

Megalopolis: Trends and Prospects

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Introduction

Megalopolis is a region spanning 600 miles from north of Richmond in Virginia to just north of Portland in Maine and from the shores of the Northern Atlantic to the Appalachians. Interstate 95 is its spine with major vertebrae at the metropolitan areas of Washington, Baltimore, Philadelphia, New York and Boston. As one vast conurbation that covers 52,000 square miles and contains 49 million people, Megalopolis is the densest urban agglomeration in the US, one of the largest city regions in the world, an important element in the national economy and a vital hub in a globalizing world.

This paper is a condensed version of larger study (Short, 2007) and a more detailed analysis (Vicino, Hanlon and Short, 2007).

The term *megalopolis* has an interesting history: it was the name given to a city in Peloponnese founded by Epaminondas around 371-368 BCE. Megalopolis was planned on the grand scale: the city walls formed a circle five miles in circumference. Great things were expected of the city, but it failed to realize the dreams of the founders, and it declined by the late Roman period. The term reemerged in the twentieth century. The Scottish polymath, urban scholar and planner Patrick Geddes (1854-1932) first employed the term in 1927 to designate one of the latter stages in his model of urban decline ranging from Metropolis to Necropolis. Geddes's disciple, the American Lewis Mumford (1895-1990) used the term and further developed the evolutionary model in his 1939 book, *The Culture of Cities*. For both Geddes and Mumford, *megalopolis* characterizes a degenerative stage of urban development in an era of giant cities, after the vitality of *metropolis* and before the exploitative *tyrannopolis* and the finality of *necropolis*, the city of war, famine and abandonment.

Jean Gottmann (1915-1994) coined the term *megalopolis* in 1957 to describe the urbanized northeast of the US (Gottmann, 1957, 1961, 1987). Gottmann's concept of megalopolis was much more optimistic and upbeat than the pessimistic model of Geddes and Mumford. It was a place of vitality, a harbinger of a better future and not a later stage in a trajectory of inexorable decline.

Recent work looking at city regions in the US, in part following on from Gottmann, has identified 10 megapolitan regions defined as clustered networks of metropolitan regions that either have population of more than 10 million or will exceed that number, on current growth projections, by 2040 (see [Table 1](#)). Collectively these large city regions constitute only 19.8% of the nations' land surface yet comprise 67.4% of the population, and approximately three quarters of all predicted growth in population and construction from 2010 to 2040. The Northeast area identified in this study, Megalopolis, is the largest of these regions in the country, responsible for 20% of the nation's Gross Domestic Product. The centers of economic gravity in both the

country and the world are increasingly recognized as these large city regions of connected metropolitan areas.

Megalopolis Defined

The US Census identifies metropolitan counties that are functionally linked to the city through levels of commuting, population density and population growth. Metropolitan counties were identified over the period 1950 to 2000 for the whole region of the Northeast; they blossom throughout the whole region over the fifty-year period with significant spread outside the core corridor region. From 1950 to 2000 there was metropolitan consolidation, metropolitan extension and the birth of entirely new metropolitan areas.

The area that I have identified as Megalopolis consists of 52,310 square miles stretching across 12 states, one district (District of Columbia), 124 counties, 13 metropolitan areas and the four major metro regions of Boston, New York, Philadelphia and Washington-Baltimore. The display of data for such a complex area creates difficulties within the confines of a single text. The reader is directed to the electronic atlas of Megalopolis at http://www.umbc.edu/ges/student_projects/digital_atlas/instructions.htm where more than 60 maps of social and economic data are cartographically presented. This is an indispensable source of information that complements and contextualizes the discussion in this paper.

Population Concentration and Dispersal

In 1950 Megalopolis had a population of almost 32 million people. One in four of all US residents lived in this region. By 2000 the population had increased to almost 49 million, 1 in 6 of the US population. In 1950 the average population density was 610 persons per square mile - by 2000 this had increased to 931 persons per square mile (see [Table 2](#)). Megalopolis is still the largest single concentration of population in the US.

