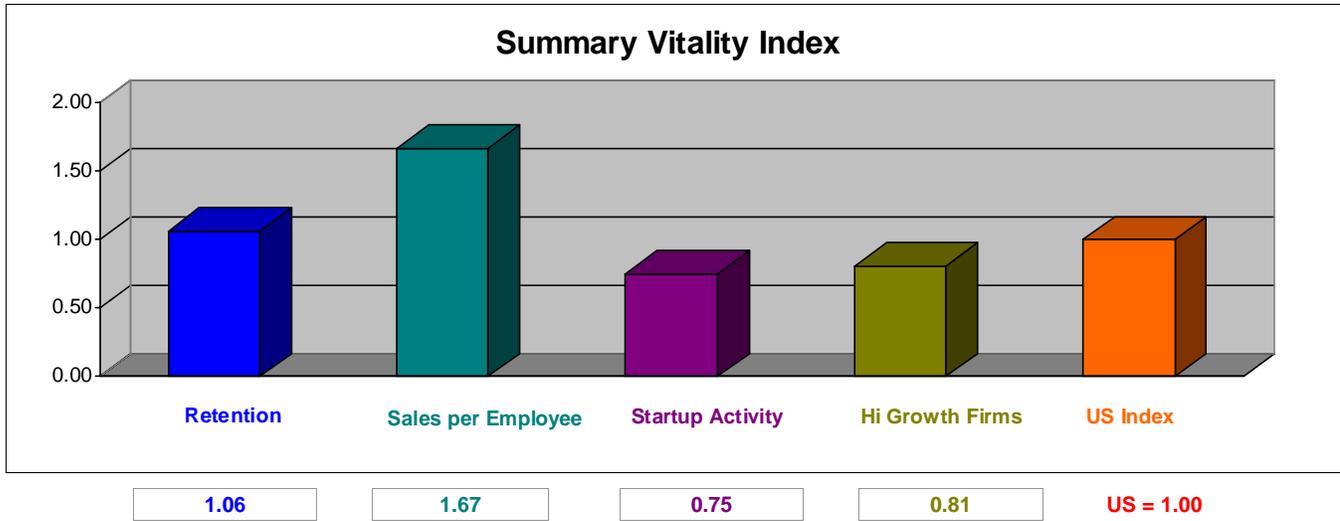
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	28,752	611	2.13%	1.05
Class I : < 5 Jobs>10 Jobs	19,206	475	2.47%	1.08
Class II : <10 Jobs>25 Jobs	23,874	192	0.72%	1.11
Class III : <25 Jobs>50 Jobs	26,878	128	0.48%	1.20
Class IV : <50 Jobs>100 Jobs	28,081	57	0.2000%	1.07
Class V : <100 Jobs> 250 Jobs	28,752	16	0.0600%	0.99

With the exception of a small lag in Class V, the MSA has leading concentrations of high growth firms in every class and in aggregate. The high growth concentrations, coupled with solid retention indices across industries and complementary entrepreneurial vitality focused in both traditional and new industries, leads to an extremely positive outlook for the MSA and its ARC counties.

# Metro Harrisburg-Lebanon-Carlisle, PA

2001 firms analyzed:

25,889



The Harrisburg MSA includes a single ARC county, Perry, at its far edge. Perry County is one of thirteen in ARC District PA 9G, the SEDA Council of Governments.

As host to a state capital, the Harrisburg MSA is always somewhat more robust than analysis of private sector data might indicate; the stable income of thousands of public sector jobs creates a significant boost in an area of this scale. In the private sector, Harrisburg's vitality performance is mixed. The area boasts very good summary retention rates for both startups and longer-term firms, but startup activity and high growth firm concentrations both lag. Out-migration, at 116 firms over five years from the 1996 pool analyzed, is higher than average, but still less than one-half of a per cent.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	23,460	12,621		
Retained Firms		12,505	53%	1.06
Sales	524,424	1,387,269	164.5%	3.25
Avg Jobs	13	17	31%	0.74
Replenishment	278,033	206,660	74%	0.97
Sales/Employee	87,404	173,409	98%	1.67

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While the area's survivor sales change index is very high, this appears to be attributable (in Harrisburg's case) more to the retention of large firms than to the general growth of many. More telling are the area's summary survivor job change vitality (0.74) and replenishment rates, both of which indicate lagging job vitality among retained firms.

These trends are reflected in the low vitality of retained construction firms. Higher vitality manufacturing industries which are of reasonable scale and might also fit into Perry County's rural environment include wood products, paper products, printing, plastics, and electronics. The MSA also indicates lagging but reasonable levels of vitality in the communications, business services and health industries – but the spillover potential here for remote Perry County appears rather low.

## Metro Harrisburg-Lebanon-Carlisle, PA

2001 firms analyzed:

25,889

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	624	323		
Retained Firms		314	50%	1.08
Sales	602,959	4,418,815	632.9%	5.19
Avg Jobs	10	11	10%	0.15
Replenishment	5,781	3,419	59%	0.71
Sales/Employee	86,137	490,979	470%	3.57

### Startup Activity

96-01 Starts	2,489
Start Rate	14.6%
US Index	0.75

The MSA's weakest leak is entrepreneurial activity, which registers at only 75 percent of national norms. Construction startups lag severely. Significant numbers of manufacturing starts also show high indexed rates in apparel, lumber, industrial machinery and electronics. These industries fit well in many rural areas such as Perry County if other conditions are right. Communications, business service and professional support services demonstrate low startup activity levels. Legal service startups are above average, predictable in a state capital – and unlikely to locate in Perry County very often.

Only a handful of industries showed enough surviving startups to make specific industry analysis meaningful. Retained construction startups continued the pattern of relatively low industry vitality. Industrial machinery, which was also high in startup activity, indicated strong retention rates and high vitality measures across the board. Retail and especially personal services vitality, both reflected local demand unlikely to create value-added activity in the MSA's ARC county.

### High Job Growth Firms:

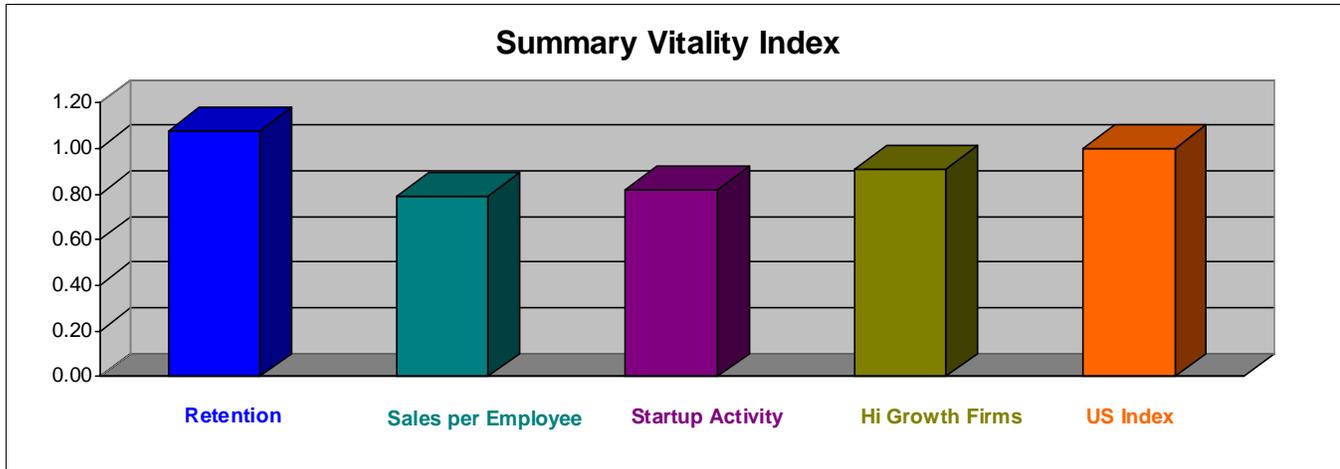
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	21,564	353	1.64%	0.81
Class I : < 5 Jobs>10 Jobs	14,602	287	1.97%	0.86
Class II : <10 Jobs>25 Jobs	17,933	113	0.72%	0.87
Class III : <25 Jobs>50 Jobs	20,162	70	0.35%	0.88
Class IV : <50 Jobs>100 Jobs	21,029	29	0.1400%	0.73
Class V : <100 Jobs> 250 Jobs	21,564	8	0.0400%	0.66

The MSA's aggregate high growth firm concentrations run 19 percent below US averages. While Harrisburg's lowest concentrations are in the largest (Class V) category analyzed, the sheer shortfall in high growth firms in smaller classes is probably more of a concern. As an emerging transportation hub and traditional manufacturing center, this area should be developing high levels of entrepreneurial activity and looking to new firms to increase high growth engines for the future, a development which would almost assuredly spill over to benefit Perry County.

## Metro Hickory-Morganton, NC

2001 firms analyzed:

12,884



1.08

0.79

0.82

0.91

US = 1.00

All three counties of the Western Piedmont Council of Governments (ARC 7E) are included in the Hickory-Morgantown NC MSA. The area's high retention and startup survival summary rates are dampened by low startup activity and concentrations of high growth firms about 9 percent below US averages. However, retained startup vitality ratings are quite good and the high growth firm concentrations are impressive in larger employment size classes.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	11,196	6,127		
Retained Firms		6,087	54%	1.08
Sales	497,993	742,171	49.0%	0.97
Avg Jobs	15	21	40%	0.96
Replenishment	164,982	124,458	75%	0.98
Sales/Employee	71,142	82,463	16%	0.79

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

At 0.35 percent, business out-migration is not a major concern in this MSA. High retention rates (8 percent above average) are supported by reasonably good vitality rates among retained firms in aggregate; all measures are within 4 percent of US averages. Construction vitality rates are extremely solid. Among traditional core industries in the needle trades, both textile and apparel vitality rates are strong in most measures, as are wood products, furniture, paper and chemicals. Plastics and some metalworking industries, especially the industrial machinery segment, score high in all job and sales change ratings. Retained electronics firms have not fared as well over the five year analysis period, although another technology related manufacturing industry, instruments, indicates very positive vitality ratings among retained firms. The transportation industries suggest more difficult retention patterns, but those firms which survive show high vitality ratings – and transport services have a high retention rate. Retention rates are high in financial services industries, but vitality measures are not. Both communications and business services show mixed ratings struggling to keep up with national performance, while health and engineering services both indicate high retention and vitality scores in all categories.

## Metro Hickory-Morganton, NC

2001 firms analyzed:

12,884

### Startups:

	1996	5 Year Survivors	Change Rate	US Index	
All Firms	332	168			<b>Startup Activity</b> 96-01 Starts 1,369 Start Rate 16.0% US Index 0.82
Retained Firms		165	50%	1.06	
Sales	693,706	969,014	39.7%	0.33	
Avg Jobs	14	25	79%	1.18	
Replenishment	4,302	3,993	93%	1.12	
Sales/Employee	77,078	107,668	40%	0.78	

While the MSA's startup activity rate is quite low in aggregate – below even the ARC average – startup retention and job vitality rates among retained startup firms is significantly higher, outperforming both ARC and US patterns.

Despite strong performance among all retained construction firms, startup activity remains high – although the sales change performance of retained startups is not good. Startup activity rates are weak among most manufacturers, but quite high in some key sectors which demonstrated strong industry-wide vitality scores – furniture, plastics and industrial machinery. The combination of high industry retention, high industry vitality and correspondingly high ratings in startup vitality measures is both unusual and impressive. Leading ratings in these three industries suggests startup vitality which is nurturing new leadership firms even as strong, mature firms remain in the action. Communications and service startup activity is weak, although vitality performance among retained business services firms (including computer) is better.

### High Job Growth Firms:

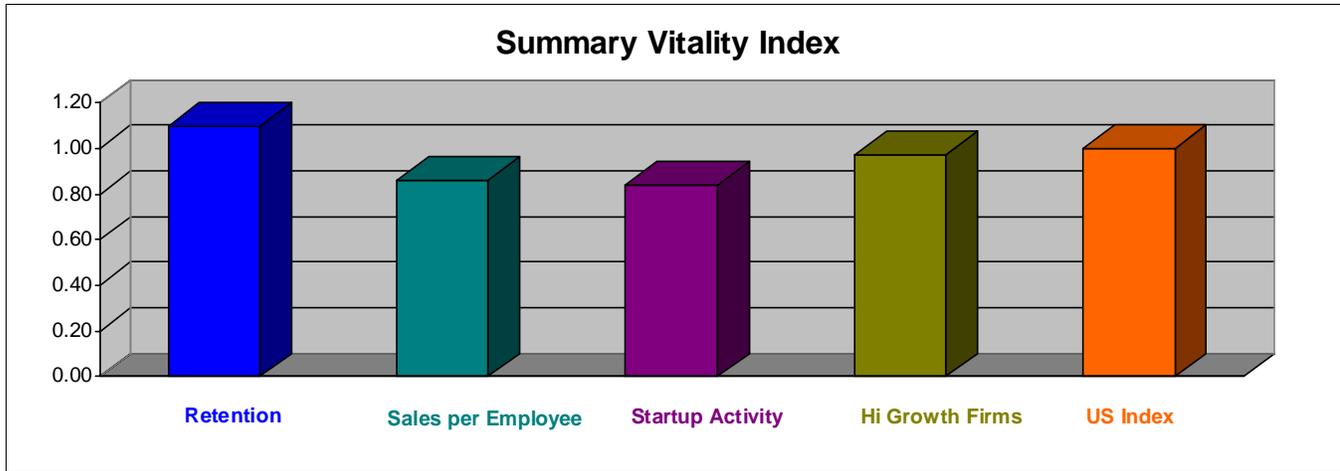
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	9,839	182	1.85%	0.91
Class I : < 5 Jobs>10 Jobs	6,318	128	2.03%	0.88
Class II : <10 Jobs>25 Jobs	8,038	54	0.72%	0.93
Class III : <25 Jobs>50 Jobs	9,071	42	0.46%	1.17
Class IV : <50 Jobs>100 Jobs	9,553	24	0.2500%	1.32
Class V : <100 Jobs> 250 Jobs	9,839	6	0.0600%	1.09

Concentrations of high growth firms are 9 percent below the US average overall – but improve considerably in Classes III, IV and V, where the MSA takes a commanding lead over US trends. This may be due to the higher vitality ratings among specific manufacturing industries, which tend to support larger average facilities, and would thus qualify in the larger employment class ratings. In any case, the high growth performance, coupled with good vitality rates among key industries and startup segments, suggests an economy focused on doing a few things very well, and capable of creating ongoing benefits from those segments.

# Metro Huntington-Ashland, WV-KY-OH

2001 firms analyzed:

10,084



1.10      0.86      0.84      0.97      US = 1.00

The Huntington-Ashland MSA includes six ARC counties in three states: Lawrence OH (in ARC 8A, the Ohio Valley Regional Development Commission); Boyd, Carter and Greenup KY (in ARC 3B, the FIVCO Area Development District); and Cabell and Wayne WV (in ARC 13B, the Region 2 Planning and Development Council).

Mature firms lead vitality in this MSA, outpacing startup vitality in every summary category and aggregate measure, although in most cases not by much. Overall retention rates run 10 percent above the US average; retention among startup firms outperforms above national trends by 4 percent. Startup activity, however, runs 16 percent below national patterns. Job vitality measures for retained startups are average, although sales vitality is significantly lower. High growth firm concentrations are within 3 percent of the national norm and especially strong in the smallest employment class, suggesting strong performance among some newer firms.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	8,968	5,002		
Retained Firms		4,972	55%	1.10
Sales	486,708	802,921	65.0%	1.28
Avg Jobs	12	17	42%	1.00
Replenishment	101,089	81,914	81%	1.05
Sales/Employee	69,530	89,213	28%	0.86

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Retention rates are strong overall, and the MSA shows only a 0.3 percent rate of out-migration among firms from the 1996 analysis pool. Both sales and job vitality rates among retained firms are strong in aggregate. Although retention is relatively weak among wood products firms (but not furniture), vitality indicators in both industries are strong, as they are in construction, chemicals, the small rubber/plastics industry and to a lesser extent, the industrial machinery industry and transport equipment. Other metalworking segments fall short. Transportation industries demonstrate high vitality ratings across the board. Technology services show good ratings in several measures, although job vitality among retained communications firms is weak. Retained business services show leading vitality scores, as do health and professional support services.

## Metro Huntington-Ashland, WV-KY-OH

2001 firms analyzed:

10,084

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	248	124		
Retained Firms		121	49%	1.04
Sales	380,928	679,048	78.3%	0.64
Avg Jobs	6	10	67%	1.00
Replenishment	1,375	1,139	83%	1.00
Sales/Employee	76,186	67,905	-11%	0.49

### Startup Activity

96-01 Starts	1,079
Start Rate	16.4%
US Index	0.84

Startup activity rates are weak across the board. Aggregate vitality scores among 121 retained starts are at the US average for job vitality measures, although considerably below for average survivor sales change.

Industry-specific vitality measures among retained startups are impressive in health services, fabricated metals and industrial machinery – but the number of retained startups from the 1996 pool in metalworking is so low as to limit the value of industry-specific measures. Among other value added industries, only business services had a reasonable number of retained startups to measure – and here vitality ratings were poor.

