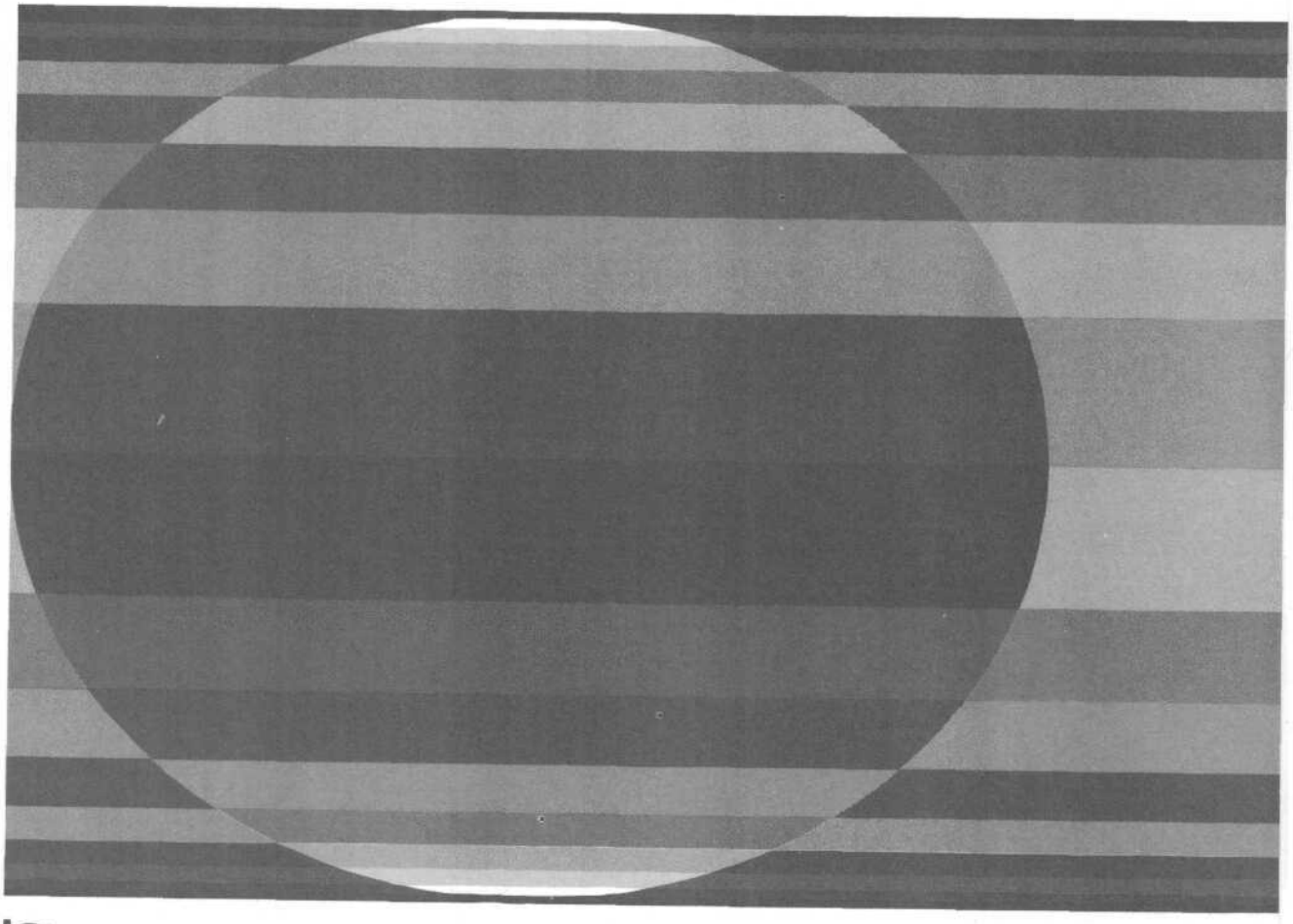
BACKGROUND PAPER

Barriers to Urban Economic Development

May 1978



Congress of the United States
Congressional Budget Office

BARRIERS TO URBAN ECONOMIC DEVELOPMENT

The Congress of the United States
Congressional Budget Office

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PREFACE

On March 27, 1978, the Administration submitted to the Congress legislation which focuses on the current economic development ills of major urban areas. This paper, which was requested by the Chairman of the Housing and Community Development Subcommittee of the House Banking, Finance, and Urban Affairs Committee, provides background information for the Congress as it debates the Administration's proposals. In keeping with the Congressional Budget Office mandate to provide nonpartisan objective analysis, this paper makes no recommendations.

The study was prepared by Reid Ewing under the general direction of Raymond Scheppach of CBO's Natural Resources and Commerce Division. The report was edited by Marion F. Houstoun and was prepared for publication by Angela Evans.

Alice M. Rivlin
Director

May 1978

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SUMMARY

There are various causes of central city economic decline and one or more proposed remedies for each. This paper, by design, focuses on only one cause--loss of industry and commerce--and only one proposed remedy--expansion of industry and commerce.

New industry and commerce would reduce rates of unemployment in central cities, strengthen central city tax bases, and have at least some multiplying effect on income. Thus, though central city economic expansion runs counter to strong market forces, federal policy changes to encourage it may still be justified. In cases where federal policy has reinforced market forces detrimental to central cities, policy changes may be justified on a purely economic basis. In other cases, justification may be social or political.

As an aid to policymakers, this paper identifies the most significant barriers to central city industrial and commercial development, and assesses the impact of federal policies on each. It makes three major points:

- Despite differences in the economic, demographic, and political character of cities, most find their ability to retain old or attract new industry and commerce limited by the same factors.

- Those factors can be mitigated by federal action, but only at substantial social and economic costs.

- Federal policies and programs capable of mitigating most factors already exist, but they are hindered by countervailing policies and programmatic flaws.

PRIMARY BARRIERS TO URBAN ECONOMIC DEVELOPMENT

Available evidence indicates that five factors have been particularly inhibiting to the growth of industry and commerce in central cities. Federal policy has both actual and potential impacts on each factor.

Availability and Cost of Land

Effects on Industrial and Commercial Location. The limited availability and high cost of central city land as compared with suburban and nonmetropolitan land do not significantly inhibit stores and offices from locating in central cities because they can and do economize on land through multistory development. As continuous process and automatic material handling have made single-story plants the norm, however, new industry has been discouraged from locating in central cities by land-related factors. Many cities cannot provide land in lots large enough for modern industrial plants, and even when such land is available, it costs several times as much as comparable land in outlying areas. Similarly, many central cities cannot provide additional land for plants, already located in central cities, that wish to expand their operations. In either case, central cities lose industry to jurisdictions with more abundant or less expensive industrial land.

The Influence of Federal Policy. The federal government has helped cities overcome land-related barriers to industrial and commercial development by subsidizing land assembly and clearance under the urban renewal program and, to some extent, the economic development program. This approach was so costly in social and economic terms, however, that it was virtually abandoned several years ago. As substantial funding for economic development in central cities becomes available again, more intensive uses of land will have to be encouraged if neighborhood disruption and federal subsidies are to be kept within reasonable bounds.

Availability and Quality of Labor

Effects on Industrial and Commercial Location. Automation of production processes and the growing importance of services in our economy have increased the demand for skilled and professional labor relative to the demand for unskilled and semiskilled labor. The movement of more affluent households to the suburbs has made skilled and professional labor more readily available in suburbs than in central cities. These two circumstances have combined to divert high-skill--and some low-skill--industry and commerce from cities to suburbs.

The Influence of Federal Policy. The federal government, through its manpower training programs, has helped cities overcome the primary labor-related barrier to economic development--lack of skilled labor. The success of those programs has been limited,

however, by the conflicting social and fiscal objectives of manpower policy, and by the ready availability of skilled labor outside central cities. Until manpower training is more heavily targeted to central cities, restructured to match the needs of central city industry, and coordinated with job-creation efforts, industry will have little incentive to locate in central cities.

Availability of Capital and Managerial Expertise

Effects on Industrial and Commercial Location. Capital and managerial expertise are readily available to major U.S. corporations, but they are not available to many small or minority-owned businesses, which represent the great majority of all businesses located in central cities. Many small or minority-owned businesses are undercapitalized to begin with, and they find lending institutions, which can afford to be selective because regulation insulates them from competition for clients, unwilling to take a chance on long-term profitability. Many are run by persons who lack basic business skills or prior experience in the same line of business. Though not unique to central cities, lack of capital and managerial expertise is nevertheless tremendously inhibiting to the growth of industry and commerce in central cities.

The Influence of Federal Policy. The federal government makes capital available to businesses primarily through loan guarantee programs; managerial expertise is made available primarily through short-term training and counseling programs. Unfortunately, those programs tend to miss the kinds of businesses most in need of help from the federal government. New businesses need debt-free financing until they reach the financial breakeven point. Businesses in declining areas need more federal involvement as a loan guarantor or loan maker. Businesses with inexperienced management need more intensive training and counseling than are generally available.

Proximity of Markets

Effects on Industrial and Commercial Location. Suburbanization has cost the nation's cities billions of dollars per year in purchasing power, much of it at the expense of central city commerce. With shopping trips shorter than trips for any other purpose, commercial establishments cannot afford to locate too far from markets; thus, they have followed population out of cities. Interregional migration has reduced the market for goods produced in the

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Northeast and the Midwest, largely at the expense of central city industry in those regions. About half of all industrial firms serve regional or local markets; thus, they are seriously affected by interregional migration.

The Influence of Federal Policy. Decentralization of population (that is, movement away from urbanized areas and urbanized regions) is a product of strong market forces, reinforced by federal highway and water projects, defense spending, waste treatment grants, mortgage insurance, and tax subsidies for homeowners. Federal programs to improve city services and housing have only slightly offset these forces, and the much-heralded "back-to-the-city" movement has remained insignificant on a national scale. To expand central city markets, the federal government would have to provide the affluent with stronger incentives to live in central cities or give central city industry an edge in federal procurements.

Quality and Cost of Transportation

Effects on Industrial and Commercial Location. Major cities have good water and rail access, but that is no longer a great advantage, since trucking has become the dominant mode of freight transport in the United States. Similarly, major cities have good transit service, but that is no longer a great advantage, since the automobile has become the dominant mode of passenger transport in the United States, for both employees and consumers. Because most major cities do not have adequate roads, truck terminals, or parking facilities, they have lost industry and commerce to areas that do.

The Influence of Federal Policy. Federal highway programs have adversely affected the growth of industry and commerce in central cities. Construction of high-performance federal-aid highways has greatly improved the competitive position of trucking, which has encouraged firms to move from central cities to suburban sites on beltways and other high-performance highways. In order to compete for industry and commerce, central cities need to improve and maintain their arterial roads and, where neighborhood disruption can be avoided, complete their limited access highways. More targeting of federal harbor/port and transit expenditures would also help.

SECONDARY BARRIERS TO URBAN ECONOMIC DEVELOPMENT

Other location factors generally have only a limited effect on the growth of business in central cities; that is, their influence is

restricted to certain industries or geographic areas. These factors typically act as "tie-breakers," helping businesses choose among otherwise comparable sites.

Federal Taxes

Federal business tax provisions can indirectly affect business location patterns in ways that are detrimental to central cities, but since those provisions apply to all locations, they are not responsible for the trends themselves, and they do not appear to exacerbate them greatly. This conclusion applies, most notably, to the investment tax credit on machinery and equipment and to accelerated depreciation on new buildings.

State and Local Taxes

Taxes are often substantially higher in predominantly urban than rural states and higher in central cities than in suburbs. Nonetheless, the evidence indicates that they have little effect on business location patterns, both because state and local taxes constitute a small fraction of business costs and because they are partially recovered in the form of public services to business and deductions from federal corporate income tax liability.

Crime

Crime is more prevalent in central cities than in suburbs, but not enough to alter the basic economics of business location. Whatever the effect of crime on business location patterns, it is certainly more psychological than economic. Unfortunately, no federal program, including a better federal crime insurance program, can eliminate the anxiety of businessmen in cities with high crime rates.