The environmental impact of this population is enormous: more people driving more cars to more places; more people running dishwashers, flushing toilets and showers; more people in more and ever bigger houses. Megalopolis is arguably the most environmentally impacted region of the country subject to the constant, mounting stress of a rising population with an ever-growing list of needs and desires.

Consider automobiles. Applying the standard estimates of one car for every 5 people in 1950 and 1 car for every 2 people in 2000 yields a total of 6.4 million cars in 1950 and 24.25 million cars in 2000. In the same surface area, the number of cars has almost quadrupled. And this total does not include the buses, cars and trucks passing through this region from the outside. There are now, at the very lowest estimate, over 24 million autos releasing exhaust, needing roads and requiring parking spaces. The landscape has been redesigned to give these cars the space and freedom to move throughout the region.

And water usage: in 1950 daily per capita water withdrawals for the US totaled 1027 gallons, and by 1995 (the latest available statistic) this figure had increased to 1,500 gallons per capita per day. In Megalopolis, not only has the population increased but so has the daily withdrawal

increased by 50% per head. These statistics need to be treated with some care: national statistics tend to overestimate rates of withdrawal since per capita water usage is less in urban areas than rural areas. However, while the absolute amounts are only very rough estimates, their direction is clear. Total water withdrawal increased in the region over 150% from 1950 to 2000.

A similar picture emerges for municipal solid waste generation. In 2000 the population of Megalopolis generated approximately *one hundred thousand tons of garbage per day*. Consider the case of New York City, which each day generates approximately 12,000 tons of municipal waste and an equal amount of waste from businesses that are collected by private companies. Since the closing of the Fresh Kills landfill in Staten Island in 2002, the city of New York now has an elaborate system for the transfer and disposal of the municipal waste. Trash is collected and hauled by 550 trash trucks to transfer stations in the city and New Jersey and then transported for incineration in Newark and dumping in landfills in Pennsylvania, New Jersey and as far south as Virginia.

Whatever the measure, it is the same story of increasing population growth in association with increased affluence and spiraling consumption producing a greater environmental footprint and increased strain on the natural systems that sustain and nurture life. As more population crams into the region, an incredible cost is exacted by the environmental transformation that is wrought. Close to 50 million people, with the greatest environmental impact per head in the history of the world, now live in Megalopolis.

Megalopolis is the most densely populated area of the most densely settled region of the country. The figure for population density in Megalopolis is more than ten times the national figure. While there are almost 80 people per square mile in the US, there are almost 930 people per square mile in Megalopolis.

Suburban Sprawl

Significant variations within Megalopolis should be noted. What stands out, quite literally, in 1950 is the tower of enormous population density in New York City and the immediate surrounding area. Other smaller □ towers' of density right across the map, the cities of Washington DC, Baltimore, Philadelphia, and Boston. The dominant pattern is of high-density cities surrounded by a flat plain of low density. Over the fifty-year period, the towers of high population density, apart from New York City shrink as the population flows out from the cities into the surrounding areas. The figures provide a striking visual image of the liquidity of the city as the towers of population ooze into the surrounding areas.

In 1950 the population of Megalopolis was concentrated in the urban cores: over one in every two of the total population lived in the central cities. By 2000 less than one in ten lived in these same areas. By 2000 much of the population and vitality of the region had shifted to the suburban counties. The region changed from a big city population to a much more fully suburbanized agglomeration. [Table 4](#) highlights the loss in selected big cities and [Table 5](#) indicates the levels of suburban growth.

Suburban Diversity

While we have made a distinction between declining central city and expanding suburbs, it is important to note that the traditional 'suburb divide' no longer suffices as a standard measure of comparison. Puentes and Warren (2006) identify what they call 'first suburbs', defined as counties that were metropolitan counties adjacent to a metro core in 1950. More than a third of the population of this region live in the first suburbs. [Table 6](#) shows how the population of Megalopolis is now distributed amongst central cities, first suburbs and newer suburbs.

