

Research Department  
Federal Reserve  
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## Boom in California Aerospace?

The California aerospace-equipment manufacturing industry should benefit during the 1982-87 period from a continuation of the defense buildup launched by the Reagan Administration last year. Increased defense spending should translate into sales and employment growth in at least some sectors of this vast manufacturing complex, which includes not only aircraft and missiles but also electronic components (semiconductors and integrated circuits), computers, and communication equipment.

During the 1982-83 period, gains in defense-related employment will be offset to some extent by weakness in commercial markets, especially for transport aircraft. But the situation should turn around by 1984. At that time, with the end of the phase-out of the Lockheed L-1011 jet transport program, and with a projected upswing in business capital spending, the industry should experience coincident growth in both the military and commercial segments of the market.

### Defense budget

In fiscal 1982, total outlays by the Department of Defense (DOD) are rising nearly 8 percent in real (constant dollar) terms. Expenditures for military-hardware procurement and research-and-development—the two budget components directly affecting defense contractors' business—should rise even more in real terms, and thus should comprise 40 percent of total outlays this fiscal year.

The Defense proposal submitted to Congress last February reflects the Administration's intention to continue its effort to strengthen the U.S. conventional and strategic military forces (long-range nuclear weapons). In support of its proposals, the Administration cited the erosion of U.S. military forces and defense industrial base that has occurred over the past two decades, vis-a-vis the Soviet Union's rapid acceleration in defense spending and weapons production.

The Administration thus proposed an increase in DOD total obligational authority from \$214.2 billion in fiscal 1982 to \$258 billion in fiscal 1983 and to \$400.8 billion by fiscal 1987. "Total obligational authority" means the authority granted to the Pentagon to commit funds for specified purposes. In real terms, these proposals represented an increase of about 13 percent in fiscal 1983 and an average annual increase of nearly 7 percent over the fiscal 1984-87 period.

Throughout the five-year period, Pentagon *outlays* would rise more slowly than *total authority*, partly because of the lag between authorization and spending, but also because of the introduction of multi-year procurement. (This system, unlike the annual Congressional allotment of funds, requires larger authorizations at the start of a program, but then permits later cost-savings through advance purchases of long-lead-time materials.) Still, according to Administration estimates, actual defense outlays would rise at a hefty real rate of nearly 11 percent in fiscal 1983, on the heels of 1982's 8-percent increase (see chart). Over the fiscal 1984-87 period, the proposals call for a 7½-percent annual rate of increase in real outlays, and an even faster gain in hardware procurement and research-and-development.

The proposed \$33-billion increase in outlays for fiscal 1983 called for several major new programs, including two nuclear aircraft carriers (\$6.8 billion), 100 B-1B bombers (\$4.1 billion), and development of an advanced-technology "Stealth" bomber. The Administration also asked for a \$6.9-billion increase "to correct deficiencies" in strategic forces. This would include the cruise missile program, more Trident ballistic-missile submarines, new ICBM and MX missiles, and a fleet of improved cargo aircraft.

Despite criticism of massive Federal deficits and disproportionate cuts in social programs,

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Congress recently voted to cut only about \$5.4 billion (2.3 percent) from the Administration's proposed 1983 defense outlays. After this cutback, the real increase will still amount to nearly 8 percent, and the slack probably will be picked up in later years.

### **California employment**

To put this stimulus into perspective, it is necessary to review the past history of California's aerospace industry. The Vietnam buildup boosted employment to a peak of 598,000 by 1968 (the data are annual averages.) Employment then trended downward to 440,000 in 1971, and recovered only modestly to 456,000 in 1977. But during the 1977-80 period, increased demand for commercial products—especially sophisticated electronic equipment—caused employment to rise by 12 percent annually.

In 1981, industry employment rose another 2 percent, reaching 634,000, but almost entirely because of increased defense business. Orders for commercial jet transports fell off sharply, especially after mid-year, reflecting the impact of declining passenger traffic and rising fuel costs on the earnings of the world's airlines. Civilian orders for electronic equipment also slowed as the national recession caused households and businesses to cut spending for such items as computers and communication equipment. Increased foreign competition added to the problems of California semiconductor firms, resulting in late-year plant shutdowns to work off excess inventory.

Employment has slipped this year, with layoffs in commercial programs offsetting growth in defense-related payrolls. By May 1982, employment was running 2 percent below the July 1981 peak level.

### **Defense impact**

By 1981, despite some inroads from competitors elsewhere, California aerospace equipment firms managed to capture 23 percent of DOD prime contract awards. Moreover, the California industry, the national leader, could

succeed in boosting its share of the defense market over the 1981-87 period. This is because California firms are the prime contractors for many of the major strategic-weapons programs emphasized in the Pentagon's spending plans.

According to the California Department of Economic and Business Development, increased defense spending could add about 110,000 new aerospace jobs by 1986, even if California firms maintained only their current share of the market. If they captured a larger share, as seems likely, the defense buildup could add as many as 135,000 new jobs to the state's economy. This refers solely to the direct impact on prime contractors and subcontractors in the aerospace-manufacturing sector. The vast bulk of the growth should occur in Los Angeles, Santa Clara, Orange, San Diego, and Santa Barbara counties (ranked by volume of awards).

