

METROPOLITAN DECENTRALIZATION IN CHICAGO

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INTRODUCTION

Large enough to intensely manifest big-city problems, but not so different as to suggest a lack of generalizability, Chicago is the urban laboratory par excellence. A focus on this Midwest giant makes particularly good sense in the case of sprawl.

Given its rising per capita incomes, flat geography, and long-standing racial tensions, Chicago provides a likely setting for sprawl. And the Chicago region has sprawled. Despite slow population growth, the Chicago urbanized area has spread out. Over the last twenty to thirty years, this process has been encouraged by a pre-existing highway system, continuing federal subsidies for housing, permissive local governments, and politically weak regional planning agencies. Chicago provides a classic case study of how a relatively dense city can develop into a sprawled region, not so much at the instigation of the public sector, but with its general assistance.

THE MAIN TRENDS, 1970 - 2000

Urban Land, Population, and Density

Major changes have occurred in the Chicago metropolitan area over the past twenty to thirty years. Between 1970 and 1990, the population of the metropolitan area increased by only four percent, but the urbanized or developed land area increased by more than 47 percent. In other words, in only a twenty-year period, roughly the same number of people came to be spread out over almost half again as much land (Moskovits and Shopland, 1999).

The changes in land use patterns, as measured in 1972, 1985, and 1997 are dramatic (Figure 2). Urban build up in the six county areas increased over the twenty-five-year period, at the expense of agricultural and natural land area.

Moreover, the loss of open space increased during this time. Nearly 275,000 acres became urbanized in the region between 1972 and 1997 -- increasing 14.5 percent between 1972 and 1985 and 30 percent between 1985 and 1997. There was a 21 percent loss of natural area and a 37 percent loss of agricultural land in the Chicago region during the same 25-year period. The greatest proportion of urbanized land growth and natural and farmland conversion took place on the fringes of the Chicago metropolitan area, 30 to 65 kilometers (and beyond) from the City of Chicago. These land use changes described above are related to shifting populations and development at lower densities.

As elsewhere, over the last half century there has been a huge population shift from city to suburbs. The population of the City of Chicago peaked at 3.6 million in 1950, containing 70 percent of metropolitan area residents. By 2000, 2.9 million Chicagoans made up only 36 percent of the region's population. Despite a much-heralded turnaround in the 2000 Census, Chicago's population in that year was 14% less than it had been in 1970 and 20% less than the 1950 peak.

Chicago's suburbs may be divided into three groups -- those urbanized by 1950, the original 1950 inner ring suburbs¹, the middle ring, joining the urbanized area in the 1960 or 1970 Census, and the post-1970 suburbs forming a third ring that includes several of the older satellite cities and the new distant suburbs beyond them. In the Chicago

¹Roughly speaking, the U.S. Bureau of the Census defined the Chicago urbanized area as those contiguous municipalities and non incorporated lands with 1000 persons per square mile.

metropolitan area, geographic rings are shaped like concentric half-circles, since the region is bordered on one side by Lake Michigan.

The suburbs are characterized by far lower densities than the city. As the suburban population-share has grown, this growth has taken the form of new suburbs with low densities. In 1990, the City had approximately 12,300 people per square mile, compared with 4,300 people per square mile in the oldest suburbs and only 1,600 people per square mile in the most recently developed suburbs. (Figure 3) These new suburbs, with 14% of the land in the urbanized area, accounted for less than 5% of the Chicago region's population.

New growth is beginning to occur beyond the boundaries of the urbanized area as it has long been defined. The built-up area in the Chicago region has traditionally been bounded by a ring of older industrial cities spanning from Waukegan on the north, through Elgin and Aurora on the west, to Joliet on the south. These cities formed a circumferential arc and served as the terminal points for the region's commuter railroads into the city. For the past 100 years, growth has essentially consisted of in-fill within this arc. Until 1950 much of that growth was dominated by increasing densities along the commuter rail lines. In the last half of the twentieth century, an automobile-led development has made use of cheaper lands between the older rail spokes. Now, however, growth is spilling beyond the "boundary" of satellite cities, into the rural areas of Kane, McHenry, and Will counties. With no natural limits to constrain it, growth seems poised to continue to consume farmland and other open space. If past development is a guide, as growth moves outward from this arc, distances across the region will grow geometrically.

However, forecasts of the pace of conversion of the region's open space to urbanized land in the near future are complicated by demographic forecasts. The Northeastern Illinois Planning Commission (NIPC) has predicted faster population growth for the Chicago region over the next two decades -- 25% or about 1.8 million people between 1990 and 2020, compared with only 4% between 1970 and 1990, (NIPC, 2000). However, partially offsetting this acceleration in population growth, the NIPC projections suggest that the growth rate in the number of households in the metropolitan area will decline somewhat from 22 percent over the two decades 1970 to 1990, to 29 percent for the thirty years 1990-2020. Nonetheless, land absorption is likely to continue at about the same rate.

In Chicago, as in other metropolitan areas of the east coast and Midwest, densities fall steeply from the core to the suburban fringe. This pattern of sprawl contrasts sharply with that of Los Angeles. Contrary to the southern California myth, for example, L.A.'s suburbs are nearly twice as dense as Chicago's. Even Sunbelt metropolitan areas like Miami, New Orleans and Denver have higher suburban population densities than the Chicago region (Urban Transportation Center, 1998).

The Demographics of Sprawl

The dramatic suburban population growth in the Chicago region can be further identified in terms of its race and class composition. While numerous factors have stimulated Chicago suburbanization, as in many other U.S. metropolitan areas, that process can be characterized as "white flight." By 2000, 37 percent of the city residents were black and 26 percent were Latino or Hispanic. (U.S. Census Bureau, 2000) Only 31 percent of the city's population was non-Hispanic white. Moving to the rest of Cook County, which includes an inner-ring of poor black suburbs and several more affluent black

communities was still only 14% black or African-American. Even more dramatically, four of the five collar counties were less than 10 percent black or African-American (Table 1). The only exception being Will County, at 11%. Will County include a long-standing black population, located primarily in Joliet, an older, industrial satellite city.