The data tells two stories. The first is of the general spread of the population first into the inner ring of suburbs from 1950 to 1970, then into the newer suburbs from 1970 and especially since 1990. Grafting onto this general Megalopolis-wide pattern are regional differences with the inner ring suburbs around DC growing more rapidly.

A Return to the City

While the 50-year data range shows decline in central city areas, when we break it down by decade a more varied patterns emerges. Since 1990 and in some cases 1980 there has been a small but significant rebound in certain cities. Between 1990 and 2000 central city areas in New York such as the Bronx and Queens increased their populations by respectively 10.7% and 14.2%, representing absolute increases of 128,861 and 277,781. This trend reverses decades of population loss. Another example is Boston. In 1950 the city had a population of 801,444. The population declined each census until 1980 when it bottomed out at 562,994. Thereafter the population increased to 574,283 in 1990, and to 589,141 in 2000.

What is happening? Certain cities, such as New York and Boston, unlike Baltimore and Philadelphia are experiencing a slight population rebound because the local economy is buoyant enough to generate employment growth. The population returning to the central city consist of two main types; single person or non-child professional households, and foreign-born immigrants. For both groups the return is fuelled by employment and housing opportunities not available in the suburbs.

Not all central cities experienced rebound. Both Philadelphia and Baltimore saw continued decline from 1990 to 2000. In Philadelphia the population declined from 1,585,577 to 1,517,550 and declined even further to 1,414,245 in 2004. In Baltimore the city's population declined from 736,014 in 1990 to 651,154 in 2000 and by 2004 the population had slipped to 609,779. People did move into both cities but there was a net loss as those leaving were more than those arriving. And in both cities the remaining population was proportionately more poor and black.

Summary of Population Change

- Megalopolis is the largest and densest urban region the US with a 2000 population of almost 49 million.
- Megalopolis increased its absolute population but declined slightly in relative significance.

- There has been a marked suburbanization of the population; two out of every three people now live in suburban counties.
- The inner ring suburbs grew very quickly from 1950 to 1970, leveling off after 1990. Growth since 1990 is more directed at the newer suburban counties.
- Central cities populations declined in absolute and relative terms. This has negative implications for the fiscal health of cities.
- One major exception to the general picture of central city decline is the continuing vitality of New York City.
- There is evidence of population rebound in selected central city areas, such as the Bronx and Queens in New York and Boston, fuelled in large part by a more recent influx foreign born immigrants.
- The greatest area of growth was in the southern part of the region, especially in the suburban counties of Maryland and Baltimore around Washington DC and along the Washington-Baltimore corridor. This growth embodies the increasing economic importance of the federal growth machine.
- Megalopolis consists of a wide swathe of suburban affluence contrasted with peripheral counties of declining economic vitality and sites of big city poverty. There is early evidence of some decline in selected inner ring suburban areas.

Economic Restructuring

Over the past fifty years a major economic change has been the decline of manufacturing, the growth of services and the growing importance of government. I will look at each of these elements.

Deindustrialization

Manufacturing has long played an important role in the life of the region as a significant employer and major source of revenue. In 1900 Megalopolis had almost 1 in 2 of all manufacturing workers in the entire country. By 1950 this number had fallen to 1 in 3.

In 1958 Megalopolis had 3,154,916 production workers, making up 27.0% of the national total. By 1997, the numbers had fallen to 1,498,706, only 12.3% of the national total. There was a significant deindustrialization of the region in both absolute and relative terms. The region has lost over 1.5 million manufacturing jobs since 1958. This region is no longer the manufacturing powerhouse of the US economy as manufacturing jobs across the nation have shrunk due to increased worker productivity, and as a greater proportion of spending is allocated to services rather than goods. There has been also a shift in manufacturing employment shifted to other parts of the national and global economy.

The Growth of Services

With the decline in manufacturing, there has been an increase in services, which now accounts for 1 in every 3 US workers and almost 30% of the Gross National Product (GNP).

