where we stand:
community indicators for metropolitan philadelphia

mpip2005

metropolitan philadelphia indicators project

a project supported by the william penn foundation and temple university

acknowledgments

The work presented in this publication was assisted by many people who helped us refine our approach, frame our questions, and identify information sources. We wish particularly to acknowledge the encouragement and guidance of the William Penn Foundation's late President Kathryn Engebretson, whose vision of evidence-based civic development was the inspiration for this project. We extend our thanks as well to Gerry Wang and Helen Davis Picher of the Foundation for their consistent support and advice.

At Temple, the President and the Office of the Provost have provided both material support and sustained interest in this work. Two other Temple administrators have been helpful collaborators on the household survey that is incorporated into the project: Joseph McLaughlin, Assistant Dean of the College of Liberal Arts, and Michael Hagen, Director of the Institute for Public Affairs.

This project benefits from the guidance of its Project Advisory Committee whose members are listed on the inside cover of this report. Many of them have individually consulted with us on various aspects of the report. We particularly want to acknowledge the ongoing guidance of Carol Collier as we seek to strengthen our environmental indicators.

The Urban Institute in Washington, D.C., has helped the project immeasurably by linking us to researchers around the country who are developing indicators in other metropolitan areas. At the Urban Institute, the National Neighborhood Indicators Partnership, led by Tom Kingsley, and the Culture, Creativity and Communities Program, directed by Maria Rosario Jackson, welcomed us as partners in their national networks.

The survey component of this project would not have been possible without the strong contributions made by the Institute for Survey Research, especially Len LoSciuto and Peter Mulcahy. In the midst of the political season in Fall 2004, working in a region over-saturated with political opinion polling, they overcame the challenge and effectively fielded a household survey whose returns are incorporated into this report.

Our incomparable editor, Linda Carbo, has helped us avoid mistakes and present a document that is comprehensible and accurate.

Finally, an especially important group of advisors to this report were those who helped us evaluate the strengths and weaknesses of the five-part typology of communities used throughout the report to group together municipalities that share important traits. Their names are listed on the inside cover of this report. They offered invaluable insights based on their grounded knowledge of the communities. We adopted some of their suggestions while choosing not to implement others. We sincerely appreciate their time and thoughts. We alone, however, take responsibility for the decisions reflected in the data and interpretations contained herein.

Carolyn Adams
David Bartelt
David Elesh
Leonard LoSciuto
Mark Mattson

introduction

This is our second annual report measuring conditions and tracking changes in communities across the greater Philadelphia region (defined as the central cities of Philadelphia and Camden plus the suburban counties of Bucks, Chester, Delaware and Montgomery in Pennsylvania, as well as Burlington, Camden, Gloucester, and Salem in New Jersey). Included in this report are two types of information:

(1) a set of social, environmental, and economic indicators portraying the quality of life in local communities

(2) a household survey conducted by Temple's Institute for Survey Research which asked respondents across the region to evaluate the quality of life in their communities

From dozens of different data sources, we have chosen indicators of community well-being that describe the variety of communities in the region, the diversity of people within the region, the places where we live and work, and the dimensions of our communities that we find significant. Since the city of Philadelphia itself contains widely differing communities, wherever appropriate we have subdivided Philadelphia into the dozen sub-sections used by the Philadelphia City Planning Commission as Planning Analysis Districts. In numerous places, this report compares our region with eight other major metropolitan areas, four of which are flourishing regions that may serve as models (Boston, Chicago, Minneapolis, and Phoenix), along with two older industrial areas similar to ours (Detroit and Cleveland), and two regional competitors (Baltimore and Pittsburgh).

In the first edition of Where We Stand, MPIP classified this region's 353 municipalities into five community types that reflected how population and housing characteristics differed among communities. During the past year, we were prompted by feedback from our Project Advisory Committee and from other knowledgeable professionals working in the suburban counties to re-examine the statistical analysis that generated that five-part typology. We added and subtracted variables to see how that would change the typology. We considered using data sets beyond the U.S. Census of Population and Housing, which had been our data source for the initial cluster analysis. In the end, we found the additional statistical manipulations yielded no better classifications than the original ones. We did, however, re-classify a handful of communities, reflecting instances in which the overall character of a municipality was disproportionately affected by a substantial population living in group quarters (e.g., a prison or detention facility), or where there was some glaring inconsistency between what census data suggested and what appeared to be the case "on the ground."

As we did last year, we provide more detailed presentations of both maps and underlying data, as well as links to additional information sources at our website (www.temple.edu/mpip), which also has available a copy of the survey instrument we used to assess household opinions about conditions in communities.

table of contents

chapter 1: the region's communities

The Philadelphia region consists of more than five million residents living in more than 350 separate cities, towns, townships, and boroughs, often in distinct communities and neighborhoods within those places. This year's report begins by looking at changes in the level of population in these communities, and at some of the ways that the region is changing.

indicator 1.1: regional community variety

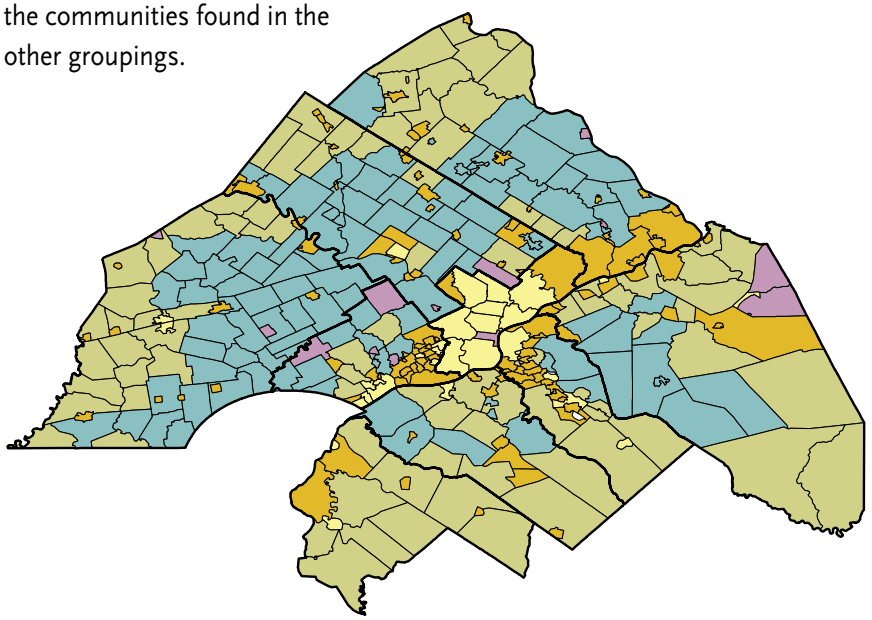
As noted in the introductory materials, we have made some adjustments to last year's community typology and renamed the five types of communities: Urban Centers, Established Towns, Stable Working Communities, Middle Class Suburbs, and Affluent Suburbs. These new names better reflect both the major defining characteristics of each group and some of the dynamics within each category. Communities that have the greatest concentration of population (density) dominate the Urban Centers category (Figure 1.1). Established Towns include many of the communities that are not so densely populated as the urban clusters, but typically have a distinctive "main street." The Stable Working Communities encompass a wide range of places. Middle Class Suburbs and Affluent Suburbs are less dense, but are distinguished from one another by income-related differences. Indeed, as Figure 1.1 indicates, there are clear differences among the categories along the income dimension.

The large number of communities classified within the latter three groups suggests that there is significant variation within these groupings. A more complete discussion of community types and the diversity within each category will be available on the project web-site when this report is released. We remind readers that these categories are not meant to carry with them any normative meanings or to suggest that all communities within each group are identical to one another. Rather, communities in each category are more similar to each other (within the dimensions that we used in the cluster analysis) than they are to the communities found in the other groupings.

FIGURE 1.1: Population size and percent of households with incomes over $75,000 by community type

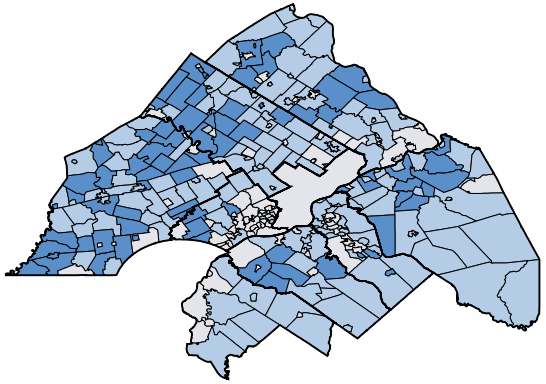
	Number of communities	*Average population*	*% over $75,000*
Urban centers	33	46,020	12%
Established towns	15	12,192	32
Stable working communities	119	10,000	23
Middle class suburbs	89	9,180	33
Affluent suburbs	108	12,940	50

Source: U.S. Census, summary file 3, 2000.



MAP 1.1: Community types

indicator 1.2: population change 2000—2003



Loss *Modest growth (<5%)*
Substantial growth (>5%)

MAP 1.2: Change in population, 2000–2003

Source: U.S. Census, Population Estimates Program, 2003.

The long-term trend of declining population in the densest and oldest communities of the Philadelphia metropolitan region continues, as seen in Map 1.2, based on the Census Bureau's estimates of population change at the municipal level. We have summarized the changes in terms of communities that are estimated to have lost population, those that evidenced modest growth, and those with an estimated population increase of more than five percent. Also in Figure 1.2a, we show how these population patterns vary across different communities.

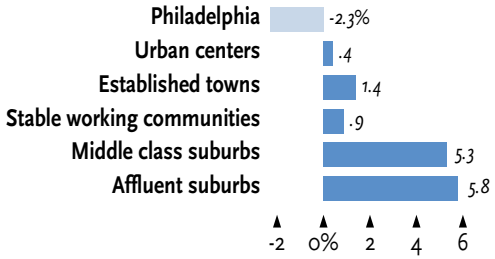


FIGURE 1.2a: Percent change in population by community type, 2000-2003

Source: U.S. Census, Population Estimates Program, 2003.

The U.S. Census estimates that the city of Philadelphia lost about 2.3 percent of its population, while the greatest growth occurred on average in middle class and affluent suburban communities. (Note that because the Census provides estimates only at the level of the municipality, we are unable to focus more closely on the city's Planning Analysis Sections, which we try to do whenever possible.) Other Urban Centers, Established Towns and Stable Working Communities showed modest growth at best, while striking gains of more than five percent were present in both Middle Class and Affluent Suburbs.

The comparison metropolitan areas show variations in population increases during the 2000-2003 period as well. As Figure 1.2b indicates,

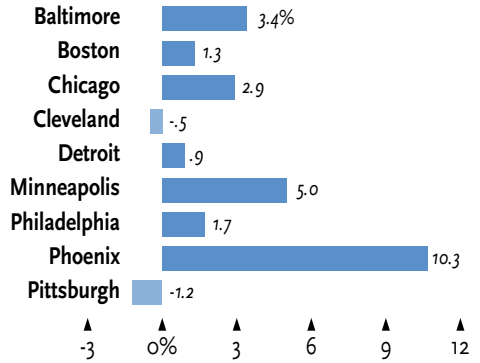
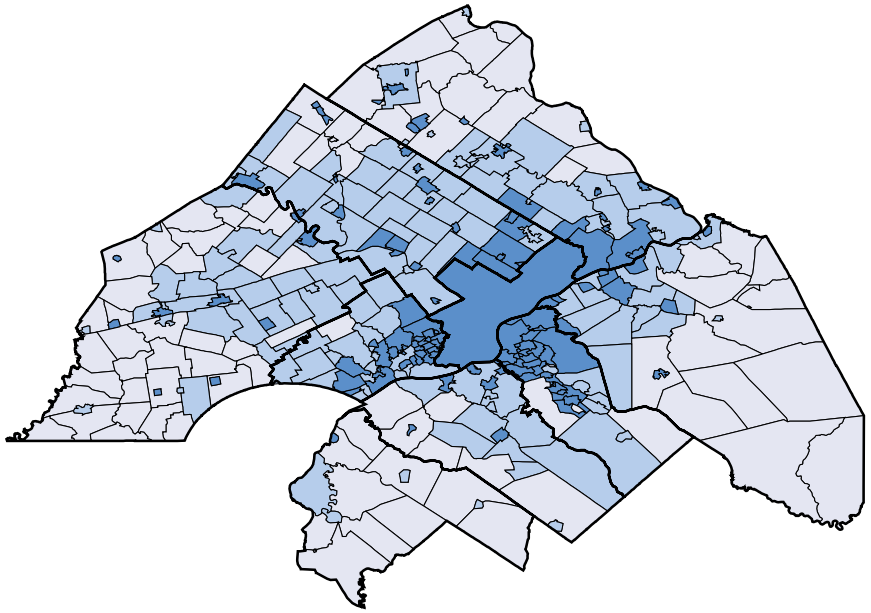


FIGURE 1.2b: Population change 2000–2003 in selected metropolitan areas

Source: U.S. Census Bureau, American Community Survey, 2003.

both Pittsburgh and Cleveland suffered a net loss in their estimated population size (based on data from the American Community Survey, or ACS; the technical notes to this report contain a full description of the ACS and how metropolitan area estimates were derived). Philadelphia joined Boston in a low-growth pattern, while Baltimore, Chicago, and Minneapolis were more robust in their population growth pattern. Phoenix showed dramatic growth, with a greater than 10 percent estimated increase in the 2000 to 2003 time period.

indicator 1.3: population density 2003



Lowest (<500/sq. mi.) *Medium* *Highest (>2500/sq. mi.)*

MAP 1.3: Population density

Source: U.S. Census, Population Estimates Program, 2003.

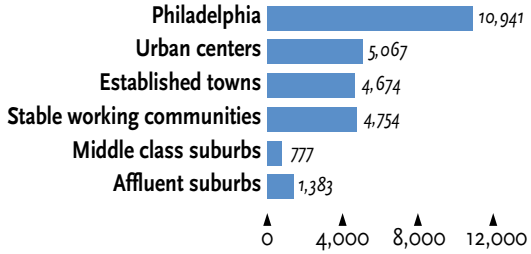
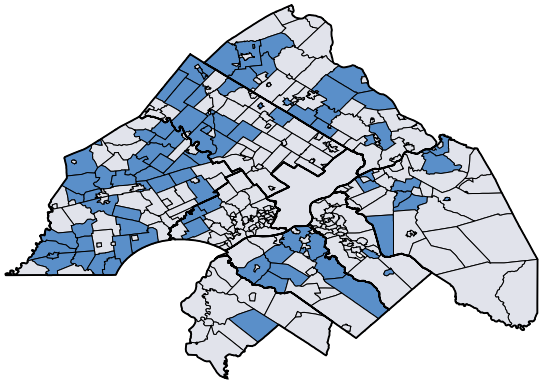


FIGURE 1.3: Density (persons/sq. mi.) by community type

Sources: U.S. Census, Population Estimates Program, 2003; summary file 3, 2000.

Map 1.3 shows where the region's greatest concentrations of residents occur. The high densities in Philadelphia and in the region's Urban Centers, Established Towns, and Stable Working Communities reflect their growth during a much more spatially limited period of regional development. Later suburban development and the popularity of the single-family detached home led to a pattern of much lower density across suburban communities, with some of the communities on the periphery of the region continuing to reflect very low density levels. Another pattern is also evident in Map 1.3: small communities, bounded by neighboring population centers, are frequently among the densest communities in the region, an artifact of their limited geographic scope and limited options for open space.

indicator 1.4: building permits/growth centers



MAP 1.4: Regional development: building permits/1000 housing units

Source: U.S. Census, Housing Permit Data 2001–2003.

Building permits indicate where the greatest residential development activity is taking place in the region. Map 1.4 focuses on the locations of high residential development in the region, measured by the ratio of building permits to the existing housing stock. As was the case in last year's report, the pattern of high average permit activity for the 2001-2003 time period is most pronounced in the communities that are emerging as new residential choices for the region's households, especially in Chester and Montgomery counties, as well as central and northern Bucks County in Pennsylvania. Communities in Burlington, Gloucester, and Salem counties also evidenced substantial activity.

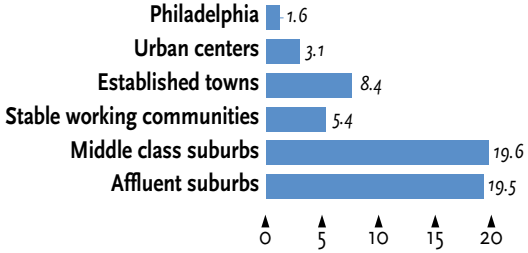


FIGURE 1.4a: Building permits/1,000 housing units by community type, 2001–2003

Sources: U.S. Census, Housing Permit Data 2001–2003.

Since this indicator portrays the number of building permits relative to the existing housing stock in each community (Figure 1.4a), it produces comparatively lower numerical values for municipalities with a large number of existing housing units. However, it is worth noting that if we were to examine instead the total number of residential permits issued in different communities (not taking into account the size of their existing housing stock), Philadelphia and many of the other Urban Centers would show high numbers of permits issued. As was the case with population estimates, permits are recorded only at the municipal level, and we cannot, therefore, develop a more fine-grained examination of within-city differences.

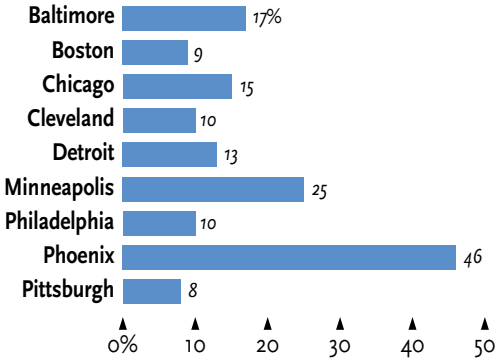


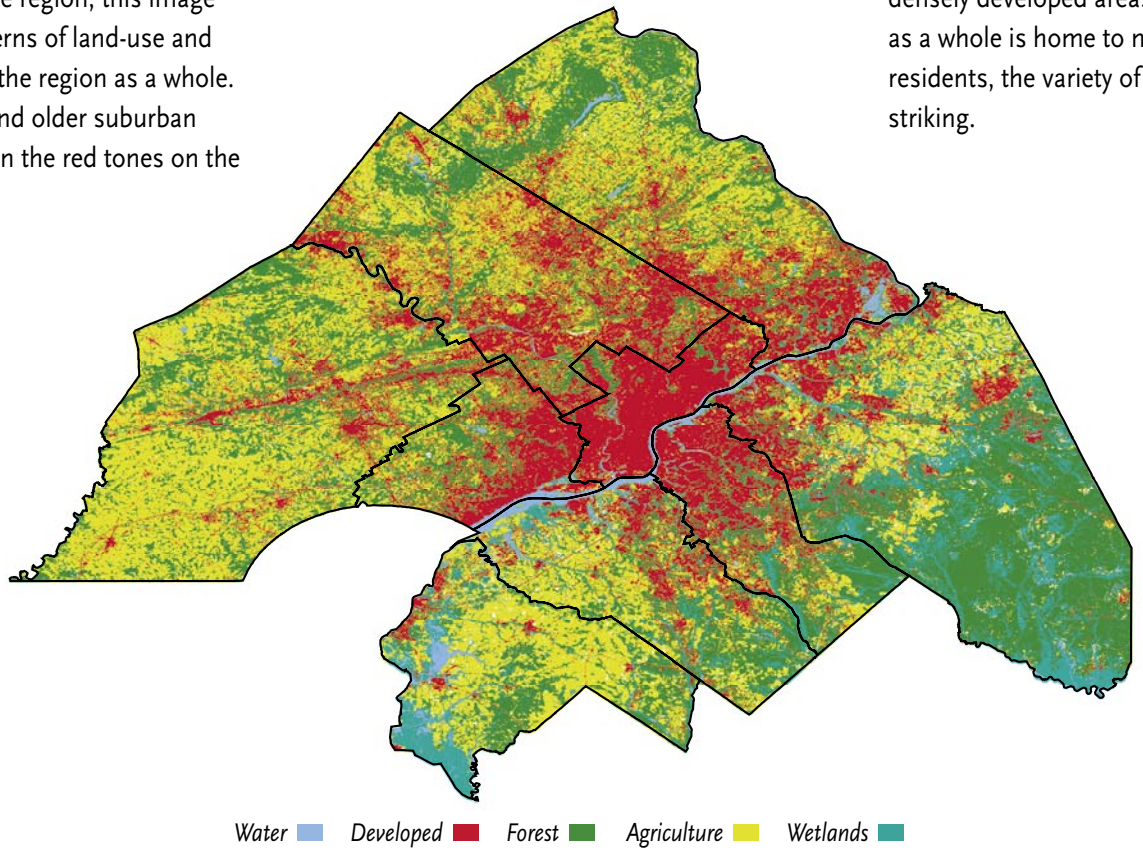
FIGURE 1.4b: Building permit growth 1990–2002 as a percentage of 1990 housing stock in selected metropolitan areas

Source: Harvard University Joint Center of Housing Studies, State of the Nation's Housing, 2004.

Over a significantly longer period, we are able to chart the differential development of our comparison metropolitan areas (Figure 1.4b). Measured by the cumulative number of residential permits issued between 1990 and 2002 as a proportion of the 1990 housing stock, one group of metropolitan areas (Boston, Cleveland, Philadelphia, and Pittsburgh) evidenced between eight percent and 10 percent permit activity levels, with Baltimore, Chicago and Detroit in a group between 13 percent and 17 percent. Minneapolis, and unsurprisingly, Phoenix, showed significantly greater residential development activity over this same time period.

indicator 1.5: land cover

The final indicator in this section marks a new approach to understanding the spatial pattern of development across the Philadelphia region. The map presented here is an interpolation of satellite digital images of the ground cover of the region. Rather than trying to characterize each community within the region, this image suggests the general patterns of land-use and regional development for the region as a whole. Established urban areas and older suburban communities are evident in the red tones on the map, indicating denser development. Patterns of development along major highways that have steadily enlarged the scope of the region over the years are also evident, especially in the areas of central Montgomery and Chester counties, along the Montgomery-Chester County border (the Schuylkill River) and in the further reaches of Burlington, Camden, and Gloucester counties. The Philadelphia region has significant vegetation cover in many of its communities, including both forested and agricultural land, much of which is interspersed with some of the most densely developed areas. While the region as a whole is home to more than five million residents, the variety of physical landscapes is striking.



MAP 1.5: Regional land cover

Source: U.S. Geological Survey, National Land Cover/Land Use Data Set, 2001.

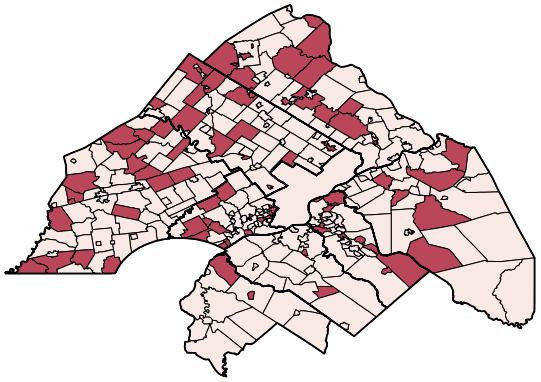
chapter 2: diversity

The diversity of the region's population is increasingly viewed as an asset that bolsters its competitive position in the global economy. Urban observers like Richard Florida have argued that population diversity is an attribute likely to be valued by knowledge workers.[1] Attracted to communities with diverse populations, knowledge workers in turn make the region attractive to high technology firms. Hence, diversity has positive economic pay-offs. Diversity exists not only in the central cities that have historically been viewed as the nation's "melting pots," but also increasingly in the region's suburbs.

indicator 2.1: income comparison: African-Americans to Whites

In 2000 about one-third of the region's African-American residents lived in the suburbs. Taking the region as a whole, African-American households had a median income in 2000 of $30,517, or 56 percent of the median White household income. However, that ratio did not necessarily hold true for suburban African-American households. Map 2.1a shows that in many of the region's suburbs, the median income of African-American households was actually higher than the incomes of the White residents living in the same community.

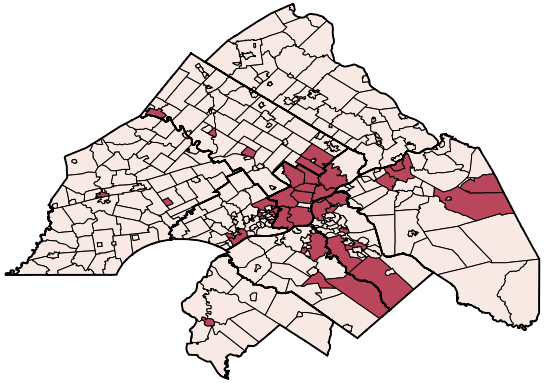
Map 2.1b shows the municipalities that were home to substantial African-American populations in 2000. We define "substantial" as at least 2,500 African-American residents comprising more than 10 percent of the community's total population. Rather than dispersing evenly throughout the suburbs, African-Americans clustered in particular communities. Large numbers of African-Americans were living in communities located close to the borders of the two core cities (for example, Pennsauken in New Jersey and Cheltenham Township, Yeadon, Darby Borough, and Darby Township in Pennsylvania). Farther out in the suburbs, African-American communities had been established in places like Willingboro in New Jersey and Chester City, Norristown, and Coatesville in Pennsylvania. Note that few of these communities correspond to the suburbs depicted in Map 2.1a, suggesting that African-American incomes typically exceeded White incomes only in areas containing small numbers of African-American residents.



0–100% >100

MAP 2.1a: Median household income of African Americans compared to Whites

Source: U.S. Census, summary file 3, 2000.



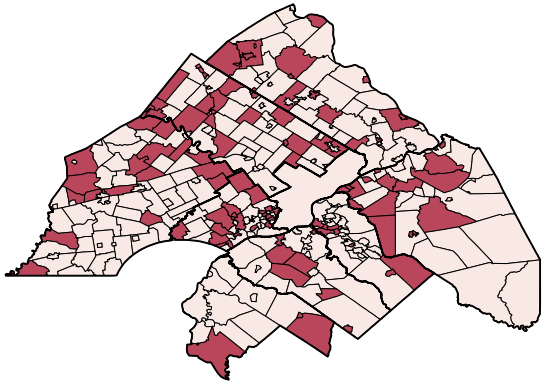
MAP 2.1b: Communities with substantial African-American populations

Source: U.S. Census, summary file 3, 2000.
Note: only African American populations >2,500 individuals considered.

indicator 2.2: income comparison: Latinos to Whites

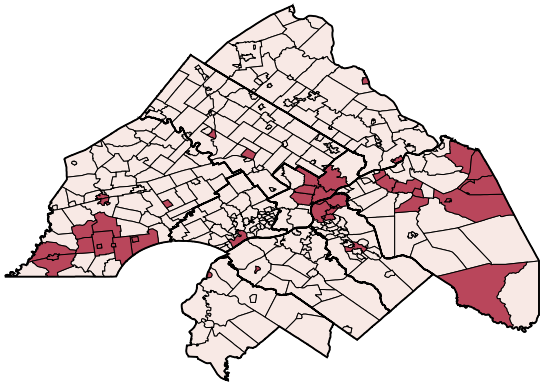
Compared to the nation as a whole, Latinos are under-represented in greater Philadelphia: they comprise only five percent of the region's population in contrast to 12.5 percent in the U.S. While the region's percentage is far smaller than in many metropolitan regions of the Sunbelt, it is comparable to other older industrial regions of the Northeastern and North Central states. Taking the region as a whole, Latino households had a median income in 2000 of $28,436—only 52 percent of the median household income for Whites. Map 2.2a shows, however, that quite a few suburban communities contained Latino households whose incomes exceeded the median household incomes of White residents living in those same communities.

Map 2.2b shows the communities where Latinos comprised at least five percent of the population in 2000. We see strong Latino clusters in North Philadelphia, Kensington, and the city of Camden, as well as in the directly adjacent community of Pennsauken, New Jersey. Other important clusters are located in more distant suburbs, especially in several communities surrounding Kennett Square in Chester County, and in a group of towns in Burlington County. With the exception of Willingboro and Westhampton townships in Burlington County, we find no instances of communities with substantial Latino populations and where Latino household incomes exceed White incomes.



MAP 2.2a: Median household income of Latinos compared to Whites

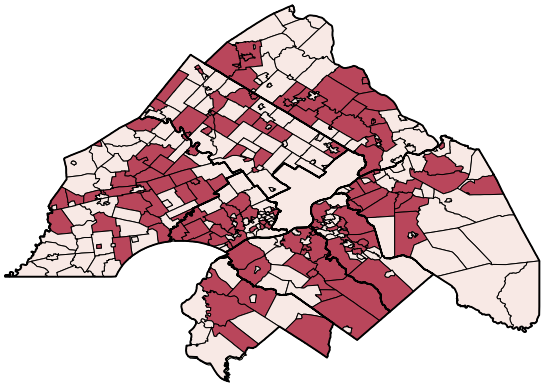
Source: U.S. Census, summary file 3, 2000.



MAP 2.2b: Communities with ≥5% Latino populations

Source: U.S. Census, summary file 3, 2000.

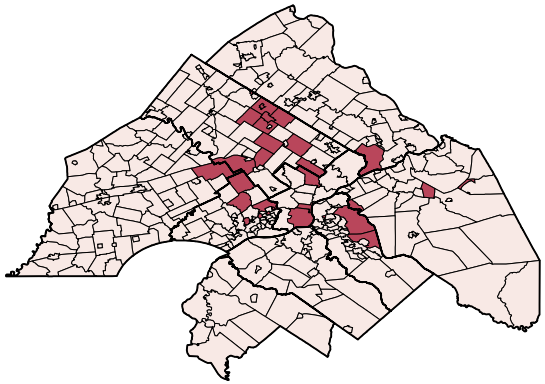
indicator 2.3: income comparison: Asians to Whites



0–100% >100

MAP 2.3a: Median household income of Asians compared to Whites

Source: U.S. Census, summary file 3, 2000.



MAP 2.3b: Communities with ≥5% Asian populations

Source: U.S. Census, summary file 3, 2000.

Asian Americans comprise 3.4 percent of the region's population, only 0.2 percent less than the percentage for the nation. Like the percentage of Latinos, that percentage is comparable to other metropolitan regions of the Northeastern and North Central states. Taking the region as a whole, Asian households had a median income in 2000 that was $46,774, or 86 percent of the median household income for Whites.

Map 2.3a shows that in numerous suburbs, Asian households had higher incomes than the White households living in the same community. Map 2.3b shows the communities where Asians comprised at least five percent of the population in 2000. Many have chosen to live in suburbs adjoining Philadelphia, particularly Cheltenham and Bensalem to the north and east of Philadelphia, and Upper Darby and Marple near the western edge of the city. Farther out are concentrations at the intersections of Delaware, Chester, and Montgomery counties, in central Montgomery County, and in Camden County. Unlike the pattern for African-American and Latino households, quite a few of the communities with substantial Asian populations are also communities where Asian household incomes exceed White incomes. In 15 suburbs whose populations were at least five percent Asian in 2000, Asian households had higher incomes than neighboring White households.

indicator 2.4: concentrations of foreign-born residents

The Philadelphia metropolitan area trails slightly behind the nation as a whole in the percentage gain in foreign-born residents over the past 20 years. Figure 2.4 compares our region with other metropolitan areas. The largest percentage gains during recent decades were made by Phoenix and Minneapolis, followed by Baltimore and Chicago.

