

BUREAU OF THE CENSUS

Statistical Brief

Advanced Manufacturing Technology

U.S. manufacturing productivity and competitiveness are thought to depend on the use of advanced technology. This Brief presents the results of a first-time Census Bureau survey that explores the prevalence of technology among major U.S. manufacturers.

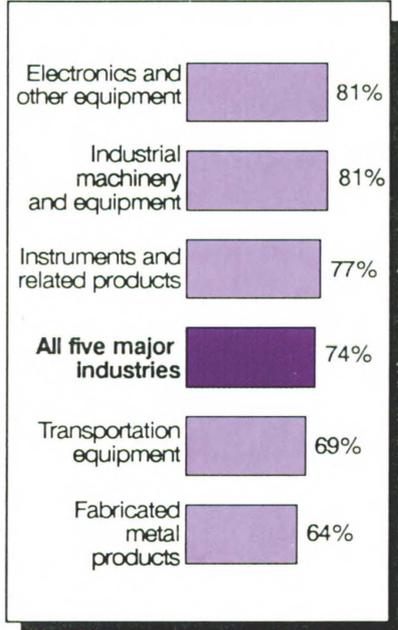
Was technology widely present?

Yes. Advanced manufacturing technology was found at most plants in the five major industry groups covered by the survey:

- Fabricated metal products
- Industrial machinery and equipment
- Electronics and other electrical equipment
- Transportation equipment
- Instruments and related products.

In 1988, these five groups employed over 40 percent of all manufacturing employees, and provided nearly half the value added in U.S. manufacturing.

Also, nearly 3 out of every 4 manufacturing plants in these industry groups used advanced technology:



- Similarly, 83 percent of the plants supplying prime contractors of defense agencies had technology, versus 62 percent that did not supply these contractors.
- Surprisingly, older and newer plants both had technology prevalence of about 75 percent.

Were there differences by technology?

Yes. The presence of specific advanced technologies in current manufacturing plant operations varied markedly.

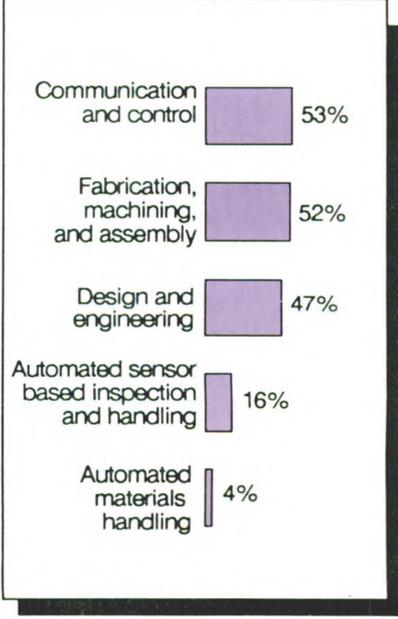
Seventeen specific technologies were covered in the survey and were grouped into five broad categories.

In 1988, about half of the plants used advanced technology from three of the five categories:

Were there differences by plant?

Yes. In general, the prevalence of technology varied among plants according to selected characteristics. For example:

- Over 90 percent of the plants with more than 500 employees had technology, versus only about 60 percent of the smaller plants.
- On average, 82 percent of the plants supplying U.S. Federal defense agencies used advanced technology, compared with 71 percent of those not supplying defense agencies.



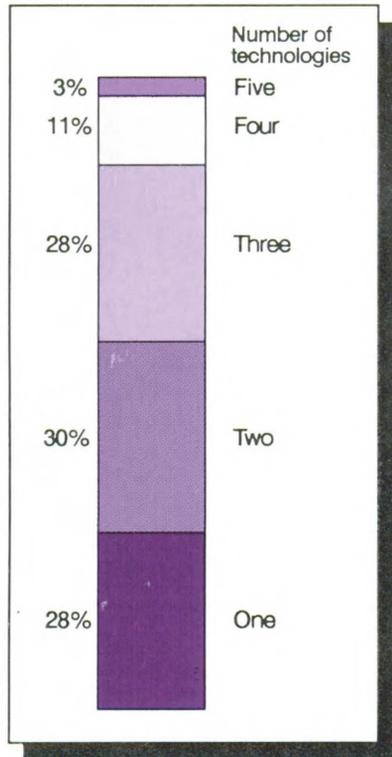
SB-13-90
Issued December 1990

U.S. Department of Commerce
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Did plants use multiple technologies?

Yes. Most U.S. manufacturers used more than one category of advanced technology in 1988.

More than 70 percent of the manufacturing plants with technology used two or more categories:



Will the use of technology increase?

Yes. U.S. manufacturers plan to obtain more advanced manufacturing technology within the next 5 years.

- Almost two-thirds of all the plants surveyed intend to acquire technology.

- Nearly 3 out of 4 current users of advanced manufacturing technology will acquire at least one additional technology.
- Over 40 percent of the manufacturing plants without an advanced technology plan to acquire some.

While U.S. manufacturing competitiveness continues to be scrutinized, it is clear that the presence of advanced technology is widespread and scheduled to increase. Future surveys will address benefits, costs, implementation problems, training requirements, and other issues surrounding technology used in U.S. production processes.

This is one in a series of occasional reports from the Census Bureau that provide timely information about our people and economy. The data presented come from a 1988 sample survey conducted by the Census Bureau, and are subject to both

sampling and nonsampling errors. For a complete description of statistical methods, quality, and limitations, see the Introduction and Appendices of the printed survey report, Current Industrial Reports, SMT(88)-1.

For further information on this Brief:

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See

Manufacturing Technology 1988, Current Industrial Reports, SMT(88)-1, May 1989.

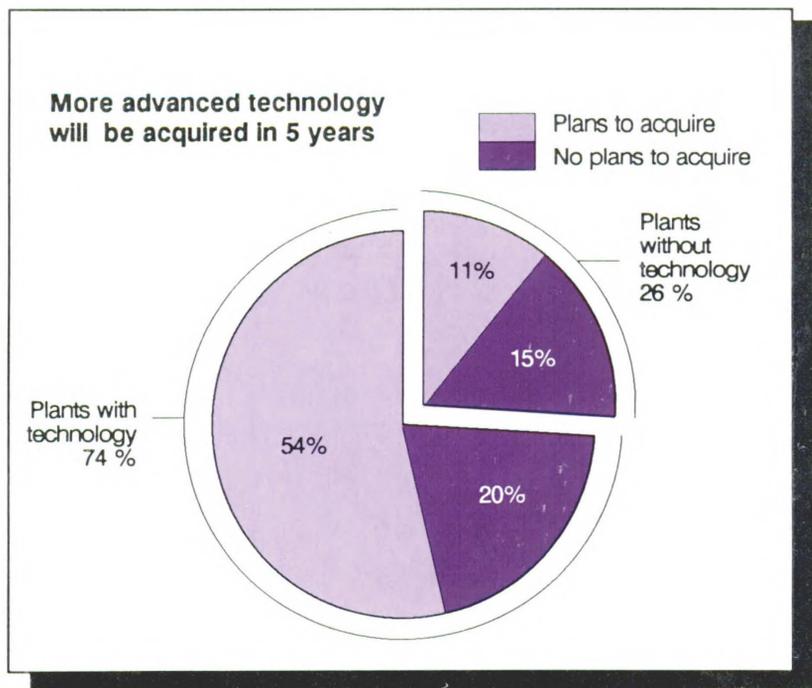
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