
Chapter 6

Adjustment for States and Communities

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Adjustment for States and Communities

INTRODUCTION

National defense money is spent in all 50 States and thousands of American communities, but its importance to local economies varies greatly. Many States and communities benefited from the last defense buildup that began in the late 1970s. And many of these will feel most keenly the effects of cuts in defense spending.

Fortunately, the number of areas seriously distressed is not likely to be great. A small number of local communities are highly dependent upon defense expenditures for their economic vitality, while a larger, but still relatively small, number are moderately dependent. Not all defense-dependent communities will suffer economic distress because they possess other sources of economic strength. However, even as defense spending declines, the fate of all communities that lean on defense for their economic vitality will depend to a large degree upon how well the U.S. economy as a whole performs in this decade. Well funded and designed economic development programs can help many affected communities avoid community distress from defense cuts, assuming a relatively prosperous national economy.

THE BASIS FOR CONCERN ABOUT COMMUNITIES

Before examining the community impacts of defense cuts, it is appropriate to ask first why policymakers at the national level should be concerned with the economic well-being of particular localities. There are at least two reasons for concern, one related to the overall efficiency of the national economy and the other to economic, social, and psychological hardships experienced by people living in declining local economies.

Local economic decline can be a drag on the national economy, particularly when some places are declining and have excess capacity for growth,

while others are growing and paying to add new capacity. When a community suffers dislocation and decline, some factors of production are moved and can be used elsewhere. Some firms may relocate, taking their capital, expertise, and even their machinery with them; some workers may do the same even though, for many, moving means great hardship. However, firms cannot move their buildings nor can workers move their homes. Public infrastructure, such as hospitals, schools, roads, sewers, and bridges, are likewise immobile. As a result, when communities undergo sudden and severe economic dislocation leading to outmigration, many houses, factories and offices may stand vacant and public infrastructure is under-used. Workers staying behind are likely to be unemployed or to take low-pay dead-end jobs. Area banks and savings and loans institutions may suffer or fail as investments go bad. Moreover, local spending on services usually increases, and because of a smaller tax base, tax rates often increase. This less-than-full use of public and private resources reduces the efficiency not only of the declining community itself but also of the U.S. economy as a whole.

If the departing industries or workers move to areas that are growing, there are further costs as the growing community has to pay for new infrastructure (e.g., bigger hospitals, widened roads) or else put further strains on already overextended resources, causing such things as transportation snarls, overcrowded schools, and other delays and inadequacies in public services. Private resources are strained as well, resulting in increasing land, housing, and office prices.¹ Businesses competing in international markets bear at least some of these increased costs.

In sum, a national growth pattern of regional booms and busts is inefficient and costly. In some places resources sit idle and under-used, while in others there is a mad scramble to build more. This does not mean that stasis and immobility are desirable; geographic reallocation of resources can

¹One study of 103 Massachusetts communities found that local per-capita expenditures were highest in both rapidly declining cities and rapidly growing cities. One reason local public expenditures increase with growth is that cost of providing services for new households is often higher than the revenues they provide. (Helen Ladd, "Municipal Expenditures and the Rate of Population Change," in R. Burchell and D. Listokin (eds.), *Cities Under Stress* (Rutgers, NJ: Center for Urban Policy Research, 1981), pp. 351-68, cited in Peter Eisinger, *The Rise of the Entrepreneurial State* (Madison, WI: University of Wisconsin Press, 1988).

result in a stronger U.S. economy. For example, the century-long shift away from rural communities that accompanied mechanization and rising productivity of agriculture delivered economic benefits to society in the form of cheap, efficiently produced food. Nevertheless, there were costs in this massive shift that are often overlooked. Many rural communities contracted and others ceased to grow. Many displaced southern farm workers, poorly educated and lacking in marketable work skills, exchanged rural poverty for an urban ghetto.²

Community economic decline imposes social, psychological, and physical distress as well as economic costs. Not only does family stress increase, but the community sense of well-being can be damaged by sudden and severe economic dislocation. Such stress can weaken the community political fabric so that redevelopment becomes more difficult.³ There can also be a human toll to community economic decline in the form of ill health, alcoholism, family violence, and other social disturbances.⁴

Granted that community economic decline costs the Nation and the people involved, will the market automatically respond to produce economic turnaround? Neoclassical economic theory implies that regional economic decline is self-correcting, that as labor, land, and other factor prices decline, firms will either move to or expand in the area.

For two reasons however, market adjustments alone do not reliably produce economic recovery in all places. First, it can take a long time for prices to fall far enough to put adjustment into motion. Moreover, unlike consumers who may rather easily shift to lower priced items, most firms do not necessarily move to take advantage of lower costs, because the costs of relocating are substantial. In addition, workers have noneconomic ties to localities that make it hard for them to move when local economies decline. The rise of the two-wage-earner family makes mobility even more difficult.

Second, economic decline may never be self-correcting. When it is sustained and significant it can create a vicious circle that makes the community progressively less competitive.⁵ As financial, human, and civic resources shrink, investment in public and private infrastructure falls. Reduced spending on education and training, transportation, and other public infrastructure makes the region less attractive to new investment, in turn causing further economic decline. Caught in a downward spiral, it may be impossible for a community ever to regain former levels of prosperity and quality of life unless it receives economic development assistance. Such acute problems are more likely to arise in areas that were never very prosperous, while thriving communities have a greater margin, making them less likely to fall into such a self-reinforcing decline.

Thus, communities vary in their ability to respond independently to economic distress. In some, particularly those that have been growing and are diversified, market forces and price adjustments alone can bring about a relatively speedy and complete recovery. While displaced workers in these areas may need help in finding new jobs, the community itself is not likely to need much in the way of economic development efforts. At the other extreme, market forces are so stacked against some communities that even with substantial help they probably cannot recover (abandoned, isolated mining communities are an example). However, many communities fall somewhere between the two extremes. Here, market forces alone probably cannot produce a swift and robust recovery. Economic development efforts can help to catalyze market forces and prevent the community from sliding into decline.

THE LOCATION OF DEFENSE SPENDING

To understand how defense spending cuts are likely to affect States and communities, it is important to know where defense-related jobs are

²U.S. National Commission on Technology, Automation and Economic Progress, *Technology and the American Economy* (Washington, DC: U.S. Government Printing Office, 1966), p. 20.

³Michael Hibbard, "When the Going Gets Tough: Economic Reality and the Cultural Myth of Small Town America," *Journal of the American Planning Association*, vol. 52, No. 4, 1986; also Roger Bolton, "'Place Prosperity vs. People Prosperity' Revisited," unpublished manuscript, Department of Economics, Williams College, Williamstown, MA, May 1991.

⁴For a more detailed description of social ill effects from rapid economic decline of communities see U.S. Congress, Office of Technology Assessment, *Technology and Structural Unemployment: Reemploying Displaced Workers* (Washington, DC: U.S. Government Printing Office, February 1986), pp. 125-127.

⁵The theory of cumulative causation, first proposed by Gunnar Myrdal, suggests that economic decline is not always self-correcting *Rich Lands and Poor* (New York, NY: Harper and Row, 1957).

located. Are they mostly in large cities, in a few States, in economically healthy communities, or in marginal areas? The degree of local economic distress from the build-down will depend in large part on the answers to these questions. Moreover, this knowledge can help the Federal Government, States, and communities determine how vulnerable particular places are to defense cuts and develop plans for responding to possible cuts.

The Department of Defense (DoD) publishes detailed statistics on the location of military personnel, DoD civilian jobs, and the location of prime contract awards to private industry and other institutions. However, because a substantial portion of defense industry work is subcontracted, perhaps as much as half, it is not possible to determine the location of all private sector defense-related jobs.⁶ Thus, predicting the community impacts from weapons systems cuts is harder than predicting the impacts from the base closures that have been announced.

To estimate defense employment by State and local areas, some analysts rely on prime contract award (PCA) information. However, much of the prime contractors' subcontract work is done by firms in other States. Because PCA figures do not measure this, they overestimate employment in some States and underestimate it in others.⁷ In an attempt to reflect more accurately subcontracting and supplier employment by State, the Defense Economic Impact Modeling System (DEIMS), an input-output model, is often used, but it too has problems that lead to

overestimates of defense employment in some places and underestimates in others.⁸ Without survey-based data on subcontractors, it is impossible to make precise estimates of the spatial location of defense employment.⁹ Moreover, given the uncertainty about the extent and nature of future defense spending cuts, it is impossible to predict in advance which communities will be hit by defense industry cuts and by how much. However, the PCA and DEIMS data can be used to roughly identify the places at most risk. It is also possible to identify the factors that make places most vulnerable to economic distress from defense cuts.

An important factor determining community impact is the size of the spending cut relative to the size of the community. As discussed in chapter 1, defense spending is less important now in relation to the national economy than it was in the 1970s after the Vietnam War. While many State and local economies are still quite dependent on defense, most are less dependent and more diversified than they were 20 years ago.

Defense spending is highly concentrated, however. Slightly over half of all prime contract awards go to just 7 States comprising one-third of the U.S. workforce. For example, while California has 11.7 percent of the U.S. work force, it receives over 19 percent of DoD spending on prime contracts. Defense spending is still more concentrated in substate areas. In 1988, seven metropolitan areas, comprising 13 percent of the Nation's labor force, received over 30 percent of all prime contract awards (see table

⁶From 1981 to 1990 about half the value of prime contract awards was subcontracted. The share ranged from between 40 to 55 percent. (DoD, Washington Headquarters Service, Directorate for Information, Operations and Reports, Office of the Secretary, *Department of Defense Prime Contract Awards, Fiscal Year 1990, DIOR/PO3-90*. Washington, DC: U.S. Government Printing office.

⁷For example, McDonnell Douglas Air Division received approximately \$5.2 billion in prime DoD awards in 1989. Nearly one-third of the funds were subcontract and less than 3 percent of the subcontracted funds stayed in Missouri; California received 41 percent of the subcontracted work and New York 10 percent. McDonnell Douglas Air does little subcontracting work for other firms. Thus, reliance on PCA figures would lead to the conclusion that Missouri is actually more defense dependent than it is (by as much as 13 percent) and that California is less. (Data supplied by McDonnell Aircraft Corp., 1991).

⁸DEIMS tries to measure employment from both prime and subcontract awards. On the basis of input-output tables, the DEIMS model calculates the percentage of each industry's output that goes to national defense. It assumes, for a given industry, that the percentage of workers employed in defense work is much the same in every State. For example, it assumes that defense work is the same proportion of total work in Los Angeles machine shops as in Detroit machine shops. As a result the model probably systematically underrepresents employment in places with large agglomerations of defense industries (e.g., California, Connecticut, Massachusetts) and systematically overstates employment in places that have diverse industry but have relatively little defense demand (e.g., many industrial states in the Midwest).

⁹X4's estimates of defense-related employment by State are based on the following sources: The number of military and civilian positions by State is from *Selected Manpower Statistics, FY90* (DoD, Directorate for Information Operations, and Reports, 1991) and industry employment is from *Projected Defense Purchases: Detail by Industry and State, Calendar Years 1991 through 1996*, DoD, Directorate for Information, Operations, and Reports, 1991, draft (the DEIMS model). DEIMS calculates defense-related industry expenditures for each State. The OTA estimates of industry expenditures for each state comprise direct DoD expenditures (minus direct Federal pay, since military and civilian DoD positions are counted separately) plus indirect expenditures (subcontracts and spending by contractors and subcontractors for supplies). Each State's share of the national total of defense industry spending was calculated and this percentage was multiplied by the total number of industry jobs in the nation (2.9 million in 1991) to calculate the number of industry jobs in each State.

6-1). At the county level, only 9 percent (271) of the 3,137 counties in the United States exceed the national average (per worker) for prime contract awards; 93 received over three times the national average.¹⁰ DoD research and development (R&D) spending is even more concentrated, with over two-thirds of R&D expenditures going to nine metropolitan areas with only 13.8 percent of the nation's population.¹¹

Thus, while most cities and counties do not depend significantly on defense spending, a few do. For example, Sagadahoc County, ME, where the Bath Iron Works is located, receives 11 times more defense prime contract funds per capita than the national average. New London County, CT, home to General Dynamics' Electric Boat submarine facility, receives 18 times the national average. One-half of New York State's prime contract awards go to Long Island contractors; most of Georgia's are in the Atlanta area.

Some argue that because of the high degree of subcontracting, defense spending is less concentrated than a simple examination of prime awards would suggest. In fact, this does not appear to be true. The few studies examining the issue suggest that subcontracting is *more* concentrated spatially than prime contracting.¹² A **possible** reason for this is that although prime awards maybe geographically dispersed, in part for political reasons, much of this

work is subcontracted back to a few areas with high concentrations of firms and people who specialize in defense work, such as Boston, Long Island, and southern California.

In assessing the defense dependence of local communities, the secondary impacts of defense spending should not be overlooked. Calculations of defense-related employment underestimate dependence when they do not include the local jobs dependent upon spending by employees of defense firms and military bases. Varying by the nature and size of the local economy and the type of job (military vs. private industry), every defense job creates approximately another 0.2 to 1.6 jobs in the rest of the local economy.¹³ For example, in southeastern Connecticut employment by defense prime contractors makes up approximately one-quarter of total area employment; regional planners estimate that altogether one-half of all jobs in the region are directly or indirectly dependent upon defense spending.¹⁴

Defense-Dependent Regions

Since World War II, defense procurement has focused less and less on traditional military products (e.g., trucks, tanks, rifles) and more on aerospace and electronic-based products. The locus of defense production has correspondingly shifted from the industrial Midwest to other areas of the Nation, particularly California and New England.¹⁵ The

¹⁰Data supplied by the Office of Economic Adjustment, DoD. In 1989, the national average was \$1,121 in prime contract awards per member of the labor force.

¹¹These are, in order of DoD research and development per member of the labor force, Denver-Boulder, Boston, San Jose, Los Angeles-Long Beach, Seattle-Everett, Nassau-Suffolk Counties (NY), Anaheim, Washington (DC), Dallas Fort-Worth, and San Diego. (Data for 1988 from Donald Hicks, Bruton Center for Development Studies, University of Texas at Dallas.)

¹²Edward J. Malecki and Lois M. Stark, 'Regional and Industrial Variation in Defence Spending: Some American Evidence,' in Michael J. Breheny, *Defence Expenditure and Regional Development* (London: ManSell Publishing Ltd., 1988); John Rees, 'The Impact of Defense Spending on Regional Industrial Change in the United States,' in G. Hoffman (ed.), *Federalism and Regional Development* (Austin, TX: University of Texas Press, 1981); Charles H. Anderton and Walter Isard, 'The Geography of Arms Manufacture,' in *The Geography of Peace and War*, edited by David Pepper and Alan Jenkins, London: Basil Blackwell, 1985, pp. 90-103; and Breandain O'hUallachain, Regional and Technological Implications of the Recent Buildup in American Defense Spending, *Annals of the Association of American Geographers*, vol. 77, no 2, June 1987. Similar findings were reported in the 1960s. Roger F. Riefler and Paul Downing, 'Regional Effect of Defense Effort on Employment,' *Monthly Labor Review*, July 1968.

¹³Multipliers in smaller localities and for military bases are smaller than for larger areas and defense industrial firms. Some researchers have retrospectively examined employment and income changes after major job losses and have concluded that because the changes are smaller than anticipated, commonly accepted employment and income multipliers are too high. However, these analyses do not take into account the growth of other economic activities in the region to compensate for the losses. The calculations of the multiplier effects assume that all sources of demand other than the one being analyzed remain constant. They are hypothetical calculations. The calculated effects overestimate actual changes in employment if other sources of demand rise to compensate for part of the defense reduction, or underestimate them if other sources of demand fall to aggravate the defense reduction. For a discussion of military spending multipliers, see Joseph Cartwright and Richard Beemiller, *The Regional Economic Impact of Military Base Spending* (Washington, DC: Bureau of Economic Analysis, U.S. Department of Commerce, November 1980); also Rodney A. Erickson, 'Sub Regional Impact Multipliers: Income Spread Effects From a Major Defense Installation' *Economic Geography*, vol 53, pp. 283-294.

¹⁴Richard B. Erickson, Executive Director, Southeastern Connecticut Regional Planning Agency, personal communication, November 1990.

¹⁵Edward J. Malecki and Lois M. Stark, 'Regional and Industrial Variation in Defence Spending: Some American Evidence, Op. Cit.; Roger F. Riefler and Paul B. Downing, 'Regional Effect of Defense Effort on Employment,' op. cit.; and Ann Markusen, Peter Hall, Scott Campbell, and Sabina Dietrick, *The Rise of the Gunbelt; The Military Remapping of Industrial America* (New York, NY: Oxford University Press, 1991).

Table 6-I-Geographic Concentration of DoD Prime Contracts: Top Seven Metropolitan Areas, 1966

Area	Percent of total DoD expenditures (cumulative)	Percent of U.S. labor force (cumulative)
Los Angeles-Long Beach-Anaheim ^a	9.4%	4.7%
Washington, DC.....	14.0	6.6
Dallas-Fort Worth.....	18.3	8.3
St. Louis.....	21.9	9.4
Boston.....	25.2	10.7
Nassau-Suffolk Counties....	28.0	11.8
San Jose.....	30.8	12.5

^aLos Angeles-Long Beach and Anaheim, et al. are considered as one area here.

SOURCES: Bruton Center for Development Studies, University of Texas at Dallas; Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, June 1990.

defense buildup of the 1980s accelerated this trend. Per capita defense expenditures in the Pacific and New England census divisions increased significantly faster than in the rest of the Nation.¹⁶ By 1989, New England and the Pacific census divisions received 2.2 and 1.5 times, respectively, the amount of spending per capita for the Nation as a whole.