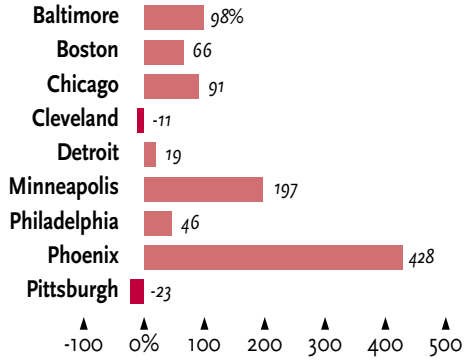
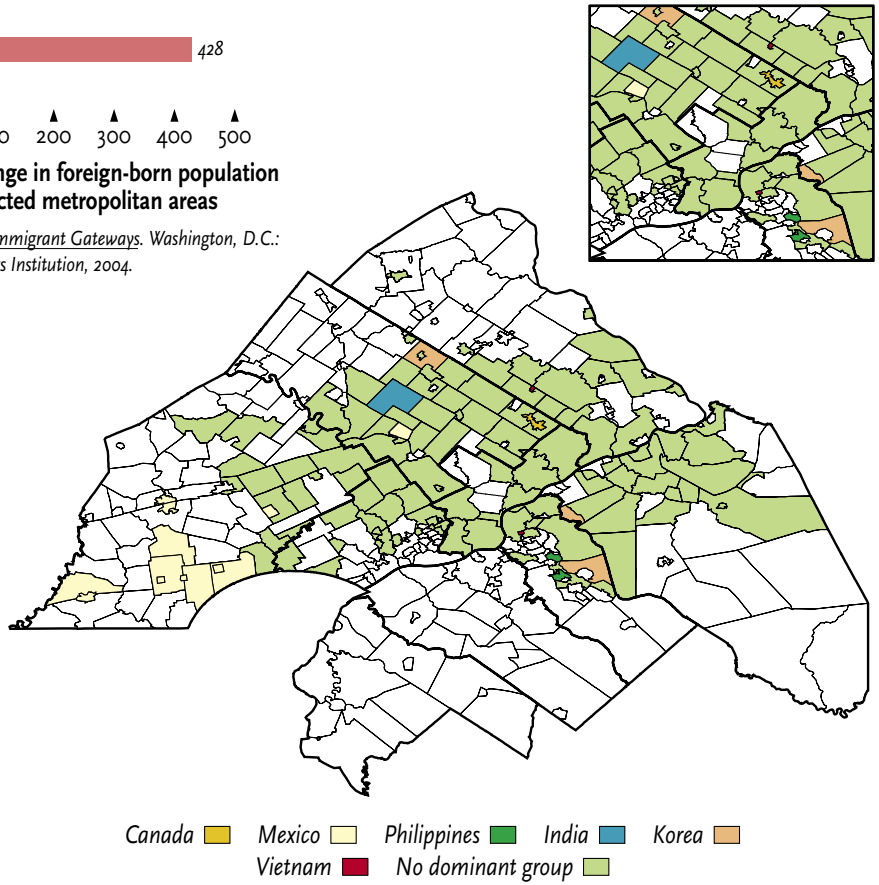


FIGURE 2.4: Percent change in foreign-born population 1980–2000 in selected metropolitan areas

Audrey Singer, The Rise of New Immigrant Gateways. Washington, D.C.: The Brookings Institution, 2004.

Map 2.4 shows concentrations of foreign-born residents (defined as communities where at least five percent of the community's population is foreign-born), highlighting the places where particular nationality groups dominate (that is, where over 30 percent of the foreign born residents come from a single country of origin). The main impression conveyed by Map 2.4 is the large number of suburbs in our region whose populations include at least five percent foreign-born. Most of these suburbs contain a mixture of countries of origin. However, Mexicans predominate among the foreign-born residents of several towns in southern Chester County where they work in agriculture. Immigrants from India predominate in Hatfield on the Pennsylvania side of the river, and in the New Jersey townships of Voorhees and Maple Shade.



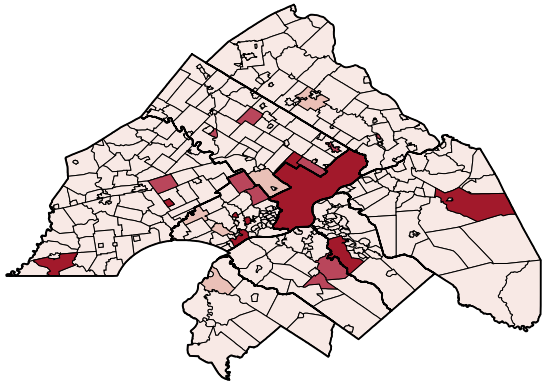
MAP 2.4: Communities with >30% foreign-born by country of origin

Source: U.S. Census, summary file 3, 2000.

indicator 2.5: international students

Attracting more international students to the region was identified as a key tactic to expand our knowledge industries in Mayor John Street's "Economic Development Blueprint for a Greater Philadelphia" (February 2005). Their presence in colleges and universities helps forge global connections, build the regional talent base, and boost local economies. Contrary to fears expressed after the terrorist attacks of September 11, 2001, the numbers of international students enrolling in our region's institutions of higher education have not declined. In the years following 9/11, the Philadelphia region has attracted increasing numbers of students from overseas: from the academic years 2002-03 to 2003-04, the number of international students in the region increased 11 percent. Our region's performance ran counter to a national trend downward in student numbers. From 2002-03 to 2003-04, the number of international students enrolled in higher education institutions across the U.S. decreased by two percent. In Map 2.5 we can see that the region's international students are enrolled in institutions located in two dozen communities.

Figure 2.5 shows the number of international students enrolled at colleges and universities in selected metropolitan areas. It shows that although Philadelphia has done well in attracting students from overseas, it nevertheless ranks behind Boston and Chicago in the total number of international enrollments in higher education.



MAP 2.5: Number of foreign students in higher education

Source: Institute of International Education, 2002–2004.

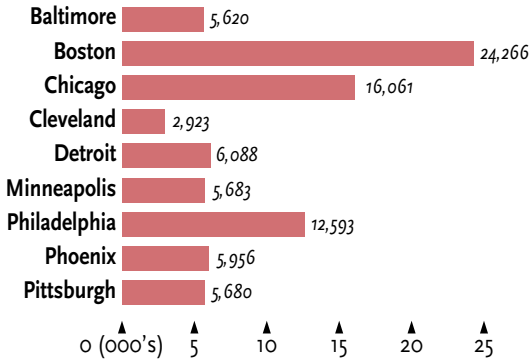


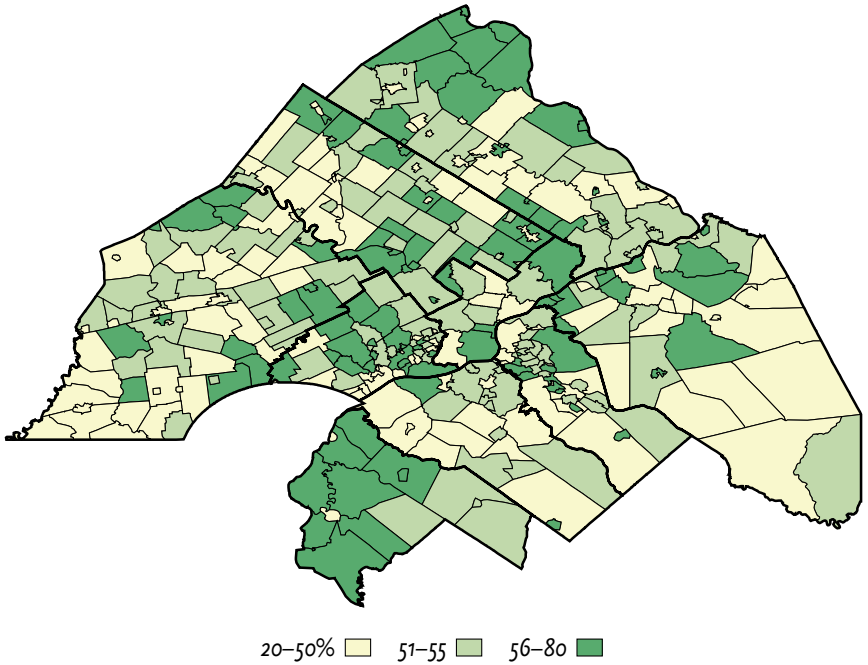
FIGURE 2.5: International students enrolled in higher education in selected metropolitan areas

Source: Institute of International Education, 2002–2004.

chapter 3: family well-being

These days traditional families composed of two parents raising children are far outnumbered by other household types. Whatever their configuration, families provide nurturing, care, support, and a safe haven for their members. The well-being of this fundamental social institution is critical to the quality of life in our region. As new definitions of the family are emerging and the composition of households is changing, community planners must consider the effects on the tax base as well as the demand for housing and services. This section explores the make-up of the region's families and related challenges and support.

indicator 3.1: households with no children



MAP 3.1: Family households with no children

Source: U.S. Census, summary file 3, 2000.

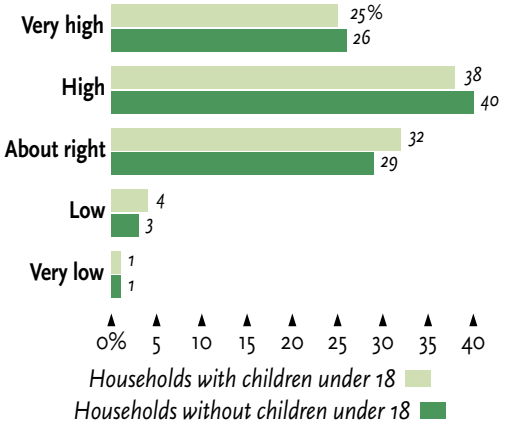


FIGURE 3.1 How would you describe the tax burden for schools?

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

Traditionally we think of the suburbs as communities for raising children. However, some of the most affluent communities in the region, full of educated professionals, are home to many households with no children under 18 years of age. As Map 3.1 shows, at the affluent intersection of Montgomery, Delaware, and Chester counties, there is a collection of communities in which substantial majorities of households are childless.

The effects of changing household composition on communities are significant, since much of our suburban housing stock, transportation network, and social service system has been built to serve families with children.

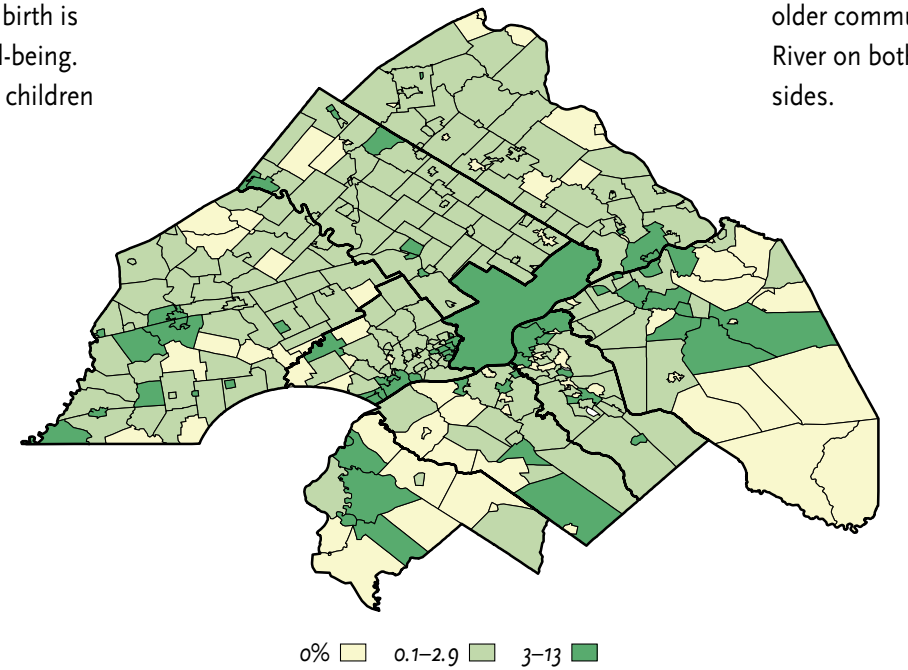
Social commentators have worried that a diminishing presence of children within communities might erode support for public education, as more and more households no longer have a direct stake in the quality of schools. Our survey did not support the assumption that childless households hold different views from families with children on the subject of paying taxes for schools. When we asked respondents to describe school taxes in their communities on a five point scale from very low to very high, we found no statistically significant difference in the answers given by households with and without children (Figure 3.1).

indicator 3.2: births to teens aged 17 and under

The rate of teenage births across the United States has been declining in recent years. Nevertheless, the percentage of births to teen mothers is higher in the U.S. than in other industrialized countries. With 9.2 percent of all births in 2002 involving teen mothers, Pennsylvania ranked below the national average of 10.8 percent. New Jersey had an even lower rate of only 6.5 percent of births in 2002 to teen mothers.

The age of the mother at the time of birth is significantly related to children's well-being. Teen mothers are more likely to bear children who suffer from low birth weights and nutritional problems. Babies born to teen mothers, along with their mothers, are at greater risk than others of living in poverty. This leaves them more reliant on publicly supported services such as public transportation, health clinics, public parks, swimming pools, libraries, and recreational programming. Children of teen parents are also likely to attain lower-than-average levels of academic achievement and therefore need expanded educational services. Yet the low- and moderate-income communities containing substantial concentrations of teen mothers have relatively weaker tax bases, making it hard to provide working teen parents and their children with the services they need.

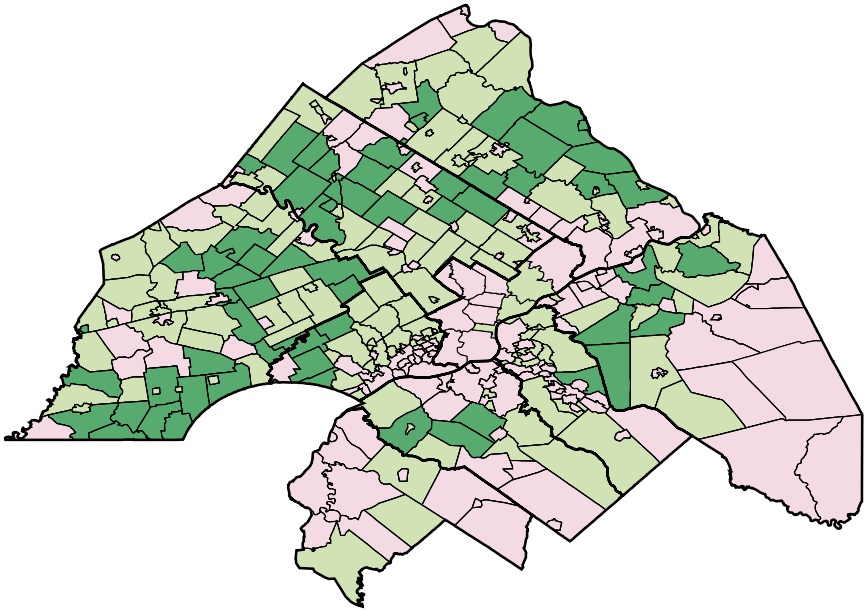
Map 3.2 shows that the higher percentages of births to teenage mothers occur in a number of older communities clustered along the Delaware River on both the Pennsylvania and New Jersey sides.



MAP 3.2: Percentage of births to mothers aged 17 years or younger

Source: PA and NJ Departments of Health, 2002.

indicator 3.3: change in population of pre-school children



Lost *Gained 0–75%* *Gained over 75*

MAP 3.3: Change in population aged 4 and under, 1980–2000

Source: U.S. Census, summary file 3, 2000.

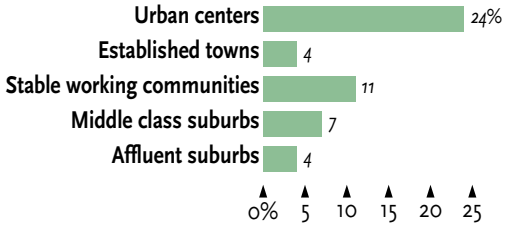


FIGURE 3.3. Percentage reporting that obtaining affordable, quality day care is a serious problem

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

One indicator of a community's appeal to young families is the presence of children aged 4 and under. Map 3.3 shows the change in the population of children aged 4 and younger from 1980 to 2000. Within Philadelphia, most sections of the city lost pre-school children during the past 20 years. However, the three sections posting gains were Kensington, the Near Northeast, and Center City.

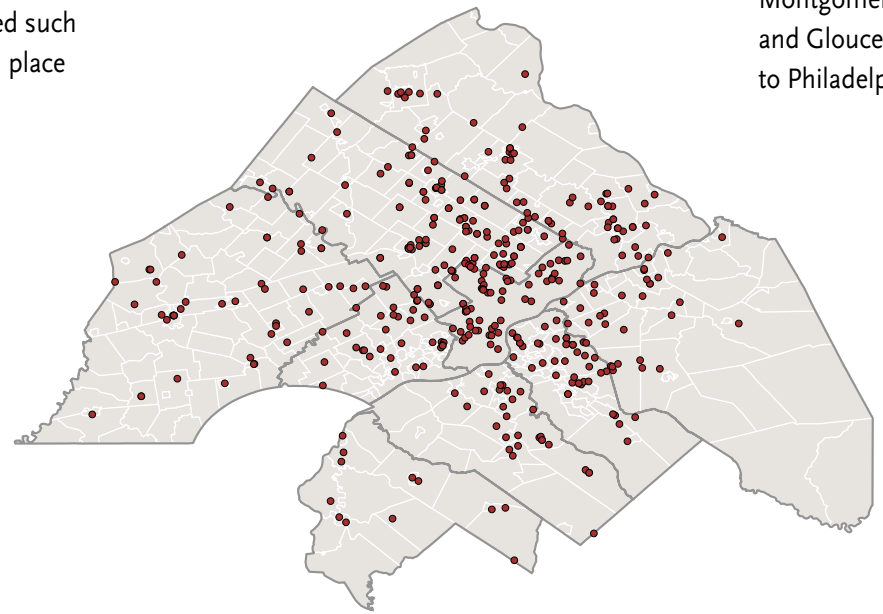
Beyond Philadelphia, the greatest losses were sustained by older communities along the Delaware River and by some communities on the outer edges of the region. As the map shows, New Jersey and Pennsylvania experienced somewhat different trends. As many New Jersey communities lost population as gained members of this youngest age group. Numerous communities in Salem and Burlington counties lost pre-school population, which may be related to the fact that in 1980 these communities had been heavily agricultural areas. Pennsylvania municipalities, particularly the middle-ring suburbs, were more likely to gain than lose young children during these decades.

Working parents of pre-schoolers arrange care for their children in many different ways. Asked whether obtaining affordable, quality day care is a serious problem for them, respondents gave different answers, depending on their location. In the region as a whole, only 10 percent cited inadequate day care as a serious problem. However, those living in Philadelphia and the other Urban Centers were more than twice as likely to perceive this issue as serious (Figure 3.3).

indicator 3.4: group housing for elderly populations

It is a well-known demographic fact that both Philadelphia and Pennsylvania have disproportionately large percentages of older residents compared to other regions of the country. A number of our region's communities have seen their older populations increase dramatically because of the construction of housing developments serving older residents. Typically suburban communities have welcomed such developments because their residents place relatively few demands on public services. Most importantly, their occupants do not add to the school-age population. Yet after several years of rapid expansion in age-restricted developments in the suburbs, some officials have begun voicing concerns that such developments may impose increasing burdens on health agencies. Others wonder if employers will want to locate in communities where the population is skewed to older age groups.

Map 3.4 shows the distribution of licensed long-term care and assisted living facilities. They are concentrated toward the center of the region, in Philadelphia and in the portions of Bucks, Montgomery, Delaware, Camden, Burlington, and Gloucester counties that are located closest to Philadelphia.



MAP 3.4: Group housing for elderly residents

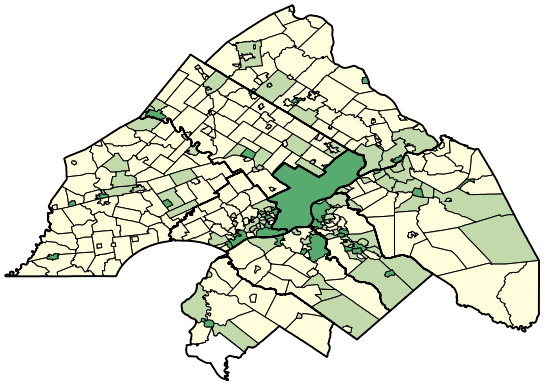
Sources: NJ Department of Human Services; PA Department of Public Welfare, 2003.

indicator 3.5: safety

Crime is a critical factor associated with the well-being of community residents in both material and psychological terms. Not only does crime threaten quality of life, it also affects the economic vitality of neighborhoods. Lower crime rates attract and retain residents and businesses, help boost house prices, and thus support local institutions such as schools. Higher crime levels increase residents' desire to leave, depress house prices, and may reduce the willingness of business owners to locate in communities. If they persist over time, high crime rates can result in communities being stigmatized.

Map 3.5a shows the distribution of violent crimes in the year 2003. (We added together four types of violent crime—murder and non-negligent manslaughter, rape, robbery, aggravated assault—to get an index for violent crime.) Perhaps not surprisingly, the communities with the highest levels of violent crime tend to be Urban Centers such as Camden, Chester City, Coatesville, and Philadelphia. In contrast to violent crime, Map 3.5b suggests that high levels of property crime are spread widely across the region. (We added together four types of property crimes—burglary, motor vehicle theft, larceny, and arson to get an index for property crime.) Communities showing the highest level of property crimes include a number of Affluent Suburbs, for example, East Whiteland, West Whiteland, and Upper Merion, where major shopping malls and other commercial developments account for substantial shares of property crimes.

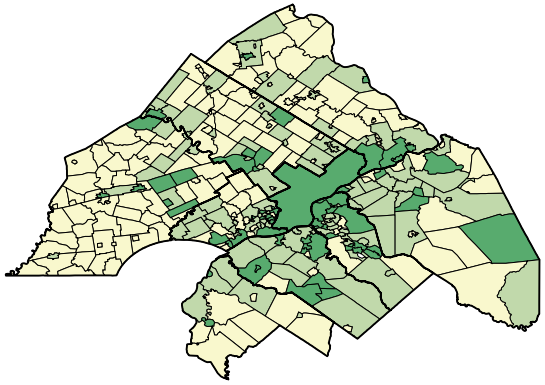
A social problem that affects the quality of life in many of our region's communities is illegal drug activity. Asked whether they think illegal drugs are a problem in their neighborhoods, respondents in the Urban Centers voiced the strongest concern. However, illegal drugs also posed a problem for significant, if smaller, percentages of residents in several other community types (Figure 3.5).



0–199 200–499 500–2,941

MAP 3.5a: Violent crimes per 100,000 population

Source: U.S. Department of Justice, Uniform Crime Reports, 2003.



0–1,499 1,500–2,999 3,000–13,053

MAP 3.5b: Property crimes per 100,000 population

Source: U.S. Department of Justice, Uniform Crime Reports, 2003.

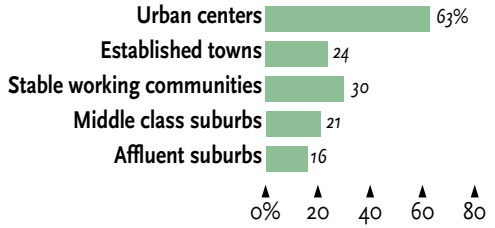
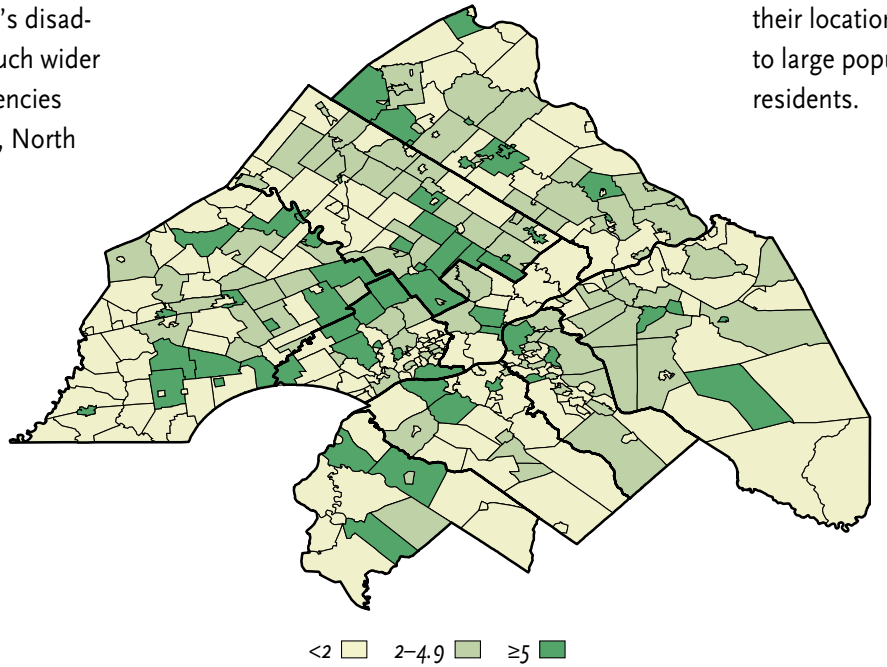


FIGURE 3.5: Percentage reporting that illegal drugs are a serious or somewhat serious problem

Source: Temple University, Philadelphia Metropolita Area Survey 2003; 2004.

indicator 3.6: available human services

Few families, no matter what their socioeconomic level, are entirely self-reliant. In an era when family members often live at a distance from one another, service agencies supply many forms of help that previously may have been provided within families. Map 3.6 shows that nonprofit organizations supplying health and human services are not confined to the region's disadvantaged communities, but serve a much wider population. Not surprisingly, these agencies are heavily concentrated in Center City, North Philadelphia, and Camden. However, many other communities around the region also appear to be well served, for example by service clusters in the towns of Media and Middletown that are located southwest of the city, and Newtown and Doylestown to the northeast. At the affluent intersection of lower Montgomery County, western Delaware County, and eastern Chester County, there is a surprisingly large number of nonprofit organizations. With the highest average incomes in the region, residents of these communities would appear to depend less than other communities on nonprofit services. It may be that their locations were chosen for their accessibility to large populations rather than to serve nearby residents.



MAP 3.6: Nonprofit health and human service organizations per 10,000 residents

Source: National Center for Charitable Statistics, 2002.

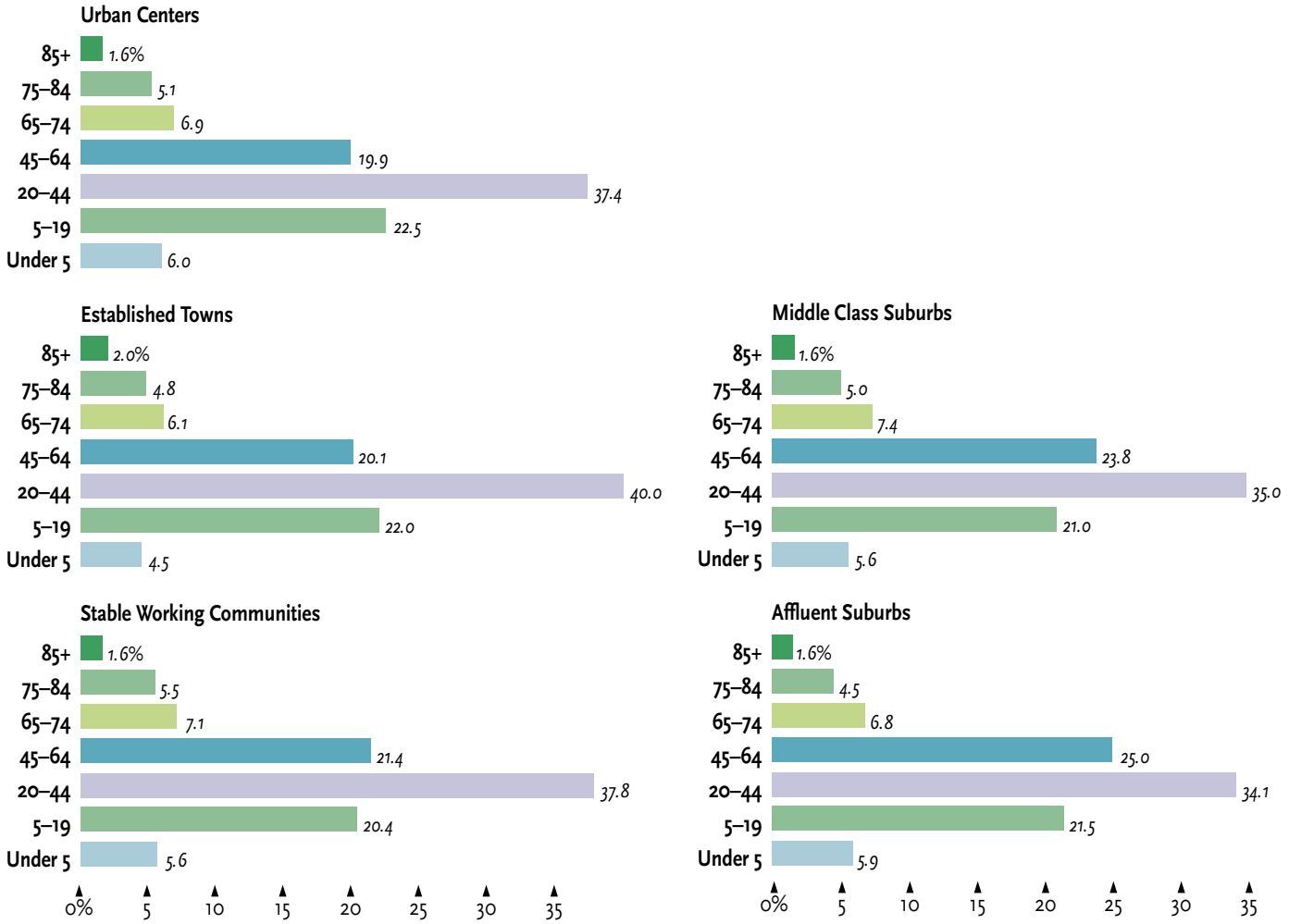
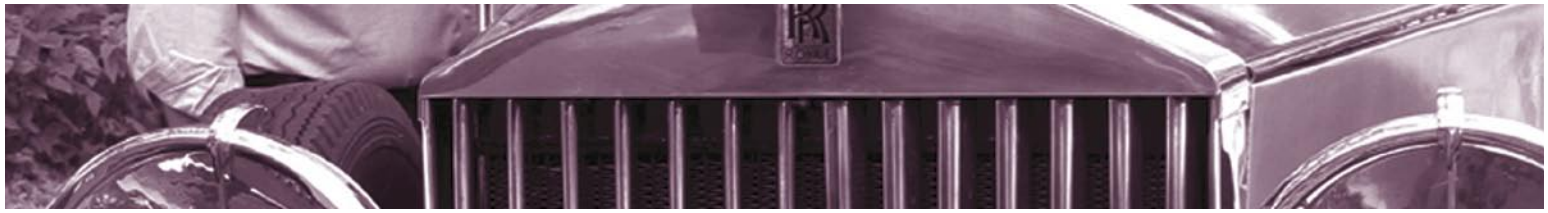


FIGURE: Age structure of community types in the metropolitan Philadelphia area

Source: U.S. Census, summary file 3, 2000.

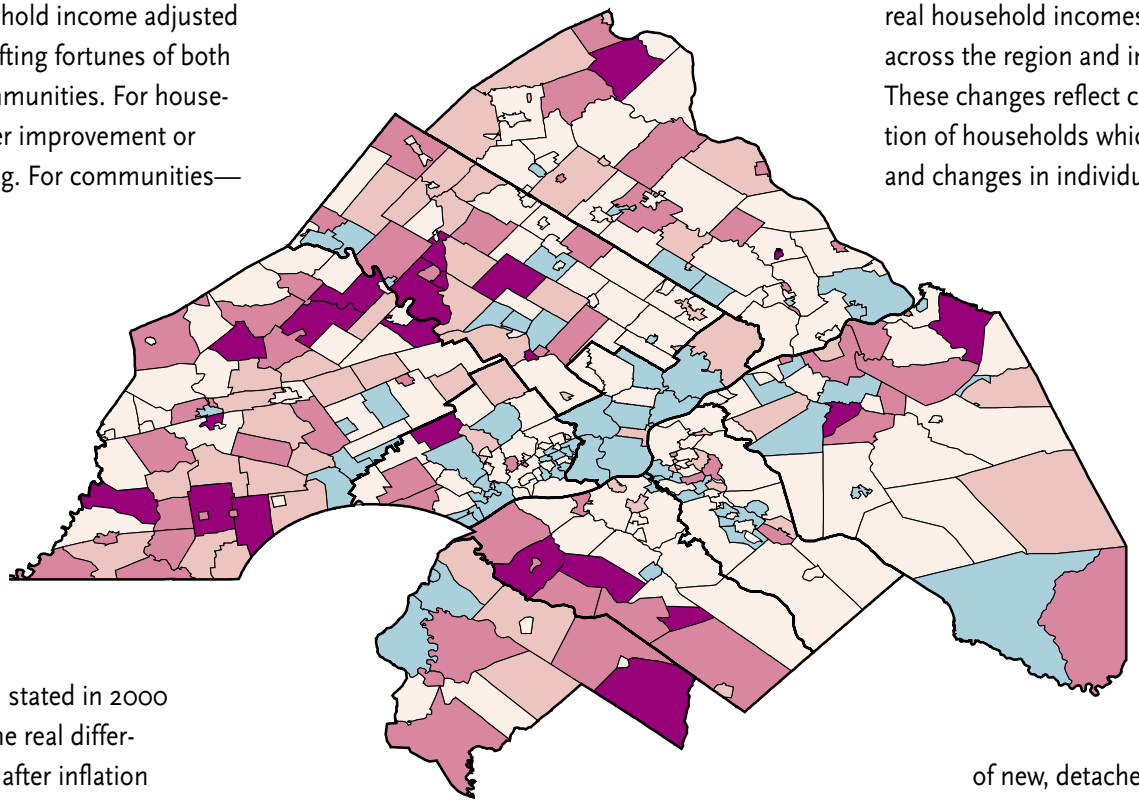
chapter 4: socioeconomic conditions



The socioeconomic conditions of the region's communities shift with time, changing residential preferences, and with regional, national, and global economic and social trends. This section explores some of the different ways the region's communities changed during the nineties and some of the present consequences.

indicator 4.1: difference in real income, 1990–2000

Changes in median household income adjusted for inflation reflect the shifting fortunes of both households and their communities. For households, changes mark either improvement or decay in standards of living. For communities—especially for those with an earned income tax—real income increases allow for possible improvements in public services while decreases may prompt calls for reduced services and cost containment. Map 4.1 displays the changes in median household incomes during the 1990s stated in 2000 dollars; the changes are the real differences in median incomes after inflation is taken into account. Those communities which did not gain or lose more than five percent in real income over the decade are defined here as stable; gains and losses are larger or smaller than this amount. Communities with declining real household incomes are broadly scattered across the region and include all income levels. These changes reflect changes in the composition of households which reside in a community and changes in individual household incomes.