### High Job Growth Firms:

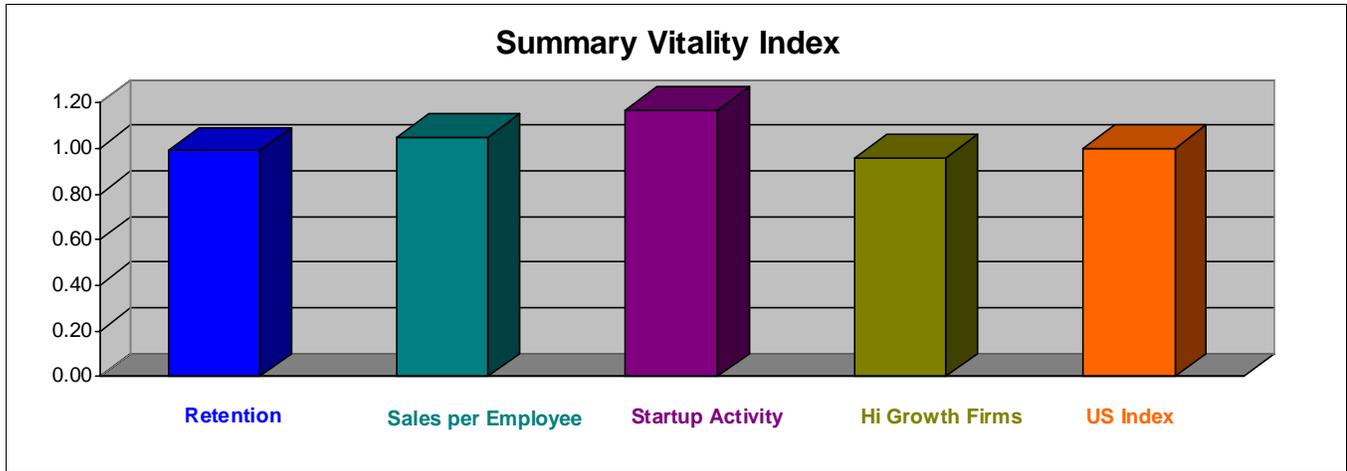
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	8,040	158	1.97%	0.97
Class I : < 5 Jobs>10 Jobs	5,121	138	2.69%	1.17
Class II : <10 Jobs>25 Jobs	6,558	50	0.72%	1.05
Class III : <25 Jobs>50 Jobs	7,485	14	0.19%	0.47
Class IV : <50 Jobs>100 Jobs	7,864	12	0.1500%	0.80
Class V : <100 Jobs> 250 Jobs	8,040	2	0.0200%	0.44

High growth firm concentrations are significantly above national averages in small employment Classes I and II. Although high growth firm concentrations dive precipitously among larger employment classes, the existence of high concentrations of small growth firms is very positive in an area with such low startup activity – not enough to compensate for the lag, but helpful.

# Metro Huntsville, AL

2001 firms analyzed:

13,199



0.99      1.05      1.17      0.96      US = 1.00

The MSA Huntsville area includes Limestone and Madison Counties in AL, part of ARC District 1C, the Top of Alabama Regional Council of Governments.

The MSA indicates a fairly strong set of summary vitality scores, including industry-wide retention rates at the US average, very high levels of startup activity conditioned by low startup survival, and reasonable concentrations of high growth firms. Emerging firms are clearly the area's strongest group, including its best high growth concentrations. In more than one case, modest industry-wide retention and vitality ratings correspond to high startup activity and vitality measures in the same industry, lending an air of evolving growth patterns and healthy churn to the MSA economy.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	10,668	5,340		
Retained Firms		5,304	50%	0.99
Sales	498,025	875,273	75.8%	1.49
Avg Jobs	13	19	38%	0.92
Replenishment	137,553	97,384	71%	0.92
Sales/Employee	71,146	109,409	54%	1.05

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA's retention rate runs only a point off the US average. While job vitality measures among retained firms are 8 percent below national trends, average survivor sales change in this technology-intensive area are far above average. The MSA's business out-migration rate is a low 0.3 percent.

Vitality measures among construction firms are poor, but as noted above, somewhat offset by startup activity and vitality in the same industry. Wood products and furniture industries reflect high vitality ratings, as do plastics and most metalworking industries, including primary and fabricated metals. Although retention among communications firms is low, growth scores among retained firms are high in both sales and job measures. All vitality measures are high across the board among professional services including engineering and research, and sales change vitality among retained firms in business (technology) services firms are extremely strong.

## Metro Huntsville, AL

2001 firms analyzed:

13,199

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	583	224		
Retained Firms		222	38%	0.81
Sales	334,034	444,221	33.0%	0.27
Avg Jobs	5	7	40%	0.60
Replenishment	3,063	1,604	52%	0.63
Sales/Employee	66,807	74,037	11%	0.54

### Startup Activity

96-01 Starts	2,004
Start Rate	22.8%
US Index	1.17

Key technology industries also exhibit leading startup activity rates, including technology driven business and professional services. Communications startups lag but not disastrously. High startup activity rates can be found among industries with both small numbers of firms (foods, textiles) and those with higher numbers of business operations, including printing, wood, fabricated metals, transport equipment and instruments. Trucking startup activity is one-third above average. Possibly as a result of so much emerging activity, financial services startup rates are high as well.

Analysis of retained startup vitality indices are limited by the small number of startups tracked from the 1996 pool. However, those in some key industries, including transport equipment and instruments, appear to rate highly. Electronics startups do not do as well. Coupled with low vitality among retained electronics firms overall, these trends may suggest a concern in this technology intensive environment. Wholesale trade vitality is strong among both longer-term firms and startups. Business and professional startups showed mixed retention and vitality rates, reflecting an intensely competitive environment. Technology services startups may look weaker than they are as a result of strong competition as well as the five-year tracking method that rules out growth measures from the vast majority of startups in these industries -- which began operations between 1997 and 2000.

### High Job Growth Firms:

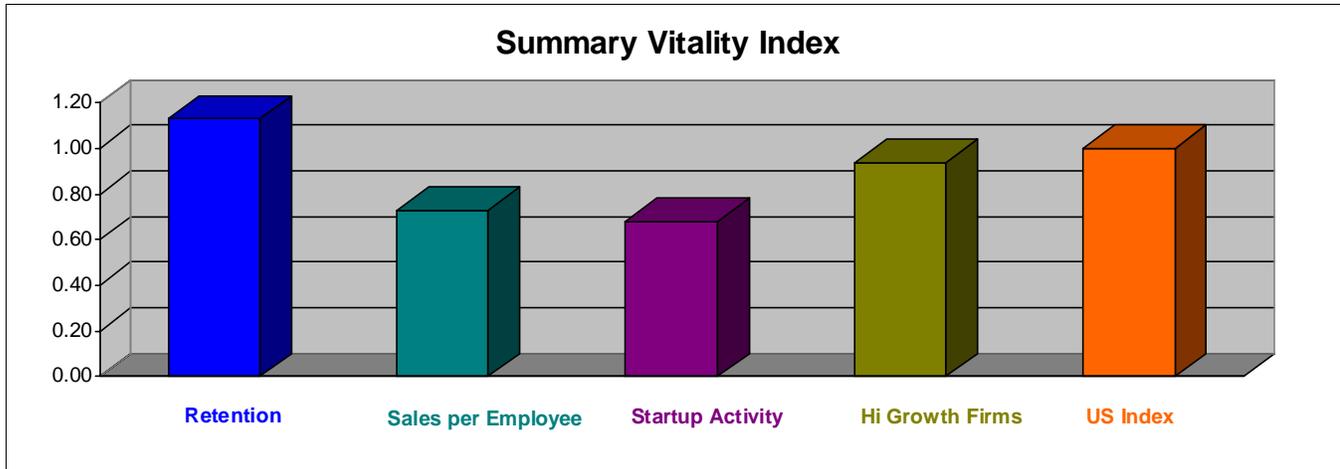
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	10,679	209	1.96%	0.96
Class I : < 5 Jobs>10 Jobs	7,202	166	2.30%	1.00
Class II : <10 Jobs>25 Jobs	8,979	55	0.72%	0.85
Class III : <25 Jobs>50 Jobs	10,075	35	0.35%	0.88
Class IV : <50 Jobs>100 Jobs	10,463	11	0.1100%	0.55
Class V : <100 Jobs> 250 Jobs	10,679	1	0.0100%	0.17

Concentrations of high growth firms run 4 percent behind national trends. Scores lag in the larger employment classes, but are at US levels in Class I, the smallest. While the immediate impact here may be modest, the MSA hosts over 165 high growth small firms, suggesting an emerging cycle of vitality which will rely on quality firms among the many startups comprising the area's entrepreneurial vitality picture.

## Metro Jamestown, NY

2001 firms analyzed:

6,076



1.13

0.73

0.68

0.94

US = 1.00

The Jamestown MSA is contiguous with Chautauqua County NY, the largest county in ARC District 6A, the Southern Tier West Regional Planning and Development Board. The MSA is also adjacent to areas of PA's Northwest Regional Planning and Development Commission.

Jamestown's summary vitality ratings fit the pattern of most metros in the NY-PA regions of the Appalachian Region – high retention rates among both startup and longer term firms, coupled with low startup activity and modest concentrations of high growth firms. In Jamestown's case, retained firms exhibit high job change vitality rates, although startup vitality is extremely weak. High growth firm rates are good in larger employment classes, but the absolute numbers in these categories are extremely small.

Business out-migration rates from this MSA are very low.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	5,482	3,134		
Retained Firms		3,118	57%	1.13
Sales	396,956	534,274	34.6%	0.68
Avg Jobs	10	15	50%	1.20
Replenishment	53,567	44,537	83%	1.08
Sales/Employee	66,159	76,325	15%	0.73

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Retention vitality ratings in the MSA are strong. At an indexed score of 1.13, aggregate retention rates are substantially above US averages. Moreover, both average job change and replenishment rates among retained firms indicate growth among established firms well in excess of US norms, although aggregate sales vitality patterns are weak.

Construction retention is good, although vitality patterns fall behind US norms. Manufacturers in both durable and non-durable industries show very good vitality measures, including wood products, furniture, chemicals, plastics, fabricated metals, industrial machinery, electronics and instruments. Retention is high among transport modes and services, but all appear to be struggling in all job and sales vitality categories. Measures in the non-depository financial services industries are strong. While retention rates in communications are excellent, vitality among retained firms is weak except in the job replenishment measure. The same can be said for business and professional services, which include technology driven computer service and research industries.

## Metro Jamestown, NY

2001 firms analyzed:

6,076

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	116	73		
Retained Firms		71	61%	1.31
Sales	657,732	852,459	29.6%	0.24
Avg Jobs	8	9	13%	0.19
Replenishment	820	617	75%	0.90
Sales/Employee	82,216	121,780	48%	0.88

### Startup Activity

96-01 Starts	566
Start Rate	13.3%
US Index	0.68

Startup activity rates are sluggish, as they are in throughout the southern NY-northern PA region. Construction industry startups are far below average, and surviving construction starts reflect mixed vitality levels. Fabricated metals startups do well in all measures, but the surviving starts in the area's industrial machinery industry appear weak. Startups in other value-added industries (business and professional services, etc.) indicate high retention rates, but little else. Identified retained startups are in such small numbers that meaningful industry-specific analysis is difficult.

### High Job Growth Firms:

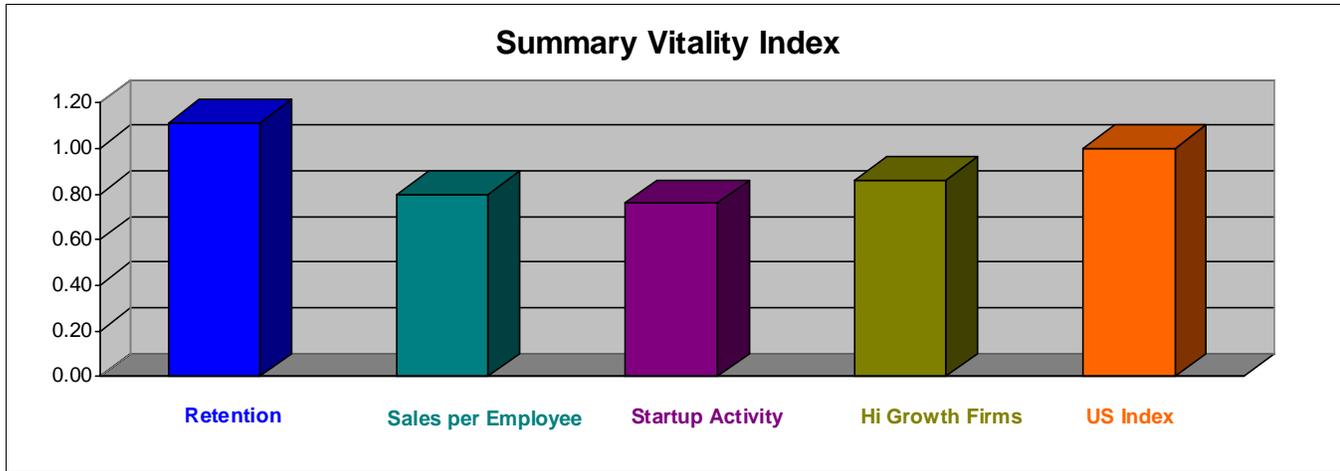
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	5,009	96	1.92%	0.94
Class I : < 5 Jobs>10 Jobs	3,501	79	2.26%	0.98
Class II : <10 Jobs>25 Jobs	4,269	28	0.72%	0.91
Class III : <25 Jobs>50 Jobs	4,767	19	0.40%	1.01
Class IV : <50 Jobs>100 Jobs	4,927	12	0.2400%	1.28
Class V : <100 Jobs> 250 Jobs	5,009	2	0.0400%	0.71

MSA concentrations of high growth firms run about 6 percent behind average. However, Class I (the smallest) is just under par and Classes III and IV indicate higher than average concentrations. For now, solid performance in some manufacturing industries and a cadre of small high growth firms are taking the place of entrepreneurial vitality in an area that needs all three.

# Metro Johnson City-Kingsport-Bristol, TN-VA

2001 firms analyzed:

16,553



1.11      0.80      0.76      0.86      US = 1.00

The Johnson City MSA includes counties from three ARC districts: Carter, Hawkins, Sullivan, Unicoi and Washington TN in ARC 11C, the First Tennessee Development District; Scott VA in District 12A, the LENOWISCO Planning District Commission; and Washington VA in ARC District 12C, the Mount Rogers Planning District Commission.

Johnson City reflects the familiar pattern of many MSAs linked to the Region, including high retention rates among both the universe of businesses and the entrepreneurial community, with low levels of startup activity and lagging concentrations of high growth firms. In this case, startup activity rates run almost one-quarter below national averages – significantly lower than the Regional average itself.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	14,119	7,935		
Retained Firms		7,908	56%	1.11
Sales	451,002	661,226	46.6%	0.92
Avg Jobs	14	16	14%	0.34
Replenishment	184,071	127,038	69%	0.90
Sales/Employee	75,167	82,653	10%	0.80

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA's high retention rate (11 percent above average) is the best news for retention vitality. Aggregate scores for vitality measures lag US patterns by 10 percent and more in aggregate, but in important value added industries, show considerable zip. At 0.2 percent from the 1996 universe of firms, business out-migration rates are unusually low.

Significant numbers of specific industries with relatively large facility concentrations also score well in the various retention indices. These include agricultural services (174 retained firms), building general contractors and special trades contractors, wood and paper products. The MSA's large metalworking cluster reflects high vitality scores in both fabricated metals and industrial machinery industries, as well as in the smaller plastics group. Both motor freight and the smaller water transportation industries, along with transport services, reflect good vitality ratings in retention and multiple survivor vitality categories. Technology services indicate high retention and vitality ratings, including other business services (including computer related) and the engineering and research segment.

## Metro Johnson City-Kingsport-Bristol, TN-VA

2001 firms analyzed:

16,553

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	413	204		
Retained Firms		203	49%	1.05
Sales	388,235	1,968,681	407.1%	3.34
Avg Jobs	15	31	107%	1.60
Replenishment	6,052	6,170	102%	1.23
Sales/Employee	77,647	93,747	21%	0.68

### Startup Activity

96-01 Starts	1,628
Start Rate	14.8%
US Index	0.76

Startup activity rates are the MSA's weak spot, including low scores in several industries which did well in retention vitality ratings – construction for example. Startup rates are high in plastics, only 8 percent below average in industrial machinery, and above US trends in the fabricated metals group, electronics and instruments (which include only a small absolute number of startups). Communications startup activity is low (0.47), and technology-driven business services startups run 28 percent below average. Professional services startup activity is low as well.

The performance of aggregated retained startups is impressive. In addition to retention, all vitality measures are well over US averages. Average survivor sales growth appears to be distorted by data in the industrial machinery industry, probably due to a merger or takeover. Small numbers of surviving startups in communications and a larger number of selected retail and professional services industries drive up the survivor vitality indices.

