

# Fiscal Research Program

## JOB CREATION BY GEORGIA START- UP BUSINESSES

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FRP Report No. 76  
November 2002



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**Executive Summary**

Small businesses are responsible for most employment growth and new business-location growth nationwide. Therefore, it is important to look at the growth and tenure of start-ups in Georgia in order to inform policy issues regarding these influential economic endeavors. This paper examines Georgia establishments that were started between 1986 and 1988 and documents survival rates over a 12-year period ending between 1997 and 2000. The report identifies the industries that have the most start-ups and where in Georgia they are located. Finally the report compares start-up activity in traditional industry groups with high-tech start up activity over this same time frame.

## **Introduction**

Research on small firms (less than 500 employees) has revealed significant shifts in recent decades.<sup>1</sup> With respect to the size of a firm, no longer is it true that bigger is necessarily better and more efficient. It is now apparent that small, start-up firms in fact provide essential innovations leading to technological change and productivity growth. Small businesses made up about three-quarters of the employment growth and 90 percent of the new business-location growth in the 1990s.<sup>2</sup> In 2000, nationwide there were 612,400 new firms (births) and 550,000 closures (deaths). Births were up 4.2 percent while deaths were up 3.5 percent nationally. The total number of small businesses nationwide in 2000 was 22.06 million.

At the beginning of 2000, Georgia had 184,458 small businesses (less than 500 employees). The rate of new firm formation was 15.7 percent (ranking Georgia 9<sup>th</sup> in firm formation), and the rate of firm terminations was 14.5 percent (ranking Georgia 16<sup>th</sup> in firm terminations).<sup>3</sup> This “churning” is a healthy sign for the state’s economy. “The crucial barometer for economic and social well-being is the continued high level of creation of new and small firms in all sectors of the economy by all segments of society.”<sup>4</sup>

Therefore, it is important to look at the growth and tenure of start-ups in Georgia. Understanding the location and variety of industries in which Georgians create start-up businesses can inform policy issues regarding these important economic endeavors. This report provides information on the number of establishment births and deaths and the number of employees in these new businesses. It compares Atlanta and

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<sup>1</sup> See Acs et al. (1998). This paper covers the literature on the issue.

<sup>2</sup> Headd (2001).

<sup>3</sup> Ibid., p. A-7

<sup>4</sup> Office of Advocacy (1998), p. 12.

## **Job Creation by Georgia Start-Up Businesses**

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non-Atlanta start-up behavior. It further defines establishments by industry and identifies the strongest industries for start-ups in the state. Finally the report compares high-tech start-ups to start-up industries generally.

## **Methodology**

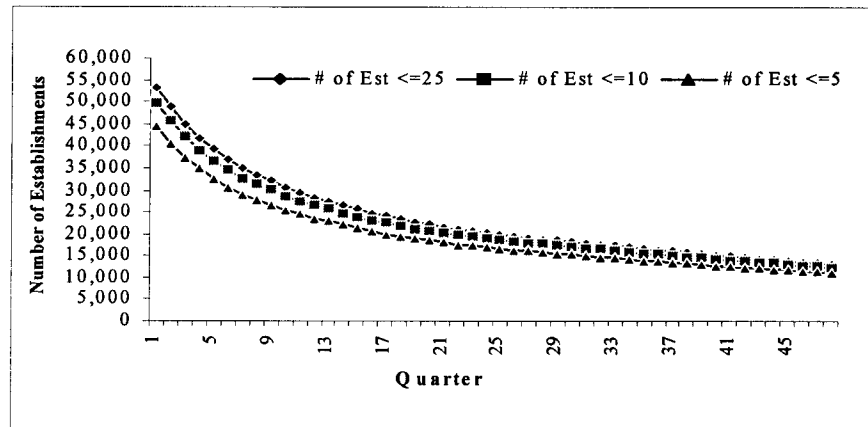
For purposes of this research, “start-up businesses” are defined as establishments with initial employment of 25 or fewer employees that came into existence any calendar quarter of 1986, 1987, or 1988. A start-up could be either an entirely new business or a new branch or office of an existing company. Establishments are further differentiated by those with ten or fewer initial employees and those with five or fewer initial employees. Employee and establishment totals were tracked for twelve years (i.e., through 1998, 1999, and 2000), or 48 quarters. Q1 refers to the start-up quarter, while Q48 refers to the 48<sup>th</sup> quarter.