MAP 4.1: Difference in real median household income, 1990–2000

Sources: U.S. Census, summary file 3, 1990 and 2000.
Note: 1990 incomes expressed in 2000 dollars

Changes in community composition reflect differences in the characteristics of households entering a community compared to those already resident and in the characteristics of those leaving communities compared to those who remain. Increases (Map 4.1) tend to occur in places with large amounts of new, detached, single-family home construction. New households typically have higher incomes than the existing residents, although the data reveal several instances—e.g., Birmingham and Thornbury townships in Chester County—where new homes accompany

indicator 4.1: difference in real income, 1990-2000

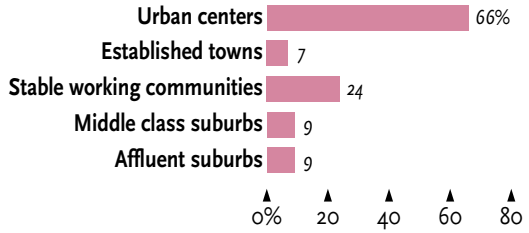


FIGURE 4.1a: Percentage of communities with lower real incomes in 2000 than 1990

Sources: U.S. Census, summary file 3, 1990 and 2000.

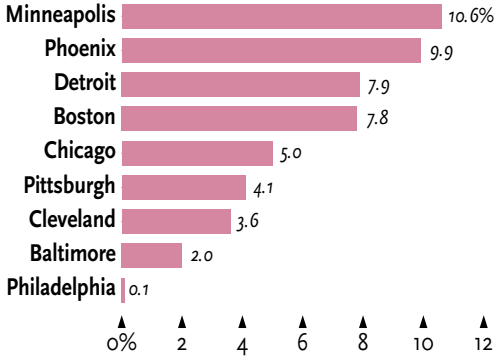


FIGURE 4.1b Change in median household income in selected metropolitan areas, 1990–2000

Sources: U.S. Census, summary file 3, 1990 and 2000.
Note: 1990 income in 2000 dollars; metropolitan areas defined in terms of 1990 boundaries.

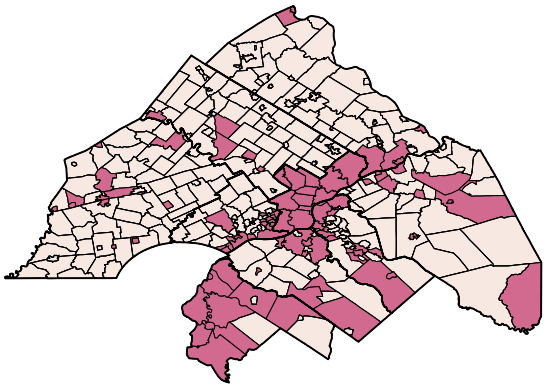
losses in real household income. In general, losses are more likely to occur in Urban Centers and Stable Working Communities (Figure 4.1a). Altogether, about one-third of the region's population or about 1.7 million area residents live in communities suffering declines in real income; in contrast, about 1.1 million live in areas with real income gains.

Changes in individual household incomes also affect community medians but arise from diverse causes ranging from regional economic trends to the fortunes of particular industries and occupations.

The Philadelphia region saw virtually no change in real household income during the 1990s while all of its peer regions gained from two to 11 percent (Figure 4.1b).[2] However, to put the number into a somewhat different context, Philadelphia fared very slightly better than the entire Northeast region of the U.S., which saw its real income decline by 0.1 percent.

indicator 4.2: prime working age males not in labor force

Nationally and regionally, the percentage of prime working age (25–54) males who are not in the labor force has grown. While the reasons are not entirely clear, research has pointed to the effects of globalization on manufacturing, the limited opportunities available to those with a limited education, and racial discrimination. When job opportunities are limited and jobs are unstable, the reaction of an increasing proportion of men has been to withdraw from the labor market. Families have become increasingly dependent on two incomes to support their lifestyles, and when one potential worker is out of the labor force, the family suffers. Communities also suffer because economic stresses within families and the social stresses they cause have broader consequences which create needs for social services.



>6.5 % not in labor force

MAP 4.2: Percentage of males aged 25–54 not in the labor force*

Source: U.S. Census, summary file 3, 2000.
Note: municipalities with less than 25 percent of population in group quarters

Map 4.2 shows the communities with the highest levels of prime age males out of the labor market—here defined as 6.5 percent or higher.[3] The map does not include the unemployed because they are still considered to be in the labor market. However, the measure is imperfect because it does not distinguish between those who withdrew from the labor market because of an inability to find acceptable work and those who withdrew because of illness, disability, or retirement. The communities with the highest levels of males out of the labor force are those which have higher percentages of Blacks, Hispanics, high school dropouts, and where median real household income declined during the 1990s. When arrayed by the community typology (Figure 4.2), the vast majority of Urban Centers—which have the highest concentrations of minorities and the less well-educated and which saw significant losses of real income during the nineties—have 6.5 percent or more of their males out of the labor force.

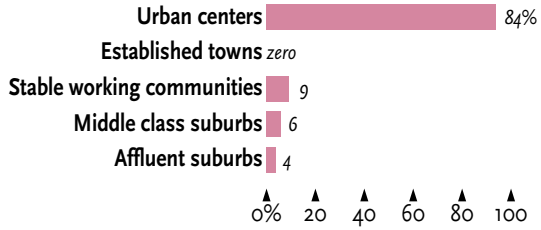
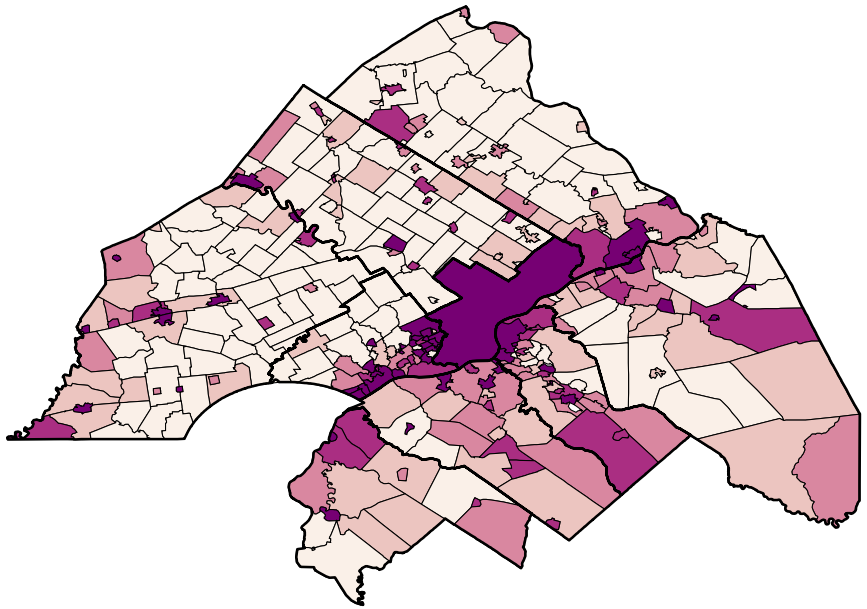


FIGURE 4.2: Communities with over 6.5% of males not in labor force

Source: U.S. Census, summary file 3, 1990 and 2000.
Note: only computed for communities with less than 25 percent of population in group quarters.

indicator 4.3: use of the food stamp program



MAP 4.3: Persons receiving food stamps, 2004

Sources: NJ Department of Human Services and PA Department of Public Welfare, 2004.

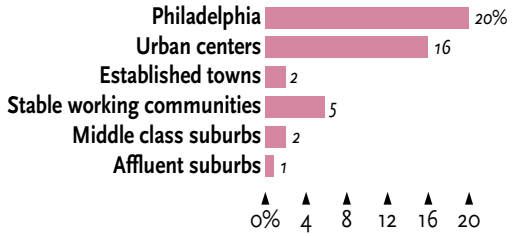


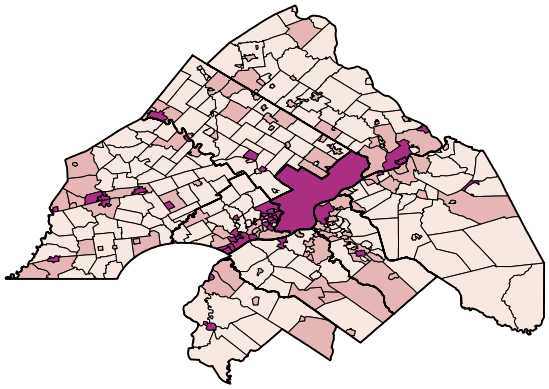
FIGURE 4.3: Persons using food stamps

Sources: NJ Department of Human Services and PA Department of Public Welfare, 2004.

While many believe the food stamp program to be a welfare program, it is better understood as an indicator of persons whose economic status is marginal and may worsen over time. While Temporary Assistance for Needy Families (TANF—the largest current welfare program) recipients qualify for food stamps, food stamp recipients comprise a far broader cross-section of the population because of significantly less restrictive eligibility requirements than those governing TANF. According to federal food stamp program statistics for the nation as a whole, 27 percent of recipients have earned income, 23 percent receive TANF payments, and 32 percent receive social security payments. One recent national study estimated that 49 percent of all children during their childhood and 51 percent of the American population between the ages of 20 and 65 will use the food stamp program.[4] Since over the past 25 years, the percentage of those eligible who actually used the program varied between 50 and 60 percent, actual program utilitization points to the vulnerability of a very large proportion of the population.

Map 4.3 shows the percentage of persons receiving food stamps by municipality as the available data do not permit differentiating within the city of Philadelphia. While usage concentrates along both sides of the Delaware River with significantly higher rates of use in New Jersey than in Pennsylvania, there is substantial dispersion across the region. Rates of individual usage among our five community types show that it is concentrated in Philadelphia and Urban Centers with a significant percentage of use in Stable Working places as well (Figure 4.3). Sixty-nine percent of recipients live in the City of Philadelphia, while Urban Centers and Stable Working Communities are home to another 12 percent each.

The Temporary Assistance for Needy Families (TANF) program replaced AFDC in 1996 with the objectives of reducing welfare rolls and moving recipients into jobs. Under TANF, recipients faced new work requirements and a five-year lifetime limit on benefits. In Pennsylvania and New Jersey, the number of families receiving welfare has dropped by more than 50 percent since the program began, although economic growth since 2000 has slowed and, occasionally, reversed the decline.



MAP 4.4: Percentage of persons on temporary assistance for needy families (TANF), 2004

Sources: NJ Departments of Human Services, October 2004 and PA Department of Public Welfare, 2004.

The implications of these changes for the region's municipalities are unclear. Municipalities with substantial numbers of TANF recipients face different demands for services than those with few cases (Map 4.4). Certainly, where recipients have moved into jobs, municipal tax rolls and business receipts improved. But the jobs obtained are seldom more than minimum wage, and somewhat paradoxically, the transition to work creates increased demands for other programs. TANF families are almost always single mothers with children—often young children; thus when they work, they need childcare, increasing the need for aid for childcare. If these mothers do find work, their jobs seldom carry health insurance, a fact which places increased demands on municipal health services. A recent four-year study of Philadelphia revealed that two-thirds of the jobs TANF recipients found were unstable and the jobs themselves were largely attributable to the strong economy of the nineties.[5] As a result, the state of Pennsylvania, confronting the more difficult current job environment and taking advantage of the block grant nature of TANF, has shifted funds to continue to support families beyond the ostensible five-year limit.

As with food stamps, TANF usage tends to concentrate in communities on both sides of the Delaware river, with 82 percent of the region's recipients living within Philadelphia.

The relative concentration of persons on TANF also appears when the data are displayed in terms of the community typology in Figure 4.4. Philadelphia has more than twice the percentage of recipients as other Urban Centers and at least eight times as many as in the other types of communities. Note that although there is significant usage of food stamps in Stable Working Communities, very few of the recipients in these communities are on TANF.

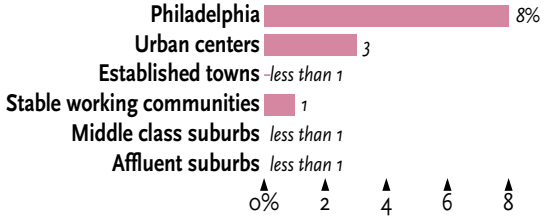


FIGURE 4.4: Percentage of population using TANF

Sources: NJ Department of Human Services and PA Department of Public Welfare, 2004.

indicator 4.5: change in educational attainment, 1990—2000

Changes in communities' percentage of persons with a bachelor's degree or better reflect broad and relatively durable effects on community structure and life. The effects are broad because the percentages almost always arise from shifts in the composition of residents. Since relatively few persons increase their educational attainment after the age of 25 (the lower bound for adult measurement), improvements in the percentage of persons with at least a college degree point to a generational change in the age structure of communities. Increases generally result from population growth following new development, the turnover of households as a consequence of aging established populations, and concentrations of highly educated immigrant groups (see Map 4.5 on the following page).

Despite the long-term trend toward greater education, neither the nation nor the region saw any increase in the percentage of persons with at least a B.A. during the 1990s. The lack of growth in higher educational attainment in the region during the decade may partly reflect the broader decline in federal and state support for higher education which has contributed to increased college costs and partly the region's documented inability to retain many of its college graduates.

Typically, decreases in educational achievement result from the departure of better-educated populations or the influx of less well-educated immigrant groups. Changes in educational attainment also often have more persistent effects than changes in household incomes because they point to residents' future earning capacities and demands for different kinds of municipal services such as childcare, parks, recreational programs, and cultural events. Communities with high levels of education have higher levels of political participation and activism, while those with less well-educated populations also generally have lower participation and activism. Only 20 communities saw declines in their percentages with a college or better degree and they were scattered across the community typology. However, Affluent Suburbs and Established Towns were at least three times more likely to experience a growth in college graduates than the other community types (Figure 4.5).

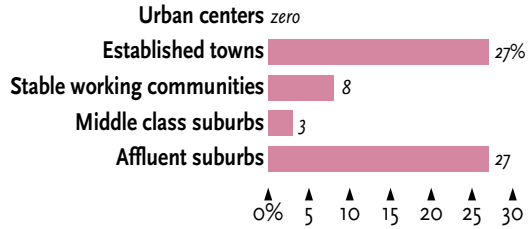
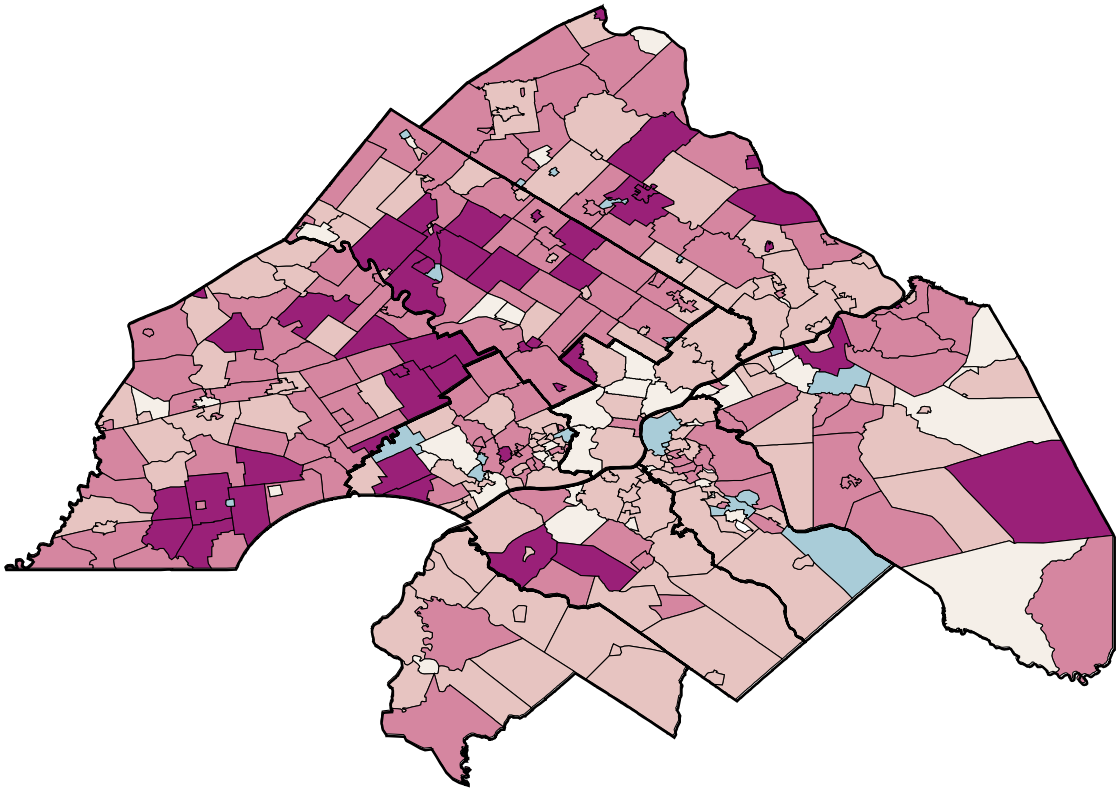


FIGURE 4.5: Percentage of communities where persons with B.A. or better grew 10% or more, 1990–2000

Source: U.S. Census, summary file 3, 1990 and 2000.

indicator 4.5: change in educational attainment, 1990—2000



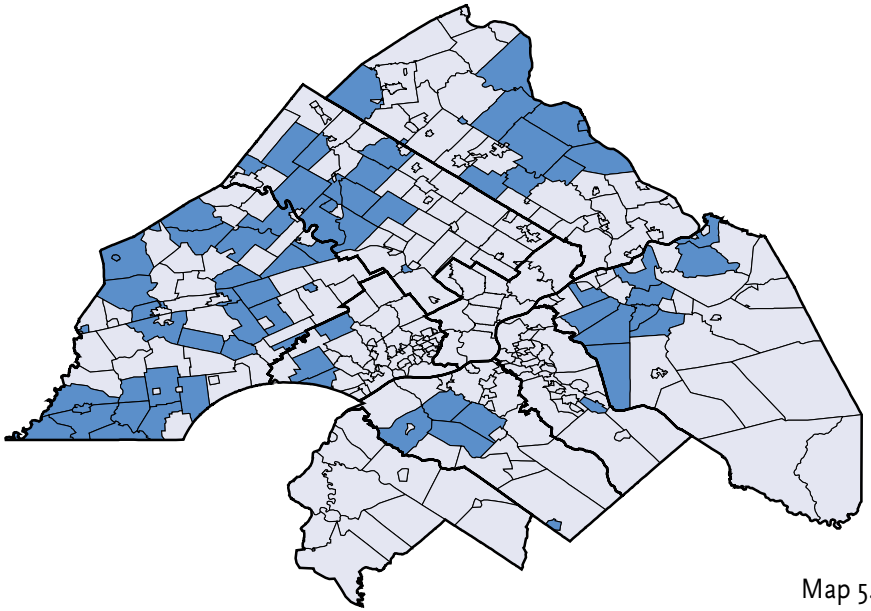
MAP 4.5: Percentage change in population with a B.A. or better, 1990–2000

Sources: U.S. Census, summary file 3, 1990 and 2000.

chapter 5: housing

Housing helps shape the daily conditions for the region's residents in three major ways: it occupies a central role in household budgets; it offers a potential for improving the wealth of households whose housing appreciates in value; and the housing conditions of a community create both financial and aesthetic indications of value. The housing indicators presented here focus on patterns of ownership, housing market activity, cost, and affordability. Two additional indicators focus on the role that housing plays in community well-being: community revitalization activity, and sub-prime mortgage lending.

indicator 5.1: new owner-occupied housing units



MAP 5.1: Production of new owner-occupied housing

Source: U.S. Census, summary file 3, 2000.

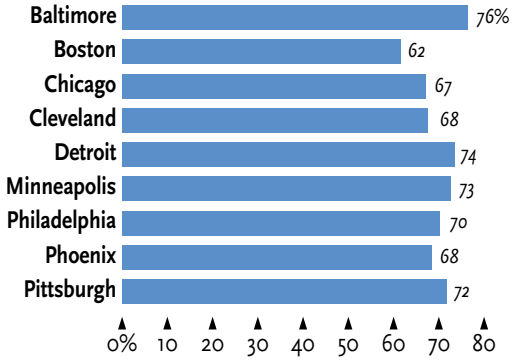


FIGURE 5.1: Owner occupancy by metropolitan area, 2003

Source: U.S. Census, American Community Survey, 2003.

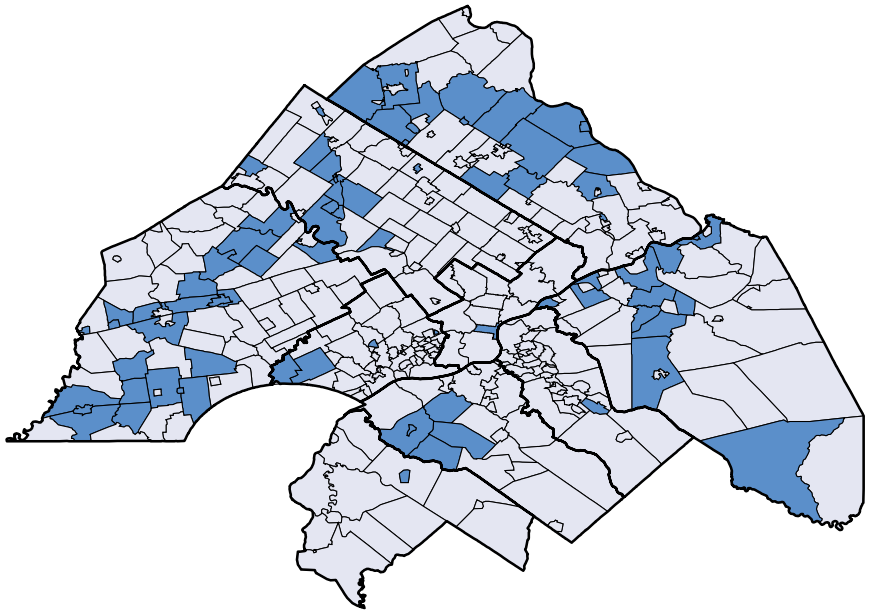
Regional housing conditions are driven not only by the income levels of their communities, but by the growth of the region as a whole and by the migration of people within the region. In a slow-growth region such as Philadelphia's, examining the proportion of a community's housing that is newly constructed often identifies one end of a continuing "chain" of moves that mirrors household decisions toward newer housing stock and away from older housing. Communities with greater proportions of newer housing units are frequently affected by increased expectations for water, sewer, and transportation infrastructure, and educational and other municipal services.

Map 5.1 presents those communities whose newer owner-occupied housing exceeded three percent of the total owner occupied units in those communities. During the 1990s the regional housing market was somewhat stagnant, reflected in the fact that less than 20 percent of the region's communities had more than three percent of their housing built during the 1990-2000 time period, although several had levels above 15 percent. With few exceptions, these communities tend to be located at some distance from Philadelphia, and provide graphic evidence of residential growth at the periphery of the region.

As a city, Philadelphia has traditionally ranked very highly in comparisons of owner-occupancy rates; as a metropolitan area, it falls in the middle of the comparison metropolitan areas (Figure 5.1). Areas noted for their economic and demographic vitality, such as Phoenix and Minneapolis, can have different owner-occupancy rates, as can cities experiencing population decline such as Detroit and Cleveland.

indicator 5.2: lending activity

Another measure of housing market activity is the level of mortgage loans relative to the size of a community's housing stock. Using Home Mortgage Disclosure Act (HMDA) data, a total of all home purchase mortgages for the three years between 2001 and 2003 was determined, and the proportion of mortgage loans (over three years) to the size of the owner-occupied housing stock was calculated. The resulting map (Map 5.2), when compared to Map 5.1, illustrates that the areas in which new housing units were at their highest level over the decade of the 1990s were among those that had the highest levels of mortgage activity. Again, the highest level of mortgage activity relative to the housing in a community was found in the suburbs located toward the periphery of the region, with the notable exception of Center City Philadelphia.



MAP 5.2: Mortgage activity, 2001–2003

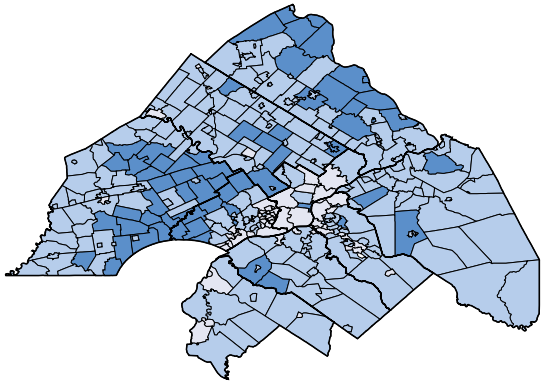
Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act Raw Data, 2001–2003.

indicator 5.3: house prices

The logical next step, given the picture of new homes and high levels of mortgage lending activity, is to examine the patterns of house prices. For the years 2001-2003, we calculated the average amount of mortgages. This amount indirectly implies sale prices and highly correlates with actual residential sale values. We used median amounts to control for extreme sales prices. The resulting map of mortgage values (Map 5.3) for each community shows a pattern mirroring both of the prior indicators. The higher housing price areas of Chester, Montgomery, and Bucks counties, in particular, overlap the newer, high loan volume areas noted in indicators 5.1 and 5.2.

The distribution of mortgage amounts by community type provides some insight into residents' housing choices, as Established Towns are second only to the Affluent Suburbs in the median amount borrowed. Urban Centers lag behind the rest of the region (Figure 5.3a).

Each of the past several years, the Joint Center on Housing Studies at Harvard has produced a report on the State of the Nation's Housing. The report includes a compilation of median sales prices for the nation's metropolitan areas, ranging from 1990 to the present. Philadelphia lags far behind the highest priced area (Boston), and falls slightly below the halfway mark in a comparison to the remaining metropolitan areas (Figure 5.3b). Of concern to many in the region is the relatively low percentage change in metropolitan housing prices, as Philadelphia has the lowest rate of growth of any of the nine metropolitan areas compared. This cuts two ways, as housing remains relatively affordable across the region as a whole, but suggests only a modest rise in value across the entire region (roughly one percent per year).



MAP 5.3: Average mortgage amounts, 2001–2003

Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act Raw Data, 2001–2003.

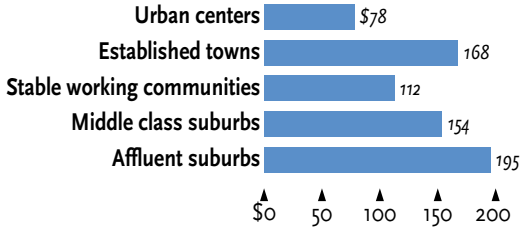


FIGURE 5.3a: Median mortgage amount, 2001–2003 ($000s)

Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act Raw Data, 2001–2003.

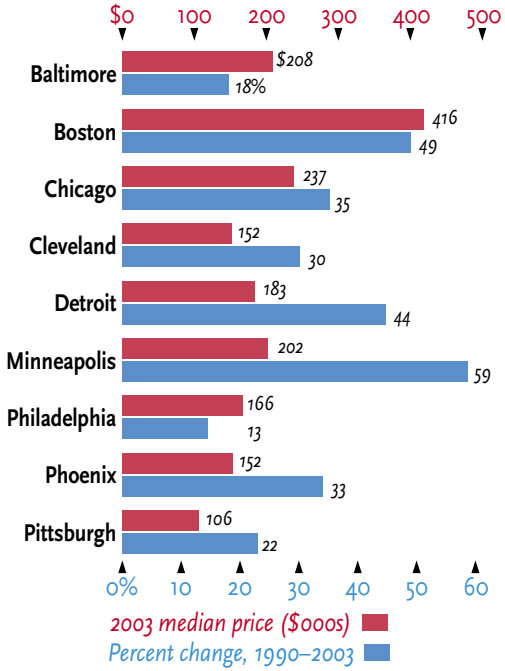
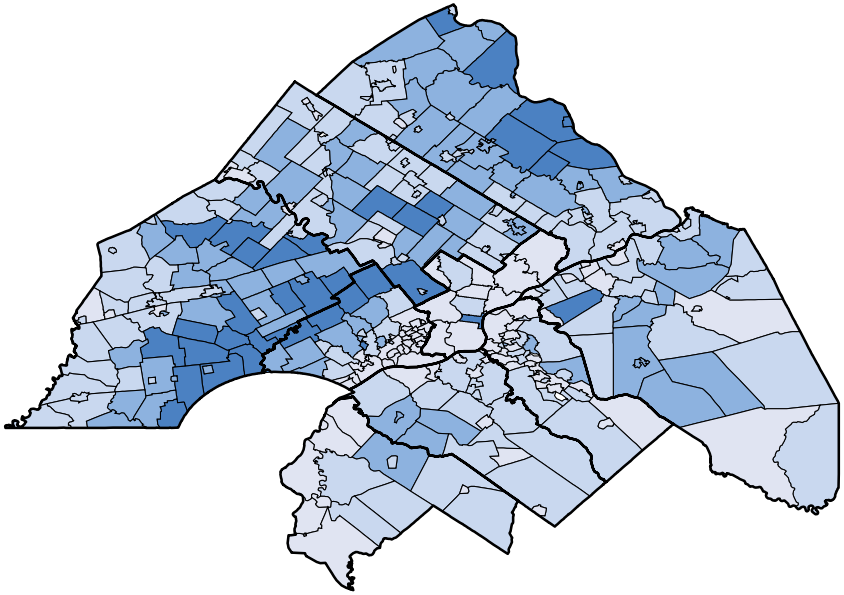


FIGURE 5.3b: Median sales price and appreciation by metropolitan area

Source: Harvard Joint Center on Housing Statistics, State of the Nation's Housing, 2004.
Note: price changes are expressed in constant dollars (2003).



MAP 5.4: Housing affordability: income needed to buy median-priced house

Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act Raw Data, 2001–2003.

One of the outgrowths of the combination of selective upward movement of house prices across the region and limited improvements in socioeconomic status (discussed more fully in Chapter 4) is pressure on the affordability of housing in the region. From a combination of the mortgage data used earlier and a housing calculator from Fannie Mae, Map 5.4 presents the distribution of housing affordability for the region's communities. The different gradations of communities represent the income level that would be needed to afford to purchase a house at the median estimated sale price for each community.