Differences in the racial composition of Chicago and its suburbs are associated with socioeconomic inequality. Over the last thirty years, a huge income gap has opened between the city and the suburban counties. Average per-capita personal income in the City of Chicago in 1969 was 98 percent of that in the metropolitan area. However, between 1969 and 1997, metropolitan per capita income in real terms grew more than 50%, while per capita incomes in the city grew by only 16%. For the decade of the 80s, city per capita incomes were virtually flat. (Table 2)

Official poverty rates also confirm high levels of inequality between Chicago and its suburbs. Twenty-two percent of city residents lived below the federal poverty line in 1990 (Northeastern Illinois Planning Commission, 1999a). Between 1970 and 1990, the poverty rate for blacks living in Chicago increased by 7.5 percent -- from 25.1 to 32.6 percent. In the ten neighborhoods that make up Chicago's Black Belt, the official poverty rate increased from 32.5 percent to 50.4 percent between 1970 and 1990 (Wilson, 1996: 15-16). Suburban populations had much lower poverty rates than Cook County. (Figure 4)

In the last few years of the 20th Century, the City of Chicago experienced a real-estate renaissance. Gentrification in a number of working-class and low-income neighborhoods resulted in modest increases in the city's population. Such counter tendencies can be expected to slow the widening of income differentials between city and suburbs, but a reversal remains quite unlikely.

In sum, the post-World War II suburbanization of the Chicago population has followed a classic pattern. The still-dense central city has been left smaller; poverty is highly concentrated in the city and some of its inner suburbs; and the new suburbs of the urban periphery are overwhelmingly white.

Employment

Jobs in the Chicago region have suburbanized even faster than has population. The City of Chicago lost approximately 350,000 jobs between 1972 and 1995 but all of its suburban counties posted substantial employment gains. As a result the city's share of total metropolitan area employment fell from 56 percent to 34 percent between 1972 and 1995. (Table 3)

Employment growth (or decline) between 1970 and 1990 in the six-county Chicago region by township is shown in Figure 5. Almost all of the job loss occurs in townships within the city of Chicago and the largest job gains are concentrated in DuPage County and northern Cook County.

Between 1973 and 1997, employment in the Chicago Central Business District held steady, but jobs in Chicago outside of the CBD declined consistently. Meanwhile, suburban job growth was significant over the entire twenty-five-year period (Testa, 1999). It is clear that some kinds of suburbs have profited more from recent employment growth than have others. Between 1980 and 1990, "old industrial suburbs" and "post World War II industrial suburbs" tended to lose employment (with a few exceptions, most notably in the area immediately surrounding O'Hare International

Airport), “old satellite cities” and “service and retail centers” have tended to retain jobs but have had little employment growth. The “new industrial/retail suburbs” and “edge cities” (farthest from the metropolitan core) have seen dramatic increases in employment.²

The development of “high-tech” industry has also contributed to the suburbanization and deconcentration of jobs in the Chicago region. Widmayer and Greenberg, (1998) estimate that more than 340,000 employees are working in technology-based companies in metropolitan Chicago, producing about 11.5 percent of the Gross State Product in Illinois. Seventy-five percent of these companies are located in the six-county metropolitan area, outside of the City of Chicago.

The deconcentration of employment in the Chicago region slowed in the boom of the 1990s. But even that most robust national expansion increased the city’s employment only modestly. Between 1994 and 1997, employment in the metropolitan area grew 6.9%, but the City of Chicago lagged far behind with a growth rate of only 2.5%, (Putnam et al., 2000.)

Another way to compare the effects of the deconcentration of jobs on the city and the suburbs is to look at unemployment rates. Between 1990 and 1998 the city rate paralleled the suburban rate but was significantly higher. By 1998, in the midst of the national economic boom and a purported urban renaissance in Chicago, the city unemployment rate stood at 5.7%, while the rate was 4.7% in Cook County (including the city), 2.7% in DuPage, 3.7% in Lake, 3.9% in Kane, 3.5% in McHenry and 4.2% in Will County (Northeastern Illinois Planning Commission, 1999). These differences reflect not only differences in employment growth, but also the considerable share of central city jobs held by suburban commuters.

Overall, compared to other large metropolitan areas in the United States, how has the deconcentration of employment in the Chicago region affected the central city? Brennan and Hill (1999) examine how competitive central cities in the 92 largest metropolitan areas were, compared with their suburbs, in attracting and maintaining employers and employment. During the period 1993-1996, 23 central cities lost private employment. Seventeen central cities actually gained jobs at a faster rate than their suburbs. Fifty-two central cities gained jobs, but at a slower rate than their surrounding metropolitan areas. Chicago ranked near the bottom of the third group. Between 1993 and 1996, Chicago had 0.4 percent employment growth while the metropolitan area beyond the city experienced 9 percent job growth. Chicago’s “central city employment competitiveness” ranked 77th among the 92 regions studied. (Figure 6)

Finally, the deconcentration of employment is not unrelated to the deconcentration of population or residence. Industrial development and commercial development create jobs. In the Chicago region, industrial development is taking place primarily close to O’Hare International Airport and outside of Cook County. Commercial development is taking place in many locations, but is concentrated around highway interchanges and suburban employment centers. Residential development, however, continues to scatter throughout the metropolitan area, not adhering to either places of industrial or commercial employment. (McDonald and McMillen, 1999) Both employment and

²U.S. Bureau of the Census, “Journey to Work Data for 1980 and 1990,” provided to the Chicago Metropolitan Case Study by the Northwestern Illinois Planning Commission.

population have deconcentrated, but not in the same direction: people are likely to live in one place, work in another, and shop in yet another -- at ever increasing distances. This pattern of decentralization of jobs and housing reinforces the spatial or jobs-housing mismatch referred to earlier.

Tax Base

Regional solutions to problems of urban sprawl are extremely difficult to achieve. The Chicago metropolitan area is fragmented into some 270 municipalities. Since these municipalities are, for the most part, dependent on local property taxes for their revenue, the population and employment shifts resulting from deconcentration and sprawl affect the fiscal capacity of these local governments. In 1993, the average property tax base per household in the Chicago region was \$121,007³. In the City of Chicago the average tax base per household was \$83,884 in 1993. Fifty-nine suburbs, mostly inner-ring suburbs, predominately black suburbs and older satellite cities, had a tax base lower than Chicago. Robbins, a poor and black south suburb, had an average property tax base per household of only \$23,616 in 1993. On the other end, 48 suburbs had more than twice the regional average tax base per household and 24 had more than three times the metropolitan area tax base. These are primarily newer northern and western suburbs.