### High Job Growth Firms:

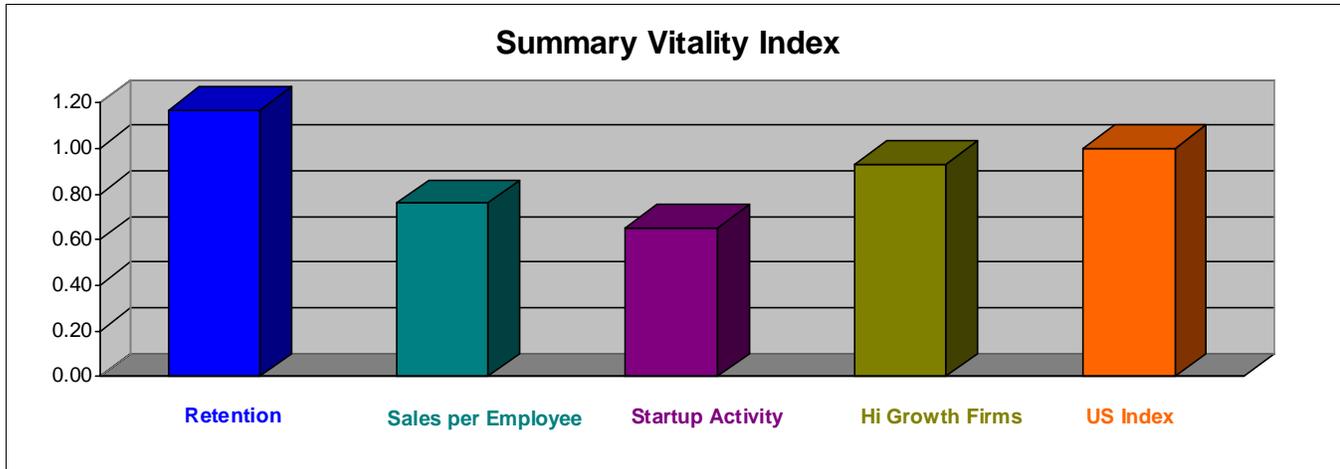
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	13,974	243	1.74%	0.86
Class I : < 5 Jobs>10 Jobs	9,340	199	2.13%	0.93
Class II : <10 Jobs>25 Jobs	11,705	74	0.72%	0.87
Class III : <25 Jobs>50 Jobs	13,112	42	0.32%	0.81
Class IV : <50 Jobs>100 Jobs	13,698	25	0.1800%	0.96
Class V : <100 Jobs> 250 Jobs	13,974	6	0.0400%	0.77

High growth firm concentrations, with an aggregate score of 0.86, are low. The area's highest ratings are for the smallest firms (Class I) at 7 percent US averages, and Class IV, those which began the period with fewer than fifty jobs and ended with more than 100 (4 percent below US patterns). Larger high growth firm concentrations might be necessary to compensate for the gap created by lagging startups in the MSA's economic vitality outlook.

## Metro Johnstown, PA

2001 firms analyzed:

8,865



1.17      0.76      0.65      0.93      US = 1.00

The Johnstown PA MSA is wholly comprised of Cambria and Somerset Counties, both part of ARC District 9F, the Southern Alleghenies Planning and Development Commission. Johnstown is one of two metros which is fully within the Commission's area. (Altoona is the other.)

In fact, Johnstown's summary vitality ratings are not unlike those in Altoona. Like Altoona, Johnstown indicates very high overall retention ratings, both for the general business population and for startup firms. Among the general business population, the concentration of high growth firms is not as high as the US average (some 7 percent lower), but better than in the Appalachian Region as a whole. Entrepreneurial activity is, however, a serious concern at only 65 percent of the national rate.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	7,476	4,429		
Retained Firms		4,393	59%	1.17
Sales	573,144	629,768	9.9%	0.19
Avg Jobs	11	13	18%	0.44
Replenishment	75,870	58,766	77%	1.01
Sales/Employee	81,878	78,721	-4%	0.76

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While aggregate scores show that retained firms in the area grew over the five-year analysis period, sales and employment changes both lagged US patterns significantly. Job replenishment rates were slightly above the US norm, suggesting that larger firms survived and experienced some expansion activity. As in most other ARC areas, business out-migration is not a major problem, but it is higher than most in most other ARC regions; a little less than 0.5 percent of surviving businesses captured in the 1996 snapshot relocated from the MSA by the beginning of 2001.

Vitality indicators included high sales and job ratings in various construction industries. There were multiple strong vitality indicators in several manufacturing industries, including non-durables such as food products, apparel, lumber furniture and the small plastics industry, but also in heavy durables – primary metals, fabricated metals, industrial machinery and electronics. The communications industry showed little vitality, but business services exhibited high levels of vitality in retention, survivor sales and job vitality measures, as did professional support services, both legal and engineering.

## Metro Johnstown, PA

2001 firms analyzed:

8,865

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	163	89		
Retained Firms		85	52%	1.11
Sales	409,023	571,250	39.7%	0.33
Avg Jobs	8	20	150%	2.25
Replenishment	1,193	1,642	138%	1.65
Sales/Employee	68,170	57,125	-16%	0.41

### Startup Activity

96-01 Starts	799
Start Rate	12.7%
US Index	0.65

Startup activity rates are by far Johnstown's weakest link. Aggregate job and sales vitality ratings among retained startups is high, but there simply aren't that many of them. Industry specific analysis of surviving startups is difficult due to small numbers; only 65 surviving startups were tracked from the 1996 pool of 163 firms identified as one year old or less.

While startup activity rates overall are exceedingly low, the MSA's traditional core metalworking industries experienced startup levels superior to national trends. These included almost thirty startup firms in primary metals, fabricated metals and transportation equipment. But that's the end of the good news insofar as startup activity rates are concerned.

Analyzing extremely limited data, some of the same industries appear to have performed well in the analysis of startup survivor vitality measures; fabricated metals and industrial machinery stand out. Construction trades contractors and engineering also appear strong in retention and job vitality categories.

### High Job Growth Firms:

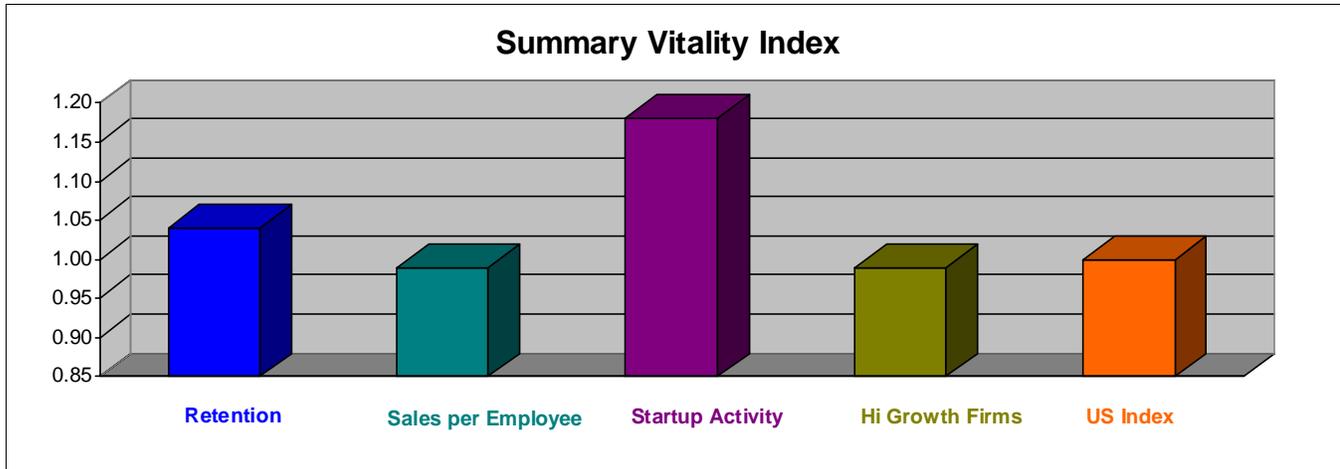
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	7,170	136	1.90%	0.93
Class I : < 5 Jobs>10 Jobs	4,935	110	2.23%	0.97
Class II : <10 Jobs>25 Jobs	6,112	48	0.72%	1.08
Class III : <25 Jobs>50 Jobs	6,784	32	0.47%	1.19
Class IV : <50 Jobs>100 Jobs	7,027	14	0.2000%	1.05
Class V : <100 Jobs> 250 Jobs	7,170	5	0.0700%	1.25

Like the Altoona MSA, Johnstown has an aggregate concentration of high growth firms which lags US patterns, but by only 7 percent. The MSA's Class II, III, IV and V high growth concentrations are all above average. These high growth firms are serving as the vitality engines for the MSA, much as they are in Altoona. Thus, the two metros are currently fulfilling their expected role as centers of economic activity for the surrounding ARC district – but the future will be bleaker unless entrepreneurial activity is substantially enhanced.

## Metro Knoxville, TN

2001 firms analyzed:

30,280



1.04      0.99      1.18      0.99      US = 1.00

The Knoxville MSA includes Anderson, Blount, Knox, Loudon, Sevier and Union Counties in TN, all counties within ARC 11B, the East TN Development District.

Only 0.3 percent of more than 22,000 firms tracked from 1996 survived the period and relocated from the area. The MSA's aggregate retention rate was 4 percent above the national average, and the summary startup survival index was right on target at the US level. High growth firms were generated at a rate almost exactly tracking national patterns. But the real news is that these average to above average scores appear in the context of a startup activity rate 18 percent above national norms, creating a picture of concurrent stability and dynamism.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	22,572	11,921		
Retained Firms		11,850	53%	1.04
Sales	535,373	922,724	72.4%	1.43
Avg Jobs	14	18	29%	0.69
Replenishment	295,892	207,995	70%	0.91
Sales/Employee	76,482	102,525	34%	0.99

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While aggregate job change among retained firms (from the 1996 pool) is somewhat under average, survivor firm sales vitality was far above national patterns. And, as discussed in the next section, startup job vitality measures were significantly higher.

The vitality in value added industries jumps out in the many industries with high retention numbers as well as a handful with less impressive showings. Retained construction firms appear to be booming. Manufacturing boasts a string of industries with high sales and job retained firm vitality rates: food products, apparel, wood products, furniture, paper, petroleum, plastics, leather, primary metals, electronics, transport equipment and instruments. Secondary transportation services show booming vitality measures, as do all segments of the financial sector. The communications and business services industries, however, do not rate as highly in sales or job vitality indices, despite good retention rates.

## Metro Knoxville, TN

2001 firms analyzed:

30,280

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	850	403		
Retained Firms		399	47%	1.00
Sales	686,842	1,231,549	79.3%	0.65
Avg Jobs	7	15	114%	1.71
Replenishment	5,972	5,864	98%	1.18
Sales/Employee	114,474	102,629	-10%	0.75

### Startup Activity

96-01 Starts	4,565
Start Rate	23.0%
US Index	1.18

Startup activity is simply enormous – and widely distributed: more than half again the national average in agricultural services and far above national rates in all construction industries. Startup activity rates in fifteen of twenty manufacturing industries top national patterns. Motor freight starts run 40 percent above average and transportation services 13 percent. Wholesale industry activity and startups in all financial industry segments reflect higher than average patterns, and technology-driven business services startups run above the US index, as do legal and engineering and research services. Among major value added industries, only communications appears to be suffering low startup rates, and this may be compensated by branch development activity excluded from this measure.

Job vitality among retained starts is extremely high. Change in retained survivor average job patterns is as high as 1.71 on the US index, while replenishment rates run 18 percent above average. Startup survivor sales change figures appear considerably lower. Among retained startups, the most significant levels of vitality are in agricultural services, where all measures, including retention, sales and job vitality indexes, are high; special trade contractors among construction industries; and a series of manufacturers but especially the metalworking and technology groups, including industrial machinery, electronics, transport equipment and instruments. Real estate and insurance indicate high retention, survivor sales and job vitality measures. Retained startup vitality seems problematic for business services.

### High Job Growth Firms:

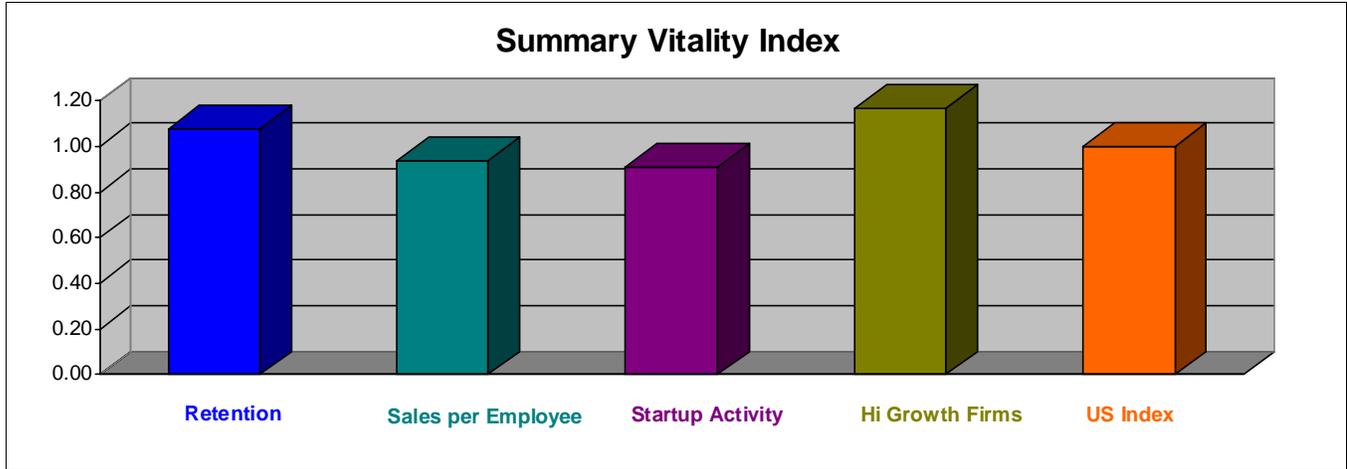
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	21,972	441	2.01%	0.99
Class I : < 5 Jobs>10 Jobs	14,272	359	2.52%	1.09
Class II : <10 Jobs>25 Jobs	17,945	124	0.72%	0.95
Class III : <25 Jobs>50 Jobs	20,524	71	0.35%	0.87
Class IV : <50 Jobs>100 Jobs	21,483	43	0.2000%	1.05
Class V : <100 Jobs> 250 Jobs	21,972	10	0.0500%	0.81

Just about average in aggregate, concentrations of high growth firms peak among the small Class I firms (corresponding to high levels of startup activity and job vitality) and again in Class IV, where firms pass the threshold of 100 jobs after beginning the analysis period with fewer than fifty. The combination of these growth drivers with widespread entrepreneurial energy reflects the MSA's broadly-based dynamism.

# Metro Lexington, KY

2001 firms analyzed:

19,618



1.08      0.94      0.91      1.17      US = 1.00

The Lexington KY MSA includes two counties, Clark and Madison, which are also part of ARC District 3C, the Bluegrass Area Development District.

The MSA indicates high levels of economic vitality over the five-year period examined, starting with an economy-wide retention rate 8 percent above national norms. Startup retention rates are also higher than average, somewhat offsetting entrepreneurial activity levels which lag about 9 percent below average. However, the vitality of those new firms, startup survival high growth firm concentrations may offset the modest lag in entrepreneurial activity.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	16,070	8,773		
Retained Firms		8,710	54%	1.08
Sales	762,031	880,453	15.5%	0.31
Avg Jobs	13	19	46%	1.11
Replenishment	200,119	165,803	83%	1.08
Sales/Employee	108,862	97,828	-10%	0.94

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA's retention vitality scores stand out; not only is the retention rate itself admirably high, but vitality of retained firms in aggregate is quite good. Lexington leads national margins significantly (8-11 percent) in both job vitality measures. Aggregate sales change vitality among retained firms is low, but this seems to be due to steep decreases in transportation equipment; Most major industries did quite well in this category. The area lost 63 firms to out-migration during the analysis period, an about-average rate of slightly less than 0.4 percent.

Construction vitality is high in all categories and industries. Not only were retention rates above average in 16 of 19 manufacturing industries, but sales vitality rates led the US level in thirteen and job vitality rates were above average in at least a single measure in sixteen industries—and above both in twelve. High vitality manufacturers included industrial machinery, fabricated metals, electronics and printing, all among the MSA's largest.

Retention and vitality ratings were also high in motor freight transportation and transport services. Retention rates in communications were just below average; sales vitality ratings were good although job vitality lagged among survivors in the industry. Business, legal and professional services all indicated high retention and vitality scores.

## Metro Lexington, KY

2001 firms analyzed:

19,618

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	457	230		
Retained Firms		227	50%	1.06
Sales	592,147	1,433,333	142.1%	1.17
Avg Jobs	7	15	114%	1.71
Replenishment	3,091	3,304	107%	1.28
Sales/Employee	98,691	110,256	12%	0.80

### Startup Activity

96-01 Starts	2,240
Start Rate	17.7%
US Index	0.91

Although startup activity rates lag by 9 percent, the vitality of retained startups over the five-year analysis period is impressive. Startups survive at levels about 6 percent above national averages, and increased average sales from the original pool of 1996 entrepreneurs at a rate 17 percent higher than US norms. Correspondingly, aggregate job vitality among retained starts is very high; the average job change vitality score runs 71 percent above the US average for retained startups, while the job replenishment rate is 28 percent higher.

Startups appear to have a difficult time in the construction industries, possibly due to the dynamism of existing firms. Along with high startup rates in plastics, fabricated metals and electronics (and average rates in industrial machinery), sales and job vitality of retained startups in those industries is extremely strong. The confluence of high vitality among both retained firms and startups in a specific industry is very encouraging. The same can be said for motor freight transport and professional services, where strong startup vitality supplemented high performance by the industry overall.