Communities represented by the lightest color on the map have houses that can be purchased with incomes at or below $50,000; the second category of

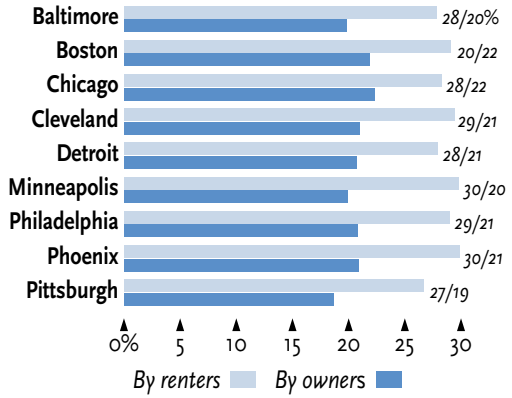
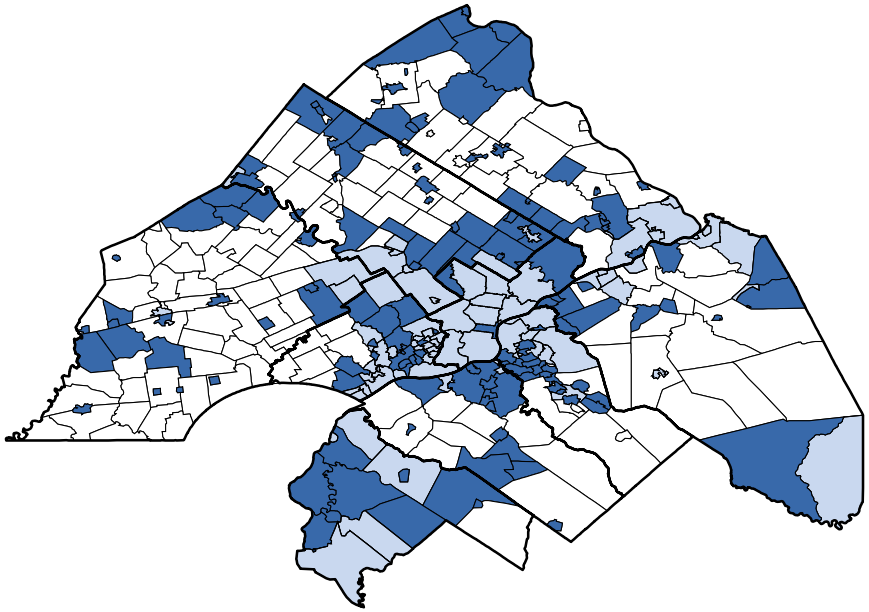


Figure 5.4: Percentage of income spent on housing, 2003

Source: U. S. Census, American Community Survey, 2003.

housing would be accessible for households with incomes between $50,000 and $75,000; the third, between $75,000 and $100,000, with the final grouping representing housing markets where the median home would be accessible only for those with incomes above $100,000. As was the case in last year's report, the more affordable communities consist of the major urban centers of the region and the oldest suburbs. It is worth noting that there appear to be two exceptions to this trend, as Center City is in the group with the highest income threshold for affordability, and that there has been some movement within the Germantown-Mount Airy-Chestnut Hill and Lower North Philadelphia communities.

When Philadelphia is compared to other metropolitan areas in terms of the percentage of household income spent on housing, it falls in the middle of the metropolitan area comparison group (Figure 5.4). The substantial differences between renters and homeowners in the respective percentages of income paid for housing are not unusual; they effectively point to one of the economic advantages associated with home ownership.



Low activity (≤5 loans/100 homes)
High activity (>5 loans/100 homes)

MAP 5.5: Revitalization: home improvement loans for older housing

Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act, Raw Data, 2001–2003.
Note: excludes communities where the majority of housing was built after 1970.

Not all housing choices are made in terms of new housing units, as many communities have essentially built out to their limits in terms of new housing. As these communities wrestle with the options facing them, they look toward revitalization—reinvestment in existing housing that is able to retain value and continue to attract homeowners who may be less interested in more expensive markets. While all home improvement activity is significant, home improvement lending that occurs in communities with older housing, defined here as housing built prior to 1970, is of particular interest.

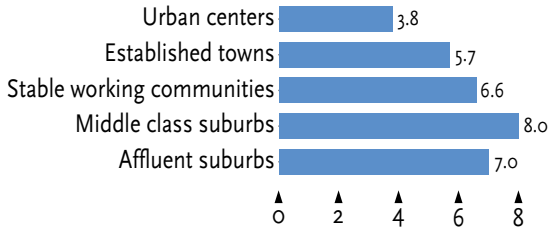
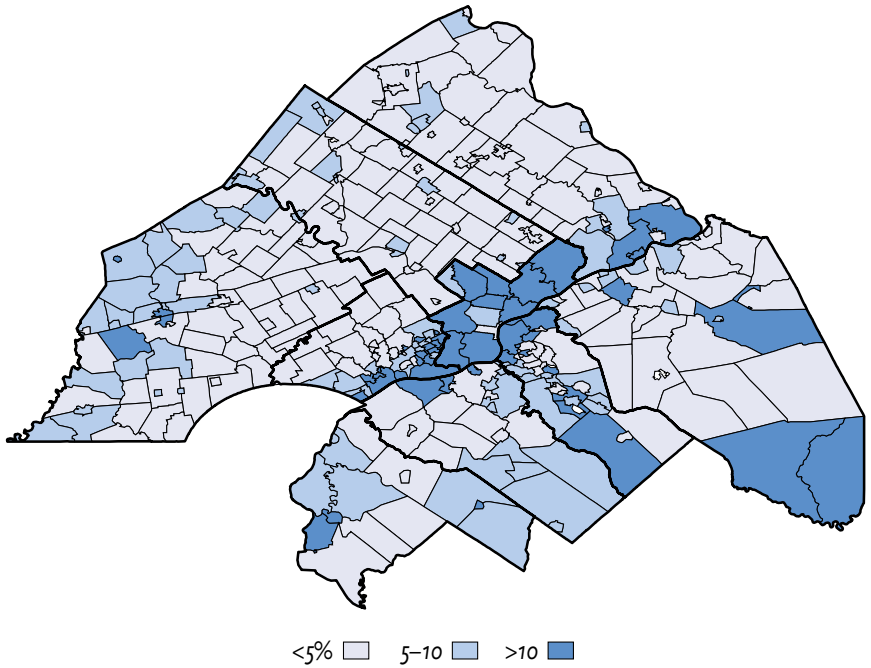


FIGURE 5.5: Annual number of home improvement loans/100 homes, 2001–2003

Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act Raw Data, 2001–2003.

The information contained in Map 5.5 tells us a number of things. First, there are a large number of suburban communities that have older housing. Many communities at the boundaries of the metropolitan area often have older housing, and have not seen a large amount of new construction. These are often communities with comparatively high levels of home improvement lending. Also many of the more densely settled areas, including some within Philadelphia and some of the "inner-ring" suburbs, show both older housing and higher levels of home improvement activity.

If the proportion of home improvement loans to all owner-occupied housing, regardless of age of housing, is measured and compared across community types (Figure 5.5), the underlying challenge facing older communities is apparent, as Urban Centers average under four loans per hundred owner-occupied units, while Middle Class Suburbs rank highest, with a proportion of eight loans per hundred.



MAP 5.6: Sub-prime lending as percentage of total (first) mortgages

Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act Raw Data, 2001–2003.

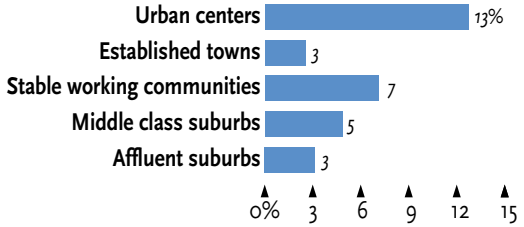


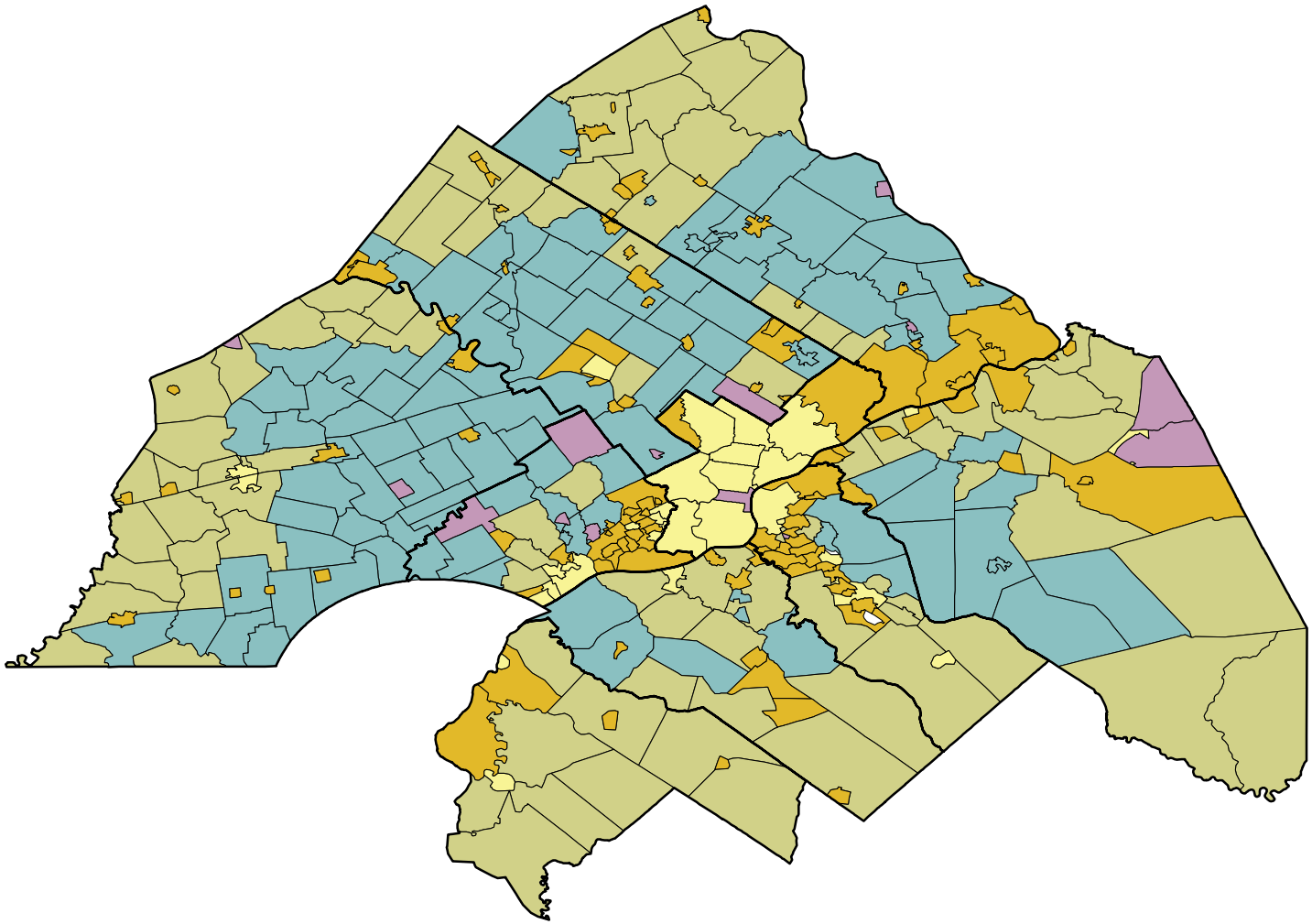
FIGURE 5.6: Percentage of mortgages issued by sub-prime lenders, 2001–2003

Sources: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act Raw Data, 2001–2003; Department of Housing and Urban Development, Sub-prime Lender List (annual).

Sub-prime lenders provide home ownership options for many potential home buyers who have incomes that constrain their choices of home purchases, or who have credit scores that exclude them from prime loans. It is, however, also the case that some sub-prime lenders are involved with predatory lending—essentially stripping household assets from lower income and elderly borrowers by expanding the debt level secured by a house using questionable or illegal practices.

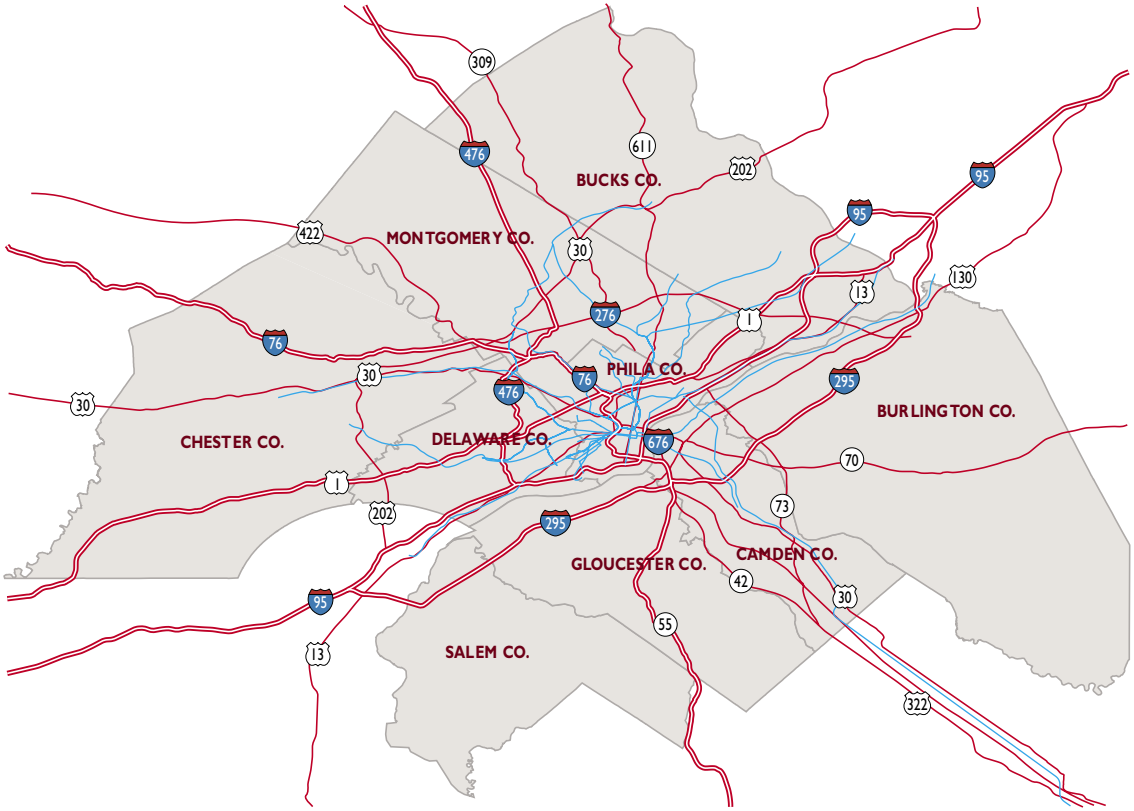
Map 5.6 presents information on the distribution of sub-prime loans across the region, grouped by the proportion of all loans that are sub-prime. As might be expected, many of the oldest, densest and poorest communities of the region are the areas where sub-prime lending is at its highest, involving both urban neighborhoods and inner-ring suburbs.

When these data are examined across the typology of the region's communities, Urban Centers are more likely to have sub-prime lending than any of the other types—more than four times as many as either Established Towns or Affluent Suburbs (Figure 5.6).


Urban centers
Established towns
Stable working communities
Middle class suburbs
Affluent suburbs

chapter 6: transportation

The transportation system—the region's road and rail network—is the infrastructure that links communities to each other and to the broader national and international networks of cities and communities. It also provides access to jobs, schools, commercial centers, and recreational or other amenities. The indicators discussed here focus on traditional commuting patterns as well as the impacts of an automobile-centered system on retail concentrations and local community street densities that can be linked to high traffic loads.



MAP 6.1: Regional transportation assets

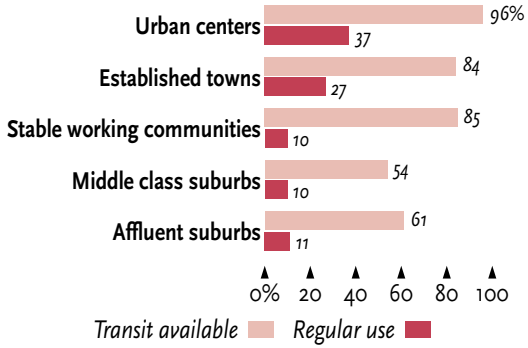


FIGURE 6.1: Availability and use of mass transit by community type, 2004

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

Map 6.1 indicates the major highways and commuter rail systems that are present in the metropolitan Philadelphia region. With two exceptions (the PATCO High Speed Line and the light rail River Line in New Jersey), the rail system was originally developed in the late 19th and early 20th centuries. Its layout reflects the era in which the city of Philadelphia was the major population and economic center of the region. The road network reflects the city's original importance as an industrial, commercial, and services center as well as the more recent pattern of suburbanization of population. While many roads converge in Philadelphia, others (such as Rt. 202, Rt. 422, and I-295) primarily serve suburban communities.

Figure 6.1 addresses the availability and use of the public transit network; transportation systems are seen as accessible by a majority of all respondents, but are seen this way more strongly in the Urban Centers, Established Towns and Stable Working Communities of the region. Its regular use—at least one to three times a week or more—is much more evident in the Urban Centers and Established Towns of the region, although even in these places, it is used by a minority of the households in these communities.

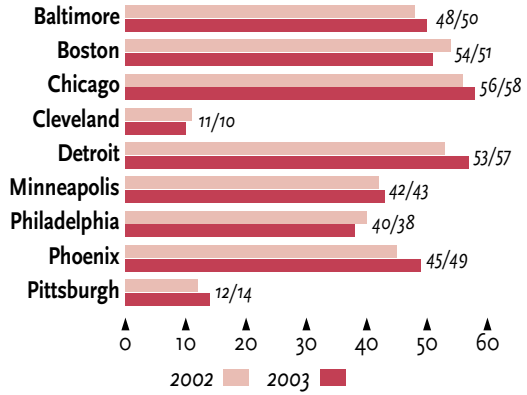


FIGURE 6.2a: Estimated annual time lost (hours) commuting in selected metropolitan areas, 2002–2003

Source: Texas Transportation Institute, Urban Mobility Report, 2005.

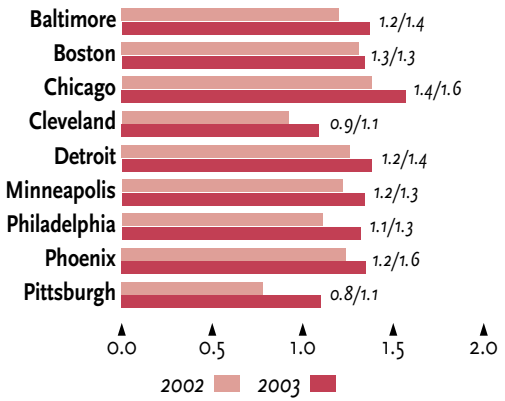


FIGURE 6.2b: Congestion index in selected metropolitan areas, 2002–2003

Source: Texas Transportation Institute, Urban Mobility Report, 2005.

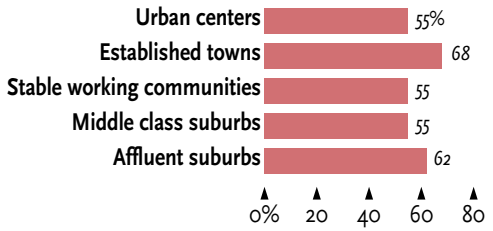


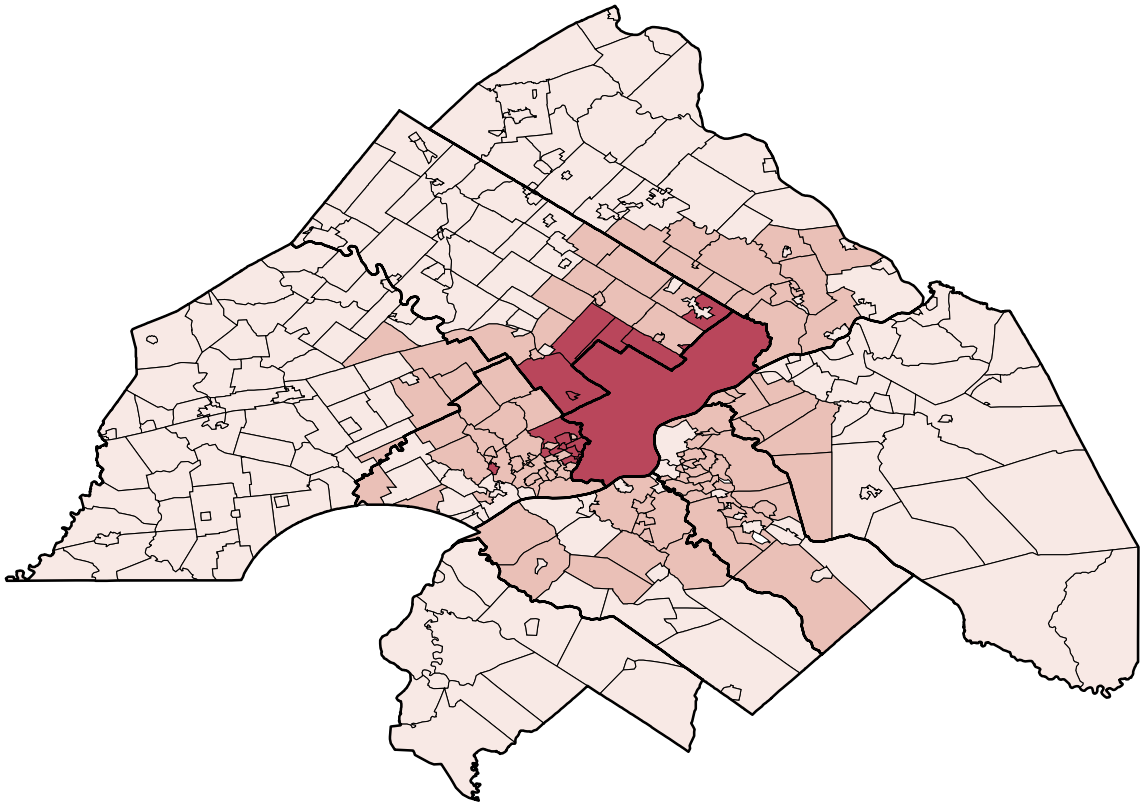
FIGURE 6.2c: Support for increased taxes for alleviating traffic congestion (percentage strongly agree and agree)

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

Transportation investments are frequently driven by the commuting demands of the region—the relationship of people's homes to their workplaces. Map 6.2 (see following page) indicates that the commuting patterns of those journeying to work outside their homes have evolved away from the city and toward other destinations. The areas immediately adjacent to the city show the greatest city-oriented commute, while to a lesser extent the next ring of suburbs provides additional commuters.

Two measures of comparative road transportation performance are available for the past two years from the Texas Transportation Institute. Figure 6.2a presents data for the eight comparison regions on the estimated cumulative hours of delay for a typical commuter in each region, while Figure 6.2b presents a "congestion index," a ratio of average travel time during peak periods to that during "free flow." Philadelphia loses less time than most of the comparison areas and has improved somewhat on this measure in the past year. While it does reasonably well by comparison to other regions in terms of congestion, its congestion index score of 1.32 is up markedly from 2002 (1.11).[6]

Data from the 2004 survey of the region's residents indicate that commuting time is an issue of concern to many within the area. There is broad-based support across community types for the statement that traffic congestion is an area for which tax increases might be considered, as evidenced by the percentage of respondents indicating that they strongly agree or agree (see Figure 6.2c).

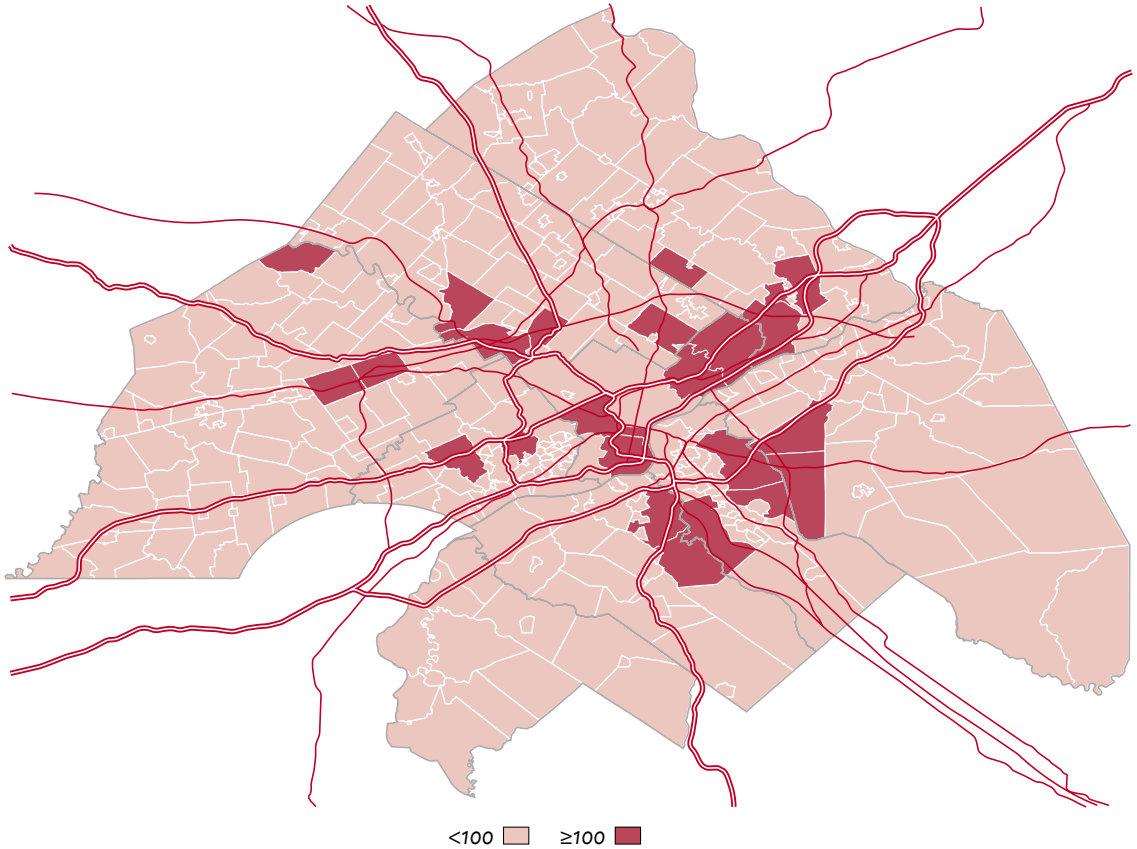


MAP 6.2: Commuting to Philadelphia: percentage of workers with a Philadelphia workplace

Source: U.S. Census, summary file 3.

indicator 6.3: retail clusters

Concentrated retail commercial centers impact communities with increased traffic and demands upon the street and road infrastructure. Using data obtained originally by the National Research Bureau, we are able to locate concentrations of shopping center stores across the region. The pattern that emerges suggests both urban and suburban concentrations of shopping-center-driven retail activity, in Center City, South and West Philadelphia, and the Northeast in Philadelphia, as well as major locations across the suburban communities of the region, such as King of Prussia, Langhorne, Cherry Hill, and Marlton.



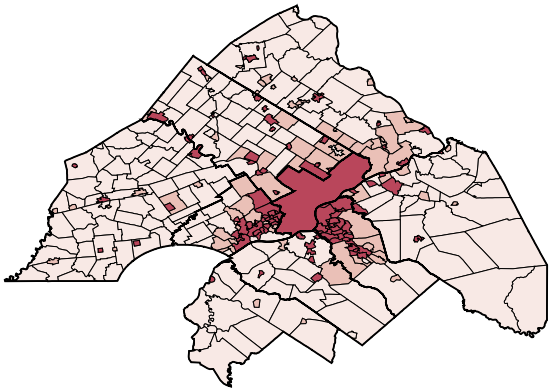
MAP 6.3: High traffic retail activity: stores in shopping centers

Sources: ESRI Business Information Solutions, 2003; National Research Bureau.

indicator 6.4: street density

One of the ways in which the transportation infrastructure affects communities is in the density of streets and highways: the number of miles of roads per square mile of area. Higher densities provide access, but also a potential for greater negative impacts (e.g., traffic, pollutants, limited green space). As Map 6.4 indicates, the highest density communities (with more than 15 miles of streets and roads per square mile) are in the highly urban and older suburban communities, as well as in some of the smallest (geographically) communities of the region. One reflection of this is found in the response of the region's residents to a question on alternatives to the single person use of an automobile, presented in Figure 6.4a. Residents living in Urban Centers and Established Towns were more than twice as likely to car pool or use public transit as in any of the other three community types.

Compared to other regions, the Philadelphia region has developed a far less dense road network than most of our comparison areas, based on data from the Federal Highway Administration (Figure 6.4b). It ranks seventh among the nine comparison regions, with greater similarities to Boston, Cleveland, and Pittsburgh than with the remaining regions examined.



MAP 6.4: Road miles/sq. mi.

Source: NJ Department of Transportation (NJDOT), Pennsylvania Department of Transportation (PENNDOT).

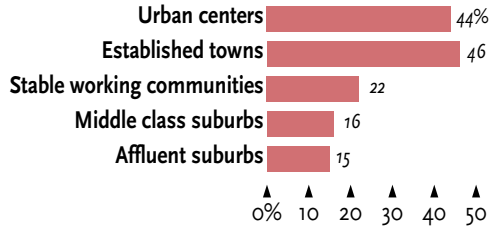


FIGURE 6.4a: Residents use of mass transit or car pools

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

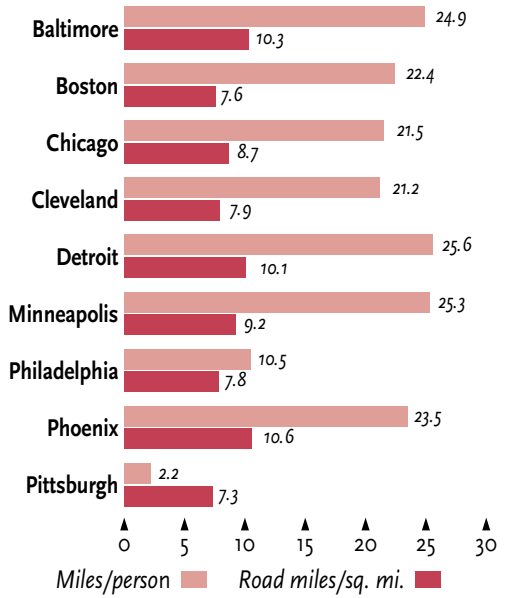
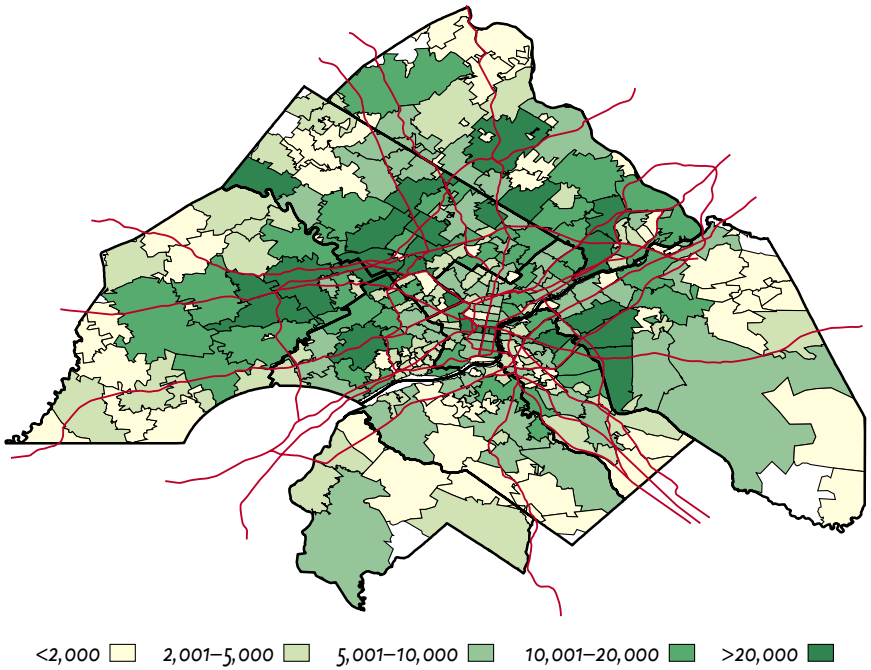


FIGURE 6.4b: Daily miles traveled and road density in selected metropolitan areas

Source: Federal Highway Administration, 2003 Highway Statistics. Note: these estimates of road density differ from those in last year's MPIP report because this year we have adopted the Federal Highway Administration's definitions of metropolitan urbanized zones.

chapter 7: regional economy

The shifting nature of the region's business sectors has combined with the suburbanization of employment and business opportunities to reshape the region's communities. In this second annual report, we have continued to focus on the role of the region's manufacturing sector, as well as other sectors that are seen as presenting new opportunities for development, namely the "creative economy," the biotechnology sector, and travel and tourism.



MAP 7.1: Employment centers: total jobs

Source: U.S. Census, Zip Code Business Patterns, 2002.

