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*The Defense Industrial Base
for the 1990s*

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THE DEFENSE INDUSTRIAL BASE FOR THE 1990s

by Murray Weidenbaum

It seems to be an anomaly to worry about the adequacy of the defense industrial base at a time when the military budget is declining rapidly. Yet several stubborn facts cannot be ignored: the United States continues to live in a dangerous world and a relatively high level of defense spending is likely in the years ahead — although down very substantially from recent peaks.

For a variety of reasons, it is appropriate to consider the future capability to design and produce high-tech weapon systems. We should try to learn the lessons from the recent past.

Background

The pattern of defense spending over the past half century approximated a frantic stop-and-go (or rather go-and-stop) cycle. Since the beginning of World War II, the military budget has never experienced an extended period of stability. Rapid shifts occurred from accelerated spending to declining military budgets and back again. The result often has been hasty planning of military force structures followed by cancellation or inefficient stretch-outs of expensive weapon systems. Given the reduced availability of funds in the years ahead, we should try to avoid this waste of resources.

In voting lower appropriations for defense, the Congress should avoid setting in motion a new stop-and-go cycle in military spending. While serious threats to the national security are changing in form, they surely continue. Future U.S. military prowess must be adequate to deal with a variety of dangerous contingencies. Both Congress and the Administration should plan on future levels of defense spending high enough to permit a ready transition to a more active military posture should that be required.

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From the viewpoint of the defense contractors, a substantial downsizing is the most sensible response to the greatly reduced market for military equipment that seems likely in the 1990s. The sooner the major contractors trim their excess capacity — through restructuring, mergers, sales of assets, or closing down unneeded facilities — the stronger will be their ability to withstand the competitive rigors of the new military marketplace. The alternative to this painful but necessary course of action will be large flows of red ink and rising debt loads, which will weaken their capability to survive as viable firms in this unique and important sector of the economy.

Like companies in other industries, individual defense firms have no particular claim to maintenance of their present size, or even to their continued existence. Most of these firms will find that a more modest level of operations is also a more efficient scale in the decade ahead.

It is heartening to note that most defense industry leaders are declining to support proposals for government to "assist" them in converting to civilian markets. They are realistic enough to understand that, in the words of one company chief executive, "the best concept for conversion is to take the defense industry down slowly."

The United States requires a viable group of experienced companies and highly skilled people to meet current and future defense needs. Moreover the major defense prime contractors and subcontractors constitute a key part of this nation's capability for industrial innovation. That is no argument for a subsidy to defense companies. It does lead to rethinking the traditional Pentagon attitude toward its contractors.

It is important that there be significant competition among the defense producers that remain. The government should not become excessively reliant on any one of them for any major category of weaponry. That means not squeezing the contractors too hard in a vain attempt to minimize the effects of budget cuts on weapon-system procurement.

During the 1980s, Congress and the Department of Defense made many changes in procurement procedures which reduced the profitability of defense business. These

developments have been reflected in the exodus from the military market of tens of thousands of subcontractors, even during the period of rapid increases in defense procurement.

In the 1980s, the existence of a large base of prime contractors competing for a relatively few but extremely expensive weapon systems forced all in the group to assume greater risks and to bid more aggressively. They were motivated by the need to utilize capacity and by the fear of missing key milestone programs and thus being left out of a whole generation of technological advancement.

This process increased the tendency of the contractors to act in effect as bankers, helping to finance the military buildup. Coupled with the simultaneous changes in acquisition policy and business taxation, all this reduced the profitability of defense work. But so long as the defense budget was rising, this arrangement kept a large base of contractors afloat and an extensive array of weapon systems in development and production. That approach to defense contracting is no longer feasible.

The quaint notion of producing more weapon systems by paying defense contractors less must be classified as a futile exercise in wishful thinking. The only sensible approach is to tailor the military's demand to match the limited supply of fiscal cloth.

In addition, the acquisition process itself must be overhauled so as to reduce the needless burdens placed on defense contractors. Cutting the burdensome overhead costs imposed by public policy should enable the companies to produce more equipment than a restrictive budget policy otherwise would permit. It would also make them more competitive in civilian markets.

Reforming the Military Procurement Process

The needed reforms of the military procurement process fall into three categories. The first is to streamline the rules. The second is to upgrade the caliber of the people involved in the process. The third is to change the incentives facing the people who produce the equipment.