### High Job Growth Firms:

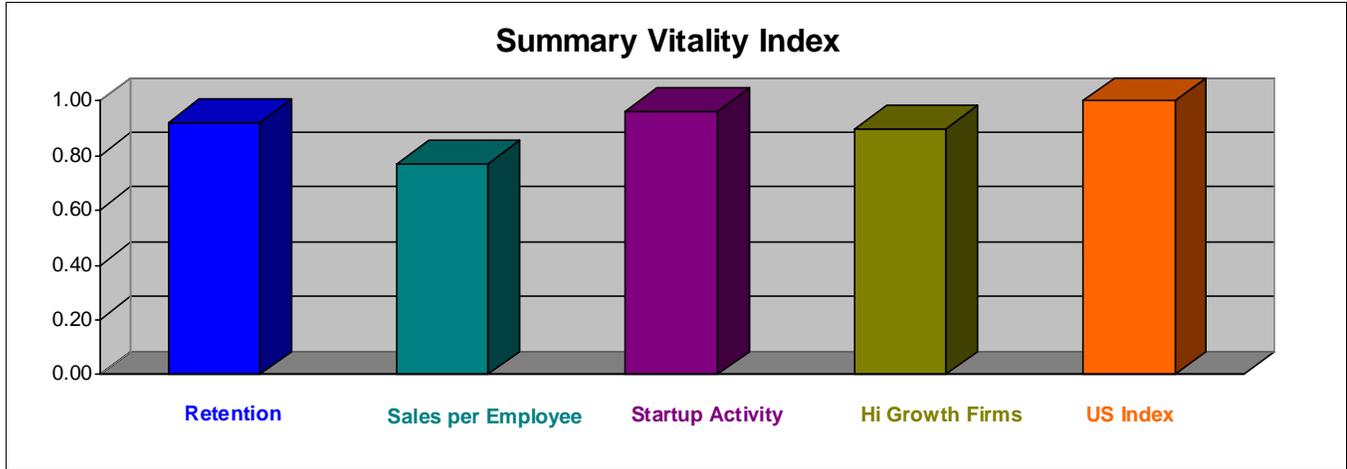
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	14,599	347	2.38%	1.17
Class I : < 5 Jobs>10 Jobs	9,248	288	3.11%	1.36
Class II : <10 Jobs>25 Jobs	11,796	92	0.72%	1.08
Class III : <25 Jobs>50 Jobs	13,546	63	0.47%	1.17
Class IV : <50 Jobs>100 Jobs	14,203	32	0.2300%	1.19
Class V : <100 Jobs> 250 Jobs	14,599	5	0.0300%	0.61

Completing the positive outlook for the MSA, high growth concentrations are very strong almost across the board. Lexington's high growth concentrations are lowest in Class V, firms which began the analysis period with fewer than 100 jobs and ended with more than 250. While important in job numbers, these firms represent a small fraction of the 347 high growth firms identified in the MSA. All other class scores ranged from 17 percent above average to 36 percent above average, with the highest concentrations among the smallest firms – those most likely to make up for current entrepreneurial lags.

# Metro Montgomery, AL

2001 firms analyzed:

11,911



0.92      0.77      0.96      0.90      US = 1.00

MSA Montgomery covers Elmore County AL in ARC District 1H, the Central AL Regional Planning and Development Commission.

The Montgomery MSA's summary vitality ratings generally lag US patterns by 5 percent-10 percent. Overall retention runs 8 percent below average, while startup activity and survival both register at 0.96, a four per cent lag. The MSA shows aggregate concentrations of high growth firms 10 percent lower than US norms. While it trails the US, Montgomery's startup activity rate is among its pieces of vitality news. Startup activity is 9 percent higher than in the rest of the Appalachian region. However, the vitality of retained startups is a serious issue.

**Retention:**

	1996	5 Year Survivors	Change Rate	US Index
All Firms	9,336	4,359		
Retained Firms		4,337	46%	0.92
Sales	458,615	719,777	57.0%	1.12
Avg Jobs	10	14	40%	0.96
Replenishment	87,345	61,769	71%	0.92
Sales/Employee	76,436	79,975	5%	0.77

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Aggregate sales vitality among retained firms is significantly higher than the US average, although both job vitality scores trail by 4-8 percent. Coupled with low overall retention rates and the relative gap in high growth firms, this is not a particularly encouraging image.

There are, however, positive signs. Retained firms in construction industries exhibit high retention rates and at least some leading scores in the various vitality indices. In addition to some manufacturing industries with smaller numbers of firms, vitality ratings are also high in core industries: fabricated metals, industrial machinery, electronics, transport equipment and instruments. (Retention rates themselves are lower in electronics and transport.) Retention rates – although not vitality scores – are high in communications. Business and professional service industry appear to lag in vitality ratings.

# Metro Montgomery, AL

2001 firms analyzed:

11,911

## Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	259	116		
Retained Firms		116	45%	0.96
Sales	698,113	999,099	43.1%	0.35
Avg Jobs	8	9	13%	0.19
Replenishment	2,128	998	47%	0.56
Sales/Employee	77,568	111,011	43%	0.81

### Startup Activity

96-01 Starts	1,399
Start Rate	18.6%
US Index	0.96

While startup activity rates lag US margins by 4 percent, they constitute a relative bright spot for Montgomery. However, vitality ratings among retained starts appear quite low in aggregate measures. Higher levels of vitality can be discerned among retained startups in various industries, but the low absolute number of firms analyzed diminishes the value of the data.

Startup rates are relatively low in construction, and above average in only a handful of manufacturing industries, including food products, apparel, paper products, plastics, primary metals, fabricated metals and electronics. Startup activity is strong in all transportation industries except air transport. Activity is weak in both communications and business services, although higher than average in several professional support industries, including legal, engineering and research, where some vitality measures are strong as well. Sales vitality in business services, including computer-related services, is strong among retained startups, unlike the case for retained business services overall.

## High Job Growth Firms:

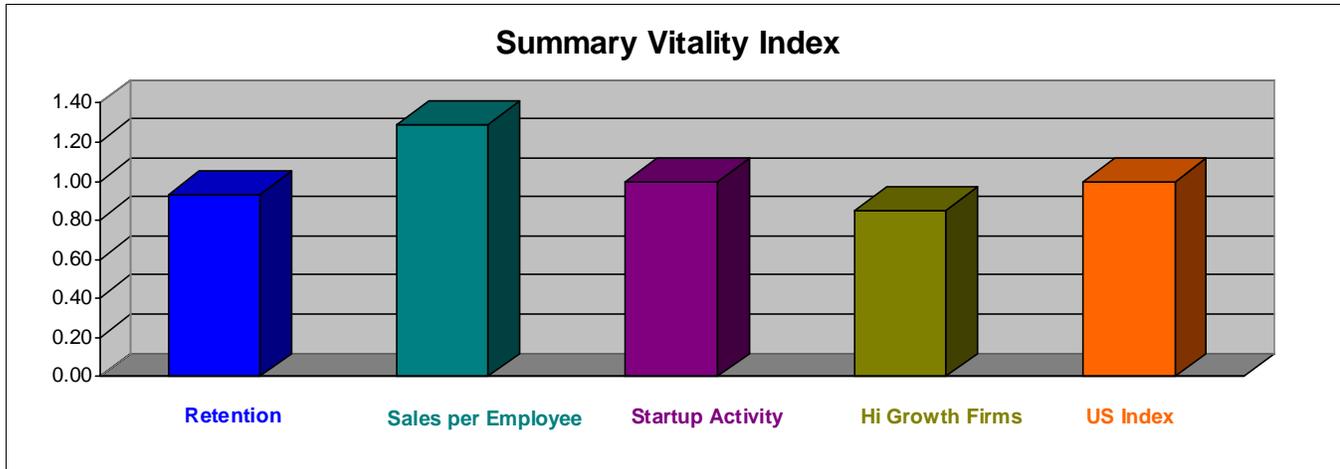
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	9,135	166	1.82%	0.90
Class I : < 5 Jobs>10 Jobs	5,805	136	2.34%	1.02
Class II : <10 Jobs>25 Jobs	7,451	52	0.72%	0.96
Class III : <25 Jobs>50 Jobs	8,524	23	0.27%	0.68
Class IV : <50 Jobs>100 Jobs	8,907	14	0.1600%	0.83
Class V : <100 Jobs> 250 Jobs	9,135	6	0.0700%	1.17

Despite an aggregate score 10 percent below national levels, the MSA indicates leading concentrations of high growth firms in both Class I (the smallest firms, those beginning with fewer than five employees) and Class V (the largest employment class). The area is very weak in high concentrations among firms which are most likely to be in their first growth period (Classes III and IV). This generally corresponds to the low levels of vitality identified among 5-year old startups, and indicates a potential focus of development work which would enhance retention, vitality and high growth concentrations throughout the MSA.

## Metro New York, NY

2001 firms analyzed:

344,039



0.93

1.29

1.00

0.85

US = 1.00

At its far western edge, the New York NY MSA includes Pike County PA, part ARC District 9D, the Economic Development Council of Northeastern PA.

Other summary indices suggest mixed vitality patterns: Aggregate retention rates were 7 percent below national levels, and retained startups trailed by 3 percent. Startup activity rates were even with US patterns, but the aggregate concentration of high growth firms fell 15 percent below. Within those summary statistics, retained firms generally indicated solid aggregate vitality patterns. The combination of high out-migration and good vitality among survivors suggests spillover opportunities for nearby ARC areas.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	363,629	172,907		
Retained Firms		170,487	47%	0.93
Sales	678,325	1,204,650	77.6%	1.53
Avg Jobs	12	18	50%	1.20
Replenishment	4,079,053	3,072,825	75%	0.98
Sales/Employee	96,904	133,850	38%	1.29

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA indicates considerably higher business out-migration rates than most others: more than 2,000 firms or 0.7 percent of the total from the 1996 pool tracked. Fully 1.4 percent of all survivor firms, relocated outside of the MSA by 2001. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retention and retained firm vitality measures were not particularly impressive in the MSA's construction industries. However, vitality, if not always retention rates, were high among a number of substantial MSA industries which are also often well-suited to conditions in rural areas: textiles and apparel, wood and paper products, leather products, electronics and instruments (which has located in rural settings less frequently than the others). Between them, these high vitality industries support over 9,000 firms in the MSA.

While it seems less likely that service industries in the core urban sections of the New York MSA are likely to relocate or expand into rural areas, communications and business services, including their technology segments, rated high in vitality measures (a mix of sales and job categories), as did support services in legal, engineering and research.

## Metro New York, NY

2001 firms analyzed:

344,039

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	12,324	5,710		
Retained Firms		5,583	45%	0.97
Sales	731,267	1,698,803	132.3%	1.09
Avg Jobs	8	14	75%	1.13
Replenishment	94,119	77,626	82%	0.99
Sales/Employee	121,878	169,880	39%	1.23

### Startup Activity

96-01 Starts	44,783
Start Rate	19.5%
US Index	1.00

Aggregate startup activity rates in the MSA were even with national levels, although the rate of retained startups was 3 percent below average. Retained startups from 1996 outpaced national vitality patterns in both average sales change and average job change categories, and lagged job replenishment measures by only 2 percent. Startup rates were very high in construction, where smaller special trades contractor startups indicated high vitality, but other construction startups followed more modest patterns of the sector overall.

Startup activity was low in almost every manufacturing industry. Apparel was a notable exception, and despite a startup activity rate 10 percent below average, industrial machinery starts (often well-suited for rural areas) were retained at a high rate and showed extremely well in vitality categories. Communications industry startup activity, including telecommunications, was 20 percent above national averages, as were startups in air transportation, although the spillover potential to Pike County are quite limited. Interesting for outlying rural ARC areas, wood products startup activity was only 1 percent below national rates, and vitality among retained wood products startups was excellent in all sales and job vitality measures.

### High Job Growth Firms:

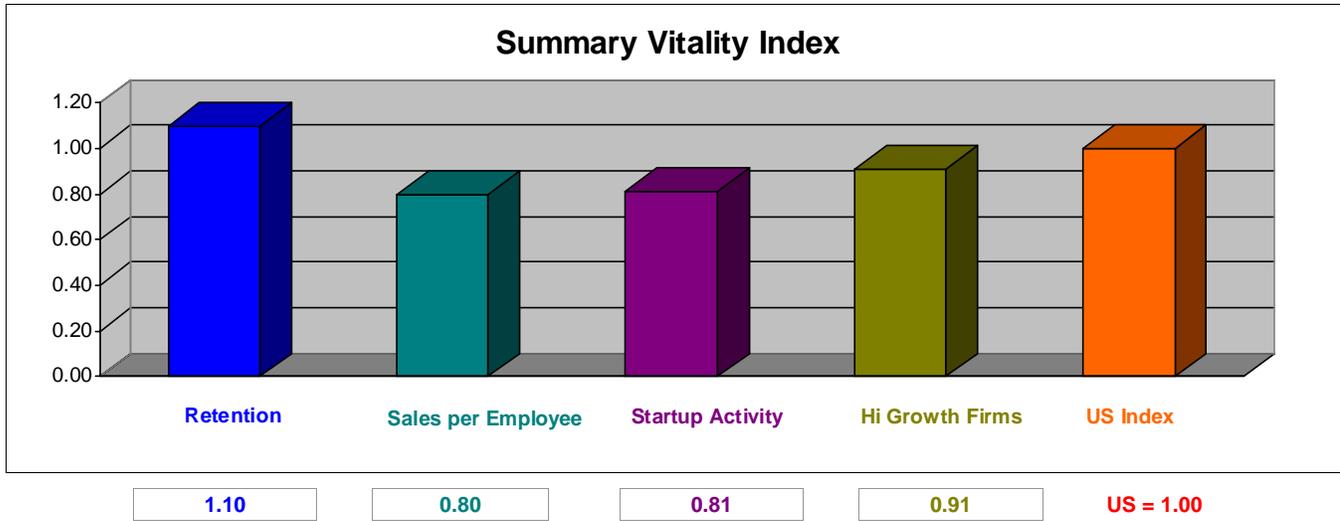
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	315,140	5,461	1.73%	0.85
Class I : < 5 Jobs>10 Jobs	222,800	4,307	1.93%	0.84
Class II : <10 Jobs>25 Jobs	266,786	1,689	0.72%	0.87
Class III : <25 Jobs>50 Jobs	297,741	1,073	0.36%	0.91
Class IV : <50 Jobs>100 Jobs	309,078	591	0.1900%	1.01
Class V : <100 Jobs> 250 Jobs	315,140	185	0.0600%	1.05

The New York MSA is strongest in high growth firm concentrations at its upper levels, in Classes IV and V, where the MSA led US rates by up to 5 percent. Smaller firms, probably including most startups, did not do nearly as well, with the smallest (Class I) firms achieving high growth patterns at only 84 percent of the national rate, despite solid overall showings among retained startup firms.

## Metro Parkersburg-Marietta, WV-OH

2001 firms analyzed:

5,754



The Parkersburg MSA includes Wood County in West Virginia's ARC District 13E, the Mid-Ohio Valley Regional Council. Washington County OH, in District 8B, administered by the Buckeye Hills-Hocking Valley Regional Development District, also falls within the MSA.

While Parkersburg's aggregate retention index is high (10 percent above national levels), other summary measures are modest at best. Startup retention is average, but startup activity rates lag national patterns by almost 20 percent. Concentrations of high growth firms top ARC regional levels overall, but are still 9 percent behind national averages. Vitality indices struggle to keep up with national rates, and are only sporadically successful among longer-term firms. The MSA lags US averages in all aggregate vitality measures for retained startup firms.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,788	2,677		
Retained Firms		2,644	55%	1.10
Sales	506,952	751,187	48.2%	0.95
Avg Jobs	13	18	38%	0.92
Replenishment	59,401	46,843	79%	1.02
Sales/Employee	63,369	83,465	32%	0.80

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA's aggregate retention index (1.10) provides a solid basis for area stability, but vitality indices suggest that retained MSA firms are lagging national patterns. Average retained firm sales and job change measures run up to 8 percent below average, although the job replenishment rates is above average by 2 percent. 0.7 percent of all firms from the 1996 pool relocated out of the MSA by 2001, an out-migration rate equal to 1.2 percent of all surviving firms, a relatively high rate. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retention rates were high among construction industries, and sales and job vitality rates led national patterns among general contractors. A number of manufacturing industries reflected good retention and high sales and job change rates, including wood products, plastics and stone-clay-glass. (Retention rates in the wood products industry were low.) Retention rates were high in technology related services (communications and business); communications job replenishment scores led national trends although other vitality measures in this and other technology-driven services lagged.

## Metro Parkersburg-Marietta, WV-OH

2001 firms analyzed:

5,754

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	118	56		
Retained Firms		55	47%	1.00
Sales	1,141,176	2,260,784	98.1%	0.80
Avg Jobs	12	19	58%	0.88
Replenishment	1,369	1,039	76%	0.91
Sales/Employee	103,743	113,039	9%	0.82

### Startup Activity

96-01 Starts	610
Start Rate	15.7%
US Index	0.81

Startup activity in the MSA is significantly below average. Activity rates are below par in almost every major industry, although fabricated metals and motor transport rate highly. Communications startup rates are 20 percent below US trends, and in technology-driven business services are only 75 percent of the national level. Professional services also indicate low activity rates. Among value added industries, the tiny handful of retained startups in motor freight transport and engineering show almost the only positive sales and job vitality measures. The very low number of retained startups (55) makes meaningful analysis of retained startup firms – in aggregate or by industry – difficult.