Air Pollution

With the Environmental Protection Agency's offset policy (under which new pollution sources are allowed in certain areas only if offsetting reductions in existing sources are accomplished) in effect, air quality controls have yet to significantly deter industry from locating in central cities. New industrial pollution sources have either been exempt from the offset requirement, have had

an automatic offset, or have received an offset from state or local government as a locational inducement. All of this is changing, however, and air quality controls could emerge as a significant barrier to central city industrial development.

Financial Incentives

There is no reason to believe that financial incentives are requisite for industrial development: relatively few firms ask for or receive them, and most doing so indicate that they would locate in the same spot and invest to the same extent without any incentives. Even at its peak, industrial bond financing--the financial incentive with the greatest potential impact on industrial location patterns--represented an infinitesimal fraction of new plant and equipment expenditures nationwide, and the figure has fallen sharply since restrictions on the value of tax-exempt bonds went into effect.

Water and Waste Treatment

Municipal water and waste treatment service is essential to industry and commerce only when the height of the water table, the permeability of land, or the nature of industrial discharges makes wells and septic tanks or cesspools impractical. In such cases, federal grants for water and waste treatment facilities and infrastructure have facilitated the decentralization of industry and commerce.

Natural Resources

Federal policies and technological innovations have tended to neutralize whatever advantage certain regions once had over others in terms of natural resource availability. The impact of natural resource availability on industrial location is limited today to a handful of industries, and is diffused throughout regions rather than concentrated in cities.

CHAPTER I. INTRODUCTION

As central cities began losing substantial industry and commerce around 1970, they suffered a corresponding loss of jobs, particularly jobs suitable for their unskilled and semi-skilled residents. Between 1973 and 1976, central cities of metropolitan areas lost 2.5 percent of their total employment, and a much higher percentage of their manufacturing jobs. During that same period, suburbs of metropolitan areas experienced a 7.9 percent increase in employment.

Loss of industry and commerce has contributed to three principal problems facing central cities. One is high unemployment. In 1976, central cities collectively had an unemployment rate of 9.2 percent, about 2 percent higher than their suburbs. Another problem is poverty. In 1976, some 14 percent of central city residents were below the poverty level, as compared with 7 percent of suburban residents. The third problem is a shortage of tax revenue. Between 1970 and 1975, central cities of 150,000 or more residents logged annual average increases in assessed property value of only 3 percent, well below the rate of inflation and even further below the rate of increase in per capita costs of city services.

PURPOSE AND FOCUS

There are various causes of central city economic decline and one or more remedies for each cause. 1/ Population movements have left central cities with a disproportionate share of the socially and economically disadvantaged, leading some observers to recommend population dispersal as a remedy for central city decline. Technological changes have left central cities with obsolete physical plants, causing other observers to recommend modernization of physical plants, particularly housing, as a remedy for central city decline. Governmental fragmentation has left central cities inadequately compensated for functions performed and services rendered, leading still other observers to recommend revenue sharing or governmental consolidation as a remedy for central city decline.

This paper considers only one cause of central city decline--the loss of industry and commerce. It is possible to compensate for the resulting loss of employment opportunities for central city residents in a variety of ways, ranging from creation of public service jobs to improvement of access to suburban jobs. But only expansion of central city industry and commerce would provide jobs for central city residents, strengthen central city tax bases, and have at least some "multiplying" effect on income. Some kinds of industry and commerce would provide more jobs, more tax dollars, and more income than others, but all kinds, whether capital- or labor-intensive, corporate- or community-based, basic or service-oriented, and so forth, would provide multiple benefits. Hence, even though the expansion of central city industry and commerce runs counter to strong market forces, it deserves serious consideration as a response to the economic decline of cities.

As an aid to policy makers, this paper identifies the most significant barriers to central city economic development and assesses the impact of past and present federal policies on each. While all major barriers are reviewed below, the emphasis is on:

- Barriers specific to manufacturing establishments. Because most manufacturing establishments do not serve local markets, they have been able to decentralize to a greater extent than establishments in any other economic sector, and in so doing have contributed to the decentralization of population, and with it, commerce. 2/

- Barriers specific to large establishments. Despite their fewer numbers, large establishments determine patterns of industrial and commercial location by attracting small establishments to nearby sites. Further, since large establishments are able to internalize such functions as marketing and legal services, they have spearheaded decentralization. 3/

- Barriers specific to new establishments. Reviewing all of the evidence, some of it contradictory, the siting of new establishments appears to have contributed more to decentralization of economic activity than has the closing, movement, or differential growth of existing establishments. 4/

- Barriers specific to suburban establishments. While a few cities have lost more jobs through inter- than through intra-regional shifts in economic activity, a vast majority have had the opposite experience. Competition for industry and commerce is more intense between cities and their suburbs than between cities and nonmetropolitan areas or cities in different regions. 5/

To summarize, the emphasis below is on factors which have encouraged new establishments, particularly large ones in manufacturing, to locate in suburbs rather than in cities. Of course, the importance of particular factors depends on the particular mix of industry in a given metropolitan area. Studies have shown, for example, that proximity to highways is especially important in metropolitan areas with a preponderance of light industry, and in those with limited, congested highway systems. Still, the following sections make it clear that certain barriers are more consequential than others under a wide variety of circumstances.

CHAPTER II. PRIMARY BARRIERS TO URBAN ECONOMIC DEVELOPMENT

Available evidence indicates that five factors have particularly inhibited central city economic development:

- The high cost and limited availability of land in central cities, at least in parcels large enough for modern industrial plants. Prime industrial land is especially limited in central cities of the Northeast.

- The limited availability of skilled and professional labor in central cities, and real or imagined differences between the quality of urban and suburban labor in the Northeast, Southeast, and Midwest.

- The lack of capital and managerial expertise. These factors, though not unique to central cities, have been tremendously inhibiting to central city economic development because central cities attract a large number of small and minority-owned businesses, many undercapitalized and poorly managed.

- Declining market potential in central cities. Suburbanization of population has been accompanied by declining demand for goods and services in central cities, at the expense of central city commerce in all regions but particularly the Northeast and Midwest. Regional outmigration has been accompanied by declining demand for products of the Northeast and Midwest, at the expense of industry throughout those regions, but particularly in their central cities.

- Poor access to highways in older rail, water, and mass transit-oriented cities, most of which are in the Northeast and Midwest. Poor access to airports also hinders industrial and commercial development in certain cities, but less so than poor highway access.

Those, then, are the principal factors inhibiting central city economic development; each is discussed in detail below.

LAND AS A BARRIER TO URBAN ECONOMIC DEVELOPMENT

Availability and Cost of Land

Cities have less developable land than surrounding suburbs, and the little land they do have is relatively expensive. Nevertheless, those relative differences do not weigh heavily against central city locations for commercial establishments because they can and do economize on central city land through multistory development. A survey of office rents in five metropolitan areas found them to be only 10 to 15 percent higher in cities than in suburbs, a difference which amounted to less than 1 percent of total costs. 6/ Another survey found the cost and availability of office space to be among the least salient reasons for corporate headquarters leaving New York City. 7/

For industry, however, the greater availability and lower cost of suburban land do weigh heavily against central city locations. As industry has converted to continuous process and automatic material handling, it has become financially advantageous, if not technologically obligatory, to operate in single-story plants, which consume large amounts of land. Although central cities have substantial amounts of vacant land, much of it is not available for development or is available in parcels too small for modern industrial plants. 8/ Developable land amounts to less than 10 percent of total land in one out of three cities with populations of more than 100,000; if suitable for industry, it is typically three to eight times more expensive than similar land in outlying suburbs. 9/ Cities in New England and the Mid-Atlantic States are particularly short of suitable land for industry.

The cost and availability of land thus rank high among site selection criteria in surveys of industry, often first or second. 10/ Land seems to be important both as a push and a pull factor: numerous surveys have shown that industrial establishments most often move because of a lack of space to expand operations, and most often seek sites with adequate space for future expansion. A survey in San Francisco, for example, found that establishments moving from that city to its suburbs, on average, doubled the floor area of their buildings and quadrupled the size of their lots. 11/

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Federal Policy with Respect to Land

The federal government has subsidized the assembly and clearance of central city land under its urban renewal program and, to some extent, its economic development program. During the heyday of urban renewal, thousands of acres were assembled, cleared, and redeveloped for industrial or commercial use. Unfortunately, much of that acreage was converted from residential use, and the program came increasingly under fire for breaking up neighborhoods, depleting the stock of low- and moderate-income housing, leaving many blocks of vacant land and, by some accounts, inducing very little economic development that would not have occurred anyway. 12/ As a result of these criticisms, federal efforts to revitalize cities came to focus almost exclusively on housing improvements, particularly after urban renewal was subsumed under the Community Development Block Grant program early in 1975.

This state of affairs is changing, however. The Economic Development Administration (EDA) is spending more on industrial and commercial parks in central cities each year, nearly seven times as much in fiscal year 1977 as in fiscal year 1972. 13/ Recent amendments to the Public Works and Economic Development Act have increased the number of cities eligible for EDA assistance by a factor of five, and have given cities priority equal to that of small urban and rural areas in the competition for limited funds. More important, the Department of Housing and Urban Development (HUD), under 1977 amendments to the Housing and Community Development Act, is about to underwrite industrial and commercial development projects for the first time in years, under both its Community Development Block Grant and Urban Development Action Grant programs. It is possible that the mistakes of urban renewal can be avoided through the exercise of administrative discretion on action grants and through appropriate planning and procedural requirements on regular block grants. In many cases, intensive land uses, such as multistory development, industrial and commercial rehabilitation, and marginal site expansion for businesses needing additional space, will have to substitute for land assembly, clearance, and redevelopment. 14/

Certain provisions of the federal income tax code have tended to accentuate land-related barriers to central city industrial and commercial development; foremost among them is the ability of industrial and commercial establishments to calculate depreciation on new buildings according to an accelerated schedule. While applicable to new buildings everywhere, cities have clearly

benefited less from "accelerated depreciation" on buildings than have suburbs, since they have less land available for new construction. Even so, because industrial and commercial buildings have long useful lives (40 or more years) and are subject to a low rate of accelerated depreciation (150 percent), the impact of this tax provision on business location patterns has been slight. Businesses can reduce their tax bill by no more than 0.6 percent of construction cost in the first year of accelerated depreciation, and progressively less in subsequent years. Thus, the total subsidy to business in fiscal year 1977 was less than $400 million, a negligible fraction of total business expenditures. Of course, if accelerated depreciation is replaced by a more substantial investment tax credit on industrial buildings, as proposed by the Administration, it will be harder to dismiss the impact of the tax code on business location patterns. 15/

LABOR AS A BARRIER TO URBAN ECONOMIC DEVELOPMENT

Availability and Quality of Labor

For every dollar of value added in the United States, 66 cents is spent on labor. This is nearly four times the expenditure on land, plant, and equipment combined. It is not surprising, then, that the availability, cost, and quality of labor strongly influence business location decisions.

Lack of skilled and professional labor is the most significant labor-related barrier to central city industrial and commercial development. Automation of production processes and the growing importance of services in our economy have increased the demand for skilled and professional labor relative to that for unskilled and semiskilled labor. Suburbanization of the middle and upper classes has made skilled and professional labor more readily available in suburbs than in central cities. These circumstances have combined to divert industry and commerce from cities to suburbs. A study in the Boston metropolitan area found that industrial establishments with high wage rates (an indication of high skill levels) were four times more likely to locate in the suburbs than were those with low wage rates. Labor availability made the difference. 16/ A survey of corporate headquarters leaving New York City found that labor availability dominated all other reasons for moving. Moves were prompted primarily by recruiting difficulties, lack of clerical staff, and executive residence in suburbs. 17/

Even some low-skill industry has been attracted to suburbs by labor considerations. Suburban labor is widely viewed as more productive, dependable, and trainable than central city labor. A well-known article in the Harvard Business Review posited that a manufacturing establishment using labor-intensive production methods and drawing its labor force from a central city poverty area would have a 7.5 percent lower productivity, a 50 percent higher turnover rate, twice the hiring cost, and eight times the training cost of one drawing its labor from the "conventional labor pool." 18/ These figures, it should be noted, were largely without empirical foundation. Indeed, under the Department of Labor's Job Opportunities in the Business Sector program, participating firms have found labor from central city poverty areas virtually indistinguishable from "conventional" labor. 19/ Nonetheless, as long as central city labor is viewed as inferior to suburban labor, central cities will be at a disadvantage in the competition for industry and commerce.