Across the board, in the Chicago region, sprawl appears to have produced more fiscal "losers" than "winners." In 1993, the total population of the 106 municipalities with a below-average property tax base per household was 4,568,300; 68 percent of the metropolitan area's total population. Fiscal "winners" are able to attract and retain the industrial, commercial and residential property tax base that will allow them to provide even more and higher quality services -- including schools -- and/or lower property tax rates, thereby making them even more attractive places for development. But fiscal "losers" have the opposite experience.

Inequalities in local governments' fiscal capacity have widened as the Chicago region has decentralized. Between 1980 and 1993, 26 suburbs lost tax base, some by as much as 36 percent. Almost all of these municipalities were predominately black, inner-ring south suburbs. During the same period, the property tax base increased by more than 48 percent in 77 suburbs. These municipalities, strong to begin with, were in the main, predominately white and affluent northern and western suburbs.

Chicago Sprawl—Its Impact on Social Welfare

As suggested above, Chicago's sprawl follows a classic pattern. The dense, monocentric, central city has given way to a multi-centered, much lower density, metropolitan agglomeration. O'Hare Airport, once close to the periphery of the area, is now the statistical center of regional population and employment. City based minority populations have been left far from suburban employment growth nodes and poverty has become ever more concentrated. Some inner suburbs have experienced substantial poverty rates, and a number of blue-collar suburbs have struggled to meet their public service needs but the income gap between the city and the more affluent suburbs has

³ All of the property tax data in this section are from 1980 and 1993 municipal taxation reports of the County Clerks' Offices of Cook, DuPage, Kane, Lake, McHenry and Will Counties and the U.S. Census Bureau's 1980 and 1990 Censuses of Population and Housing.

grown steadily. The city has lost population and employment; increasingly distant suburbs have gained both.

Has Chicago's classic sprawl been good or bad for the region? How has the most important regional trend-- the trend in overall well-being — been affected by sprawl? This remains a contentious question in the region, as in the nation as a whole. The Urban Transportation Center of the University of Illinois at Chicago emphasized sprawl's positive role, (1988, Highways and Urban Decentralization), pointing to a fundamental connection between low density and more affordable housing prices. In addition, the report documented the various cost advantages of outer suburban locations for a wide range of businesses.

There can be little doubt that a range of privately appropriated benefits are generated by sprawl. Households and businesses make their location decisions voluntarily, and in these decisions they attempt to improve their welfare and profits. But private gains do not amount to the entire story. Numerous claims have been made regarding the costs of sprawl. A recent survey (Burchell et al, 1998) presents extensive annotation of key studies in this area. Considerable disagreement still exists as to the magnitude of these costs.

Recent work on the Chicago region (Persky and Wiewel, 1999, 2000) has weighed various private benefits against the externalities and public costs engendered by outer suburban development of land for residential and business uses. Their findings suggest that the social costs of sprawl just about equal the private benefits. For example, in comparing the consequences of siting a manufacturing plant of 1000 workers in a Greenfield location in the outer suburbs as compared with a central city location, they find the significant private benefits more than offset by external and public sector costs (Table 4).

Land costs are lower in the outer suburbs. Wages are lower, too. But Persky and Wiewel's study finds that these gains, at least for Chicago's case, are heavily subsidized by public dollars and unpaid social costs. So much so that employment decentralization generates no net efficiency gains. When net efficiency gains are nonexistent, attention naturally shifts to questions of distribution. At least from the Persky and Wiewel study, it would seem that employment decentralization in Chicago favors high-income households, (Table 4).

Sprawl generates both real benefits and costs. It generates significant redistribution. The full reckoning of net benefits is yet to be completed. Under the circumstances, prudence would seem the most reasonable course for public policy. And prudence suggests a careful review of federal and state policies to determine which policies have encouraged or limited sprawl.

FEDERAL AND STATE POLICIES THAT HAVE AFFECTED SPRAWL

Location decisions are highly decentralized. Millions of individuals and thousands of businesses make individual choices. In most cases, these choices are realized through the agency of real estate developers, who themselves form a competitive and decentralized industry. In some immediate sense, it has been these developer-suppliers, in combination with the private customers to whom they cater, that have led the private sector in turning Illinois greenfields into sites for suburban homes and businesses. [Urban Transportation Center (1998); Zhang and Zhu (1999)].

But market forces have been supported and facilitated by public policies--policies that have influenced demand and shaped supply. Although the public sector has never declared itself in favor of or opposed to sprawl, its actions have consistently encouraged the decentralization of private residences and businesses. This is true at all levels of government.

In this section, we examine some of the public policies that helped determine growth patterns in the Chicago region, with an emphasis on those that have most often been mentioned as encouraging sprawl.

Land Use

As in many other places, Illinois gives strong authority over land use decisions to individual municipalities. This includes the authority to determine zoning and establish minimum lot sizes and maximum densities. Combined with a system of education funding that relies primarily on local property taxes, this has encouraged municipalities to oppose the development of low- or moderate-income housing in favor of "high-end" low density residential and commercial, development.

But state policies have in many ways framed local land use decisions. In particular, the early proliferation of local governments across the Chicago region and the highly permissive, subsequent attitude toward low-density annexations, have been the direct products of state-level policies. Thus efforts to promote land use planning at a regional level have resulted in only limited public coordination.

A proliferation of municipalities and special purpose districts. The Chicago metropolitan region today has more than 1200 units of local government, including municipalities, townships, counties, special purpose districts and public authorities. This proliferation occurred in part as a result of older state policies: It used to be easier to incorporate a new municipality than it was to annex population into the central city. In addition, municipalities were limited in their powers to tax or incur debt, so numerous special districts were created that had the powers to bond and tax to provide additional services. (Lindstrom 1999b)

Undoubtedly, a larger number of municipalities mean that coordination and regional planning will be more difficult. But more municipalities may affect land use patterns more directly. Dye and McGuire's analysis (1999, p 8) of more than 100 metropolitan areas showed that a greater number of municipalities in a region were significantly related to a higher share of the population in the collar counties. However, there is no clear evidence of a relationship between the number of municipalities and the annual growth in the total urbanized land area.

