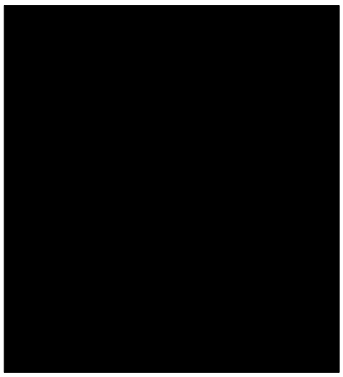
Summary 1

The United States is in the midst of a technological revolution, driven in large part by rapid advances in microelectronics. Digital electronic technologies permit information in a myriad of forms to be generated, routed, and transmitted cheaply, nearly instantaneously, and at high volumes virtually anywhere. There has been much speculation about the impacts of the "information superhighway," "digital society," and emerging "cyberspace" on society as a whole, but surprisingly little is known about the potential effects of this technology revolution on the spatial distribution of jobs and people broadly, or on urban conditions in the United States specifically. Today, urban life is increasingly shaped through the continuous and real-time interactions facilitated by information technologies (computing and telecommunications technology). Because these interactions differ so markedly from past interactions that were more burdened by space and time constraints, they have, through their impact on industries and jobs, the potential to significantly reshape America's metropolitan areas, leading to growth for some places and decline for others. **These technologies will form the basis of a new technology system that is giving shape to the next wave in urbanization, one OTA calls the post-industrial metropolis.**

The new technology system is creating an ever more spatially dispersed and footloose economy, which in turn is causing metropolitan areas to be larger, more dispersed and less densely populated. There are a number of important benefits from such development patterns. Some metropolitan areas will grow, as will many outer suburbs. Businesses and people will be freer to choose where they will locate, and many will choose to locate in lower-cost, higher-amenity areas. And as technology facilitates



the dispersion of businesses to the outer suburbs, workers can live closer to their jobs.

However, the changes will also create problems because of inadequate transportation, added infrastructure costs, and negative environmental consequences. Moreover, some places will have trouble adapting, and will face disinvestment, job loss, and fiscal difficulties. The economies of many older, higher-cost metropolitan areas, as well as central cities and older inner suburbs of many metros, are likely to face increasing job loss and disinvestment, leading to underutilization of the built environment, potentially reduced central city agglomeration benefits for industry, increased poverty and ghettoization for residents, particularly minorities, and fiscal problems for local governments. Moreover, the mismatch between the location of the new economy (in the suburbs and in post-industrial metros) and the skills it demands, and the large and rapidly growing population of lower-skilled and often minority residents in urban cores is likely to exacerbate current economic and social problems in the urban core.

The new development patterns pose a number of challenges that have important public policy implications. **OTA concludes that a new and reinvented federal urban economic development policy is needed to respond to the fundamental changes that America's metropolitan areas are undergoing.** The new policy would work to build up the productive capacity of distressed places, in partnership with state and local governments and the private sector. It embraces three kinds of policies: first, economic development policies that focus on economic revitalization of urban core areas (including central cities and inner suburbs); second, policies to create partnerships between urban cores and industry, state governments, and suburban jurisdictions, including facilitating the mobility of urban core workers into suburban labor markets; and third, policies to move toward full pricing of development and infrastructure, to reduce or eliminate price subsidies now encouraging sprawl development.

In May 1994, three congressional committees asked OTA to undertake a study on how new technologies are reshaping America's metropolitan areas: The Senate Committee on Banking, Housing, and Urban Affairs; the House Committee on Banking, Finance and Urban Affairs and its Subcommittee on Economic Growth and Credit Formation; and the House Committee on Public Works and Transportation and its Subcommittee on Investigations and Oversight. Because the form of cities and metropolitan areas is largely shaped by patterns of commerce and industry, this report examines the likely impact of the information technology revolution on industry and commerce in America's metropolitan areas, including cities and suburbs. This chapter summarizes the findings of the report.

Chapter 2 analyzes policy options Congress could consider in addressing the problems and opportunities stemming from the technologically driven economic reshaping of metropolitan areas. Chapter 3 first presents an overview of how technological change has affected the historical development of U.S. metropolitan areas. It then examines the trends over the last 15 years in regional and urban economies and describes the nature of the post-industrial metropolis. The next four chapters focus on how technology is affecting and is likely to affect the spatial location and character of industry and residences. Chapter 4 provides an overview of the major technologies, discusses how they affect metros and cities, and presents a summary of the likely impacts. Chapters 5 and 6 focus on how technology is reshaping the locational patterns in two specific sets of industries: 1) information-based service industries (e.g., banking, insurance, securities trading, telecommunications, and professional services); and 2) goods-related industries (freight transportation, wholesale trade, and manufacturing). Chapter 7 examines three important crosscutting technology applications that could change the nature of human and economic settlement patterns: 1) telecommuting; 2) Intelligent Transportation Systems, and 3) advanced telecommunications infrastructure. Finally, chapters 8 and 9 concentrate on the impacts of these changes and discuss strategies for addressing the problems they are likely to cause. Chapter 8 analyzes impacts on the

outer suburbs and the exurbs, particularly the impact of urban sprawl, and documents how dispersed development appears to be subsidized. Chapter 9 considers the prospects of the core (central cities and inner suburbs), and examines a number of approaches for increasing development and economic activity in the core, including addressing the impact of the spatial mismatch between the location of jobs and urban residents, and the reuse of urban brownfields (contaminated lands).

EVOLUTION AND CURRENT CONDITIONS OF THE U.S. METROPOLITAN SYSTEM

Because technological change in the United States has not been continuous, but rather has occurred in waves, with clusters of technological innovations emerging in relatively short periods of time, many believe that the development of cities and metros of the United States has not been a smooth evolution to the conditions of the present, but has been marked by major transformations from one kind of city to another.[1] Technology transitions have driven urbanization, redefining urban hierarchies and bringing new types of specialization to the urban economic base.

The current and emerging phase of urban development, beginning in the 1970s, is best understood as post-industrial metropolitan development, where business spreads throughout the metropolis; residential growth spreads to the outer suburbs and to exurban areas; some parts of some central cities, especially central business districts (CBDs) revive (at least in the 1980s); and many parts of older central cities and inner suburbs, particularly those formerly dependent on mass production manufacturing, stagnate or decline (see chapter 3). Goods-related employment declines as a share of metro jobs, and services, particularly information-based services (e.g., banking, insurance), increase.

During the 1970s, after decades of relative decline, population and employment rose faster in rural areas than in metropolitan. Moreover, in the 1980s, both the population and civilian workforce of large metros (over 1 million population) grew slightly faster than that of smaller metros. However, all that workforce growth was in fringe, as opposed to core, counties of metro areas.

Not all metropolitan areas grew, however. About half of the largest 25 metros suffered decline or little to no growth between 1970 and 1990, while the other half grew vigorously. Five (13 percent) of the largest 40 metropolitan areas lost population between 1980 and 1990 (Detroit, Pittsburgh, Cleveland, Buffalo, and New Orleans), and 49 (22 percent) of the 228 next largest metros also shrank. For example, the city of Pittsburgh's population declined by 30 percent between 1970 and 1990, while the metropolitan population fell by 4 percent. Most declining metros depended on older industries that lost many jobs in the last 15 years, including tires, automobiles, and steel, or were centers for the excavation and refining of copper, coal, aluminum, and oil. In short, the fortunes of metropolitan areas have diverged sharply; some have grown as they increased linkages to global markets and/or assumed new roles and functions; others have stagnated or declined.