As noted in last year's report, the business locations and employment centers of the Philadelphia region have decentralized and organized around new centers in many suburban areas. Map 7.1 indicates the major centers of employment based on zip codes with major roads superimposed.

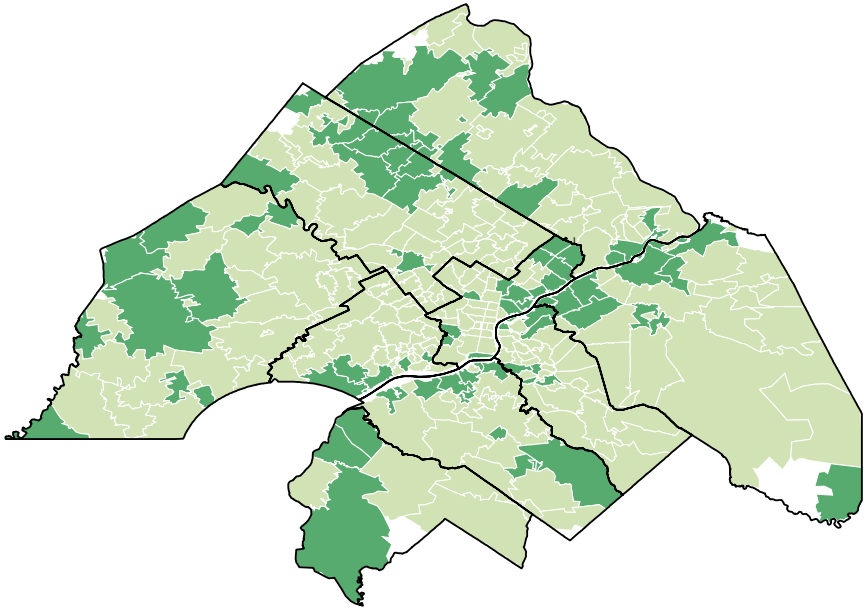
This year's map reinforces the sense of a spatially decentered economy. As was the case last year, key employment clusters within Philadelphia exist in central and West Philadelphia, with additional strengths in South, Southwest, and Northeast Philadelphia. The major employment centers in the suburbs are found in lower and central Bucks County, along the often-cited Rt. 202 corridor at the juncture of Chester, Delaware, and Montgomery counties, and in the Mt. Laurel/Marlton area of Burlington County in New Jersey.

FIGURE 7.1: Non-Farm employment levels by metropolitan area

	Jobs (000's)	*% change (1995–2004)*
Baltimore	**1,263**	**12%**
Boston	**1,638**	**3**
Chicago	**3,749**	**3**
Cleveland	**1,073**	**1**
Detroit	**837**	**-5**
Minneapolis	**1,738**	**12**
Philadelphia	**1,868**	**9**
Phoenix	**1,6758**	**37**
Pittsburgh	**1,135**	**6**

Source: Bureau of Labor Statistics, Metropolitan Labor Force Series, 2004.

The Bureau of Labor Statistics tracks employment over time by metropolitan area. The data show a growth pattern between 1995 and 2004 that might surprise many in the metropolitan area. Philadelphia has seen a 9.1 percent increase in the size of its employment base over the 10-year period, exceeded only by Baltimore, Minneapolis, and Phoenix (Figure 7.1). Other metropolitan areas have not fared as well, with Detroit's employment base shrinking; Boston, Chicago, and Cleveland have grown three percent or less.



Manufacturing jobs >15% of all jobs

MAP 7.2: Employment centers: manufacturing

Source: U.S. Census, Zip Code Business Patterns, 2002.

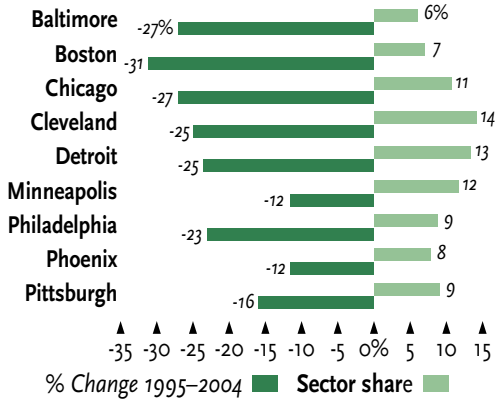
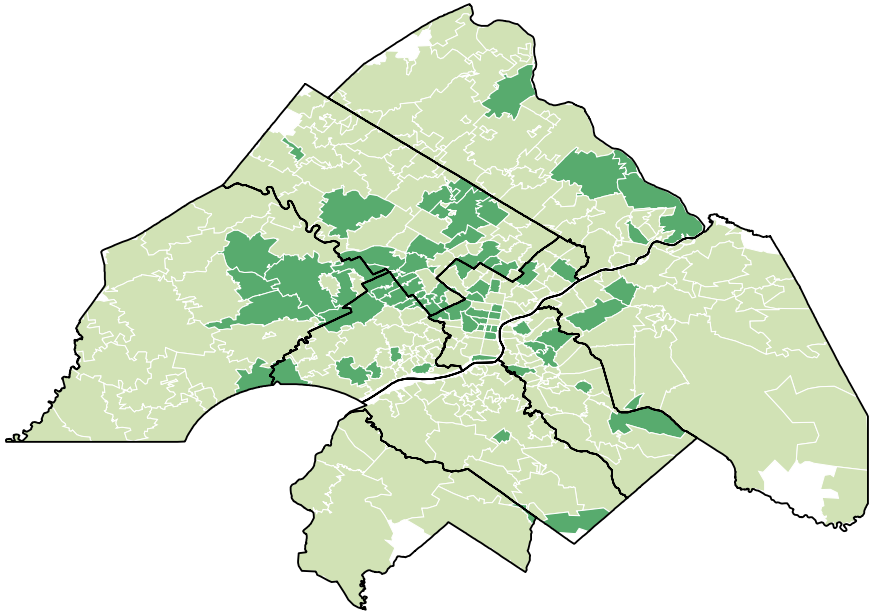


FIGURE 7.2: Manufacturing jobs as percentage of all jobs by metropolitan area

Source: Bureau of Labor Statistics, Metropolitan Labor Force Series, 2004.

We continue to track the fate of the manufacturing sector across the region. In a simplified presentation of the locational centers of manufacturing employment, Map 7.2 presents the new geography of manufacturing in the region. Several communities within Philadelphia remain relatively strong areas of manufacturing employment, especially in the Northeast, in the Hunting Park area, and in West Philadelphia. Older core areas of manufacturing on both sides of the Delaware River, both north and south of the city are still evident, but the presence of widely scattered locations on the periphery of the region suggests that the sense of a heavily concentrated manufacturing "core" will need to be reconsidered. Further, while the relative strength of manufacturing as an economic sector may have diminished for the region as a whole, it remains an important source of jobs for the communities identified on the map.

Figure 7.2 indicates that, among comparison metropolitan areas, Philadelphia falls at a midpoint between the region with the lowest regional manufacturing share (Baltimore) and the cities with the highest (Cleveland and Detroit). The cities of the upper Midwest continue to have larger manufacturing shares—although not dominant ones—compared to eastern cities and Phoenix. It should be noted, however, that all areas evidenced double-digit percentage losses in manufacturing sector employment.



Creative economy jobs >10% of all jobs

MAP 7.3: Employment centers: creative economy

Source: U.S. Census, Zip Code Business Patterns, 2002.

FIGURE 7.3: Creative class employment

	% Share	Rank
Baltimore	–	–
Boston	37	11
Chicago	31	44
Cleveland	29	75
Detroit	31	55
Minneapolis	34	22
Philadelphia	32	33
Phoenix	30	75
Pittsburgh	30	67

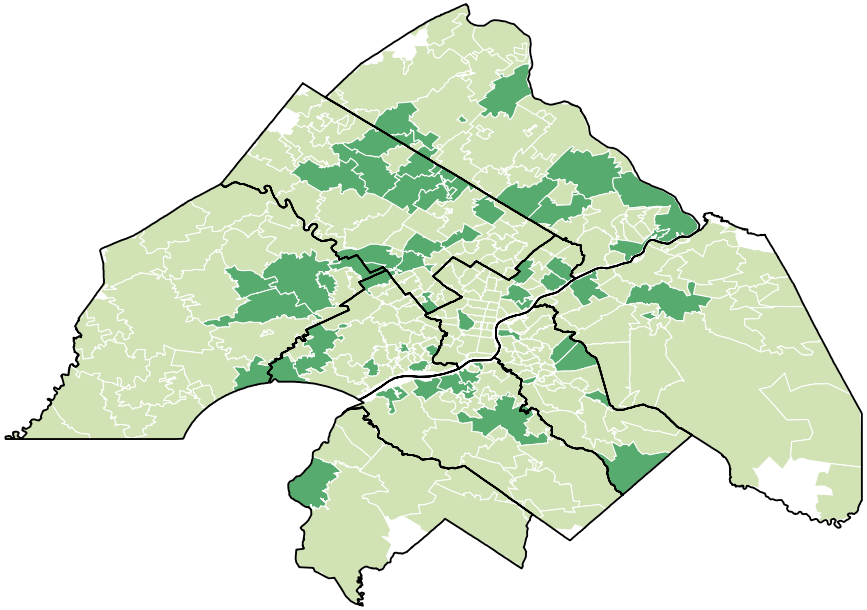
Source: Richard Florida, The Rise of the Creative Class, 2004 (pp: 368-369).
Note: Baltimore is omitted because the data source folded it into Washington DC.

In another chapter of this report specific attention is paid to the many dimensions of the arts and cultural activities as they are distributed across this region. A review of both Florida's work on the creative class and John Howkins' analysis of the components of a "creative economy" yields a definition not confined to jobs directly involved with the arts.[7] (That more restrictive definition of creative employment is discussed and mapped in Indicator 12.5 later in this report.) This broader creative economy includes not only art, design, fashion, films, TV, radio, and other visual and performing arts, but also advertising, publishing, research and development, software, and other businesses in which workers make their living by creative problem-solving.

Map 7.3 shows where this broadly defined creative sector is located. It spreads well beyond the city of Philadelphia, encompassing wide areas of the region. Places with more than 10 percent of jobs in the creative economy stand out along the Delaware border where Chester and Delaware counties meet; in Gloucester, Camden, and Burlington counties; and in the northern section of both Montgomery and Bucks counties.

Figure 7.3 presents the employment share and the overall rank of each of the comparison metropolitan areas, with the exception of Baltimore (whose information is aggregated into the broader Washington, DC metropolitan area). Philadelphia, with nearly one-third of its regional employment in the creative economy, ranks slightly behind Boston and Minneapolis in employment share, with an overall rank of 33rd as measured against all metropolitan areas.

indicator 7.4: biotechnology



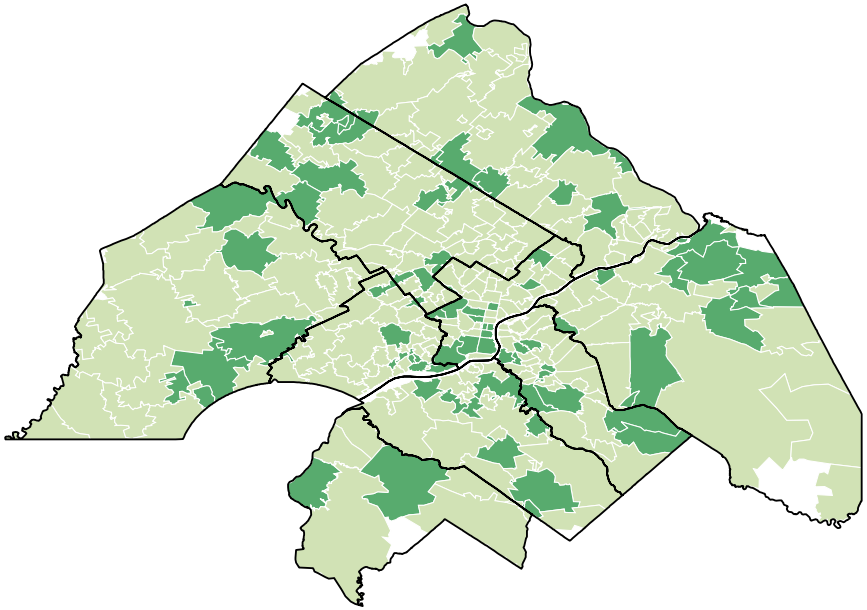
Biotechnology jobs >2% of all jobs

MAP 7.4: Employment centers: biotechnology

Source: U.S. Census, Zip Code Business Patterns, 2002.

Last year's report focused on the distribution of Information Technology (IT) and higher education/medical employment as indicators of new directions in the regional economy. Several recent regional business initiatives have specifically cited the importance of the region's biotechnology and life-science industries as a potential growth pole that would anchor further developments in the related sub-sectors of IT and medical support such as clinical trials networks, "translational" research (from "bench to bedside"), healthcare information systems and patient support services. This component of the regional economy is best understood as limited in size, but strategically important to the region's continued emergence as a center of both IT and "eds and meds" employment.

The highly specific definition of this sector means that its employment totals will be less striking than many others. In Map 7.4, the centers of biotechnology employment are identifiable when they constitute more than two percent of the total employment in a given zip code. The importance of major pharmaceutical companies along the Rt. 202 corridor in both Montgomery and Chester counties, as well as along the Bucks and Montgomery County border is immediately apparent, as is the importance of major chemical research and production facilities along the Delaware River.



Travel and tourism jobs >12% of all jobs

MAP 7.5: Employment centers: travel and tourism

Source: U.S. Census, Zip Code Business Patterns, 2002.

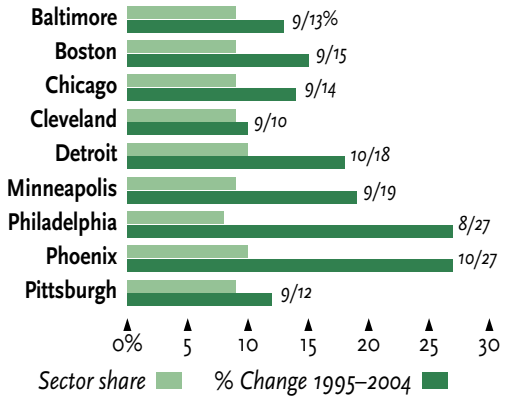


FIGURE 7.5: Travel and tourism jobs as percentage of all jobs by metropolitan area

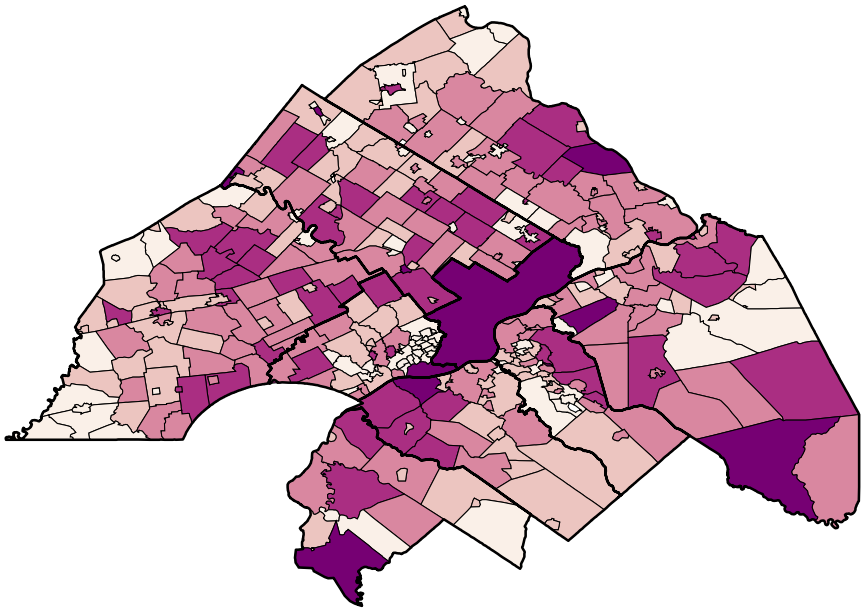
Source: Bureau of Labor Statistics, Metropolitan Labor Force Series, 2004.

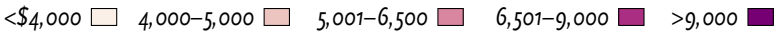
We continue to track travel and tourism employment in the region, given the importance of this sector for regional economic development. The data from the County Business Patterns for 2002 (in Map 7.5) indicate that these are businesses and employment opportunities that are widely scattered across the region. Apart from employment centers located either in Center City or adjacent to air and rail terminals in the city, there are comparatively few places within the region where travel/tourism employment (including entertainment venues) constitute more than 12 percent of the employment in a community. It is also apparent that "convenience" travel firms (e.g., concentrations of hotels/motels and restaurants near turnpike and interstate highway interchanges) provide many of the employment opportunities in this sector.

Compared to last year, when the employment data indicated an overall employment share in this sector of about eight percent, most of the metropolitan areas apart from Philadelphia approach a nine percent share (Figure 7.5). Recurring discussions across the region about improving performance in the travel and tourism sector may be driven by the lag of this region compared to others, especially given the robust growth pattern shared by all regions. In this regard, Philadelphia's position as the region showing the greatest percentage growth indicates that it is likely to continue to increase its employment share in the travel and tourism sector.

chapter 8: government and taxes

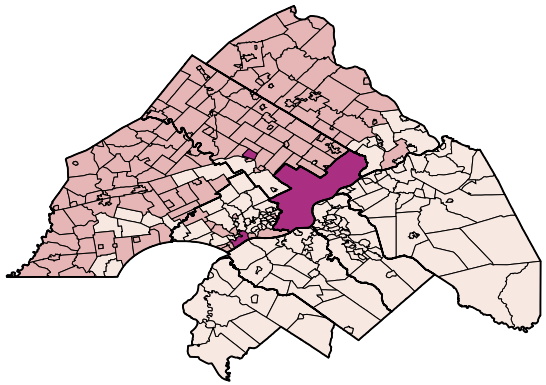
Almost daily the regional media feature stories about how local governments are raising revenue to fund public services, focusing on issues like these: How will Pennsylvania use revenues from the gambling industry to support school districts across the state? How many of the recommendations put forward by Philadelphia's Tax Reform Commission will the city government ultimately adopt? How will New Jersey school districts cope with a new state law passed last year to discourage increases in property taxes by limiting the growth of local school budgets? Debates about tax policies often ignore the widely varying resources available in different municipalities to pay for local services. This section examines local government resources and citizen satisfaction with public services.

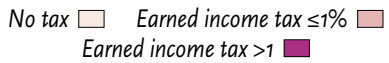




MAP 8.1a: Local government revenues per household

Sources: NJ Department of Community Affairs; PA Department of Community and Economic Development, 2000-2002.





MAP 8.1b: Municipalities that levy an earned-income tax

Source: PA Department of Community and Economic Development, 2000-2002.

Local communities are responsible not only for funding schools, but also for basic services such as public safety, streets, water, and sewer, along with amenities like libraries and recreation. Although they are expected to provide similar kinds of services, local officials in different communities have quite different levels of resources at their disposal.

Map 8.1a shows the total revenues per household with which local officials pay for government services. The map includes revenues derived from all sources, including state and federal. To rule out one-year aberrations for municipalities, we averaged the dollar revenues available in three successive years, 2000-2002. Philadelphia shows up as having a high level of government resources partly because its lower-income population relies more heavily than do suburbanites on public services, and also because it functions as both a local government and a county, funding all the services that county governments provide. Moreover, Philadelphia funds numerous services that are regularly used not only by city residents, but also by suburbanites and other visitors to the city.

Recently the earned-income tax captured news headlines when Pennsylvania offered to share future tax revenues paid by the gambling industry with suburban communities that agreed to impose an extra earned-income tax of 0.1 percent. Although Philadelphia imposes the largest and most publicized wage tax, Map 8.1b shows that the majority of Pennsylvania suburbs also levy an earned-income tax. New Jersey suburbs are prevented by state law from levying a municipal earned income tax.

indicator 8.2: public employees per capita

Figure 8.2a shows that different types of communities hire varying numbers of public employees for every 1,000 residents. Interestingly, the most affluent communities in the region typically employ fewer public workers than other communities, possibly because more affluent households are less likely to rely on public services than families with lower incomes. The fragmentation of the Philadelphia suburbs into 350 local governments can lead to inefficiencies when all these jurisdictions are providing parallel services. That is why a number of New Jersey communities have negotiated cooperative service arrangements with the encouragement of state grants from the program known as "Share" (Sharing Available Resources Efficiently). An example is the arrangement worked out by Audubon Park and Audubon Borough in Camden County to share court and police services.

The most striking number in Figure 8.2a is the high number of public employees in Philadelphia compared with other municipalities, even the other Urban Centers. As was the case with indicator 8.1, the most important contributors to Philadelphia's high number are the extensive services needed by lower-income Philadelphians and the city's dual status as both city and county government. With respect to the wages that the city pays for its workforce, Figure 8.2b shows that the average monthly wage for Philadelphia city employees falls in about the middle position between the highest and lowest paying of a set of comparison cities.

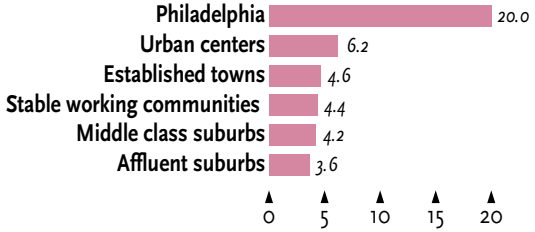


FIGURE 8.2a: Local government employees (excluding school teachers) per 1,000 residents

Source: U.S. Census, Census of Governments, 2002.

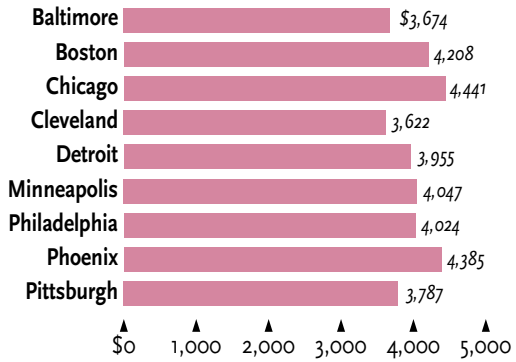
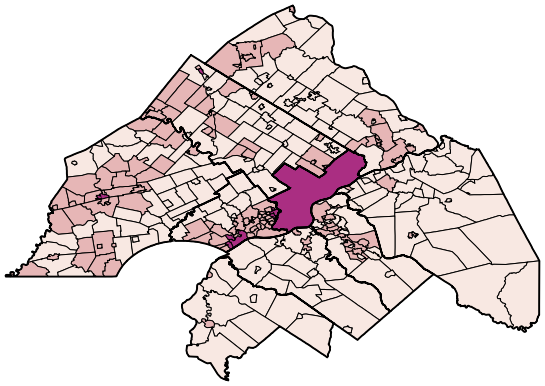


FIGURE 8.2b: Average monthly earnings by full-time public employees in selected central cities, 2002

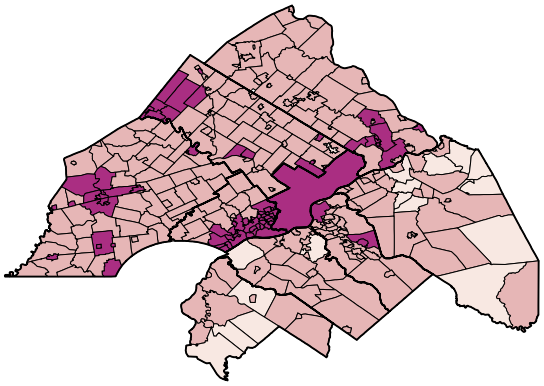
Source: U.S. Census, Census of Governments, 2002.



$2,263–4,999 5,000–7,000 >7,000

MAP 8.3a: Combined state and local taxes paid by a hypothetical household if suburban earners work outside of Philadelphia

Sources: U.S. Census, summary file 3, 2000; NJ Department of Community Affairs; PA Department of Community and Economic Development, 2000-2002.



$3,405–4,999 5,000–7,000 >7,000

MAP 8.3b: Combined state and local taxes paid by a hypothetical household if suburban earners work in Philadelphia

Sources: U.S. Census, summary file 3, 2000; NJ Department of Community Affairs; PA Department of Community and Economic Development, 2000-2002.

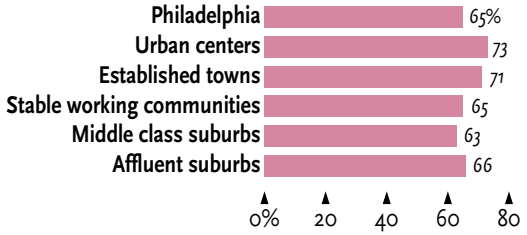


FIGURE 8.3a: Taxes for schools are very high or high

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

Local governments pay for many of the services they provide through revenues generated locally by two main types of taxes: taxes on real estate and taxes on earned income. Some rapidly growing townships also generate significant revenue from real estate transfer taxes. While the tax laws in the two states give local governments in Pennsylvania a wider range of local revenue sources to tax compared with fewer tax options in New Jersey, real estate taxes comprise the single largest source of revenues for municipalities in both states (with the notable exception of Philadelphia, whose wage tax generates larger revenues than its property tax).

Maps 8.3a and 8.3b display the combined state and local tax burden which would be experienced in different municipalities by a hypothetical household earning the median income for the region ($47,536) and owning a house priced at the average market value for the region ($119,400). The difference between the two maps is that in the suburbs, Map 8.3a assumes the wage earners in this hypothetical household are employed outside Philadelphia, whereas Map 8.3b assumes those same suburban earners are employed in the city and therefore subject to Philadelphia's wage tax. In the first scenario (Map 8.3a), the highest burdens are faced by residents of Philadelphia, followed by a number of other communities near the Delaware River in Bucks and Delaware counties, along with some communities in Camden County. In the second scenario (Map 8.3b), residents of these other older communities who work in Philadelphia actually pay higher taxes than Philadelphians.

indicator 8.3: local tax burden

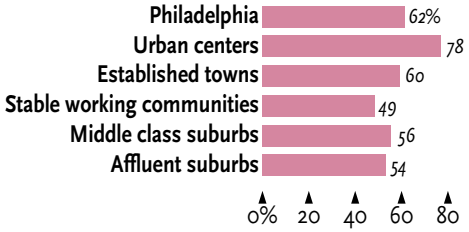


FIGURE 8.3b: Taxes for public services are very high or high

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

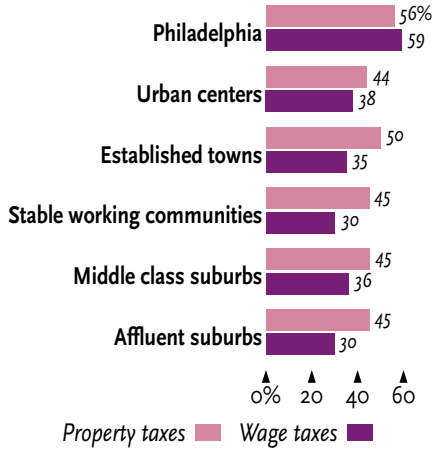


FIGURE 8.3c: Think property taxes/wage taxes are unfair

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

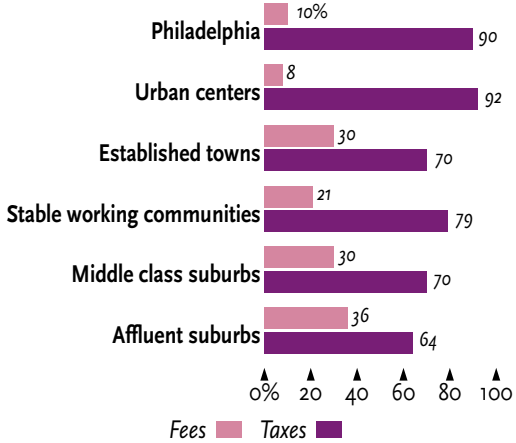


FIGURE 8.3d: Which is a fairer way to pay for public services: fees or taxes?

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

Despite significant differences in the tax revenues that local governments collect, the citizens of the region express similar sentiments about their tax bills. Respondents in the Urban Centers outside of Philadelphia as well as the Established Towns are the most likely to describe their school taxes as "very high" or "high" (Figure 8.3a). Somewhat smaller percentages of residents in most community types rate their taxes for public services like garbage collection and police as "very high" or "high" (Figure 8.3b).

Note that since tax data are available only by municipality, Philadelphia is shown separately from the other five community types.
Within Philadelphia, about the same percentages of residents think that local property taxes and local income taxes are unfair, whereas in the rest of the region property taxes are much more likely to be thought unfair than are local income taxes (Figure 8.3c). Interestingly, despite New Jersey citizens' reputation for being antagonistic toward property taxes, the suburban Pennsylvania respondents in our survey were just as likely as New Jersey respondents to think property taxes unfair. Forty-eight percent of New Jerseyans called property taxes unfair, compared to 50 percent of those living in the Pennsylvania suburbs. Among the different community types, the most substantial differences involved paying fees versus taxes for public services (Figure 8.3d), with residents of Philadelphia and other Urban Centers showing far less support for fees than residents of other community types.

indicator 8.4: citizen satisfaction with public services

Along with public education (which is portrayed in the next section of this report), local governments are responsible for providing basic public services and for protecting residents' safety. To assess citizen satisfaction with the job local officials are doing, our regional survey asked questions about respondents' evaluations of basic public services and about the job done by local government in managing growth and development. In the three service areas—maintaining streets (Figure 8.4a), keeping public areas clean (Figure 8.4b), and collecting garbage (Figure 8.4c)—Philadelphians rate their public services lower than any other residents, even those living in the other Urban Centers. Of the three services, the most consistently favorable ratings go to garbage collection, which elicits high levels of satisfaction even in Philadelphia. Throughout the region, respondents express considerably less satisfaction with their local government's performance in managing growth (Figure 8.4d) than in providing basic services.

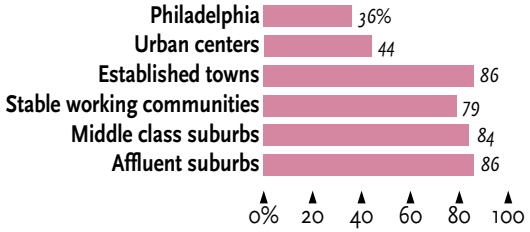


FIGURE 8.4a: Street maintenance rated very good or good

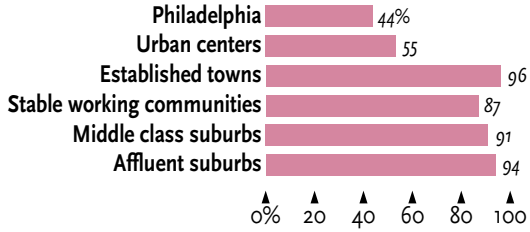


FIGURE 8.4b: Keeping public areas clean rated very good or good

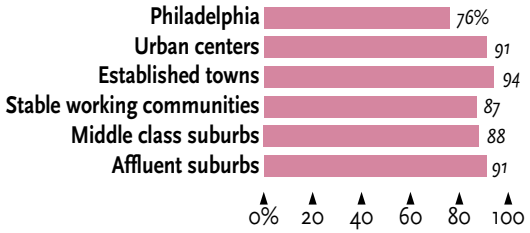


FIGURE 8.4c: Garbage collection rated very good or good

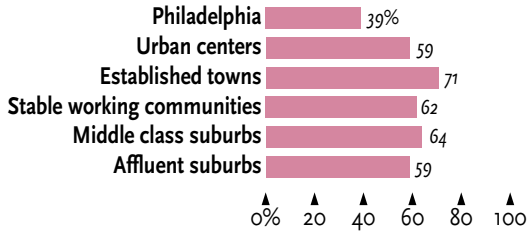


FIGURE 8.4d: Strongly agree or agree that town is doing a good job managing growth and development

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004

indicator 8.5: taxes and amenities as reasons for moving

A question arising from the variety of communities in this region is how households make choices when deciding where to live. While economic factors play a part, when our survey respondents were queried about why they chose the community they lived in, they indicated that a mix of amenities, family, and economic factors was significant.

Four reasons were listed by a majority of respondents as having been "very important" to their decisions about their choice of a community, with safety and housing costs markedly outstripping both school quality and the convenience of shopping and schools. Consistent with last year's report, lower taxes were not cited by this year's respondents as one of the major reasons for their choice of community (see Figure 8.5a).