Annexation policies. Many rapidly growing suburban municipalities have been able to annex large amounts of land, often well in advance of actual development. In 1990, the Village of Huntley was two square miles. Through annexation of vacant land that surrounded it, the village was 11 square miles by the end of the decade. Its acquisitions were done quickly, without referenda or court approval, and entirely legally. In the 30 years from 1960 to 1990, the satellite cities of Elgin, Joliet and Waukegan had all doubled in physical size, and Aurora tripled its land mass. There is really no reason for a municipality *not* to annex as much adjoining land as possible. Because developers are usually eager to have their new developments incorporated (for the fire, police and other

services the municipality then provides its buyers), they often make substantial payments to the municipality (Templeton 1999). Municipalities are usually also eager to incorporate new growth, especially if it is commercial, so they can reap the tax revenue benefits.⁴ More generally, municipalities want to be able to exert some control over new development, which they can do only if it is within their borders. In addition, annexation provides municipalities with an easy way to increase their importance regionally. These benefits of annexation accrue only to municipalities that are surrounded by vacant land—those on the urban fringe.

Of course, it is not the annexation itself that is the problem, since fewer large municipalities may be more desirable than many small and newly incorporated ones. However, as currently formulated these permissive annexation policies do nothing to restrict development in outlying, unincorporated areas. Given that developers see a benefit from having their developments in incorporated areas, if municipalities were given incentives not to annex additional land, growth could be steered into existing municipalities.

Limited regional planning. The separation and uneven funding of the Northeastern Illinois Planning Commission and the Chicago Area Transportation Study reflect the region's decentralized political realities. Planning agencies must depend upon consensus among a large number of government entities. They face funding difficulties and have limited statutory ability to enforce or implement plans.

The Chicago Area Transportation Study (CATS, the region's metropolitan transportation planning organization) and the Northeastern Illinois Planning Commission (NIPC) have each created plans that could have been important to the region. But NIPC's plans are not enforceable and, since it is dependent on the donations of local governments for its funding, its actions are subject to local approval. Since CATS is officially a part of the Illinois Department of Transportation, its plans are influenced significantly by that state agency (Lindstrom 1999b).

Local land use policies in the Chicago region have been built on a framework supplied by the State of Illinois. It has provided little defense against sprawl, and it has failed to empower regional bodies to plan effectively. Although the state's framework did not require the substantial absorption of open land, it disarmed a possible public control on such growth.

The Intra-Metropolitan Distribution of Federal and State Spending

Throughout the country, central cities receive a disproportionate share of state and federal per capita spending in comparison to their suburban neighbors. Such spending in the form of intergovernmental transfers, payroll, purchasing, and especially transfer payments has been interpreted as a "stealth urban policy" (Parker, 1995, 1997). Relative to its suburbs, Chicago has experienced a considerably higher level of federal spending per capita. The contrast is particularly sharp with respect to the newest cohort of outer suburbs, those joining the urbanized area in the 1980 or 1990 Census (Table 5).

⁴ As noted above, a growing literature suggests that outer suburban development will not generally pay large dividends or even cover its cost if any reasonably comprehensive measures are applied. See Persky and Wiewel (1999,2000) and Altshuler and Gomez-Ibanez (1993). While an individual municipality may gain, its neighbors will often suffer significant losses.

A large portion of this difference is accounted for by higher levels of transfer payments for the aged and the poor.

Putting aside the specific programmatic purposes of the federal government, it is tempting to speculate that these intra-metropolitan differences in per capita expenditures would have a substantial centralizing effect on the region's economy.

Just spending all that money in the city relative to the suburbs should presumably work to limit the spread of the metropolitan area. But federal spending in Chicago has done little to stem the outward flow of population and jobs. An extensive simulation of the Chicago region suggests the centripetal impact of federal spending streams is small. Had federal spending (Table 5) been equalized across suburban rings, only about 2,000 acres of outer suburban residential land would have been saved. As a share of all the residential land in the collar counties this amounts to only 0.6% (Persky and Kurban, 1999). Similar simulations of state level programs show even smaller overall effects.

A benchmark for judging these effects can be gleaned from the case of high technology development in Chicago's outer suburban regions. That development has led to the absorption of 24,000 acres of land, 18,000 acres more than would have been developed if these industries and many of their workers had located in the city instead (Felsenstein 1999). Thus the modest impacts of federal and state general spending are far overshadowed by the larger forces pushing new industries to the periphery.

But if the overall spatial distribution of federal and state spending has done little to stem Chicago sprawl, specific federal and state programs are strongly implicated in the classic outward movement of the region. Chief among these are housing, transportation, and school funding.

Housing Policies

Federal housing policies have helped to shape Chicago area residential patterns over the past 40 years. For example, the construction of high-rise inner city public housing units has contributed directly to the residential landscape and may have contributed to white flight.

Despite the multiplicity of programs, the central focus of federal housing policy has long been home ownership. Today the most significant tool for encouraging home ownership is the federal income tax code. These provisions heavily subsidize home ownership. From the perspective of sprawl, tax expenditures encourage the conversion of open space into peripheral suburban development. Persky and Kurban (1999) find that that federal tax subsidy of housing have prompted Chicago households in new suburbs to consume larger houses on larger lots. If the tax subsidies were removed, these Chicago households would have consumed significantly less land, reducing residential land absorption in the younger suburbs (areas that became urbanized in 1970 and 1990) by as much as 20 percent.

The tax subsidies for housing may not have brought households to the suburbs, but these subsidies have encouraged those households, once located in the suburbs, to consume considerably more land than they would have otherwise.

Transportation and Infrastructure Policies

The city of Chicago would not have developed into the metropolis that it is today had it not been for large amounts of federal, state and private money spent building up the city's infrastructure (in addition to the significant funds invested by the city itself) (Lindstrom 1999b). From the building of the Illinois and Michigan Canal and the railroads in the 1840s to the Interstate Highway system and the tunnel and reservoir system of the postwar period, the city's form has been shaped by external funding. The expressway system, in particular, laid the grid for suburban expansion.