In brief, lack of skilled and professional labor, and real or imagined labor-quality problems, are substantial barriers to central city economic development. Outside of a few metropolitan areas in the Southwest and West, central city residents have markedly less education than suburban residents, and hence fewer skills and, by some accounts, lower productivity. Other labor-related barriers to central city economic development pale next to those.

While wage rates in certain industries are slightly higher in central cities than in suburbs, the reverse is more often the case, and low-wage industries continue to cluster in central cities. 20/ Surveys have shown that wage rates for skilled labor are fairly uniform within metropolitan areas, not only in highly unionized industries subject to metropolitan-wide wage agreements, but also in other industries tapping the same labor market. Wage rates for unskilled labor do vary within metropolitan areas, unionization being less prevalent among unskilled workers, but seldom by more than 10 percent and usually to the advantage of central cities. 21/

Of course, this does not rule out the possibility that systematic regional wage differentials inhibit economic development in the central cities of certain regions. Various studies suggest that between 10 and 30 percent of U.S. manufacturing is labor-oriented, that is, attracted to low-wage areas. 22/ One early study found that nearly one-third of the interstate shifts in manufacturing were attributable to the availability of low-wage, non-unionized labor in the South.

This is no longer the case, however. Two recent studies found that industry, which had come principally from the Northeast, is no longer attracted to the South solely or even largely because of low wage rates. 23/ Interregional migration, it appears, has brought wage rates in the two regions into rough equivalence. As of 1972, the average hourly earnings for production workers were only 2 percent higher in the Northeast than the South, and they were actually lower in Boston and New York, for example, than in Atlanta and Houston.

Studies and surveys in the 1940s and 1950s found some industrial firms moving south simply to avoid unionization. It was not so much the low wage rates that motivated them as the absence of work rules, work stoppages, and other correlates of unionization. The incentive to move to the South has diminished, however, as patterns of unionization have become more uniform within the United States. Although the Northeast and the Midwest still have a higher percentage of unionized employees than the South, the gap has narrowed to the point where the most recent econometric study, after controlling for wage rates and other factors, found no significant relationship between unionization and growth rates of manufacturing employment across states. 24/ Unionization may still influence industrial location through its effect on wage rates, but it apparently has little independent effect now.

Federal Policy with Respect to Labor

Federal manpower programs of the 1960s focused on the principal labor-related barrier to central city economic development--lack of skilled labor. 25/ Manpower training under the Manpower Development and Training Act (MDTA) of 1962 sought to give unemployed labor the specialized skills demanded by the private sector. The impact of that training on worker earnings has been hotly debated, but on one point there is agreement: it provided skills of use to the private sector, as evidenced by a high rate of job placement and retention. Despite high unemployment in the early 1960s, 78 percent of those trained with MDTA assistance were fully employed a year or more after job training, 13 to 23 percent above comparable workers who were untrained. 26/

Yet, as concern for minorities grew in the mid-1960s and as the more employable of the unemployed found jobs in the expanding economy, manpower policy came to emphasize, first, the provision of basic skills for the hard-core unemployed and then, when jobs for

them did not materialize in the private sector, the creation of public service jobs. Public employment has since become the dominant element of manpower policy in this country. Only one-fifth of total fiscal year 1976 expenditures under the Comprehensive Employment and Training Act (CETA) were devoted to manpower training, and only one-fifth of the manpower training funds went directly to industry. Those trained under CETA were mostly young and poorly educated; hence they were marginal candidates for highly skilled jobs. Those placed in public service jobs, though older and better educated, were given almost no training of use to the private sector, should they reenter the labor market. 27/

Some critics believe that manpower programs would be more effective if there were more involvement of the private sector in manpower training and more emphasis on structural unemployment. By themselves, those changes would not channel industry and commerce into central cities. They might, however, if manpower training efforts were more heavily targeted to central cities and were better coordinated with federal job-creation efforts (infrastructure development, business loans, tax credits, and the like). 28/

Federal labor laws have contributed to the equalization of wage rates and unionization across regions, but less than they might have because of pervasive noncompliance. Even in industries fully covered by minimum wage standards, nearly as many workers are below the minimum wage as are at or just above it (within 25 cents of it); and even with unfair labor practices prohibited by law, thousands of employers each year interfere with union recruitment, discriminate against union members, or refuse to bargain in good faith. 29/ This will be the case as long as it costs employers less to violate labor laws, given the modest penalties involved and the small chance they will ever pay them, than to observe labor laws, given their inflationary impact on wages and fringe benefits. 30/

The investment tax credit on machinery and equipment provides a substantial subsidy to business, some $10.6 billion in fiscal year 1977. This subsidy, reinforced by accelerated depreciation on machinery and equipment, encourages industry to substitute capital for labor. Central cities, with their abundant supplies of unskilled labor, almost certainly lose some industry as a result. There is reason to believe, however, that the impact of the investment tax credit on central city economic development is slight. Labor demand studies, though sometimes contradictory, indicate that capital and labor are not perfect substitutes for each other, and that automation does not systematically favor highly skilled labor. 31/ In consequence, the investment tax credit has been estimated to deflate

blue-collar employment by a modest 1.1 percent, and, of course, only part of this is at the expense of central cities. 32/

The tax code, moreover, contains two provisions that tend to moderate the bias toward capital-intensive production methods. One is double taxation of corporate income, first as business earnings and then as stockholder dividends, while employee income is taxed only once. The other provision is the employment tax credit authorized by the Tax Reduction and Simplification Act of 1977. It will provide an estimated $2.5 billion subsidy to business in fiscal year 1978, partially offsetting the projected $11.9 billion investment tax credit.

The main effect of the tax code is not, then, to encourage industry to locate outside cities. It is rather to accelerate the growth of industry locating outside cities for other reasons. Both employment and investment tax credits reward businesses which expand their operations; thus they are worth more to areas with growing than declining economic bases. 33/ Cities obviously benefit less than suburbs, and cities in the Northeast less than those elsewhere. In 1972, for example, New York City had 4.0 percent of the nation's manufacturing employment, but only 1.7 percent of its new investment in manufacturing. The tax subsidy to manufacturing in New York was correspondingly lower than average. Central cities would gain a clear tax advantage over suburbs only if tax credits or deductions were targeted to depressed areas, as in Robert Kennedy's proposed Urban Employment Opportunities Development Act of 1967.

FINANCE AND MANAGEMENT AS BARRIERS TO URBAN ECONOMIC DEVELOPMENT

Availability of Capital and Managerial Expertise

Lack of capital and managerial expertise rank high among barriers to central city industrial and commercial development--not inherently, but as a result of the particular mix of businesses located in central cities.

When major U.S. corporations need outside financing (which is the exception for them), they borrow from national money markets at relatively low and uniform interest rates. Similarly, when they need managerial expertise, they find it through nationwide talent searches. Capital and managerial expertise are readily available to them. 34/

They are not, however, readily available to the vast majority of businesses in central cities. Approximately 75 percent of firms in central cities have fewer than ten employees, and approximately 10 percent are owned by minorities. Those small and minority-owned firms have great difficulty attracting capital and managerial talent, and they have correspondingly high rates of business failure. 35/

Many are undercapitalized to begin with and find lending institutions, which can afford to be selective since government regulation insulates them from competition for clients, unwilling to take a chance on long-term profitability. 36/ Many have the added liability of being managed by persons who lack basic business skills or business experience in the same line.

Lack of managerial expertise can be just as damaging to businesses as lack of capital. One study found that small businesses whose owners had previous experience in the same line stood a 50 percent better chance of surviving the first two years of operation than those whose owners lacked such experience. Another study found that minority-owned businesses whose managers had previous experience in the same line had significantly higher net earnings during the first four years of operation than those whose managers did not. 37/

The Federal Role in Finance and Management

The federal government makes capital available to businesses primarily through loan guarantee programs, and managerial expertise available primarily through short-term training and counseling programs. Unfortunately, those programs tend to miss the kinds of businesses most in need of assistance from the federal government. 38/ Federal business assistance programs do not meet the needs of many businesses in declining areas. By guaranteeing more loans than it makes directly, the federal government is able to make its limited business loan funds go a long way. It cannot guarantee, however, that businesses in declining areas will be adequately financed because private lending institutions are loathe to invest in such areas, even with federal guarantees. The result is a heavy concentration of regular Small Business Administration (SBA) loans in fast-growing cities and regions. 39/

Federal business assistance programs do not meet the needs of many new businesses. On direct loans, SBA will defer payments for as long as one year, will reamortize loans, and will provide supple-

mental loans during the first year of amortization if that will keep new businesses from failing. On guaranteed loans, it will ask private lending institutions to do the same. But, in all cases, businesses are expected to begin repaying loans before they have reached the financial break-even point, which is generally three to six years after start-up. Businesses that cannot repay loans on schedule do not qualify for SBA direct loans or loan guarantees, and if they happen to secure them, they are likely to default. 40/

SBA has yet to grant moratoria on loan repayments to new businesses, though empowered to do so on certain loans. Further, it has yet to seriously encourage equity investments in new businesses, though equity investments are preferable to loans because they neither require steady repayment nor cut off other sources of financing by raising debt/equity ratios. 41/ The federal government's only equity financing program--the Small Business Investment Company (SBIC) program--is poorly funded and, in actuality, is structured to encourage more debt than equity financing. In fiscal year 1977, SBA budgeted twenty times as much for its loan programs as its SBIC program, and the SBICs themselves provided five times as much in straight debt as in straight equity financing. With no strong federal program to encourage equity investments in small businesses, and a tax structure which discourages them, venture capital for small businesses has virtually dried up since 1969. 42/

Federal management assistance programs do not meet the needs of many businesses with inexperienced management. 43/ A great majority of SBA management counseling is done on an occasional basis by volunteers and students of varying competence and commitment. SBA management training reaches a small fraction of the business community and consists, for the most part, of short orientation courses and specialized workships and seminars. The EDA technical assistance program is oriented more toward economic planning than management assistance. Only the Office of Minority Business Enterprise, through its business development program, provides what might be called intensive management assistance.

In fiscal year 1977, federal outlays for financial assistance to small businesses exceeded outlays for managerial assistance by 65 to 1. In light of Dun & Bradstreet surveys indicating that poor management is the root cause of most business failures, it would seem that management assistance warrants more emphasis. 44/ The challenge lies in structuring programs to increase participation by businessmen, who do not always perceive the need for management assistance when it exists.

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To summarize, businesses in declining areas--including central cities--would benefit from more federal involvement as a loan maker, or perhaps as a loan guarantor. New businesses would benefit from debt-free financing, preferably through equity investments but, short of that, through moratoria on loan repayments. Businesses with inexperienced management would benefit from intensive management training and counseling, perhaps in combination with financial assistance so there is more incentive to participate.

MARKET POTENTIAL AS A BARRIER TO URBAN ECONOMIC DEVELOPMENT

Proximity of Markets

The nation's central cities have lost substantial population--and relatively affluent population at that--to their suburbs, exurbs, and other areas. Indeed, some cities in the Midwest have lost population at rates of over 3 percent per year. This loss of population cost cities nearly $30 billion in purchasing power between 1970 and 1974, much of it at the expense of central city commerce. 45/ With shopping trips averaging under 5 miles in 1970 (less than trips for any other purpose), commercial establishments cannot afford to locate too far from markets; hence they have followed population out of the central cities and into outlying areas. In fact, proximity to markets is so vital to commercial establishments that intrametropolitan commercial location patterns can be mathematically modeled solely in terms of market potential. 46/

Interregional migration from north to south and east to west has reduced the market for goods produced in the Northeast and Midwest, much of it at the expense of central city industry in those regions. Numerous surveys and studies indicate that roughly half of all industrial firms are market-oriented, and that at least 15 percent serve local markets. 47/ One study found that counties doubling their population over a ten-year period end up with nearly three times the industrial employment they would have with no population growth. 48/ One reason is increased market potential.