The 1980s growth of large metropolitan areas is not synonymous with, but is related to, the fate of historic core cities. Whereas most of the 40 largest metropolitan areas grew (on average 1.9 percent), half of the central cities continued to decline in population. Central cities that grew in the 1980s tended to be those that had managed a successful transition from an older industrial economy to an advanced service economy via specialization as locations for corporate headquarters; finance, banking, insurance, commercial real estate (FIRE); and related producer services (e.g., law, advertising, tourism and hotels). This was especially the case for so-called global cities (New York, Los Angeles, San Francisco, Chicago) that served as command and control centers for global

[1] John Borchert, "American Metropolitan Evolution," *Geographical Review*, vol. 57, 1967, pp. 301-32.

corporations and for operations of global financial institutions and related businesses, but also cities such as Boston, Dallas, Minneapolis, Seattle, and San Jose, whose regions specialized in high-tech manufacturing.

While not all central city economies lost population and jobs, virtually all are losing blue collar jobs and becoming more specialized in services, particularly advanced services. Manufacturing used to be, but is no longer, identified with the central city. Decline of manufacturing employment in high-cost urban areas, particularly in the Midwest and Northeast, is not new. However, its severity and speed is new. In the 1980s, the 28 largest central counties of the Northeast and Midwest regions lost a total of nearly 1 million manufacturing jobs.[2] A large share of manufacturing is now located in the outer suburbs and exurbs of major metropolitan areas.

Wholesaling, retailing, construction, and consumer services also were once predominantly urban, but now are primarily suburban. In part, retailing and consumer services followed the market—when people moved to the suburbs, so did they, although it was probably not until the 1980s that some large department stores, for example, closed their city flagship stores. Most of the growth in warehousing and distribution has occurred on the periphery of America's metropolitan areas, rather than in the urban core, in part to be near beltways and interstate highways and to gain access to larger parcels of low-cost land.

As center cities lost industries like manufacturing, retail, wholesale, construction, and consumer services, producer services (e.g., financial services, advertising, accounting, law) in many places filled the gap. Many of these industries rely upon face-to-face contact and need to be near each other and other industries. A major reason for the growth of central county economies since the 1970s is that they already had specialized in industries, particularly financial services and business services, that grew faster than the national economy. In addition to producer services, three other major industries help support many central city economies: 1) cultural and educational institutions, including museums, zoos, universities, teaching hospitals, and medical centers; 2) industries that reflect the role of the central city as a center of tourism and conventions, i.e., hotels and airports; 3) government services, for state capitals or cities with federal or state installations or courts.

Even as central city economies have lost blue collar jobs and gained producer services jobs, which employ a higher percentage of college-educated workers, their populations have become poorer and disproportionately minority. Of the 40 largest cities, 29 had poverty rates in 1990 above the national average and 11 of the 29 have rates 1.5 times greater. The poverty rate in the largest 71 cities increased from 16.1 percent to 18.2 percent between 1980 and 1990.[3] Moreover, the poor are (not surprisingly) more concentrated in central cities than in suburbs. In 1990, the central city poverty rate (18 percent) was approximately 10 percentage points higher than that in the suburbs. In addition, the number of poverty census tracts in America's largest 100 cities increased 63 percent between 1970 and 1990, while the number of extreme poverty tracts increased 160 percent.[4] Thus, by 1990, two in five urban tracts had at least 20 percent of their population in poverty, and one in seven had at least 40 percent in poverty.

While many central cities and inner suburban economies have been struggling and losing population, both population and jobs in most outer suburban and exurban locations have increased. The spatial form of U.S. metropolitan areas has evolved significantly in the last 20 years. The ac-

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[2] John D. Kasarda, "Industrial Restructuring and the Changing Location of Jobs," in Reynolds Farley (ed.), *State of the Union* (New York: Russell Sage Foundation, 1995).

[3] Sue G. Neal and Harold L. Bunce, "Socioeconomic Change in Distressed Cities During the 1980s," *Cityscape*, vol. 1, No. 1, August 1994.

[4] Ibid.

cepted picture of the metropolitan area as a place with one economy, located in downtown skyscrapers and inner ring factories, is no longer valid. Now, 57 percent of office stock is in the suburbs, up from 25 percent in 1970 (see also figure 3-8 in chapter 3).[5] Today the bedroom suburb, little more than a home to workers commuting to the central city, is rare.

Bedroom suburbs have been replaced by an increasingly urbanized metropolitan area outside the central city, which, like the core, is a place not only for houses but for businesses and jobs. Many people both live and work in the suburbs and rarely visit the central city; others still commute to the core for work, but patronize the retail, personal, business, consumer, and social services in the suburbs. Suburban job growth has led some to argue that "downtown," by which they mean a diversified center of economic activity that includes offices and retail, has relocated to the suburbs or, specifically, to business and commercial centers in the suburbs known as "edge cities," which in some cases are larger than the central business district.[6]

Today, approximately 55 percent of Americans live in the suburbs. In the largest 25 metros, 75 percent of the population live in the suburbs. Moreover, exurbs and satellite cities are growing, as low-density development spreads beyond the outer suburbs. The fastest-growing sections of many metropolises are now furthest from the central city, in low-density exurban areas.

IMPACTS OF NEW TECHNOLOGY ON RURAL, URBAN, AND SUBURBAN ECONOMIES

Predicting the future is difficult. New and powerful information and telecommunications technologies continue to be developed and their impacts on industrial and residential location are still evolving. However, based on the analysis of individual industries (chapters 5 and 6), telecommuting and technology-based infrastructure (telecommunications infrastructure and Intelligent Transportation Systems—chapter 7), it is possible to see how advanced technologies are changing the locational patterns of individuals and industries and, on the basis of this, to predict how these changes are likely to affect metropolitan economies in the United States over the next 10 to 20 years.

Historically, cities have arisen and grown as centers of transactions and commerce, largely because of the need for physical proximity among firms, suppliers, and customers. Agglomerations of people, infrastructure, and industry allowed efficient production, transport, and distribution of goods and services. By letting activity be physically farther apart, yet functionally still as close, technology, particularly new transportation modes (e.g., trains, electric trolleys, cars and trucks), helped shape the first industrial city (1870-1920) and the mass production metropolis (1920-1970).

Today, new technologies, particularly information technologies, are playing a similar role. To better understand how the next wave of technologies is likely to recast industrial and residential locational patterns, it is important to understand the key technologies being adopted by industry. Many of the early applications of information technology improved internal operations (e.g., mainframe and desk top computing) and often created "islands of automation" with little interconnection between components. It is only recently that technologies that facilitate real-time and widespread linkages and communication among operations have begun to be widely adopted. These technologies are getting cheaper and more powerful, and will become pervasive. This report puts these technologies into three groups: 1) technologies to transform information into electronic form (e.g., fax, video

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[5] Gary Pivo, "The Net of Mixed Beads," also, Neil Pierce, *Citistates: How Urban America Can Prosper in a Competitive World* (Washington, DC: Seven Locks Press, 1993).

[6] Joel Garreau, *Edge City: Life on the New Frontier* (New York, NY: Doubleday, 1991).

phones, computers, optical scanners, and bar code readers); 2) switching and routing technologies (Internet communications and e-mail, call forwarding systems, local and wide area networks, and wireless communications and computing); and 3) transmission (e.g., fiberoptics, digital switching systems, and satellites).