Because 85 percent of military prime awards in the Pacific region are in California, impacts there are considered at the State level (see discussion below). New England however, can be considered as a regional unit because most New England States are dependent upon defense spending, making it the most defense-oriented census region in the Nation.¹⁷ By 1991, substantial defense cuts had already occurred and were aggravating a severe regional recession. New England unemployment was at 8.3 percent compared to a nationwide average of 6.5 percent.¹⁸ New England has suffered through defense cuts before. When defense awards declined by almost one-half between 1948 and 1973, and a number of military bases were closed in the early

1970s, the impact on the region's economy was significant.¹⁹ A soaring unemployment rate (over 12 percent in 1975) led many to refer to the area as the New Appalachia. But the economy recovered, due to a combination of the rise of high-tech manufacturing, financial services, and, not least, defense spending. The positive impact of \$150 billion in DoD purchases in the 1980s in the region should not be underestimated. Even though current cuts will occur over a longer period of time than in the post-Vietnam era, no increase in defense spending can be expected to give the region a boost.²⁰

Urban Versus Rural Defense Dependency

Large cities benefit more than rural areas from defense spending. Metropolitan and nonmetropolitan counties get about the same amount of Federal funds per capita when defense and space are excluded, but metropolitan counties get three times more in defense and space spending.²¹ Thus, rural areas should be less affected by the defense build-down, particularly if cuts are across the board. Steeper cuts in DoD operations (especially in military bases) may affect rural areas more than cuts made across the board, concentrated in procurement, or focused in R&D, especially since the latter is heavily concentrated in a few larger metropolitan areas. Given the economic difficulties rural areas have experienced in the 1980s, this is fortunate. The strong growth of metropolitan economies in the 1980s and their superior prospects for the future put them in a better position to absorb defense spending cuts.

Defense Dependency by State

For most States, projected cuts in defense are not large in relation to the size of their economies. Twenty-nine States have defense-related shares of

¹⁶From 1980 to 1986, defense expenditures increased by \$221 per person in New England and \$342 per person in California. In comparison spending increased by \$146 nationally and by only \$68 in the heavily industrial East North Central region. In 1986, the United States spent \$1,100 per capita on defense. Thomas Muller, "The Impact of Reagan Administration Policies on Regional Income and Employment," (Washington, DC: The Urban Institute, May 1986), p. 11.

¹⁷Lynne E. Browne, "Defense Spending and High Technology Development: National and State Issues," *New England Economic Review*, September/October, 1988, pp. 3-22.

¹⁸For February 1991. Calculated from U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings* (Washington, DC: April 1991).

¹⁹Yolanda K. Henderson, "Defense Cutbacks and the New England Economy," *New England Economic Review*, July/August 1990.

²⁰Richard Barff, "Living by the Sword and Dying by the Sword: Defense Spending and New England's Economy in Retrospect and Prospect," unpublished paper, Department of Geography, Dartmouth College, 1990.

²¹Nonmetropolitan counties receive \$303 per capita vs. \$1,011 per capita for metropolitan counties. U.S. Department of Agriculture, Economic Research Service, Agriculture and Rural Economy Division, *Rural Economic Development Policy in the 1980's: Preparing for the Future* (Washington, DC: U.S. Department of Agriculture, July 1987), pp. 11-17.

employment at or below the national average of 4.2 percent. If defense spending were reduced at a relatively rapid pace, to about \$218 billion in 1995 (see ch. 3), no more than 0.18 percent of the work force (or an average of approximately 4,100 jobs per State) in these 29 below-average States would be vulnerable to job loss each year.²² However, in some States, such as Alaska, Hawaii, Virginia, and to a lesser extent Connecticut, Maryland, and California, defense spending is large enough that cuts could have a greater impact on the economy. Only 10 States have more than 5.5 percent of their jobs in defense (table 6-2). In these States, the faster paced cuts could put around 0.3 to 0.6 percent of the States' jobs at risk in a given year. This loss may not appear overwhelming, but it could slow growth, particularly if other segments of the State economy are weak.

Defense-Dependent Communities

While regional and State impacts of reduced defense spending promise to be manageable overall, particularly if the build-down occurs gradually, the impact on certain communities could be more troublesome. A small but significant number of areas have benefited substantially from the Cold War economy. Some have specialized in the production of ships and submarines (e.g., Bath, ME; Groton, CT; Newport News, VA), some in tanks (Lima, OH), and others in aircraft and missiles (St. Louis, Wichita, Seattle, Los Angeles), electronics (San Jose, Boston, Fort Worth, Okaloosa County, FL), and defense services (Washington, DC).

For example, the western Massachusetts town of Pittsfield is home to a GE Aerospace facility that makes defense-related electronics equipment. In 1986, GE employed 7,800 of the region's 41,000 workers. Pittsfield's economy has struggled as GE's employment dropped to fewer than 3,000 in 1991. Unemployment reached almost 13 percent in 1991.²³ The number of employed workers declined by 3,000 from 1990 to 1991.

Southeastern Connecticut is similarly defense-dependent. Located on Long Island Sound at the border of Rhode Island, the region is the home of

Table 6-2-The 15 Most Defense-Dependent States, 1991

State	Defense share of employment (percent)	Total defense jobs
Alaska	13.1	34,000
Hawaii	12.1	68,000
Virginia	10.4	328,000
Connecticut	6.5	110,000
Maryland	6.2	152,000
Utah	5.9	45,000
New Mexico	5.9	40,000
California	5.9	829,000
Washington	5.7	137,000
Colorado	5.6	96,000
Massachusetts	5.3	157,000
Arizona	5.2	86,000
Mississippi	5.1	56,000
Oklahoma	4.9	73,000
Missouri	4.8	121,000
U.S. total	4.2	5,016,000

SOURCES: Employment data from Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, June 1991. Total U.S. defense employment from Department of Defense, Office of the Comptroller, *National Budget Estimate for FY 1992* (Washington, DC: 1990). Allocations of defense employment by State by the Office of Technology Assessment, based on the Defense Impact Economic Modeling System (DIEMS). Total defense jobs refers to jobs within the United States and excludes DoD military personnel stationed overseas.

General Dynamic's Electric Boat, other defense firms, and military installations. In 1990, some 120,000 people were employed overall in the region. Electric Boat's Groton facility employed approximately 17,000, while an additional 2,208 civilians and 13,950 military personnel were at the Navy's Submarine base and the Naval Underwater Systems Command (NUSC). NUSC is losing 900 positions through realignment, and Electric Boat could eliminate as many as half its positions, depending on future submarine contracts. United Nuclear Corp. (UNC), which made nuclear reactors for submarines, employed 1,200 people. UNC will close by 1992,

Though it is not possible to pinpoint which or even how many communities are at serious risk in the defense build-down, data on DoD prime contract awards by county provide some rough approximations. In 1989, 271 of the Nation's 3,137 counties got awards worth more than the national average, per employed person, while 142 received awards worth more than two times the national average. (See table

²²Data from OTA calculations of defense employment. Based on William Kauffman's (*Glasnost, Perestroika, and U.S. Defense Spending*, Washington, DC: Brookings Institution 1990) estimates of the decline in employment through 1995, percentage job losses were calculated for military, civilian, and private industry positions. These estimates assume defense cuts evenly affect each State's share of defense employment. In fact, depending on the weapons systems cut and the bases closed, the employment impact will probably be uneven.

²³U.S. Bureau of Labor Statistics, *Employment and Earnings* (Washington, DC: May 1991).

Table 6-3-Defense Dependency by Size of County, 1989

Prime contract defense dependency		County employment			Total
		Under 50,000	50,000 to 250,000	Over 250,000	
Low	Number of counties	2,526	220	59	2,805
	Millions of workers	24.4	22.7	31.4	78.5
Medium	Number of counties	84	30	15	129
	Millions of workers	1.1	3.6	12.8	17.6
High	Number of counties	97	26	19	142
	Millions of workers	1.3	3.1	10.1	14.5

^aLow counties have fewer prime contract awards per employed worker than the national average; medium have more than the national average and less than twice the national average; and high have more than twice the national average.

SOURCE: Unpublished data supplied by Department of Defense, Office of Economic Adjustment, 1990. The total number of counties is less than the actual U.S. total because of missing data.

6-3.) The 271 above-average counties had 32.1 million workers, or 27 percent of the employed U.S. labor force, while the 142 most dependent counties encompassed 14.5 million workers, or 12.5 percent of the employed labor force.

The extent and speed of the build-down will affect the extent of community distress. If the build-down proceeds at 4 to 5 percent per year, the number of seriously affected communities will likely remain manageable, if the national economy recovers and begins to grow. A steeper build-down of 6 to 7 percent per year would affect more communities. A rapid build-down at, say 10 percent for one or two peak years, could affect still more.

FACTORS AFFECTING ECONOMIC DISTRESS

Compensating Economic Growth

In the short run, cutting the defense budget will eliminate jobs. However, in the moderate and long term, some compensating job growth will occur, assuming that either public or private investment takes up the slack.²⁴ For illustration, Leontief estimated in 1965 that after a 20-percent reduction in defense spending, about half the States would gain

employment because compensating economic growth would more than offset any defense losses, while compensating growth would reduce the severity of defense job losses in the remaining 25 States.²⁵ To the extent compensating growth occurs in the national economy, States affected by defense cuts, and to a lesser extent, communities, will be helped.

Speed of Cuts and Advance Notice

The effects of defense cutbacks will be eased if the cuts occur over a number of years. Gradual cutbacks make it easier for laid-off workers and idled resources to be absorbed through local economic growth. In fact, employment is often phased down gradually as contracts for military systems are completed. For example, the layoffs at United Nuclear Corp. in Connecticut are occurring in stages, with 500 employees laid off in 1990, 400 in 1991 and the final 300 in 1992. As a result, the impact on the local economy is moderated and UNC has time to try to develop new, nondefense business at the plant.²⁶

When military bases close, soldiers are transferred and civilian positions are eliminated in stages, so that by the time of closure many positions have already disappeared. Advance notice of 2 to 5 years

²⁴Brian W. Cashell, "Defense Spending Cuts: Implications for Deficit Reduction and the Economy," Congressional Research Service, U.S. Congress, Jan. 5, 1990; Michell R. Garfinkel, "The Economic Consequences of Reducing Military Spending," *Federal Reserve Bank of St. Louis Economic Review*, vol. 72, November/December 1990, pp. 47-59; C. Alan Garner, "The Effect of U.S. Defense Cuts on the Standard of Living," *Federal Reserve Bank of Kansas City Economic Review*, vol. 76, January/February 1991, pp. 33-47; and Lori Taylor, "Reduced Defense Purchasing: Anticipating the Impact on State and Industry Employment" *Federal Reserve Bank of Dallas Economic Review*, November 1990, pp. 17-27.

²⁵Wassily Leontief, et al., "The Economic Impact-Industrial and Regional-of an Arms Cut," *The Review of Economics and Statistics*, vol. XLVII, No. 3, August 1965, pp. 217-241; see also John H. Cumberland, "Dimensions of the Impact of Reduced Military Expenditures on Industries, Regions and Communities," in *The Economic Consequences of Reduced Military Spending*, Bernard Udis (wt.), (Lexington: Lexington Books, 1973); Lori Taylor, op. cit; and Roger H. Bezdek, "The 1980 Economic Impact-Regional and Occupational-of Compensated Shifts in Defense Spending," *Journal of Regional Science*, vol. 15, No. 2, 1975, pp. 183-198.

²⁶UNC has matched funds it received from the State of Connecticut to hire a consultant to identify alternative businesses that the company might conduct at the facility.

Box 6-A—Lockheed Maintenance of Boeing 747s at Norton Air Force Base

In August 1990, Lockheed Corp. signed a lease with the Air Force and the Inland Valley Development Agency (IVDA) to use two hangars at Norton Air Force Base for a maintenance service for Boeing 747s. Norton, located in San Bernardino, CA was one of the 86 military facilities selected in the first round of base closures.

Lockheed Aircraft Service Co. has been in the business of maintaining commercial airlines since 1938. With the rise of the commercial repair and maintenance market in the last decade, Lockheed opened new facilities in Greenville, SC and Tucson, AZ. Recently, the company saw an opportunity to get into maintenance of 747s for Japan Airlines.

At the time Lockheed was planning the new facility for this purpose, Congressman George Brown, who represents the San Bernardino area, urged the company to consider using Norton, which was rumored to be closing. When the closure was announced, Lockheed approached the Air Force about using the facility. From Lockheed's perspective, Norton was ideal. Its hangars were large enough for 747s and required only minimal upgrading. The high-cost southern California location was not a detriment because 747 maintenance requires highly skilled workers, who are well paid.¹

What Lockheed needed first was an agreement with the Air Force on joint use of the facility. Air Force regulations on the use of bases by outside contractors are dauntingly complex, but Lockheed was finally able to sign a 50-year lease that involved the Air Force and later the IVDA, which had been formed by local communities to develop the base once it is closed. The agreement allowed Lockheed to use two hangars immediately, and another two after the base closes in 1995. Lockheed will pay an average of \$2.1 million per year for at least the first 10 years and will invest \$20 million in the new facility.

Several problems delayed the commencement of the operation. First, Lockheed found that the hangar floors would not support the weight of 747s and had to put down a new floor. Then it turned out that the soil underneath the hanger was contaminated by solvents, so Lockheed entered into discussions with the Environmental Protection

before closure makes it easier for people to get replacement jobs and communities to get a head start on their economic development and base reuse efforts. For example, in San Bernardino, CA, where Norton Air Force Base is scheduled to close in 1994, Lockheed Corp. operates a commercial aircraft maintenance service that by October 1991 employed 200 people.²⁷ (See Box 6-A.) Virtually all of the communities affected by the first round of base closures have begun to plan for base reuse and local economic development.²⁸

Local Economic Conditions

The health of a State or local economy greatly affects the extent of distress caused by defense cuts. If cutbacks occur in an urban area with a healthy nondefense sector, little economic development

assistance may be necessary.²⁹ For example, Long Island, home to Grumman Corp. and a number of other defense contractors, has experienced defense cuts, but its relatively strong and prosperous economy has helped absorb some of the impacts.³⁰ While smooth adjustment to reduced defense spending is not assured, the overall health and diversity of the Long Island economy will go a long way toward easing the problems. Similarly, because the economy of Antelope Valley, CA (70 miles north of Los Angeles) was relatively healthy, it was able to absorb the 1986 loss of 6,000 Rockwell jobs upon completion of the B 1-B bomber program. Since the area has become in part a bedroom community for Los Angeles, the impacts of the layoffs were minimal.³¹ In fact, Los Angeles County as a whole grew faster than any other California county in the

²⁷David Fondler, "Lockheed Attracts First Norton Client," *Inland Valley Daily Bulletin*, Sept. 12, 1990, p. C7.

²⁸Data provided by the Office of Economic Adjustment, DoD.

²⁹U.S. Department of Defense, Office of Economic Adjustment, *Economic Adjustment/Conversion* (Washington DC: Office of Economic Adjustment, July 1985), app. K.

³⁰Long Island grew faster in the last decade than any other area in New York State and its personal income per capita is in the top 1 percent of all communities in the United States. Employment in 1989 was at a historic high, although due in part to cutbacks in defense firms and the national recession, it had shrunk 5 percent (60,000 jobs) by 1991. However, it still exceeded 1986 employment levels. Unemployment in June 1991 was 6.2 percent, slightly below the national average. See Martin Melkonian, "Cutbacks in Defense Spending: Outlook and Options for The Long Island Economy," Business Research Institute, Hofstra University, February 1989, p. 1; also Bureau of Labor Statistics, *Employment and Earnings* (Washington, DC: 1991).

³¹However, some workers did have to commute up to 70 miles for their new jobs in Los Angeles and Long Beach.

Agency on cleanup. The soil was removed and is being cleaned on another part of the base. This entire process delayed the project by about 1 year.

By October 1991 Lockheed had hired 200 workers and had begun work on the first 747. IVDA officials expect that Lockheed will have hired a total of 1,500 workers by the end of 1992. The company has indicated that it would like to hire locally as much as possible, giving special preference to people losing jobs on the base. However, because of company requirements that many of the workers have commercial aircraft repair experience and FAA certification, the IVDA officials expect that only about one-third of the workers can be hired locally, most of them for less technical jobs. Lockheed also expected to draw subcontractors to the area. A variety of firms doing avionics repair, aircraft refurbishing, and engine repair have shown interest in locating on or near the base.

The Lockheed reuse project is only one part of the overall expected reuse activity for Norton. The IVDA plans to obtain the airport itself at no cost (through the public benefit clause that governs the disposal of Federal property) and operate it as a civilian operation for air cargo. In addition, it is proposing to develop the balance of the Norton base acreage (400 acres) and 1,500 acres around the base with manufacturing and office space, and hopes to create 20,000 jobs. This would be more than double the 10,000 civilian and military positions that were on the base before closure.

The preparation is going more slowly than the IVDA would like. The Air Force has refused to discuss the sale price of the base until the environmental impact studies are completed in September 1992. Moreover, it is not clear when the Air Force will vacate different parts of the base. Without this information, efforts to do interim leasing, find a developer, and begin reuse have been delayed. At least one major developer has cut off negotiations because of the uncertainty about the date of land availability, price, liability, and environmental cleanup. If a sale is finally agreed upon, IVDA will issue bonds to finance the purchase of the base.

¹Interview with John Dailey, Director of Public Relations, Lockheed Aircraft Service Co., July 1990.

1980s, with growth in Antelope Valley faltering only in the 1990-91 recession, which hit construction hard.

In contrast, when a number of demand shocks including defense cuts occur simultaneously in the local economy, significant decline can occur. Such a scenario describes the decline of the Seattle economy following the Vietnam War. Not only did defense aircraft spending decline, but the space program shrank, and the commercial aerospace market also collapsed in a cyclical downturn.³² This triple whammy caused massive layoffs, the effects of which rippled through the area economy. New England today is in a similar if less severe situation, where defense cuts have further depressed a regional economy already weakened by declines in computers, traditional manufacturing, financial services, and real estate.³³ When the direction of the local economy is down, defense cuts deepen and lengthen the decline.

Some of the more defense-dependent States today have relatively strong economies to cushion the blow from reduced defense spending. Unemployment rates in 7 of the 13 most defense-dependent States were below the national average in 1991, even after most of these States suffered some defense cuts. Some of these State economies were growing; from 1986 to 1990, 7 of the 13 had growth rates equal to or greater than the national average (table 6-4).³⁴ Defense cuts may lower the rates of growth in these States, but they are in a better position to weather cuts than defense-dependent States with a record of slower growth.

The economies of many defense-dependent metropolitan areas are also relatively strong. Twelve of the top 15 metropolitan areas in defense contracts per employed worker had lower unemployment rates than the national average in 1990. Six had faster than average labor force growth from 1986 to 1991. (See table 6-5.) Of the 14.5 million workers living in counties highly dependent upon defense in 1989, 68

³²U.S. Department of Defense, Office of Economic Adjustment, *Economic Adjustment/Conversion*, Op. cit.