The data for this report is derived from ES202 records obtained from the Georgia Department of Labor. The records contain employment level for all establishments required to file unemployment insurance tax. These data do not include those who are self-employed, which, in the case of start-ups, is noteworthy. However, when a self-employed person hires a worker, he/she is normally required to file unemployment insurance tax and would then be counted as a start-up.

## Start-Ups Statewide

- During the three-year period 1986-88, there were 53,201 new establishments created in Georgia.
- Most start-up establishments do not survive. For example, of the 53,201 start-ups with 25 or fewer initial employees, only 13,260 (25 percent) were still in existence at the end of 12 years; the rate of start-up deaths tapers off after the fifth year ( Figure 1). Figure 1 shows the number of surviving firms at the end of each quarter.

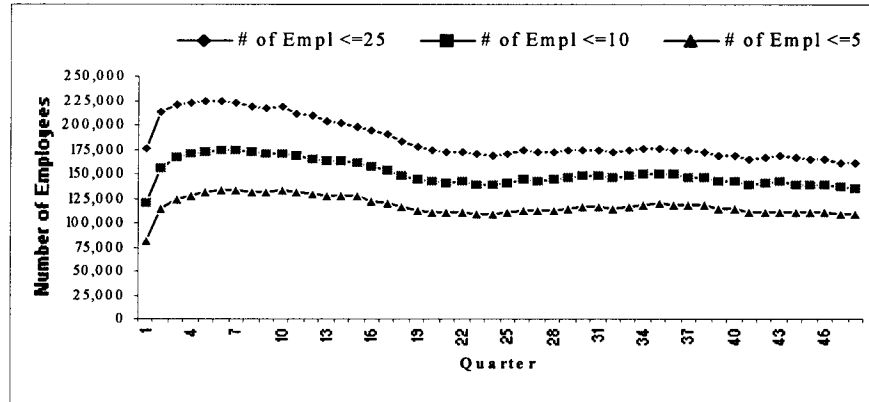
**FIGURE 1. SURVIVAL OF START-UP ESTABLISHMENTS START-UP QUARTER TO QUARTER 48**



## Job Creation by Georgia Start-Up Businesses

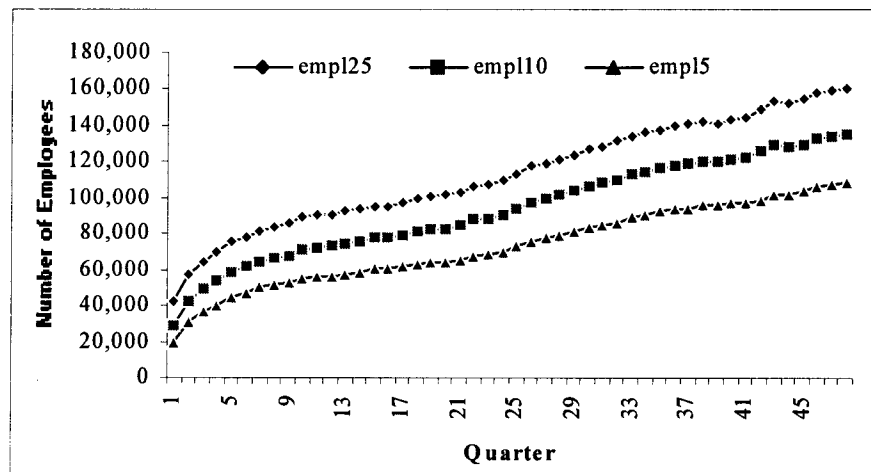
- Generally, start-ups create jobs rapidly after their first quarter of existence but then employment slowly declines as these establishments go out of business. Beginning in year 5 there is a relative leveling off of the employment level (Figure 2).

**FIGURE 2. EMPLOYMENT FOR START-UP ESTABLISHMENTS START-UP QUARTER TO QUARTER 48**



- Total employment for all start-ups (i.e., for establishments that continued and that died) declined for the same 12-year period from 176,793 (in the start-up quarter) to 160,863. This is a decline of 9 percent, or 15,930 jobs (Figure 2).
- Within the establishments that survived the entire 12-year period, employment grew from 42,158 to 160,863 (an increase of 11.8 percent per year) (Figure 3).