### High Job Growth Firms:

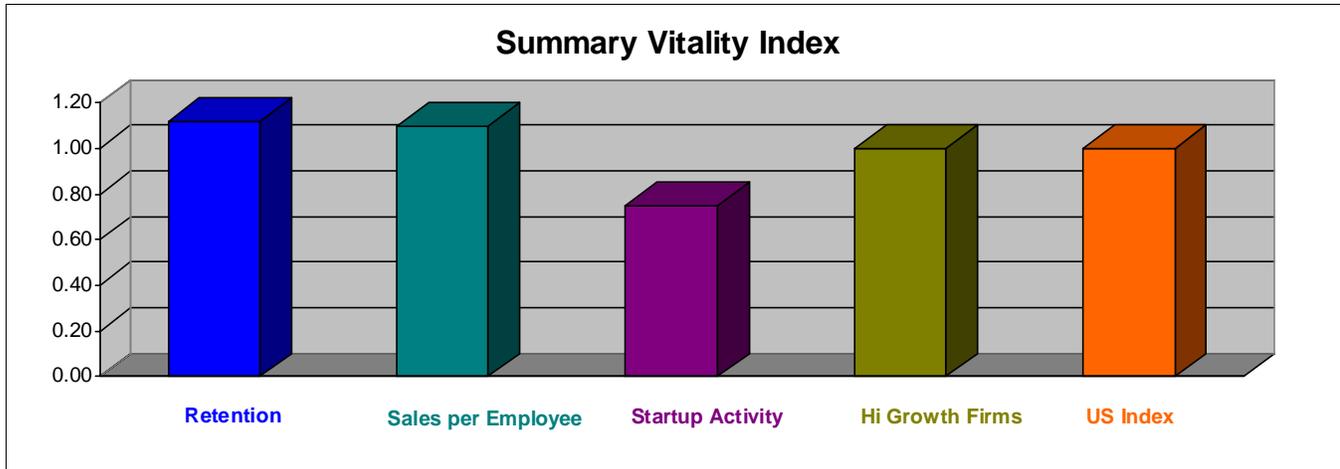
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	4,536	84	1.85%	0.91
Class I : < 5 Jobs>10 Jobs	2,814	65	2.31%	1.01
Class II : <10 Jobs>25 Jobs	3,650	23	0.72%	0.87
Class III : <25 Jobs>50 Jobs	4,199	12	0.29%	0.72
Class IV : <50 Jobs>100 Jobs	4,418	8	0.1800%	0.95
Class V : <100 Jobs> 250 Jobs	4,536	2	0.0400%	0.79

The aggregate concentration of high growth firms is only 9 percent below the US average. The only leading job class for high growth firms is the smallest, Class I, which runs 1% ahead of national levels. All other classes are below average, all but the limited Class IV (including firms began with fewer than 50 jobs and ended with more than 100) by significant margins.

# Metro Pittsburgh, PA

2001 firms analyzed:

94,903



1.12      1.10      0.75      1.00      US = 1.00

Metropolitan Pittsburgh covers six of the nine counties in ARC District 9H, the Southwestern PA regional Development Council, including Allegheny, Beaver, Butler, Fayette, Washington and Westmoreland Counties.

Vitality indices throughout the MSA are quite strong, with the exception of entrepreneurial startup activity. Retention is at an impressive 12 percent above national trends, while startup retention is only a point lower. High growth firm concentrations are on a par with national averages, and higher in several employment classes. Vitality measures among retained firms and retained startups alike are high. Startup vitality is seriously mitigated by the dearth of entrepreneurial activity, which is fully one-quarter below national trends. Differences between the MSA summary scores and those of ARC 9H are mainly focused on startup activity rates, which are even lower in the three LDD counties not covered by the MSA.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	87,324	49,258		
Retained Firms		49,069	56%	1.12
Sales	555,994	1,031,707	85.6%	1.69
Avg Jobs	12	17	42%	1.00
Replenishment	993,689	845,998	85%	1.11
Sales/Employee	92,666	114,634	24%	1.10

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Business out-migration from the MSA is only 0.2 percent of firms from the original 1996 pool tracked for the analysis, and only 0.4 percent of all surviving firms. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retention rates are an impressive 12 percent above average – and more impressive because they are coupled with strong growth ratings in all sales and job vitality categories. Construction indices indicate continuing vitality among retained firms in industry groups throughout this sector. Retention rates are below average in only one small industry (leather products) and significantly higher in many others. Vitality measures indicate leading experience in sales change, job change and replenishment in several important manufacturing industries, including the needle trades (both textiles and apparel), furniture, printing, chemicals, plastics, and stone-clay-glass. Metalworking shows sales and job vitality among retained firms in primary metals, industrial machinery, electronics and transport equipment. Retained firms in the large fabricated metals industry appear weaker in all measures. Retained firms in all transport modes and services except rail indicate leading vitality growth rates.

Value added services are also strong. Communications industry retention is 4 percent below average, but job vitality – both average job change and replenishment – are strong. Likewise, technology-driven business services reflect high scores in retention (1.18) and job replenishment measures in particular. Support services – research, engineering and legal – also demonstrate strong vitality measures.

## Metro Pittsburgh, PA

2001 firms analyzed:

94,903

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	2,387	1,254		
Retained Firms		1,239	52%	1.11
Sales	610,816	1,109,485	81.6%	0.67
Avg Jobs	8	14	75%	1.13
Replenishment	17,734	17,073	96%	1.16
Sales/Employee	101,803	110,949	9%	0.81

### Startup Activity

96-01 Starts	9,376
Start Rate	14.6%
US Index	0.75

Startup activity is as weak as retention vitality is strong. Startup activity rates in construction are very low, and among significant manufacturing industries, only primary metals and transportation equipment evidence leading startup activity. Other manufacturing startups generally lag far behind national trends for their industry. Communications startup activity is only 3 percent lower than the national average, but business services, including computer related, show startups at an even lower rate than the MSA average of 0.75. No other significant industries in the MSA reflect startup activity rates approaching the national level.

Where there are startups, they survive at higher than average levels and do quite well in the vitality indices. While aggregate sales change figures among surviving startups are very low, job vitality – average firm employment change and job replenishment – are significantly better than national norms. Retained startup vitality is evident among special trades contractors, food products, wood products and furniture, chemicals and stone-clay-glass. Retained startups in primary metals, industrial machinery and transportation equipment – 43 of them from the 1996 group traced – lead national patterns for both sales and job vitality measures. Transportation startups did extremely well. Retention rates (although not vitality measures) were high in communications, and business services operated at or near national levels for all vitality patterns. Some financial industries, especially brokerages, indicated high vitality measures, as did engineering and research.

### High Job Growth Firms:

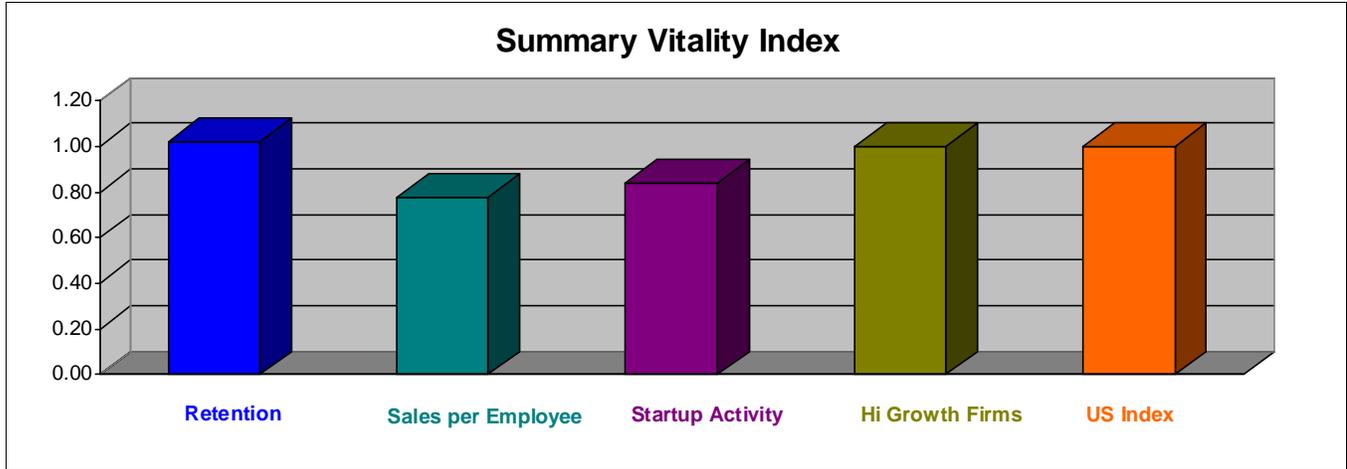
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	81,135	1,648	2.03%	1.00
Class I : < 5 Jobs>10 Jobs	54,591	1,334	2.44%	1.06
Class II : <10 Jobs>25 Jobs	67,503	504	0.72%	1.03
Class III : <25 Jobs>50 Jobs	76,047	289	0.38%	0.96
Class IV : <50 Jobs>100 Jobs	79,323	182	0.2300%	1.21
Class V : <100 Jobs> 250 Jobs	81,135	51	0.0600%	1.12

High growth firm concentrations are at or above national levels in all categories except Class III (firms beginning with fewer than 25 jobs and ending with more than 50), which runs only 4 percent behind. The MSA's high growth firm concentrations are particularly strong in the larger employment classes, Class IV and V, where the MSA's advantage goes as high as 21 percent.

# Metro Roanoke, VA

2001 firms analyzed:

10,302



1.02      0.78      0.84      1.00      US = 1.00

The Roanoke MSA includes a single ARC county, Botetourt in ARC District 12E of Virginia's Fifth Planning District Commission.

With the exception of startup activity, which registers 16 percent below US levels and below ARC regional averages, the Roanoke MSA supports summary vitality scores which are right on the money. Aggregate retention rates are 2 percent above average, and startup retention bests national rates by 7 percent. Concentrations of all high growth firms are right at national levels. Aggregate vitality scores are high for retained startups in both job vitality categories, while corresponding vitality scores are consistently below average for retained firms.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	8,539	4,442		
Retained Firms		4,399	52%	1.02
Sales	442,447	650,077	46.9%	0.93
Avg Jobs	12	16	33%	0.80
Replenishment	99,425	71,476	72%	0.93
Sales/Employee	73,741	81,260	10%	0.78

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA's out-migration rate is 0.5 percent of firms from the 1996 universe analyzed, and 1.0 percent of the survivors, casting a minor pall on the better than average retention rate. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim. At the same time, vitality indices for retained firms are below average across the board, ranging from 80 percent of the national rate in the survivor job change category to 93 percent in sales change and job replenishment.

Heavy construction firms evidence high retention rates and excellent vitality across the board. And while most manufacturing industries also register below average vitality ratings, a few stand out as high performers, including plastics, fabricated metals, instruments, miscellaneous manufacturing and electronics (high vitality despite very low retention levels in this last). Retention rates are high in the large trucking industry, as are job replenishment measures. Communications and business services appear to have weak vitality among retained firms – and retention rates almost 10 percent below the national average – but the insurance industry shows high vitality ratings in an otherwise modest performance in the FIRE sector.

## Metro Roanoke, VA

2001 firms analyzed:

10,302

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	220	115		
Retained Firms		110	50%	1.07
Sales	755,914	1,107,609	46.5%	0.38
Avg Jobs	10	18	80%	1.20
Replenishment	2,053	1,963	96%	1.15
Sales/Employee	107,988	100,692	-7%	0.73

### Startup Activity

96-01 Starts	1,052
Start Rate	16.4%
US Index	0.84

Low startup rates are pervasive. Among value-added industries, only three -- lumber, paper and fabricated metals -- indicate startup activity rates higher than the national average for the industry. (The number of firms involved is small.) Motor freight's low startup rates are no doubt influenced by a crowded local playing field and a high vitality set of retained players. Startup rates in FIRE and value added services are low.

The small number of retained startups from the 1996 pool (110) makes industry-specific analysis difficult. However, it is clear from the aggregate numbers that although the solid level of retained startups (7 percent above average) had difficulty moving into higher sales patterns, this may have been due to industry mix more than vitality, since job vitality measures are quite good; Retained startup average job change and job replenishment are 15 percent and 20 percent above average respectively. Two of the few industries with enough retained starts to analyze in any meaningful way showed solid vitality ratings -- special trade contractors and miscellaneous retail. But another, business services, did poorly.

### High Job Growth Firms:

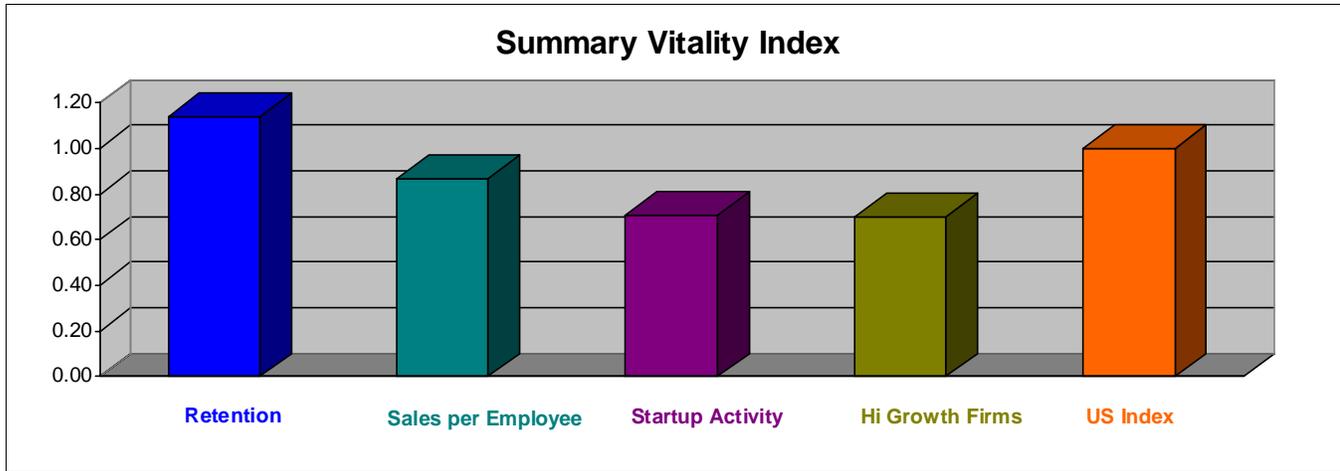
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	8,090	164	2.03%	1.00
Class I : < 5 Jobs>10 Jobs	5,110	127	2.49%	1.08
Class II : <10 Jobs>25 Jobs	6,581	54	0.72%	1.13
Class III : <25 Jobs>50 Jobs	7,514	37	0.49%	1.24
Class IV : <50 Jobs>100 Jobs	7,892	16	0.2000%	1.07
Class V : <100 Jobs> 250 Jobs	8,090	4	0.0500%	0.88

Despite relatively modest retention vitality ratings, the MSA supports a good number of high growth firms. Aggregate concentrations are only average, but four of five classes (Classes I-IV) reflect concentrations above national levels by as much as 24 percent. These economic engine firms will continue to generate growth in Roanoke, but the area's stability would be significantly aided by enhanced entrepreneurial performance.

# Metro Scranton-Wilkes-Barre-Hazleton, PA

2001 firms analyzed:

26,183



1.14      0.87      0.71      0.70      US = 1.00

The Scranton MSA includes Pennsylvania counties in three different ARC districts: Wyoming County in District 9C, the Northern Tier Regional Planning and Development Commission; Lackawanna and Luzerne Counties in PA District 9D, the Economic Development Council of Northeastern PA; and Columbia County in PA District 9G, the SEDA Council of Governments. The MSA is totally within the Appalachian region.

Summary vitality rates mirror the most common pattern for northeastern ARC MSAs – high overall retention rates (coupled with good vitality among retained firms), high retention rates for startup firms, and very low levels of startup activity. Many such areas demonstrate average to high concentrations of high growth firms, but the Scranton MSA does not; high growth rates in aggregate fall 30 percent below US averages. Nonetheless solid vitality measures among surviving firms suggests a reservoir of strength that will be complemented by new branch attraction not included in these measures.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	24,556	14,199		
Retained Firms		14,135	58%	1.14
Sales	466,007	726,666	55.9%	1.10
Avg Jobs	12	15	25%	0.60
Replenishment	275,493	206,322	75%	0.97
Sales/Employee	77,668	90,833	17%	0.87

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA's overall retention index is 14 percent above national levels, and business out-migration appears quite low – only 0.3 percent of firms from the original pool and 0.5 percent of all survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim. Sales vitality is high overall and job replenishment figures are just below national averages.

Sales per employee measures are high in a number of value added industries, including furniture, plastics, stone-clay-glass, primary metals, electronics and transport equipment. Communications sales per employee levels are only 11 percent below national levels – high for most Regional MSAs. In selected industries, vitality indices are positive in multiple categories. These include paper goods, chemicals, plastics, petroleum, primary metals, electronics and transport equipment.