³³Richard Barff, "Living by the Sword and Dying by the Sword: Defense Spending and New England's Economy in Retrospect and Prospect," Op. cit.

³⁴Some of this growth may have been due to the influx of defense dollars; however, total defense spending has been declining since 1988.

Table 6-4.-Economic Conditions of the Most Defense-Dependent States, 1991

	Defense-related jobs as share of total State employment (percent)	Unemployment rate July 1991 (percent)	Annual employment growth 1986-1990 (percent)
Alaska	13.1	7.3	1.0
Hawaii	12.1	2.8	2.9
Virginia	10.4	6.0	2.7
Connecticut	6.5	6.8	0.4
Maryland	6.2	5.5	1.8
Utah	5.9	5.2	1.7
New Mexico	5.9	7.3	1.6
California	5.9	8.0	2.7
Washington	5.7	5.9	4.2
Colorado	5.6	4.5	1.5
Massachusetts	5.3	9.4	0.3
Arizona	5.2	5.5	2.8
Mississippi	5.1	9.5	1.8
U.S. average	4.2	6.8	1.8

SOURCES: Employment data from Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, September 1991. Total U.S. defense employment from Department of Defense, Office of the Comptroller, *National Budget Estimate for FY 1992* (Washington, DC: 1991). Allocations of defense employment by State by the Office of Technology Assessment.

percent lived in counties with low unemployment rates.³⁵

The loss of defense industries in small communities with little economic diversity could be traumatic. A remote location can compound the difficulties. For example, after Glasgow and Lewiston Air Force Bases (AFB) in rural Montana and Edgemont Army Depot in rural South Dakota closed in the late 1960s and early 1970s, few of the lost jobs were regained because there were few other functions the towns could serve. Communities such as Oscoda, MI (Wurtsmith AFB), Leesville, LA (Fort Polk), and Limestone, ME (Loring AFB), all slated for base closings, are the kinds of small towns that are most vulnerable.

However, most defense spending occurs in large metropolitan areas, many of them with highland and housing costs, excessive pollution, heavy traffic congestion, and lack of open space. Boston, Long Island, San Jose, Washington, DC, and southern

California typify such development patterns.³⁶ For example, southern California utility rates are as much as 50 percent higher than those in other States. Land prices are among the highest in the Nation. The 1990 average price for a single family home in the State was \$210,000, more than double the national average.³⁷ Because of the high cost of living, labor costs are one-third more than in parts of Texas, Colorado, and Oklahoma.³⁸ Likewise, traffic congestion, water shortages, and air pollution not only lower the quality of life, but increase business costs, slow growth, and make it hard to attract skilled workers when they are needed (see table 6-6).

When defense spending is cut in such congested metropolitan areas, demands on strained resources lighten, which, over time, makes it easier for compensating economic growth to occur. Regional firms that produce for national and international markets find it easier to grow and export as labor and land costs stabilize or decline, putting overall costs

³⁵ "Highly defense-dependent" counties are those with more than twice the national average per employed worker in prime contract awards in 1989. Low unemployment rates were those below 4.5 percent (at a time when the national rate was 5.4 percent). Data on defense spending were provided by the Office of Economic Adjustment.

³⁶ For Long Island, see Martin Melkonian, "Cutbacks in Defense Spending: Outlook and Options for The Long Island Economy," *op. cit.*; also Ann Markusen, et. al., *The Rise of the Gunbelt*, *op. cit.*

³⁷ Richard L. Stern and John H. Taylor, "Is the Golden State Losing It?" *Forbes*, Oct. 29, 1990, p. 87.

³⁸ *Ibid.* In 1991, average hourly earnings of workers in Los Angeles were \$11.17 while in San Antonio, TX they were \$8.19. In the nonmetro areas of Texas, the wage rates are even lower, Bureau of Labor Statistics, *Employment and Earnings*, (Washington, DC: May 1991).

Table 6-5-Economic Conditions of Metropolitan Areas Receiving the Most Prime Contract Awards

Metro area	Prime contract \$ per employed worker, 1988	Unemployment rate July 1991	Annual employment growth 1986-90 (percent)
San Jose	\$4,590	6.20/1	1.0%
St. Louis	3,850	6.7	0.6
Washington, DC	2,863	4.4	2.0
Boston	2,863	8.2	0.0
Cincinnati	2,778	5.1	2.6
Dallas-Fort Worth	2,776	6.6	0.7
Nassau-Suffolk Counties	2,691	6.1	0.1
Hartford	2,666	6.3	0.7
Los Angeles-Long Beach	2,234	8.6	2.2
Anaheim	2,164	5.3	2.3
Seattle-Everett	2,127	4.7	4.8
San Diego	1,950	7.0	4.0
Denver-Boulder	1,949	4.3	0.5
Baltimore	1,701	6.2	1.5
Minneapolis-St. Paul	1,441	4.1	1.7
U.S. average	\$1,060	6.8%	1.8%

SOURCES: Prime contract data from the Bruton Center for Development Studies, University of Texas at Dallas. Employment data from the Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, September 1991.

more in line with those of competitors elsewhere.³⁹ Keep in mind, however, that compensating growth takes time, and that some segments of the population will suffer reduced incomes during the period of adjustment. Also, defense cuts could cause another kind of loss in some local economies. For example, in Los Angeles, the cutbacks could aggravate the growing income inequality in the region. In the 1980s high-and low-paying jobs have grown in number while those in the middle have decreased. Because the majority of defense jobs in Los Angeles pay middle wages, defense cuts could worsen this income and opportunity inequality. Los Angeles is home to a large and rising number of immigrants, many possessing low-level skills. Without the good manufacturing jobs provided by defense (or other industries), opportunities for the poor and immigrants will become scarcer. The pattern of increasing disparity in pay may create a community polarized into haves and have-nets.^a

In depressed or less congested metropolitan areas, defense cuts could have serious effects on the local economy as a whole. Cities like Baltimore, Buffalo, Cincinnati, and St. Louis already have labor sur-

pluses, relatively low-cost housing, and less traffic congestion. Defense spending cuts could simply enlarge the supply of resources that are already under-used.

Many of these older industrial areas may face the additional drawback of layoffs that disproportionately affect blue-collar workers, who generally have a harder time than more highly educated workers in finding replacement jobs. For example, a study of defense cuts in Maryland estimated that Baltimore would have a harder time adjusting to defense cuts than the Washington, DC suburbs because the former's work force is heavily blue-collar.⁴¹ The higher concentration of engineers and other white-collar workers in suburban Montgomery County, MD would ease community adjustment.

Considering the high cost of doing business in areas such as Long Island, Los Angeles, and Washington, DC, why have defense firms not already moved to lower cost locations? Indeed, some have. Lockheed Aerospace Division recently moved to Marietta, GA from its birthplace in Burbank, CA. Hughes and several other aerospace companies in Los Angeles have moved some small production

³⁹Richard Barff, "Living by the Sword and Dying by the Sword: Defense Spending and New England's Economy in Retrospect and Prospect," *Op. cit.*, p. 24.

⁴⁰Los Angeles Economic Roundtable, *Attachment 8: Employment and Wage Trends in Los Angeles County*, Feb. 22, 1991.

⁴¹Marie Howland, "The Costs of Job Loss for Stable Workers: Implications for Defense Cutbacks in Three Counties of Maryland," in *The Defense Budget and the Maryland Economy*, Bureau of Governmental Research, School of Public Affairs, University of Maryland, (College Park, MD: 1990).

**Table &6-Metropolitan Areas Receiving Most Prime Contract Awards
Per Employed Worker, 1989**

Metro area	Prime contracts per employed worker	Annual cost of traffic congestion per capita, 1988	Median housing prices (thousands)
San Jose	\$4,590	\$650	NA
Washington, DC	3,863	570	\$150
St. Louis	3,850	180	77
Boston	2,863	440	174
Cincinnati	2,778	150	80
Dallas-Fort Worth	2,776	410	89
Nassau-Suffolk Counties	2,691	370	161
Hartford, et al.	2,666		157
Los Angeles-Long Beach	2,234	620	213
Anaheim, et al.	2,164	620	242
Seattle-Everett	2,127	490	142
San Diego	1,950	260	183
Denver-Boulder	1,949	260	86
Baltimore	1,701	270	106
Minneapolis-St. Paul	1,441	180	89
U.S. average	\$1,060	\$290	\$ 95

SOURCES: Prime contract data from the Bruton Center for Development Studies, University of Texas at Dallas. Employment data from Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, June 1990. Data on cost of traffic congestion from Texas Transportation Institute, *Roadway Congestion in Major Urbanized Areas 1982-1988* (College Station, TX: Texas A&M University, 1990). Data on housing prices from the National Association of Realtors, Washington, DC. All data are based on national averages for 1990 and reflect median home prices.

facilities to smaller cities, generally in the South and West.

Yet, despite the occasional relocations, southern California and other high-cost areas remain attractive, especially for defense R&D, management functions, and high value-added and skilled production. Los Angeles in particular is a vast regional complex oriented to defense production where the major contractors, suppliers, consultants, universities, skilled technical workers, research centers, and government installations provide a rich interdependent environment that makes it difficult for any one firm to leave.⁴² The same considerations apply in Boston, Long Island, and Washington, DC.⁴³

These areas possess strong agglomeration economies (savings that firms experience from locating near a concentration of activities related to the firm) and are likely to possess an advantage in weathering

defense cuts.⁴⁴ For example, Scott and Gauthier found that when defense and space expenditures (missiles and aerospace) were increasing, other areas gained more employment than southern California.⁴⁵ But in times of decline, southern California's defense missile and aerospace industry did better.

MILITARY BASE CLOSINGS AND REALIGNMENTS

From 1991 to 1997, 173 military installations are slated for closure or realignment (reduction in personnel). On December 29, 1988 the first Commission on Base Closures and Realignments released its list of 86 domestic military installations that DoD will close from 1991 to 1995; the commission recommended reducing personnel at 5 additional bases.⁴⁶ The 1991 Defense Base Closure and Realignment Commission recommended clos-

⁴²Allen J. Scott and Donald J. Gauthier, "The US Missile and Space Industry: Genesis, Growth and Locational Structure, with Special Reference to Southern California" Department of Geography, University of California -Los Angeles, 1991; also Ralph Vartabedian, "Aerospace Moves: Hidden Costs Often Negate Gains," *Los Angeles Times*, Mar. 3, 1991, p. X21.

⁴³Ann Markusen, et al., *The Rise of the Gunbelt*, Op. cit.

⁴⁴Edwin S. Mills, *Urban Economics* (Glenview, IL: Scott, Foreman and Co., 1980); also Nancy Ettlinger, "Development Theory and the Military Industrial Firm," in *The Pentagon and the Cities, Urban Affairs Annual Reviews*, A.M. Kirby (ed.), vol. 40, fall 1991.

⁴⁵Allen J. Scott and Donald J. Gauthier, "The US Missile and Space Industry: Genesis, Growth and Locational Structure, with Special Reference to Southern California" op. cit.

⁴⁶U.S. Defense Secretary's Commission on Base Realignment and Closure, *Base Realignments and closures: Report of the Defense Secretary's Commission* (Washington DC: 1988).

ing an additional 34 bases and realigning 48 more. When Congress did not adopt a joint resolution in opposition to either commissions' recommendations, the Secretary of Defense was required to take action. In 1993 and 1995, future commissions will make additional, but probably fewer, recommendations for base closures.

The impacts from military base closings should be relatively mild. First, the 173 installations scheduled to be closed represent less than 4.5 percent of the 3,800 DoD installations in the United States. Second, the local multiplier effect from base closures is usually lower than for defense industry cutbacks.⁴⁷ Third, because most military personnel, many base civilian workers, and their family members and dependents are normally transferred to other bases, the impact on local unemployment rates is less than from contractor cutbacks (i.e., they do not swell the numbers of the local jobless).⁴⁸ Fourth, compared with defense industry cutbacks, communities usually have greater lead time to plan for base reuse and other economic development activities. With the exception of Pease AFB in New Hampshire, which closed in February 1991, all Round One closures were announced at least 4 years in advance. Lead time for Round Two closures is generally less, with nine facilities scheduled to close in September 1993, 2 years after announcement. But eight will not close until 1994, and 16 will remain open until 1995 or after.

Finally, communities are often left with valuable real estate (e.g., land, buildings, air strips, housing) or open space, the use of which can help ease economic adjustment.⁴⁹ Cameron Station in Alexandria, VA, Fort Sheridan in Chicago, the Presidio in San Francisco, and Fort Meade in Maryland are all

examples of installations on the closure list that can provide the host communities with open space or developable land. According to Henry Howard, deputy city manager of Alexandria, VA, the city has been hoping for years that Cameron Station would be closed, even though 4,700 jobs will be lost.⁵⁰ The city is anxious to use the land for housing and commercial development and to get the land back on the city tax rolls, from which the base is exempt. Valued at \$140 million, the land has strong development potential.

Because it is still early in the process, few civilian reuse agreements have been signed. However, successful reuse can mitigate the impacts of closure. One advantage to closing bases through commissions, with Congress confining itself to one yes-or-no vote on *all the* commissions' recommendations, is that decisions to close bases are final. Most communities do not spend valuable time and energy fighting the actions, as they did in earlier closures. Now they get on with the hard work of economic development.⁵¹ All of these factors make base closures less traumatic than defense contractor cuts that, on the face of it, affect the same number of job holders.

Few of the base closures will have significant employment impacts on the local communities. Of the 91 facilities selected for closure in the first round, 52 are stand-alone housing units with virtually no employment impacts, and another 16 will displace fewer than 10 jobs each. The second round closures are more significant, but many are in large cities where the impacts are likely to be less than in small towns. For example, while approximately 4,000 positions will be eliminated at the Naval Air Station

⁴⁷Defense contractors normally pay higher wages than military bases, where most of the personnel are active duty service members. Second, military personnel purchase much of their goods and services on the base, and the employment generated is of military and civilian personnel who are more likely to leave the area when the base is closing. Third, defense contractors often support a web of subcontractors within the region. Donald Hicks, *Leveraging the Nation's R&D and Defense Investments in the Metroplex Regional Economy*, (Dallas, TX: Regional Technology Program, North Texas Commission, July 1988.) These factors mean that the number of additional jobs created by defense spending is higher for industrial contractors than for bases. Edward J. Malecki and Lois M. Stark, "Regional and Industrial Variation in Defense Spending: Some American Evidence," in Michael J. Breheny, *Defense Expenditures and Regional Development* (New York, NY: ManSell Publishing Ltd., 1988); John Rees, Bernard L. Weinstein and Harold Gross, *Regional Patterns of Military Procurement and Their Implications* (Washington, DC: The Sunbelt Institute, 1988).

⁴⁸DoD found that on average 20 percent of civilian workers displaced from military bases retire, 60 percent relocate and only 20 percent enter the local labor market. Commission on State Finance, *Defense Spending in California: Impact on California* (Sacramento, CA: California State Legislature, 1990), p. 43. See also Darwin W. Daicoff, "The Community Impact of Military Installations," in *The Economic Consequences of Reduced Military Spending*, Bernard Udis (ed.) (Lexington, MA: Lexington Books, 1973).

⁴⁹The National Association of Installation Developers, composed of organizations that have taken over closed military bases, holds an annual conference and provides information on how best to reuse closed military bases.

⁵⁰Many of these positions are being transferred to Fort Belvoir, located about 20 miles away in northern Virginia.

⁵¹U.S. Department of Defense, Office of Economic Adjustment, *Economic Adjustment/Conversion*, Op. Cit.

at Moffett Field south of San Francisco, the closure will eliminate no more than 0.5 percent of the total jobs in the area because the local economy is so large. Cities such as Chicago, Denver, New York, Sacramento, Seattle, and Washington are all large enough that base closures will probably have little impact on the local economy (see table 6-7).⁵²

In some communities, however, the impacts are potentially large. Bases constitute a significant part of the local economy in places such as Oscoda, MI (Wurtsmith AFB); Leesville, LA (Fort Polk); Blytheville, AR (Eaker AFB); Aroostook County, ME (Loring AFB⁵³); and Monterey, CA (Fort Ord). More than 11 percent of Monterey County's employment is dependent on Fort Ord, while Wurtsmith AFB supports over 20 percent of the jobs in Michigan's Iosco County, the base closing area that is at the top of the list in defense dependence. The impacts in some particular towns may be higher. In Champaign County (IL), population decline resulting from the closure of Chanute AFB may reach 9 percent, while the decline in the village of Rantoul, where the base is located, could be greater than 50 percent.⁵⁴ The effects on local businesses and the city government could be disastrous.

To minimize the impacts, prompt disposal and reuse of base property are critical. If title to the base is transferred to new owners at least 1 year before the actual closure, development can be set to begin immediately after closure. However, this process often does not work smoothly. Signs of delay are already visible in Round One of the current base closures. This is not a new problem. When the General Services Administration (GSA) was responsible for base disposal in the 1960s and 1970s, many communities criticized the agency for delays and unrealistic demands in negotiated sales.⁵⁵ DoD is now responsible for transfer of the bases to be

closed. But, except for DoD's office of Economic Adjustment (which is responsible for helping communities facing base closures), DoD personnel are perhaps not fully aware of the importance of prompt disposal to community economic health.

Several factors suggest there are still serious obstacles in the way of rapid transfer of property at a reasonable price. First, before offering the property to State and local governments, DoD must offer the property to other Federal agencies and have it screened for possible use by the homeless. The entire process can take considerable time. It is further slowed by a Department of Housing and Urban Development (HUD) policy that prohibits screening of property for use as homeless shelters until 18 months or less before vacancy and requires 3 months for review. The result is that DoD is often unable even to approach State and local governments until about 1 year before closure.

Second, and more serious, are the environmental problems at some bases, which threaten to delay civilian reuse and make it more costly. Most DoD facilities have environmental problems; some may be beyond remediation. Sources of pollution include hazardous wastes from machinery use and the handling of fuel, solvents, and explosives. Of 61 major bases to be closed in the first two rounds, 15 are on the Environmental Protection Agency (EPA) Superfund list of hazardous waste sites most in need of cleanup. At least 52 bases have some contaminated areas, totaling over 935 sites.⁵⁷

For bases due to be closed, the problems of environmental degradation are especially urgent. These problems can greatly limit the options available; they pose health hazards to people who might work in new facilities on the closed base, and they scare off companies that might otherwise set up new operations there. Companies are worried not only by

⁵²A study by the Arms Control and Disarmament Agency in the 1960s found that metropolitan areas made the transition following base closure with relative ease.