However, other questions in the survey showed that households who consider taxes important express a greater likelihood of moving from their present location than those who do not consider taxes important. We asked residents if they had ever considered moving in order to pay lower taxes, and also whether they were likely to move within the next two years. Only about one-quarter of households said they had ever considered moving in order to pay lower taxes. Looking specifically at that subset of "tax-sensitive" households, we found they expressed a higher likelihood of moving within the next two years than did the less tax-sensitive households (Figure 8.5b). This relationship existed in both this year's survey of the region's residents and in the combined responses from this year's and last year's surveys. In this year's survey, tax-sensitive households were more likely than other households to predict they will be moving by a margin of eight percentage points. The margin is almost twice that large in the combined years' responses.

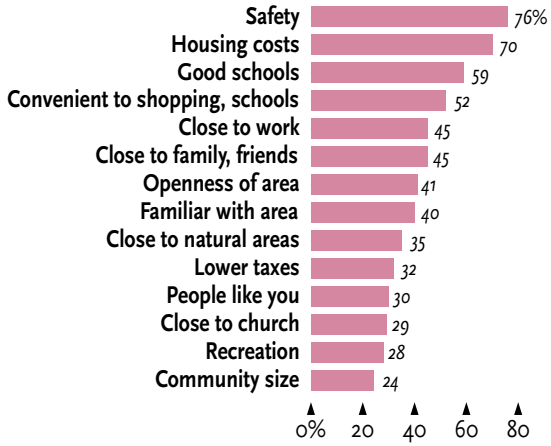


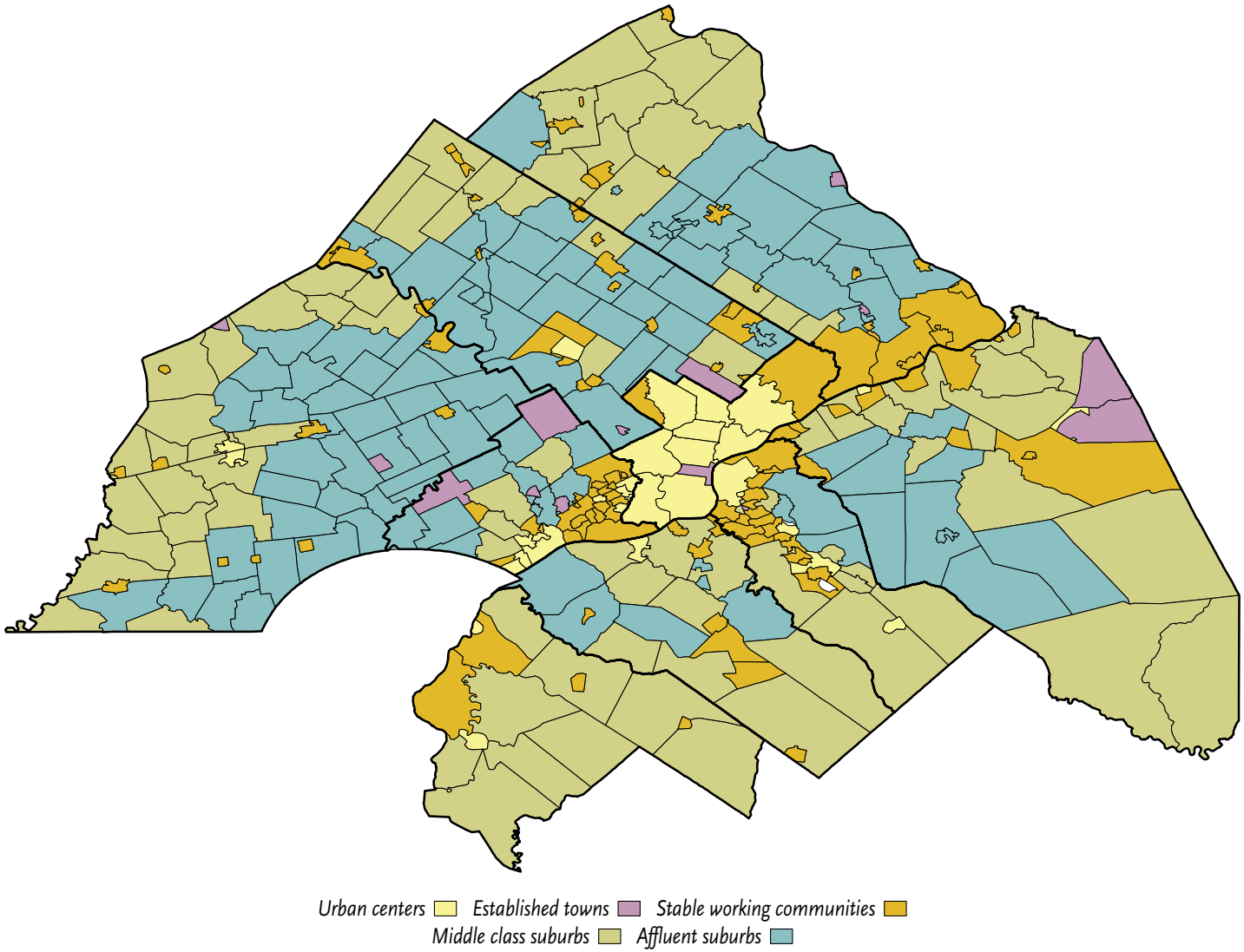
FIGURE 8.5a: Factors in community choice that are considered very important

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

FIGURE 8.5b: Taxes and the likelihood of moving within two years

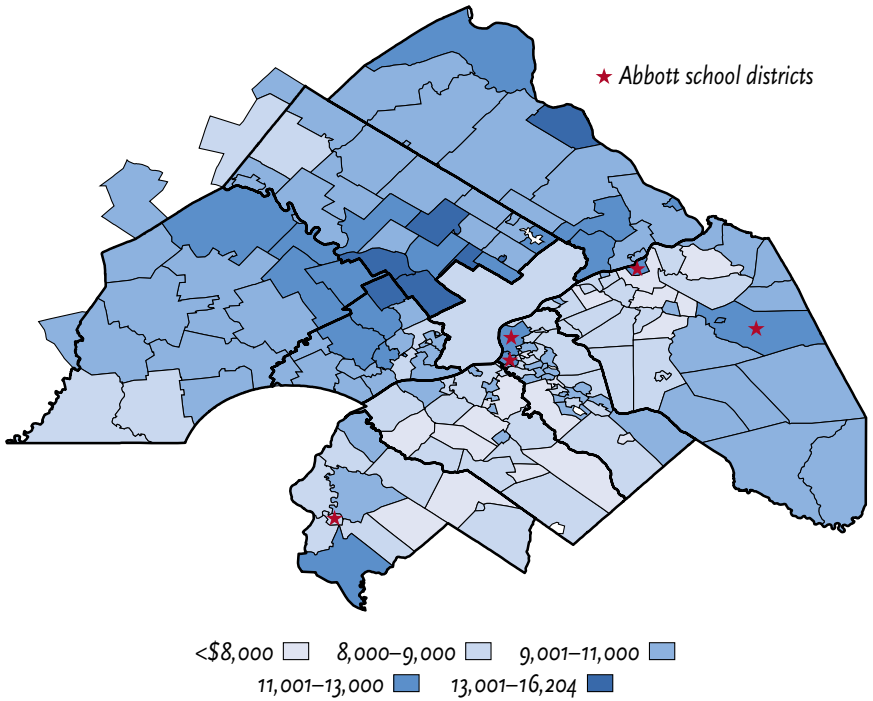
2004 Survey	*Likely to move*	*Not like to move*
Tax-sensitive households	36%	64%
All other households	28	72
Combined 2003-2004 Surveys		
Tax-sensitive households	43	57
All other households	28	72

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.
Note: defined as those who have at some point considered moving in order to pay lower taxes


Urban centers
Established towns
Stable working communities
Middle class suburbs
Affluent suburbs

chapter 9: education

This section provides information about important dimensions of educational services in our communities, using the boundaries of school districts as our reporting units. Although the region contains 353 municipalities, its residents are served by 196 school districts. These boundaries do not necessarily coincide with the boundaries of municipalities. Schools rank among the most important contributors to the quality of life in any community. Fifty-nine percent of the respondents to our regional household survey told us good schools were "very important" to the decision to move into their current community, while another 14 percent ranked good schools as "somewhat important" to their choice of a community.



MAP 9.1: School district spending per pupil

Sources: NJ and PA Departments of Education, 2002–2003.

Spending by school districts differed significantly in the 196 school districts in our region, from a low of $6,192 per pupil in Somerdale Borough, to a high of $16,204 per pupil in Lower Merion. Map 9.1 shows a significant number of school districts in New Jersey spend less than $8,000 per pupil, while no districts on the Pennsylvania side fall below $8,000. The second lowest spending levels are seen in Philadelphia, along with a number of school districts in eastern Delaware County and a sizable collection of districts spanning all the New Jersey counties. A cluster of affluent communities at the intersection of Montgomery, Delaware, and Chester counties support the largest concentration of high-spending schools in the region.

FIGURE 9.1: Satisfaction with amount of money spent on local public schools

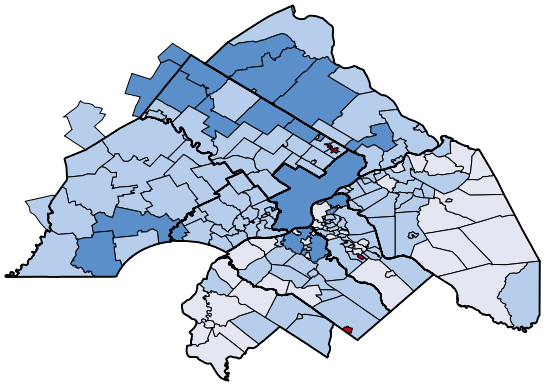
	Not enough	*About right*	*Too much*
Philadelphia	67%	20%	13%
Urban centers	43	36	15
Established towns	4	66	30
Stable working communities	27	49	24
Middle class suburbs	18	56	26
Affluent suburbs	10	66	24

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

In New Jersey, it is worthwhile noting that among the higher spending communities are five that have been designated Abbott Districts by the state of New Jersey. They are identified on Map 9.1. These five are included among several dozen school districts throughout the state whose tax bases have been deemed insufficient to finance local schools. By allocating disproportionate aid to these districts, the state government supports a higher rate of spending for their schools than in most other districts on the New Jersey side of the river.

When we look at the attitudes of the region's residents about spending for their local public schools, we find that Philadelphians are far more likely than any other citizens of the region to judge insufficient the amount of money being spent on public schools (Figure 9.1).

indicator 9.2: student-teacher ratios in primary schools



MAP 9.2: Student-teacher ratio in primary schools

Sources: NJ and PA Departments of Education, 2002–2003.

FIGURE 9.2a: Strongly favor or somewhat favor increasing state taxes to pay for educational initiatives

	Philadelphia	*Southeast PA*	*State of PA*
Smaller class sizes in early grades	85%	72%	76%
Full day kindergarten	82	66	61
Voluntary pre-kindergarten	74	58	56

Source: Franklin & Marshall College, Center for Opinion Research, "2004 School Reform Survey" April 2004.

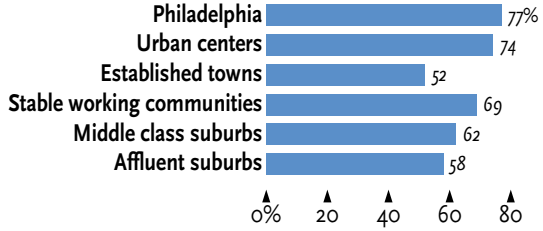


FIGURE 9.2b: Strongly agree or agree would pay higher local taxes for schools

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

Research suggests that small classroom size contributes to learning, especially at lower grade levels. Map 9.2 shows the average student-teacher ratio at primary grade levels. (Note that this ratio does not necessarily portray class sizes, since it includes not only regular classroom teachers, but also special-purpose teachers.) Although the high ratio of students per teacher in Philadelphia is expected, it is interesting to observe that high ratios also occur in some outlying school districts where tax revenues have not kept up with school enrollments. Note that school districts in the New Jersey suburbs enjoy generally lower student-teacher ratios than their Pennsylvania counterparts. All five Abbott districts fall within the most favorable category for student-teacher ratios. (See indicator 9.1 for an explanation of Abbott districts.)

A 2004 survey of Pennsylvanians' attitudes about state funding found that sizable majorities of residents in Philadelphia and its suburbs favored increasing state taxes for school funding (as did majorities in the rest of the state). Figure 9.2a shows that Philadelphians were more supportive of state tax increases to pay for different types of educational initiatives than either the southeast region as a whole or the state of Pennsylvania.

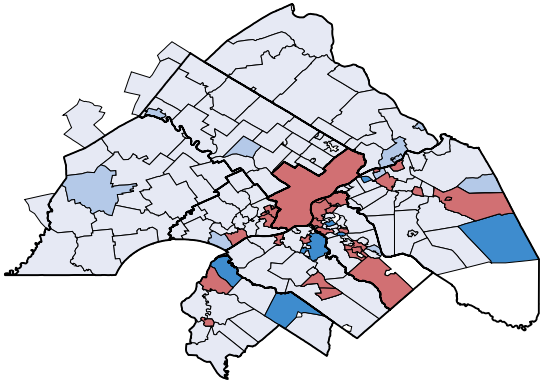
Our regional household survey asked whether respondents would be willing to pay higher local taxes if the proceeds went to better schools. Again, Philadelphians appear willing to pay more taxes, a willingness shared by respondents in other Urban Centers (Figure 9.2b). Smaller majorities in other community types appear willing to pay higher taxes to support improved schools.

indicator 9.3: standardized test scores related to family incomes

Public schools are increasingly accountable for their pupils' performance on standardized tests. While New Jersey and Pennsylvania administer different tests, each state attempts to determine whether students are achieving at appropriate grade levels. In Pennsylvania, students falling "below basic" are deemed to have little understanding and minimal display of skills included in the Pennsylvania Academic Content Standards. The comparable performance category in New Jersey is "partially proficient."

Map 9.3 shows the association of low test scores with low incomes, measured by eligibility for subsidized school lunches. Pupils whose family income is up to 130 percent of the poverty line are eligible for free lunches, and those whose families earn between 130 percent and 185 percent of the poverty line get reduced prices. The map identifies (in red) the school districts that show both of the following characteristics: (1) they serve large numbers (over 30 percent) of children eligible for subsidized lunches, and (2) they report high percentages (over 30 percent) of 8th grade students failing standardized reading tests. It is worth noting, however, that these two conditions do not always occur together. In seven districts (colored in dark blue), high failure rates on reading tests occur in districts that do not have high proportions of students eligible for free lunches. Nine other districts (colored in lighter blue) report high levels of eligibility for subsidized lunches, yet do not report high failure rates on 8th grade reading tests.

Philadelphians express far less satisfaction with public schools than residents of other communities in the region, including the other Urban Centers (Figures 9.3a). Furthermore, fewer Philadelphians perceive their public schools improving. Figures 9.3b show there is little difference in the estimates of school quality given by suburban respondents in New Jersey and Pennsylvania.



>30% failing scores and >30% free/reduced lunch
>30% failing scores
>30% free/reduced lunch
<30% failing scores and <30% free/reduced lunch

MAP 9.3: Student eligibility for lunch assistance and 8th grade performance on standardized reading tests

Source: National Center for Education Statistics, 2002.

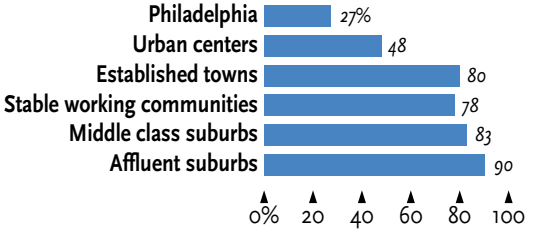


FIGURE 9.3a-1: Quality of schools is very good or good

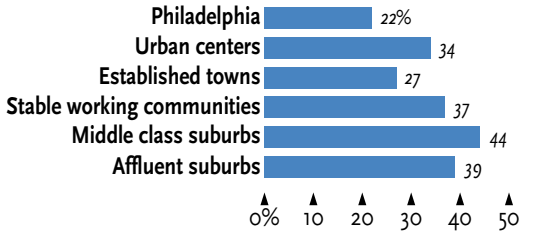


FIGURE 9.3a-2: School quality has increased over the past 5 years

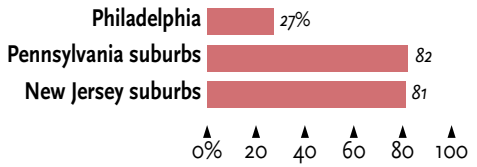


FIGURE 9.3b-1: Quality of schools is very good or good

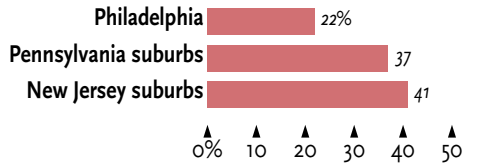
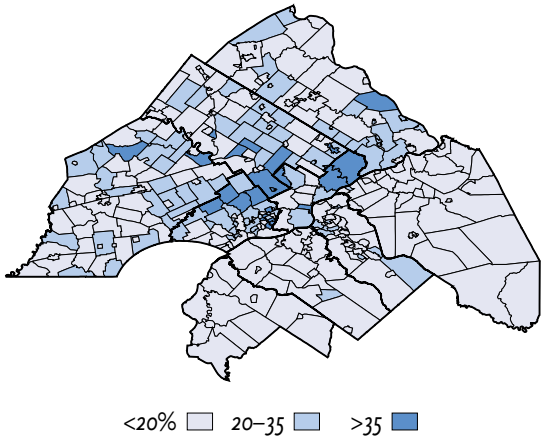


FIGURE 9.3b-2: School quality has increased over the past 5 years

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

indicator 9.4: private school attendance



MAP 9.4: Private school attendance: school-age children in private school

Source: U.S. Census, summary file 3, 2000.

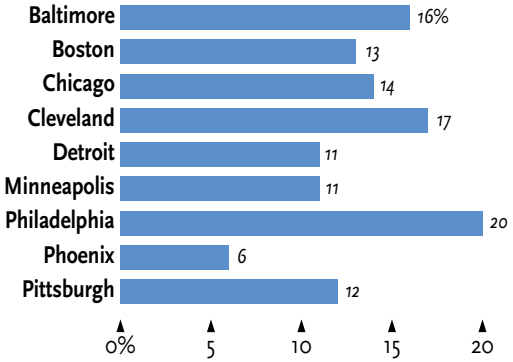


FIGURE 9.4a: Percentage of school–age students attending private schools in selected metropolitan areas

Source: U.S. Census, summary file 3, 2000.

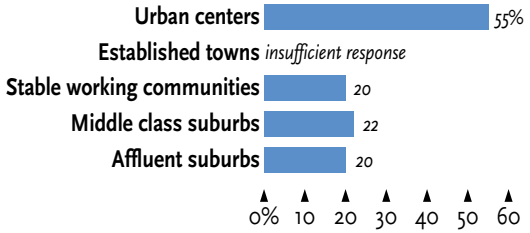
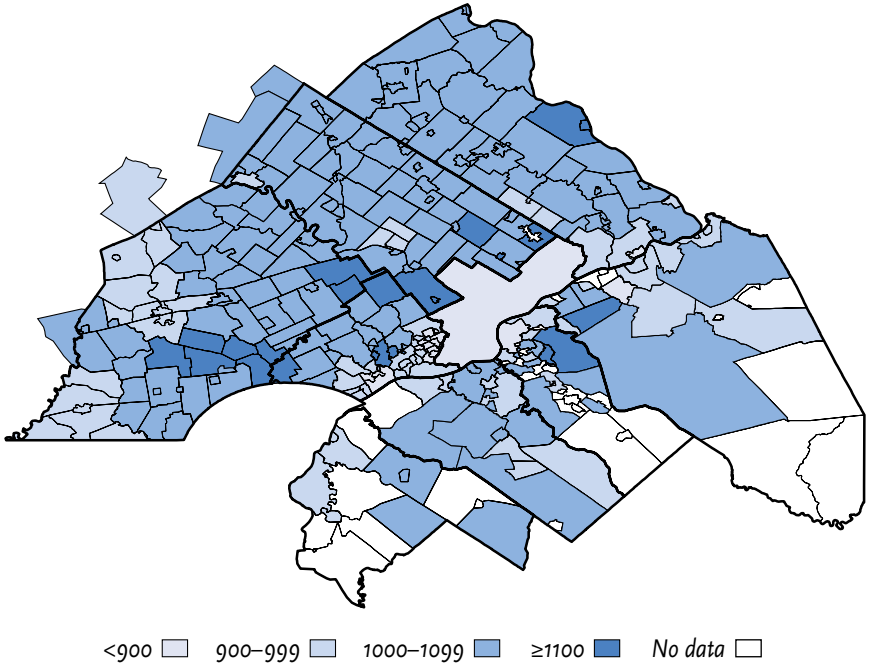


FIGURE 9.4b: Not sending child to private school, but would like to

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

Families in greater Philadelphia send their children to private schools in larger numbers than do families in other regions. The average figure of 20 percent of the region's school age children attending private schools is higher than in comparable metropolitan areas (Figure 9.4a). Map 9.4 shows that well above 20 percent of youngsters in certain communities have chosen private schools—for example, in a number of suburbs in Montgomery and Delaware counties. However, it would be a mistake to think of private schools as serving only wealthy families. Many families with modest incomes choose private schools to avoid sending their children to poorly performing public schools. The map identifies the Near Northeast and Far Northeast sections of Philadelphia as places where over a third of youngsters attend private schools. Comparing communities on the two sides of the Delaware River, we see much lower rates of private school attendance in New Jersey than in Pennsylvania.

The appeal of private schools to parents in this region becomes even more apparent when we look at the responses to a survey question concerning private schools. Among those respondents who are not currently sending their children to private schools, a majority of households in the Urban Centers and substantial minorities in other community types reported they would like their youngsters to attend private schools (Figure 9.4b).



MAP 9.5: Average combined SAT score, 2000–2002

Sources: NJ and PA Departments of Education, 2000–2002.

FIGURE 9.5: Average SAT scores, 2000–2002

	Verbal	*Math*	*Verbal/math*
Philadelphia	404	412	816
Camden	385	390	775
Suburbs	503	509	1012
Metro as whole	500	507	1007
National test takers	505	513	1018

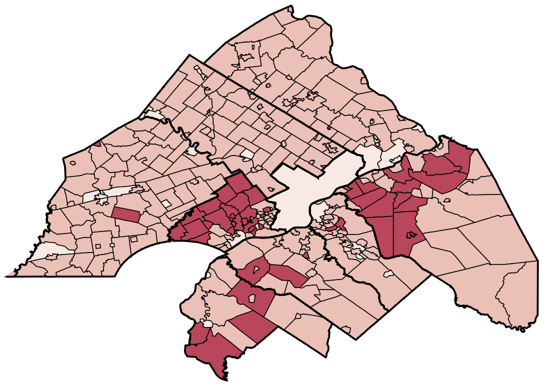
Sources: NJ and PA Departments of Education; College Board, 2000–2002.

Like many other educational indicators, scores achieved on the SAT (Scholastic Assessment Test) are known to correlate with family income, parents' education level, race, and ethnicity. Since it is taken by college-bound seniors across the nation, the SAT is used by college admissions officers to compare groups of students coming from schools with widely differing resources, educational programs, and grading practices. The test aims to measure students' skills in verbal reasoning, critical reading, and math problem solving. Prior to spring 2005, a maximum of 1600 points could be earned for the combined verbal and math portions of the SAT.

Map 9.5 shows the average combined scores for the verbal and quantitative portions of the SAT in each school district in our region. To make sure the scores were not reflecting only one-year aberrations for individual school districts, we averaged SAT scores over three succeeding test years, 2000-2002. The map portrays a substantial gap in test scores between the cities of Philadelphia and Camden and the rest of the metropolitan area. Test takers in the Philadelphia suburbs, while they achieve higher scores than their urban counterparts, do not out-perform the national average (Figure 9.5).

chapter 10: civic participation

Along with the economic capital required to build and maintain houses, stores, and businesses, many urban analysts now recognize the value of a community's "social capital," defined as the attitudes, relationships, and behaviors that foster cooperation. A functioning network of mutual obligation, trust, and support among residents can be a resource in itself to sustain the quality of life in communities. This section assesses the strength of those social networks in our region's communities by looking at several forms of civic engagement.



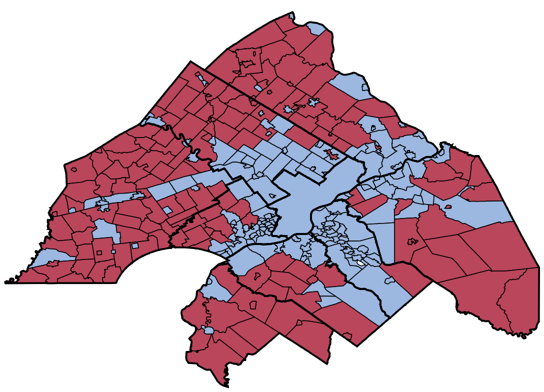
MAP 10.1a: Percentage of registered voters who voted in November 2004

Source: NJ and PA County Boards of Election, 2004.

FIGURE 10.1: Households reporting their political views overall

	Very or somewhat liberal	*In the middle*	*Very or somewhat conservative*
Urban centers	42%	33%	25%
Established towns	35	24	41
Stable working communities	29	39	32
Middle class suburbs	37	27	37
Affluent suburbs	32	32	36

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.



MAP 10.1b: Presidential voting results in November 2004

Source: NJ and PA County Boards of Election, 2004.

Voting is the most basic form of participation in community life. Map 10.1a shows the unusually high level of interest in the November 2004 contest between George Bush and John Kerry. Registered voters in two large clusters of townships in western Delaware County and northern Burlington County turned out at extremely high rates—80 percent or more. Most other suburban communities produced turn-outs almost as high, in the 65 percent to 80 percent range. Map 10.1b displays the results of the voting in the November 2004 election. Voters in the central core of the region, including the suburbs closest to Philadelphia and Camden, gave majorities to John Kerry, while a majority of the electorate in the more distant suburbs of Pennsylvania and New Jersey voted for George Bush.

When we asked residents of the region to describe their overall political views, we found surprisingly little variation across types of communities. Figure 10.1 shows that slightly higher shares in the Urban Centers than in other communities said their views are liberal, and slightly higher shares in the Established Towns said their views are conservative. Otherwise, there were only minor differences among the community types in the way people characterized their underlying political viewpoints.

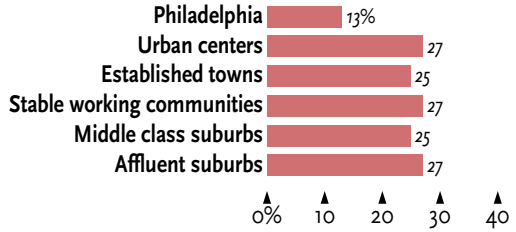


FIGURE 10.2a: Attended government board meeting in the past 12 months

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

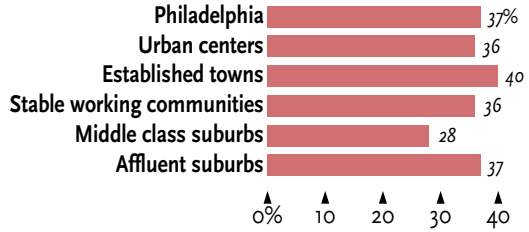


FIGURE 10.2b: Have contacted government officials In the past 12 months

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

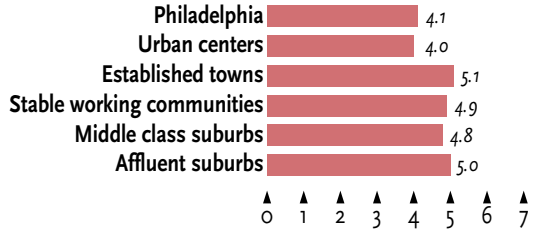


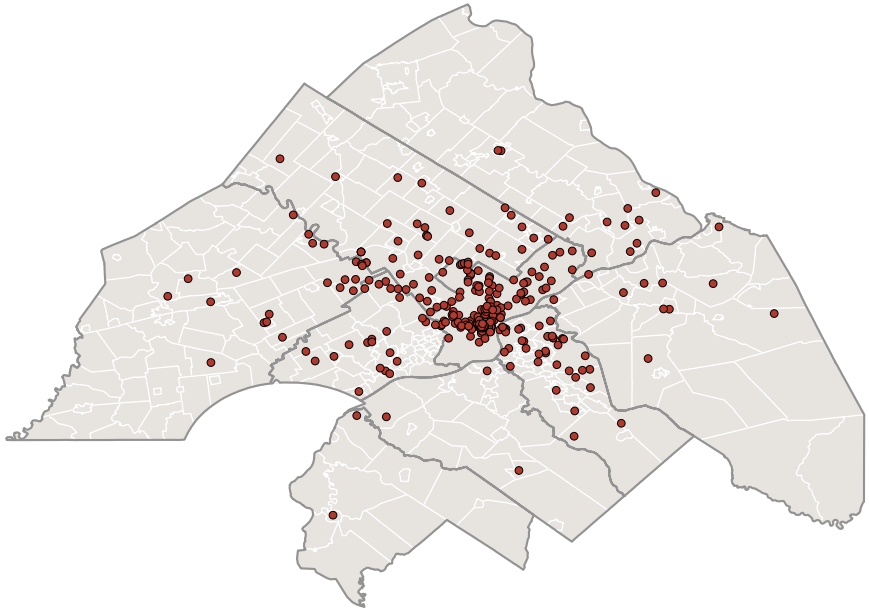
FIGURE 10.2c: Satisfaction with the job done by local government officials, on a 7-point scale from completely dissatisfied (1) to completely satisfied (7)

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

The prevailing pattern of subdividing responsibility into hundreds of small government units within our region is defended on the grounds that it puts local government within the reach of every citizen. The assumption is that small governments are more likely than large jurisdictions to respond to the preferences of their constituents. How often do our region's residents actually interact with local officials to express their preferences? In most types of communities around the region, about one quarter of residents told us they had attended at least one meeting of a local government board during the last year (Figure 10.2a). However, in Philadelphia barely half that proportion reported having attended such a meeting. This is consistent with a general expectation of lower levels of governmental participation in big cities containing many residents with lower-than-average incomes and education levels.

When we asked our survey respondents whether they had contacted a government official within the past year, about a third reported they had. On this question, we found no statistically significant difference in the pattern of answers in Philadelphia and the other types of communities (Figure 10.2b). Although Philadelphians may be less likely than suburban dwellers to attend meetings, they are no less inclined to make personal contact with public officials.

It would be tempting to conclude that the majority of citizens are so satisfied with local government that they feel no need to contact local officials. That is not what our survey suggests. Across the region, only a minority of residents express high levels of satisfaction with the job being done by local officials. On a 7-point scale, with 7 representing complete satisfaction, 1 representing complete dissatisfaction, and 4 representing a neutral reaction to the job done by local officials, the region's residents rated their local officials between 4 and 5 (Figure 10.2c). The least satisfied respondents appear to be the residents of Philadelphia and the other Urban Centers, who expressed no more than a neutral stance on their local officials (4 out of 7). Not only was their average response the lowest among the community types, but a larger percentage of them selected the most negative possible answer, "completely dissatisfied."



MAP 10.3: Community improvement nonprofit organizations

Source: National Center for Charitable Statistics, 2002.

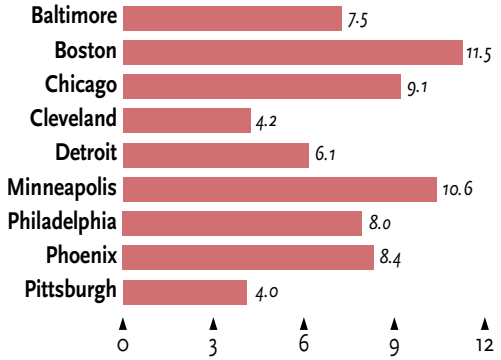


FIGURE 10.3: Volunteer referrals/1,000 population in selected metropolitan areas, 1998–2004

Source: www.VolunteerMatch.org, October 2004.

Nonprofit, voluntary organizations are among the most important ways that residents of the region pursue community improvements. Such organizations have the potential not only to address problems, but also to foster civic participation. They have deep roots in the greater Philadelphia region, traceable back to Benjamin Franklin's energetic promotion of nonprofit institutions like the Library Company, Pennsylvania Hospital, and the University of Pennsylvania.

Today's nonprofit sector includes organizations of varying types and sizes, from major civic institutions to small neighborhood associations.

Map 10.3 displays the locations of the nonprofit organizations that have been identified by the National Center for Charitable Statistics as dedicated mainly to improving communities, building capacity, making grants to communities, and strengthening volunteerism. Some of them focus on physical and economic improvements, while others promote community service. (Note: only organizations with at least $25,000 in annual revenues are included.) Not surprisingly, these organizations are concentrated in Philadelphia and Camden County.

