

Teamwork on Manufacturing

Georgia Manufacturing Vital Signs XI

Georgia Tech researchers are engaged in an ongoing effort to compile data on the manufacturing sector in Georgia, the nation and other countries.

Manufacturing Job Loss Rate Slows in Georgia

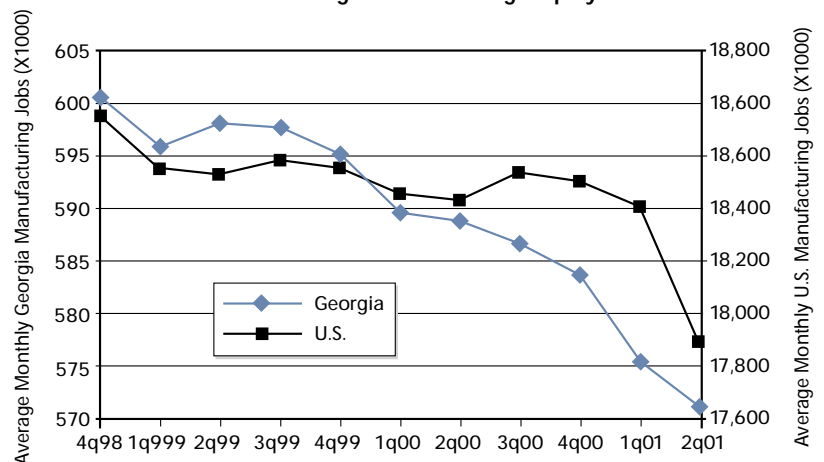
Manufacturing employment in Georgia, which totaled 569,400 in June 2001, declined by 4,300 jobs between the first and second quarters of 2001. The rate of job loss over this period (-0.7 percent) was lower than the -1.4 percentage rate of the previous two quarters. Manufacturing jobs declined at a lower rate in Georgia than for the Southeast (-1.0 percent) and the nation (-2.8 percent). All states in the Southeast experienced manufacturing employment declines during the second quarter of 2001, with the largest decline occurring in North Carolina (-1.9 percent).

The rate of job decline in Georgia was most severe in the electronics and electric equipment industry (-7.9 percent). Other industries experiencing declines in manufacturing employment since the first quarter of 2001 were transportation equipment (-1.7 percent), paper and allied products (-1.3 percent), lumber and wood products (-1.0 percent), printing and publishing (-0.6 percent), and chemicals and allied products (-0.2 percent).

Average hourly earnings for manufacturing employees in Georgia rose in the second quarter of 2001 by 9 cents to \$13.10. Hourly earnings were up 1.5 percent compared to one year ago. Georgia's

average wages were still less than the national average (\$14.10) and the Southeast average (\$13.30). Between the first and second quarters of 2001, Georgia's hourly earnings grew by 0.9 percent, which was slightly higher than the Southeast average (0.8 percent), but less than the national average (1.2 percent). As a result, the gap between Georgia and national manufacturing wages grew by 10 cents between the first and second quarters of 2001.

Chart 1: Average Manufacturing Employment



Georgia's Early Edge in Teamwork Now Erased

In the April 2001 issue of *The Industrial Advisor*, we discussed the benefits of adopting teamwork over traditional top-down assembly-line approaches. We reported that more than half the firms participating in Georgia Tech's 1999 Georgia Manufacturing Survey used teamwork in manufacturing planning and production, and 47 percent had employee continuous-improvement and problem-solving teams. We found that firms using team-based approaches could get products

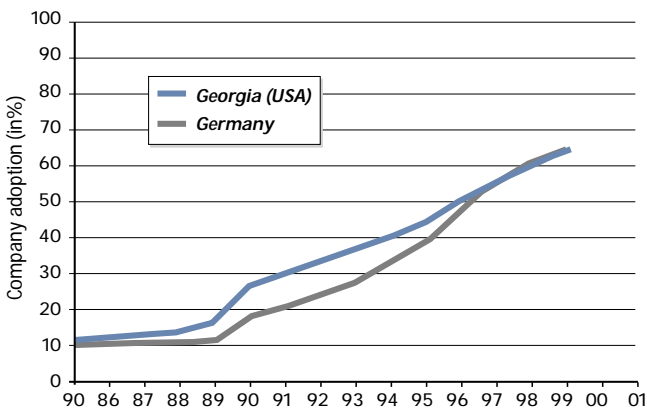
to market faster than those that did not – a significant competitive advantage.

But how does the use of teamwork in Georgia’s manufacturers compare with adoption rates of firms in other advanced economies? Working with researchers from Germany’s Fraunhofer Institute of Systems and Innovation Research, we have benchmarked the use of team-based approaches in production among manufacturers in capital goods industries (metalworking, industrial machinery, transportation, electronics, electrical equipment, and instruments) in Georgia with similar firms in Germany. The results in Chart 2 shows that indeed Georgia firms held an early lead over German firms concerning the use of teamwork in production. By the end of the 1990s, however, German firms had completely closed the gap.

Interestingly, large and small firms used teamwork in different ways. More than 80 percent of large (more than 500 employees) capital goods manufacturers in Georgia used teamwork for problem solving, compared to less than 60 percent of small manufacturers (with under 100 employees). On the other hand, compared with larger firms, those small manufacturers that used teamwork often did so more intensively – by giving teams greater responsibilities for production planning and quality control. This suggests that small manufacturers, when they adopt teamwork, can do so in more integrated and flexible ways that more fully use employee capabilities.

– Jan Youtie,
 Georgia Tech Economic Development Institute
 – Philip Shapira, and Eunjo Oh,
 Georgia Tech School of Public Policy

Chart 2. Introduction of Teamwork in Production, Capital Goods Manufacturers Georgia and Germany



Data reported for capital goods manufacturers. Source: Georgia Manufacturing Survey 1999 (N=232) and Fraunhofer ISI Survey, Innovation in Production, 1999 (N=1442).