Taken alone, an increase of as much as 135,000 jobs in defense-related programs would raise industry employment over the 1981-86 period from 634,000 to 769,000. This represents a 4-percent annual rate of growth, or 21 percent for the entire five-year period.

During the 1982-83 period, however, this growth could be offset somewhat by continued weakness in at least some commercial programs. As a result of the slowdown in commercial orders, Lockheed Corporation announced in late 1981 that it would phase-out production of its wide-bodied L-1011 Tristar aircraft over a two-year period. McDonnell Douglas Corporation—California's other commercial airframe manufacturer—will reduce employment in this sector during the 1982-83 period even if it continues its troubled DC-10 program.

The commercial sector at best may remain stagnant until about 1984. By that time, the L-1011 phase-out will be completed and business capital spending should begin to recover, bolstering demand for commercial

electronic products. Around 1984, therefore, California's aerospace industry may show substantial growth in both its defense and commercial lines of business.

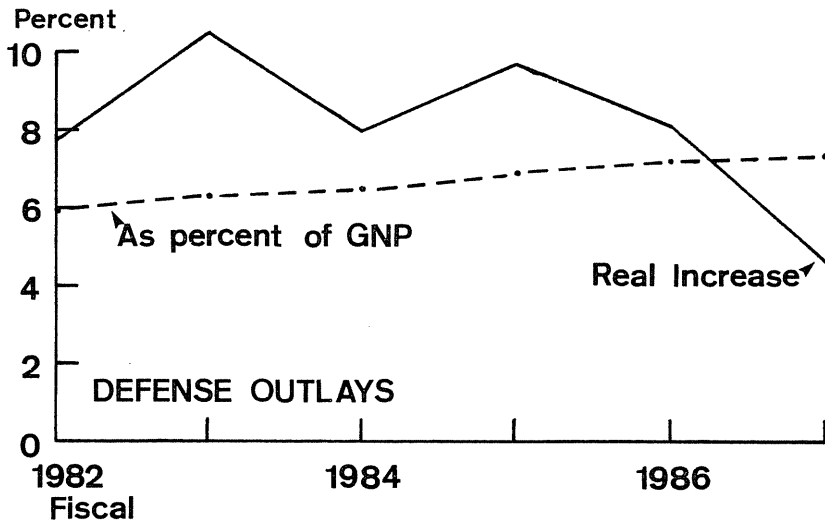
**Labor shortages?**

The question arises whether the rapid military buildup will place pressure on the nation's labor markets and manufacturing capacity, as defense firms scramble to attract workers and acquire necessary materials. Some observers have suggested that the buildup could aggravate inflation by creating labor and material bottlenecks. Admittedly, the Administration proposals call for defense expenditures to rise steadily as a proportion of GNP over the 1982-87 period—from about 5.9 percent in fiscal 1982 to about 7.4 percent in fiscal 1987. However, this 1.5-percentage point

rise over a five-year period is substantially smaller than the 2.0-percentage point increase that occurred in the three-year Vietnam buildup.

For California, weakness in commercial aerospace programs, as well as substantial excess capacity in other industries should prevent pressures of this type from arising, at least until the mid-1980s. Shortages of certain types of skilled labor and specialized components could develop, but in general, increased military spending should not place severe pressures on California's labor and materials markets. This seems doubly true in view of the fact that California is now experiencing cutbacks in non-defense Federal programs.

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Source: Department of Defense, *Annual Report*

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**BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT**

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount	Change	Change from	
	Outstanding 6/30/82	from 6/23/82	Dollar	Percent
Loans (gross, adjusted) and investments*	160,651	1,234	8,790	5.8
Loans (gross, adjusted) — total #	140,131	1,319	9,746	7.5
Commercial and industrial	44,280	815	4,549	11.4
Real estate	56,976	— 5	3,785	7.1
Loans to individuals	23,455	107	568	2.6
Securities loans	2,275	10	543	31.4
U.S. Treasury securities*	6,471	— 86	286	4.6
Other securities*	14,049	1	— 1,242	— 8.2
Demand deposits — total#	41,986	4,815	— 2,245	— 5.1
Demand deposits — adjusted	27,804	1,655	— 1,795	— 6.1
Savings deposits — total	30,473	247	— 35	— 0.1
Time deposits — total#	95,477	815	14,194	17.5
Individuals, part. & corp.	85,967	1,001	13,574	18.8
(Large negotiable CD's)	35,054	623	3,021	9.4
<b>Weekly Averages of Daily Figures</b>	Week ended 6/30/82	Week ended 6/23/82	Comparable year-ago period	
<b>Member Bank Reserve Position</b>				
Excess Reserves (+)/Deficiency (—)	82	108	108	
Borrowings	254	25	139	
Net free reserves (+)/Net borrowed(—)	— 172	83	— 31	

\* Excludes trading account securities.

# Includes items not shown separately.

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