Let us begin with the legal framework. The sad fact is that American business, military and civilian, is faced with a major expansion of expensive and burdensome regulatory legislation.

Efficiency can be served by stripping out the host of special contract provisions that require military contractors to act more like government bureaus doling out benefits to designated classes of beneficiaries than like private enterprises delivering innovation and technological progress.

The effectiveness of military procurement can be improved by removing the myriad of restraints and directives imposed by members of Congress anxious to protect the defense jobs located in their states or districts. Forcing the military to buy weapon systems they do not need is the most inefficient way of providing benefits to constituents.

A sweeping overhaul of the entire government procurement process is the most effective remedy for the continuing proliferation of detail and trivia. Replace the current 30,000 pages of military procurement regulations with short, simple regs — 100 pages or less. That means eliminating all the socioeconomic provisions and the restrictive "micromanagement" provisions as well.

It is ridiculous for Congress to legislate such trivia as setting rank and grade for competition advocates or establishing tours of duty for program managers or setting rules for allocating overhead to spare parts or repeatedly revising the synopsis requirements in the announcements of requests for proposals. It is hard to keep a straight face when you read the GAO response to the New Jersey congressman who was worried about the adequacy of defense procurement of fresh fruits and vegetables from the Garden State. Just think of the loss to the national security if apples are imported from New York or Washington State.

Simplifying military procurement is also the most direct way of responding to the small firms' perennial complaints that they are scared away from defense work because of the complexity of the process.

Comprehensive reform requires dividing military procurement into two categories: items that can be purchased readily from the private sector, and the acquisition of weapon systems. The great majority of all procurements, items readily available from the civilian sector, should be made in the same manner that civilian agencies do their buying: using standard commercial, rather than detailed military, specifications.

To be sure, there are many borderline cases. Here the advice of a group of military policy experts assembled by the Center for Strategic and International Studies is useful. The CSIS group recommends a concerted effort to accept commercial specs when they will not affect operational requirements. They specifically caution against favoring military specs which only marginally improve operational capability or which cover the most extreme environments.

For weapons acquisition, selection should be made on the basis of prototypes produced by two or more competing firms. Mounds of paperwork are not an adequate substitute. The only consistently reliable means of getting the information needed to evaluate a proposed military system is to build prototypes and to test them. Given the repeated shortcomings resulting from rushing weapon systems to premature production, we can brush aside the counterargument that prototypes are costly and time-consuming to build.

Virtually everyone who has examined the military procurement process has focused on the crucial role of the people who award and administer contracts. The capability of procurement officials must be raised. The authority of the manager of each weapon system should be increased commensurate with the responsibility of the job.

Many managers of new weapons programs function as little more than briefing specialists and marketing representatives. At least some of the officers assigned to supervise weapon production should be experienced in industrial management. They should also possess the authority needed to accomplish their jobs, be well compensated, and be accountable for the results. It is essential to improve the training of the officers responsible for making multi-million (often billion) dollar decisions.

The cumbersome staffing structure of the military procurement process must also be overhauled and streamlined. The number of acquisition personnel should be cut substantially, down to the levels of comparable commercial business. The present five or more administrative levels of review should also be cut back sharply. Some of these layers have an extensive horizontal structure. The views of many different officers must be accommodated in order to pass through a given layer.

The federal government should take a leaf out of the book of private business. Many companies have gone through a painful downsizing in the course of which they have changed entrenched institutional cultures, enhancing decisionmaking and stimulating innovation. The payoffs in terms of cost and efficiency have been substantial.

But reforming procurement personnel and procedures, however necessary, is only a prelude to doing a better job of designing and producing weapon systems.

The truly serious problems arise in buying items that are so advanced that they do not exist at the time of purchase — new generations of aircraft, missiles, and communication equipment. Ideally, the award should go to the company that will provide the optimum combination of high quality, low cost, timely delivery, and ready maintainability. However, who can really ascertain those qualities ahead of time? The answer is not to award the development and production work to contractors who want the business so badly that they will underestimate cost substantially or overpromise on performance.

There is a way out of this dilemma. It is to take more fully into account the bidder's past performance on defense contracts. The company's track record is an important indication of the quality of its future work. Focusing on actual accomplishment provides a powerful incentive for improvement.