**FIGURE 3. EMPLOYMENT FOR SURVIVING START-UP ESTABLISHMENTS START-UP QUARTER TO QUARTER 48**

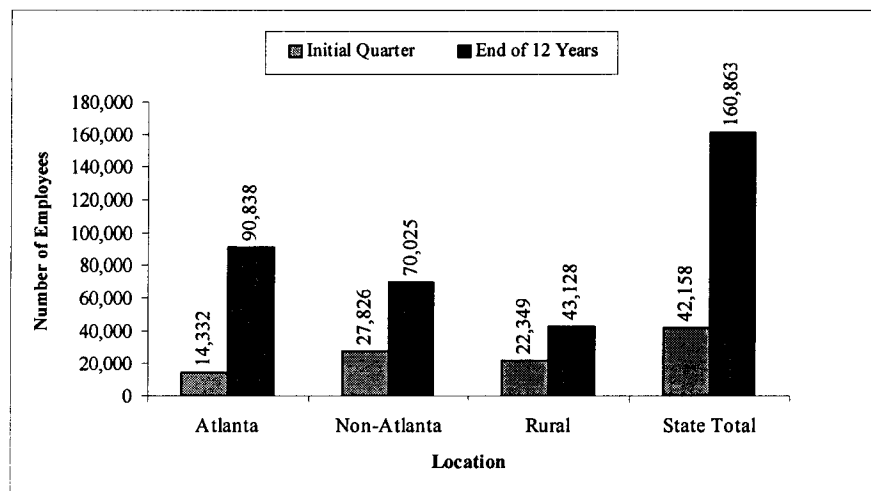




## Start-Ups in Rural and Metro Georgia

- More than one-half of the jobs in successful start-ups created between 1986-88 were in rural Georgia. Start-ups are considered successful if they have retained employees over the 12-year period (Figure 4). Metro Atlanta jobs in successful start-ups increased 6.34 times over the 12-year period; rural jobs in successful start-ups increased 1.93 times. Excluding metro Atlanta, Georgia start-up employment grew 2.5 times over this time period.

**FIGURE 4. EMPLOYMENT AMONG SURVIVING ESTABLISHMENTS**

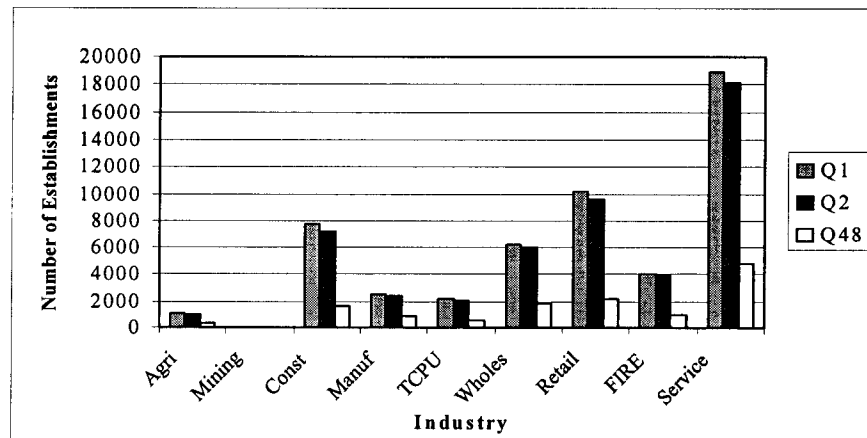


### Start-Ups by Industry

This portion of the report identifies the relative success of start-up establishments in the state as distributed by industry. In addition, we identify the average number of employees per establishment by industry and the total number of employees by industry. Each of these categories measures start-up activity beginning any time in the period 1986-1988 and traces that particular cohort of start-ups for twelve years (i.e. through 1998-2000).