The Federal Role With Respect to Markets

Federal policies have not been the dominant force behind interregional migration and resulting market shifts. The literature on interregional migration clearly indicates that factors beyond

federal control--such as climate, age of residents, contacts in other areas, and previous migration experience--have as much impact on migration patterns as do unemployment rates, income levels, and educational attainment, which are themselves less a function of federal policies than of private decisions. 49/

Nevertheless, federal policies have facilitated and reinforced prevailing patterns of regional migration. Migration to the West and Southwest would have occurred without the interstate highway and land reclamation programs, but at a slower pace. Civilian population would have moved to the South and West, but federal defense installations and defense contracts brought military population as well. 50/

Nor have federal policies been the dominant force behind suburbanization of population. Suburbanization has occurred because suburbs have less expensive land than cities, lower tax rates than cities, better schools than cities, and a host of other advantages for the auto-owning public.

Nevertheless, federal policies have facilitated and reinforced prevailing patterns of suburbanization. An EDA-sponsored study judged the following federal programs to have a "heavy" impact on suburbanization: highway and rapid transit programs, water and sewer construction programs, and mortgage insurance programs. 51/ Highway and rapid transit improvements have enabled persons who work in cities to live at ever-greater distances from cities. In Minneapolis-St. Paul, for example, highway improvements enabled auto users in 1970 to travel 2.2 miles farther on a half-hour commute than they had twelve years before. Commuters have taken advantage of this by moving farther from the city. 52/

Federal grants for water and sewer collector systems have facilitated residential development in outlying areas by reducing development costs and providing a substantial margin of excess capacity for future development. 53/ They have particularly facilitated development in areas where low soil permeability, high bedrock, unusually high or low water table, or small lot size make septic tanks and wells impractical. Although HUD has spent less on sewers since its Water and Sewer Grants program was incorporated into the Community Development Block grant program in 1975, the Environmental Protection Agency (EPA) has more than made up the difference under its Wastewater Construction Grants program.

Federal mortgage credit and insurance programs have made financing available on millions of single-family homes, a great majority in the suburbs. In 1964, 74 percent of new and 54 percent of existing homes insured by FHA were outside cities. Subsequent programmatic changes designed to promote homeownership among low-and moderate-income urban families have moderated this suburban bias. Yet, as of 1976, three-fifths of the new homes and two-fifths of the existing homes insured by FHA were still outside cities. As long as FHA-mortgage insurance is available to any suburban family that can service a mortgage properly, a high percentage of homes with federally insured mortgages will be outside cities simply because most moderately priced vacant land is outside cities. 54/

The federal income tax code, by permitting deductions of home mortgage interest payments and property taxes, and deferral of capital gains taxes on home sales, will provide an estimated subsidy to homeowners of $11.1 billion in fiscal year 1978; over 80 percent of that subsidy will go to taxpayers with incomes of $20,000 a year or more. Because opportunities for homeownership tend to be greater outside of central cities, the tax subsidy for homeownership has reinforced, if not prompted, suburbanization of the more affluent. 55/

To be sure, some federal programs have made central city residence marginally more attractive to the affluent. Urban renewal, for example, increased the stock of high-rent housing in central cities. To do so, however, it razed many times more low-rent housing units than it replaced, and it could not have significantly altered residential patterns of the affluent as only 100,000 middle- and upper-income units were constructed between 1950 and 1971--a trickle by the standards of the private housing market. 56/

Other federal programs have presumably made cities more attractive to the affluent by improving their public services, public facilities, and their cultural and recreational opportunities, but those programs have not offset some very tangible detractions of central city residence, among them high taxes, high crime rates, and poor schools. Thus, while there is some evidence of a back-to-the-city movement by the middle class, it has remained insignificant on a national scale. 57/

In order to expand central city markets, financial incentives might be used to attract significant numbers of the affluent to central cities. The federal housing "programs" with the largest number of affluent beneficiaries are tax subsidies and mortgage insurance for homeowners. According to one expert, the two together

accounted for nearly the entire percentage increase in homeownership between 1940 and 1960, with tax subsidies dominating at higher income levels and mortgage insurance at lower income levels. 58/ If the two were somehow targeted to central cities, they would no doubt induce some middle and upper class resettlement of cities, thereby expanding the market for central city goods and services.

Similarly, if federal procurement expenditures were targeted to central cities, they would expand the market for central city industrial products. One billion dollars in federal procurement expenditures have been estimated to create between 60,000 and 100,000 man-years of work--more than that created by an equivalent tax cut, and as much as that created by an equivalent public works expenditure. 59/ Although targeting of federal procurement expenditures may be economically inefficient, it has one obvious advantage over resettlement of cities by the affluent--it would minimize displacement of the urban poor, the major drawback of urban renewal. 60/

TRANSPORTATION AS A BARRIER TO URBAN ECONOMIC DEVELOPMENT

Quality and Cost of Transportation

Major cities, particularly those in the Northeast, once offered industry and commerce the best in transportation. Most developed around seaports or on inland waterways, which were ideal locations for the transport of bulk commodities. Most were focal points on the nation's rail network, with downtown freight yards and spurs handling all manner of goods. Most had dense streetcar and bus lines, which transported customers and employees to downtown businesses.

While major cities still offer good water, rail, and transit access, they have lost much of their competitive edge. The increasing importance of light industry in our economy and the growing orientation toward local markets have made access to water and rail transport, which have their greatest cost advantage on long hauls of bulk commodities, less advantageous than it once was. Trucking has become the dominant mode of freight transport, both in its own right and as a mover of containerized goods. In addition, rising income and changing land-use patterns have increased auto ownership, and that, in turn, has diminished business dependence on transit service. The automobile has become the dominant mode of passenger transport, for both employees and customers of business establishments.

Older cities, constrained by historical development patterns, have had great difficulty in making the transition to the truck and auto age. Most have congested roads, inadequate truck terminals, and inadequate parking facilities, which place them at a tremendous disadvantage in the competition for industry and commerce.

The points made above are best illustrated with summary statistics. 61/ Between 1950 and 1975, rail's share of intercity freight traffic declined from 47 to 30 percent of total tonnage carried. Only containerized (mainly trailer-on-flatcar) shipments registered any increase, rising from virtually nothing to 5 percent of revenue carloadings. National waterways as a group maintained their market share over this period, but the Great Lakes, the most urbanized portion of the national waterways, suffered a sharp decline. Here again, containerized (including roll on/roll off) shipments outpaced all others.

The decline of rail and water transport and the growth of containeration translated into gains for the trucking industry. Between 1950 and 1975, that industry's share of intercity freight traffic rose from 26 to 36 percent of tonnage carried, more than any other mode. Although more expensive than rail or water transport on long hauls of bulk commodities, trucks are cost-competitive on hauls of less than about 200 miles, and on even longer hauls, when loads are light or when they are moved by independent or private carriers. More important, trucks are faster, more reliable, and less subject to loss and damage than their main competitor, railroads. Industries with higher valued products are willing to pay more for this kind of service. In three nationwide surveys of industry, access to highways and contract trucking ranked first or second among site selection factors. By contrast, access to rail facilities was about halfway down all three lists and access to waterways was at the very bottom of the two lists that included it. 62/

Transit ridership in the United States fell from 17 billion passengers in 1950 to 7 billion in 1975. By 1970, transit accounted for only 11 percent of all work trips in metropolitan areas, and a mere 4 percent of all trips nationwide, with the automobile carrying the vast majority of the remainder. Although more expensive than transit on many trips, the automobile has a cost advantage on trips of less than two or three miles and on longer trips with multiple occupants. More important, the automobile is faster, more convenient, and more reliable than its main competitor, transit. Households in all but the lowest income classes are willing and able to pay more for this kind of service. One result is that the nation's oldest cities have been the nation's biggest losers of industry and commerce, despite their superior transit systems.

Developers of industrial parks, office complexes, and shopping centers have come to demand sites close to highways, whether served by transit or not. 63/

Like highway transportation, the rise of air transportation has contributed to central city economic decline. Between 1950 and 1975, air carriers' share of the intercity travel market increased from 14 to 78 percent of passenger-miles by public carrier. This increase was accompanied by industrial and commercial development around outlying airports--development that might otherwise have occurred in central cities. Still, the impact of airports on business location patterns is in no way comparable to that of highways. Proximity to airports ranks well down the list of site selection criteria for corporate offices, and is even lower for manufacturing establishments, whose goods are shipped almost exclusively by land or water.

The Federal Role in Transportation

The federal-aid highway program has contributed to changes in passenger and freight movement detrimental to central cities. Between 1945 and 1975, route mileage on high-performance federal-aid highways nearly doubled while intercity waterway mileage in the continental United States remained virtually constant and intercity rail mileage declined slightly. A corresponding increase of 40 percent in average truck speed nationwide greatly improved the competitive position of trucking and enabled industrial firms serving regional and even national markets to move away from central city rail spurs. Auto accessibility within metropolitan areas also improved tremendously, allowing commercial firms to move away from central locations while continuing to compete for metropolitan markets.

Many of these firms were attracted to circumferential highways constructed around central cities under the federal-aid highway program. A survey of industrial establishments along the Capital Beltway in Northern Virginia found that nearly all had located there for reasons of accessibility, and that most had moved there from inlying sites in Washington, Alexandria, or Arlington. 64/ A study of retailing in 14 metropolitan areas, half with beltways and half without, found that employment growth was much more heavily concentrated outside central cities with beltways than outside those without. 65/ A survey of industrial and commercial establishments along a beltway in the Boston metropolitan area indicated that nearly all of them were attracted from the central city rather than other metropolitan or nonmetropolitan areas. 66/

As billions of dollars were being spent on circumferential highways, many central city arterial roads were allowed to deteriorate and many proposed radial highways (freeways going out from cities) were scrapped altogether. Between 1970 and 1975, urban arterial route mileage with "good" pavement declined by 10 percent, and mileage with "free flowing" peak-hour traffic declined by 5 percent. 67/ Arterials were not adequately maintained, let alone upgraded, because of lack of funds. As late as fiscal year 1974, higher levels of government were channeling one-third fewer dollars into central cities than into their metropolitan "fringes."

Of course, as authorizations for urban system highways have grown, more federal-aid highway funds have become available to central cities. Yet many central cities may still be inadequately funded: they may have arterial and other major roads excluded from the federal-aid urban system; they may not receive a specific allocation of urban system funds from their respective states or metropolitan planning organizations; or they may lack sufficient matching money to utilize their full allocation of urban system funds. 68/

Withdrawal of proposed radial highways from the interstate system saved neighborhoods along the right-of-way and avoided some environmental degradation, but it did so at the expense of central city industrial and commercial development. The vast weight of evidence indicates that radial highways bring business into central cities. 69/ For example, a survey of manufacturing firms along radial highways in eight cities found that while 49 percent had located there before highway construction and 29 percent had moved there from elsewhere within those cities, 22 percent were newly attracted to them, many specifically because of the highways. 70/

To compete effectively for industry and commerce, central cities need to upgrade and maintain their arterial roads and, where the integrity of neighborhoods can be preserved, complete their radial highways. At present, the interstate system contains roughly equal mileage in radial and circumferential gaps; if past performance is any indication, more progress will be made on the circumferential gaps unless programmatic changes are made. 71/ Radial gaps could, for example, be given higher priority in funding than the many circumferential gaps designated of local significance only, or the latter could be removed from the interstate system entirely.

The federal rail, waterway, and transit programs have only slightly offset the adverse impact of federal-aid highways on older cities. Subsidies for railroads carrying freight grew from virtually nothing in the early 1970s to 3 percent of expenditures by users in fiscal year 1975, three times the figure for trucking. The Regional Rail Reorganization (3R) Act of 1973 provided subsidies for operation of bankrupt railroads in the Northeast, pending rail reorganization, loans for rehabilitation and modernization of their physical plants, and matching funds for continuation of service on unremunerative rail lines in that region. The Railroad Revitalization and Regulatory Reform (4R) Act of 1976 extended financing for rehabilitation of physical plants and matching funds for continuation of unremunerative rail service to marginal railroads nationwide, most of which are in the Midwest.