Megalopolis remains a major center of selected producer services. Over 1 in every 2 workers in the nation in the important sector of finance and insurance workers are located in Megalopolis. And 1 in every 10 workers are based in the New York metro area. The figures are even higher for the subcategory of securities intermediation, 81% of all workers in the US in this category are employed in Megalopolis, with 33% located in the New York metro area.

Although Megalopolis shed its manufacturing jobs, it is home to information processing sectors. Metro locations are still important for these producer services. The three sectors noted in [Table 7](#) employed a total of 5,628,668 people in 1997, with 1,927,48, or 34.2% in the four metro areas of New York (0.974 million), Washington DC (0.464 million), Philadelphia (0.266 million) and Boston (0.222 million).

The key sector of Professional, Scientific and Technical services is also important in Megalopolis. There are almost 3 million workers employed in this sector, well over a half of all such workers in the entire country. The largest single centers are in Washington DC with 285,204 and in New York City 249,161. In 1997 the two metro regions of New York and Washington-Baltimore had respectively 569,807 and 346,773 of these jobs, 18% of the national total. Megalopolis is now more of an information-processing center than a metal-bashing economy. It is the analysis of information rather than the manipulation of metal that is now the defining economic characteristic and leading economic sector in Megalopolis.

The Importance of Government

One important change in the national economic picture is the rise of government and the corresponding increase in the importance of the public sector to the operation of the private market. Two elements are important, the allocation of federal government funds and the growth of public employment.

According to the 2000 Census, the national per capita spending of federal funds and grants was \$5,562. The Megalopolis per capita figure is \$6,902, well above the national average.

The US government requires a massive amount of goods and services. Government contracts are highly valued as they are always paid, backed as they are by the weight of government authority. Each month *The Washington Post* publishes a list of contracts awarded in the technology sector. The following contracts are taken randomly from the issues of March 28 and December 5, 2005, a small sample of the drip feed of government procurement contract into the local economy:

- Anteon of Fairfax awarded \$117 million 5-year contract to support Army's Casualty Care program in Iraq.
- Centurum of Arlington awarded \$46.7 million 6-year contract for technical service support for the US Navy's battlefield sensors.
- General Dynamics of Fairfax awarded \$2.3 billion 5-year contract for information technology services to the US Army.
- ITT of Alexandria awarded a \$57.3 million contract from Space and Missile Defense Command for lethality testing.
- Radian of Alexandria awarded a \$4.3 million contract from US Navy for air conditioners.

This brief sample is only small glimpse of the tight nexus of the military-industrial-scientific complex that has grown up around Washington DC. Federal contracts are the basis for the spectacular economic growth of the Washington metro area.

Government procurements, at the federal, state and local levels also lead the way in giving encouragement and preference to female-owned and minority-owned businesses. In the past twenty years these programs enabled a more diverse group of people to benefit from government contracts. The creation of a female and minority entrepreneurial class has been aided enormously by preferential treatment in the awarding of government contracts.

Government spending influences private market decisions. The location of public highways, for example, has guided the form and level of private investment in suburban areas. The edge cities of out-of-town shopping malls and bedroom communities are as much creations of public spending as they are functions of private investment. Public investment provides an important container for private investment.

Government spending also plays a role in the location of fixed-asset investments such as military bases and research centers. Across Megalopolis there is a wide scatter of military bases. In some cases the military base is a major employer in the local economy. Fort Belvoir is the largest single employer in Fairfax County in Virginia. The base employs 24,000 workers. Fort Meade in Anne Arundel County in Maryland generates 39,000 jobs and Fort Monmouth is the third largest employer in Monmouth County New Jersey. The plans announced by the Base Realignment and Closure Commission in May 2005, had important consequences for the local economies of Megalopolis. The largest absolute effects will be felt in the greater Washington metro with a projected net loss of 26,238 jobs with the closure of such bases as the Walter Reed Army Medical Hospital and the growth of over 27,000 jobs in the suburban districts with major expansions planned for Fort Meade (5,400 new jobs) and Fort Belvoir (18,000 new jobs). While the absolute numbers were smaller elsewhere in the region, the relative effects were substantial. The planned loss of 8,457 jobs at the New London submarine base in Connecticut and the complete closing of Fort Munroe in New Jersey will have devastating effects on the local economies. Fort Munroe directly employs 5,272 civilian and military workers and indirectly supports 20,000 workers in the local region.

