- Key manufacturing sectors that are expected to grow in employment from 2002 to 2012 include: plastics product manufacturing (by 128,000 jobs), machinery manufacturing (by 120,000 jobs), architectural and structural metals manufacturing (by 77,000 jobs), and pharmaceutical and medicine manufacturing (by 68,000 jobs).[1]

- Other major manufacturing sectors expected to experience job growth include food manufacturing and motor vehicle and parts manufacturing.[2]

- Among metal workers and plastics workers, job opportunities for computer-control programmers and operators are anticipated to be excellent, as employers are expected to continue to have difficulty finding qualified workers.[3]

- Among metal workers and plastics workers, job opportunities for machinists are expected to be excellent.[4]

- Manufacturing contributed 22 percent of economic growth (the GDP adjusted for inflation) between 1992 and 2000. When software production is added, industry's contribution to real GDP growth increases to 28 percent—the largest of any sector.[5]

- Manufacturing growth spawns more additional economic activity and jobs than any other economic sector. Every $1 of final demand for manufactured goods generates an additional $0.67 in other manufactured products and $0.76 in products and services from non-manufacturing sectors.[6]

- Manufacturing salaries and benefits average $54,000, higher than the average for the total private sector. Two factors in particular attract workers to manufacturing: higher pay and benefits, and opportunities for advanced education and training.[7]

- Through the multiplier effect, manufacturing stimulates employment in other sectors of the economy at a greater pace than other industries. Specifically, every $1M in final sales of manufactured products supports eight jobs in the manufacturing sector and an additional six jobs in other sectors.[8]

- In the National Association of Manufacturer's latest workforce survey of U.S. manufacturing employers, 80% of respondents said that they had a serious problem finding qualified candidates for the highly technical world of modern manufacturing.[9]

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[1] U.S. Bureau of Labor Statistics (BLS), Jay Berman, *Monthly Labor Review*, February 2004.
[2] BLS, *2004-05 Career Guide to Industries*.
[3] BLS, *Occupational Outlook Handbook*, 2004-05.
[4] Ibid.
[5] National Association of Manufacturers (NAM), *The Facts About Modern Manufacturing, Sixth Edition*, September 2003, p.4.
[6] NAM, "Securing America's Future: The Case for a Strong Manufacturing Base," June 2003, p.1.
[7] Ibid.
[8] NAM, *The Facts About Modern Manufacturing, Sixth Edition*, September 2003, p.15.
[9] Phyllis Eisen, "Today's Manufacturing Layoffs Mask a Looming Shortage of Skilled Workers in the U.S.," August 5, 2003.

- Several examples of "high-growth advanced manufacturing" occupations are: Electrical Engineer; Product Marketing Manager; Robotics Technologist; Industrial Engineering Technologist; CAD-CAM Designer; Sales Engineer; Chemical Technician; Tool and Die Maker; Environmental Technician; Industrial Engineer.[10]

[10] National Association of Manufacturers, the Manufacturing Institute, and Deloitte & Touche, *Keeping America Competitive: How a Talent Shortage Threatens US Manufacturing,* April 2003.