While the wholesale rail abandonment that might have occurred without federal assistance would have been devastating to industry in the Northeast, and older rail-oriented cities would have been hardest hit, the federal rail assistance program has not provided those cities with a decisive advantage in the competition for industry and commerce. Subsidies for unremunerative rail lines go almost exclusively to rural and small urban areas, and even there may have minimal impact on industrial development. Past rail abandonments have shown that trucks can substitute for railroads to a great extent. 72/ This is the case because railroads' major function is to transport inputs to production, and the cost of transporting those inputs is a dominant location factor for only 8 percent of all manufacturing. 73/

Federally financed rail rehabilitation and modernization upgrade service to all points on a rail line, not just those to in cities. This is true of track improvements, the major component of current rehabilitation efforts, and it is also true of freight yard consolidation, the one measure directly affecting cities. If consolidated freight yards are located in central cities, all industry on local spurs, both central city and suburban, will benefit to about the same extent. If consolidated freight yards are located outside central cities, however, some central city industry could be effectively bypassed. 74/

It has been asserted that if entirely deregulated, railroads would lower rates on intercity traffic to compete more effectively with trucks, would raise rates on branch lines to reflect the full cost of service to rural and small urban areas, and would raise rates on containerized shipments to reflect the value of their contents. Each of these actions would give industry more incentive to locate on

central city rail spurs. In fact, however, railroads already have considerable latitude in lowering rates or raising them in cases where effective competition exists. Early returns from the 4R Act, which grants railroads greater flexibility in rate making, suggest that deregulation would primarily enable railroads to raise rates in cases where effective competition does not exist, rather than compete more effectively in cases where it does. 75/

Water transportation is by far the most heavily subsidized mode of intercity freight transport: the federal government pays the full cost of construction, operation, and maintenance of national waterways. As of fiscal year 1975, federal waterway subsidies amounted to 42 percent of barge revenues nationwide, 14 times the figure for railroads. Since the nation's largest cities are located on waterways, many of their businesses benefit from artificially low transportation costs as a result of those subsidies. Even so, these cities do not have a great advantage in the competition for industry and commerce.

Like railroads, waterways primarily carry inputs to production, and consequently have lost much of their drawing power as industry has become less sensitive to the costs of transporting inputs. A survey of manufacturing establishments locating or expanding in counties contiguous to one inland waterway showed that transportation costs were a minor consideration for most of them, as compared with the availability and cost of labor, market accessibility, and land costs. 76/

Moreover, federally funded waterway improvements do not, in general, favor central cities over other points on waterways. The newest addition to the inland waterway system, the McClellan-Kerr Multiple Purpose Arkansas River System, attracted some $3 billion in new industrial investment between 1968 and 1974, but much of that was outside cities, as many privately owned ports sprang up along the waterway. A mere 1 percent of that $3 billion was around Tulsa's port, despite large public expenditures on port facilities. 77/

The only federally funded waterway projects clearly favoring central cities over other locations are harbor and related channel improvements, and they are neither heavily funded nor directed toward older port-oriented cities. Waterway construction projects completed by the Army Corps of Engineers between 1970 and 1977 cost the federal government more than $4.5 billion, but only 7 percent of that was spent on harbors and channels nationwide, and only 2 percent on harbors and channels in the Northeast and the Midwest. 78/ A handful of cities have clearly attracted new industry and commerce as

a result of those projects, but all are "new" cities blessed with other economic advantages. To cite an extreme example, the upgrading of Houston's ship channel has made Houston the nation's third largest port in tonnage handled, creating an estimated 27,000 permanent jobs. 79/ Thanks in part to harbor and channel improvements, the Gulf Coast now has more large ports (handling over 20 million tons per year) than the East Coast.

Like harbor improvements, port improvements have been funded on a relatively small scale, and mostly in the South and the West. Between 1966 and 1977, only $125 million, or 4 percent of EDA's public works budget, was spent on port-related improvements, and less than $10 million of that was spent on ports in the Northeast and the Midwest. 80/ Ironically, even cities upgrading their ports with federal assistance have not necessarily attracted new industry, as many invested in facilities for containerized cargo unlikely to originate nearby. 81/

The previous Secretary of Transportation stated that federal "port activities" have had "little or no apparent effect on the competitive relationship among...ports." This may be true if the Secretary was referring solely to federally funded port improvements. It probably is not true, however, if the full range of port-related activities, from federal harbor and channel improvements to foreign trade agreements, are taken into account. 82/ And it is even less likely to be true in the future, as foreign waterborne commerce assumes ever-greater importance in our economy and as federal port-related expenditures correspondingly increase.

Federal obligations for mass transportation have increased twentyfold over the past decade, to the point where transit now receives almost half of all federal funds for surface transportation in urbanized areas--a remarkable figure in light of transit's small share of the market. 83/ Much of that funding goes into older transit-oriented cities, which could not maintain such extensive transit service without it. But again, this does not give these cities a tremendous advantage in the competition for industry and commerce, for at least three reasons.

First, transit assistance is not doled out solely or even largely on the basis of need (that is, transit ridership or ridership potential). Under the existing apportionment formula, such highway-oriented cities as Los Angeles, Houston, and Denver receive more than twice as much operating assistance per transit passenger as do Chicago, Philadelphia, and Boston, and a number of highway-oriented cities have been awarded capital grants for expensive new rapid transit or peoplemover systems. 84/

Second, as with rail assistance, transit assistance benefits suburban as well as central city industry and commerce. The main thrust of transit development in the United States has been toward regional transit systems which, while improving accessibility to central cities, have done the same for suburbs. Thus, while regional bus systems have facilitated the commuting of suburban residents into central cities, 1970 census "journey to work" statistics indicate that they have also facilitated the commuting of city residents to suburban centers. And while rapid transit lines have spurred store and office development in the central business district of one metropolitan area (San Francisco), they have done the same in suburbs of others (Philadelphia and Boston). 85/

Third, transit service is of minor concern to business nowadays. The only transit improvements that attract business are heavy rail improvements. 86/ The only business they attract is retail trade and some services. 87/ And the only time they attract them is when land is easily assembled, the demand and capital for new development exist, and local land-use policies favor development. 88/ Unfortunately, those complementary factors are not often present in U.S. cities.

To summarize, federal rail, water, and transit programs have only slightly offset the adverse impact of federal-aid highways on older cities due to the limited drawing power of these modes of transportation, the regional rather than local nature of transportation improvements, the wide dispersal of federal funds, and the absence of "complementary factors" facilitating commercial and industrial development in central cities. All but the first of those could be moderated through federal policy changes.

The federal government has not significantly contributed to decentralization of industry and commerce through its airport development program. 89/ Until passage of the Airport and Airways Development Act of 1970, federal funding for airport development was well under $100 million per year. Funding has increased manifold since then, but it has been largely reserved for existing air carrier airports and new general aviation facilities. This will continue to be the case as long as discretionary funding for airport development remains limited and environmental opposition to large-scale projects remains intense. In fact, by underwriting the construction to transit links from cities to outlying airports, the federal government may, on balance, make a positive contribution to central city industrial and commercial development. 90/

CHAPTER III. SECONDARY BARRIERS TO URBAN ECONOMIC DEVELOPMENT

Businesses collectively consider dozens of factors in site selection. 91/ The previous chapters reviewed the most critical ones. This chapter looks at the "tie-breakers," that is, the factors which typically become critical only when sites are comparable in other respects. These factors may nonetheless act as barriers to urban economic development.

Taxes

As discussed previously, federal tax policies may indirectly affect business location patterns, acting through other location factors to reinforce trends detrimental to central cities. Since tax policies are the same everywhere, however, they have no direct impact on business location patterns and they probably have less overall impact than certain location-specific federal programs. This will be the case as long as federal tax policies do not explicitly favor certain areas over others.

Although none have been enacted, bills that would give special tax benefits to businesses in depressed areas have occasionally been submitted to the Congress. Most tax experts agree that such benefits would not reach all businesses which need federal assistance because about one out of two businesses do not have any tax liability, and, moreover, such benefits would be wasted on many businesses which do not need federal assistance. For these reasons, they favor direct assistance to business.

State and local tax policies are, of course, an entirely different matter. New York, the state with the highest business taxes, has a corporate income tax two and one-half times that of Alabama; its local taxes on commercial property are an average of three and one-half times those of Alabama. 92/ Even within the same metropolitan area, it is not uncommon for cities to have property tax rates 50 percent higher than their suburbs. 93/

Despite those sometimes substantial differences among state and local business taxes, the weight of evidence indicates that state and local taxes become a determining factor only when sites are comparable with respect to primary location factors. At least six empirical studies and three literature surveys have found state and

local tax rates to have little effect on business location patterns. 94/ The fact is that state and local taxes together constitute less than 2 percent of the value of shipments for almost all industries in almost all states, and they do not vary enough to change the competitive position of most industries in most states. 95/ Moreover, state and local taxes are partially recovered in the form of public services to business and deductions from federal income tax liability.

Urban Environmental Problems

As described above, urban "environmental" problems have contributed to suburbanization of population, and that, in turn, has contributed to suburbanization of industry and commerce through its effect on markets and labor availability. In addition, urban environmental problems have had some direct impact on business location patterns. Theft, fraud, and vandalism have unquestionably put some establishments in central cities out of business and have prompted others to move to the suburbs. Likewise, air quality controls have unquestionably caused some new industrial establishments to locate in nonurbanized areas.

Nonetheless, the direct impact of urban environmental problems on business location patterns has apparently been slight. Crime rates are surprisingly similar from city to city and city to suburb. 96/ Small Business Administration surveys show that the incidence of shoplifting is actually lower for businesses in central cities than for those in suburbs, and that the incidence of other crimes is only marginally higher. Surveys by the Law Enforcement Assistance Administration show no systematic regional variation in commercial victimization rates among major cities. Atlanta, Denver, Dallas, and Portland, for example, all have higher burglary rates than New York City. Inasmuch as crime rates are fairly uniform, and crime, though costly in absolute terms, still amounts to less than 1 percent of business receipts nationwide, the economic cost of crime does not represent a significant barrier to industrial and commercial development in central cities. Of course, the psychological cost of crime could be significant even though the economic cost is not. Anecdotal evidence suggest that it is in certain cases.

Since 1971, the federal government has provided "affordable" crime insurance to businesses in states that do not have it. The small number of commercial policyholders (13,000 currently) reflects certain programmatic shortcomings, among them fairly high premiums, particularly in high crime areas; inadequate promotion of the

program; exclusion of certain types of crime; and the ineligibility of cities in low-crime states. But it also reflects limited need. The impact of commercial victimization is more psychological than economic, and federal crime insurance can neither compensate businessmen for their anxiety nor induce them to locate in cities with high crime rates.

Strictly interpreted, the Clean Air Act Amendments of 1970 would have prohibited new industrial development in areas failing to meet federal ambient air quality standards. 97/ When opponents alleged that this would curtail all industrial development in the nation's most populated areas, the Environmental Protection Agency (EPA) responded with an emissions offset policy that allows industry to locate in "non-attainment" areas (areas that do not meet federal air quality standards) if its emissions are controlled to the greatest degree possible and, more significantly, if more than offsetting emission reductions are obtained from existing sources of pollution.

As far as can be determined from EPA and industry representatives, with the offset policy in effect, air quality controls have not significantly deterred industry from locating in central cities. By one conservative estimate, 96 percent of new industrial sources have been exempt from the offset requirement because they produce less than 100 tons of pollutant annually. The rest have either secured "built in" offsets by replacing old plants with new, less polluting ones; have been given offsets by states or localities as an inducement to locate within their boundaries; or have been willing to pay for offsets because sites had compensating advantages. Generally speaking, establishments have had no incentive to locate in suburbs rather than cities because non-attainment areas have encompassed entire metropolitan areas.

All of this is changing, however. Non-attainment areas for sulfur dioxide and particulates are being redesignated, in some cases, to exclude suburbs but to include parts of cities. The offset requirement is being extended to establishments with potential as well as actual emissions of more than 100 tons of pollutant annually, an extension that will quadruple the number of establishments so covered. Finally, low-cost offsets are "drying up" as states incorporate them into their implementation plans. To be sure, the natural turnover of central city industry will continue to provide offsets for new establishments, and the increasingly strict constraints on new source emissions in attainment areas will tend to minimize the advantage of suburbs and exurbs over cities. Even so, air quality controls could emerge as a significant barrier to expansion of central city industry.