There are also civilian government institutions. One of the fastest growing counties in Megalopolis is Montgomery County in Maryland. Its population grew from 164,401 in 1950 to 873,341 in 2000; a 431% increase while the increase for Megalopolis as a whole was only 53%. The county has a concentration of federal research laboratories and regulatory agencies that in turn attract high technology companies, service industries and vendors. Montgomery County is home to nineteen major federal research and development and regulatory agencies, including the National Institute of Standards and Technology, the National Institutes of Health, National Oceanic and Atmospheric Administration, Naval Medical Center, Nuclear Regulatory Commission, the Food and Drug Administration, the Department of Energy, Walter Reed Army Medical Center, U.S. Army Diamond Labs, and the Consumer Products Safety Commission. The National Institute of Health in Bethesda, for example houses 12 research institutes employing 20,000 workers and has grants, contracts and a procurement budget of \$9 billion. In the 1993 contract year, Montgomery County companies received 19 percent (\$159.2 million) of NIH's

total US research budget. The National Institute of Standards and Technology employs 2,600 scientists at its primary site at Gaithersburg in Montgomery developing measurement standards necessary to commercialize for industry. The Food and Drug Administration (FDA), headquartered in Rockville in Montgomery employs 4,500 people. A new \$500 million consolidated campus for the FDA is under construction at White Oak in Montgomery County. With this steady injection of federal dollars and the creation of secure and well-paid employment in the scientific research sector, it comes as no surprise that Montgomery ranks as the ninth most affluent county in Megalopolis with a median household income in 1997 of \$62,130; the average for Megalopolis and the nation was \$46,684 and \$37,005. More than one in every two people aged over 21 in the county have a bachelor's degree, the national figure is just under one in every four.

Federal spending constitutes an important part of the economic propensity and population increase of this southern rim of Megalopolis.

In the past fifty years Megalopolis has undergone a profound economic transformation that includes a decline in the amount of land devoted to agriculture, a marked loss of manufacturing employment, the growth of services, the rise of government as a powerful economic motor, the suburbanization of retail and the overall shift of jobs from cities to suburbs.

Areas of growth include the development of a military-industrial-scientific complex around Washington DC, and the dynamic financial services sector in the New York metro area. Services have replaced manufacturing in the successful local economies. The leading economic sector in Megalopolis is the manipulation of information rather than the shaping of metal. Growth has taken place in the information economy, public services and financial services.

Urban Places in Megalopolis

In order to identify different places within Megalopolis we used 2000 data from Housing and Urban Development (HUD) that gave us a range of variables for each census place (see Vicino, Hanlon and Short, 2007 for more details). Our data matrix was 39 variables for 2,353 places. Using the statistical technique of principal components analysis, we computed component scores and grouped the scores. The resultant typology of places is shown in [Table 8](#). While the large swathe of middle class places make up most of suburban Megalopolis there are also extremes of affluent and very poor places. Immigrant gateways that house the increasing number of foreign-born were found and around the Washington DC we identified areas of black middle-class often associated with public sector employment.

Global Connectivity of Megalopolis

Megalopolis is a central hub of global flows. We looked at two types of global connectivity. First, the work of the Globalization and World Cities research group based in the UK, provides a metric of economic global connectivity. They calculate data the connectivity of cities all over the globe using producer services such as banking insurance advertising and law. [Table 9](#) shows that this is one of the pivotal points in the advanced producer. [Table 10](#) provides data from the

research group at George Washington University who look at global flows of immigrants. Again New York City predominates.

Planning Issues

The issues facing this large, liquid metropolis are many and varied. While each city, county and municipality face unique problems associated with their particular location, there are a number of issues that run across these boundaries. I want to consider four: sprawl, transportation, affordable housing and the metropolitan fragmentation of government.