Digitized and electronic processes have the potential to replace many paper transactions, some face-to-face functions, and some physical transport of goods. Because a rapidly growing share of the economy consists of information transactions—be they stock trades, insurance forms, or point-of-sale data—the potential of information technologies to shape spatial patterns of employment is greater than ever before (see chapters 4, 5, and 6). For example, industries that in the past had to be close to customers and other firms because they constantly transmitted information are now more free of the need for proximity because of electronic digital transactions. Within goods industries, information technology is transforming the logistics chain, making it possible for goods distribution and transportation to consolidate operations and locate farther from the customer. Similarly, industries requiring frequent face-to-face contact (for example, architects in design teams) will be able to adequately meet many communication needs electronically through e-mail, video telephones, and easy-to-use data transfer protocols. **In sum, technology is connecting economic activities, enabling them to be physically farther apart, reducing the competitive advantage of high-cost, congested urban locations, and allowing people and businesses more (but not total) freedom to choose where they will live and work.**

Urban/Rural Growth

Because information technology is making an increasing share of the economy less dependent upon face-to-face contact and close proximity with customers, suppliers, and competitors, many speculate that it will lead to a radical deconcentration of economic activity and population to lower-cost rural areas and to developing nations. A number of noteworthy examples fuel such speculation: New York Life's life insurance processing operations in Ireland; Citibank's back office credit card operations in Sioux Falls, South Dakota; telecommuters living in Telluride, Colorado. Visions of life spent conducting business through the Internet, hooked up by video phone, and receiving and sending faxes, all the while living in bucolic and isolated bliss, are likely to be a dream that only a few can fulfill. **OTA concludes that the new wave of information technologies will not prove to be the salvation of a rural U.S. economy that has undergone decades of population and job loss as its natural resource-based economy has shrunk.**[7] At least in the foreseeable future, most of the economy will be locating in metropolitan areas, perhaps not the largest, highest-cost metros, but the next tier of mid-sized metros.

There are several reasons for this. First, much of the work that goes overseas and to rural areas (e.g., data entry and processing) is routine and low-skilled and is most amenable to elimination by automation.[8] Second, although technology enables an increased share of work to be done anywhere, large and medium-sized metros continue to provide advantages for industry (see below). One important advantage is that metropolitan

[7] However, a limited number of high-amenity rural areas and rural areas at the periphery of metropolitan areas may experience significant growth. To the extent that information technologies enable growth in some rural areas, it is likely to be in those areas that are already doing well.

[8] Some work, such as computer programming, that is higher skilled and amenable to being done at distance, is being done overseas, but it is not clear that other higher skilled work can be performed in such remote locations.

areas offer an environment conducive to innovation and learning, which, as technology increases the importance of continual product and service development, is an advantage to many more firms.

Finally, the information technology (IT) revolution allows many service functions to gain economies of scale through consolidation. This is true in part because sectors such as freight transportation and wholesale trade are buying ever larger and more complex equipment, and also because information technology lets businesses serve more places and customers from a single location. In the past, many service companies had branch facilitates distributed throughout the country, many in smaller towns. Now more and more firms are using IT to consolidate operations, closing smaller offices in smaller cities and towns, and building up larger offices in metropolitan areas.

Inter-Metropolitan Differences

Consistent with historical patterns, new information technologies are making it easier for business to locate many operations in any region of the country. These technological changes are likely to lead to increasing factor price equalization among regions. Historically, some regions, such as the Northeast, had historic advantages stemming from agglomeration economies, location near large markets, transportation, and more recently, an advanced telecommunications infrastructure. However, as information technology allows more functions to be performed at a distance or to be consolidated, and as advanced telecommunications infrastructure diffuses down the urban hierarchy, these competitive advantages are likely to lessen. Lower-cost regions, providing they have sufficient external economies (e.g., air travel, transportation, labor force, quality of life, and telecom infrastructure) are likely to grow.

With technology enabling more locational freedom, the search by firms for lower-cost locations is likely to continue to reshape regional employment patterns, leading to higher rates of growth for many smaller and mid-size metros, many of them in the middle of the country. Geographic centrality aids operations, by reducing average air travel distance, and because of central time zones. Geographic wage and other cost differentials will encourage relocations to low-cost regions until an equilibrium is established or approached.

Finally, as the need for proximity is weakened by information technologies, urbanization economies and diseconomies may become more important. Metropolitan areas continue to provide important advantages for industry, including a large and diverse labor supply, large and more prosperous consumer markets, frequent and cheap air transportation, prompt regular mail service, and availability of repair and technical services. Advantages for people include high-quality medical care, cultural and educational institutions, and a large and diverse labor market.[9] At the same time, diseconomies of urbanization, including high costs of living and doing business, crime, pollution, traffic congestion and lack of access to open spaces, are high in many metros, particularly larger ones. The interplay between economies and diseconomies of large metros will play an important role in shaping the future of metropolitan areas.

As, or perhaps because, technologies allow more locational freedom, development may be becoming more uneven, with places that made the transition to the post-industrial metropolis (see chapter 3) doing well, while places that have not, continuing to decline. Places with the advantages described above, including a skilled, moderately priced labor force; low diseconomies (e.g., crime, congestion, and environmental pollution); an industrial base of advanced innovative companies, and high quality of life, will continue to do well. In contrast, places without these advantages are like-

[9] However, it is important to note that information technology and telecommunications have the potential to allow some formerly urban advantages to be accessible to rural households. These include, for example, access through the Internet to top-quality libraries and other information, distance learning, telemedicine, and satellite television receivers.

ly to continue to lose out, and risk a continuing cycle of decline as reduced advantages (both public and private) lead to reduced economic growth, which in turn reduces advantages even more.

Intra-Metropolitan Differences: Central City Prospects

As discussed in chapter 3, much of the revival of central cities in the 1980s was because of dramatic growth in producer services on the one hand, and increased foreign immigration on the other. In addition, some central cities have remained viable by successfully integrating themselves into the metropolitan-wide economy.[10] Yet, the perception has grown that American cities, particularly the urban cores of many large metropolitan regions, are in trouble, and may not be sustainable over the long term, caught in a downward spiral of joblessness and business failure, revenue shortfalls and declining services, crime, racial strife, and ungovernability, with middle-income families leaving while the wealthy wall themselves off in protected enclaves.

Technological change is likely to continue to impact urban cores by letting more of the economy be operated at a distance; it threatens the economic well being of many central and inner cities, and older suburbs of metropolitan areas. Many of these places may have trouble adapting, and will face disinvestment, job loss, and fiscal crisis. A number of important changes facilitated by technology are discussed below.

The New Metropolitan-Wide Economy

First, it is clear from urban settlement patterns in the late 20th century that reference to cities is anachronistic, a holdover from a period when the core city was home to most of the productive capacity in the metropolitan area. **Today, as industry spreads throughout the metro region, it is the metropolitan areas as a whole, not just the core, that is the functioning economic unit.**

Technology, by enhancing the locational freedom of firms within metropolitan areas, is causing the rise of metropolitan-wide economies. At one time, core cities had advantages of agglomeration and proximity that outweighed their high costs. However, now the core is in some sense just one of several "edge cities" within the metropolis. By making firms more footloose, technology lets jobs follow people. Quality of life for people and cost for business become more important. Thus, central cities will increasingly have to compete on cost, niche markets (such as tourism), and amenities.