- Start up establishments:** The Q48 line in Figure 5 shows the number of surviving start-up establishments by SIC industry, i.e. establishments that were still in existence 48 quarters (12 years) after their start-up. The Q2 line show the number of start-up establishments that were still in existence in the calendar quarter immediately following their start-up. Service, Retail and Wholesale industries retained the largest number of start-up establishments (Figure 5).<sup>5</sup>

**FIGURE 5. START-UP ESTABLISHMENTS BY INDUSTRY**



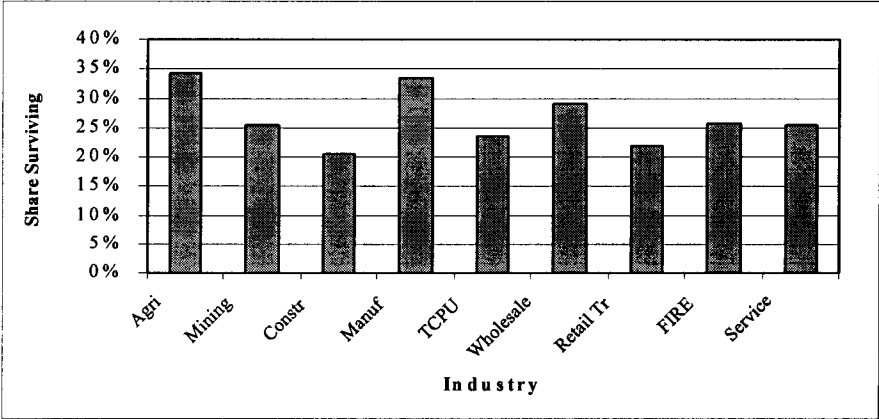

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<sup>5</sup> Note: TCPU is Transportation, Communications and Public Utilities. FIRE is Finance, Insurance and Real Estate.

# Job Creation by Georgia Start-Up Businesses

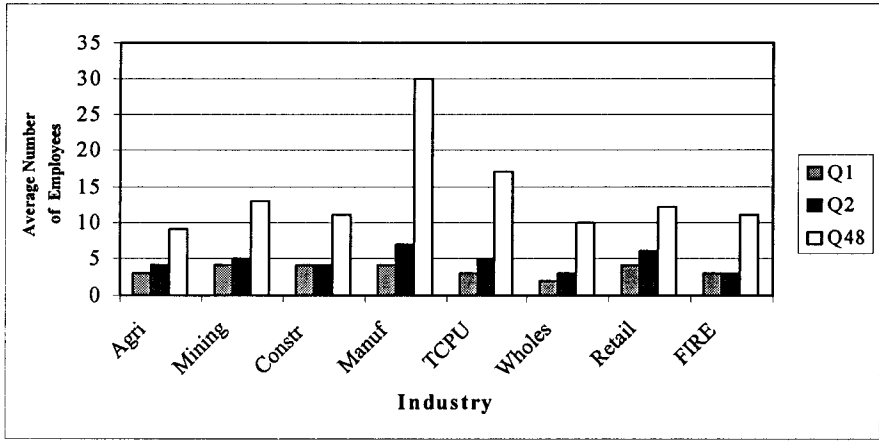
**Share of survivors:** In terms of the percentage of establishments that survive over the 12-year period, all industry groups cluster between 20 percent to 34 percent. The leader is Agriculture, with 34 percent, followed by Manufacturing at 33 percent and Wholesale Trade at 29 percent (Figure 6).

**FIGURE 6. SHARE OF SURVIVING START-UP ESTABLISHMENTS BY INDUSTRY**



**Share of Average number of employees:** The average number of employees retained in *surviving* start-up establishments (Q48) varied from 9 employees in Agriculture to 30 employees in Manufacturing (Figure 7). The increase between Q1 and Q48 is the result of the employment expansion of surviving firms. Surviving establishments were not any larger at the time they started than those establishments that failed.