Sprawl

By sprawl I mean the liquid suburban expansion that has spread out across the region in a low-density, largely unplanned fashion. Sprawl is the sum of myriad small and large residential and commercial developments that spread an urban penumbra across the landscape. Sprawl provides some benefits. A wide scatter of employment, retail and commercial development spreads economic opportunities throughout the metropolis. But there are costs to sprawl in addition to the ones already mentioned. The first is the reliance on oil-based, private transport. Sprawl is a form of development that is too diffuse to support public transport or easy walking. The heavy and in some cases total reliance on private auto transport imposes a heavy environmental price in terms of air pollution, and the increasing dedication of space for roads and parking. The reliance of a built form precariously balanced on one fossil fuel with large and fluctuating costs raises issues of long term sustainability.

There are ecological costs. Urban sprawl creates more paved surfaces. When 10 percent to 15 percent of land surface is paved then increased sediment and chemical pollutants reduces water quality; at 15 percent to 20 percent there is markedly reduced oxygen levels in streams; and at 25 percent many organisms die. Volstad et al (2003) is just one of the many studies that decisively document the local impairment of streams with the increase of urban land use in Megalopolis.

One planning response to sprawl is the *smart growth* initiative that stresses mixed land uses and compact building designs that create high densities with lower environmental impact. Smart growth has emerged as a strategy to deal with the constant pull of development towards greenfield sites on the city's edge; it focuses on existing developments in order to utilize their infrastructures and to preserve open space and farmland. It is a framework for municipalities facing heavy development pressure and looking for principles and policies to halt the abandonment of urban infrastructure and the costly rebuilding in greenfield sites.

In 1996, the Smart Growth Network enunciated some principles: mix land uses, design more compact buildings, construct walkable communities, create a sense of place, preserve open space, direct development towards existing communities, provide variety of transport choices, make fair, predictable and cost-effective decisions, and encourage community involvement in development decisions. If implemented, smart growth may halt the seemingly relentless expansion of the suburban fringe into open spaces.

Transportation

The main transportation issue facing this giant urban region is congestion. The level of traffic is on the verge of overwhelming the infrastructure. The Texas Transportation Institute publishes regular measurements of travel times and congestions costs for all metro regions in the US. According to the 2005 report the Washington metro area has the third worst traffic congestion in the country, as measured by annual delay in hours, New York is 13 th, Baltimore is 17 th and Philadelphia is 27 th (http://tti.tamu.edu/documents/mobility_report_2005.pdf). When congestion costs, which include estimates of the costs of delay and extra fuel costs, are factored in, New York is the second most costly at \$6770 million, DC has is the seventh at \$ 2463 million and Philadelphia is tenth with \$1334 million. An indication of both the intense congestion in Megalopolis as well as the extent of non-workplace separation in the region is available from the American Community Survey of commuting times in 2002. [Table 11](#) shows the times for cities and counties in the region with the longest commuting times. The cities and counties of Megalopolis have the longest times in the whole country.

The road networks are so overloaded at key points that minor accidents can soon lead to major traffic snarls and major delays. The increased traffic is also having a serious impact on the infrastructure because as more cars and heavier trucks pound the roads, the need for repair and maintenance expenditure increases.

Affordable Housing

The increase in house prices in Megalopolis raises real problems of housing affordability. As prices rise, households have to divert an increasing part of their income to pay rising housing costs. Encouraging owner-occupation is the government's main and often only housing policy. The extension of owner-occupation to lower and lower income groups is not without its problems. The number of homeowners now spending more than 50% of their income on housing rose by 27% between 1997 and 2001 (US Department of Housing and Urban Development, 2005). Households respond to the growing housing-income gap by lengthening their commutes to work. This rise in commuting means more traffic congestion, an increase in commuting time, communities left more vulnerable as lower-income but essential service workers such as police, teachers, firemen and healthcare workers have to live further out, and business growth is sometimes stifled due to difficulties in recruiting labor locally. In some case the private market responds as workers can leverage a tight job market into increase wages, but the housing squeeze is often toughest for the lower-income, service workers.