⁵³For more information on the impacts of the closure of Loring, see Daryl A. Hellman and Gregory H. Wassall, "ESICWhg the Economic Impact of Military Bases and Base Closings: Loring Air Force Base, Maine," *The New England Journal of Business and Economics*, vol. 8, No. 2, spring 1982, pp. 5-24.

It is important to note that the purpose of the analysis is not to identify particular communities that are likely to have more difficulty in responding to the closure of bases. More detailed information would be needed to do this. However, the information here does allow an estimation of the number of bases that will experience more significant impacts.

⁵⁵"Economic Impact Report of the Proposed Closure of Chanute AFB on the Village of Rantoul," Dan Spiegel, Department of Urban and Regional Planning, and Geoffrey Hewings, Department of Geography, University of Illinois, Urbana-Champaign, May 1, 1991.

⁵⁶Roger Bolton, "Impacts of Defense Spending on Urban Areas," in *The Urban Impacts of Federal Policies*, N. J. Glickman, (ed.) (Baltimore: Johns Hopkins University Press, 1980, pp. 151-174.

⁵⁷Defense Environmental Restoration Plan Annual Report to Congress, DoD, 1990.

Table 6-7—Military Base Closures and Realignment With the Greatest Economic Impacts

Base	County or metropolitan statistic/area	State	Unemployment rate 1990	Job growth 1986-90	Total civilian job loss ^a	Loss as a percentage of local employment ^b
Wurtsmith AFB	Iosco	MI	8.8	4.9	2,127	20.9
Grissom AFB	Miami	IN	5.9	-1.0	2,306	15.9
NAS Chase Field	Bee	TX	9.1	0.0	1,573	15.3
Fort Polk	Vernon	LA	7.4	2.0	1,989	11.4
Eaker AFB	Mississippi	AR	13.1	1.2	2,173	11.2
Fort Ord	Salinas	CA	8.8	2.2	15,998	10.9
Loring AFB	Aroostook	ME	6.5	1.8	2,985	8.1
Castle AFB	Merced	CA	11.0	1.0	4,982	7.7
Myrtle Beach AFB	Horry	SC	6.5	2.4	3,966	5.7
England AFB	Alexandria	LA	6.4	-0.1	2,916	5.4
Fort Chaffee	Fort Smith	AR	7.5	1.5	3,377	3.9
Chanute AFB	Champaign	IL	3.9	1.9	3,039	3.4
Fort Devens	Worcester	MA	6.3	0.4	5,250	2.6
Pueblo Depot	Pueblo	CO	8.2	3.5	869	1.7
Pease AFB	Portsmouth	NH	4.2	2.9	2,150	1.6
NUSCD New London	New London	CT	3.7	-0.2	1,784	1.5
Sacramento			4.8	3.9	9,870	1.4
Army Depot	Sacramento	CA			6,653	0.9
Mather AFB	Sacramento	CA			3,217	0.5
Philadelphia			4.6	1.0	29,750	1.3
NSY Philadelphia	Philadelphia	PA			19,928	0.9
NADC Warminster	Philadelphia	PA			4,202	0.2
NAVSTA Philadelphia	Philadelphia	PA			3,899	0.2
Fort Dix	Philadelphia	NJ			1,185	0.1
Philadelphia Hospital	Philadelphia	PA			536	0.0
San Francisco			3.3	1.0	10,400	1.2
Presidio SF	San Francisco	CA			7,584	0.9
Hunters Point NS	San Francisco	CA			2,665	0.3
Hunters Point Annex	San Francisco	CA			129	0.0
Hamilton AAF	San Francisco	CA			22	0.0
Lexington Depot	Lexington	KY	3.0	3.1	2,284	1.2
Riverside			6.6	6.0	10,901	1.1
Norton AFB	Riverside	CA			6,978	0.7
George AFB	Riverside	CA			3,923	0.4
Bergstrom AFB	Austin	TX	4.6	1.1	4,248	1.0
Lowry AFB	Denver	CO	4.6	0.4	8,602	1.0
U.S. average			5.5	1.8		

^aCivilian job loss is the number of civilian jobs lost directly at the base plus the indirect loss of jobs generated by military and civilian pay. Multipliers used for calculating indirect job loss were obtained from the Office of Economic Adjustment, DoD. Direct military job loss was not counted since these individuals are normally transferred to other locations and hence do not add to the local unemployment rolls.

^bBecause counties do not always include the total population in the local labor market, these figures may overstate the degree of defense dependency, particularly for the counties with small populations. However, the figures give a sense of relative defense dependency.

SOURCES: Unemployment data from Department of Labor, Bureau of Labor Statistics, *Employment and Earnings* May 1987 and May 1991. Base closure data by the Defense Base Closure and Realignment Commission and by the Base Closure Office, Office of the Secretary of Defense, DoD; also *Base Realignments and Closures: Report of the Defense Secretary's Commission* (Washington DC: December 1988) and *Defense Base Closure and Realignment Commission: Report to the President, 1991* (Washington, DC: 1991).

the danger to their employees, but also by the financial risk of taking on liability for future cleanup costs.

Equally significant are the delays in reuse from environmental cleanup. When a toxic chemical is widely dispersed in small quantities, collecting the contaminated material and extracting it is a laborious job. For groundwater, the prevalent method of treatment is to pump the water to the surface and treat it to destroy or extract the pollutants. This can

take decades. In some cases the rate of extraction from complex aquifers is slow and in others, the pollutants cannot readily be extracted because they don't flow with the pumped water.

In addition to technological obstacles are institutional ones. DoD is still in the early stages of assessing environmental problems at bases on the closure list. At the current rate of cleanup, few bases will be cleaned before they close. For example, of the 15 closing bases on the EPA national priorities

Table 6-8-Military Bases Scheduled for Closure on the EPA National Priorities List

Facility	Begin remedial investigation and feasibility study	Complete remedial investigation and feasibility study	Estimated date for completion of remedial action
Fort Devens	5/91	1996	3/96
Loring AFB	1/91	1997	6/99
Pease AFB	12/90	1994	3/97
NCBC	4/91	Negotiating	11/99
Aberdeen/Nike Facility	3/90	1995	N/A
Alabama Ammunition Plant	5/90	1994	Late 1996
Castle AFB	7/89	1995	2005
Fort Ord	7/90	1997	2003
George AFB	9/90	1994	2004
Hunters Point	9/90	1994	2000
Mather AFB	7/89	1994	2004
Moffett NAS	8/89	1997	2008
Norton AFB	6/89	1993	2003
Sacramento Army	12/88	1996	1998
Williams AFB	9/90	1994	11/96

SOURCE: Stephen Lipmann, background analysis for the Office of Technology Assessment, Oceans and Environment Program, November 1991.

“Superfund” list, none are scheduled to be cleaned up before late 1996 and many not until early in the next century, years after the date of closure (table 6-8).

Adequacy of funds for cleanup is still another problem. Local community representatives at the closing bases are concerned about this matter. At Chanute AFB in Illinois, for example, 800 buildings, many of which are important to redevelopment plans, must be checked and treated for asbestos all at once—an expensive proposition.⁵⁸ The government of the nearby town of Rantoul is pleased with the Air Force’s speed in tackling this problem and also in identifying, and in most cases removing, the underground storage tanks that pepper the base. But they are not reassured to know that the work will proceed only as uncertain funds allow.

In 1984, Congress established the Defense Environmental Restoration Program (DERP) to cleanup the mess at military bases.⁵⁹ A separate appropriation, the Defense Environmental Restoration Account (DERA), is the source of funds for cleanup. The account spent \$601.3 million in fiscal year 1990, and is funded at \$1.1 billion in fiscal year 1991. DoD estimates of the total costs of DERP have

risen from \$9 to \$14 billion in early 1990 to \$30 billion,⁶⁰ and other estimates range much higher.⁶² DERA funds can be used for bases closed during the second round, but a separate Base Closure Account (BCA) is the exclusive source of funds for environmental restoration projects at bases closed in the 1988 round. BCA funds, for which Congress authorized \$100 million in fiscal year 1991, can also be used for Round Two closures.

The major environmental laws that regulate the disposal and cleanup of dangerous material were in place and DERA established before the possibility of wide-scale military base closures had arisen. Neither deals explicitly with the implications of the base closures. In consequence, the goals of ensuring the prompt reuse of a base sometimes clash with the priorities dictated by environmental laws.⁶³

One of the most important issues is whether DoD can dispose of part of a base while retaining for further environmental work other parts that are still contaminated. Without this dispensation DoD will be hard pressed to sell many of the facilities it is closing, as most have waste sites within their often extensive boundaries that are unlikely to be cleaned up before closure.

⁵⁸Mike Little, lawyer for the Village of Rantoul, IL, personal communication, June 25, 1991.

⁵⁹Defense Environmental Restoration Program, *Annual Report to Congress for Fiscal Year 1990* (Washington, DC: Department of Defense, February 1991), p. iv.

⁶⁰*Ibid.*, p. 30.

⁶¹“Toxic Cleanup Stalls Transfer of Military Sites,” *New York Times*, June 30, 1991, p. 1.

⁶²Keith Schneider, “Military Has New Strategic Goal in Cleanup of Vast Toxic Waste,” *New York Times*, Aug. 5, 1991, p. A1.

⁶³Bob Carr, EPA Enforcement Division, personal communication, July 13, 1991.

Section 120h of CERCLA/SARA, the relevant passage of the Superfund law, is unclear on this point of ‘parceling’ land.⁶⁴ EPA claims that to read it as forbidding any division of the property into clean and unclean for transfer may be overly strict, but the military services are wary of running the risk of being taken to court by anyone wishing to hold up the closure and transfer of bases on these grounds.⁶⁵

Environmental problems are in fact obstructing the process of base closure and transfer at a number of bases.⁶⁶ Pease AFB in New Hampshire has attracted particular attention because it is the first of the bases on the closure list actually to be closed and the reuse process has gone further than elsewhere. A State body, the Pease Development Authority, has been set up to act as the agent of transfer and has been negotiating with Deutsche Airbus, a German aircraft company and partner in Airbus Industrie, which wants to use Pease AFB for aircraft maintenance operations, the same purpose for which the military used it. The base is contaminated with solvents, pesticides, paint strippers, and fuel on about 100 of its 4,400 acres.⁶⁷

Deutsche Airbus wants a parcel of 50 acres that provides access to the runway and contains a large hangar crucial for its plans. Some of the land in this parcel is known to be contaminated and some is thought to be clean, although this is not certain.⁶⁸ The deal has been held up by uncertainty over the legal propriety of transferring contaminated ground. Originally the expectation was that the property would be sold, but this was deemed impossible with the environmental investigation still underway. The next approach, a ‘parcel within a parcel,’ with the transfer only of uncontaminated parts of the 50 acres, including the area of the hangar, and lease of the rest, ran into problems when the Air Force discovered contamination near the hangar. The latest approach is just to transfer the hangar building and to lease the land, including that under the hangar,

until the cleanup is done. (Box 6-A describes a similar solution for Norton AFB in California.) An agreement was under negotiation in late 1991, and there were signs that it would succeed. However, if the Air Force cannot allow reuse of Pease AFB until cleanup, the reuse will very likely be delayed until the next century.⁶⁹

Many factors determine the economic impact on particular localities of cuts in defense spending. The size of city, the speed and extent of spending cuts, the nature of the military spending, and the health and structure of the local economy all combine to make the impacts of the defense build-down highly variable from place to place. Table 6-9 outlines best and worst-case scenarios for communities affected by defense spending cuts; particular places may be weak in some factors but these drawbacks may be offset by strengths in other factors. For example, Los Angeles is at a disadvantage because it is more highly defense dependent than many areas. However, the regional concentration of skills, experiences, and brain power—agglomeration economies—could work to offset the disadvantages.

MITIGATING THE COMMUNITY IMPACTS OF REDUCED DEFENSE SPENDING

Economic development efforts have the potential to lessen adverse impacts of defense cuts on communities. Because reductions in defense spending affect communities in much the same way as cutbacks or closures of any industrial activity, it is useful to examine how economic development programs established for more general purposes have worked.

Governments use a wide range of policy tools to promote economic development (box 6-B). Some focus directly on business development, with policy

⁶⁴Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA) require that any deed for the transfer of property owned by the United States to any other person or *entity* contain “a covenant warranting that all remedial action necessary to protect human health and the environment with respect to any such substance remaining on the property has been taken before the date of such transfer.” The covenant must also warrant that the United States will take “any additional remedial action found to be necessary after the date of such transfer.” Superfund Amendments of 1986 Sec. 120 (Federal Facilities, (h)(3)(B)(i)).

⁶⁵Information provided by EPA Enforcement Division, July and August 1991.

⁶⁶Congress has established an Environmental Response Task Force to make recommendations by October 5, 1991 concerning ways to improve interagency coordination of environmental response actions at military installations.

⁶⁷DERP, Report to Congress 1991.

⁶⁸EPA Enforcement Division, Op. Cit.

⁶⁹Information provided by OEA, July 1991.

Table 6-9-Factors in Community Economic Impacts From Defense Cuts

Best-case community	Worst-case community
Size of the cut is small relative to the local economy	Size of the cut is large relative to the local economy
Cuts occur slowly	Cuts occur quickly
Community has ample notice	Community has no notice
Cuts occur in military bases	Cuts occur in private defense industry
Cuts occur in plants where defense is a small share of production	Cuts occur in plants with no civilian production
Growing national and regional economies	Stable or declining national and regional economies
Growing local economy	Stable or declining local economy
Cuts occur in large, metro areas	Cuts occur in smaller places
The local economy was congested	The local economy was not congested

SOURCE: Office of Technology Assessment, 1991.

tools that include business financial assistance, small business incubators, technology transfer, technical assistance, manufacturing extension services, and export assistance. Other policy tools support infrastructure and other public improvements that will lead to economic development, including industrial and research parks, site conversion, and tourism development. Still other efforts focus on increasing the skills of the work force, including technical and on-the-job training. Finally, economic development agencies can market their communities, using such means as industrial recruitment and trade missions, to bring in new businesses or expand the markets of area firms.

The New Economic Development Environment

Because the last major round of defense cuts occurred in the 1970s, many look to the experiences of communities affected then to draw lessons for today. However, major changes in the environment for economic development have intervened so that lessons should not be applied uncritically.

Since the early 1970s, the U.S. economic environment has become harsher, making it more difficult for many communities to replace lost jobs. Formerly, economic development problems were usually isolated, affecting particular towns or poor areas. But in the past two decades, the U.S. economy has increasingly faced tough international competition, lower levels of economic growth, declining manufacturing employment, structural decline of

many industries, and large trade and budget deficits. All these combine to make the current economic environment much less forgiving than it was before the first oil shock in 1973.⁷⁰ For example, the average unemployment rate from 1950 to 1972 was 4.75 percent; during the economic growth period of 1984 to 1990, unemployment averaged 6.2 percent.⁷¹ Manufacturing employment increased throughout the 1970s, reaching its peak in 1979 but falling 9.4 percent since then.

Changing fortunes of regional economies also influence the effects of the defense build-down. Recent difficulties of particular industries have had significant regional economic consequences. For example, the fall in oil and gas prices contributed to a regional recession in the West South Central area. The earlier decline in lumber and wood products had serious consequences for the Pacific Northwest. The difficulties in steel, autos, tires, and other durable goods industries slowed growth in the Midwest and Middle Atlantic States (although this region is likely to fare better in the defense build-down than others because it is less defense-dependent). Currently, the regional recession in computers, microelectronics, finance, and banking in the Northeast is compounding the difficulties of adjusting to defense cuts there. These extra strains in the national and regional economic environments may make successful adjustment to reduced military spending more difficult than it was in the 1960s or 1970s.⁷² Regional strains mean that more communities now compete for new

⁷⁰U.S. Congress, Office of Technology Assessment, *Paying the Bill: Manufacturing and America's Trade Deficit* (Washington, DC: U.S. Government Printing Office, June 1988).

⁷¹Calculations made from data in U.S. Department of Labor, Bureau of Labor Statistics *Employment and Earnings*, various issues.

⁷²Floyd and Robertson found that the strong economy of the Coastal Plains region in the southeastern United States greatly facilitated the adjustment to losses of large numbers of military personnel in the region from 1967 to 1972. Charles F. Floyd and Terry D. Robertson, "The Impact of Military Force Reductions on the Coastal Plains Region," *Growth and Change*, vol. 6, No. 2, 1975, pp. 3-8.

Box 6-B-Selected Types of Economic Development Programs**Capital**

Industrial revenue bonds

Direct loans

Loan guarantees

Interest subsidy programs

Pension fund investments

Venture and Seed capital

Foreign trade zones

Enterprise zones

Tax credits and deductions

Grants and incentives

Export financing

Tax abatements and concessions

Tax increment financing

Technology

Research centers

University research grants

Business research grants

Technology transfix programs

Industrial extension services

Industrial network support

Flexible manufacturing centers

Manufacturing service centers

Labor

Employee training/retraining

Technical training

On-the-job training

Primary/secondary school reforms

Math/Science high schools

Dislocated worker centers

Management

Community and site profiles

Entrepreneurial training

Management assistance

Procurement assistance

One-stop business center

Plant visitation programs

Labor management committees

Quick response teams

Employee buyout assistance

Business councils

Ombudsperson

Land

Land write-downs

Industrial parks

Research parks

Speculative buildings

Incubators

Physical infrastructure improvements

Land banking

Building rehabilitation

Site conversion

Marketing

Advertising and marketing

Recruitment missions and offices

Trade missions

Tourism promotion

Export assistance

Export trading companies

Procurement outreach programs

business and new jobs.⁷³ The intense competition makes it that much harder for any given community to attract new economic activity.⁷⁴

Finally, communities that in the 1970s could depend on the Federal Government for significant economic development support must now rely much more on themselves and their State governments. The Federal Government now spends significantly

less on economic development than it did 15 years ago. States and cities have taken the lead in the 1980s, but budget difficulties are reducing their capacity to act in the early 1990s.

The experience of four defense-dependent communities studied by DoD's Office of Economic Adjustment illustrates the differences between the two periods.⁷⁵ Federal efforts played a large role in

⁷³Alan Gregerman, *Competitive Advantage: Framing a Strategy To Support High Growth Firms*, (Washington, DC: National Council for Urban Economic Development 1984); see also Robert Guskind, "Games Cities Play," *National Journal*, March 18, 1989, pp. 634-640.