Many nonprofit organizations rely heavily on volunteers. Increasingly, those who recruit volunteers are turning to the Internet. One of the largest internet sites is VolunteerMatch (www.volunteermatch.org), a free online service since 1998 that has matched willing volunteers to more than 30,000 nonprofit organizations throughout the U.S. Figure 10.3 shows how their referrals of "virtual volunteers" in greater Philadelphia compare to referrals in other metropolitan areas.

indicator 10.4: social ties and sense of community

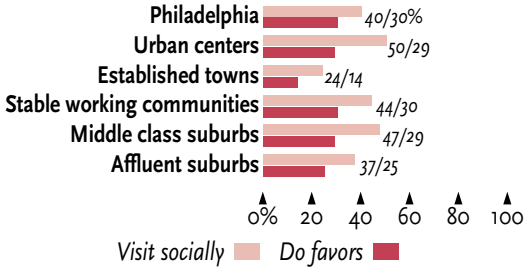


FIGURE 10.4a: Social ties; neighbors visit socially and do favors for each other daily or 1–3 times/week

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

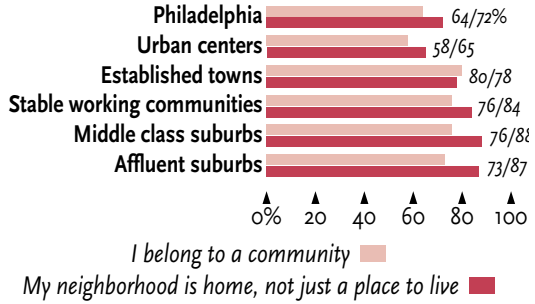


FIGURE 10.4b: Sense of community; I feel like...

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

Our survey asked respondents to describe their interactions with neighbors (to assess people's social ties) and also to express their attitudes about their communities (to gauge people's sense of community). Social scientists have found that while community interactions and attitudes may be related, they need to be examined separately because they are often dissimilar. In fact, our survey results revealed some dissimilarities.

Figure 10.4a shows that when it comes to residents' interactions with one another, most of the different types of communities exhibit similar patterns. Respondents in Philadelphia and the other Urban Centers reported visiting neighbors and doing favors at roughly similar rates as other community types. Figure 10.4b, on the other hand, portrays residents of Philadelphia and other Urban Centers as different from respondents in other types of communities when they describe their sense of community. Urban respondents were less likely than others to think they belong to a community. Philadelphia's historic label, "a city of neighborhoods," does not mean its residents express a stronger sense of attachment to their neighborhood than suburbanites. Asked whether their neighborhood is home or just a place to live, residents in many suburban communities were more likely to call their neighborhood home than respondents who lived in Urban Centers.

FIGURE 10.5a: In past year, did you attend a...

	Informal meeting with neighbors	*Neighborhood association or block meeting*	*Neighborhood meeting in a church*
Philadelphia	53%	42%	30%
Urban centers	54	34	36
Established towns	32	34	18
Stable working communities	45	24	12
Middle class suburbs	38	28	15
Affluent suburbs	42	29	12

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

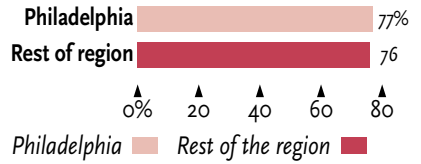


FIGURE 10.5b: Percent of households with adult active in school affairs

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

We asked residents across the region whether in the past year they had sought to deal with local problems by meeting with neighbors informally, attending a neighborhood association or block club, or attending a meeting at a place of worship. Interestingly, even though citizens in Philadelphia and other Urban Centers express a weaker sense of community and belonging than inhabitants of many other parts of the region, their levels of involvement were higher than for the other places (Figure 10.5a). One possible explanation is the unusually high rates of homeownership in Philadelphia and the other Urban Centers in our region, compared with comparable U.S. cities. Homeowners have been shown to be more likely to take part in neighborhood affairs than renters.

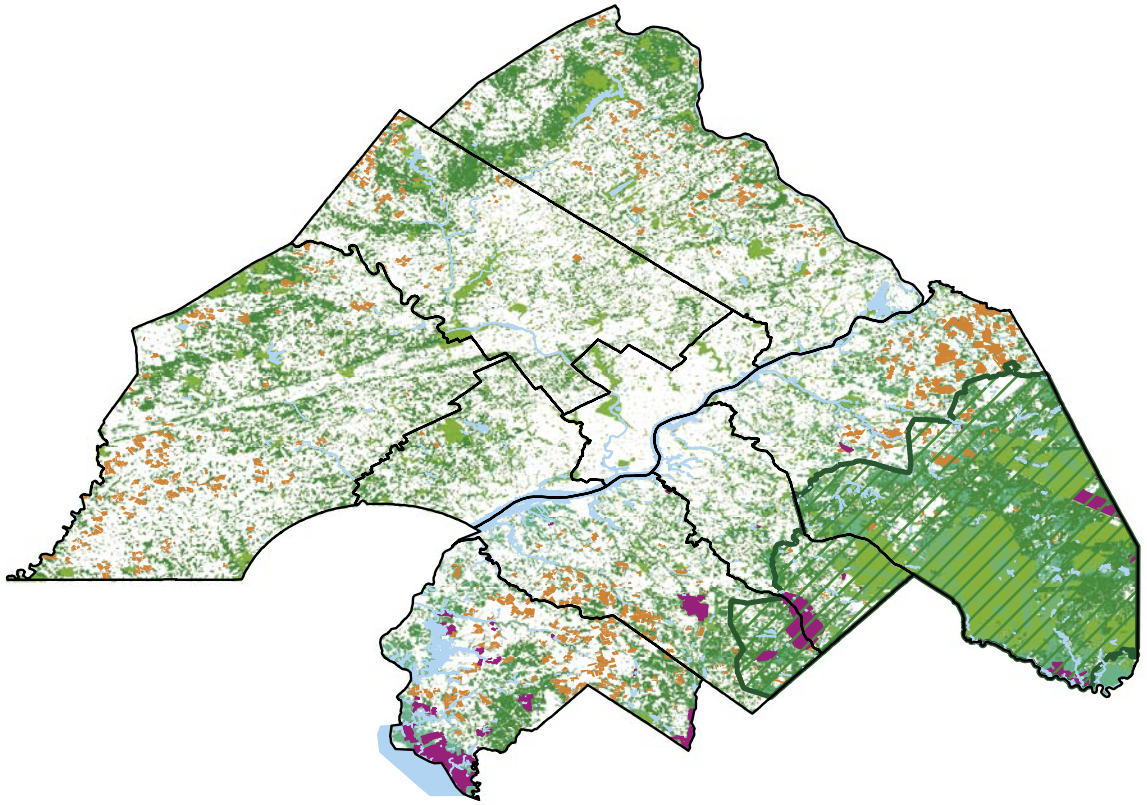
Issues involving children's schooling are among the most powerful reasons for citizens to become active in their communities. For the second year in a row, our survey found virtually no difference between Philadelphia and its suburbs in the percent of households reporting that at least one adult is active in school affairs (Figure 10.5b). About three-quarters of all households with school age children (whether in city or suburbs) are engaged in school activities. (Beyond the city of Philadelphia, the number of respondents does not permit a reliable breakdown among community types.)

chapter 11: environment

Indicators of the region's environmental conditions suggest positive signs of engagement with the protection of open space, but also some of the environmental pressures that can be expected in very large metropolitan areas. Signs of environmental awareness are present as states, counties, and communities provide for green space and for remediation of environmental damage. Our survey respondents indicate signs of environmental awareness as well. Signs of continuing environmental stress are evident, however, in both the level of hazardous wastes and airborne risks evident across the region, as well as in heavy concentrations of impervious surfaces in many communities.

indicator 11.1: parks and protected lands

In Chapter 1, an image of the Delaware Valley gained from satellite data indicates that the region, while significantly developed in terms of homes and businesses, has a substantial amount of green space interspersed with its built environment. One of the major reasons for this is seen in Map 11.1, which illustrates the region's combination of parks and protected lands, along with forested areas (both unprotected and protected) that helps maintain the mix of communities and open space. The mix of parks and protected lands provides an indication of the degree of engagement of the region's communities with environmental conservation.



MAP 11.1: Parks and protected land

Sources: NJ Department of Agriculture, 2004; Delaware Valley Regional Planning Commission, 2003; NJ Department of Environmental Protection, 1999; U.S. Geological Survey, National Land Cover/Land Use Data Set, 2001.

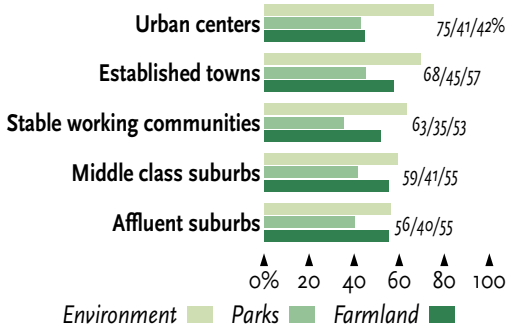


FIGURE 11.1a: Support of increased taxes for environmental issues by community type

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

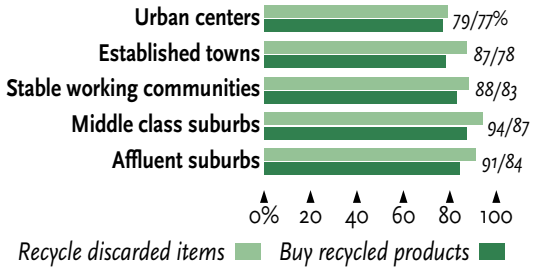


FIGURE 11.1b: Recycling activity by community type

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

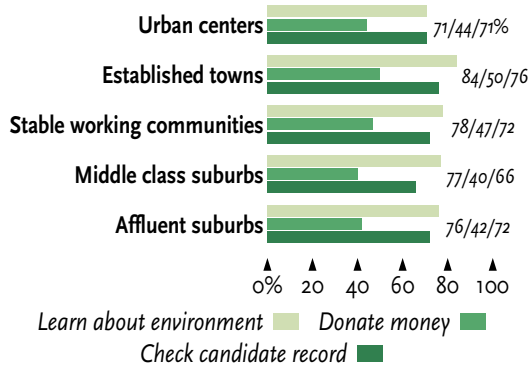


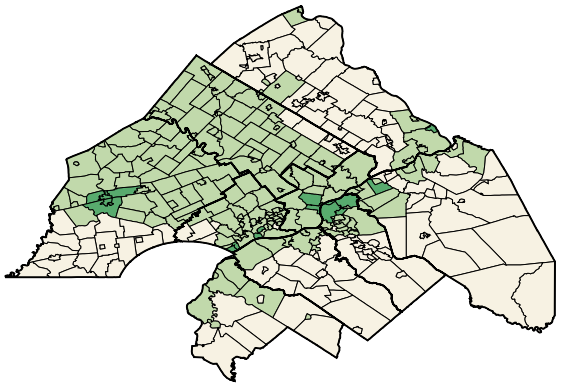
FIGURE 11.1c: Environmental activity by community type

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

An added sense of this commitment can be found in the responses to questions about environmental issues. Figure 11.1a presents responses to a question about increased taxes for environmental issues, compared across community types. Responses favored the idea of increased taxes for environmental supports as a general proposition, but support declined when specific items were addressed. Urban Center respondents were more likely to either strongly agree or agree with support for the environment than were their counterparts in other areas (especially in the two suburban community types); they were significantly less committed to farmland preservation, and more likely to be interested in park funding than respondents from other community types, although less than 50 percent indicated support.

Figure 11.1b presents some information about respondents' engagement with recycling; Figure 11.1c addresses public issue engagement through education, political awareness, and donations to environmental organizations. Respondents from Urban Centers were somewhat less likely to either recycle regularly or to purchase recycled products, although there was a strong predilection toward these activities across the community typology. When dimensions of other activities were surveyed (Figure 11.1c), respondents indicated differences in these activities by the level of active engagement required. Thus, learning about the environment and ascertaining political positions of candidates received far more positive responses than did the question of whether people had donated to an environmental organization.

The Environmental Protection Agency (EPA) has developed the Risk Screening Environmental Indicators (RSEI) series, a data set designed to evaluate toxic chemical emissions. The RSEI model combines the amounts of toxic chemicals, their environmental concentration, estimated doses received by individuals, the long-term toxicity of the chemicals and the number of people affected by these releases. RSEI provides a cumulative risk model for each square kilometer on the national grid, from which community level measures are derived. The EPA suggests that communities with elevated risk scores on RSEI engage in health screenings that are oriented to the specific toxicities that are evident in the data base (e.g., lead, PCBs, mercury, etc.).



Lowest (<335) *Mid-range* *Highest (>1200)*

MAP 11.2: Airborne risk levels: RSEI scores

Source: U.S. EPA, Risk Screening Environmental Indicators (RSEI), 2000.

Using the distribution of RSEI scores across the regions and deriving categories from that distribution, Map 11.2 indicates low, medium, and high RSEI levels across the region for 1999 and 2000 combined.[8]

The pattern of airborne risk levels shows the highest levels (RSEI scores above 1200) immediately adjacent to the suburban industrial concentrations found in and around Coatesville, Chester, Marcus Hook, Morrisville, Pennsauken and Delran, plus Center City, Lower North Philadelphia, and Camden. Most of the areas on the periphery of the region that developed somewhat later show the lowest levels (below 335). The remaining communities, which constitute the bulk of the region, have RSEI scores that range between 335 and 1200, indicating that monitoring RSEI levels over time might be warranted. These levels are reflected in the differences across community types (Figure 11.2a).

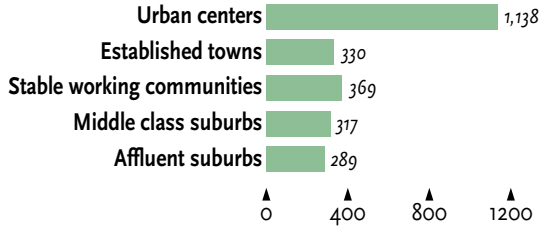


FIGURE 11.2a: RSEI levels by community type

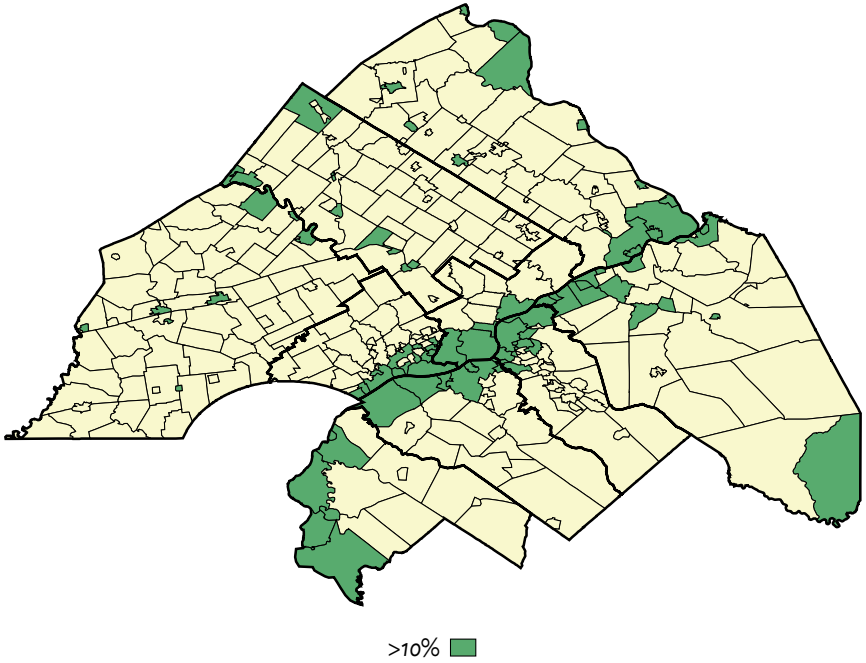
Source: U.S. EPA, RSEI Model, 2, 1, 1999–2000.

The EPA's Air Quality Index monitors the presence of major pollutants in metropolitan areas. Figure 11.2b provides the average number of days per year that the air was unhealthy for health sensitive populations, and the days in which the major pollutant for urban areas—ozone—was above EPA margins. Philadelphia falls in the middle range of metropolitan areas, with four areas lower in unhealthy days, and four areas higher. However, it ranks second highest in average number of ozone days, with Phoenix the leading metropolitan region by a significant margin over all others.

FIGURE 11.2b: Average unhealthy and high ozone days per year by metropolitan area, 2001–2004

	Unhealthy	*Ozone*
Baltimore	21	106
Boston	12	97
Chicago	21	60
Cleveland	24	74
Detroit	28	48
Minneapolis	5	88
Philadelphia	21	126
Phoenix	14	215
Pittsburgh	43	52

Source: U.S. EPA, Air Quality Index, 2001-2004.



MAP 11.3: Percentage of land in 100-year flood zone

Sources: Federal Emergency Management Agency (FEMA) Q-3 Flood Data, 1996 and updates.

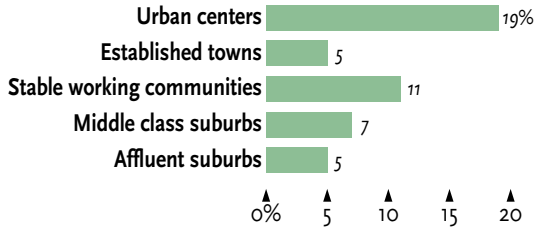


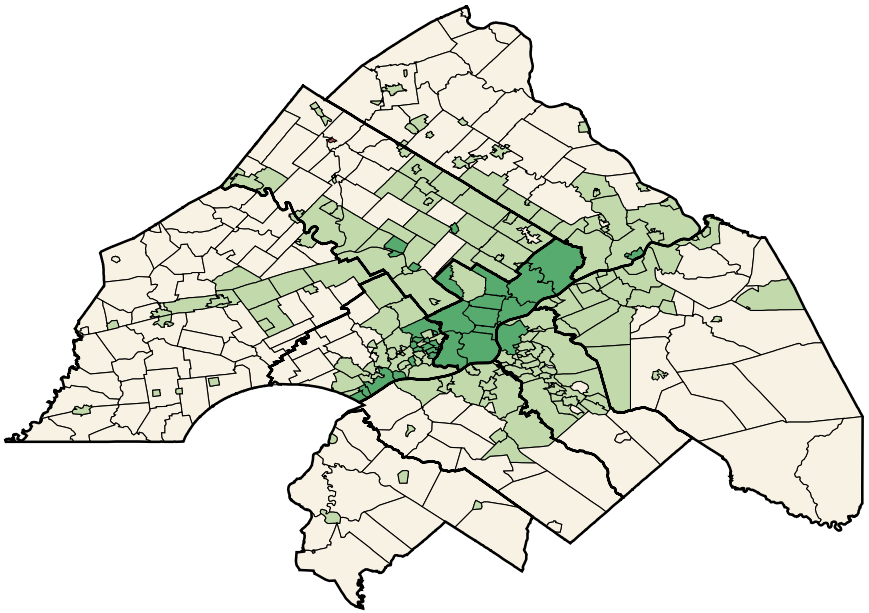
FIGURE 11.3: Percentage of land lying in 100-year floodplain by community type

Source: Federal Emergency Management Agency, 1996.

The several torrential downpours experienced over the past year alerted many communities in the region to the potential hazards associated with flooding. Many communities in the Delaware Valley are located on or near floodplains—expanses of ground that can be expected to flood on a more or less frequent basis. The Federal Emergency Management Agency (FEMA) provides data on a one percent probability for flooding, or as it is sometimes referred to, a once in 100-year probability that an area will be flooded.

These flood zones represent a combination of the proximity to water, the elevation and topology of the land, characteristics of the water source that might facilitate flooding, and detailed hydraulic analyses. As Map 11.3 indicates, proximity to watersheds is one key element of communities being in flood zones, as many communities along the Delaware and Schuylkill rivers, and the Big Timber, Perkiomen, and Rancocas creeks have more than 10 percent of their land in a floodplain.

One important artifact of the region's development is seen in Figure 11.3. The Urban Centers, as well as the Stable Working Communities of the region, many of which developed specifically because of their access to waterways, have a higher proportion of their land in floodplains than any of the remaining three community types.



Lowest (<4%) *Medium* *Highest (>20%)*

MAP 11.4: Percentage of land covered by impervious surface

Source: U.S. Geological Survey, National Land Cover/Land Use Data Set, 2001.

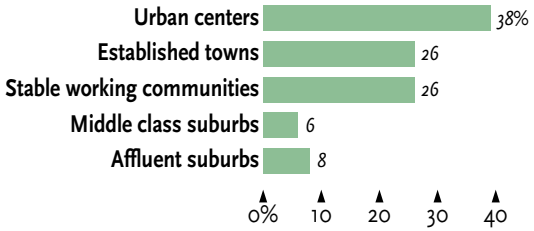


FIGURE 11.4: Percentage of land covered by impervious surfaces by community type

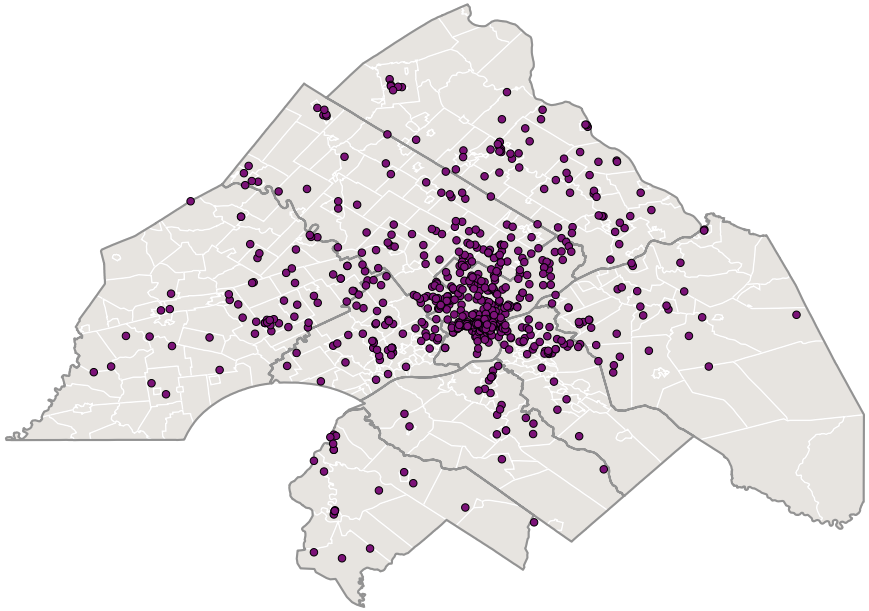
Source: U.S. Geological Survey, National Land Cover/Land Use Data Set, 2001.

Flooding is often exacerbated by the amount of runoff that is caused by the presence of impervious surfaces, land uses such as buildings, roads, or parking areas that make it impossible for rainwater to be absorbed directly into the ground. Using United States Geological Survey (USGS) digital data from its satellite photography, we measured the percentage of impervious areas found within each community in our region. Map 11.4 displays the results of those calculations, with those communities having more than 20 percent of their land as impervious in the highest category, and those having less than four percent impervious land as the lowest category. Communities that have small geographic footprints are more likely to have a high percentage of impervious surfaces, as are the more densely populated communities of the region as indicated in Figure 11.4.

These patterns are reflected in the distribution of impervious surfaces across the MPIP community typology. Suburban communities, by virtue of the larger lot sizes and lower densities (see Chapter 1) have markedly lower percentages of impervious surfaces.

chapter 12: arts and culture

To many supporters of the arts, the value of cultural activities lies in their intrinsic capacity to enrich people's lives. Increasingly, however, the arts are being valued also for their ability to advance community goals; to contribute amenities that make communities appealing to new residents; to bring tourists into the regional economy; to build social cohesion in urban neighborhoods; and to enhance the educational experiences of children and youth. Given the range of potential benefits they bring, arts and culture must be included in any attempt to assess the quality of life in our communities.



MAP 12.1 Nonprofit organizations with arts, culture, and humanities programming

Sources: National Center on Charitable Statistics, 2002; Greater Philadelphia Cultural Alliance, 2003; NJ State Council on the Arts, 2003.

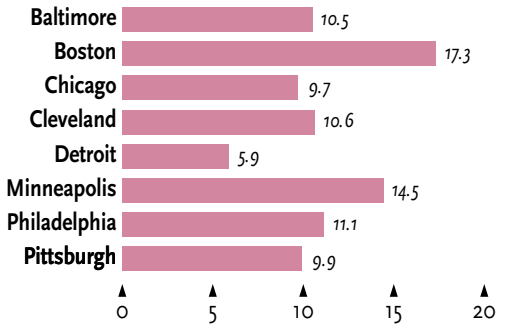


FIGURE 12.1: Number of cultural nonprofits per 100,000 persons in selected metropolitan areas

Source: National Center for Charitable Statistics.
Note: includes nonprofit arts and culture organizations with annual revenues over $25,000. The figure does not include Phoenix because of reporting problems.

Throughout history cities have served as centers of cultural production, so it is not surprising that nonprofit arts and culture organizations, including museums, archives, orchestras, theatres, opera companies, and many other cultural venues are concentrated in the core cities of Philadelphia and Camden. Map 12.1 shows that beyond Center City, Philadelphia contains a second concentration of historical/cultural institutions winding through the northwest neighborhoods of Germantown, Mount Airy, and Chestnut Hill. Lower Merion contains another dense collection of cultural venues. A few other cultural "hotspots" are emerging in the Pennsylvania suburbs, particularly in and around Doylestown and West Chester. On the New Jersey side, another concentration is appearing in Cherry Hill, Haddonfield, and Haddon Heights. When we examine how the presence of nonprofit cultural organizations in greater Philadelphia compares with other urban regions, we see that the Philadelphia region ranks behind Boston and Minneapolis, but ahead of Chicago and the other five metropolitan areas in Figure 12.1.

indicator 12.2: public schools with art and music instruction

Researchers have concluded that children who participate in arts and culture programs in their schools derive benefits ranging from enhanced academic performance to improved attitudes, attendance patterns, self-discipline, and interest in school.[9] The arts can provide creative, positive outlets even for youngsters who are not succeeding in other school subjects. Often, cultural performance involves collaborative work with others, teaching cooperation and social skills. Hands-on participation appears to carry greater benefits than more passive modes of learning about culture.

Figure 12.2 reports the responses to our survey question about whether all school children should have an opportunity to learn to play a musical instrument or participate in other arts activities. Clear majorities in almost all types of communities expressed strong support for providing such opportunities to children in schools.

Map 12.2 shows the Pennsylvania school districts in which certified teachers of music and art are providing instruction to pupils in public schools. It shows that a number of the communities whose residents expressed the strongest support for art and music for children provide that instruction in less than half their schools. This is the case in Philadelphia as well as in several other Urban Centers such as Chester-Upland and Norristown, and also in some Stable Working Communities such as Bristol in lower Bucks County and the Interboro school district in Delaware County serving Tinicum, Prospect Park, Norwood, and Glenolden. (We were unable to obtain comparable information for New Jersey school districts.)

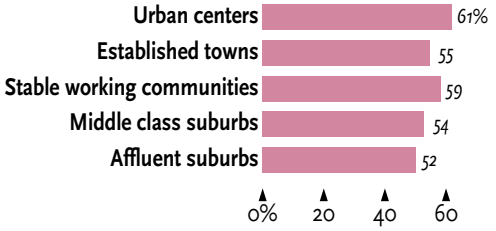
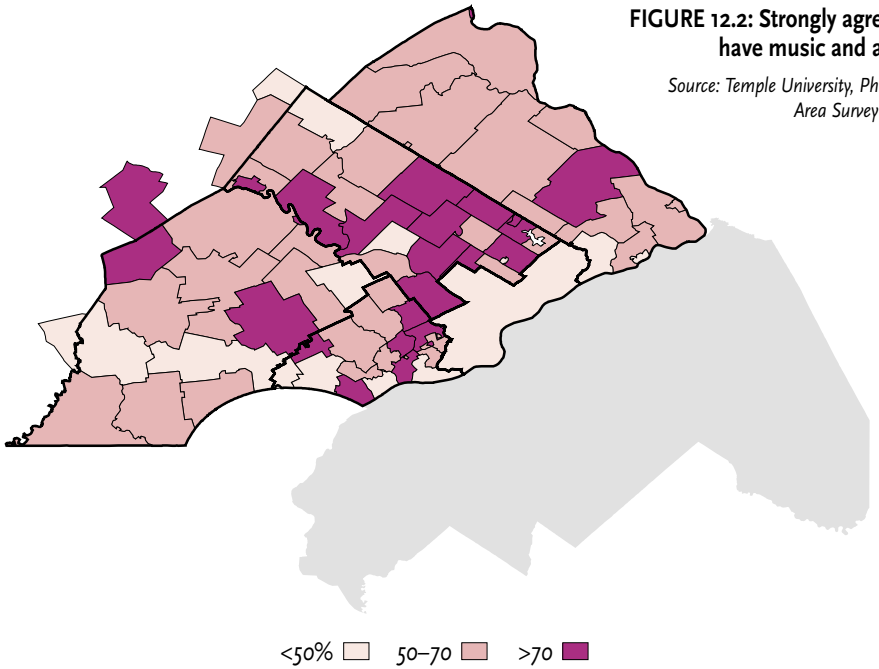


FIGURE 12.2: Strongly agree that children should have music and arts in school

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.



MAP 12.2: Percentage of schools with certified music and arts instruction

Source: PA Dept of Education, 2002–2003.

indicator 12.3: attendance at art exhibitions and performances

When we asked respondents whether they had attended various types of cultural activities at least once during the past year, we got the responses reported in Figure 12.3a. There was surprising similarity in people's reports of their attendance at cultural events across all types of communities. We had expected higher proportions of residents in Urban Centers to report participating in many arts and culture activities since arts and cultural opportunities are more abundant and more conveniently located in many of those communities. However, residents in the region's Urban Centers reported patterns of attendance that were no higher than those found in most other communities. Interestingly, the highest participation rates for almost all types of cultural activities were registered by respondents in the Established Towns.

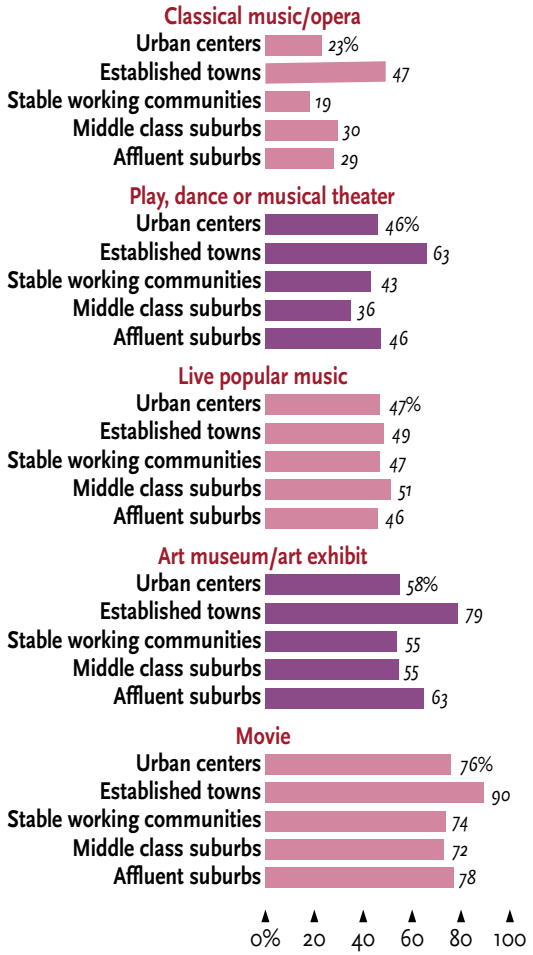


FIGURE 12.3a: Have attended at least one cultural event in past year

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

Despite scoring the highest cultural participation rates among the community types, residents of the Established Towns were nevertheless the most likely to report that they had not attended as many cultural events as they would have liked (Figure 12.3b). By far the most common reason for not attending, cited by respondents in all community types, was lack of time.