## Metro Scranton-Wilkes-Barre-Hazleton, PA

2001 firms analyzed:

26,183

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	605	328		
Retained Firms		323	53%	1.14
Sales	665,447	748,772	12.5%	0.10
Avg Jobs	10	9	-10%	0.00
Replenishment	5,614	2,921	52%	0.63
Sales/Employee	83,181	106,967	29%	0.78

### Startup Activity

96-01 Starts	2,437
Start Rate	13.8%
US Index	0.71

Startup activity rates average 29 percent below national levels. Textiles, fabricated metals and industrial machinery all indicate above average startup activity rates, and electronics startups are only 5 percent below average. The financial sector reflects high startup activity in more than one segment, as do legal services. But communications, business services and other value-added industries bear the brunt of low level entrepreneurial activity in this ARC MSA.

Although low in aggregate, startup vitality measures show hopeful signs in specific industries. Like construction vitality overall, retained startups in the general contracting industry indicate high growth patterns. The FIRE sector shows high vitality among retained startups. Perhaps most importantly, the technology-driven business services industry not only experienced a level of startup retention more than 80 percent above the national average. This was coupled with high job change rates among surviving startups in an area which, as in many ARC districts, business and technology service gaps are large.

### High Job Growth Firms:

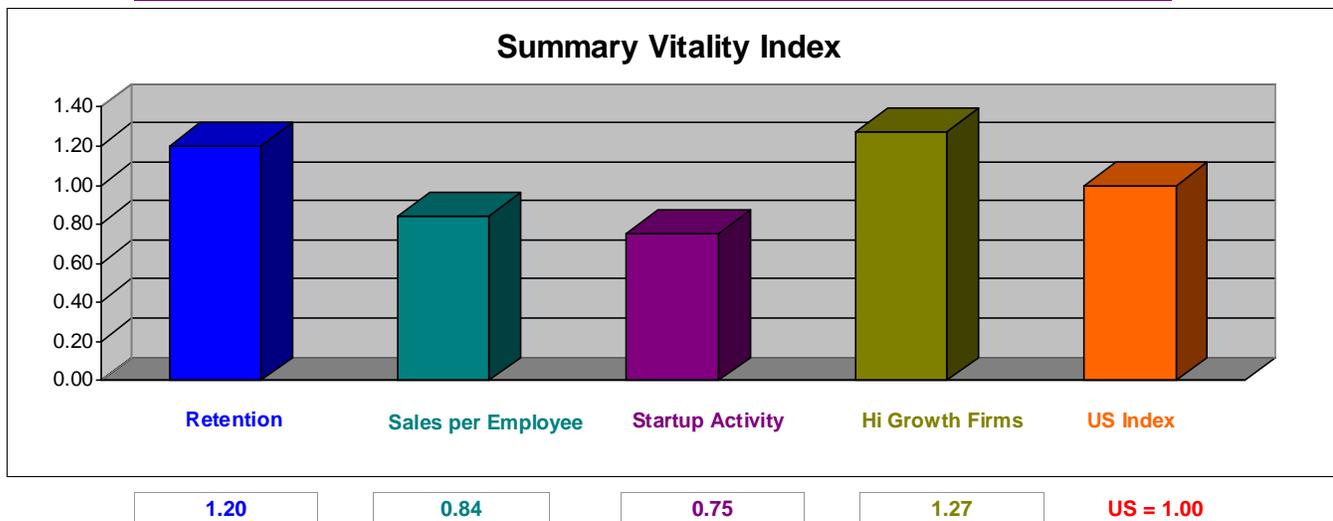
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	22,415	319	1.42%	0.70
Class I : < 5 Jobs>10 Jobs	15,545	273	1.76%	0.76
Class II : <10 Jobs>25 Jobs	18,852	86	0.72%	0.63
Class III : <25 Jobs>50 Jobs	21,082	62	0.29%	0.74
Class IV : <50 Jobs>100 Jobs	21,918	25	0.1100%	0.60
Class V : <100 Jobs> 250 Jobs	22,415	7	0.0300%	0.56

High growth concentrations in the MSA are low across the board, ranging from 0.56 among the largest class of firms, Class V, to no higher than 0.76, or 24 percent below average, among firms which began the measurement period with fewer than five jobs and grew to at least 10 by the end of 2000.

# Metro Sharon, PA

2001 firms analyzed:

4,985



The Sharon MSA is contiguous with Mercer County, PA, which is also within the eight county ARC District 9A, the Northwest PA Regional Planning and Development Commission. Sharon is one of two MSAs (Erie is the other) encompassed by the District.

Spurred by a combination of industrial and retail growth, the well-located Sharon MSA indicates high summary vitality scores in every category except entrepreneurial activity. Overall retention rates are 20 percent above national levels, backed by some strong retained firm vitality indices. Startup retention rates are even higher, and the concentration of high growth firms in this small MSA is more than one-quarter greater than the national level.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,032	2,462		
Retained Firms		2,441	61%	1.20
Sales	525,117	781,702	48.9%	0.96
Avg Jobs	11	15	36%	0.87
Replenishment	41,026	36,399	89%	1.15
Sales/Employee	75,017	86,856	16%	0.84

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

About 0.5 percent of Sharon firms from the original 1996 pool relocated outside the one county MSA by the beginning of 2001 – 0.9 percent of the survivors. (While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.) This is a relatively high proportion, but not wholly unusual for a MSA limited to a single county area. Out-migration is also not a major concern in light of other vitality ratings, unless it were to be concentrated among young firms.

Survivor sales change rates lag US patterns mildly, but job replenishment scores suggest that this may not be a major concern. Job replenishment rates in aggregate run 15 percent above average, suggesting retention of larger firms and expansions across industries and size categories, a notion supported by the area’s high growth firm concentrations. Aggregate sales per employee levels among retained firms are still about 16 percent below average.

Retained construction industry firms clearly boomed over the analysis period, showing leading retention and vitality indices across the board (but lower in the sales per employee ratings). Major industry strengths included core area manufacturers: food products, wood products and a series of metalworking industries – primary metals, fabricated metals, industrial machinery and electronics. Retained firms in some minor industries – e.g., chemicals and plastics – also performed well in vitality indices. Sales per employee positioning remained relatively low among survivors in most industries – but led in primary and fabricated metals.

The area’s small number of communications firms also did well in retention and vitality indices. (Startup rates in communications reach average levels due to the small number of existing firms.) Likewise, technology-driven business services indicate high retention and sales vitality ratings among retained firms. Sales per employee are particularly high, suggesting good competitive positioning.

Retained retail industries (which in this rural collector MSA often bring in outside dollars) indicate high retention patterns across the board, and leading vitality measures, especially employment vitality, in many.

## Metro Sharon, PA

2001 firms analyzed:

4,985

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	94	59		
Retained Firms		58	62%	1.32
Sales	501,250	1,943,636	287.8%	2.36
Avg Jobs	5	10	100%	1.50
Replenishment	463	564	122%	1.46
Sales/Employee	100,250	194,364	94%	1.41

### Startup Activity

96-01 Starts	492
Start Rate	14.6%
US Index	0.75

The MSA's weak link is clearly entrepreneurial activity. The startup rate is only 75 percent of the national average, and well below ARC average rates as well. The demand for, and vitality of, startup firms is evident. Startup retention rates are 32 percent above average, and retained startups (only 58 could be traced from the 1996 pool) evidence leading indicators in every vitality index: sales vitality, employment change and job replenishment, Retained startup sales per employee rates are more than 40 percent above the national average, capping an impressive showing.

Startup activity is unfortunately low in most industries, but quite strong in core manufacturing groups, including leading rates in primary metals, fabricated metals, industrial machinery, electronics and transport equipment. Reflecting the MSA's transportation infrastructure and increasing use as a retail destination point for surrounding areas, the lodging industry also shows startups at a higher than average rate. Business service and communications startup activity lags national levels slightly, but are significantly higher than the average rate in the MSA.

### High Job Growth Firms:

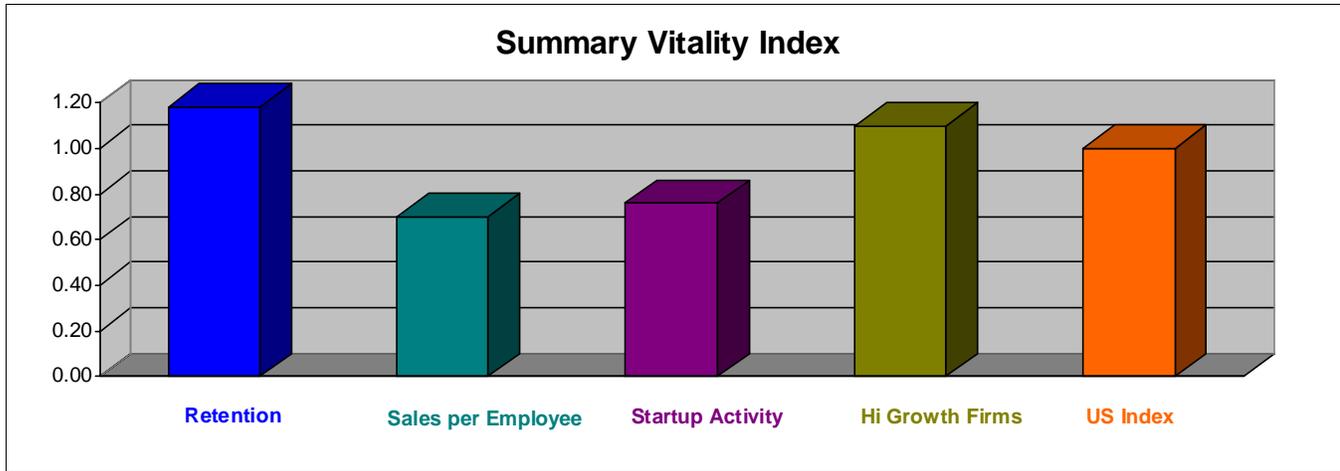
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,720	96	2.58%	1.27
Class I : < 5 Jobs>10 Jobs	2,549	79	3.10%	1.35
Class II : <10 Jobs>25 Jobs	3,163	23	0.72%	1.00
Class III : <25 Jobs>50 Jobs	3,510	16	0.46%	1.15
Class IV : <50 Jobs>100 Jobs	3,643	11	0.3000%	1.59
Class V : <100 Jobs> 250 Jobs	3,720	1	0.0300%	0.48

The MSA indicates concentrations of high growth firms at or in excess of the US average in all employment classes analyzed except the largest, Class V. Aggregate concentrations are 27 percent above average. This is a very positive indicator, although a high number of these firms are likely to be retail branch facilities lured by the development of commercial activity. Nevertheless the significant concentrations of small, high growth firms are likely to be relatively young and thus for the time being mitigate the area's poor entrepreneurial activity performance. Coupled with very positive retention and vitality rates among value added industries, the vitality outlook for this MSA, and the opportunity to spread benefits to other areas of the ARC District, are quite good.

# Metro State College, PA

2001 firms analyzed:

5,193



1.18      0.70      0.76      1.10      US = 1.00

The State College MSA is contiguous with Centre County PA, fully encompassed by ARC District 9G, the SEDA Council of Governments. Three other counties in the SEDA COG district comprise part or all of three other MSAs.

As is the case in every PA MSA that includes ARC counties, entrepreneurial activity in the State college MSA lags US patterns overall, despite leading rates in a smattering of industries. Vitality rates among retained startups – and the startup retention rate itself – are excellent. The area also boasts a concentration of high growth firms some 10 percent higher than the US average, focused largely among smaller firms.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,830	2,303		
Retained Firms		2,285	60%	1.18
Sales	459,641	731,183	59.1%	1.17
Avg Jobs	17	24	41%	0.99
Replenishment	61,341	55,037	90%	1.17
Sales/Employee	76,607	73,118	-5%	0.70

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Overall retention rates run 18 percent above the national average. Over the five year period reviewed, only eighteen firms were identified as out-migrants from the 1996 pool, a 0.5 percent rate and 0.8 percent among surviving firms – not a troublesome level for a single county MSA. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim. Aggregate sales and job vitality measures among retained firms are quite high, rating 17 percent above national patterns for both sales change vitality and job replenishment. Aggregate sales per employee levels are considerably lower than in the Appalachian region overall.

The area's small manufacturing sector indicated at least some high vitality ratings among about two-thirds of its manufacturing industry groups. Wood products and furniture both did well, showing high indices in all categories. Retained firms in chemicals and metalworking industries also did well. Although fabricated metals retention rates were below par, retained firms scored high on sales and job vitality indices, Retention and multiple vitality rates among retained firms were also excellent in industrial machinery, instruments and miscellaneous manufacturing. Electronics indicates outstanding retention and sales vitality rates. In most heavy industries, sales per employee positioning among retained firms are approaching US levels.

Retention and job vitality among retained firms in technology based services – communications and business services – are high, although sales vitality and sales per employee appear to lag. Health and professional support services, both legal and engineering-research, also indicate high vitality factors in multiple categories.

## Metro State College, PA

2001 firms analyzed:

5,193

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	78	49		
Retained Firms		48	62%	1.32
Sales	446,875	1,602,222	258.5%	2.12
Avg Jobs	6	16	167%	2.50
Replenishment	458	772	169%	2.03
Sales/Employee	74,479	100,139	34%	0.73

### Startup Activity

96-01 Starts	504
Start Rate	14.9%
US Index	0.76

Startup activity in plastics and electronics are strong. High levels of entrepreneurial activity in wholesale durables likely reflect the vitality of core manufacturing groups, and activity in engineering-research almost reaches average levels. But all other startup activity lags seriously, including in the technology-driven communications and businesses services industries.

As is the case in some other ARC-based metros, the low level of startup activity contrasts sharply to the experience of area entrepreneurs. In State College, startups survived the five-year analysis period at a rate 32 percent above the US average. Startup retention and vitality indices were excellent in some technology-based industries, including electronics and engineering-research. However, business services retention was weak, as were both sales and job change measures among the small number of business services firms. Sales per employee levels among retained electronics starts are about 5 percent below average – but significantly better than average in engineering-research. Retained business service startups also indicate high sales per employee levels.

### High Job Growth Firms:

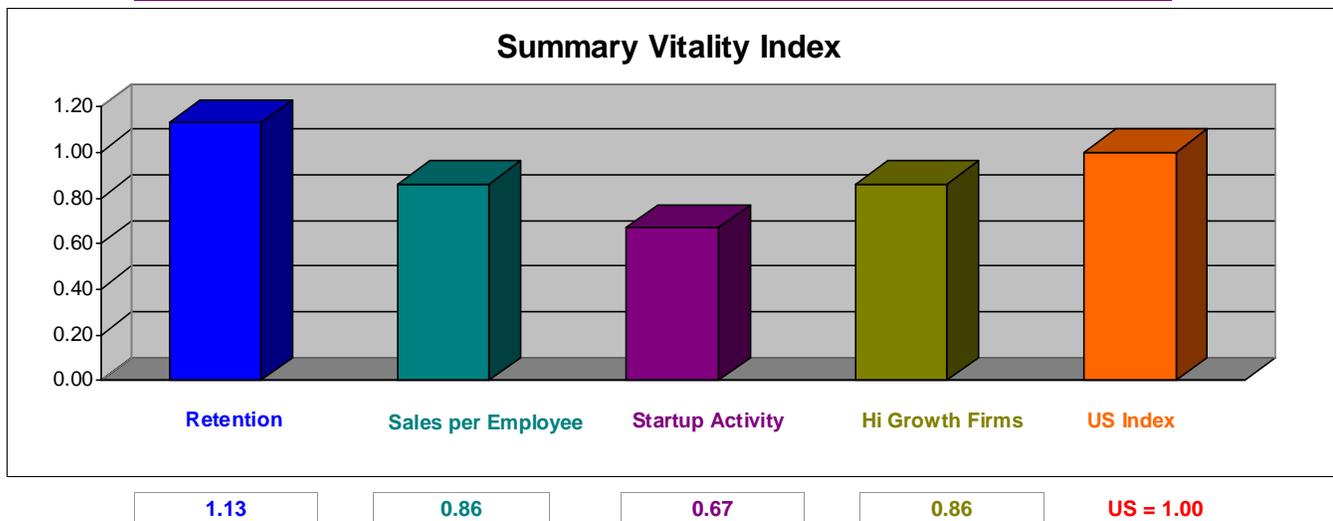
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,531	79	2.24%	1.10
Class I : < 5 Jobs>10 Jobs	2,230	61	2.74%	1.19
Class II : <10 Jobs>25 Jobs	2,868	29	0.72%	1.40
Class III : <25 Jobs>50 Jobs	3,295	14	0.42%	1.07
Class IV : <50 Jobs>100 Jobs	3,443	4	0.1200%	0.61
Class V : <100 Jobs> 250 Jobs	3,531	2	0.0600%	1.01

The area's high growth index is 10 percent above US levels in the aggregate rate. The highest concentrations of high growth firms are in the smaller employment classes (Classes I, II and III), indicating that the area's younger firms may be developing into its economic engines. The dearth of startup activity is an anomaly that could be rectified with ongoing development efforts in this university center.

## Metro Steubenville-Weirton, OH-WV

2001 firms analyzed:

4,245



The Steubenville-Weirton MSA includes three ARC counties in two different districts: Jefferson OH in District 8C, the Ohio Mid-Eastern Government Association, and both Brooke and Hancock Counties in ARC District 13K, comprising the whole of the B-H-J Metropolitan Planning Commission.