⁷⁴For example, in 1988, an estimated two-thirds of the States devoted over 25 percent of their economic development efforts to industrial attraction, while one-third devoted over 50 percent to it. *1988 State Economic Development Expenditure Survey*, (Washington DC: National Association of State Development Agencies, 1989); see also Roger Wilson, *State Business Incentives and Economic Growth: Are They Effective? A Review of the Literature* (Lexington, KY: The Council of State Governments, 1989).

⁷⁵Office of Economic Adjustment, DoD, *Economic Adjustment/Conversion* (Washington, DC: July 1985), app. K.

helping three of the communities adjust to defense cuts in the early 1970s. One of these was Wichita KS, where, in response to defense cutbacks at the Boeing aircraft company, a Federal Interagency Economic Adjustment Committee team of 22 professionals traveled to the site and wrote a report detailing 48 development actions that could improve the local economy. The Federal Government then spent \$20 million between 1971 and 1975 to implement the recommendations. That translates into \$53 million in 1991 dollars—more than the extra \$50 million that Congress provided in 1990 for all economic development assistance to defense-affected communities over the next 3 years.⁷⁶ The main recommendations for Wichita in the 1970s were to develop the Kansas Coliseum, implement a drainage improvement project, and put in place sewer and water improvements. Wichita's unemployment rate fell from 14 to 6.5 percent the year following the layoff, but in the process approximately 20,000 people, including 7,000 technical workers, moved to other areas.⁷⁷

In contrast, when the 1,000-employee Fairchild facility closed in 1984 in Hagerstown, MD, the Federal Government's role was minimal. Beyond a small planning grant from the Federal Economic Development Administration (EDA), the community and the State were responsible for economic development. The effort was successful. One of the two Fairchild facilities was bought by Rohr Industries, which currently employs approximately 500 people in bonding of composites for use in military aircraft. Fairchild donated the second facility to the State, which sold it to a private developer. The building is now a multipurpose air/industrial park that employs about 350 people. The State played a critical part in attracting Citicorp to Hagerstown, where the company now employs 1,500. Maryland's large and successful role in this community reflects the increased importance of State economic development in the 1980s. The Hagerstown story is quite typical of the time; it illustrates the contrast between the dominant Federal role of the 1970s (as in Wichita) and the stronger State and local roles of the

1980s after the dramatic decline in Federal funding for economic development. (See table 6-10.)

Economic development funding was only part of the Federal contribution toward helping communities respond to defense cuts in the 1970s. Many communities relied on Federal grants for highways, sewer and water systems, airports, municipal construction, and other infrastructure. These funds have become scarce today as Federal grants in aid to State and local governments declined from \$133 billion in 1978 (in 1988 dollars) to \$92.5 billion in 1988.⁷⁸ As John Lynch, a former OEA official, argues: "Today, there are few remaining community adjustment tools at the Federal level for dealing with major economic dislocations—even for reinforcing State plant closure adjustment efforts."⁷⁹

Federal Programs To Assist Defense-Dependent Areas

Some Federal programs that States and cities can turn to for economic development support remain, although most are poorly funded. Also, as noted, Congress authorized an extra \$50 million for defense-related community adjustment efforts to be spent by EDA through the Title IX Sudden and Severe Economic Dislocation Program in fiscal years 1991-93. As of November 1991, however, the funds were not yet available for EDA to spend.

DoD's Office of Economic Adjustment

The Federal agency most responsible for organizing a Federal response to community disruption brought about by military cutbacks is DoD's Office of Economic Adjustment (OEA). OEA was created in 1961 "to assist in meeting those unemployment and other economic problems of communities affected by the termination of military bases. Currently, it helps communities develop plans for adjusting to defense industry cutbacks as well as military base closures. It also staffs the President's Economic Adjustment Committee (EAC). The EAC, formed in 1970, is an interagency organization of 18 Federal departments and agencies that is chaired by the Secretary of Defense and staffed by OEA. EAC

⁷⁶Defense Authorization Act of 1990, Public Law 101-510, Sec. 4103.

⁷⁷Office of Economic Adjustment, *Economic Adjustment/Conversion*, op. cit.

⁷⁸*Significant Features of Fiscal Federalism, 1989 Edition, Volume II* (Washington, DC: Advisory Commission on Intergovernmental Relations, August 1989), p. 18; also Peter K. Eisinger, *The Rise Of the Entrepreneurial State* (Madison, WI: The University of Wisconsin Press, 1988), j). 68.

⁷⁹John E. Lynch (ed.), *Plant Closures and Community Recovery* (Washington, DC: National Council for Urban Economic Development, January 1990), p. 3.

Table 6-10-Federal Funding for Economic Development, 1978 to 1990
(millions of 1990 dollars)

Program	Funding		Percent reduction
	1978	1990	
Economic Development Administration	\$ 957	\$ 216	79%
Economic Adjustment Program (Title IX)	137	24 ^a	82
Department of Housing and Urban Development			
Community Development Block Grants.....	6,373	2,914	54
Urban Development Action Grants.....	728	0	100
Total Community and Regional Development ,..	\$14,800	\$6,398	57
Small Business Administration	6,327	928	85

^aThe regular appropriation for the Title IX program in 1990 was \$24 million and for the Sudden and Severe Economic Dislocation program within Title IX, \$12 million. These amounts were augmented by a special appropriation of \$24 million to help communities damaged by Hurricane Hugo.

^bTotal includes other economic development programs not listed above. It excludes disaster relief and insurance.

SOURCE: Office of Management and Budget, Executive Office of the President, *Budget of the United States*, (Washington, DC: 1979, 1991).

meets intermittently to discuss problems related to community impacts of defense spending changes and to coordinate Federal responses to these, when appropriate.

During the 1980s much of OEA's work was helping communities adjust to expansions of DoD activity. Its role in the 1990s will be the opposite, helping communities cope with economic disruptions caused by base closings or major DoD procurement reductions. During the late 1980s, OEA had a small annual budget of about \$4 million. Its budget in the 1990s has been increased to deal with increased defense cuts. It received \$7.4 million in fiscal year 1991 and \$6 million has been allotted for fiscal year 1992, of which about \$4.7 million will be granted to communities.⁸⁰

Communities become eligible for OEA services in cases of a base closure or major realignment or when a reduction in DoD spending will result in the loss of 1,000 or more full-time DoD and contractor employee positions over a 5-year period. OEA funds planning studies (its grants average about \$70,000), provides technical assistance, and acts as a liaison with the 18 member agencies of EAC (chiefly, the Departments of Labor and Commerce) and with State agencies. Because the planning grants are relatively small, OEA is able to provide at least minimal assistance to most communities affected by defense cuts.

OEA is staffed by competent professionals who appear to understand local and regional economic development, and it generally operates with enough

flexibility to get the job done. For example, when Secretary Cheney announced the cancellation of the A-12 fighter program on a Thursday, on the following Monday an OEA representative was in Fort Worth (where a division of General Dynamics is located) meeting with the mayor and other local leaders to discuss the problems and see how OEA could help. If the agency were mired in red tape it could not have been so responsive.

Nevertheless, it is not clear that OEA's location within DoD is helpful. Some communities have complained that instead of serving as an advocate for their interests within DoD, OEA represents DoD's interests. Another complaint is that OEA tends to put the process of base closures in an overly optimistic light. In addition, because of its low profile within DoD, OEA has a hard time obtaining its share of the Department's resources. As more bases close, this issue may become more troublesome.

OEA's role vis-a-vis the White House Economic Adjustment Committee is unclear. Because it comes to the meetings as a representative of one among several Federal agencies, OEA has little authority to get other agencies to toe the line. It must rely on persuasion to get agencies to come forth with resources. In some cases, this has proven difficult.

Finally, OEA limits its assistance to planning efforts only. In a few cases where it has attempted to do innovative small-scale demonstration projects, DoD's legal counsel has limited its efforts. While OEA planning assistance is important, many communities have a critical need for funds to implement

⁸⁰Office of Economic Adjustment DoD, December, 1991.

plans. Indeed, planning money is sometimes overabundant while implementation goes unfunded. For example, Rantoul, IL received funds from OEA and private sources to fund three separate reuse and economic development plans for the closing Chantute AFB. Community officials say they know what is needed and would rather have been able to spend some of this money on efforts to create jobs.

Economic Development Administration, Department of Commerce

Communities seeking economic development assistance to compensate for the loss of the military market may draw on the resources of the Economic Development Administration (EDA), especially the Title IX Sudden and Severe Economic Dislocation (SSED) program. Areas that have had economic dislocations due to plant closings, layoffs, or base closings are eligible for grants to develop and implement an adjustment strategy, if the economic dislocation exceeds certain job loss thresholds for the area. Other EDA programs fund public works, technical assistance, and economic research. While funding is limited, these programs can be useful to defense-dependent communities.

EDA awards about 20 SSED strategy grants and an equal number of SSED implementation grants each year. SSED funds have supported a variety of efforts including economic development strategies, access roads for industrial plants, industrial parks, business revolving loan funds, and business incubators. In recent years, strategy grants have ranged from \$25,000 to \$200,000 and averaged \$65,000; implementation grants have ranged from \$25,000 to \$2 million and averaged slightly more than \$630,000. A minimum of 25-percent local share, cash or in-kind, is required. Funding for the program in fiscal years 1990 and 1991 was \$12.3 million each year.⁸¹

In the Defense Authorization Act for fiscal year 1991 (enacted in October 1990), Congress authorized an additional \$50 million for defense-related community adjustment efforts for the SSED program, to be made available over the next 3 years. However, as of November 1991, more than 1 year after the authorization, DoD had not transferred the money to EDA.⁸² Once transferred, the money will remain available for obligation until September 30, 1993. Eligible communities are those experiencing an actual or threatened DoD-related work force reduction that meet regular SSED eligibility standards.⁸³

To determine how well the SSED program is working and is likely to work for defense-affected communities, OTA interviewed a number of economic development and EDA officials and called officials of seven communities that had received SSED grants in the last 5 years. Their comments indicate that, as currently structured, the EDA program has some problems that threaten to reduce its usefulness.

Distressed communities often wait along time for EDA funds. Because prompt response is a critical factor in community recovery to economic dislocation, delays can pose a significant problem.⁸⁴ EDA is not oriented to prompt response. In 1990, the median time between a community's proposing a project and EDA approval of the grant was 198 days.⁸⁵ However, the mean time was 292 days, indicating that some proposals took much longer. Five of the seven communities experienced delays of over 18 months between the time of application to EDA and funding. The worst delay involved a small city that experienced a series of plant closings in the early and mid-1980s. Because the city was not at first aware of the Title IX program, officials did not contact the regional EDA office until 3 years after the first layoffs. Thus, after waiting for over 1 year

⁸¹The Title IX program also received a special 1-year augmentation of \$23.9 million to respond to Hurricane Hugo in 1990.

⁸²DoD initially dragged its feet in transferring this money. More recently, differences of opinion between DoD and Department of Commerce legal counsels on technicalities have held up the transfer of funds. Department of Commerce lawyers argued that EDA did not have explicit legal authority to accept funds from DoD. The Defense Authorization Act for fiscal years 1992 and 1993 explicitly confers this authority.

⁸³For communities not in Metropolitan Statistical Areas, the dislocation must amount to the lesser of 2 percent of the work force or 500 jobs if the unemployment rate exceeds the national average. Where the unemployment rate is below the national average, the thresholds are higher, at 4 percent or 1,000 jobs. For communities in Metropolitan Statistical Areas, the dislocation must amount to the lesser of 0.5 percent of the work force or 4,000 jobs if the unemployment rate exceeds the national average and 1 percent or 8,000 jobs where the unemployment rate is below the national average.

⁸⁴Paul Dempsey, "EDA Title IX Community Adjustment Experience," in John Lynch, (ed.), *Plant Closures and Community Recovery* (Washington, DC: National Council for Urban Economic Development, 1990).

⁸⁵The response time for projects related to Hurricane Hugo was somewhat shorter, with the median time of 148 days. (Data from the Economic Development Administration U.S. Department of Commerce.)

for a response to its proposal, the city had to wait another 20 months to receive a small strategy grant. The EDA regional office then took another 11 months to approve the community's plan. The city then applied for the follow-on EDA implementation grant, but after waiting 14 months was turned down, in part because it was unable to target the funds to the workers dislocated nearly 5 years earlier, and in part because economic conditions had improved somewhat. The entire process took almost 8 years from the initial layoffs.

SSED funding delays have several causes. First, the approval process is cumbersome. Communities must first contact their State EDA representative and then their regional EDA office. The performance of regional offices appears to vary significantly. While some are staffed with experienced people, others have had staffing problems that delay responses. Moreover, communities complained that some regional offices saw their role as simply reviewing proposals rather than facilitating and streamlining the application process. Not only does this cause delays and elicit rounds of rejections and resubmittals, it leaves communities without needed technical assistance. For example, one small city has used its SSED grant to establish a revolving loan fund for local businesses needing capital to expand. However, city officials are unsure how best to operate the fund. While EDA has given them extensive "guidance" on the rules, they have been left to fend for themselves on determining how to make sure the fund benefits the local economy.

The approval process in the national office is usually better than at the regional level, but still encounters delays. According to one EDA official, regional offices formerly had greater authority over project selection, and the process was then less cumbersome. Over time, the Washington EDA office has become more involved in approvals and delays have become more common. According to one EDA official, the Inspector General's office in Commerce has sometimes sent back applications three and four times over small details.

EDA's requirement that communities develop an adjustment strategy before receiving an implementation grant can also delay the process. Communities come to EDA in crisis and need to get things

underway quickly. While the community officials interviewed by OTA agreed that the process of developing strategies is helpful, some have already developed their strategies before coming to EDA. Moreover, in some cases the Office of Economic Adjustment has already provided funds for strategy development. If EDA is not flexible in its requirement to develop EDA-funded plans first before proceeding to implementation, funds will be wasted and needless delays will occur.⁸⁶

EDA has demonstrated the capacity to respond quickly. In a pilot project, the agency once used a strike team approach similar to OEA's to respond to a plant closure in Arkansas. EDA officials flew to the town and within 3 days approved a grant. However, because EDA as an organization is not attuned to rapid response, the pilot-project approach has not been implemented in everyday practice.

EDA officials concede that some particular regional offices have problems in responding to communities, which they are working to correct. However, they also argue that the SSED program is not a quick response program and that therefore funding delays are not a serious problem. They suggest that SSED is not intended to help dislocated workers get jobs in the area they live in, nor is it intended to help distressed communities maintain former levels of economic activity. Rather, its purpose is to ease communities' problems of adjustment to economic distress.

When EDA assistance does arrive, communities are sometimes hindered from undertaking innovative economic development approaches. EDA appears more comfortable with traditional projects such as industrial parks. This may help explain the fact that the most delays occurred in projects that were least traditional (e.g., science parks, tourism strategy, plant modernization). EDA's roots are in the 1960s and 1970s, when it was formed to help the long-term development of lagging rural regions by use of traditional tools such as infrastructure development and industrial attraction. As the focus of economic development has shifted to distressed communities, EDA has been slow to integrate newer approaches, including "best practice" efforts such as technology centers, entrepreneurial development, and manufacturing modernization.

⁸⁶In the one defense-related grant so far, EDA has provided a small \$37,000 grant to the Southern Mississippi Planning and Development District to begin implementing an OEA-funded strategy to deal with cutbacks at the Army Ammunition Plant in Picquine. The grant will pay for the collection of information related to marketing property in the area to outside firms.

Finally, repeated threats by the Reagan administration through the 1980s to eliminate EDA clearly aggravated the agency's problems. The uncertain and politically difficult environment contributed to reduced morale, lower staff quality, inadequate staffing levels, poor operation and administration of the program; and it led to the pursuit of low-risk policies.

Even if EDA were to improve its response time and acquaint itself more thoroughly with modern economic development efforts, its limited funding means that it can help only a fraction of the communities in need. EDA funds only 20 communities a year. Given the much larger number of distressed communities (some related to defense cutbacks, many others not), it appears that the demand for EDA funds could rise significantly. Even with the additional \$50 million Congress provided to help defense-affected communities, the demand for funds is likely to exceed supply, particularly if the defense build-down proceeds more rapidly and economic growth continues to be sluggish.

Within present budget limits, one way to mitigate the mismatch of need and supply is to limit the number of communities applying. In effect, EDA does this. The agency has not used the plant closing information generated by the WARN legislation to market its programs to communities in need. Furthermore, by making it known that funds are unavailable, EDA officials discourage communities from applying in the first place. A more helpful way to ration EDA services would be to raise eligibility requirements so that only the neediest communities receive funds. Current threshold requirements of job loss still enable a large number of communities to qualify for assistance. Even communities with strong economies that might recover without public intervention often qualify.⁸⁷ Many communities that are more truly in need go without assistance due to lack of funds.

Despite the problems, EDA funds do help communities recover. All the community officials inter-

viewed by OTA stressed how important EDA funding was to their recovery efforts. However, this appreciation was tempered with the desire for EDA to be run more efficiently.

Other Federal Programs

Another source of funds for community economic development is Community Development Block Grants, administered by the Department of Housing and Urban Development (HUD). The program allocates grants to entitlement communities (cities with more than 50,000 population) and to States for distribution to nonentitlement communities. Funds (\$2.9 billion in fiscal year 1990) can be used for a variety of purposes including housing rehabilitation, energy conservation, public services and facilities, business financing, and commercial revitalization. Many communities have used the funds to set up revolving loan funds for businesses. However, new rules mandating that 60 percent of the beneficiaries must be low and moderate income (increased from 50 percent) limit its usefulness as an economic development tool.⁸⁸

Several other Federal programs can provide some assistance. Services provided by the Department of Commerce to businesses include Export Promotion Services, the Small Business Administration's (SBA) financing programs, and Small Business Development Centers, mostly located on college campuses, which provide counseling on particular management problems.⁸⁹ The Farmers Home Administration (Department of Agriculture) also provides Business and Industrial Development Loans and Grants to assist economic development in rural areas.

State and Local Programs To Assist Defense-Dependent Areas

While the Federal Government's role in subnational economic development has declined significantly, State and local efforts have dramatically expanded in both scope and sophistication. Until the late 1970s, most States and cities equated economic development solely with industrial recruitment. In the 1980s, State and local governments added a wide

⁸⁷To qualify, the dislocation must meet a minimum threshold requirements in terms of jobs lost. Thresholds are double in communities with unemployment rates below the national average.