Metropolitan Fragmentation

The large number of local government units in Megalopolis is, in itself, not a problem. There are some, public choice theorists being the most vocal, who would argue that this is a healthy state of affairs. A large number of different municipalities in a city region allow residents to choose a variety of tax loads, school districts and forms of government. There are other arguments in favor of multiple municipalities. They tend to be smaller, and small municipalities are closer to the needs of individual citizens, more accessible, more responsive. Smaller municipalities allow ordinary residents and citizens to be engaged. These are convincing arguments for the *status quo* that cannot be dismissed easily. However, there are also problems associated with this fragmentation. We can consider two.

The first is a central city-suburban fiscal disparity. Central cities, especially those with shrinking populations, have a declining tax base and lower income population while the suburbs have an expanded tax base and a relatively affluent population. Cities have relied on the property tax as a source of revenue. With declining population and an out movement of businesses and higher-income households, the tax base shrinks while the concentration of poorer people places greater demand on service provision such as police, welfare and social services. The older cities also have an ageing infrastructure that is expensive to maintain and replace. Central cities have to deal with the politics of economic decline while many suburbs get to contend with the management of growth. While central cities may witness a downward spiral of low tax base, leading to poor services that cause more people to leave, thus reducing the tax base even further, the growing suburban communities may experience a benign cycle of new population, generating more tax revenue, thus allowing better services, thus attracting even more people. This creates a tremendous inequity in municipal funding, a problem that is exacerbated by the decline of federal funding for many social programs. Municipal fragmentation, that separates out poor cities from affluent suburbs, reinforces the inequalities in US society.

A second related problem is public education. In the US, the federal government has a very limited role in providing funding and resources to public schools. School funding is dominated by state and municipal sources. States provide on average 50% of total school budgets, local districts around 45%, based on local property taxes, while the federal government only constitutes 5%. At the school district level disparities in wealth feed directly into educational standards and performance. Poor school districts cannot afford to spend the same as richer school districts.

The Need for Regional Planning

Megalopolis is one of the most important urban regions in the US and indeed in the world. Its internal coherence has deepened as lengthening journeys to work, widening regional job markets and dispersing housing markets effectively link the separate metros into overlapping fields of influence and interconnecting flows of people and goods. And yet, there is the increasing sense that such problems as transport congestion, affordable housing, pollution, waste management and economic competitiveness are not only similar around the region, they are shared problems whose solution is predicated upon more and wider regional systems of co-operation.

The task facing managers of globalizing city regions is increasing global competitiveness with local livability. It is important to have an efficient spatial economy that also provides a good quality of life to its residents. It is important to ensure equity, ecological sustainability and efficiency.

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Table 1 Megalopolitan regions in the US

Name	Largest Metro	2000 Population (mill.)
Southland	Los Angeles	20.96
Valley of The Sun	Phoenix	4.09
NorCal	San Francisco	11.56
Peninsula	Miami	12.83
Northeast (Megalopolis)	New York	49.18
Cascadia	Seattle	7.11
Gulf Coast	Houston	11.53
I-35 Corridor	Dallas	14.46
Midwest	Chicago	39.48
Piedmont	Atlanta	18.39

Source: after Lang and Dhavale, 2005

Table 2 Population change in Megalopolis

	1950	2000
Population	31,924,488	48,720,108
As % of US population	20.9	17.3
Pop density (sq mi)	610.2	931.3
US pop density (sq mi)	42.6	80.5

Table 3 Population redistribution in Megalopolis

	1950	2000
Population of central cities as % of Megalopolis population	16,435,953 51.4	16,453,21 33.7
Population of suburban counties	6,284,393	31,228,502
As % of Megalopolis population	19.6	64.0

Table 4 Areas of population loss in Megalopolis

Population

	1950	2000	% change
Baltimore	949,708	651,154	-31
Boston	801,444	589,141	-26
Philadelphia	2,071,605	1,517,550	-27
Washington DC	802,178	572,059	-29