This is an area with indices indicates low vitality patterns seen in a number of other northern ARC-based MSAs. The area's summary retention rate is high (1.13), and is coupled with low startup activity – in this case a full one-third below national levels. High growth concentrations are also low (14 percent below average). And perhaps most tellingly, startup retention rates lag US patterns by 20 percent. Aggregate vitality rates among all retained firms and retained startups alike are also quite low.

### Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	3,725	2,141		
Retained Firms		2,118	57%	1.13
Sales	539,888	715,803	32.6%	0.64
Avg Jobs	13	16	38%	0.92
Replenishment	46,653	36,788	79%	1.02
Sales/Employee	77,127	89,475	16%	0.86

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While the MSA and thus, the business out-migration sample are small, the levels of out-migration appear troublesome. 0.6 percent of all firms from the 1996 pool and 1.1 percent of all survivors relocated outside the MSA between 1996 and the beginning of 2001 – a relatively high rate. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retained firms in the MSA indicated sales vitality patterns significantly under par. Job vitality was better, and replenishment slightly above, US averages. Among retained firms, sales per employee rates remained low in aggregate, suggesting lagging competitive position. Vitality ratings among building contractors were high, a positive indicator of local development, but vitality measures among manufacturing industries were quite mixed. As in many other ARC areas, wood products indicated high vitality indices. Chemicals evidenced high sales vitality among retained firms, and a high sales per employee index – but low job vitality scores. Retention rates were low in fabricated metals, but high in sales vitality and job replenishment indices. Sales per employee were only slightly below national levels. Industrial machinery retention and vitality measures were high across the board. Retained motor freight firms indicated high job vitality measures and leading retention rates.

Sales vitality rates among retained communications firms were excellent, but retention was slightly below average and job vitality quite low. Sales per employee indices were very low, suggesting that the sales vitality measures were more catch-up than leading. Technology-driven business services measures were high in both retention and job change categories, but low sales and sales per employee rates raise concerns about the industry, especially in light of low startup activity rates discussed below.

## Metro Steubenville-Weirton, OH-WV

2001 firms analyzed:

4,245

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	67	26		
Retained Firms		25	37%	0.80
Sales	238,095	382,609	60.7%	0.50
Avg Jobs	5	6	20%	0.30
Replenishment	321	144	45%	0.54
Sales/Employee	47,619	63,768	34%	0.46

### Startup Activity

96-01 Starts	364
Start Rate	13.1%
US Index	0.67

Startup activity rates are very low in almost every major industry and only 67 percent of the US average in aggregate. While rates among some manufacturing industries are above average, the number of firms involved makes it difficult to lend this much weight. With the exception of fabricated metals, startup activity in almost every value added manufacturing and service industry appears low.

Startup retention rates are low. Only 25 retained startups from the 1996 pool (already small) could be identified, making industry-specific analysis difficult. It is nevertheless worth noting that inconclusive data showed at least some high vitality rates among the handful of retained startups in construction, motor freight and communications. In aggregate, retained startups did not do well, indicating vitality ratings much lower than average in every category – sales change, the two job vitality measures and sales per employee.

### High Job Growth Firms:

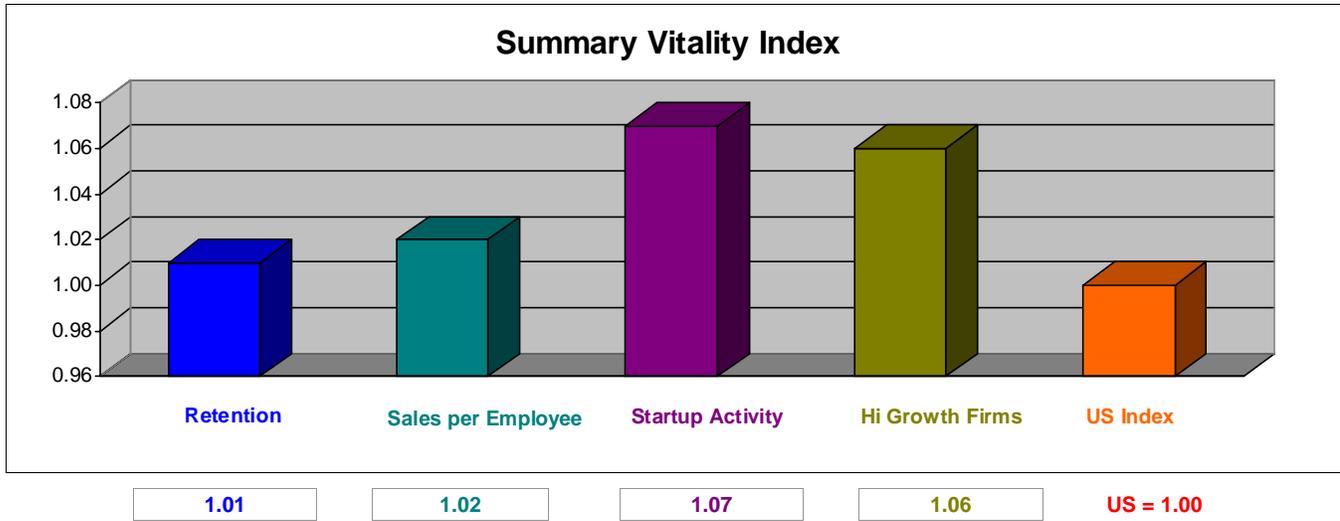
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes		59	1.74%	0.86
Class I : < 5 Jobs>10 Jobs	2,196	47	2.14%	0.93
Class II : <10 Jobs>25 Jobs	2,811	18	0.72%	0.88
Class III : <25 Jobs>50 Jobs	3,174	9	0.28%	0.72
Class IV : <50 Jobs>100 Jobs	3,331	5	0.1500%	0.79
Class V : <100 Jobs> 250 Jobs				

The MSA's aggregate high growth firm concentration was 14 percent below average, ranging from a high score of 0.93 (7 percent below US patterns) in the smallest employment Class I, down to 0.72 in Class III. No high growth firms were identified in the largest analyzed employment class, Class V.

# Metro Tuscaloosa, AL

2001 firms analyzed:

5,730



The Tuscaloosa MSA includes Tuscaloosa County, AL, one of six counties in ARC District 1D, the West Alabama Planning and Development Council.

The MSA has enviably solid summary vitality ratings across the board. Both overall retention and startup retention rates are very close to national averages, while levels of entrepreneurial activity (1.07) and concentrations of high growth firms of all ages (1.06) are significantly above national levels. Most aggregate vitality ratings for retained firms and retained startups alike lead US indices.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,634	2,362		
Retained Firms		2,346	51%	1.01
Sales	514,913	951,905	84.9%	1.67
Avg Jobs	14	23	71%	1.71
Replenishment	61,527	54,779	89%	1.16
Sales/Employee	73,559	105,767	44%	1.02

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

At 1 percent above the US average, aggregate retention rates in this MSA are not a concern. Business out-migration rates were a low 0.3 percent from the 1996 pool of firms tracked, and 0.7 percent of identified survivors. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Aggregate vitality growth measures are very strong across the board, including scores of 1.67 in sales change vitality among retained firms, 1.71 job change vitality and a job replenishment rating 16 percent above average. The measures indicate good expansion activity, and the retention and growth of larger as well as smaller firms.

Retention and vitality among retained firms appear very strong in agricultural services, although sales per employee remain lower than US averages. Construction also indicates high retention and vitality in selected measures. Performance is mixed among many manufacturing industries, with several reflecting modest retention rates (and a small number of firms) but high sales or job vitality indicators among retained firms in the industry; these include food products, fabricated metals and instruments. Others (still small numbers of firms) suggest leading retention coupled with one or two high vitality measures, including electronics, industrial machinery and primary metals (these are standout industry performances), stone-clay-glass and printing.

Among value added services, technology-driven communications and business services indicate relatively low vitality measures, but health and legal services are quite strong in both retention and vitality ratings.

## Metro Tuscaloosa, AL

2001 firms analyzed:

5,730

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	140	66		
Retained Firms		64	46%	0.98
Sales	490,984	683,333	39.2%	0.32
Avg Jobs	6	11	83%	1.25
Replenishment	802	702	88%	1.05
Sales/Employee	81,831	75,926	-7%	0.55

### Startup Activity

96-01 Starts	757
Start Rate	20.9%
US Index	1.07

Startup activity is 7 percent above the US, and 20 index points above the Appalachian regional level. Startup rates are strong in construction. Startup activity is weaker among most manufacturers, but higher rates in the technology-oriented instruments industry and within the MSA's small base of plastics firms. Startup activity in business services (including computer-related) and professional support services are high.

While vitality ratings among retained startups are not as high as within the general business population, they are nonetheless quite solid. Startup retention dips below national averages by 2 percent. Aggregate sales vitality among retained startups is quite low, as is the retained startup sales per employee rate, both of which could be significantly affected by industry mix. However, both job vitality ratings are high among retained startup firms in aggregate.

Due to the scale of the MSA and the small number of retained startups, industry breakdowns of vitality measures are of limited value. However, retained startups in all three construction industries appear to have had a difficult time generating high vitality ratings. Retained startups in printing, plastics and industrial machinery developed at least some high vitality measures in both sales and job categories. Retention among motor freight startups was poor – but job change ratings led national patterns among those which did survive. However, retained startups appear to have achieved their best vitality ratings among personal service and retail firms.

### High Job Growth Firms:

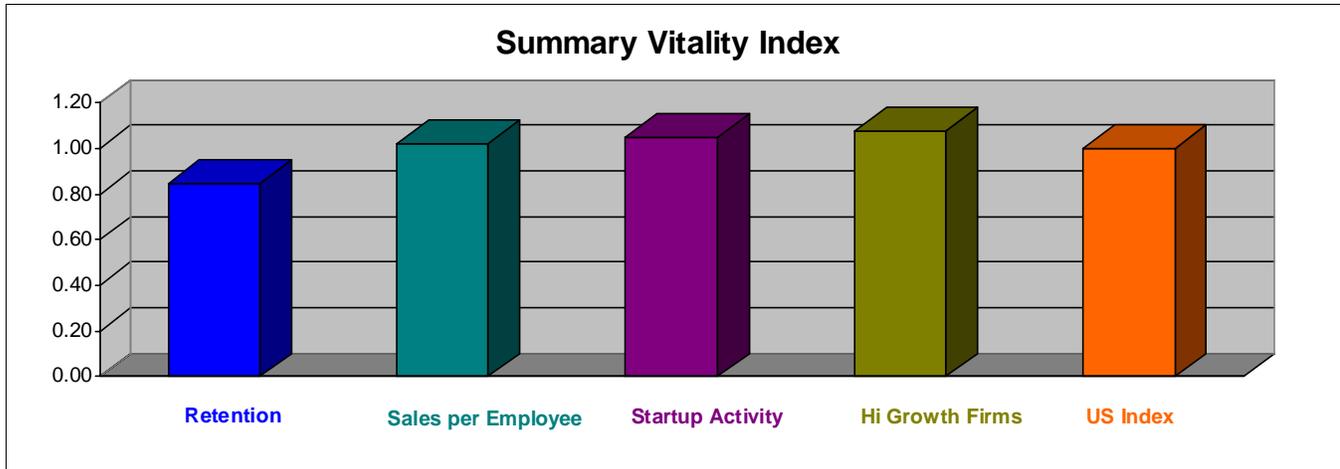
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	3,957	85	2.15%	1.06
Class I : < 5 Jobs>10 Jobs	2,309	69	2.99%	1.30
Class II : <10 Jobs>25 Jobs	3,109	20	0.72%	0.89
Class III : <25 Jobs>50 Jobs	3,638	13	0.36%	0.90
Class IV : <50 Jobs>100 Jobs	3,848	9	0.2300%	1.23
Class V : <100 Jobs> 250 Jobs	3,957	3	0.0800%	1.35

The MSA has higher than average concentrations of high growth firms in both small and large employment classes (Classes I, IV and V). Unlike ARC metros which rely on current high growth concentrations for future vitality, high growth firms appear to act as a supplement here to solid retention indices and leading rates of entrepreneurial activity.

# Metro Washington, DC-MD-VA-WV

2001 firms analyzed:

211,379



0.85      1.02      1.05      1.08      US = 1.00

The Washington DC MSA includes Berkeley and Jefferson Counties in West Virginia, both part of ARC District 13I, the Region 9 Eastern Panhandle Regional Planning and Development Council.

The Washington MSA is one which has already spread its technology influence to outlying counties, a dynamic whose influence is almost certain to expand still further to currently outlying areas of the MSA. The MSA's low overall retention scores, including low startup retention, are conditioned by two factors: First, the higher failure rates and churn cycles among technology intensive industries and areas, particularly communications and technology-based services; and second, the relatively new nature of explosive entrepreneurial and branch growth in the area, much of it since 1996. This recent growth is not captured in the analysis of the pool of firms which existed in 1996 -- and for which retention measures were analyzed.

The area indicates high levels of summary startup vitality, 5 percent above US average and ranging much higher in selected industries.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	175,066	75,772		
Retained Firms		75,053	43%	0.85
Sales	655,145	1,164,768	77.8%	1.53
Avg Jobs	13	21	62%	1.48
Replenishment	2,090,577	1,542,575	74%	0.96
Sales/Employee	93,592	105,888	13%	1.02

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA's low overall retention rate (0.85) is offset by a series of leading vitality scores. Retained firm sales vitality runs 53 percent above average in aggregate, and average job vitality 48 percent above average. The aggregate sales per employee rate is 1.02. As is the case in many large and disparate metros, vitality rates undoubtedly vary widely among more and less developed areas.

The business out-migration rate from the MSA is 0.4 percent from the pool of 1996 firms tracked, and 0.9 percent among the group of survivor firms. This rate is considerably lower than other large metros, like New York, examined for this analysis. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retention vitality among the largest construction industries is mixed. Retention rates themselves are low, but sales vitality is good and job vitality among retained firms at average levels. Retention rates among manufacturing industries are generally low, but the same industries indicate high sales and job vitality measures among retained firms. In most – fabricated metals, industrial machinery and electronics – sales per employee rates among retained firms are also high. Plastics also evidences high job and sales vitality, but with lower sales per employee rates.

Both communications and business services are concentrated in technology services, and reflect lower than average retention levels for the larger industries. Vitality rates are higher, although sales vitality is dampened by the exclusion of headquarters and branch facilities from the sales analysis to avoid distortions. Vitality ratings in business support services, including legal and engineering-research, lead most national patterns.

## Metro Washington, DC-MD-VA-WV

2001 firms analyzed:

211,379

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	6,381	2,460		
Retained Firms		2,419	38%	0.81
Sales	607,057	1,054,477	73.7%	0.60
Avg Jobs	8	21	163%	2.44
Replenishment	50,628	48,976	97%	1.16
Sales/Employee	101,176	75,320	-26%	0.55

### Startup Activity

96-01 Starts	28,214
Start Rate	20.5%
US Index	1.05

Extremely high concentrations of entrepreneurial activity in technology services are the most likely cause of low startup retention patterns throughout the MSA. Vitality rates among retained startups are low in the sales change category, but much higher than average in both job vitality indices. Sales per employee rates among retained startups are low.

Startup activity rates are high in most value-added or potential export services industries. Among manufacturers, startup activity is significant and particularly high in food products, chemicals and the series of heavier industries – fabricated metals, industrial machinery, electronics, transport equipment and instruments. Vitality is particularly high among retained industrial machinery startups. Communications startups developed at rates 17 percent above average, and business services starts are at US levels and higher in technology services. Retained communications startups indicated high levels of job vitality, in both average survivor job change and replenishment categories, as did business services. Vitality rates, as well as startup activity, is high among retained engineering-research startups.

### High Job Growth Firms:

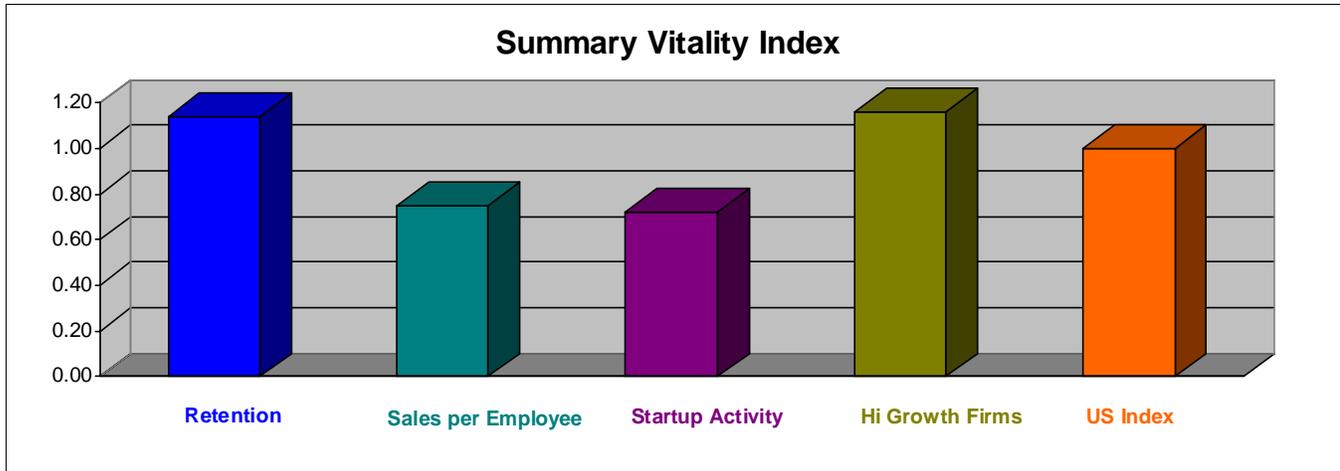
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	159,957	3,516	2.20%	1.08
Class I : < 5 Jobs>10 Jobs	104,996	2,710	2.58%	1.12
Class II : <10 Jobs>25 Jobs	130,750	1,122	0.72%	1.19
Class III : <25 Jobs>50 Jobs	149,219	765	0.51%	1.29
Class IV : <50 Jobs>100 Jobs	156,081	418	0.2700%	1.41
Class V : <100 Jobs> 250 Jobs	159,957	153	0.1000%	1.71

Every job class category in the MSA indicates higher than average concentrations of high growth firms. The highest rates tend to be among larger firms. The high growth firm concentration couples with a significant advantage in entrepreneurial vitality to create an economic powerhouse oriented toward new technology firms which will increasingly complement the landscape of rural areas in the MSA and beyond.