Business Climate

A favorable "business climate" ranks fairly high among site selection factors in surveys of industry. Yet there is no evidence that elements of a favorable business climate, such as industrial bond financing, tax holidays, and liberal industrial zoning, are prerequisites of industrial development. The only nationwide survey of industry to consider such factors found that a mere 3 to 8 percent of establishments viewed industrial bonds, tax incentives, and lenient industrial zoning as critical location factors; 16 location factors had higher rankings. 98/ Other surveys have found that relatively few businesses ask for or receive financial incentives from state or local governments, and that most doing so would locate in the same place and would invest to the same extent without any incentives. 99/

Industrial bond financing dominates all other financial incentives in terms of potential savings to industry, and is utilized most heavily by states in the South. 100/ Largely on the basis of these two facts, some observers have assigned industrial bond financing a major role in the movement of industry to Southern states. A more plausible position is that industry moved South primarily because of labor costs, climate, and markets, and considered industrial bond financing only in choosing among otherwise comparable locations. Even in the mid-1960s, peak years for industrial bond financing, bond issues amounted to only 1.4 percent of all expenditures on new plant and equipment by industry nationwide, and that figure has fallen sharply since the Revenue Act of 1968 placed restrictions on the value of tax-exempt bonds. Further, with one or more levels of government authorized to issue industrial bonds in all but two states, no region has a corner on the industrial bond market anymore. 101/

Water and Waste Treatment

Major water-consuming industries might be expected to avoid areas of periodic water shortage, notably the West and Southwest. This is not the case. Nearly all industries, even those producing primary metals, have leeway in substituting water-extensive for water-intensive production methods, and therefore seldom reject regions solely or even largely because of limited water supplies. 102/ Massive federal water projects in the Southwest and West have tended to neutralize what little advantage other regions once had in the competition for industry.

The cost of water and waste treatment varies within metropolitan areas, but less than some other costs, and it thus ranks low among site selection factors in surveys of industry. The availability of water and waste treatment, on the other hand, ranks moderately high in a number of surveys. 103/

Large establishments engaged in such activities as petroleum refining and petrochemical manufacturing consume so much water and generate so much waste that it pays them to draw their water from surface courses, treat it themselves, and return it directly to those courses. 104/ Small establishments engaged in commerce and certain industrial activities require so little water and generate so little waste, all of it "domestic" in nature, that they can rely entirely on wells and septic tanks or cesspools, if they must. But about one out of four industrial establishments falls between the two extremes, producing effluent incompatible with septic tanks and cesspools, but in insufficient quantity to justify a separate treatment facility. The availability of water and waste treatment is a key site selection factor for those establishments. It is also a key factor for all establishments in areas where land is very expensive, soil is impermeable, or the water table is unusually low or high, making septic tanks, cesspools, or wells impractical.

Cities, having extensive, high capacity water and sewer systems in place, once had a clear advantage over other jurisdictions in the competition for industry and commerce. This advantage would have been accentuated by federal water pollution control laws but for the federal waste treatment grants which accompanied them. Between 1956 and 1973, 14,200 waste treatment facilities were constructed with federal assistance, nine out of ten in municipalities with populations of less than 50,000. Though only half of all expenditures were in those smaller municipalities, central cities lost their near-exclusive claim to high-capacity waste treatment facilities. In the mid-1960s, the federal government also began funding the construction of water purification plants and water and sewer collector systems, again largely outside central cities. These facilities unquestionably expedited the exodus of industry and commerce from central cities, though to a lesser extent than population movements. 105/

The Water Pollution Control Act of 1972 requires that the federal share of construction costs for wastewater treatment facilities and infrastructure be recovered from industrial users. This attempt to discourage decentralization of industry has been only marginally effective because of exemptions and liberal terms on cost

recovery. Amendments to the Act also require that industrial users of municipal wastewater systems pre-treat their discharges. This attempt to equalize the financial burden of waste treatment for all establishments in the same industry could cost cities some marginal industry. 106/

Energy

The availability and cost of energy do not significantly affect the location of industry or commerce at the subregional level. Prices of electricity, natural gas, and other fuels are essentially constant within metropolitan areas, and gas and electric lines are extended at little or no cost to large industrial and commercial users. 107/ The latter neutralizes the slight advantage that central cities, with their ubiquitous gas and electric lines, would otherwise have in the competition for industry and commerce. It would take strong "cost of service" rate requirements, stronger than those in the National Energy Act, to end this popular practice.

The availability and cost of energy do have some effect on locational patterns at the regional level. Residual fuel oil, electricity, and natural gas are currently priced 30, 50, and 100 percent higher in New England than the Southwest, and natural gas, in particular, has not been readily available to new commercial and industrial customers outside the Southwest for a number of years.

Nonetheless, because energy generally represents less than 1 percent of production costs, and because fuels are generally interchangeable, most industries do not weigh energy cost or availability heavily in locational decisions. One study concluded that of 370 sectors in the United States economy, only 24 spend more than 2 cents on energy per dollar of output and are also sufficiently independent of markets and material inputs to follow energy supplies. 108/ It further concluded that only a few of the 24 sectors, albeit some important ones such as industrial chemicals and primary aluminum, were actually concentrated in states with abundant energy supplies.

As long as energy supplies were relatively abundant, federal energy policies had little effect on energy cost and availability across regions. Natural gas shipped interstate, though subject to federal price regulation, was virtually the same price as natural gas sold intrastate (adjusting for transmission costs). Foreign and domestic oil were also comparably priced and so were largely unaffected by federal price equalization. Offshore sites were leased for oil and gas exploration and western lands for coal exploration, but the demand for these fuels did not justify extensive development.

Energy shortages of the early 1970s changed all of this. Dwindling production of natural gas caused the price of unregulated gas sold intrastate to soar relative to regulated gas sold interstate, prompting gas producers to reserve much of their newly discovered supplies for intrastate markets of the Southwest. The oil embargo and subsequent oil price increases made foreign oil much more expensive than domestic oil and would have grossly inflated the price of fuel oil in nonproducing states, had it not been for the pre-existing price equalization policy. Although much less significant, the higher price of oil, gas, and coal accelerated exploration and development of federal offshore oil and gas reserves and western coal reserves.

The current push to increase domestic energy production and decrease domestic consumption could have significant regional impacts. The major energy-producing states of the Southwest would lose some of their attraction to industry if oil and gas reserves off the East Coast and coal and shale oil reserves in the West were developed; if liquified natural gas and Canadian/Mexican natural gas were imported in large quantities; or if natural gas were subject to taxes and end-use controls or price deregulation.

Raw Materials

Proximity to raw materials, once a major industrial location factor, has declined in importance over time. 109/ Today's complex products require so much processing that location near a source of raw materials no longer affords a decisive advantage in all but a few industries. Changing technology has facilitated development of resources in areas where it was once uneconomical. The federal government has made raw materials available from foreign suppliers by gradually easing trade restrictions. U.S. Steel, was able, for example, to locate its Fairless Works on the Delaware River near Trenton, New Jersey, because it had access to foreign iron ore. These changing circumstances have lessened the need to be near raw materials to the point where only 1 to 8 percent of the variation in industrial employment growth among states can be explained by the availability of raw materials. 110/

Personal Factors

There is no doubt that purely personal factors enter into some industrial and commercial location decisions, a classic example being the businessman who sets up shop near his favorite golf course. 111/ Yet personal factors are clearly secondary to economic factors,

particularly for large firms. When a firm's location is inconsistent with the calculus of economic advantage, its very existence will be threatened by more favorably located competitors. That fact tends to keep personal factors in check. 112/

CHAPTER IV. CONCLUSIONS

Although cities in the United States differ widely in their economic, demographic, and political character, most find their ability to attract industry and commerce limited by the same factors, principally the high cost and limited availability of land, lack of skilled labor, inadequate capital and managerial expertise, declining market potential, and inferior highway access. Other factors limit the ability of certain cities to attract certain types of industry and commerce, but they are less pervasive and decisive than the factors mentioned above. The first conclusion of this paper is, therefore, that while central cities need some leeway to adjust for local conditions, federal efforts on their behalf can focus on a small number of barriers to central city economic development.

The federal government has underwritten assembly and clearance of central city land under urban renewal and economic development programs; skill training for central city workers under manpower programs; loans and management assistance for central city businesses under various business assistance programs; improvements in central city housing and public services to encourage resettlement of cities under a battery of urban-oriented programs; and central city highway construction under the federal-aid highway program. Yet none of those programs have been outstandingly successful in eliminating the primary barriers to central city industrial and commercial development and some have had unfortunate social consequences. The second conclusion of this paper is, therefore, that while the primary barriers to central city industrial and commercial development are susceptible to federal influence, the economic and social cost of eliminating them is likely to be high.

The federal government already has policies and programs capable of mitigating almost all barriers to central city industrial and commercial development, even the lesser ones such as high property taxes and high commercial victimization rates. Those policies and programs have not always done so, however, because of programmatic flaws and countervailing policies. In particular, federal policies and programs have tended to favor new development over conservation and rehabilitation; to reinforce rather than redirect market forces; and to disperse rather than target benefits.

Examples can be found throughout this paper. The third conclusion of this paper is, therefore, that while new initiatives on behalf of central cities may be beneficial, there is ample opportunity to encourage central city industrial and commercial development through reorientation of existing policies and restructuring of existing programs.

FOOTNOTES

1/ Different perspectives on the causes of central city decline and related remedies are reviewed by Peter Greenston and Carl Snead, A Selected Review of Urban Economic Development, Report prepared by the Urban Institute for the Economic Development Administration (May 1976), pp. 81-114; and Bennett Harrison, "Ghetto Economic Development: A Survey," Journal of Economic Literature, (March 1974), pp. 1-37.

2/ The role of industry as a leader in decentralization has been hotly debated in recent years, but the vast weight of evidence indicates that decentralization of industry and population are, at the very least, mutually reinforcing, and that both contribute to decentralization of commerce. A review of the more recent empirical evidence is provided by Bennett Harrison, Urban Economic Development-Suburbanization, Minority Opportunity, and the Condition of the Central City (Washington, D.C.: The Urban Institute, 1974), pp. 7-26.

3/ Relevant theory is reviewed and tested by Michael Goldberg, Intrametropolitan Industrial Location: Plant Size and the Theory of Production (Center For Real Estate and Urban Economics, University of California, 1969), pp. 92-98 and 188-200.

4/ While businesses in some central cities have higher failure rates, higher moving rates, and lower growth rates than businesses elsewhere, businesses in other central cities do not. Only business starts are consistently underrepresented in central cities. See, Roger Schemenner, The Manufacturing Location Decision, Report prepared for the Economic Development Administration (forthcoming), Chapter 4; Raymond Struyk and Franklin James, Intrametropolitan Industrial Location: The Pattern and Process of Change in Four Metropolitan Areas (Lexington Books, 1975), pp. 96-100; Franklin James and James Hughes, "The Process of Employment Location Change: An Empirical Analysis," Land Economics, (November, 1975), pp. 404-413; Robert Leone, "Location of Manufacturing Activity in the New York Metropolitan Area" (National Bureau of Economic Research, unpublished manuscript); Kenneth McClennan and Paul Seidenstat, New Businesses and Urban Employment Opportunities (Lexington Books, 1972), pp. 41-60; David Creamer, Manufacturing Employment by Type of Location-An Examination of Recent Trends (The Conference Board, 1969), pp. 79-93; George Bleile and Leon Moses, "Transportation and the Spatial Distribution of Economic Activity," Highway Research Board Bulletin 311 (1962), pp. 27-30; and William Kinnard and Zenon Malinowski, The Turnover and Mortality of Manufacturing Firms in The Hartford Connecticut Economic Area, Report prepared for the Small Business Administration (January 1960), p. 36 and 46.

5/ Between 1969 and 1972, core counties in seven of nine census divisions lost more jobs through intra- than through interregional shifts in manufacturing, and all nine lost more jobs through intraregional shifts than through national declines in their principal industries. Kathryn Nelson and Clifford Patrick, Decentralization of Employment During the 1969-1972 Business Cycle: The National and Regional Record (Oak Ridge National Laboratories, 1975), p. 10. Likewise, central cities in 11 of 12 representative metropolitan areas lost more jobs between 1953 and 1965 through suburbanization of industry and commerce than through the other components of change. Wilfred Lewis, Urban Growth and Suburbanization of Employment: Some New Data (The Brookings Institution, unpublished manuscript, 1969), p. 12.

6/ Gerald Manners, "The Office in Metropolis: An Opportunity for Shaping Metropolitan America," Economic Geography (April 1974), pp. 93-110.