In the Chicago region, from 1973 to 1993 vehicle miles traveled increased by 57.6 percent but transit ridership fell by 18.5 percent (DiJohn, 1999). Economic prosperity has certainly allowed more individuals to purchase and maintain a personal automobile but federal and state policies have also played a role in the increased use of automobiles. From 1965 to the mid-1990s, the federal government spent hundreds of billions of dollars on highway aid. In roughly the same time period, the federal government spent only about one-seventh the amount in federal aid to public bus and subway systems (Rusk, 1999). Although the federal highway system was not constructed to promote suburban development and these expenditures do not account for the differences in numbers of automobile and transit users, the transit system would likely have had more riders if it had received greater funding. The federal government did not begin to finance mass transit until 1961, when it provided funds in the Housing and Urban Development Act. Similarly, it was not until the 1970 constitutional convention that Illinois designated transit as a legitimate public purpose on which state funds could be spent (DiJohn, 1999). Until then all transit was provided by private companies and the state supported only roads.

Before 1956, revenues from motor fuel taxes went directly into the federal government's general fund. The Highway Revenue Act of 1956 created the Highway Trust Fund as a way to guarantee funding for the construction of the new Interstate Highway system. Today, even though the highway system is for the most part completed, all federal fuel tax funds (excluding a 4.3 cent tax per gallon that is sent to the General Fund for deficit reduction) and other user taxes are channeled directly into the Trust Fund, where they must be spent exclusively on transportation projects. In fiscal year 1996, the Highway Trust Fund received \$24.7 billion in tax revenues: 89 percent (\$22.0 billion) was allocated to the highway account and 10.5 percent to transit. Only since 1983 was any part of the Highway Trust Fund spent on transit (Federal Highway Administration, 1999). Thus the Highway Trust Fund has skewed federal priorities by creating a dedicated funding source for transportation projects. (Nivola, 1993)

Of course, not all road funding allocations encourage sprawl, and it could also be argued that extending transit systems in outlying areas does almost as much to draw new businesses and residents to exurban communities as does a new road. Indeed, Warner's classic *Streetcar Suburbs* makes just that point in regard to the development of Boston (1969). In the Chicago area, most of the older suburbs were developed along the rail lines that entrepreneurial companies put in.

Much of the Chicago region's decrease in transit ridership came during a financial crisis of the early 1980s, when funding shortfalls caused the regional transit agencies to raise fares and cut service. In turn, riders abandoned the system rather than pay more for less, causing even greater deficits. During just one two-year period, 1981 to 1983

(which also coincided with a recession), the system lost 113 million rides (DiJohn, 1999). Although ridership took a slight upswing in 1998, it was not enough to offset the losses of the previous 20 years. For transit to be viable, it needs to be funded proactively, and alternatives to fixed route systems need to be considered seriously.

It appears that some of these past trends are changing. During the period 1989-1996, federal spending on infrastructure and transportation programs has not been large enough, nor sufficiently concentrated, to play a major decentralizing role (Persky and Kurban, 1999). While substantial absolute amounts of federal dollars were devoted to highways and roads used by outer suburban residents, the per capita expenditures were not large, amounting to less than \$100 dollars per year. Moreover, these expenditures were more than offset on a per capita basis by federal public transit funds and other infrastructure grants received by the city (Table 6).

Per capita expenditures on these same program areas at the state level show a spatial distribution similar to the federal expenditures. This is perhaps not surprising, since federal dollars for infrastructure and transportation must often be leveraged with state and/or local money. The differences, although not large, favor the newer suburbs of the outer rings (Table 7).

Between 1989 and 1996 highway investments in the Chicago region took the form largely of rebuilding and maintenance, rather than expansion. While more aggressive highway investments in the past laid a foundation for sprawling land use patterns in the region, recent history suggests a more cautious approach by both the federal and state government, offset by some investments in public transit. Thus, the sprawl-inducing effects of earlier transportation funding may slowly be mitigated.

School Funding and Property Taxes

In theory, policies to equalize school funding and provide more state aid could lower the level of sprawl in a region. If inner-city schools are under-funded and suburban schools are well-funded, in the absence of other alternatives, families with children will move to the outer areas. On the other hand, as state aid becomes more equalizing, more families with school-age children might choose to stay in the region's core, resulting in a lower share of the region's population in the collar counties. Dye and McGuire (1999) find that between 1970 and 1990, sprawl may have been lower in regions whose states contributed a larger share of school district's revenues and had policies that equalized the distribution of these revenues. A higher degree of equalization in the state aid formula, for example, "has a negative effect ... on the share of total population residing in the collar counties and on the growth of the urbanized land area, but a positive effect on the share of the total land categorized as urbanized." (Dye and McGuire 1999, p.8)

Compared to most other metropolitan areas observed, the Chicago region is losing ground in state equalization policies. In Illinois, the main source of school funding is the local property tax, but each district also receives aid from the state, in the form of formula grants and categorical grants⁵. Between 1980 and 1990, the state of Illinois decreased its share of school district revenues, although, recently, the state share is

⁵ Formula aid is the state's equalizing grant and targets low-wealth, low-income districts. It comprises about two-thirds of all state aid and averages \$1,453 per elementary student. Categorical aid makes up the remainder of state aid and is allocated to districts for specific programs (McGuire and Merriman, 1997).

once again increasing (Goldstein and Njus 1999). The degree of equalization in the distribution of state revenues also decreased dramatically in the 1980s. By 1990, the amount of variation among state funding of Illinois' school districts was two times that of Wisconsin and Indiana, and three and one-half times that of Michigan. In fact, in a study of state education expenditures in 1989-90, only Alaska had more variation. For example, Chicago, despite having a poverty rate of nearly twice the statewide average, received only about 70 percent of the mean downstate level of formula aid (McGuire and Merriman, 1997). This is because the state uses assessed value in its allocation formula, without including a more direct measure of poverty.