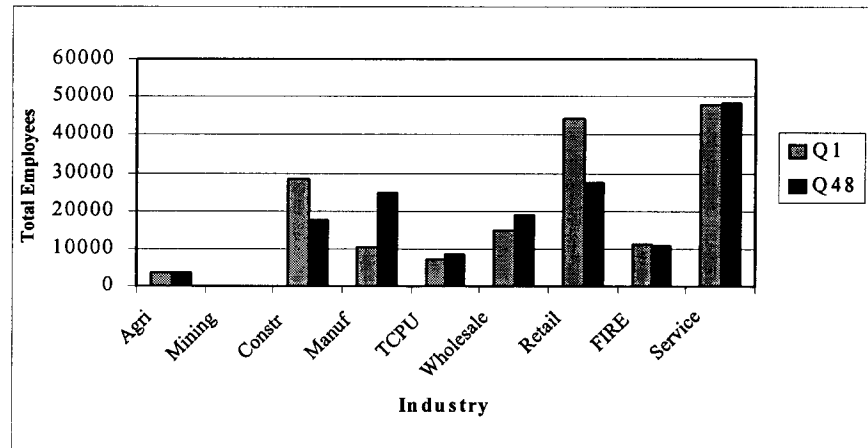
**FIGURE 7. AVERAGE NUMBER OF EMPLOYEES IN START-UPS BY INDUSTRY**



### Total Employees by Industry

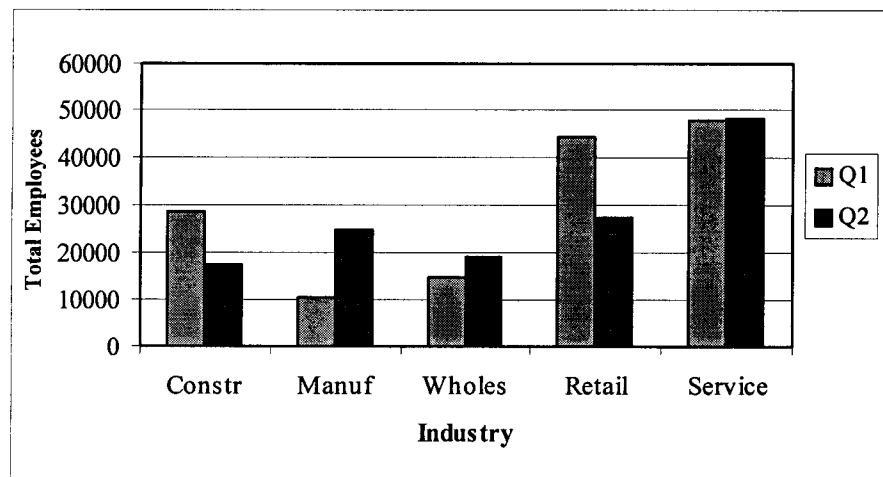
- Total employment for this cohort of start-ups over the twelve-year period was lowest in the Mining sector and highest in the Service sector. In Mining the employment total started at 197 and dropped to 171; in Services the employment total started at 47,870 and rose to 48,338 (Figure 8).

**FIGURE 8. TOTAL EMPLOYEES IN START-UPS BY INDUSTRY**



- In terms of total employment retained, after one quarter, the most successful start-up industries were Service, Retail, and Manufacturing (Figure 9).