The Future Condition of Defense Contractors

Although the bottom is not about to fall out of the military market, a tough period of belt tightening has begun. The broad product and market base of many of the companies

involved should help the defense industry handle the transition to a smaller military market. However, the painfulness of the adjustments ahead will vary.

The Primary Defense Contractors

Many of the large aerospace companies — such as General Dynamics, Grumman, Lockheed, Martin Marietta, McDonnell Douglas, and Northrop — rely on the Department of Defense for most of their income. Some, notably General Dynamics, are widely diversified within the military market, producing aircraft, missiles, tanks, and submarines. Others like Martin Marietta have gained fairly secure subsystem niches within that market. Still others, such as McDonnell Douglas, have diversified to a significant degree into commercial aircraft work (but without attaining profitability). Most of these companies should be able to weather the storm, though not at their current volumes of sales and employment.

Companies like Grumman and Northrop, dependent on just a few weapon systems, may be in for a difficult time, depending on the future of those specific contracts. They surely are more vulnerable than the more diversified defense contractors. They are responding with actions which make sense for them but create concerns for the future — such as reducing company-funded research and development.

Because of the military's great dependence on the major defense contractors for designing and building key weapon systems, their survival as a group seems assured. Nevertheless, a shakeout of their present numbers could well occur. Substantial excess capacity coupled with weak finances characterize this key segment of the defense industrial base. Mergers and consolidations may reduce the number of current players. Some of the financially weaker firms may be acquired by civilian-based companies. A smaller group of stronger firms will enhance the long-run survivability of this group of companies.

Major Defense Divisions of Civilian-Oriented Companies

In contrast, other major defense contractors look primarily to commercial markets for the bulk of their sales. Examples of large companies with important defense segments include

Boeing, Litton, Raytheon, Rockwell, Tenneco, and United Technologies. In most of those firms, the defense divisions are separate from the commercial activities. Boeing represents an interesting transition since the 1950s, from a firm which was then overwhelmingly dependent on defense business.

In other cases — AT&T, Ford, General Electric, General Motors, Honeywell, and Westinghouse — defense work is a minor part of their total sales. However, each is a large and important defense contractor. GE is well diversified in the military market, its products ranging from nuclear reactors for submarines to missiles to space systems. Yet, cutbacks in the purchases of new aircraft will hurt this major supplier of jet engines.

In some cases, these firms will benefit from the expansion of civilian markets, especially if macroeconomic policy succeeds in maintaining high aggregate levels of economic activity. Because their contracts with the Pentagon generally are less profitable than their commercial sales, some of these companies will respond to shrinking military markets by phasing out defense business or trying to sell their defense segments. Emerson, Honeywell, and Olin already have.

Smaller Contractors and Subcontractors

Less attention is usually given to the very large array of small businesses — some prime contractors, and far more subcontractors to the large firms. These smaller companies provide the components and parts vital to every weapon system (ranging from fasteners and seals to pumps and castings). The reported erosion of the defense industrial base in recent years centers on the enterprises in this category. Many of them will be hurt in the defense transition, especially as large prime contractors pull business back into the parent company.

In a survey of 120 of its subcontractors on the M-1 tank, General Dynamics found that 15 percent of the firms would have to close a plant if production of the tank was ended. On the other hand, many of the smaller firms are more capable of dual military-commercial work than the larger and often more muscle-bound primes.

The Need for Reversibility

A strong industrial base is an essential part of the capability of quickly reversing the direction of military policy. As we have seen in the Gulf War, effective reversibility requires a basic military force in existence, which can be augmented promptly by calling up the reserves and the national guard. But a future period of sustained reductions in defense spending underscores two other key aspects of reversibility: a healthy defense manufacturing base and an ongoing research and development effort focusing on the design of new and improved weapon systems.

That does not require maintaining every weapon system or military supplier. But reversibility does point up the need to maintain an adequate industrial base containing an array of strong prime contractors and subcontractors that can compete effectively for the design and production of the equipment that is required.

The notion of reversibility is consistent with closing down or selling off defense plants no longer needed. The defense industry is coming off an all-time peak and a substantial reduction in its size is to be expected. Since many of its production facilities are ancient by the current standards of the competitive commercial economy, the opportunity to phase them out should be welcomed.

It is vital that the remaining defense suppliers in the aggregate be financially viable and that they possess the ability to meet the likely design and production needs of the military establishment in the years ahead. That is the basic challenge of maintaining an industrial base adequate to respond to the changing threats to the national security.