⁸⁸The rule requires that over a 3-year period, a total of at least 60 percent of the beneficiaries must be low and moderate income individuals. HUD is proposing increasing this to 70 percent.

⁸⁹These centers can provide adequate advice to novice entrepreneurs attempting to start "mom and pop" small businesses, but often lack the know-how to provide more sophisticated advice to entrepreneurs attempting to start manufacturing or technology-based service firms. As a result, their usefulness as an economic development tool is limited.

range of economic development tools that go beyond recruitment to include new business development, industrial expansion and modernization, and technology development.

One indication of the increased State commitment to economic development is the rise of department of commerce budgets in the States. From 1982 to 1990 they increased almost fivefold, from an average per State of \$6.7 million in 1982 to \$32.5 million in 1990 (in 1990 constant dollars).⁹⁰ State incentive programs (tax, capital, and land subsidies, and technical assistance) increased in number from 840 in 1966, to 1,213 in 1976, to 1,633 in 1985.⁹¹ In addition to expanding in scope, the sophistication of the new State and local efforts far exceeds those of the 1970s. For example, in 1983, OTA found that 22 States had developed 38 technology programs.⁹² By 1988, 45 States had developed over 250 programs.⁹³

Local economic development efforts have also increased significantly in the 1980s. Today almost half of 322 large and small American cities surveyed have revolving loan funds for business, over one-third provide entrepreneurial assistance to new business, and over one-half advertise for new industry.⁹⁴ Larger cities (above 200,000 population) and economically distressed cities employ economic development tools more extensively.⁹⁵

This expansion has led some to conclude that State and local efforts are sufficient to deal with defense dislocations, even with reduced Federal efforts. This is dubious. First, while accurate figures on State and local spending for economic development do not exist, it appears that this spending has not filled the gap left by the withdrawal of Federal

support--especially since much of the increased spending by State and local government was in response to higher levels of need.⁹⁶

Second, many of the Federal efforts were devoted to community development; they provided distressed communities with funds to develop industrial parks, renovate buildings, and build infrastructure. The States have limited funds for these activities. They are more interested in business expansion and development.⁹⁷

Third, capacities and efforts vary significantly among States and cities. Some spend generously on highly sophisticated economic development programs. Others spend much less. In the absence of accurate data on State spending for economic development, expenditures by State economic development agencies are a proxy measure of the variance among States. For example, per capita State spending on economic development is \$28.00 in Alaska and only \$2.50 in Mississippi.⁹⁸

The current fiscal crises of many States have made matters much worse. One reason for the expansion of State economic development budgets in the 1980s was that State revenues were growing. According to the National Association of State Budget Officers, at least 28 States face revenue shortfalls in 1991,⁹⁹ and many are having to sharply curtail spending on economic development programs.

Nevertheless, several States have recently begun tentative efforts to respond to the build-down. Because the location of defense spending is not well understood, a number of States are conducting studies to assess the importance of defense spending

⁹⁰1990 *State Development Agency Expenditures and Salary Survey* (Washington, DC: National Association of State Development Agencies, 1990).

⁹¹Peter Eisinger, *The Rise of the Entrepreneurial State* (Madison, WI: University of Wisconsin Press, 1988), p. 19.

⁹²*Census of State Government Initiatives for High Technology Industrial Development* (Washington DC: U.S. Congress, Of&Z Of Technology Assessment, May 1983).

⁹³Robert D. Atkinson, *State Programs for Technology Development* (Washington, DC: National Association of State Development Agencies, 1988).

⁹⁴Ann O'M. Bowman, *Tools and Targets: The Mechanics of City Economic Development* (Washington, DC: The National League Of Cities, October 1987).

⁹⁵*Ibid.*

⁹⁶DoD's report on economic adjustment to defense cuts states: "... It does not appear, however, that State resources and responsibilities have increased sufficiently to compensate for a reduced Federal role in response to defense-related dislocations. [not only for economic development, but for related activities such as sewer, water, transportation, public facilities]." Office of Economic Adjustment, DoD, *Economic Adjustment/Conversion* (Washington, DC: July 1985, app. K.)

⁹⁷Interview with Miles Friedman, Director, National Association of State Envelopment Agencies, February 1991.

⁹⁸State expenditures from National Association of State Development Agencies, 1988 *State Economic Development Expenditure Survey* (Washington, DC: 1988). There are some problems with comparing economic development budgets since some States include some expenditures as economic development while others do not. However, the range of these figures is indicative of how much expenditures can vary.

⁹⁹David Broder, "Is This the Year States Finally Get the Hill's Attention?" *The Washington Post*, Jan. 6, 1991, p. C7.

in their economies and the needs of defense contractors in converting to civilian production.¹⁰⁰ States hope they can then target development programs to defense firms and defense dependent communities. In particular, many States are interested in using existing programs to help small and medium-size defense contractors gain civilian markets.¹⁰¹ However, not all States have made efforts. In fact, several of the most defense-dependent States have done little to respond to the build-down.

What Communities and States Can Do To Stimulate Economic Development

Organizing and Planning for Economic Development

Economic development is more than simply putting particular programs in place. Communities do not always easily or directly speak with one voice. In many communities the proliferation of actors, interests, and personalities with “turf” and ego concerns outweigh the “common weal.”¹⁰² Without the critical preparatory work of developing leadership and encouraging groups to work together, conflicts often undermine productive activity.¹⁰³

Bringing the key players together into a coalition is easier in some communities than in others. For example, in Salt Lake City, a community task force was set up the day the closure of Fort Douglas was announced, and the task force agreed that the University of Utah should receive the land. In other cases, attaining community consensus is more difficult. For example, there is considerable disagreement over the future use of George Air Force Base, in San Bernardino County, CA, and this has slowed reuse efforts.

In some areas community economic development organizations already exist, making the job easier. For example, the pre-existing St. Louis Regional Growth Association has taken primary responsibility

for coordinating economic development efforts in St. Louis. In other cases, such as southeastern Connecticut, economic development organizations had to be created from scratch.

Virtually all communities affected by defense cuts, either base closures or defense industry cutbacks, are able to get at least some technical and financial assistance from OEA to organize and plan. An important aspect of OEA’s assistance is that the agency works to build a coalition of key players before providing a community with a planning grant.

Planning is the next step. It is essential in dealing with base closures, since communities must develop a reuse plan for the vacant property and buildings. Many of the bases to be closed in the first round have developed base plans with the help of OEA. Possible uses cover a wide range. For example, options for a portion of the 55,000-acre Jefferson Proving Ground in Madison, IN include a golf course and surrounding housing cluster, a shopping mall, and a foreign trade zone. Depending on the size of the impact, communities may also develop an overall economic development plan. For example, Rantoul, IL, home to closing Chanute APB, developed both a base reuse plan and an overall economic development plan using grants totaling \$234,700. More often than before, OEA now also provides planning grants in response to defense industry cutbacks. The St. Louis Regional Growth Association received \$100,000 from OEA for planning in response to the loss of 9,000 jobs at McDonnell Douglas.

The next step after organization and planning is implementation. Among the several ways to do it are recruiting new businesses to the area; encouraging the expansion of existing businesses in the area (including, when feasible, the conversion of defense contractors); and promoting the formation of new businesses.

¹⁰⁰Included are Colorado, Connecticut, Florida, Kentucky, Maine, Maryland, Minnesota, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, and Washington.

¹⁰¹In addition to individual State efforts, the National Governors’ Association has established a Defense Adjustment Task Force made up of six States, DoD, and other Federal agencies. The task force will identify successful State initiatives and industry conversion efforts for detailed investigation. It will also help four States design, implement, and evaluate economic conversion policies and programs. The National League of Cities is conducting a similar project for cities.

¹⁰²Interview with Goetz Wolff, Resources for Employment and Economic Development, Los Angeles, personal communication, September 1991; see also Terry F. Buss and F. Stevens Redburn, *Shutdown at Youngstown* (Albany, NY: State University of New York Press, 1983) for a discussion of the problems that arise when conflicting organizations and individuals are engaged in economic development.

¹⁰³EDAW, Inc., *Planning Civilian Reuse of Former Military Bases*, prepared for the Office of Economic Adjustment, Office of the Secretary of Defense (Washington DC: June 1990).

Attracting New Industry: Industrial Recruitment

When faced with the loss of a major employer, one solution is to convince new companies to move in. Industrial recruitment efforts have long been the main recourse for State and local economic development agencies. Often these agencies organize an industrial attraction group to go out and beat the bushes for new business—traditionally manufacturing facilities, but now also corporate headquarters and service industries. To make their communities or States more attractive, economic development agencies often provide a variety of subsidies and incentives, including lower business taxes, tax abatements, low-cost financing, free training, free land and buildings, and other schemes to reduce business costs.

On the face of it, industrial attraction may seem a ready-made solution to the problems of defense-related job loss. For some areas, especially those with little other existing industry to build on or without much potential for self-reliant growth (such as from tourism or small business development), recruitment may in fact be the best strategy. A well-conceived and executed marketing plan can pay off. This is especially true in the case of certain base closings where large amounts of developed land, buildings, and facilities are available at low cost. Examples include Norton Air Force Base, which will be home to a Lockheed operation to repair and maintain planes, and Pease Air Force Base, which Deutsche Airbus is negotiating to use for a similar operation.

Despite the popularity of ‘smokestack chasing,’ it has serious drawbacks. First, relocations and openings are far fewer than the communities pursuing them. While data are sketchy, it appears that between 1969 and 1975 there were approximately 1,100 manufacturing relocations per year, on aver-

age. Some 630 relocated outside their immediate area, and of these, about 200 relocated to another State.¹⁰⁴ In 1984 there were approximately 1,200 major manufacturing sitings in the United States.¹⁰⁵

The supply of footloose firms is more than matched by the large number of desirous communities and States, among which the competition is fierce.¹⁰⁶ An estimated 7,500 economic development organizations are competing for new business.¹⁰⁷ For example, Illinois was up against 82 other proposals in its unsuccessful efforts to attract a major United Airlines maintenance facility to Chanute Air Force Base in Rantoul.¹⁰⁸

Economically distressed areas are not the only ones bidding for firm relocations. Places that are quite well off also compete. For example, Fairfax County, VA, a prosperous middle-class suburb of Washington, DC, launched an aggressive recruitment drive in the late 1970s even though the area was growing steadily.¹⁰⁹ These efforts succeeded. The number of firms relocating to the area rose and the population increased.¹¹⁰ However, the Nation benefited little since economic activity was simply transferred to an area that was already strong economically. Locally, the growth brought with it such familiar problems as high housing prices and transportation congestion. Fairfax County is not alone in this practice. Other well-off communities around the Nation have also joined in the recruitment game. For example, Indianapolis beat out prosperous Fairfax county, as well as a host of other communities, in its bid for the new United Airlines maintenance facility.

Because so many locales have joined this “buffalo hunt,” the chance of landing a firm are even lower for communities that are truly in need (for example, small towns where a military base that is the major employer is closing). Aggressive recruitment by well-off communities aggravates the imbal-

¹⁰⁴James Miller, “~~aCbRelocations in the United States, 1969-1975,” in Richard B. McKenzie, *Plant Closings: Public or Private Choices?* (Washington, DC: Cato Institute), p. 27. While the data used in this study may not provide a fully accurate representation of relocations, it does provide a rough estimate of the numbers.

¹⁰⁵North Carolina Department of Economic Development, “North Carolina’s Blueprint for Economic Development: A Strategic Business Plan for @ @’ Growth,” 1988.

¹⁰⁶See Roger Wilson, *State Business Incentives and Economic Growth: Are They Effective? A Review of the Literature*, op. cit.

¹⁰⁷Alan Greggerman, *Competitive Advantage: Framing a Strategy to Support High Growth Firms*, op. cit.

¹⁰⁸United Airlines decided to locate the facility in Indianapolis. Office of Airport Affairs, United Airlines, August 1991.

¹⁰⁹Greggerman, op. cit. p. 64.

¹¹⁰Most recently, the county and the State convinced General Dynamics to move their corporate headquarters from St. Louis to northern Virginia. As part of the inducement to locate there, Virginia provided GD with \$400,000 in subsidized training.

ance between supply (firms willing to establish new facilities) and demand (places doing the recruiting). As expected, when demand outstrips supply, the price that communities must now pay in the bidding wars to attract firms has risen.¹¹¹ An example of high-priced incentives is the package Illinois offered to United Airlines to get the company to locate its maintenance facility in Rantoul. It was worth over \$150 million. Indiana and the city of Indianapolis came up with more, \$294 million, to win the United facility. Moreover, communities are often led to believe that if they do not come up with expensive inducements even firms already established in their area will leave.¹¹²

The problem of incentives is particularly onerous when they benefit foreign industrial competitors. While exact figures are not available, it is estimated that between 1978 and 1988 U.S. States and cities gave foreign automobile firms close to \$1 billion in inducements.¹¹³ (See table 6-11.) These large incentives did not induce the firms to locate in the United States, since that decision had already been made.¹¹⁴ Nor did they benefit seriously economically depressed communities since Japanese auto plants generally located in relatively prosperous areas.¹¹⁵ These subsidies did provide a windfall to foreign competitors at the expense of U.S. firms and they did

erode local tax bases that might have been used for education or public infrastructure.¹¹⁶

Note that in Japan, the Ministry of International Trade and Industry (MITI) and the Ministry of Finance use their finance and approval powers to coordinate and limit local prefecture subsidies to foreign firms.¹¹⁷ Of course, one reason national government ministries are able to do this is that they have greater authority over local decisions than the U.S. Government has. With the coming of EC92, the European Community intends increasingly to limit and coordinate subsidies given to non-EC firms.

The U.S. Government not only does little to remedy the problem of runaway incentives, but in some ways encourages it. Supposedly, Federal economic development funds cannot be used directly to recruit industry from one location to another, but it happens in practice. Firms often relocate to EDA-funded, below-market-rate industrial parks, or receive training for their new workers financed by the Job Training Partnership Act (JTPA). Federal policy also encourages local competition over the location of Federal facilities, especially science and technology projects.¹¹⁸

Most studies of location factors find that incentives are not important in determining the location of firms.¹¹⁹ More important factors are access to

¹¹¹Robert Guskind, "Games Cities Play," *National Journal*, Mar. 18, 1989, pp. 634-640; Larry C. Ledebur and William Hamilton, "The Great Tax-Break Sweepstakes," *State Legislatures*, September 1986, pp. 12-15; Paul Peretz, "The Market for Incentives: Where Angels Fear to Tread?" *Policy Studies Journal*, 5, February 1986, pp. 624-33.

¹¹²For example, in response to a threat to leave Illinois, the State and local government gave Sears Roebuck over \$110 million in concessions in 1990 to relocate from downtown Chicago to the suburbs. It may be doubted that Sears would actually have left the Chicago area since that is home to its large work force, but the threat was enough to convince State and local government to pay. Ibid.

¹¹³Norman Glickman and Douglas Woodward, *The New Competitors* (New York, NY: Basic Books, 1989), pp. 230-231. The cost of these incentives has increased significantly over time. Researchers at the University of Kentucky found that the dollar amount of subsidy per worker rose from \$20,000 at Nissan, to \$50,000 at Fuji-Isuzu, to as high as \$108,000 at Toyota.

¹¹⁴Ibid.

¹¹⁵For example, the Mitsubishi/Chrysler plant located in Bloomington IL, which at the time had one of the lowest unemployment rates in the State. The State then proceeded to designate the area an enterprise zone. Other Japanese car companies located in less affluent but still relatively healthy communities. For example, in 1980 the unemployment rates for Rutherford County (Nissan) was 74 percent of Tennessee's, Union County's (Honda) was 71 percent of Ohio's, and Scott County's (Toyota) was 64 percent of Kentucky's rate.

¹¹⁶Ann H. Elder and Nancy S. Lind, "The Implications of Uncertainty in Economic Development" *Economic Development Quarterly*, vol 1., No. 1, February 1987, pp. 3040.

¹¹⁷Clyde Prestowitz, *Trading Places* (New York, NY: Basic Books, 1989), p. 369.

¹¹⁸For example, 21 States prepared detailed, costly studies for their bids to land the Superconducting Supercollider. Graham Jones, Executive Director, New York State Science and Technology Foundation remarks made at the 16th Annual AAAS Colloquium on Science and Technology Policy, "State Science and Technology Initiatives in a Time of Fiscal Crisis," Washington DC, Apr. 12, 1991.

¹¹⁹Blair and Premus suggest, "There is little evidence that a region or community can attract industry from other regions by offering locational subsidies since comparable bundles of industrial incentives are now available in most States and regions." (John P. Blair and Robert Premus, *Industrial Location*, *Economic Development Quarterly*, February 1987, p. 84.); see also Roger W. Schmenner, *Making Location Decisions* (Englewood Cliffs, NJ: Prentice Hall, 1982); also Michael Kieschnick, *Taxes and Growth: Business Incentives and Economic Development* (Washington, DC: Council of State Planning Agencies, 1981); M. Wasylenko, "The Location of Firms: The Role of Taxes and Fiscal Incentives." in Roy Bahl (ed.), *Urban Government Finance: Emerging Trends* (Beverly Hills, CA: Sage Publication@ 1981) pp. 155-190; William Wheaton, "Interstate Differences in the Level of Business Taxation," *National Tax Journal*, 36, 1983, pp. 83-94.

Table 6-n-Selected State and Local Incentive Packages

Firm	State/city	Incentives (\$ millions)
Foreign car companies:		
Toyota	Kentucky	\$ 373 ^a
Mitsubishi	Illinois	170 ^b
Mazda	Michigan	120 ^c
Isuzu/Fuji	Indiana	86 ^c
Volkswagen	Pennsylvania	86 ^c
Nissan	Tennessee	66 ^c
Honda	Ohio	16 ^c
Total		\$ 917
Non-manufacturing Industries		
United Airlines Maintenance Facility	Indiana/Indianapolis	\$ 294
Chase Manhattan Bank	New York City	235 ^c
Sears	Illinois	110
National Broadcasting Co.	New York City	98 ^c
Citicorp	New York City	97 ^c
Drexel Burnham Lambert	New York City	85a
Shearson Lehman Hutton	New York City	74a
Burlington Air Express	Toledo, OH	50 ^c
Presbyterian Church USA	Louisville, KY	30a
Burlington Air Express	Fort Wayne, IN	15a
Total		\$1,088

SOURCES:

^aRobert Guskind, "Games Cities Play," *National Journal*, Mar. 18, 1989, PP. 834-840.^bAnn H. Elder and Nancy S. Lind, "The Implications of Uncertainty in Economic Development," *Economic Development Quarterly*, vol. 1., No. 1, Feb. 1987, pp. 30-40.^cNorman Glickman and Douglas Woodward, *The New Competitors* (New York, NY: Basic Books, 1989).

markets, skilled workers, and low labor costs. If a community lacks these key attributes, its chances of recruiting firms, regardless of the incentives it provides, are small. At best, incentives are tie-breakers that may influence a firm to choose between **two equal communities in the same region**.¹²⁰

In short, the competition for investment attraction makes it harder for defense-dependent communities to succeed in economic development. When everyone is offering the same subsidies, communities truly in need of new industry have a harder time. **When** such places do get a new industry, it is sometimes at an exorbitant cost that they can ill afford and that undermines the provision of public services and infrastructure.