7/ Wolfgang Quante, The Exodus of Corporate Headquarters from New York City (Praeger, 1976), p. 90.

8/ Andrew Hamer, Industrial Exodus from the Central City (Lexington Books, 1973), pp. 35-45.

9/ The percentage of buildable vacant land in cities with populations of more than 100,000 was calculated from Table IV of Ray Norton, "Vacant Urban Land in the American City," Land Economics (November 1971), pp. 345-355; price ranges for prime industrial land in eleven metropolitan areas were obtained from regional offices of the Army Corps of Engineers:

SMSA	Central City	Outlying Suburbs
	(In thousands of dollars per acre)	
Atlanta	$120-260	$15-45
Baltimore	75-150	40
Dallas	80-160	5- 20
Los Angeles	175-	15-200
New York	100-200	50- 80
Norfolk	25- 50	12
Philadelphia	100-200	30- 35
Phoenix	120-130	15-100
Portland	65- 70	25- 50
Sacramento	65- 85	25-100
San Francisco	220	30-125

10/ See, for example, Charles Stonier, ed., Industrial Location Principles and Their Role in Site Selection on Long Island (Hofstra University, 1964), p. 273.

11/ Leland Smith, "Inner City Industrial Districts," Urban Land (May 1971), pp. 3-8.

12/ An exhaustive critique of urban renewal is provided by John Weicher, "Urban Renewal--National Program for Local Problems," in Perspectives on Housing and Urban Renewal (Praeger, 1974), pp. 181-278.

13/ The source of this statistic is a computer run done for CBO by the Economic Development Administration.

14/ At least in certain cases, multistory plants in central cities could be cost-competitive with single-story plants in suburbs, and marginal site expansion could satisfy the needs of expanding businesses. See Hamer, Industrial Exodus, pp. 63-80; and Schmenner, The Manufacturing Location Decision, Chapter 5.

15/ A forthcoming CBO report estimates that extension of the investment tax credit to buildings will provide a subsidy to industry of $1.8 billion in 1979, perhaps 90 percent of which will be for new construction. This is several times the tax subsidy currently provided by accelerated depreciation on buildings. Congressional Budget Office, "The Impact on Cities of Proposed Changes in the Investment Tax Credit," Report prepared for the Task Force on State and Local Government of the House Committee on the Budget (forthcoming).

16/ Donald Stone, Industrial Location in Metropolitan Areas (Praeger, 1974), pp. 56-59.

17/ Quante, The Exodus of Corporate Headquarters, pp. 90-106.

18/ John Garrity, "Red Ink for Ghetto Industries?", Harvard Business Review (May-June 1968), pp. 4-16.

19/ Various surveys and studies drawing this conclusion are cited by Harrison, "Ghetto Economic Development," p. 16.

20/ Struyk and James, Intrametropolitan Industrial Location, pp. 115-122.

21/ The most recent studies of intrametropolitan wage differentials are those of Hamer, Industrial Exodus, pp. 48-51; Manners, "The Office in Metropolis," pp. 98-99; McClennan and Seidenstat, New Businesses and Urban Employment Opportunities, p. 68; and Albert Rees and George Shultz, Workers and Wages in an Urban Labor Market (University of Chicago Press, 1970), pp. 176-184.

22/ A number of these studies are reviewed by Leonard Wheat, Regional Growth and Industrial Location (Lexington Books, 1973), pp. 6-20.

23/ Wheat, Regional Growth, pp. 183-197; and Curtis Harris and Frank Hopkins, Locational Analysis (Lexington Books, 1972), p. 88.

24/ Wheat, Regional Growth, pp. 194-195.

25/ This brief history of manpower policy in the U.S. is based on three evaluative studies: Charles Perry and others, The Impact of Government Manpower Programs (Wharton School, University of Pennsylvania, 1976); Advisory Commission on Intergovernmental Relations, The Comprehensive Employment Training Act: Early Readings from a Hybrid Block Grant (1977); and David O'Neill, The Federal Government and Manpower (Washington, D.C.: American Enterprise Institute, 1973).

26/ Earl Main, "A Nationwide Evaluation of M.D.T.A. Institutional Job Training," Journal of Human Resources (Spring 1968), pp. 159-170.

27/ Congressional Budget Office, Public Employment and Training Assistance: Alternative Federal Approaches (February 1977). See, in particular, Tables 3 and 5.

28/ Manpower training is neither effectively targeted to cities nor linked to job-creation activities. According to some critics, the legislative objectives of manpower training would be better served if they were. U.S. Advisory Commission on Intergovernmental Relations, The Comprehensive Employment Training Act, pp. 67-68; and Stanley Friedlander, Regional Economic Development and Federal Legislation, Report prepared for the Economic Development Administration (March 1976), pp. 7-16.

29/ Edward Gramlich, "The Impact of Minimum Wages on Other Wages, Employment, and Family Income," Brookings Papers On Economic Activity (1976), pp. 409-451; Committee on Education and Labor, The Labor Reform Act of 1977 (September 1977), pp. 8-28.

30/ Orley Ashenfelter and Robert Smith, "Compliance With The Minimum Wage Law," Paper prepared for the Department of Labor (April 1974); and B. Skelton, "The Economics of Unfair Labor Practices by Employers," Testimony before the Subcommittee on Labor-Management Relations of the House Committee on Education and Labor (August 9, 1977).

31/ Most time-series studies show that even in the long run, the demand for labor with respect to the price of capital is quite inelastic, and by inference, opportunities to substitute capital for labor are limited. Some cross-sectional studies are in agreement, others find capital and labor perfect substitutes for one another. See reviews by Daniel Hamermesh, "Econometric Studies of Labor Demand and Their Application to Policy Analysis," Journal of Human Resources (Fall 1976), pp. 507-527; and Marc Nerlove, "Recent Empirical Studies of the CES and Related Production Functions," in The Theory and Empirical Analysis of Production (National Bureau of Economic Research, 1967), pp. 55-121. A number of studies showing that automation does not always eliminate low-skill jobs are reviewed by Morris Horowitz and Irwin Herrnstadt, "Changes in the Skill Requirements of Occupations in Selected Industries," in Technology and the American Economy-Appendix to Volume II (National Commission on Technology, Automation, and Economic Progress, 1966), pp. 227-287.

32/ Jonathan Kesselman and others, "Tax Credits for Employment Rather Than Investment," American Economic Review (June 1977), pp. 339-349.

33/ Orley Ashenfelter, "Evaluating the Effects of the Employment Tax Credit," Paper prepared for the Conference on Evaluation of the Economic Stimulus Package at the Brookings Institution (November 1977); and Roger Vaughan, The Urban Impacts of Federal Policies: Vol. 2, Economic Development (The Rand Corporation, 1977), pp. 93-94.

34/ Mahlon Straszheim, An Introduction and Overview of Regional Money Capital Markets, Report prepared for the Economic Development Administration (July 1969), pp. 15-19; and Ruth Shaeffer, Staffing Systems: Managerial and Professional Jobs (New York: The Conference Board, 1972), pp. 14-40 and 48-55.

35/ That small and minority-owned businesses have difficulty attracting capital and managerial expertise, and have correspondingly high failure rates, is widely acknowledged. See, for example, William Strang, "Minority Economic Development: The Problem of Business Failures," Law and Contemporary Problems (Winter 1971), pp. 119-136; and Edward Hollander and others, The Future of Small Business (Praeger, 1967), pp. 91-106 and 126-135.

36/ Cyrus Gardner, Banking Regulation and Urban Growth (The Rand Corporation, 1973), pp. 6-18.

37/ Kurt Mayer and Sidney Goldstein, The First Two Years: Problems Of Small Firm Growth and Survival, Report prepared for the Small Business Administration (February 1961), pp. 104-106; and Jerry Cromwell and Peter Merrill, "Minority Business Performance and the Community Development Corporation," The Review of Black Political Economy (Spring 1973), pp. 65-81.

38/ This section evaluates business-assistance programs from the standpoint of business needs. For an evaluation from the standpoint of cost control, see the U.S. General Accounting Office, The Small Business Administration Needs to Improve Its 7(a) Loan Program (February 1976).

39/ See the appendix on the 7(a) Loan Program in Donald Kummerfeld and others, Federal Activities Affecting the Location of Economic Activity, Volume II, Report prepared for the Economic Development Administration (November 1970); and Georges Vernez and others, Federal Activities in Urban Economic Development, Volume II: Technical Appendices, Report prepared for the Economic Development Administration (January 1978), Tables C.7 and C.8.

40/ At one time, the Small Business Administration did not even make loans to new businesses for fear of default, and currently makes fewer than one out of three loans to new businesses, most in relatively small amounts.

41/ For a discussion of the problems facing new businesses, including their shortage of equity, see Small Business Administration, Report of the SBA Task Force on Venture and Equity Capital for Small Business (January 1977), pp. 4-8.

42/ Ibid., pp. 8-13.

43/ This discussion of federal management-assistance is based primarily on interviews with SBA personnel and the statistics they provided. A brief description of management-assistance programs and their clientele is provided by the Small Business Administration, Management Assistance, Paper prepared for Congressional briefing (July 1977). A brief evaluation of management assistance for SBA loan recipients is provided by the U.S. General Accounting Office, The Small Business Administration, pp. 57-68.

44/ Dun and Bradstreet, The Business Failure Record 1975 (1976), p. 12.

45/ Vincent Barabba, "The National Setting: Regional Shifts, Metropolitan Decline, and Urban Decay," in Post-Industrial America: Metropolitan and Interregional Job Shifts (Center for Urban Policy Research, Rutgers University, 1975), pp. 39-76.

46/ Models typically distribute retail and service employment within metropolitan areas on the basis of population distribution, employment distribution, and occasionally income, all determinants of market potential. H. James Brown and others, Empirical Models of Urban Land Use: Suggestions on Research Objectives and Organization (National Bureau of Economic Research, 1972), pp. 19-29.

47/ Vaughan, The Urban Impacts of Federal Policies, p. 51; Benjamin Chinitz and Raymond Vernon, "Changing Forces in Industrial Location, Harvard Business Review (January-February, 1960), pp. 126-136. Studies in several large cities have found 25 to 30 percent of industry to be oriented toward local markets.

48/ James Burrows and others, Industrial Location in the United States (Lexington Books, 1971), p. 76.

49/ See, for example, Bernard Bass and Ralph Alexander, "Climate, Economy, and Differential Migration of White and Nonwhite Workers," Journal of Applied Psychology (December 1972), pp. 508-521; Michael Greenwood, "An Analysis of the Determinants of Geographic Labor Mobility in the United States," Review of Economics and Statistics (May 1969), pp. 189-194; and James Tarver and William Gurley, "The Relationship of Selected Variables with County Net Migration Rates in the United States, 1950-1960," Rural Sociology (March 1965), pp. 3-22.

50/ Ira Lowry, Migration and Metropolitan Growth: Two Analytical Models (Chandler, 1966), pp. 7-33; James Tarver and R. Douglas McLeod, "Trends in Distances Moved by Interstate Migrants," Rural Sociology (December 1970), pp. 523-533.

51/ Kummerfeld, Federal Activities Affecting Location, Exhibit B.

52/ A recent study has shown that average daily travel time is relatively constant from place to place and year to year, regardless of transportation and land-use variations. Highway improvements simply allow people to travel farther or more often in the same time period. Yacov Zahavi, Travel Over Time, Report prepared for the Federal Highway Administration (January 1978).

53/ The tendency of water and sewer facilities to promote urban sprawl is discussed in qualitative terms, with reference to relevant literature, by the Environmental Impact Center, Secondary Impacts of Transportation and Wastewater Investments: Review and Bibliography, Report prepared for the Environmental Protection Agency (January 1975), pp. 17-23. The same conclusions are reached quantitatively by Clark Binkley and others, Interceptor Sewers and Urban Sprawl (Lexington Books, 1975), pp. 82-90; and the Environmental Impact Center, Secondary Impacts of Transportation and Wastewater Investments: Research Results, Report prepared for the Environmental Protection Agency (July 1975), pp. 50-57.