The insufficiency of state equalization leaves Illinois school districts heavily dependent on local property taxes. The lowest quartile of municipalities, those with property tax rates ranging from 3.3 to 6.8 percent, are clustered in DuPage County and scattered throughout the five other collar counties. The highest quartile, with rates ranging from 9.8 to 17.4 percent, are almost exclusively in suburban Cook County (Dye and McGuire, 1999). In addition, a preliminary study of the Chicago region suggests that higher property tax rates may discourage economic activity (Dye et al, 1999). After adjusting for several relevant variables, a Cook County location remains a statistically significant deterrent to industry (McDonald and McMillen 1999) While Cook County has a number of characteristics that might account for this observation, it remains true that the county assesses industrial and commercial properties at high rates relative to its neighbors. Because Cook County is the core county, its higher rates push some commercial and industrial development to seek locations in outer counties. All of these factors combine to make outer suburban locations more attractive for households with school age children.

Thus, federal and state policies have played a considerable role in facilitating Chicago sprawl. Although designed for purposes only incidentally concerned with population density and land use, these policies have generally reinforced other factors driving decentralization.

SLOWING SPRAWL IN THE CHICAGO REGION

The Chicago Metropolitan Case Study demonstrates that a range of federal and state policies have reinforced the other factors behind decentralization in the region. If as suggested by Persky and Wiewel (2000) the region's decentralized urban pattern provides little net gain on efficiency grounds, serious attention should be paid to changing policies to reduce subsidies and enhance equity. Chicago's sprawl will not be reversed by new federal and state policies, however it can be slowed by a conscious shift away from current federal and state policies.

A Regional Agenda

We propose a five-point agenda for the Chicago region. The proposals underscore the priorities suggested by the research. The items have been chosen to emphasize policies that "do no harm," i.e. those that can be strongly justified even if their impact on sprawl proves to be modest.

1. Impose higher impact fees at a regional level. For better or worse the federal government's income tax code encourages excessive land absorption. The most direct way for the state to counter such subsidies is through promoting or even mandating higher and more realistic impact fees on new development.

Although there are many types of impact fees, the term generally describes fees paid to municipalities by developers to offset the marginal costs associated with new development – requirements for new infrastructure or additional demands on schools. Because such fees attempt to make new development “pay for itself” and reduce the fiscal impact of new growth on current residents, impact fees are popular in many states.

Illinois municipalities have the right to impose impact fees, but their ability to do so is more strictly regulated than in many other states (Templeton 1999). While many Illinois municipalities do impose some type of impact fee on developers, many forego monetary fees and are content to receive dedications for park and school land, which may be worth less than the public costs they are meant to offset. This is unfortunate, since impact fees are an effective—and basically equitable—tool to control sprawl. By raising the cost of building new homes, impact fees reduce demand for larger homes on larger lots (and by extension new homes in general). Although impact fees do raise the costs of development, it seems fair and reasonable to impose the costs of new development on the beneficiaries. Moreover, impact fees, like property taxes, can be made proportional to the value and size of new developments, thus lessening their regressivity. They can also be dampened through density bonuses for employer assisted housing and other developments, which include affordable housing.

While research in this area is just beginning, Skidmore and Peddle (1998) conclude that imposing impact fees does decrease residential development. Analyzing a sample of municipalities in DuPage County, a Chicago-region collar county, they found that the presence of fees led to a net reduction in development by 25 percent. However, they caution that several questions remain to be answered, including whether developers then tend to locate in municipalities that do not have impact fees, thereby increasing the rate of development elsewhere. For these reasons, we advocate better state legislation to allow for the collection of impact fees on a regional (or at least county) basis.

2. Directly preserve open space through the purchase or transfer of development rights. Open space and farmland preservation efforts are among the most popular growth control measures nationwide. Here in the Chicago region, residents in four of the collar counties have recently supported more than \$200 million in bond issues to preserve farmland and open space (Bukro, 1999). In addition, the state of Illinois is beginning to take more of an interest in open space preservation. As part of the Illinois Open Land Trust initiative, passed unanimously by the House of Representatives, the state will provide \$160 million over four years for the state and local governments to acquire land for conservation or recreation (Governor’s Open Land..., 1999).

There are two main ways a region can preserve open space—either through the transfer of development rights, or through the outright purchase of those rights (also known as conservation easements). In the latter program, farmers permanently give up the right to develop their land in exchange for a cash payment. Farmers are compensated for the difference between what the farm would sell for in agriculture use, and what it would sell for if developed. In Pennsylvania’s program, payments average about \$2000 per acre. (Freese, 1995). The farmer may sell the land at any time, but the easement remains with the property permanently.

A transfer of development rights program is usually more complex to administer and may take more forms. Generally, however, the local government designates certain areas

within its boundaries as 'sending areas' and other areas as 'receiving areas.' Such programs may be voluntary—developers may get density bonuses by buying the rights—or mandatory—owners are not permitted to build in sending areas, and developers may not build in receiving areas without purchasing rights.

3. Equalize school funding. The first major step in this direction must be to equalize school funding at the state level. We find evidence that school funding policies affect the level of sprawl in a metropolitan area. These findings, although preliminary, suggest a need for a larger state role in education funding and in the equalization of that funding as a possible deterrent to residents moving out of the central city and increasing land consumption. Regardless of their effect on land use patterns, however, these fiscal disparities also need to be addressed because of the equity issues they raise within the region. As we noted above, sprawl has significant equity consequences. Therefore, we recommend that the state of Illinois shift education funding from local property taxes to state income taxes.

4. Discourage major infrastructure investments in outer parts of the region. Several states have enacted programs to ensure that the central cores remain the focus of the state's infrastructure funding. Most notable is Maryland's Smart Growth Initiatives, enacted by the state legislature in 1997. The program contains five components—including a Rural Legacies program, a Brownfields program, Job Creation Tax Credits, and Live Near Your Work—but the centerpiece of the legislation is the creation of Priority Funding Areas. Since October 1998, state funds for projects like roads, water and sewer, and state facilities have been directed to the state's priority funding areas, which include every municipality, areas inside the Baltimore and Washington beltways and designated enterprise zones. Since the program is new its effects are still uncertain. (Maryland Office of Planning, 1999; Gurwitt, 1999).

The Maryland Priority Funding Areas program holds important lessons for the state of Illinois. While it provides incentives for municipalities to 'grow smart,' it does not put direct land use restrictions on local governments. They remain free to encourage development wherever in the county they choose, so long as no state funds are involved. Certainly, implementing a similar program in the Chicago region would be much more difficult. Illinois counties do not have as much control over land use issues as do counties in Maryland. However, a program here that would require municipalities and counties to make development plans and then channeled state infrastructure funding only to designated growth areas seems likely to reduce land consumption.