Assistance for Existing and New Businesses

Another option for States and localities losing defense jobs is to support the expansion of existing businesses and the creation of new ones. Most new State and local economic development initiatives in

the 1980s have been directed toward this growth-from-within strategy.¹²¹

The programs are many and varied. Business financing programs help firms obtain start-up and expansion capital. Tax break and regulatory reduction programs try to lower costs. Business assistance programs help entrepreneurs and managers do a better job of managing their firms. Technology centers and grant programs increase firms' access to new technologies. Industrial extension services help companies adopt "best practice" technologies, and worker training programs teach skills needed to use the technologies effectively. Export assistance helps businesses obtain new export markets. Small business incubators, industrial parks, and research parks provide space for companies to develop and expand. Education and training programs upgrade the knowledge and skills of the work force so that businesses can grow and expand.

Defense dependent communities can use these programs not only to generate new economic activity but also to help defense contractors and

¹²⁰Norman J. Glickman and Douglas P. Woodward, *The New Competitors*, op. cit., p. 228.

¹²¹Peter Eisinger, *The Rise of the Entrepreneurial State*, op. cit.

subcontractors move into commercial markets, re-tool production facilities, and develop new products. Such proactive efforts to help contractors convert can, if they succeed, lessen the ill effects of defense cuts on communities and workers. (See ch. 7 for further discussion.)

The growth-from-within strategy is probably best suited for medium-size and large cities with a diversified economic base. The competitive advantage of most metropolitan areas affected by defense spending cuts, such as Boston, Los Angeles, Long Island, Philadelphia, San Jose, and Washington, DC, lies not in their ability to attract new industry but in developing and expanding those in place.¹²² However, Federal economic development programs do not distinguish among different types of economies, and are as likely to make a grant for a new industrial park to Los Angeles as to a small community in rural Mississippi.

While the growth-from-within strategy has many advantages over recruitment, it also has its limitations, especially as currently designed and operated.¹²³ Often, the programs are very small relative to the scale of the problems. For example, in response to substantial defense cuts in southeastern Connecticut, organizers in the area are developing SEATECH, a 10,000-square-foot small business incubator that is expected to house 10 startup businesses in marine-related and environmental protection businesses. However, the area has lost at least 2,000 defense jobs in the past 5 years, and is likely to lose thousands more in the next 5 years. While it is a step in the right direction, an incubator that produces 20 to 100 jobs in 5 years is not enough.

More generous funding for economic development would help, but existing funds could go farther if they were better targeted to activities that lead to economic growth. Most economic development

programs serve any kind of industry, rather than targeting those that bring money into the community. Areas losing defense dollars need to generate economic activity that either sell goods or services outside the local economy (bringing in new dollars) or replace goods or services flowing from elsewhere into the local area.¹²⁴ The businesses that bring money into a community are often referred to as the basic or export sector, while firms that rely on local spending (e.g., retail) are referred to as non-basic.

Basic sector firms, meaning ones that sell to regional or even larger markets, are valuable replacements for declining or closing defense activities.¹²⁵ These are usually goods-producing industries (agriculture, forestry, mining, and particularly manufacturing) and some kinds of business services. Employment in non-basic sectors generally will increase only if overall community income increases; economic development assistance to non-basic firms may do nothing more than displace other locally owned firms. Retail and other local service firms do sometimes 'export' their services from the region, mostly by selling to customers from elsewhere who come to community to make their purchases, and thus bring in new dollars; for example, where tourism is important, this may be true. However, by and large, the impact of these firms on local economic development is small.

Many economic development programs make no distinction between basic and nonbasic firms, and provide assistance to all kinds of businesses, including restaurants, retail stores, repair shops, and a host of other non-basic industries. In 1990 only 13 percent of the 700 SBA Small Business Development Centers' counseling cases were manufacturing firms.¹²⁶ Some of the largest recipients of federally tax-exempt industrial revenue bonds in the early 1980s were large nationally owned fast-food restau-

¹²²Norton and Rees argue that large cities have little competitive advantage in attracting branch manufacturing plants. Rather, their advantage is in the development of new industries and R&D-based activities. RD. Norton and John Rees, "The Product Cycle and the Spatial Decentralization of American Manufacturing," *Regional Studies*, vol. 13, 1979, pp. 141-151).

¹²³For example, see Doug Ross and Robert E. Friedman, "The Emerging Third Wave: New Economic Development Strategies in the 90's," *The Entrepreneurial Economy Review*, vol. 9, No. 1, Autumn 1990.

¹²⁴Matt Kane and Peggy Sand, *Economic Development: What Works at the Local Level* (Washington, DC: National League of Cities, December, 1988); Glen Pulver, *Community Economic Development Strategies* (Madison, WI: University of Wisconsin-Extension); Eva Galambos, *Making Sense out of Dollars: Economic Analysis for Local Government* (Washington, DC: National League of Cities, November, 1978); and Avrom Bendavid-Val, *Regional and Local Economic Analysis for Practitioners* (New York, NY: Praeger Publishers, 1983).

¹²⁵Edward Morrison, "Small Business: A Strategic perspective," *Economic Development Commentary*, Spring 1985.

¹²⁶Small Business Administration 1991.

rants and discount department stores.¹²⁷ Nearly 40 percent of the firms receiving SBA 503 loans through Certified Development Companies (CDCs) are wholesale or retail firms.¹²⁸

Some economic development planners argue that all firms help a local economy in one way or another and that it is inappropriate for government to pick particular industries for development assistance.¹²⁹ Even granting this point, it is clear that the impact on a local economy of, say, a computer manufacturer, is greater than that of a grocery store. A hard and fast rule cannot be applied, but a greater awareness of the importance of basic or export firms and of knowledge-intensive firms would improve the effectiveness of local economic development programs.¹³⁰

A third point is that economic development programs are not always organized to meet the needs of business. In the rush to create programs addressing a broad range of business needs (e.g., financing, technology, management, export assistance), governments have set up separate programs for each of these goals. While they often provide valuable services, they could be made more easily accessible to business users.

The average firm has to be highly adept at locating the right agency at the right level to find the help it needs. Knowing where to look and how to apply can be a challenge for all but the most intrepid businessperson. When firms need assistance in more than one area (e.g., financing, exporting, and worker training), the maze becomes even more complex. Public programs rarely operate as locally based, full-service one-stop shops.

When firms do find the right kind of assistance, it is often provided by business generalists rather than by specialists who know the problems of a particular

industry. When sectoral specialization is lacking, service providers are unable to develop in-depth, comprehensive knowledge about particular industries' market structure, technology needs, and worker skill requirements. The generalist approach may serve novice entrepreneurs attempting to open retail stores, but it falls short when it comes to working with manufacturing or technology-based service firms operating in intensively competitive markets.

Finally, the main content of many economic development programs misses the mark, failing to address the problems that keep firms from expanding. Often, they are oriented more to giving firms money than helping them solve problems that would lead to increased competitiveness. Most public economic development programs provide incentives to firms to relocate or expand; they include property and inventory tax breaks, low interest loans, zoning waivers, subsidized training costs, free or low-cost land, and free infrastructure. These subsidy programs remain more pervasive than others that provide direct services to manufacturing industries.¹³¹ These costly business subsidies are not aimed at improving business efficiency, innovativeness, or competitiveness.

The outline of a new model for economic development is emerging in some States and cities, partly in response to the limitations discussed above. This model has much in common with some European efforts.¹³² An example is the Technological Institute near Copenhagen (one of 31 technology services centers in Denmark), that assists small and medium-size industrial firms in using advanced technologies.¹³³ The Institute not only conducts applied R&D relevant to particular industries but also provides a wide range of services to its clients. These include market research into new industrial markets, assess-

¹²⁷Tax-exempt revenue bonds allowed a company to obtain financing at lower rates since bondholders' interest was federally tax exempt. Congress has since limited industrial development bonds (IDBs) to manufacturing firms.

¹²⁸U.S. Small Business Administration.

¹²⁹For example, see Roger Vaughan, Robert Pollard, and Barbara Dyer, *The Wealth of States* (Washington, DC: Council Of State Policy and Planning Agencies, 1985).

¹³⁰For discussion of the value of knowledge-intensive issues to the national economy, see U.S. Congress, Office of Technology Assessment, *Competing Economies: America, Europe, and the Pacific Rim*, OTA-ITE-498 (Washington, DC: U.S. Government Printing Office, October 1991).

¹³¹Timothy J. Bartik, *Who Benefits from State and Local Economic Development Policies*, (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1991); also Ann O'M. Bowman, op. cit.

¹³²See Joseph Cortwright, 'Old World, New Ideas: Business Assistance Lessons from Europe,' Report to the Joint Legislative Committee on Trade and Economic Development State of Oregon, April 1990; also Stuart Rosenfeld, "Technology Innovation and Rural Development: Lessons from Italy and Denmark," A Report of the Rural Economic Policy Program, Aspen Institute for Humanistic Studies/Ford Foundation/Wye Institute, Washington DC, December 1990.

¹³³Diane Palminteri, Innovation Associates, Inc. *Best Practices in European Innovation Development* (Washington, DC: U.S. Department Of Commerce, Economic Development Administration December 1989).

ment and **consultancy** on technical and management **problems, demonstration** of new **technologies, financial consulting, and** referral. Most of the services that a manufacturing firm needs are thus integrated in one place. Because a quasi-independent nonprofit organization runs the Institute, problems of competition among government agencies and bureaucratic inflexibility are lessened. The Institute's strategic focus on small and medium-size manufacturing firms and its development of deep and specialized knowledge about specific sectors are extremely useful to its clients. Because over two-thirds of the Institute's budget comes from the firms it serves, the program is three times larger than it would be without private funds. This industry involvement reflects both the high quality of Institute services and the interest off- in using the services.

The lesson of the Danish Technological Institute and other programs like it is that industry needs drive program design. The most effective programs target basic sector industries, in most cases, goods-producing industries. They provide services in integrated, one-stop "industrial service centers." When possible, services are organized along sectoral lines (e.g., focusing on auto suppliers, wood products firms, metal working shops, aerospace companies, textile firms). They are most effective when run by intermediary, nongovernment organizations. In most cases the centers are located independent of universities and close to the businesses they serve.

A few programs based in part on this model have been put in place in the United States. For example, Oregon recently established and partly funded the Wood Products Competitiveness Corp., which will be governed by a board of industry officials. It is expected to provide a wide range of services to Oregon's secondary wood products producers, including marketing, training of workers and managers, manufacturing modernization, R&D, financing, and promotion of cooperative industrial networks. Service providers certified by the Corporation work with individual firms and groups of firms. Industry controls the program and shares the costs. The State hopes to extend this model to other key basic sector industries. Oregon will help firms in each of the key

industries to cooperate in research consortia, joint training programs, market development activities, and the like.

Another example is the Florida Technology Coast Manufacturing and Engineering Network, which focuses directly on defense producers. It was organized to help defense producers cooperate to gain new contracts, develop new products, and share information. Located in Fort Walton Beach in the Florida Panhandle, the area is home not only to the largest air base in the world, Eglin AFB, but also to a number of defense producers. Most of the defense companies have been laying off people in small numbers gradually over the last few years.

In 1990, in response to the expected defense build-down, defense producers showed increasing interest not only in bidding more successfully for fewer defense contracts, but also in getting more commercial work. At the instigation of the Economic Development Council of Okaloosa County and the Okaloosa Community College, a network of over 32 firms, most of them defense-dependent electronics firms, was formed.¹³⁴ One of the keys to the network is team bidding for both DoD and non-DoD contracts. The companies bid on products that none can produce on its own but several can handle as a group. Although the network is too new to show measurable results, organizers hope the teams will win several defense and commercial contracts. They also anticipate that the network will help firms develop new products and transfer technology among themselves.

EFFECTIVENESS OF ECONOMIC DEVELOPMENT EFFORTS

It is clear that a wide range of programs exist at the local, State, and Federal level to help stimulate economic development in the face of defense cuts. What is not so clear is how effectively these programs can respond to economic dislocation in a reasonable period of time. Empirical research on the effectiveness of economic development efforts is spotty at best.¹³⁵ To be sure there is plenty of anecdotal evidence, but individual successes cannot

¹³⁴Economic Development Council of Okaloosa County, FL, "Technology Coast Manufacturing and Engineering Network."

¹³⁵Tiebout, in a 1966 article discussing the possible impacts of defense cuts on California, ■■■■■ed the state of knowledge then: "When the proverbial chips are down, the real question is: What does one do to soften the blow or shifts on a community? What steps can be taken by the local area, the State, and the Federal government? Here the comfortable world or research must, in part, give way to some speculation and value judgments. And of course no easy or simple answers pop out. Charles M. Tiebout, "The Regional Impact of Defense Expenditures," in Roger Bolton, *Defense and Disarmament, The Economics of Transition* (Englewood Cliffs, NJ, Prentice Hall, 1966). The situation is much the same today,

necessarily be generalized. The evidence on community economic development policies in response to plant closings is even slimmer. While the Office of Economic Adjustment has studied the economic recovery from base closures, there is little comprehensive information on how communities have responded to plant closures or layoffs.¹³⁶ Nevertheless, 20 years of experience have something to teach us. Informed opinion and the experience of some communities that have suffered significant economic blows and made strong attempts at recovery offer useful guidance. The following sections draw upon two main sources of information: first, empirical data on community responses to base closure and second, the experience of one community (Jackson, MI) that went through severe economic dislocation in the early 1980s.

The Local Economic Response to Base Closings

In contrast to the paucity of empirical findings on community adjustment to defense contractor cutbacks, there is considerable information on what happens when communities experience military base closures. For over 10 years, DoD's Office of Economic Adjustment has studied the impacts on communities of military base closings. Although OEA's findings understate the level of economic distress caused by base closures, the record on base reuse is nonetheless generally positive. Communities have used bases as economic development resources, and in most cases their efforts have paid off in net gains in employment.

OEA concludes that from 1961 to 1990, new jobs (158, 104) at 98 bases more than replaced the loss of DoD civilian jobs (93,424) at the former bases. The bases have been put to a wide variety of uses: 42 bases are being used as municipal or general aviation

airports, 75 are home to industrial and office parks, and more than 73,000 students are enrolled at post-secondary educational institutions located on former bases.

However, OEA underestimates the negative impacts of closures. First, when calculating the loss of employment in communities, it looks only at lost civilian DoD jobs. OEA omits DoD contract employees and the impact on the community of purchases by military personnel and by the base itself. Some 137,000 military personnel were relocated in the 98 base closings.¹³⁷ While it is appropriate not to count military jobs when calculating direct job loss (the people involved were transferred to other bases), the loss of spending ripples through the local economy causing secondary economic impacts and lost jobs. If these effects are added, using a conservative multiplier of 1.4 for base procurement and military personnel expenditures, the figures for lost jobs in communities experiencing bases closures in the last 30 years rise by more than 54,000, from about 93,000 (OEA's estimate) to 148,000.¹³⁸ Given that 158,104 jobs were created there was still a net gain, but a much smaller one.

These average increases in employment also obscure the fact that there was great variance in results. While the Benicia Arsenal (CA) recovered over 2.5 times the 2,300 lost civilian jobs, Brookly AFB and Mobile Air Material Area in Alabama recovered only one-quarter of the 12,000 lost civilian jobs. The Truman Annex in Key West, FL gained back about 10 percent of its 568 lost jobs.

Moreover, it took a long time for new uses of the bases to generate enough jobs to make up for the lost employment. Of the 98 bases examined by OEA, the

¹³⁶John E. Lynch, *Plant Closures and Community Recovery*, op. cit. p.1.

¹³⁷OEA states: "In many instances, the loss of military personnel (up to 5,600 military in the case of Amarillo, Texas) may have significantly affected the community's regional economy. Military personnel, however, are not recorded in the local employment or work force statistics. The relocation of military personnel (136,823 positions in nearly 100 community projects) represents a regional income loss but not as direct employment loss to the area. For this reason, successful transition should in large part be measured against whether the DoD civilian job loss in the community has been replaced by new jobs and economic activity on the former base facility." *Civilian Reuse of Former Military Bases: 1961-1990*, Department of Defense, Office of Economic Adjustment, p. 2. But, while military jobs cannot be considered a direct job loss, they do represent an indirect job loss.

¹³⁸This multiplier is drawn from Joseph Cartwright and Richard M. Beemiller, *The Regional Economic Impact of Military Base Spending* (Washington, DC: The President's Economic Adjustment Committee, Department of Defense, Office of Economic Adjustment, November 1980) and from the multipliers used by OEA in their analysis of Round Two base closures. Note also that multipliers vary depending on the activity on the base. In addition, several factors make the employment multiplier associated with base closings smaller than with contractor cutbacks. In order not to exaggerate the impact of reductions of military personnel, a more conservative multiplier of 1.4 was used here. (A multiplier of 1.4 means that each DoD jobs support 0.4 additional jobs.)

Box 6-C—Case Study: Closure of the Kincheloe Air Force Base in Chippewa County, MI

The experience of Chippewa County in Michigan's Upper Peninsula is often cited to show that economic development after a base closure can be accomplished, even under the most difficult of circumstances.¹ However, closer examination shows that while County leaders did an excellent job, the experience was not an unqualified success. Even its limited success would be hard to replicate today because far less Federal money is available to support base reuse. Finally, the county's biggest infusion of new jobs came, not from new private business, but from new prisons built by the State of Michigan.

