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# Defense Industries Making Adjustments

*Federal purchases for national defense increased in the last two decades but have now begun to slow. In response, defense manufacturers are shifting to civilian production. This brief features Census Bureau data and estimates that detail these changes, particularly for capital goods industries.*

## Federal Defense Expenditures Slow

Total Federal expenditures for goods and services for national defense have increased each of the past two decades. Federal defense spending was less than \$75 billion in 1971, more than doubled in the next decade, and exceeded \$323 billion in 1991.

However, the pace of annual defense increases slowed in the late 1980's. Expenditure growth averaged over \$20 billion per year between 1980 and 1987 but under \$8 billion in each of the last 4 years.

Defense also has become less important to the U.S. economy. Defense spending rose from 5.3 to 6.5 percent of gross domestic

product (GDP) between 1980 and 1986, dropped to 5.7 percent in 1989, and has remained there for 2 years.

## Manufacturers Feel the Effects

The effects of flagging Federal purchases are felt in industries that manufacture defense products, particularly capital goods.

- Manufactured products are the largest single category of Federal defense purchases, accounting for 46 percent of all such purchases in 1987.
- Defense capital goods industries account for some 80 percent of all defense purchases of manufactured products.

Reports from capital goods manufacturers confirm that defense spending grew through

most of the 1980's and has slowed in recent years.

- Defense shipments increased from \$41 billion in 1980 to \$109 billion in 1987 and then declined about 2 percent by 1991.
- The backlog of unfilled defense orders reached \$167 billion in March 1986 and then dropped some 15 percent over the next 6 years.

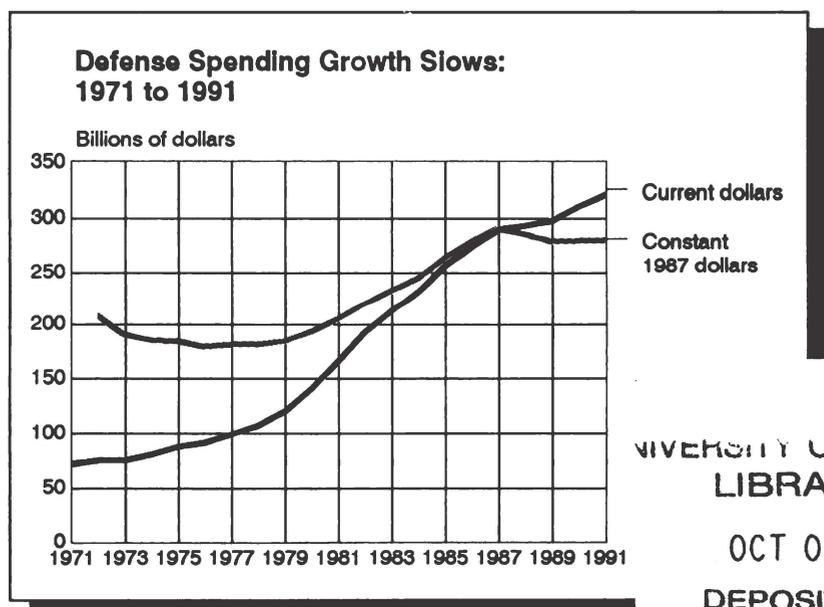
## Defense Industries Are Concentrated

Only some industries make products for national defense. The 69 manufacturing industries that were the most important suppliers to Federal agencies were surveyed in 1987.

- They shipped \$135 billion in manufactured products



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- purchased by Federal defense agencies.
- Only 14 shipped the \$109 billion in defense capital goods purchased by Federal agencies.

Analysts combine the defense capital goods industries into five groups with shipments in 1987 of:

- \$38 billion for aircraft, missiles, and space vehicles.
- \$34 billion for communication equipment.
- \$24 billion for aircraft, missile, and space vehicle parts.
- \$8 billion for ships, tanks, and tank parts.
- \$5 billion for ordnance and accessories.

This ranking of industry groups has changed very little in recent years.

**Capital Goods Manufacturers Adjust**

Defense capital goods industries have adjusted to the slowing of defense purchases by redirecting, not reducing, their efforts. This is seen in increased production of goods for civilian use.

For example, between 1980 and 1991 total shipments by defense capital goods industries rose from \$109 to \$239 billion. However, the defense share of these shipments:

- Grew from 36 to 57 percent between 1980 and 1987.
- Then declined steadily to 43 percent in 1991.

Similar trends of growth and then decline are seen in defense shipments for each of the 14 capital goods industries. Perhaps because of this adjustment capacity, employment in defense capital goods industries during the 1980's was more stable than in other capital goods industries.

- Defense capital goods industries employed nearly 1.6 million persons in 1990, up a modest 2 percent from 1980.
- Other capital goods industries had about 1.7 million employees in 1990, down 26 percent from their high in 1980.

**Adjustment Processes Can Differ**

Individual manufacturers in defense capital goods industries can have very different adjustment experiences. For example, each firm's goals, resources, and productivity are different; product market and competitive conditions can vary; and overall economic conditions change across time and geographic areas.

*This is one of a series of reports from the Census Bureau that provide information about our people and economy. The data reflect primarily censuses and*

*sample surveys conducted by the Census Bureau. For complete descriptions of statistical methods, quality, and limitations, see the Introduction and Appendices of the reports listed below.*

**For further information on defense capital goods industries:**

See the publications, M3 Manufacturer's Shipments, Inventories, and Orders

MC87-S-7 Manufacturer's Shipments to the Federal Government

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