# Metro Wheeling, WV-OH

2001 firms analyzed:

5,593



1.14      0.75      0.72      1.16      US = 1.00

The Wheeling MSA encompasses, Marshall and Ohio Counties in West Virginia's ARC District 13J, the Region 10 Bel-o-Mar Regional Council and Planning Commission; and Belmont County OH, in District 8C, the Ohio Mid-Eastern Governments Association.

The MSA indicates impressively high summary vitality rates in all indices except startup vitality, which runs almost one-third below national levels, and substantially below other ARC patterns. Aggregate vitality indices for retained firms are high with the exception of sales per employee rates, but aggregate retained startup vitality rates lag in all measures. High growth firm rates are excellent in all categories. But, as the discussion indicates, the vitality measures should be read in conjunction with the MSA's extremely low sales per employee rates, which indicate that in almost every high vitality industry, low sales volume among retained firms tends to pump up the sales change.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,846	2,785		
Retained Firms		2,771	57%	1.14
Sales	440,227	700,150	59.0%	1.16
Avg Jobs	11	15	45%	1.09
Replenishment	52,637	42,592	81%	1.05
Sales/Employee	62,890	77,794	24%	0.75

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

The MSA's aggregate retention rate runs 14 percent above the US average. Measures in every sales and employment vitality category, lead US patterns. The high growth indices are somewhat mitigated by low sales per employee rates, which indicate that high sales vitality patterns among retained firms are more an issue of catching up to average US levels than actual leading position.

The MSA indicates a low business out-migration rate of 0.3 percent from the 1996 pool of firms tracked, and about 0.5 percent among surviving firms from that pool. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Retention and vitality indices are excellent in all construction trades, but extremely low sales per employee rates among survivors suggest an industry that has lagged for some time and is only now beginning to catch up. Only a handful of manufacturing industries exhibit leading vitality rates, among them food products, wood products and furniture, printing and a variety of heavy industries, including primary metals, fabricated metals and industrial machinery. Survivor sales per employee rates are low in every one of these. Sales vitality and survivor sales per employee rates are much better in freight transport, and the communications industry reflects impressive vitality across the board – but again, low sales rates overall suggest that the vitality scores by themselves may be misleading. More in line with other northeastern ARC metros, technology-driven business services rates are high in the retention index and very low in sales and job vitality ratings, including the sales per employee category. Engineering-research industries are the exception, where high retention rates are matched by high vitality indices and high sales per employee rates.

## Metro Wheeling, WV-OH

2001 firms analyzed:

5,593

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	126	66		
Retained Firms		64	51%	1.09
Sales	450,000	531,579	18.1%	0.15
Avg Jobs	6	7	17%	0.25
Replenishment	701	450	64%	0.77
Sales/Employee	75,000	88,596	18%	0.64

### Startup Activity

96-01 Starts	515
Start Rate	14.0%
US Index	0.72

Startup activity rates are very low. However, wood products and furniture, fabricated metals, industrial machinery electronics and transport equipment boast handfuls of startups that indicate leading levels of activity in each industry (relative to the number of industry firms in the MSA).

Low startup activity levels find their match in low aggregate vitality scores among retained startups from 1996. The number of identified retained startups is low (64), making industry-specific analysis difficult. In aggregate, sales vitality rates are very weak among surviving starts, and average survivor job change not much better. Job replenishment rates are about three-quarters of the US average. In small part as a result of this relatively higher rate, but more importantly due to small sales volume to begin with and lackluster growth, sales per employee rates among surviving starts are also very low.

### High Job Growth Firms:

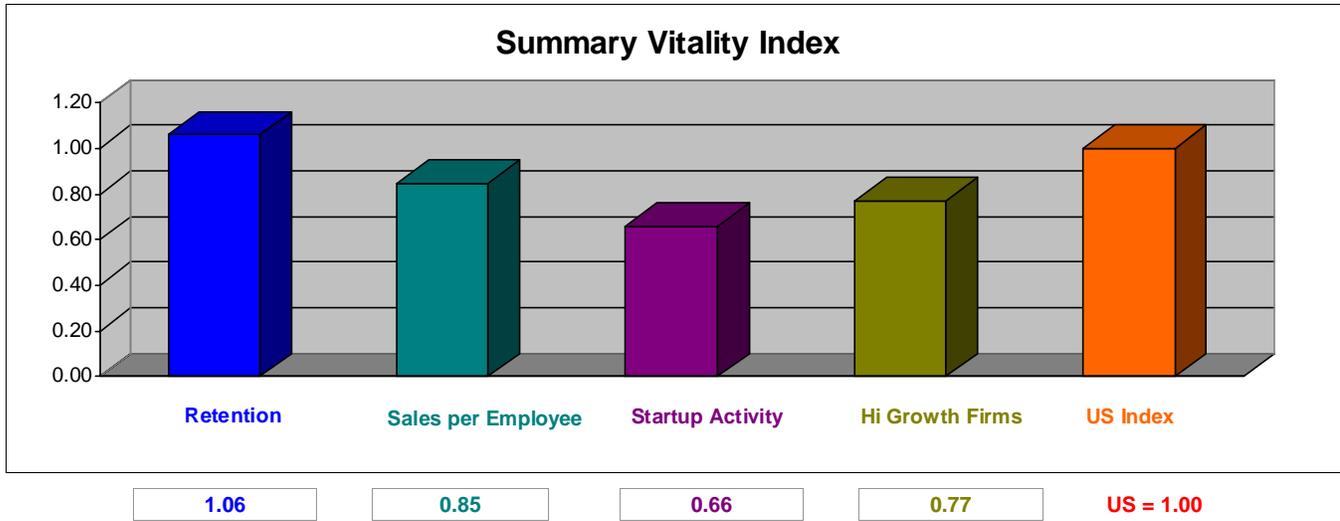
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	4,453	105	2.36%	1.16
Class I : < 5 Jobs>10 Jobs	2,849	85	2.98%	1.30
Class II : <10 Jobs>25 Jobs	3,641	34	0.72%	1.29
Class III : <25 Jobs>50 Jobs	4,165	18	0.43%	1.09
Class IV : <50 Jobs>100 Jobs	4,342	11	0.2500%	1.33
Class V : <100 Jobs> 250 Jobs	4,453	3	0.0700%	1.20

Given the problems with this overall picture, the leading concentration of high growth firms in the MSA is interesting. It seems likely that this group is driving whatever vitality exists in the MSA, and to whatever extent the area thrives, these firms, along with large, low growth but relatively stable mainstays, are responsible.

# Metro Williamsport, PA

2001 firms analyzed:

4,611



The Williamsport MSA is contiguous with Lycoming County in ARC District 9G, the SEDA Council of Governments. It is one of four metros involved in the District.

The MSA fits the vitality patterns of most metros in the northern portion of the Appalachian region, including high retention, average to high startup retention (here at the low end of the pattern) and very low summary rates for both entrepreneurial activity and concentrations of high growth firms. In this case, most aggregate vitality rates are low as well, and concentrations of high growth firms lag across the board. Business out-migration rates are high, although mitigated by generally higher MSA relocation levels among single county metros.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	4,554	2,457		
Retained Firms		2,427	53%	1.06
Sales	503,869	617,682	22.6%	0.45
Avg Jobs	12	16	42%	1.00
Replenishment	50,713	39,804	78%	1.02
Sales/Employee	83,978	88,240	5%	0.85

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

Aggregate retention rates are 6 percent above average, but appear to be more a testament to very low entrepreneurial pressure as much as healthy stability. Business out-migration accounted for 0.7 percent of the losses from the 1996 analyzed pool of firms, and makes up 1.2 percent of the survivor count – a relatively high margin. While the number of migrant firms is the same in both calculations, the pool of firms to which it is compared differs by the number of area firms that ceased operations in the interim.

Job vitality measures among retained firms appeared good in aggregate, but the sales change measure lagged seriously. Sales per employee rates among survivors are 15 percent below the corresponding group at the national level. Job and sales vitality and sales per employee rates are low among all construction segments. Retention and vitality rates were considerably better in a number of core manufacturing industries, including food products and wood products, chemicals and plastics. Apparel reflected high job vitality ratings but low retention, a pattern also found in electronics. Industrial machinery stood out as a high vitality performer among a limited number of retained firms. Electronics, plastics, wood and food products firms also developed sales per employee rates for retained firms above national averages. Retention and sales change rates in transport equipment led national patterns.

Air and transportation services evidenced good retention indices and vitality ratings in small industries. However, both communications and business services, the most technology-driven services, indicate very low vitality (although good business services retention). Some retail industries show solid vitality ratings, as do legal services, and engineering-research.

## Metro Williamsport, PA

2001 firms analyzed:

4,611

### Startups:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	124	60		
Retained Firms		58	47%	1.00
Sales	550,467	847,170	53.9%	0.44
Avg Jobs	15	13	-13%	0.00
Replenishment	1,783	745	42%	0.50
Sales/Employee	50,042	77,015	54%	0.56

### Startup Activity

96-01 Starts	413
Start Rate	13.0%
US Index	0.66

Startup activity is the area's weakest vitality category. Overall activity rates fall 34 percent below national norms. Only a handful of significant industries reflect leading startup activity rates. These include heavy construction, wood products, furniture, chemicals, primary metals, non-deposit financial institutions and brokers. While lagging US patterns, both communications and business services industries show startup activity rates higher than the rest of the MSA.

Overall, startup retention was average, and the aggregate vitality scores of retained starts stayed far behind US patterns. Retained startups also performed well in some of these same industries. Startups showed high retention rates heavy construction, wood products, chemicals and business services. Business services, wood products, chemicals and industrial machinery also indicated high vitality rates, usually in both job and sales indices. Sales per employee rates among retained startups remained low almost across the board – but very high in the technology-driven business services industry.

### High Job Growth Firms:

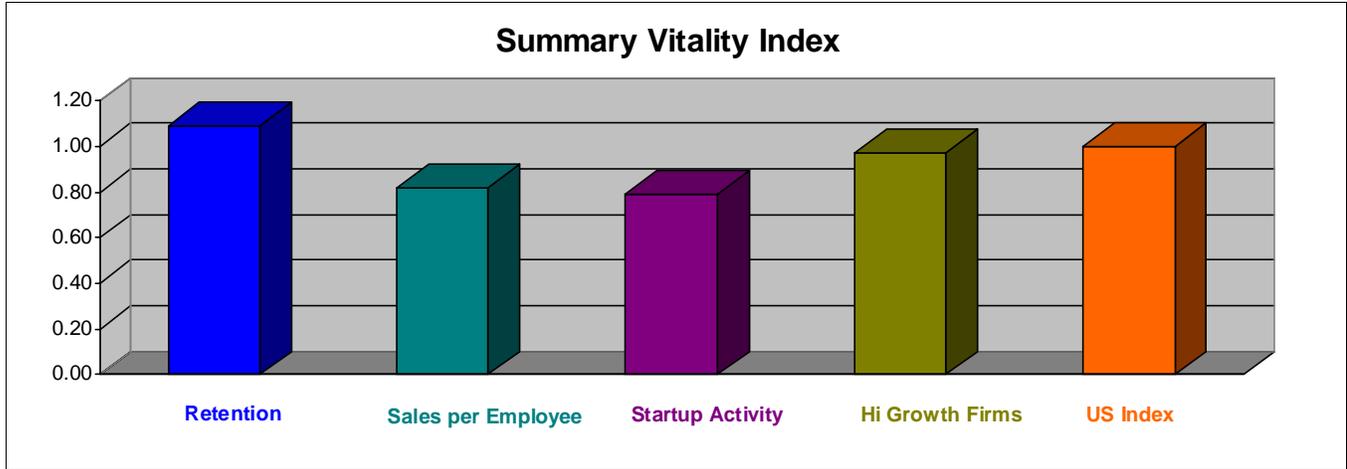
	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes		66	1.57%	0.77
Class I : < 5 Jobs>10 Jobs	2,887	56	1.94%	0.84
Class II : <10 Jobs>25 Jobs	3,577	21	0.72%	0.81
Class III : <25 Jobs>50 Jobs	3,951	11	0.28%	0.70
Class IV : <50 Jobs>100 Jobs	4,130	6	0.1500%	0.76
Class V : <100 Jobs> 250 Jobs				

Concentrations of high growth firms lagged national patterns both in aggregate and in every employment class size examined. Concentrations ranged as low as 70 percent of national levels in Class III (less than 25 jobs growing to more than 50) and as high as 84 percent of the US average in Class I.

# Metro Youngstown-Warren, OH

2001 firms analyzed:

21,228



1.09      0.82      0.79      0.97      US = 1.00

The Youngstown MSA includes Columbiana County, OH, within ARC District 8C, the Ohio Mid-Eastern Governments Association and one of four MSAs covering ARC counties in District 8C.

The MSA indicates a high summary retention score and an identical (1.09) summary startup survival rate. Vitality patterns among retained firms are generally low, and lower still among the population of retained startups. High growth firm concentrations are good at lower employment levels – a hopeful sign in a lagging entrepreneurial economy – but very low in the larger employment classes analyzed.

## Retention:

	1996	5 Year Survivors	Change Rate	US Index
All Firms	19,849	11,008		
Retained Firms		10,941	55%	1.09
Sales	505,053	764,052	51.3%	1.01
Avg Jobs	13	15	15%	0.37
Replenishment	239,035	157,796	66%	0.86
Sales/Employee	72,150	84,895	18%	0.82

note: Sales per employee calculations use employment data only from firms for which sales can also be identified. Sales data reflects single site firms only.

While aggregate retention rates are quite high and sales change among retained firms is slightly above average, job vitality indices are very low. Sales per employee rates advanced somewhat against US averages during the analysis period, but still lag by 18 percent.

Construction vitality appears significant; the MSA is probably experiencing similar impacts from commercial activity evident in the Sharon PA MSA to the east. Among manufacturers, food products, apparel and wood products firms all performed well in vitality measures, although retention rates in wood products were low. All three industries reflected high sales per employee rates. Plastics generated outstanding retention and vitality ratings as well as sales per employee rates 10 percent above average. Among heavier industries, fabricated metals, industrial machinery and electronics firms all performed well in sales vitality indices, but instruments lagged in sales and all four industries trailed in the sale per employee index. Job vitality ratings were high in instruments.

Technology-driven communications lagged, but business services (including computer related) showed high retention and sales vitality among retained firms. Sales per employee remain low in both.

## Metro Youngstown-Warren, OH

2001 firms analyzed:

21,228

### Startups:

	1996	5 Year Survivors	Change Rate	US Index	
All Firms	577	299			<b>Startup Activity</b> 96-01 Starts 2,224 Start Rate 15.4% US Index 0.79
Retained Firms		294	51%	1.09	
Sales	405,616	778,327	91.9%	0.75	
Avg Jobs	6	9	50%	0.75	
Replenishment	3,424	2,449	72%	0.86	
Sales/Employee	67,603	97,291	44%	0.71	

Startup activity rates are the area's weakest link, running 21 percent below national patterns in aggregate. Among manufacturers, strong startup activity is only evident in paper and industrial machinery, with rates in the important plastics industry approaching US levels. Retail startup activity is low. Business services startups appear at a rate 90 percent of the US average, but entrepreneurial activity among professional support services is extremely weak.

Despite a low startup activity rate, retained fabricated metals firms stand out for vitality measures. Sales per employee among both fabricated metals and industrial machinery startups are far above average. The same is true of retained motor freight and transport services startups. Retention is high among personal and business services startups are strong, but only personal services indicate high job and sales vitality rates.

### High Job Growth Firms:

	'96 Firms in Class	High Growth 96-01	% High Growth	US Index
Aggregate : All Classes	18,086	355	1.96%	0.97
Class I : < 5 Jobs>10 Jobs	11,852	303	2.56%	1.11
Class II : <10 Jobs>25 Jobs	14,986	111	0.72%	1.02
Class III : <25 Jobs>50 Jobs	16,920	55	0.33%	0.82
Class IV : <50 Jobs>100 Jobs	17,698	22	0.1200%	0.65
Class V : <100 Jobs> 250 Jobs	18,086	2	0.0100%	0.20

The area is driven in part by a reasonably good concentration of high growth firms focused on the smaller employment classes. High growth Class I firms are found in concentrations 11 percent above average; the rates drop from there down to a 80 percent lag among the largest Class V firms. The 300-plus high growth firms in the MSA appear to be the brightest spot in the economic vitality picture.