Weakened Central City and Inner-Suburb Economies

There are a number of technological factors that put the economies of central cities (particularly outside the central business district) and inner suburbs at risk. First, technology is reducing the importance of distance for many functions, particularly more routine functions, giving businesses more freedom to locate in places with cheaper land, buildings, and labor. These places are often in the outer suburbs or the exurbs, or in mid- and smaller-size metros. Moreover, these places typically have less crime, traffic congestion, and air pollution than most urban cores.

Second, in some sectors, information technology and other advanced technologies are reshaping physical infrastructure needs, and in a number of industries this has led to (in some cases **required**) new, larger, and differently designed facilities. This is particularly true in goods production and handling. For example, in wholesale trade, the move to flow-through practices like cross-docking requires buildings configured quite differently from older urban warehouses. In shipping, access to intermodal facilities with good road access is increasingly important. In some service sectors, buildings with large floor plates that can easily be reconfigured, especially for fiberoptics and other wiring, is increasingly important. These factors

[10] For example, Indianapolis is both politically and economically tightly integrated with its surrounding suburbs.

lead many routine goods and services industries to locate at the edge of metros where larger and cheaper parcels of land on which to build are available.

Overall, the technological and economic trends suggest that the non-central business district portions of many central cities and their inner suburbs will continue to be the weakest part of metropolitan economies for at least the next two decades, and that without economic development policies they will find it harder to compete.

Specialization of Core Economies

Technological change is also contributing to a restructuring of urban core economies, particularly the central business district, which is becoming a place requiring more highly skilled and educated people. As technology enables lower skill routinized work to be moved out of high-cost central cities, the economic base of the central business district is increasingly shaped by complex, higher-end office work, including managerial and professional functions. There are several reasons for this. Though technology allows work to be routinized, and hence moved, it also supports, especially in the services, the continuous creation of new products, a process which tends to be located in urban areas. The rise of globalization means that a larger share of the U.S. economy is devoted to command and control functions, which are naturally attracted to a small number of global cities, including New York, San Francisco, and Los Angles. Finally, much managerial and professional office work needs face-to-face communication, and so remains in central cities.

Yet, as discussed above, new technologies can reduce the importance of spatial proximity in communication. For example, portable computing and phones, e-mail and Internet connections, fax, and easy-to-use data transfer protocols all make communication over distance easier. Coming technologies such as ubiquitous computing, high-definition displays, video phones, and high-speed and high-capacity communications will accelerate this trend. However, there are at least two reasons why technology will not substitute for all face-to-face needs. First, it is not clear how well technology can substitute for face-to-face communication. The latter has not only richness and contextual advantages, but also includes informal, "water cooler" conversations and meetings out of the office over lunch. Second, some industries and functions may be more willing to use these systems and decentralize than others, depending upon the extent, nature, and importance of face-to-face communications and the extent of cost competition in the industry.

Similarly, while the predominant effect of technological change is toward dispersion of activities, particularly the more routinized ones, technologies may create specialized niche functions, which, if they do not give urban core areas an edge, at least may help compensate for their disadvantages of cost, congestion, etc. Many of these niche functions are related to innovation, flexibility, speed of delivery and response, and other factors, and are often described as flexible specialization. These include opportunities in smaller-scale flexible manufacturing, just-in-time goods distribution activities, and some intermodal freight transportation activities (see chapter 6).

However, notwithstanding some niche functions, technology will likely continue to decentralize routine work and goods-related work, while at the same time leading to core economies becoming more highly skilled, with many professional and managerial jobs. In addition, technology is requiring higher skills for many more jobs, regardless of location. **A**s a result, there is likely to be a growing mismatch between the location of the new economy and the skills it demands, and the large and rapidly growing population of lower-skilled and often minority residents in urban cores. The mismatch contributes to unemployment and underemployment in the urban core. **Cities face a challenge in how to bridge what appears to be a growing gap between the skills required for employment in advanced services concentrated in urban cores, and the limited**

skills that many young big-city residents bring to the job market.

Finally, in an era of rapid technological change, cities (and metropolitan areas) that succeed—grow in population, jobs and incomes—will be places that have successfully managed to adapt to the new technology system. In contrast, metros, cities, or parts of cities that will not or cannot adapt run the risk of being left behind to face stagnation or decline. Adaptation of people, institutions, and the built environment will be important to urban core survival (see chapter 9).

Intra-Metropolitan Differences: Outer Suburban and Exurban Prospects

Over the next two decades, many outer suburbs of metropolitan areas will be the healthiest part of the metropolitan economy and the strongest parts of the national economy. Job growth is likely to continue, in part driven by relocations out of the central city and inner suburbs, but also because of faster rates of expansion. Suburban jurisdictions housing growth will by and large enjoy fiscal health, although they may be hard pressed to pay for the expansion if they do not require new development to pay the total public costs of new development (e.g., roads, schools) (see chapter 8). These places will need little or no assistance from state or federal governments to promote development. Residential development is likely to continue to expand at the peripheries of most metropolitan areas, leading to increased urban sprawl and lower population densities. These trends in business and residential location are likely to exacerbate a number of problems, including outer suburban traffic congestion, consumption of open space, and increased gasoline consumption.

Business Suburbanization

The locational freedom gained by advances in intrafirm communications will likely cause continued dispersal of firm activities, with an increasing share of routine, and even non-routine back office work moving to the suburbs. Industry will move in part to save on rent and taxes, which are usually lower in the suburbs, and to be closer to a higher-quality workforce.

Residential Dispersion

Residential dispersion to the outer suburbs and exurban areas is also likely to continue, if not accelerate. The driving forces include lower-cost land, which means more affordable and larger houses and the desire of many Americans for space. Technological change is facilitating this.

Because technology is enabling increased business suburbanization, greater numbers of workers can live even further out in exurban locations and still commute to jobs at the edge of metropolitan areas. Moreover, as the number of workers telecommuting increases, residential dispersion is likely to increase even more (see chapter 7). Because most of these will be telecommuting perhaps two to three days a week from home, or from telecommuting centers at the edge of metropolitan areas, they will still have to live near metropolitan areas. Thus, while reduced work time in central offices is not likely to lead to significant deconcentration of population to rural areas far from metropolitan areas, it does allow workers to live farther from urban cores.

Finally, intelligent transportation systems (ITS, the application of information technology to the surface transportation system) should reduce congestion and commuting times, allowing even more residential mobility (see chapter 7). ITS will have marginal, though possibly critical, impact on land use by increasing the average, and in some cases the maximum, vehicle throughput capacity at some bottlenecks and routes through speeded-up toll collection, optimized flow through and across signalized routes, and quick detection and resolution by road officials of accident-causing delays. These technologies are likely to encourage urban dispersion. Almost all theoretical formulations of the impact of transportation investment assert that better transportation will attract people and business, and spread them out over a wider area, because commuters and others can travel a greater distance in the same amount of time.

UNEVEN DEVELOPMENT: OUTER SUBURBS AND EXURBS

The characteristic pattern of American metropolitan development toward the end of the millennium is one of a vast, low-density, and fragmented urban region with sprawling, isolated suburbs surrounding an older, often decaying inner core. For example, while the Chicago metropolitan population has grown hardly at all over the last decade, the urbanized area has increased by over 20 percent as population has declined in the core and grown on the fringe. OTA concludes that the technological revolution in computer technologies, telecommunications, and industrial organization will exacerbate industrial and residential dispersion within metropolitan areas.