54/ After assessing changes in FHA mortgage insurance programs during the 1960s, one study stated that "...to conclude that FHA shifted its emphasis from the suburbs to the central city would seem to imply erroneously that FHA withdrew some of its mortgage insurance benefits from the suburbs and gave them to the central city. As mortgage insurance is voluntary with the user and in recent years has been authorized to all intents and purposes in unlimited amounts, an increased volume of FHA operations in the central city did not in itself imply or bring about any reduction of mortgage insurance in the suburbs, nor was it even contemplated." Semer & Zimmerman, FHA Mortgage Insurance Programs During the 1960's, Report prepared for the Department of Housing and Urban Development (October 1974), p. 39.

55/ Subcommittee on the City, Federal Tax Policy and Urban Development (September 1977), pp. 2-5.

56/ Weicher, "Urban Renewal," p. 190-191.

57/ Franklin James, "Private Reinvestment in Older Housing and Older Neighborhoods: Recent Trends and Market Forces," Statement before the Committee on Banking, Housing, and Urban Affairs of the United States Senate (July 10, 1977), pp. 29-30.

58/ George Peterson, "Federal Tax Policy and Urban Development," Statement before the Subcommittee on the City of the House Banking, Finance, and Urban Affairs Committee (June 16, 1977), p. 23.

59/ These figures refer to jobs created in the second year of a program. Congressional Budget Office, Temporary Measures to Stimulate Employment (September 1975), p. 69; also see George Johnson and James Tamola, The Efficacy of Public Service Employment Programs, Report prepared for the U.S. Department of Labor (June 1975), p. 21.

60/ The inefficiency of procurement preference schemes is discussed by James Sundquist, Dispersing Population: What America Can Learn from Europe (The Brookings Institution, 1975), pp. 269-270.

61/ These statistics are taken from the Transportation Association of America, Transportation--Facts and Trends (July 1976); Federal Highway Administration, Nationwide Personal Transportation Study-Report Nos. 8 and 9 (1973); American Public Transit Association, Transit Fact Book (June 1977); and Association of American Railroads, Yearbook of Railroad Facts (1977).

62/ Economic Development Administration, Survey of Industrial Location Determinants (1971); McGraw-Hill, Plant Site Survey--A Study Among Business Week Subscribers (1964); and Edward Kiley, "Highways as a Factor in Industrial Location," Highway Research Record 75 (1965), pp. 48-52.

63/ See, for example, J. Ross McKeever, Business Parks-Office Parks, Plazas, and Centers (Urban Land Institute, 1970), pp. 13-14.

64/ Bureau of Population and Economic Research, The Socio-Economic Impact of The Capital Beltway on Northern Virginia (University of Virginia, 1968), pp. 64-68.

65/ See the section on "Retail Trade" in Economic and Demographic Forecasting Team, "Suburbanization and Beltways" (Federal Highway Administration, unpublished manuscript, May 1972).

66/ Of 96 establishments on Route 128 around Boston, 62 relocated there from sites in Boston and another 14 from sites in Cambridge. As only one out of four of those establishments even considered locating outside the Boston metropolitan area, Route 128 was clearly attracting more industry and commerce from Boston and Cambridge than from other metropolitan and nonmetropolitan areas. Transportation Engineering Division of MIT, Economic Impact Study of Massachusetts Route 128, Report prepared for the U.S. Bureau of Public Roads, Department of Transportation (December 1958), pp. 18-21 and 37-38.

67/ Secretary of Transportation, The Status of The Nation's Highways: Conditions and Performance, Report to the U.S. Congress (September 1977), pp. 80-93.

68/ Secretary of Transportation, Urban System Study, Report to the U.S. Congress (January 1977), pp. 61-65 and 70-73.

69/ Studies of the impact of radial and other highways on economic development, land use, and land value were most recently summarized by the Federal Highway Administration, Social and Economic Effects of Highways (1976), pp. 75-92; and the Environmental Impact Center, Secondary Impacts of Transportation and Wasterwater Investments, pp. 41-122.

70/ Hammer, Siler, George Associates, The Influence of Central City Radial Freeways on Manufacturing Location Decisions, Report prepared for the Federal Highway Administration (October 1973), pp. v-xi.

71/ At CBO's request, the Federal Highway Administration produced the following estimates of interstate highway mileage:

	Radial	Circumferential
Complete	1,699	2,758
Incomplete	417	518

72/ James Sloss and others, Analysis and Evaluation of Past Experience in Rationalizing Railroad Networks, Report prepared for the U.S. Department of Transportation (October 1974), pp. 73-99. Also see Public Interest Economics Center, The Impacts on Communities of Abandonment of Railroad Service, Report prepared for the U.S. Railway Association (June 1975), pp. 6-21.

73/ Robert Lichtenberg, One-Tenth of a Nation (Harvard University Press, 1960), pp. 43-44.

74/ The Penn Central, in particular, had an abiding interest in closing its New York City freight yards and so encouraged industrial firms on central city rail spurs to move to sites near its suburban freight yards.

75/ For roughly half of all rail freight movements, railroads have complete freedom in rate making as long as rates are compensatory. For the other half, railroads are without effective competition and would have an incentive to raise rates if deregulated. Since the 4R provisions went into effect, several rate increases have been suspended by the ICC because effective competition did not exist. Interstate Commerce Commission, The Impact of the 4R Act Railroad Ratemaking Provisions, Report to the U.S. Congress (October 1977), pp. 22-52.

76/ Institute for Water Resources, Recent Developments in the McClellan-Kerr Arkansas River Navigation System Area (U.S. Army Corps of Engineers, April 1977), pp. 63-74.

77/ See sections on "Economic Development" and "Port Development" in George Antel, "Impact Study of the McClellan-Kerr Arkansas River Navigation System, The First Four Year--1971 through 1974" (Institute for Water Resources, U.S. Army Corps of Engineers, unpublished manuscript, 1975).

78/ These percentages were derived from project expenditure data provided by the Army Corps of Engineers.

79/ Warren Rose, "Catalyst of an Economy: The Houston Ship Channel," Land Economics (August 1967), pp. 32-43.

80/ These percentages were derived from project expenditure data provided by the Economic Development Administration.

81/ This has been cited as one example of counterproductive federal expenditures in central cities. William Alonso, "Problems, Purposes, and Implicit Policies for a National Strategy of Urbanization," in Population, Distribution, and Policy (U.S. Commission on Population Growth and the American Future, 1972), pp. 644.

82/ The adverse impact of international trade on New York City's economy is discussed by Vernez and others, Federal Activities in Urban Economic Development, p. III-5.

83/ Federal obligations for highway projects in urbanized areas totaled $2.7 billion in fiscal year 1977. Federal obligations for transit projects, almost all of which were in urbanized areas, totaled $2.5 billion.

84/ Studies noting a divergence of need and federal assistance include the Urban Mass Transportation Administration, Transit Operating Performance and the Impact of the Section 5 Program (November 1976), pp. 6-11 and 33-35; and George Hilton, Federal Transit Subsidies-The Urban Mass Transportation Assistance Program (Washington, D.C. : American Enterprise Institute, 1973), pp. 73-83.

85/ The impact of transit improvements on business location patterns is reviewed by Robert Knight and Lisa Trygg, Land Use Impacts of Rapid Transit: Implications of Recent Experience, Report prepared for the U.S. Department of Transportation (August 1977), pp. 194-198; Environmental Impact Center, Secondary Impacts of Transportation and Wastewatrer Investments: Review and Bibliography, pp. 13-14 and 124-131; and Nancy Sheldon and Robert Brandwein, The Economic and Social Impact of Investments in Public Transit (Lexington Books, 1973), pp. 41-47.

86/ Knight and Trygg, Land Use Impacts, pp. 202-203.

87/ Environmental Impact Center, Secondary Impacts, pp. 13-14.

88/ Knight and Trygg, Land Use Impacts, pp. 196-200.

89/ A history and evaluation of the federal airport development program is provided by Ross Eckert, Airports and Congestion (Washington, D.C.: American Enterprise Institute, 1972).

90/ The nation's first rapid transit extension to an airport, in Cleveland, has been criticized for its high cost and limited patronage. Nonetheless, surveys indicate that 15 percent of all air passengers use the system, and 25 percent are traveling to and from the central business district. Hilton, Federal Transit Subsidies, pp. 61-66.

91/ For an exhaustive listing, see "Checklist of Site Selection Factors," Site Selection Handbook (February 1978), p. 57.

92/ U.S. Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism: 1976-1977 Edition (March 1977), Tables 86 and 113.

93/ Dick Netzer, Economics of the Property Tax (The Brookings Institution, 1966), Table 5-7.

94/ The six studies are cited by Vernez and others, Federal Activities in Urban Economic Development, p. II-8. The three literature surveys are by Vaughan, The Urban Impacts of Federal Policies, pp. 72-73; Advisory Commission on Intergovernmental Relations, State-Local Taxation and Industrial Location (April 1967), pp. 59-63; and John Due, "Studies of State-Local Tax Influences on Location of Industry," National Tax Journal (June 1961), pp. 163-173. The few studies which have found some relationship between tax rates and business location patterns indicate that tax rates must be unusually high before they begin to inhibit economic development.

95/ William Williams, "A Measure of the Impact of State and Local Taxes on Industrial Location," Journal of Regional Science (Summer, 1967), pp. Other studies showing that state and local taxes represent a small fraction of value added or sales are reviewed by Bennett Harrison and Sandra Kanter, "The Great State Robbery," in Conference on Alternative State and Local Public Policies (1977), pp. 57-66.

96/ This discussion of commercial victimization is based on interviews with Housing and Urban Development and the Department of Commerce personnel familiar with the federal crime insurance program, and on the published report: Department of Commerce, Cost of Crimes Against Business (January 1976). A forthcoming update of that report provides more recent commercial victimization figures.

97/ The Environmental Protection Agency has contracted for studies to assess the impact of air quality controls on industrial location, but the results are not in yet. This discussion is therefore based entirely upon interviews with EPA personnel in several regional offices and with representatives of the National Association of Manufacturers and the U.S. Chamber of Commerce.

98/ Economic Development Administration, Survey of Industrial Location Determinants.

99/ These surveys are summarized by Schmenner, The Industrial Location Decision, Chapter 4; Daryl Hellman and Gregory Wassall, "State Financial Incentives to Industry: Do They Work? Are They Desirable?" Paper presented at the Annual Conference of the National Tax Association (November 1977), pp. 4-6; and Harrison and Kanter, "The Great State Robbery," p. 61.

100 Daryl Hellman, Gregory Wassall, Laurance Falk, State Financial Incentives to Industry (Lexington Books, 1976), 6-7 and 21-43.

101/ "The Fifty Legislative Climates," Industrial Development (January-February 1978), p. 3.

102/ Gilbert White, "Industrial Water Use: A Review," Geographical Review (July 1960), pp. 412-430.

103/ See, for example, Bureau of Business Research and Service, Site Selection Factor Studies, Fresno, California, 1968-1969 (Fresno State College, November 1971), pp. 50-66.

104/ This discussion is based largely upon interviews with EPA staff.

105/ Environmental Impact Center, Secondary Impact of Transportations and Wastewater Investments: Review and Bibliography, pp. 15-23.

106/ Between 1971 and 1974, water and air pollution controls were responsible for an estimated 68 plant closings, a high percentage of which were in the New York region. It is likely that many more plants will be forced to close when the new water and air pollution control requirements go into effect, and that a disproportionate number of them will be in older industrial cities.

107/ Gas companies in many metropolitan areas no longer accept new industrial or commercial customers, whether they require line extensions or not. But before gas shortages became commonplace (and even now in areas of abundant supplies), most gas companies installed a length of line at no cost to a customer up to a percentage of the customer's estimated first year bill. Most electric power companies do the same.

108/ William Miernyk, "Rising Energy Prices and Regional Economic Development," Growth and Change (July 1977), pp. 2-7.

109/ Reasons for the decline are best summarized by Management and Economics Research Inc., Industrial Location is a Factor in Regional Economic Development, Report prepared for the Economic Development Administration (November 1967), p. 19.

110/ Wheat, Regional Growth and Industrial Location, pp. 203-204.

111/ A number of studies showing that personal factors influence location decisions are summarized by M. Logan, "Locational Behavior of Manufacturing Firms in Urban Areas", Annals of the Association of American Geographers (September 1966), pp. 451-466.

112/ Martin Segal, Wages in the Metropolis (Harvard University Press, 1960), pp. 5-6.