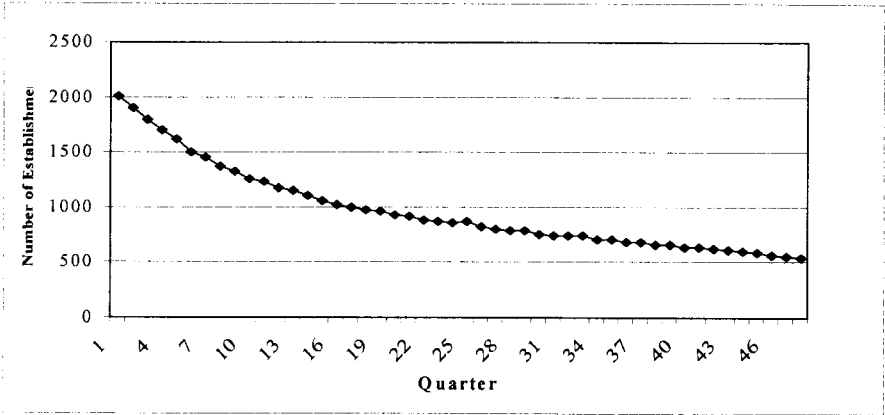
**FIGURE 9. TOTAL NUMBER OF EMPLOYEES IN MOST SUCCESSFUL START-UP INDUSTRIES**



**Employment in High Tech Start-Ups**

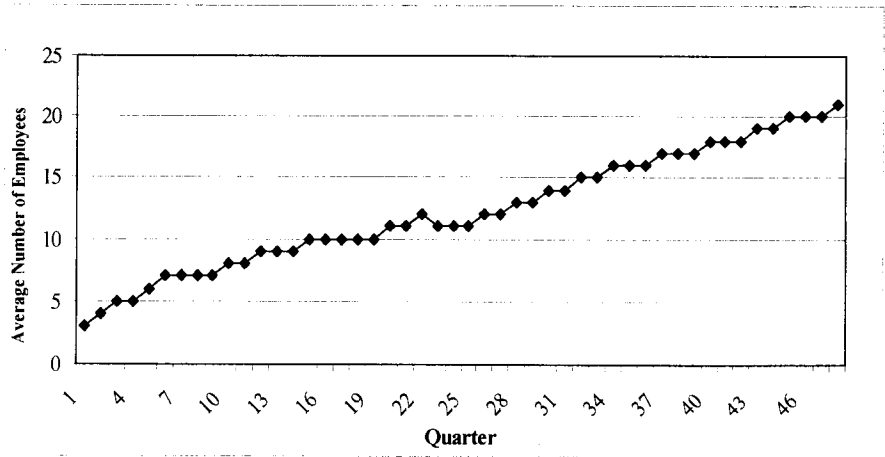
From 1986 to 1988, there were 2016 new high tech establishments.<sup>6</sup> Of these, 539 survived over the 12-year period (Figure 10). The survival rate for high tech start-ups was 27 percent, which is slightly higher than start-up establishments generally (25 percent) (Figure 1).

**FIGURE 10. TOTAL NUMBER OF HIGH TECH ESTABLISHMENTS**



New high tech establishments had an average of three employees when they started. This grew to an average of 21 employees after twelve years (Figure 11).

**FIGURE 11. AVERAGE NUMBER OF EMPLOYEES PER HIGH TECH ESTABLISHMENT**

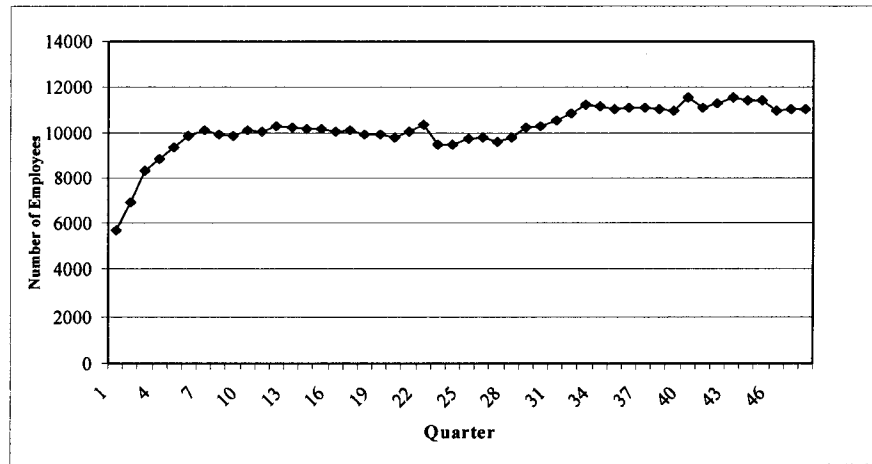


<sup>6</sup> High tech SIC codes are identified in Walcott (2000).

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- Total employment in all high tech start-ups over the 12-year period grew from 5,662 workers to 11,086 workers, or by 51 percent ( Figure 12).

**FIGURE 12. TOTAL NUMBER OF EMPLOYEES FOR HIGH TECH ESTABLISHMENTS**



**Start-Up Success Rates**

Finally, we compare high-tech start-up establishments to the industry groups which have the most successful start-ups. It is important to remember that high-tech companies are found in numerous industries, so there is overlap in the data. Nonetheless, this table shows that among start-ups, the high-tech employment growth rate for the 12-year period is second only to manufacturing.

**TABLE 1. EMPLOYMENT**

<b>Industry</b>	<b>Q1</b>	<b>Q48</b>	<b>% Change</b>
Construction	28485	17564	-38.3%
Manufacturing	10219	24607	140.8%
Wholesale	14996	18919	26.2%
Retail	44166	27521	-37.7%
Service	47870	48338	1.0%
High Tech	5662	11086	96.8%

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