Sprawling growth on the fringe, however, is not just an outcome of unimpeded market forces, implementation of technological advances, and social factors (e.g., crime and racial segregation), but is also influenced by public policy forces (see chapter 8). Though there is no definitive analysis on the effect of government policies on the spatial form of metropolitan areas, there is evidence that public policies at many levels encourage sprawl and thus, indirectly, abandonment of the central city and inner suburbs. Unfortunately, there have been few careful studies of the marginal costs of infrastructure and services in metropolitan areas. But the evidence suggests that fringe suburban and exurban development does not pay the marginal costs of its development, and that the costs are sometimes borne by the central cities and inner suburbs.

For example, the federal mortgage interest tax deduction disproportionately benefits the well-housed (a greater share of whom are in the suburbs) and appears to encourage large building lots, leading to residential dispersion. State governments subsidize suburban sprawl largely through road building on the fringe, a cost not fully borne by users. Indeed, automobile users, especially heavy users in the automobile-dependent suburbs, exurbs, and rural areas, are heavily subsidized. Local government, too, distorts development by subsidizing residential infrastructural investment on the fringe. Moreover, both state governments and suburban jurisdictions provide large financial incentives for industry to locate in outer suburban and exurban locations, often to firms relocating from urban core areas. The pricing of public and private utilities also understates the costs of providing services to suburban and exurban residents. There are good reasons for providing such things as telephones, mail, electricity, and gas at an average cost throughout a metropolitan region (for health and safety and the prevention of social and economic isolation); however, these pricing policies appear to subsidize suburban and exurban development.

Moreover, in addition to direct subsidies, there may be a number of indirect costs (externalities) borne by others because of dispersed development. These include environmental quality, traffic congestion, and access to open space. These direct and indirect subsidies appear to raise the cost of development in the core (central cities and inner suburbs), while making development on the edge cheaper. However, it should be noted that the extent of such subsidies and their impact on development patterns is largely unknown.

UNEVEN DEVELOPMENT: NEW CHALLENGES FOR THE URBAN CORE

In some respects, the technological revolution reshaping many economic sectors has produced mixed results for America's cities, but there are two areas in which its effects have been clearer: it has reduced the ability of urban core residents, particularly lower-skilled minorities, to gain good jobs; and it has led to the increasing abandonment and underutilization of urban land, buildings, and infrastructure (see chapter 9).

Technological change and industrial restructuring has steadily ratcheted upward the skill levels required for employment, while at the same time spatially separating routine jobs (many of which have moved to the fringe) from complex jobs (many of which are concentrated in the core). Jobs for people with high-school-level skills are fewer in number, and in many cases they no longer offer a route to better jobs. Jobs for people without even

high-school-level skills are even fewer. One major problem for many urban core residents is a skills mismatch between their skills and the skills demanded by the new economy. Moreover, jobs that do exist for high school graduates are increasingly in the suburbs and hard for central city residents to get to, or even find. Economic and spatial change and skills and spatial mismatch have contributed to more and longer unemployment among central city residents and increased poverty in many neighborhoods outside of the central business district

Moreover, changes in technology, business organization, and residential patterns are causing increasingly uneven development, including greater misuse and under-use of urban land, buildings, and infrastructure in central cities and older suburbs. Where industry has closed or moved, land and buildings are left behind, idled, or underutilized, jobs vanish, and local tax revenues drop. In spite of the absence of hard evidence, there is general agreement that the underutilization of land and buildings in cities is growing. The most visible evidence is the vacant land and the derelict and abandoned buildings in the inner cities, much of it referred to as brownfields, contaminated with chemical wastes. In addition, there is a growing number of poor and very poor neighborhoods which are becoming more sparsely populated.

Recently, a great deal of attention has focused on brownfields and their cleanup and reuse. Cleanup difficulties, particularly uncertainties related to federal and state environmental regulations, present a barrier to reuse of these sites and associated job creation. Barriers to brownfield reuse include: technical remediation issues; liability concerns associated with contamination; the cost of cleanup and reuse; community concerns; and prospects for redevelopment. Developers and business will be wary of brownfield sites until there is progress on these issues.

POLICY OPTIONS

OTA concludes that, given the technological and economic trends toward decentralization, America's central and inner cities are unlikely to regain their earlier dominance. However, renewal and development does appear possible, particularly if new and effective federal, state, and local public policy approaches are instituted.

There are at least three reasons why policy makers at the national level should care about metropolitan development patterns. First, uneven development reduces the efficiency of the national economy and imposes costs on non-urban core residents, taxpayers, and consumers. The premature writedown or less than full use of public and private resources in distressed or declining areas imposes costs and reduces the efficiency not only of the declining area, but also of the U.S. economy as a whole. In addition, uneven urban development imposes economic and social hardships on some people in some urban economies. Finally, the nature of the federalist system means that some states and cities will not adequately address urban decline, especially poverty. In many cases city or state governments would like to do more to help distressed local economies or parts of economies but can't justify these actions politically.

Federal urban policy has built on a number of assumptions since World War II, including a strong federal role, the idea of a mass production metropolis with most employment concentrated in the core, a focus on remedying market imperfections through direct government action, and an emphasis on housing, social services, and physical redevelopment. These assumptions are no longer as valid, and therefore there is a need to reevaluate policy in light of changing conditions.

This report discusses the federal role in addressing the problems of the post-industrial metropolis. **In the era of the post-industrial metropolis, federal urban policy needs to become smarter and more strategic, focusing on shaping the institutional, regulatory, and fiscal environment influencing uneven growth patterns.** Especially in an era of reduced federal resources, increased capacities at the state, local, and private (non-profit and profit) levels, and increased variation and diversity between places, federal policy needs to focus less on simply providing funding to a large number of places through grant and other

programs, and more on intervening strategically in the metropolitan development system. Federal funding is still needed, in part because it can provide important levers to shape the behavior of other institutions. The federal role, however, needs to encompass several critical functions not now being performed: 1) providing incentives for other players (e.g., states, suburban governments, core city governments, non-profits, and business) to strategically devote their own resources to solving problems of uneven development between and within metropolitan areas; 2) assessing how other non-urban federal policies (e.g., environmental regulation, tax policies, telecommunications policies) contribute to uneven development and, if feasible, working to minimize their negative impacts; 3) assessing how non-urban federal programs (e.g., manufacturing modernization programs, business finance programs) could be better targeted to support more even development; and 4) supporting new innovative institutions, including in the private sector, that promote urban economic development, and 5) increasing efforts devoted to evaluation, demonstration, and technical assistance so that state-of-the art federal, state, and local urban economic and community development efforts are continually advanced.

Chapter 2 discusses three new approaches to federal urban policy: 1) improving the effectiveness of urban and community economic development efforts; 2) developing partnerships and metropolitan linkages; and 3) reducing subsidies to peripheral development (see table 1-1).