Table 5 Areas of population growth in Megalopolis

Population

	1950	2000	% change
Prince William Co., VA	22,612	280,812	1142
Howard Co., MD	23,119	247,842	972
Fairfax Co., VA	98,557	969,749	884
Ocean Co., NJ	56,622	510,916	802
Loudoun Co.,VA	21,147	169,599	702

Table 6 Population distribution in Megalopolis

	2000 Population (mill.) % of Megalopolis Pop.	
Central city	6.4	33.5
First suburbs	16.7	35.5

Newer suburbs 15.1 31.0

Table 7 Financial services in Megalopolis, 1997

Category	Number of workers	as % of US total
Finance and Insurance	2,534,209	43
Securities Intermediation	568,939	81
Information & Data Processing	113,665	33
Professional, Scientific & Technical	2,980,794	57

Source: Economic Census

Table 8 Urban places in Megalopolis

	Demographics	Income	Education and Employment	Housing	Examples
Affluent Places	Mostly white; married parents	Very high income; low poverty	College graduates; management occupations	Newer, large housing stock; high homeownership rates	Scarsdale , NY ; Chevy Chase , MD
Underclass Places	Black; Hispanic; single parent families	High poverty; low income	High school drop-outs	High rental; older housing stock	Camden , PA ; Asbury Park , NJ
Black Middle Class Places	Mostly black; some single-parent families	Middle income; low poverty	College graduates; high public sector employment	Built after 1970s; high homeownership rates	Bowie , MD ; Mitchellville , MD
Immigrant Gateway Places	A quarter foreign born; Hispanic and other races high; mostly married couples with children	Low to middle income; some poverty	College graduates; some high school drop-outs; varied education levels	High rental; low homeownership rates	Hoboken , NJ ; Tysons Corner , VA
Middle America Places	Mostly white, married families; □1950s image□ of suburbia	Low to middle income; low poverty	High school graduates; some college	Mostly homeowners; postwar bedroom communities	Levittown , NY ; Dundalk , MD

Table 9 Global connectivity of cities in Megalopolis

City	Global network	Rank
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	connectivity (max=1)	
New York	0.976	1
Washington	0.418	7
Boston	0.351	8
Philadelphia	0.268	13
Baltimore	0.178	24
Hartford	0.142	32
Wilmington	0.059	40

Source: after Taylor and Lang, 2005

Table 10 Global urban immigration rank of cities in Megalopolis

City	Global Urban Immigration Rank
New York	1
Washington DC	16
Boston	24

Source: after Benton-Short et al, 2005

Table 11 Commuting times in cities and counties in Megalopolis, 2002

City	Average daily commuting time (mins)	National rank
New York	38.4	1
Philadelphia	30.3	3
Baltimore	29.7	5
Washington DC	29.4	6
Boston	28.2	10
Newark	27.6	11
County		
Bronx , NY	41.8	1
Queens, NY	41.4	2
Richmond, NY	41.2	3
Kings, NY	39.9	4
Prince William , VA	35.5	5
Prince George 's, MD	34.6	6
Nassau, NY	34.1	7
Monmouth, NJ	32.4	11
Suffolk, NY	32.0	12
Westchester , NY	32.0	12
Plymouth , MA	31.7	14
Rockland , NY	31.6	15
Montgomery , MD	30.9	16
Orange, NY	30.2	22

Somerset, NJ	30.0	23
Dutchess, NY	30.0	23
Ocean, NJ	29.8	26
Hudson , NJ	29.7	27
Middlesex , NJ	29.7	27
New York , NY	29.4	30
Anne Arundel, MD	29.0	35
Howard, MD	28.8	37
Fairfax , VA	28.6	38
Rockingham , NH	28.5	39
Bergen , NJ	28.5	39

Source: US Census, American Community Survey: <http://www.census.gov/acs/www/index.html>
(accessed 2 October, 2006)

NOTE

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