5. Increase incentives for employers to locate in the central city. Employment deconcentration has provided new fuel to residential sprawl. For city business locations to compete with cheap peripheral sites, infrastructure and other public support have often been necessary. When carefully pursued these aren't corporate welfare, but serious investments.

Chicago has one of the most successful brownfields redevelopment programs in the country. These programs should certainly be continued and even strengthened. At the state level, Illinois is moving towards proportionate share liability as law in dealing with brownfields, which is meant to help ensure that investors not responsible for the environmental condition of the land are not held liable for its condition. (City of Chicago..., 1998) As they continue, the effects of these programs should be monitored and adapted as necessary.

Other widely used policies employed by regional, state and federal agencies can help to redirect industrial development to the inner city include tax increment financing districts, site assembly, workforce training programs and property tax abatements and subsidies to retain and expand employment base, as well as to create a mix of housing options. There's no doubt that in some cases these incentives have been abused. The danger remains of simplistically interpreting any industrial investment as economic development; or of identifying residential gentrification with a general improvement in housing standards. However, when intelligently designed and well administered, they can provide critical tools for the rebuilding of the employment base of the central city. (See Bingham and Mier, 1997, and Blair and Reese, 1999.)

Toward Effective Implementation

A regional effort to consciously limit sprawl requires a regional planning authority with effective political power. In order to become more useful to area residents, planning in the Chicago region must be more comprehensive and effective. First, the functions of CATS—the regional MPO—and NIPC—the regional planning commission—should be merged and a new agency created that is responsible for both land use and transportation planning. Second, the new agency needs to be provided with a guaranteed funding stream to remove any question of local political influence.

The new body should draw on the experience of Portland's Metro. That regional planning agency was approved by the state legislature and voters and formed in 1970, at which time it lacked a steady revenue stream and was responsible only for solid waste planning for the region and, later, the Portland Zoo. Today, Metro has home rule and is responsible for drawing and overseeing changes to Portland's urban growth boundaries; for coordinating plans of the three counties, 24 cities, 60 special districts and other state and regional agencies; and for developing the region's 2040 plan (Porter, 1996).

The Chicago region should push for authority from the state to create such a regional planning body. To create a body with home rule, however, would require a 3/5 majority vote in the legislature to change the state constitution—something unlikely to happen in the near future. Concern over lack of an effective regional planning agency is echoed in the Chicago Metropolis 2020 report, which advocates creating a regional coordinating mechanism that would take responsibility for regional efforts in housing, transportation, fiscal policies and general regional planning efforts, among other tasks. Because the report acknowledges that structuring and funding such a body could take several years, it advocates in the meantime consolidating CATS, NIPC, and the planning function of the Regional Transportation Authority (RTA).

As the Portland Metro example shows, the body would also need a permanent stream of funding to be successful. Other lessons include the importance of planning through consensus building, not mandates. If such a body were developed in the Chicago region, it could coordinate with other agencies to implement many of the programs described here, including regional impact fees, regional affordable housing programs, a tax-base sharing program and general planning responsibilities.

Which of the five policy initiatives should have priority is largely a matter of political realities—what coalitions can be formed and which areas provide opportunities for intervention. We remind our readers what Foster (2000) has pointed out: In many cases, it's not so much the policies a region has, but how the region takes advantage of

the policies, that makes the difference. This makes our recommendation to develop a regional planning body with legislated powers all the more important. In this way, regional leaders can build the authority to develop and implement regional programs that can best take advantage of current policies, as they work to bring about other reforms that benefit the region.

Tables and Figures

Figure 1: The Chicago Metropolitan Area

Source:

Figure 2: Land cover change of the Chicago metropolitan region, 1972-1997

Source: Calculated from aerial snapshots by the Landsat satellite which passes over Chicago once every 16 days. Project funded by the National Aeronautics and Space Administration (Wang, 1999).

Figure 3:

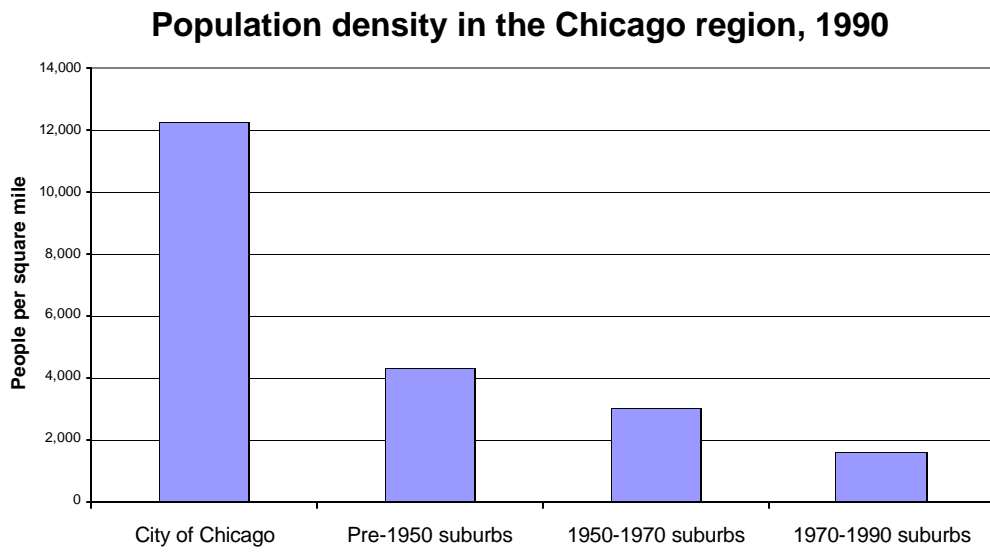


Figure 4: Estimated poverty in the Chicago region by county, 1995

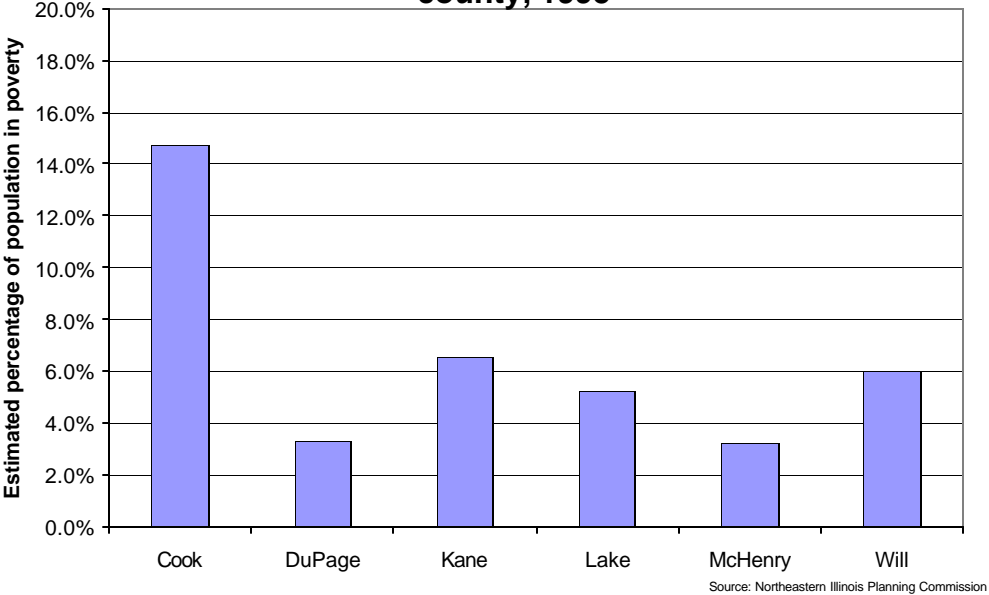
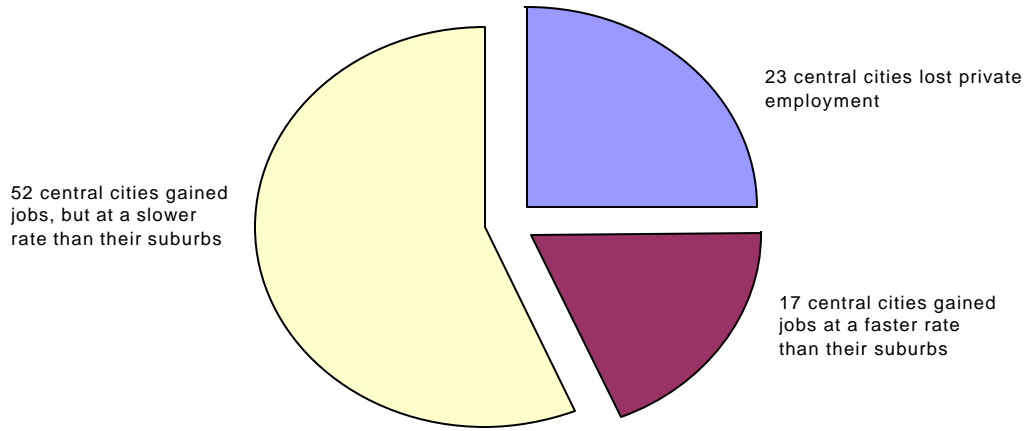


Figure 5: Employment by Township

Figure 6:

Competitiveness of U.S. central cities, 1993-1996



source: Brookings Institution

Table 1: Minority Population Shares in Metropolitan Counties (2000)

	<u>Black</u>	<u>Latino</u>
Cook (Including Chicago)	27%	16%
DuPage	3%	9%
Kane	6%	24%
Lake	8%	14%
McHenry	1%	8%
Will	11%	9%

Source: U.S. Census 2000.

TABLE 2: REAL PER-CAPITA PERSONAL INCOME

	1969	1979	1989	1997
City	\$20,407	\$22,275	\$22,492	\$23,611
Metro Area (6 Counties)	\$20,861	\$24,421	\$28,054	\$31,715
Ratio City to Area	97.8%	91.2%	80.2%	74.4%

All figures in 1997 dollars.

Sources: Bureau of Economic Analysis and Chicago Model produced by Regional Economic Models, Inc (REMI)

Table 3: Employment

Table 4: Annual Costs and Benefits of Choosing Greenfield Plant Site

<u>By Type</u>		<u>By Income Group</u>	
1. Externalities	(\$1,121)	1. Low	(\$636)
2. Public Sector Impact	(\$1,548)	2. Medium	(\$970)
3. Private Benefits	\$2,597	3. High	\$1,534
Net Benefits or Cost	(\$ 72)	Net Benefits or Cost	(\$ 72)

Note: All figures in thousands of 1995 \$. Each entry reflects the difference between a greenfield and central city location for a manufacturing plant with 1000 workers. () indicates cost. Low income households defined as those with annual income less than \$30,000; medium with income between \$30,000 and \$75,000; high with income above \$75,000. Source Persky and Wiewel (2000).

**TABLE 5: FEDERAL EXPENDITURES IN THE CHICAGO URBANIZED AREA,
1989-1996**

Average Per Capita Annual Expenditures, All Programs				
	City	Urbanized by 1950	Urbanize d by 1970	Urbanized by 1990
1989-1996 Total	\$5311	\$4398	\$3262	\$2754

TABLE 6: FEDERAL EXPENDITURES IN THE CHICAGO REGION, 1989-1996

1989-1996 Average Per Capita Annual Expenditures, Highways, Public Transit, and Other Infrastructure				
	City	Urbanized by 1950	Urbanize d by 1970	Urbanized by 1990
Highways and Related	\$24	\$52	\$62	\$ 86
Public Transit	\$72	\$37	\$24	\$ 21
Other Infrastructure	\$23	\$ 4	\$1	\$ 0
TOTAL	\$119	\$93	\$87	\$107

TABLE 7: STATE EXPENDITURES IN THE CHICAGO REGION, 1989-1996

1989-1996 Average Per Capita Annual Expenditures, Highways, Public Transit, and Other Infrastructure				
	City	Urbanized by 1950	Urbanized by 1970	Urbanized by 1990
Highways and Related	\$45	\$76	\$101	\$128
Public Transit	\$74	\$42	\$28	\$21
Other Infrastructure	\$2	\$2	\$0.5	\$0.5
TOTAL	\$122	\$120	\$129	\$149

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