When the Department of Defense (DoD) closed Kincheloe AFB in 1978, the county faced a severe economic crisis. Chippewa County had a population of 32,416, of whom 25 percent were military personnel and their dependents. The base closure meant not only a loss of the \$36-million payroll and 737 civilian jobs, but also a major loss in population as over 3,000 military personnel were transferred from the area.

The Upper Peninsula is a geographically isolated, sparsely populated, mostly rural area in a harsh climate (170 inches of snow in 1989). Eight percent of employment in the three-county area is in manufacturing, with tourism, government, and services accounting for the rest.

In response to announcement of the base closing, county leaders created the Chippewa County Economic Development Corp. (EDC), a nonprofit municipal corporation responsible for planning and implementing the economic development effort. Since no private developer was interested in the base, EDC's initial task was to make a long-term commitment to the financial requirements of operating the facility.

The effort was underwritten with funds from a variety of sources. From 1978 to 1982, Chippewa County put up \$2.2 million in cash and in-kind services—a substantial sum for a county whose annual budget was a little over \$3 million. The State provided approximately \$1.3 million to the Base Conversion Authority² for management of the base for the first 4 years. The Federal contribution was still more substantial. The county received \$300,000 from DoD's Office of Economic Adjustment (OEA) to formulate an economic development plan, plus a \$4.1 million EDA Title IX grant to set up an industrial revolving loan fund and to convert military facilities to civilian use.³ The Department of Housing and Urban Development (HUD) provided three grants totaling \$650,000 to renovate utilities and buildings for industrial use, and the Federal Aviation Administration and the Michigan Aviation

¹Most of the following material was drawn from Letitia L. Oliveira, "Digging Out From Hard Times: Economic Recovery in Michigan and Pennsylvania," contractor report prepared for the Office of Technology Assessment, Aug. 17, 1990.

²The Base Conversion Authority was established by the Governor and included the heads of the Departments of Commerce, Labor, and Corrections, the State Office of Management and Budget, a representative of the Governor's office, and six local leaders. It managed the base facility from 1978 to 1982, when it was not legally possible for another organization to manage it. The Base Conversion Authority used approximately \$800,000.

³Kathy Noel, Executive Vice President, Chippewa County Economic Development Corp., personal communication, Aug. 2, 1990; and William L. Laubernds, personal communication, Aug. 8, 1990, cited in Oliveira, *ibid.*

mean year of closure was 1970.¹³⁹ By 1981, there were not yet enough jobs on the bases to replace those that had been lost.¹⁴⁰ In other words, it took more than 11 years, on average, for the bases themselves to generate replacement jobs. Some of the communities did generate other new jobs through general local economic growth not related to base reuse.

Another caveat; it is risky to extrapolate the experience of communities that suffered closures in the 1960s and 1970s to closures in the 1990s. As noted above, and as the experience of Chippewa County illustrates (box 6-C), in the past communities could rely on a large infusion of Federal dollars. Between 1975 and 1980 the Economic Development Administration provided \$57.5 million to 31 base redevelopment projects.¹⁴¹ In 1991 dollars this amounts to about \$110 million. Over the past 20

¹³⁹This was calculated from: U.S. Department of Defense, Office of Economic Adjustment, *Civilian Reuse of Former Military Bases, 1961-1990, 1990*. The mean year was calculated using a weighted average of year of closure and number of civilian jobs lost.

¹⁴⁰Data for 1981 was based on data in Department of Defense, Office of Economic Adjustment, *Civilian Reuse of Former Military Bases, 1961-1990*, *op. cit.*

¹⁴¹"Report of the Task Force on Military Base Re-Use," Business Executives for National Security Education Fund, Inc., Jan. 5, 1989.

Commission provided \$2.4 million to convert the airport to civilian use. Total State and Federal funding to the area for redevelopment exceeded \$14.6 million (1991 dollars). In addition, the Air Force donated the base to the county. It was a large gift. The total real property value of the 3,600 acres, 175 commercial and industrial buildings, and 1,383 living units on the base was estimated at approximately \$105 million.⁴

The EDC, which now owns and manages the industrial park and airport, organized land, buildings, labor, capital, training, and other incentives into a single package and marketed it to firms they wanted to attract, including cold weather testing facilities, small divisions of big companies, and companies receiving defense contracts (which were growing during the defense buildup). Firms could go to one place, the EDC, for information about sites and facilities, training programs, and financing assistance available from other agencies. EDC marketed the area using direct mailings and selective advertising, and gave special attention to generating nationwide media articles.

This energetic effort yielded only modest success. EDC was able to recruit 28 small manufacturing facilities, but by 1991 all but 10 of the facilities had closed or moved away. Thereremaining 10 firms employ 320 people. A much bigger contribution to the county's economy came from Michigan's \$800-million prison expansion program, under which five medium or mixed-security prisons were located in Chippewa County. These prisons now provide 1,400 jobs.

With the help of the new prison and manufacturing jobs, the county's unemployment rate dropped from 15.7 percent in 1980 to 6.4 percent in 1989. The number of people employed in the county actually rose from 10,500 in 1976, before the base closed, to over 14,000 in 1989, and the population also grew, albeit slowly.⁵

Chippewa County owes a good deal of its recovery to effective local leadership and to the creation of a single local organization to oversee economic development. However, without outside resources, recovery would have been limited. Michigan's decision to locate five prisons in the county was the key factor in the recovery. In addition, the importance of State and Federal funding should not be overlooked. John Campbell, Executive Director of the Eastern Upper Peninsula Planning Commission, noted, "The (\$4.1 million) Title IX grant was the most critical component. Otherwise we wouldn't have gone any further."⁶

Altogether, Federal redevelopment funds, including a total of \$6.5 million from EDA, amounted to \$11.5 million (1991 dollars) and the State provided \$1.75 million. Today, Federal funds for community economic development are scarce. The EDA special fund for defense-dependent communities is \$50 million; just five Chippewa Counties would exhaust that fund. Finally, the Air Force donated its base and buildings to the county. In the present round of base closings, the services are allowed to sell their bases to the highest bidder. If Kincheloe were closed today, the Air Force might well demand payment for it.

⁴John Campbell, Executive Director, Eastern Upper Peninsula Planning Commission, Sault Ste. Marie, MI, personal communication, Aug. 2, 1990, cited in Oliveira, op. cit.

⁵Laubernds, op. cit.; and William Laubernds, "Overcoming Geographic Isolation: Chippewa County, Michigan," John Lynch, (cd.), *Plant Closures and Community Recovery* (Washington, DC: National Council for Urban Economic Development, January 1990).

⁶Campbell, op. cit.

years the Federal Government has spent more than **\$500 million** to help communities affected by base closures.¹⁴² Even though State capacities to respond to economic dislocations have grown since the 1970s, it is not likely that their support offsets the decline in Federal support. In addition, communities received bases in the 1960s and 1970s at a fraction of their assessed value. According to a Congressional Budget Office report, at 33 bases for which data was available, the sale price of the property was about 35 percent of the total value.¹⁴³ Today, DoD's interest in obtaining revenue from the transfer of

bases makes it doubtful that the bases now being closed will be transferred as cheaply. Finally, the current awareness of environmental problems and the need for remediation mean that environmental cleanup will be a major factor in base closings in the 1990s. Present legal requirements could delay significantly the reuse of bases.

Communities Recovering From Economic Distress: Jackson County, Michigan

There is less information on community economic development after industrial cutbacks, whether

¹⁴²Andrew Mayer, "Military Base Closures" U.S. Congress, Congressional Research Service, updated Nov. 1, 1990, p. 4.

¹⁴³Ibid.

defense or nondefense related, than on the experience after base closings, although several richly detailed case studies are available.¹⁴⁴ The story of one community-Jackson, MI-can provide a number of lessons and insights. Located in the heart of the industrial Midwest, Jackson County illustrates the havoc wreaked on some communities by the combined forces of recession and the restructuring and decline of the U.S. automobile industry. It also sheds light on the possibilities, and the difficulties, of community recovery from devastating economic blows.¹⁴⁵

Even with a growing national economy, unless the regional and State economies are also strong, recovery from serious economic loss is difficult. Committed local development efforts can help, particularly when assisted by a strong State program and a facility location policy that favors distressed communities (e.g., locating a State prison in Jackson). However, even when the local and State economic development efforts are "ftig on all cylinders," recovery can prove difficult. In Jackson's case, it was only partial. Keep in mind, however, that Jackson suffered greater losses than all but the most defense-dependent communities are likely to undergo.

Between 1978 and 1982, unemployment in Jackson County (population about 150,000) more than doubled, reaching 16.1 percent in 1982. Within a 6-month period in 1983-84, Jackson experienced the closing of two major plants, Goodyear Tire and Rubber and Clark Equipment. The loss of nearly 1,800 jobs in these two plants, combined with the impact on suppliers, resulted in a total loss of approximately 3,000 jobs. Population declined by 6 percent between 1978 and 1985, as people left the area in search of work.¹⁴⁶

A 1982 Chamber of Commerce survey of 240 manufacturing firms found that 80 percent of the industrial base was tied to the auto industry. Many suppliers had located in Jackson because it is close to Lansing and Detroit but its wage rates were lower by \$4 to \$6 per hour. That manufacturing base has survived, but it has changed considerably. Since the

1982 study, 60 percent of the firms with 50 or more employees have been acquired by multinationals, and Jackson has lost four of its six firms with over 300 employees.

Faced with such severe setbacks, local officials and business people organized to stop the hemorrhaging of their economy. The Chamber of Commerce surveyed local firms to understand the economic base of the community and to find out what local companies needed to keep them in the area. Together with the city and county governments, the Chamber organized the Jackson Alliance for Business Development, an economic development organization that has a 13-member board representing business, government, and academia.

Jackson focused a significant portion of its economic development efforts on industrial attraction. The Jackson Alliance identified community strengths in the automobile and food processing industries and put together a professional-looking package of information to market the community. Jackson's domestic and international recruiting efforts showed some results. The community attracted a British company making automotive valve springs (40 employees), two meat-processing plants employing 25 workers each, and a sugar-processing company. However, one of the meat-processing plants and the sugar plant recently went out of business, laying off their workers. More impressively, Jackson also recruited two new Japanese plants, Tokia Rika and Michigan Automotive Compressors (MACI). Tokia Rika announced its intention of locating in Jackson in 1991, employing 175 people, but had yet to open its plant in late 1991. MACI, a joint venture between Nippondenso and Toyota to make automobile air-conditioning compressors, was projected to employ around 600 people, but because of slow growth in the U.S. auto market had employed only 370 people in 1991.

To attract the MACI plant, Jackson provided generous incentives, including 10.5 acres of improved land that were worth \$7.8 million as of 1990. Most of the incentives were financed through a newly created Local Development Finance Author-

¹⁴⁴For example, see Terry F. Buss and F. Stevens Redburn, *Shutdown at Youngstown*, Op. cit.

¹⁴⁵Most of the following material was drawn directly from Letitia L. Oliveira, "Digging Out From Hard Times: Economic Recovery in Michigan and Pennsylvania," contractor report prepared for the Office of Technology Assessment, Aug. 17, 1990.

¹⁴⁶Robert W. Carleton, Vice President, Community and Business Services, Jackson Community College, Jackson, MI, personal communication, June 6, 1990 and August 6, 1990; and Michigan Modernization Service and the Industrial Technology Institute, "Local Area Modernization Plan (LAMP) Draft Report: Jackson, Michigan," p. 8; cited in Oliveira, op. cit..

ity with a \$6,2-million bond issue. The bonds are guaranteed by tax revenues resulting from improvements on the site (tax increment financing); they will be retired over 15 years. Projected annual tax revenues from MACI are \$1.2 million, of which about \$800,000 per year will be used to retire the bonds.

Besides trying to attract new firms, the Jackson Alliance helped existing companies expand by providing assistance in securing tax abatements, loans, and land at subsidized prices. Expansions of local companies added between 250 and 300 new jobs. Most of these firms were also helped by State programs, including worker training and tax abatements. A business incubator was established in November 1987 through a partnership between the city, the Jackson Alliance, and Jackson Community College. Since its inception, 25 firms have left the incubator and 19 of these (15 of them manufacturing) were still in business in 1991. These firms created approximately 100 jobs.

Other local organizations actively participated in rebuilding the economy. Under the leadership of Bob Carlton in the early 1980s, the Chamber of Commerce functioned more as an economic development organization than is typical of this body. Another active local group is the Jackson Area Quality Initiative (JAQI), a nonprofit, community-based organization that provides training in improving quality, productivity, and competitiveness. Through Jackson Community College, JAQI has offered intensive training in statistical process control for a variety of businesses. The training has produced results. After a first round of training, workers at Elm Plating were able to halve their downtime, and hit zero percent downtime on a consistent basis; recommendations coming out of the training have saved the company over \$100,000.¹⁴⁷

Jackson's recovery is incomplete, and as recent events have shown, is fragile. By 1989, unemployment was down to 6.9 percent, a percentage point higher than the national average, but with the 1991 recession, unemployment increased to over 11 percent.¹⁴⁸ In 1989, Jackson's population and work

force were still slightly below 1979 levels (U.S. population meanwhile rose 12 percent and employment 16 percent). Wages in Jackson had dropped an average of \$2 per hour.¹⁴⁹ And, the second largest infusion of new jobs in Jackson (after the Nippon-denso plant) came from the expansion of the State penitentiary.

Part of the recovery was due to external circumstances. The United States experienced an extended period of economic growth from 1983 through 1989, which was reflected in the local economy. The auto industry, which benefited from this period of economic growth, from Japanese voluntary export quotas, and from Japanese investment in a new assembly plant (the Mazda plant in Flat Rock), has decentralized in Michigan. Finally, Jackson's convenient location between Ann Arbor and Lansing stimulated some growth in Jackson as a "bedroom community" for commuters and is likely to become an even more important factor in future growth.

Still, Jackson's situation must be remeasured against where the community would be if it had not taken steps to retrain its work force, improve efficiency of its manufacturers, and market the community to outside firms. Strenuous efforts by community leaders did contribute to the restoration of stability and a degree of prosperity, but did not repair all of the damage. It is worth repeating, however, that very few communities losing defense industries will face as massive losses as Jackson did in the recession and economic restructuring of the 1980s.

How Well Do Economic Development Policies Work?

The first step for a community affected by cuts in defense spending is to accept that cuts will occur and begin to develop positive strategies for adjustment. The literature is full of stories of communities whose response to a base closure or contract cutback was to put all their energies into stopping what was usually the inevitable. Because current declines in defense spending cuts appear to be long term and not easily reversed, it is all the more important for communi-

¹⁴⁷ "JAQI Success stories," *JAQI Notes*, spring 1990, cited in Oliveira, op. cit.

¹⁴⁸ U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, vol. 37, No. 5, May 1990, p. 154.

¹⁴⁹ Tom Nicholls, Executive Director, Jackson Area Manufacturers Association, Jackson, MI, personal communication June 6, 1990, cited in Oliveira, op. cit.

ties to accept the inevitable and initiate economic development policies.¹⁵⁰

Interjurisdictional and institutional cooperation is just as important. Having too many competing economic development organizations and jurisdictions can severely limit success. Officials in several communities affected by defense cuts see lack of cooperation among communities as a potential threat to successful adjustment.¹⁵¹ This problem was serious in southeast Connecticut, where fragmented approaches to economic development have been geared to a town rather than a regionwide effort. Current efforts to organize the Southeastern Connecticut Economic Development Coalition aim to overcome the problem.

Organizational cooperation and active local leadership are the basis but do not guarantee success. Obviously, commitment and dedication must be translated into well-designed and funded economic development programs. But even the best programs cannot fully prevent community economic distress. One reason is that most defense cuts occur without much notice (military base closings are the exception), while economic development programs take time to work and produce results. Take the case of Taunton, MA, an OEA-cited success story. In 1973, Raytheon closed its missile site radar plant in Taunton and laid off 1,400 workers. A cornerstone of Taunton's response was the development of the Myles Standish Industrial Park (funded largely by \$3.25 million from EDA). Firms did locate in the park, but only gradually; it was not until the end of 1985 that they had created 1,400 jobs, the number lost in 1973. Although the economic development efforts could be considered a success, it took over 12

years for that success to come about.¹⁵² Moreover, Taunton was aided by the growing prosperity of the Route 128 area in the 1980s, benefiting from the good fortune of the region. Many communities experiencing base closures took just as long to regain lost jobs.¹⁵³

Economic development programs alone cannot turn around every community affected by the defense build-down. Many factors determine a community's growth potential. Location and access to markets, natural resources, skill level of labor force, entrepreneurial ability, corporate structure, industry mix, community leadership, growth of the regional and national economy, and luck all contribute. If defense cuts occur in communities with no innate advantage, economic development efforts may play only a marginal role.

Stepping back to look at the national picture, many communities will lose a small number of defense-related jobs. The impact will be mild and normal market forces will provide for full and reasonably swift adjustment. Of the communities that take a larger cut, some will suffer relatively little because of compensating positive factors. In less favored communities, active economic development policies will be reasonably successful in some. However, the time until recovery may be fairly lengthy, particularly if the community gets little advance notice of the cuts and if the national economic performance continues to be weak. Finally, a few areas will not recover completely or quickly, even though economic development policies may serve to lessen the depth and length of the distress.

¹⁵⁰A strategy of preservation may have made a certain amount of sense in the past when defense budgets cutbacks came and went. For example, Vallejo, CA has lobbied to keep open the Mare Island Naval Base since the 1920s when the base was first threatened with closure. In many ways this was a successful strategy for the town, since it was able to keep employment at the base. However, the strategy was not without its costs. Being dependent on one employer (the Navy) meant that a more diversified, civilian-oriented economy has not developed. Judy Schneider and Wendy Patton, "Urban and Regional Effects of Military Spending: A Case Study of Vallejo, California, and Mare Island Shipyard," in Michael J. Brecheny, (ed.), *Defense Expenditure and Regional Development*, op. cit. It could be argued that many other smaller, defense-dependent places are in similar situations. Certainly, defense dependency in southeastern Connecticut has closed off past development options and made it more difficult for the area to respond to today's defense cuts.

¹⁵¹OTA interviews with Los Angeles, southeastern Connecticut, and St. Louis officials.

¹⁵²Department of Defense, Office of Economic Adjustment, *Economic Adjustment/Conversion*, Op. cit., app. K, p. 28.

¹⁵³Department of Defense, Office of Economic Adjustment, *Civilian Reuse of Former Military Bases: 1961-1990*, op. cit., p. 2.