Federal Economic and Community Development Policies

There is a common perception that since the 1960s federal urban policies have concentrated on economic development, particularly of distressed communities within cities, and that the policies have failed.[11] Yet, few if any urban development programs since the 1960s have targeted economic development, and overall, policy has made only limited efforts to implement economic development in the urban core. If this current wave of technological change were leading to increased centralization of economic activities, there would be little need to try to stimulate economic growth in these areas. However, because technology is leading in the opposite direction, it may be an appropriate federal role to assist affected cities and suburban communities to give them time to adjust to these changes and reduce the transition costs (for people, industries and governments) of moving from the old industrial metropolis to the post-industrial metropolis (see chapter 3). One important avenue toward this goal is to ensure that a broad range of federal economic development policies focus on these areas. Moreover, it will be important that federal policies recognize the latest and most innovative economic development approaches and not only encourage communities to adopt these, but also modify their rules and regulations to allow communities to do so.

Today, four departments or agencies provide assistance for urban economic development: the Department of Housing and Urban Development, the Economic Development Administration (EDA) in the Department of Commerce, the Small Business Administration, and the Treasury Department.

HUD operates two major programs for urban economic and community development, the Community Development Block Grant program (CDBG), and the Empowerment Zone and Enterprise Communities Program. In addition, it operates several smaller programs. The CDBG program is the major federal community development program. It allocates grants on a formula basis to entitlement communities (cities with more than 50,000 population and selected urban counties) and to states for distribution to non-entitlement communities on a discretionary basis. Funds can be used for a variety of purposes including

[11] Nicholas Lemann, "The Myth of Community Development," *New York Times Magazine*, Jan. 9, 1994: 26-31; 50; 54; 60.

TABLE 1-1: Policy Options

		Impact on federal $	Change in federal role	Change in state/local role
	IMPROVING ECONOMIC AND COMMUNITY DEVELOPMENT EFFORTS			
1	Increase funding for economic and community development	M-L	N	N
2	Target more funds to distressed cities and suburbs.			
	▪require that EDA spend more of its funds in urban areas	N	M	N
	•tighten CDBG funding formulas	N	M	M
3	Increase targeting of SBA loan programs to minority-owned businesses and businesses in distressed urban core areas.	N	s	s
4	Require cities to spend an increased share of federal funds in distressed neighborhoods	N	s	M
5	Provide incentives for cities and states to focus programs on distressed places and disadvantaged persons.	N	s	M
6	Base state and local funding on performance			
	▪allocate a share of block grant funds based on selected performance measures of the grantee	N	M	M
	▪create a competitive, challenge-grant program combining all federal economic and community development funds.	N	L	M
7	Encourage EDA or HUD to do more to support innovative efforts, perhaps funding an office of strategic economic development	s	M	s
8	Consolidate existing urban economic and community development programs into one program into one agency or institution.			
	= move more toward consolidated block grants.	N	L	M
	•create a competitive, challenge-grant program combining all federal economic and community development funds.	N	L	M
9	Target a greater share of federal funding to more comprehensive, innovative economic development organizations.			
	•encourage HUD to fund more innovative economic development institutions, perhaps through funds distributed on a performance basis.	N	s	M
	▪broaden the applicability of activities under Title 1 in EDA to allow funding for innovative economic development programs or activities.	N	s	M
10	Increase support for Community Development Corporations (CDCs) and other similar comprehensive, locally-based development organizations.			
	▪increase funding for HUD's National Community Development Initiative	M	s	M
	▪establish a quasi-public corporation to fund community-based development organizations.	M	L	M
11	Target a greater share of NIST's manufacturing outreach efforts urban areas	N	M	s
	DEVELOPING PARTNERSHIPS AND METROPOLITAN LINKAGES			
12	Encourage federal policymakers to work with trade associations, large corporations, and other business organizations to catalyze efforts to revitalize distressed urban economies	s	M	M
13	Provide incentives for local governments in a metropolitan area to cooperate.			
	▪encourage the Administration to review existing federal programs as to the extent to which they hinder or encourage regional cooperation at the metropolitan level.	N	s	M
	▪require that states and cities receiving federal funds in areas such as transportation, economic development, and housing establish metropolitan-wide development councils that work to minimize uneven development	N	M	L

(continued)

TABLE 1-1: Policy Options (Cont'd.)

		Impact on federal $	Change in federal role	Change state/lo role
14	Encourage the formation of metropolitan-wide organizations to manage federally-funded efforts.	N	M	L
15	Increase support for mobility to work programs.			
	▪ fund the "Bridges to Work" program, and based on its findings, expand the program to more cities and more participants.	M	s	M
	▪ provide tax incentives to suburban employers who provide van pools or other transportation for disadvantaged urban core residents.	M	s	s
	REDUCING SUBSIDIES TO PERIPHERAL DEVELOPMENT			
16	Require that HUD assess the extent to which public policies subsidize suburban and exurban development, particularly at low densities.	L	N	N
17	Develop policies to reduce state and local industrial incentive bidding wars.			
	▪ prohibit executive branch agencies from entering incentive bidding contests for the attraction of federal facilities.	s	s	N
	▪ apply anti-pirating provisions to all federal economic development programs.	N	s	M
	▪ encourage the Secretary of Commerce to convene a meeting of state economic development directors to try to reach an agreement to stop, or at least significantly curb the practice.	N	s	M
	▪ require city and state recipients of federal economic and community development funds to report all subsidies given to relocating firms	N	M	L
	▪ reduce federal funds to states and communities for economic development in proportion to recruitment incentives offered	N	M	L
	▪ subject state and local incentives to federal taxation.	+	s	M
18	Foster cleanup and redevelopment of urban brownfields:			
	▪ establish programs to fund brownfield assessment and cleanup.	M	M	S
	▪ establish a "Brownfield IRA" that would allow small and medium-sized companies to put aside tax free money that must be spent for cleanup	M	s	S

1= none; S= small; M= moderate; L= large; + = increased revenue flow.

housing rehabilitation, energy conservation, public services and facilities, infrastructure, business financing, and commercial revitalization. In 1995, funding was approximately $4.6 billion.

In addition, Congress established the Empowerment Zone/Enterprise Communities program in 1993, targeted to pervasive poverty, unemployment, and general distress. Six cities (Atlanta, Baltimore, Chicago, Detroit, New York, Philadelphia/Camden) were designated as EZs (with Los Angeles and Cleveland being designated as supplemental EZs), and 60 urban ECs were selected. Each urban EZ is slated to receive $100 million, and each EC is to receive $2.95 million through the Social Services Block Grants administered by the Department of Health and Human Services. These grants can be used to fund a variety of economic, social, and community development activities as determined by community residents. In addition, the Treasury Department will administer $2.5 billion in tax credits to EZs.

The Economic Development Administration (EDA) in the Department of Commerce principally funds local public works construction projects (e.g., industrial parks, access roads, sewer lines), in large part to enable communities to attract new industry. EDA also provides grants to communities facing sudden economic distress, increasingly to respond to military base closures, and funds technical assistance and economic research. Current grant funding of $379 million is down from $900 million (1995 dollars) in 1980.

The Small Business Administration (SBA) provides financing and technical assistance to small businesses, some of them minority-owned, and some located in urban core areas. The agency's primary financing program, the 7(a) loan guarantee program, guaranteed more than 36,000 loans in FY 1994 for a total of more than $8.1 billion. SBA's 504 program is a fixed asset financing program for existing businesses. In FY 1995, it will have made approximately 4,000 loans, for $1.5 billion.

Administered by the Treasury Department, the Community Development Finance Initiative (CDFI) was established in 1994 to provide capital to either existing financial institutions that specialize in community development lending, or to seed new organizations proposing to do this type of work. The program plans to announce its first round of funding availability ($50 million) in mid-October, 1995.

Improving Economic and Community Development

Federal support for economic and community development helps local communities design and carry out strategies to address poverty, abandonment, and economic distress. However, there are several limitations to current federally supported economic and community development initiatives. First, while the number of distressed places has increased in the last 15 years, federal funding has decreased. Second, the reduced funds could be better targeted to distressed areas. A not insignificant share of CDBG and other economic development funds are spent on places with relatively low levels of distress and need (such as well-off suburbs) and projects that have a low level of benefit for low- and moderate-income people. For example, between 1975 and 1989 the share of CDBG funds going to the most distressed cities declined from about 50 percent to about 36 percent, while the share going to cities that were best off doubled (to about 11 percent).[12]

Third, funding formulas for many programs provide few incentives for improving local grantee performance. Many federal urban programs (including job training, housing, and economic development) provide formula-based block grants to city or state governments, regardless of the performance of the grantee. In most cases, performance varies significantly between cities or states, with some cities using federal funds to craft and implement effective, strategic, and efficient

[12] Michael J. Rich, "Targeting Federal Grants: The Community Development Experience" in *Community and Economic Development: Rethinking the Federal Role*, Congressional Research Service, May 6, 1992.

actions, and others failing to plan, or operating mediocre programs. Yet, for both the best performers and the worst, block grants provide the same amount of money.

Fourth, although there is considerable agreement that comprehensive and strategic approaches to community development are more effective than piecemeal ones, current efforts are piecemeal and uncoordinated, with federal urban policy being the province of a number of different agencies and within each, a large number of individual programs. According to the General Accounting Office the federal government assists distressed urban communities and their residents through at least 12 federal departments and agencies.[13] This proliferation of programs causes a number of problems. Because these agencies rarely work together, their programs cannot reinforce one another. Also, organizations at the local level must deal with a plethora of programs and agencies, making it difficult for localities to obtain assistance. This also makes the crafting of strategic, comprehensive, and integrated solutions at the local level difficult, as each federally funded program has its own rules, eligibility requirements, and boundaries.

Fifth, new institutions and approaches are needed at the local level. Efforts to improve the economic prospects of distressed urban areas and the lives of disadvantaged people in cities are an amalgam of separate subsystems, usually with very little overlap, cooperation, or coordination. Moreover, many economic and community development programs do not work closely with industry and, as a result, have limited effectiveness. Moreover, business development programs are often bureaucratic, content with supplying general information rather than real services (e.g., training, access to technology, management assistance), passive in orientation, and uncertain how to develop working relationships with firms. The best programs are customer-oriented, focused on ongoing interaction with the business client, provide customized services and are flexible. Non-governmental (private or quasi-public) organizations often do this best.

Sixth, most EDA and HUD economic and community development funds are either for physical revitalization projects (e.g., housing and infrastructure) or for loans and other financial assistance to individual firms. In part because of the potential of new information technologies to weaken and restructure the economy of the urban core, a new kind of urban policy effort may be needed, one that is focused sharply on economic development in general, and on business development in particular. As a result, a major thrust of the new urban economic development should be building up the capacity and competitiveness of business in the central city and inner suburbs. Moreover, urban economic development should rely less on tax incentives, low interest loans, and provision of buildings and infrastructure, and more on helping small- and medium-sized business owners and managers improve their management and financial skills, access to technology, and workforce training levels. There are a number of urban economic development initiatives that will be important, including promoting urban manufacturing, developing minority entrepreneurship, and using technology proactively.

Though the particular limitations of federally supported economic and community development efforts can be addressed individually (e.g., institute new procedures for targeting, develop performance standards as part of block grants), Congress could undertake a major overhaul of these efforts and create a new approach that addresses all the limitations simultaneously. One option would be to create a consolidated urban development initiative (see box 2-1 in chapter 2). This could be in one department, such as HUD or Commerce. Or, to give the initiative more flexibility and a fresh new start, it could be housed in a

[13] The General Accounting Office, "*Community Development: Comprehensive Approaches Address Multiple Needs but Are Challenging to Implement*," GAO/RCED/HEHS-95-69 (Gaithersburg, MD: February 1995).

newly created, quasi-public National Urban Economic Development Corporation. Either entity would operate as a comprehensive, performance-based, flexible urban development program and would house all current federal urban economic and community development programs, including EDA and CDBG. The organization's main role would be to make competitive challenge grants to states and cities, perhaps with a share of the funds going to states and a share directly to cities. In addition, it could play a catalytic role to stimulate the development of other urban initiatives, particularly in partnership with foundations and the private sector, and to help develop partnerships between states, suburban jurisdictions and cities.

States and cities would compete for grants for a multi-year period, with funding being renewed each year based on performance. Initial funding could be based in part on need and level of distress, and in part on the degree to which proposals were strategic as opposed to ad hoc; comprehensive instead of piece-meal; regional in nature rather than local; and based on partnerships rather than going it alone. Funding could be for a wide array of projects, activities, or organizations. Moreover, a portion of the city funds could be allocated on a metropolitan basis in order to promote regional cooperation and develop regional solutions. By basing allocations in part on performance, the federal government could provide flexibility at the state and local level, yet use market forces to drive performance improvement among grantees, and also create incentives for state and local grantees to meet federal objectives. Because more disadvantaged communities may not have the resources to design as effective programs or craft as effective proposals, such a system could have provisions built into it that reward performance in part on the level of improvement shown by a jurisdiction.

Developing Partnerships and Metropolitan Linkages

In an era of reduced federal resources; increased capacities at the state, local, and private (non-profit and profit) levels; and greater variation and diversity between places, federal policy needs to focus less on simply providing funding to a large number of places through grant and other programs, and more on intervening strategically in the metropolitan development system. As a result, it will be important to encourage state governments and industry to proactively be a part of the solution to urban problems. Moreover, though economic development will be important in urban cores, both to provide breathing room during this transition and to capitalize on the opportunities provided by technological change, relying on economic revitalization of the core alone is unlikely to be successful. Stronger linkages between all parts of the metropolitan economy are needed now that one of the defining features of the post-industrial metropolis is that it is not a collection of small, nearly self-sufficient economies, but is a truly metropolitan-wide economy (see chapter 3). As a result, federal policy should encourage efforts that use region-wide resources and efforts to solve urban core problems.

One important role for the federal government is to catalyze partnership efforts between the private sector and firms and communities in distressed parts of metropolitan areas, partly by documenting what is going on and then publicizing what can be learned from them.[14] Even with adequate federal funds, urban policy efforts would be less than fully successful if they did not tap into the expertise and creativity of the private sector. Federal policymakers need to consider working with trade associations, large corporations, and other business organizations to explore the extent

[14] Michael E. Porter, "The Competitive Advantage of the Inner City," *Harvard Business Review,* May-June 1995, pp. 55-71.

to which efforts that firms find profitable also help revitalize urban economies, and to help catalyze such efforts.

In addition, the design of federal policies has not adequately recognized that the defining feature of the post-industrial metropolis is that it is a metropolitan-wide economy. It is important that federal policy promotes efforts that link the opportunities in the growing outer suburbs with the needs of the urban core, especially jobs. There are several ways to do this.

First, the federal government can provide incentives for municipalities in metro areas to work together to promote growth in core areas. The Intermodal Surface Transportation Efficiency Act (ISTEA) and the Clean Air Act Amendments, which require regional solutions to metropolitan problems, are precedents for this approach. Effective regional planning will also help to overcome the fragmentation of land use planning in American metropolitan areas. As a result, Congress may want to encourage the Administration to review, perhaps through the National Economic Council, the extent to which existing federal programs hinder or encourage regional cooperation at the metropolitan level. In addition, it could require that states and cities receiving federal funds for activities such as transportation, economic development, and housing establish metropolitan-wide development councils to work to minimize uneven development.

Second, many federal and state-funded programs are operated by separate organizations in suburban and central city areas. For example, the Job Training Partnership Act (JTPA), the major source of federal training funds, is usually organized into multiple Service Delivery Areas (SDAs) with the central city SDA separate from suburban ones. The lack of a regional structure makes it difficult to craft metropolitan-wide training, placement, and transportation solutions for employment. Instead of providing services through federally funded organizations now set up at the county or city level, Congress could encourage the formation of metropolitan-wide organizations to manage, or at least coordinate efforts. For example, Congress could provide incentives under the JTPA program for Service Delivery Areas (SDAs) to cooperate across SDA boundaries. More proactively, Congress could consider requiring that Service Delivery Areas be consolidated to the metropolitan level.

Finally, even though economic development in the core appears able to provide some jobs in the core, dispersion of jobs will nonetheless continue because of the technological changes described in this report. As a result, urban core residents need access to jobs throughout the metropolitan economy. This was not a problem when the poor and unemployed lived near large concentrations of jobs, either in the downtown or in core city industrial areas, and the metropolitan labor market was by and large synonymous with the central city. However, as jobs decentralize, particularly jobs that provide opportunity for people with less education, policies that recognize the metropolitan nature of the economy are needed. Thus, one strategy for economic development is to overcome isolation by developing and maintaining connections to growing suburban labor markets. There are three main components of a metropolitan-wide employment accessibility policy. First, people in central city areas may need job training to prepare them for suburban jobs in back office operations, light manufacturing, or retail. Second, effective job information systems are needed to match city workers with job openings in the suburbs. Finally, central city workers need transportation to suburban jobs and they are often dependent upon car pooling or public transportation.

HUD has begun a pilot program, "Bridges to Work," to link unemployed and under employed in central cities to jobs in the suburbs. Six cities have been chosen for a four-year demonstration project to begin at the end of 1995. Total funding will be $25 million over four years. To further these efforts, Congress could fund the "Bridges to Work" program, and based on its findings, expand the program to more cities and more participants. In addition, it could provide tax incentives to suburban employers who provide van pools or other transportation for disadvantaged urban core resi-

dents. Possible forms of incentives could include tax credits for van service to existing transit or bus lines, and accelerated depreciation of the vehicles.

Reducing Subsidies to Peripheral Development

Even though urban economic development policies can be improved, their full effect will be hindered because outlying and core jurisdictions often do not compete for investments on equal terms. In a number of respects, including infrastructure and transportation, new development in places with lower densities is often more expensive, yet pricing policies often do not reflect these differences. Federal tax policy also appears to favor suburban as opposed to core areas. In many ways, the actions of the public sector, including the federal government, distort the locational decisions of the market. The failure of market prices to reflect full costs, including externalities, means that price signals are being given that further stimulate urban sprawl and dispersed development. Dispersed development is cheaper than it would be if it paid its full costs, and core development is more expensive. Moreover, such development patterns appear to systematically weaken the development prospects of the urban core.

Though only preliminary empirical research has been done, it does appear that development on the edge of metropolitan areas, particularly sprawl development, does not pay for itself, and is instead subsidized by others (e.g., local taxpayers in the core, consumers in a region, and state and federal governments). Several important subsidies include the provision of incentives by local and state governments to businesses locating in prosperous suburbs, the costs imposed on urban core brownfield redevelopment, and the underpricing of physical development (e.g., roads, sewers, etc.) in low-density, peripheral development. Moving to reduce or eliminate these subsidies and instituting full-cost pricing policies for peripheral development appears to be a step in the right direction, although the magnitude of these subsidies or the impact of their elimination on metropolitan growth patterns is not known.

Although dispersed development weakens the economic prospects of the core, unduly restricting development in the outer suburbs or exurban locations through such mechanisms as growth controls may be economically inefficient. However, an array of mechanisms, including marginal cost pricing, development levies, and full-cost recovery regulations, use the market's own signal mechanism—price—to encourage a more cost-effective urban development pattern. However, these mechanisms are in themselves incomplete because they address only localized and direct costs, not the region-wide social, economic, and environmental costs of excessive suburbanization and inner city decline. For that to occur, mechanisms that internalize external costs onto development are also needed.

A number of policies could move in this direction. First, options to encourage pricing of services to reflect marginal differences in the cost of providing services (such as telecommunications, cable TV, electric power) depending upon location, could increase costs in outer locations and reduce costs in the central city. Second, policies to internalize externalities could help reduce the unfair cost advantage outer suburb and exurban sites currently enjoy. For example, enforcing the Clean Air Act provisions regarding trip reduction in nonattainment metropolitan areas is likely to benefit urban core locations because transit access is greater there. Similarly, congestion pricing for driving would require automobile drivers to pay for the costs of increased traffic congestion that they impose on other drivers. Third, reforming tax treatment of home ownership could be beneficial to core areas. The homeowner mortgage interest tax deduction currently favors the well-housed and encourages large building lots, both of which favor outer suburbs where home ownership rates are higher and lots are larger.

However, without further and more definitive information, it is not clear how important subsidies are to encouraging peripheral development. Therefore, one option would be to task HUD to undertake a major study to assess the nature and extent to which public policies at all levels of gov-

ernment inadvertently subsidize suburban and exurban development, particularly at low densities, and what policy steps could be taken to reduce or eliminate these subsidies.

Second, curbing industrial recruitment incentives, particularly by fast-growing and prosperous areas, is an important urban policy. It is one thing for companies to leave the center city to move to the outer suburbs because land costs or rents are cheaper. Market forces are operating well here. However, it is quite another thing when financially well-off suburban jurisdictions provide financial incentives (free land, reduced taxes) to induce companies to move out of the city; financially strapped urban core jurisdictions cannot afford to counter such incentives. Though most federal economic development programs contain prohibitions against funding firms to move from another community, the CDBG program does not. As a result, one option would be to apply anti-pirating provisions to all federal economic development programs. More fundamentally, Congress could link federal funding for economic and community development inversely to the amount of incentives jurisdictions offer. States and cities (particularly growing ones) that spend money on incentives for relocating firms might have the amount of federal economic development funding reduced by some proportion, depending on the degree to which they provide more incentives than other states.

Finally, more so than outer suburbs, inner suburbs and central cities (or new firms locating there) are burdened with the costs of cleaning up contaminated lands because, in many cases, those responsible for the contamination cannot pay. Brownfields pose a number of problems, including cost, liability, delays, and uncertainty, all of which discourage their development. While removal of these impediments would not solve all redevelopment problems for these sites, it would help. There are a number of federal policies that could improve the prospects for brownfield redevelopment, including modification or clarification of liability issues, and EPA delegation of authority to states.[15] In addition, the federal government could provide funds to communities for assessment and cleanup of sites with strong prospects for development.

[15] U.S. Congress, Office of Technology Assessment, *The State of the State of Brownfields* (Washington, DC: OTA, June 1995).