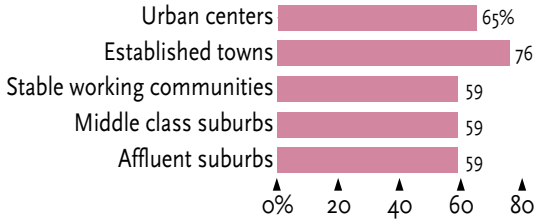


FIGURE 12.3b: Have not attended as many cultural activities as they would have liked

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

indicator 12.4: willingness to support local arts and culture with taxes

At a time when the Greater Philadelphia Cultural Alliance has commissioned a study of how other metropolitan regions fund their arts and culture sectors, it is worth examining public opinion about spending local tax dollars to support arts and culture. When asked whether they would be willing to pay more taxes to improve arts and culture in their own communities, respondents in Stable Working Communities and two types of suburbs are slightly less favorable than residents in Urban Centers and the Established Towns. Less than half of residents in the Middle Class and Affluent Suburbs would tax themselves further to create more arts and culture opportunities in their communities, while the proportion in Urban Centers and Established Towns is closer to two-thirds. (Note: the survey did not ask about support for a regional tax to support the region's cultural assets, only about taxes to support more opportunities within the local community.)

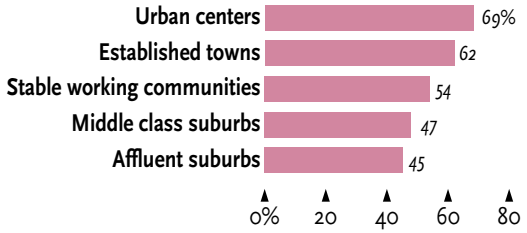
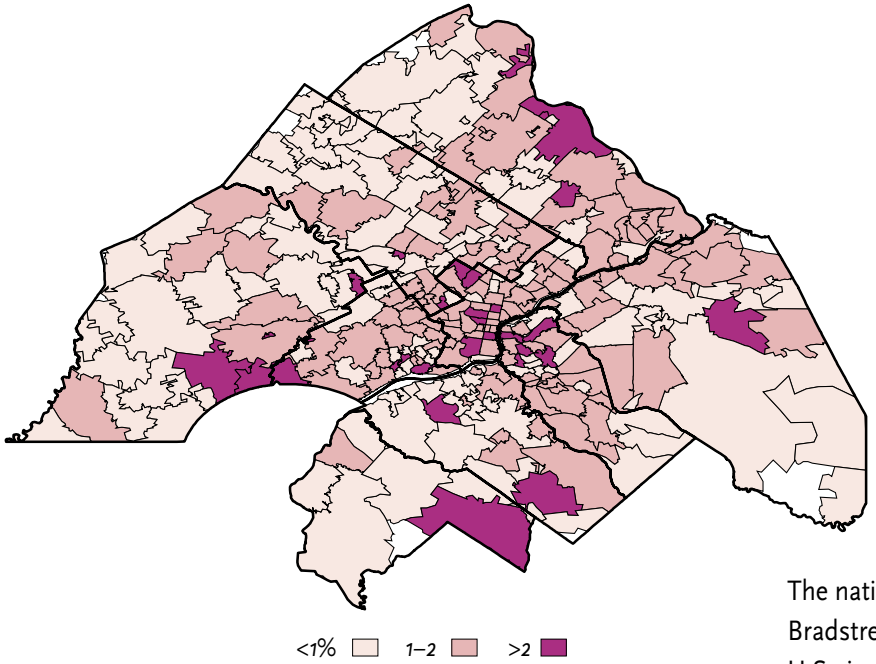


FIGURE 12.4: Support for increased taxes to pay for local arts and culture

Source: Temple University, Philadelphia Metropolitan Area Survey 2003; 2004.

indicator 12.5: arts-related employment



MAP 12.5: Arts and culture jobs by zipcodes

Source: US Census, Zip Code Business Patterns, 2002.

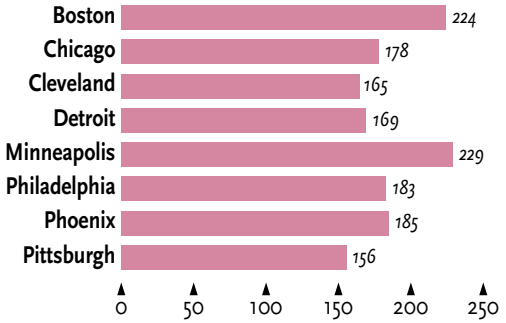


FIGURE 12.5: Arts-related businesses per 100,000 residents in selected metropolitan areas

Source: Americans for the Arts, The Creative Industries, 2004.
Note: Baltimore is omitted because the data source folded it into Washington, DC.

The arts create employment for substantial numbers of residents in the region. Map 12.5 shows where employees in the arts and culture sector are working. (Note: the boundaries in Map 12.5 are zip codes.) Employers range from museums, dance companies, and galleries to historical societies, archives and libraries, design workshops, theatres, zoos, botanical gardens, and many other enterprises focused on cultural production. As expected, their employees are working in Philadelphia and Camden County. In Chester County, an area of concentration focuses on Longwood Gardens and nearby employers.

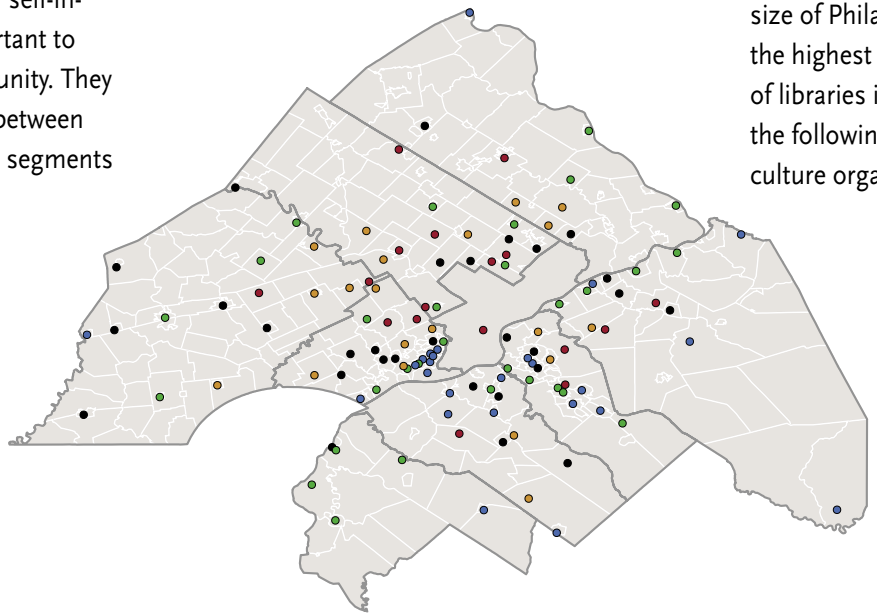
The national advocacy group, Americans for the Arts, has used Dun and Bradstreet data to track the locations of arts-related employers across the U.S., including both for-profit businesses and nonprofits. Their research covered employers in six creative industries: museums and collections, performing arts, visual arts and photography, radio/TV/film, design/publishing, and art schools and services. It included all types of employers from nonprofit museums and orchestras to movie theaters and advertising firms. They found that the total number of arts-related employers in the Philadelphia region is the ninth-largest among metropolitan areas of the U.S. (New York, Los Angeles, and San Francisco having by far the largest numbers of such employers). Figure 12.5 compares the number of arts businesses per 100,000 residents in selected metropolitan areas. Taking population into account, Figure 12.5 shows Philadelphia compares favorably with the selected metropolitan regions except for Boston and Minneapolis.

indicator 12.6: public library circulation

Although the term "culture" is often used to denote high art, in another sense it reflects people's shared beliefs, values, language, and other shapers of human identity. The latter definition of culture is tied to shared knowledge, often conveyed by the written word. Libraries play an important role in promoting cultural identity, social cohesion and education. Libraries offer community residents a place to learn; to obtain information for personal, family, and job-related purposes; to find entertainment; and to develop skills. Since they offer the possibility of self-instruction, libraries are especially important to disadvantaged members of the community. They may help reduce the recognized gaps between information-rich and information-poor segments of the population.

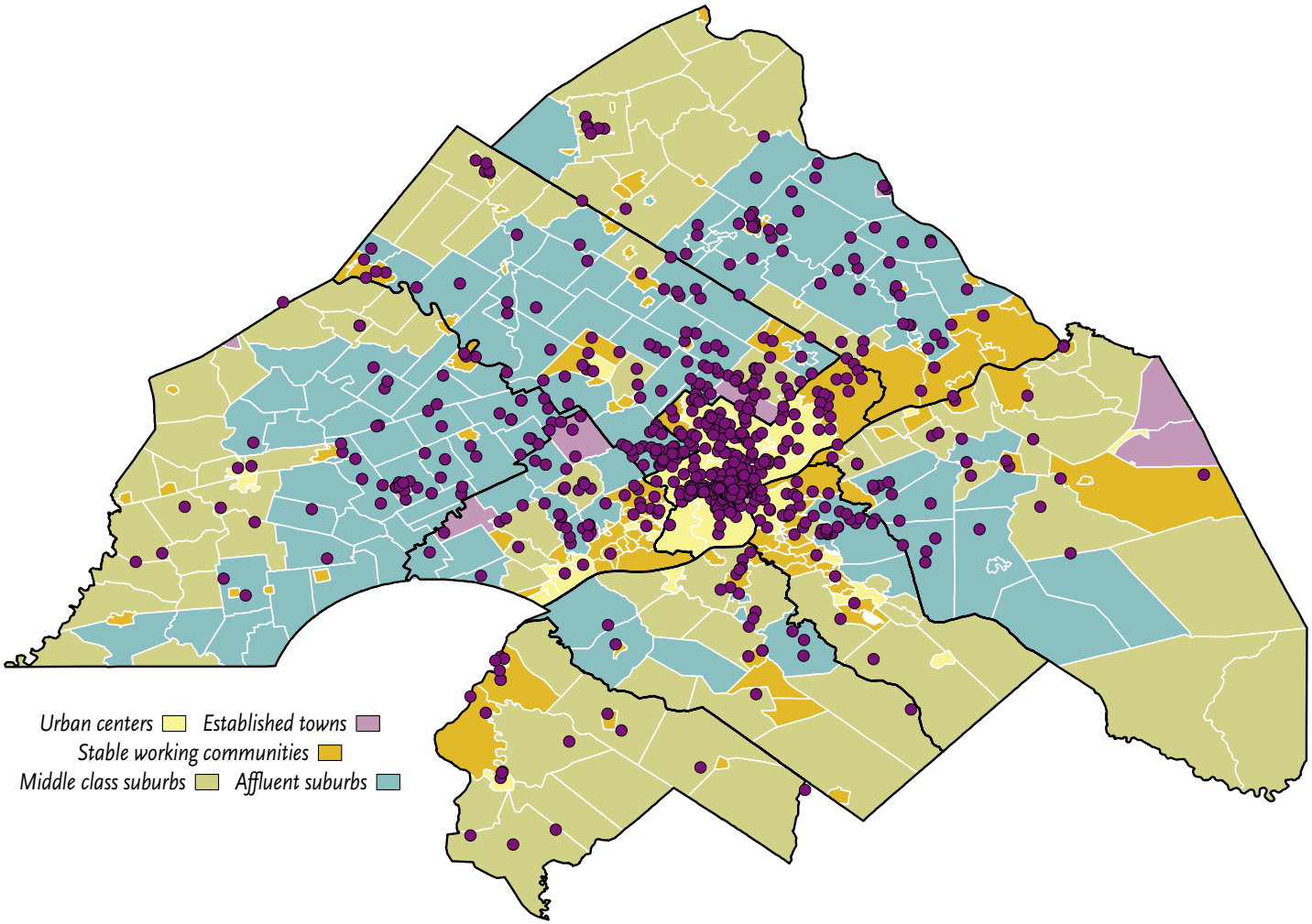
Despite media reports about the declining reading habits of Americans, circulation figures for public libraries across the U.S. have increased somewhat since the early 1990s. According to the American Library Association, the average number of items circulated by public libraries in 1992 was 6.4 per person living within a library's geographical service area; by 2002, the national average had climbed to 6.8. Unfortunately, circulation rates for public libraries in Pennsylvania and New Jersey ranked below national averages in 2002. New Jersey's average was 6.3 transactions per person, while Pennsylvania's average was only 5.1.

The different color dots on Map 12.6 denote the varying circulation volume reported by public libraries in our region. Since circulation figures are universally available only at the level of library systems (as opposed to individual buildings), the colors signify the number of transactions conducted by the system to which the individual library belongs. Given the large size of Philadelphia's system, its libraries rank at the highest level of transactions, as do a number of libraries in Montgomery County. Map 12.7, on the following page, displays nonprofit arts and culture organizations by community type.



MAP 12.6: Libraries; total annual circulation transactions

Source: National Center for Education Statistics, 2002



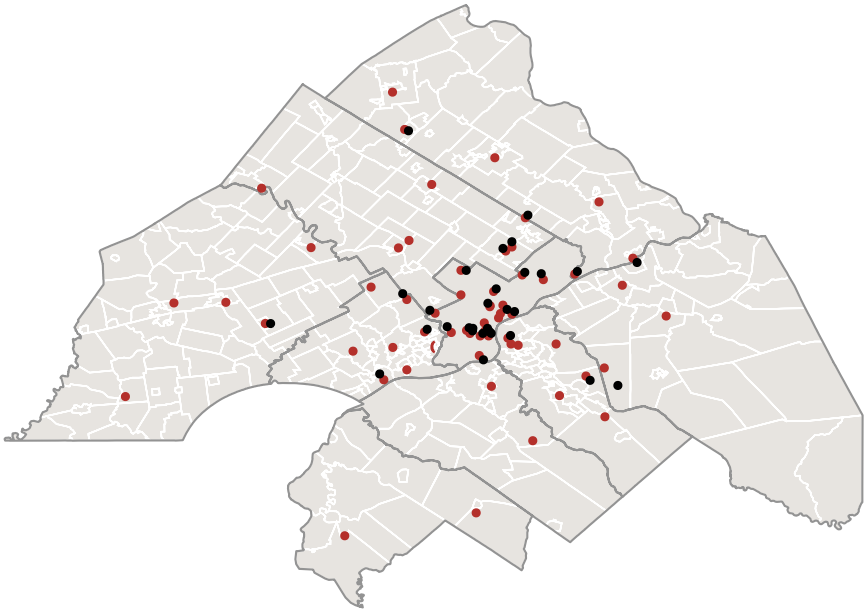
MAP 12.7: Nonprofit arts and culture organizations by type of community

Sources: National Center on Charitable Statistics, 2002; Greater Philadelphia Cultural Alliance, 2003; NJ State Council on the Arts, 2003.

chapter 13: health indicators

Despite the region's rich health care resources, accessibility to medical care remains an issue for many. This chapter explores how the physical organization of medical resources affects accessibility. Access to medical care affects the region's communities through its effects on children's ability to perform in school, adults' ability to work (as shown in last year's report), and individuals' quality of life more generally.

indicator 13.1: locations of medical school affiliated and unaffiliated general hospitals



Affiliated ● *Unaffiliated* ●

MAP 13.1: Locations of general hospitals

Sources: U.S. American Hospital Association, Guide, 2005; PA Department of Health, 2002–2003; NJ Department of Health and Senior Services, 2003.

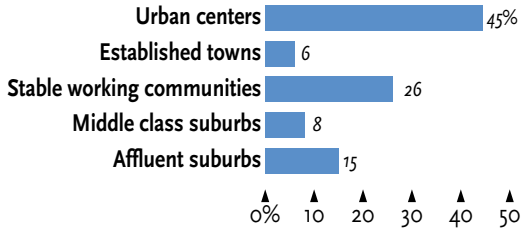


FIGURE 13.1: Percentage distribution of hospitals by community type

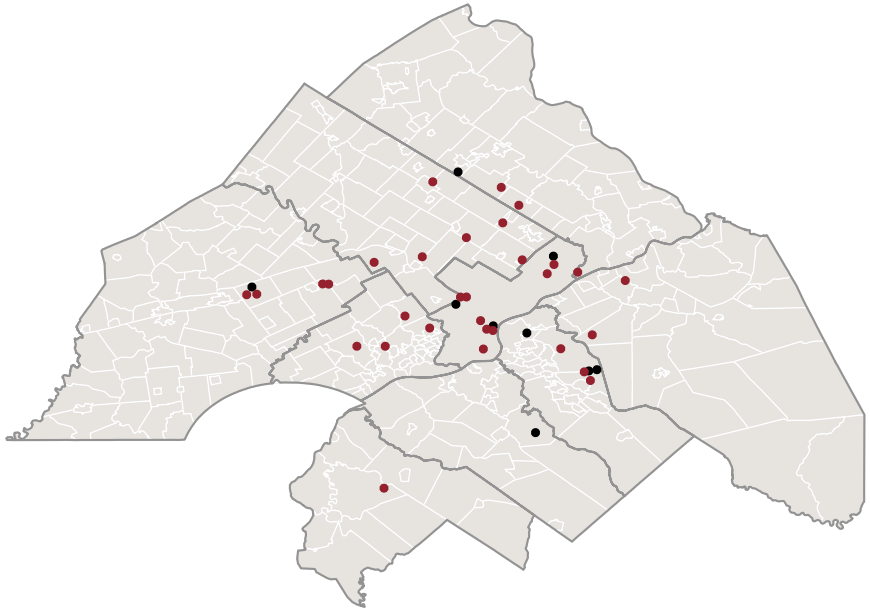
Source: American Hospital Association, Guide, 2005.

Technology, cost containment pressures, increased governmental regulation at the state and federal levels, new medical procedures and protocols, and evolving provider preferences are changing the organization of health care delivery. But more complex procedures and a growing reliance on hospital emergency rooms continue to place hospitals at the strategic center of the delivery of care for the region's communities. Map 13.1 displays the location of the region's 62 general hospitals, including children's hospitals, which are accredited or otherwise meet the standards for listing by the American Hospital Association; it omits specialty hospitals such as those devoted to a specific medical condition.

Black dots on the map identify those hospitals which have medical school affiliations. Such affiliations mean that medical school faculty teach and practice in these hospitals, medical students are trained within them, and hospital medical staff have school teaching appointments. Hospitals with medical school affiliations are taken to have a higher standard of patient care than those without them.

Figure 13.1 reveals that close to half of all hospitals are located in Urban Centers, although there are substantial presences in Stable Working Communities and Affluent Suburbs. Established Towns, despite typically quite favorable accessibility, and Middle Class Suburbs are significantly less often hospital sites.

indicator 13.2: locations of ambulatory surgical centers



Nonprofit • *Profit* •

MAP 13.2: Locations of ambulatory surgical centers

Sources: PA Department of Health, 2002–2003; NJ Department of Health and Senior Services, 2002.

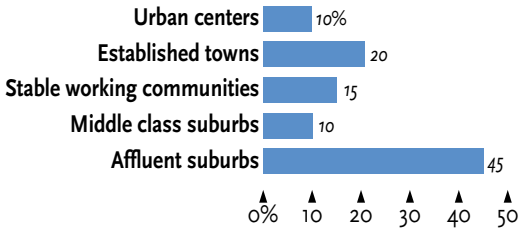


FIGURE 13.2: Percentage distribution of ambulatory surgical centers by community type

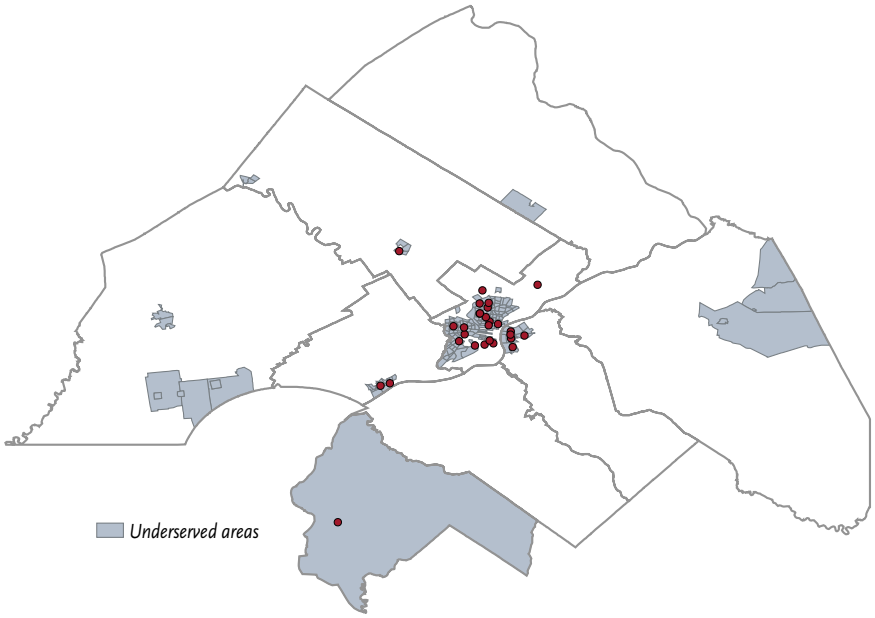
Sources: NJ Department of Human Services and PA Department of Health, 2002–2003.

One consequence of the changes in health care delivery systems is a decentralization to free-standing ambulatory surgical centers and physicians' offices of many procedures that once took place and required stays in general hospitals. The decentralization increases the accessibility of these medical services, and as technologies improve, the range of procedures they offer will grow. Some general hospitals have established their own free-standing and geographically separate ambulatory surgical centers to respond to the competition of ambulatory surgical centers and federal cost containment initiatives, but most centers are independent and owned by one or more physicians. They offer lower costs because they lack the substantial overhead expenses general hospitals must incur. In contrast to general hospitals in the region, 85 percent of which are operated as nonprofits, 78 percent of ambulatory surgical centers function on a for-profit basis (Map 13.2).

Physicians' ownership of these centers is a contentious issue for hospitals because many of their owner-doctors and physician employees have staff privileges in the hospitals with which they compete. Hospitals assert that the for-profit centers siphon away cases with some of the most generous insurance reimbursements; they also argue that the centers choose to treat the patients likely to have the fewest complications. Both strategies leave the hospitals with the most difficult and least financially rewarding cases and thus weaken hospitals' financial status. Ambulatory surgical centers in the region have a median licensed medical staff of 30 but vary in medical staff size from two to 169.

As Figure 13.2 reveals, 45 percent of the region's 40 ambulatory surgical centers are located in Affluent Suburbs and another 10 percent are in Middle Class Suburbs.

indicator 13.3: medically underserved areas and federally qualified health centers



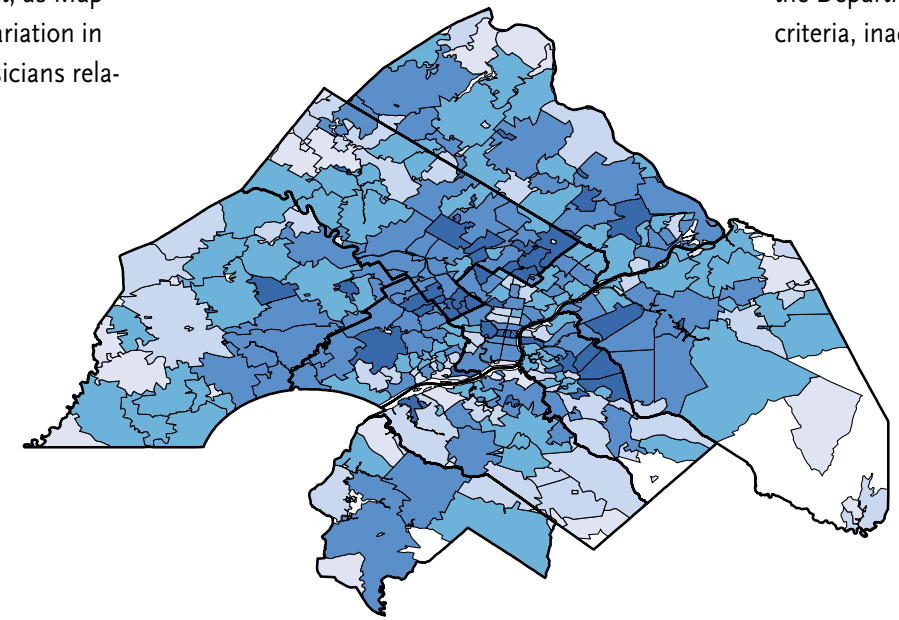
MAP 13.3: Locations of medically underserved areas and federally qualified health centers

Source: U.S. Department of Health and Human Services, Health Resource Services Administration, 2005.

The evolving American health care system increasingly creates tiered levels of care. The federal government defines certain areas and populations as underserved by primary care providers on the basis of a score computed from the percentage of the population over 65 years of age, the poverty rate, the infant mortality rate, and the physician-population ratio. A Federally Qualified Health Center (FQHC) is an entity which has contracted with the federal government to supply primary health care services similar to what a physician would offer in an office setting to a medically underserved area or population. Map 13.3 shows that the region has, despite five medical schools and more than 17,000 physicians, underserved areas both in widely scattered places and where the region's medical schools and teaching hospitals are concentrated. The existence of medically underserved areas in West Philadelphia, Center City, and North Philadelphia, where there are medical schools and teaching hospitals, does not imply that these institutions neglect these areas as many provide substantial uncompensated care. Rather it indicates the health burdens of poverty and aged populations. The 2004 Philadelphia Health Management Corporation Household Survey found that 20 percent of poor adults in Philadelphia lacked insurance. The FQHCs clearly cluster within the city and Camden. Note that all of Salem county is medically underserved and has just one FQHC. Chester, Bucks, and Burlington have medically underserved areas and no qualified medical centers; Montgomery County has just one for its two underserved areas. For those persons in suburban medically underserved areas, the trip to a FQHC is typically a long one and it falls upon persons for whom such trips often impose a significant burden.

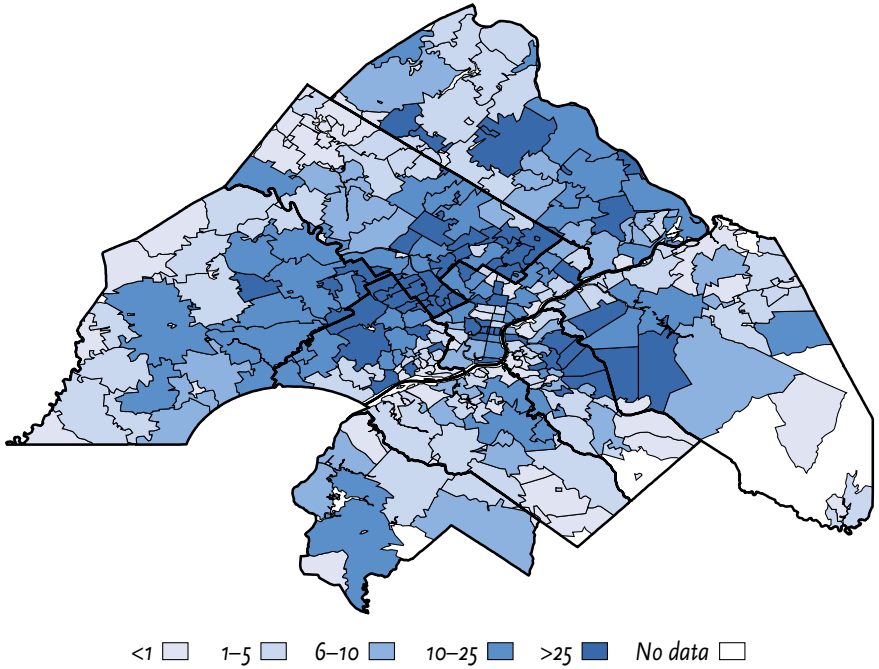
indicator 13.4: primary care physicians

Primary care physicians provide entry to the health care system. They offer first contact, comprehensive, and continuing care. If a patient needs specialized care, it is typically the primary care physician who makes that decision and who recommends the specialist. Family practitioners, general internists, pediatricians, and obstetrician-gynecologists are the types of physicians who give primary care. Primary care physicians are widely distributed, but, as Map 13.4 indicates, there is substantial variation in the distribution of primary care physicians relative to population. The number of physicians per 10,000 persons roughly indicates the relative availability of a physician to the local population; the larger the ratio, the more physicians are available. This map and Map 13.5 display the data by zip code tabulation areas (ZCTAs), which are geographic areas defined by the U.S. Census to approximate zip codes. The highest concentrations of primary practitioners are in West Philadelphia in an area containing four large hospitals and in Center City, where there are another four. Substantial concentrations also occur in the Cherry Hill-Voorhees area in New Jersey and in the southern and northern lobes of lower Montgomery County. But this map should be examined together with Map 13.3 because it shows that the supply of physicians in a substantial number of areas remains, in terms of the Department of Health and Human Services criteria, inadequate.



MAP 13.4: Primary medical practitioners per 10,000 population

Source: U.S. Department of Health and Human Services, Health Resource Services Administration, 2005.



MAP 13.5: Medical specialists per 10,000 population

Source: U.S. Department of Health and Human Services, Health Resource Services Administration, 2005.

Because medical specialists see only a fraction of the patients that a primary practitioner does, they have a substantial incentive to locate where potential patient populations will have ready access via roads and public transportation. The areas of the region with the best access are in the center of Philadelphia. The center of Philadelphia also has several large general hospitals and several more specialized hospitals. Since for many specialists much of their practice occurs within hospitals, proximity to a hospital is another priority. Map 13.5 illustrates these constraints on specialists' locations. Although there is considerable dispersion across the region, the highest concentrations are in West Philadelphia and Center City. As with primary practitioners, there are additional substantial concentrations in the southern and northern lobes of Montgomery County; the New Jersey concentration in the Cherry Hill-Voorhees area extends into adjoining Mt. Laurel and Evesham in New Jersey. There are actually more areas with more than 25 specialists per 10,000 population than there are comparable concentrations of primary practitioners—which points to the fact that, broadly consistent with national figures, 60 percent of the region's physicians are specialists.

chapter 14: terrorism

A special report from
Temple University's Center for Preparedness Research, Education and Practice
Alice Hausman and Brenda Seals

Using the Philadelphia Metropolitan Area Survey, Temple University's Center for Preparedness Research, Education and Practice (C-PREP) investigated how citizens have prepared themselves to meet emergencies that include terrorism. C-PREP investigators asked households in the greater Philadelphia region about their concerns about natural disasters and terrorism, their current preparedness practices, and their awareness of community resources. The goal of this survey work is to help communities and response agencies address gaps in their preparedness.

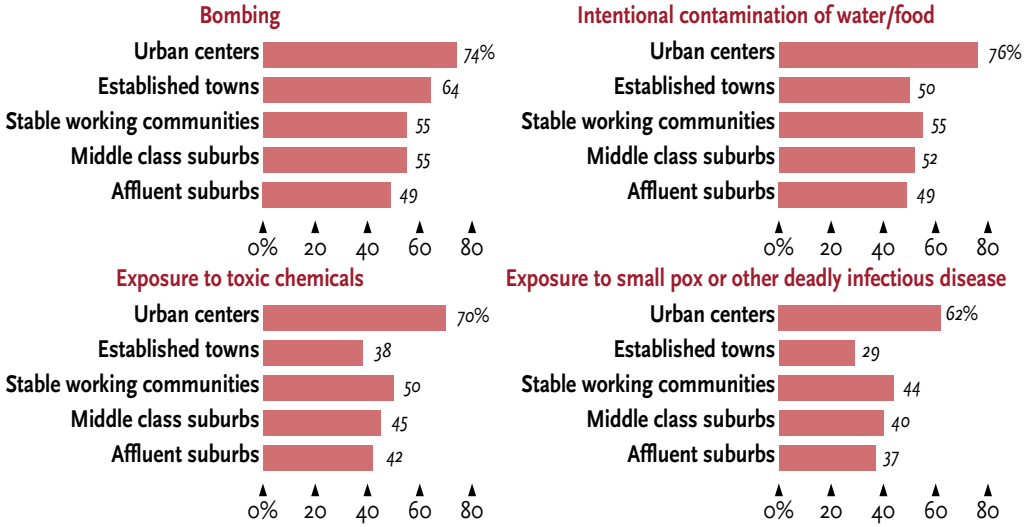


FIGURE 14.1a: Very concerned or somewhat concerned about these terrorist events happening in your community in the next two years

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

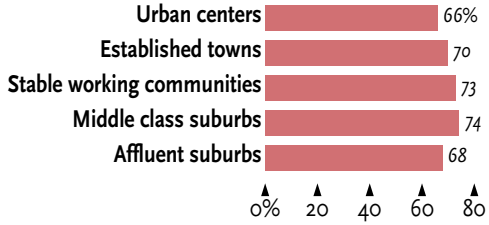


FIGURE 14.1b: Very confident or somewhat confident about being personally prepared for natural disaster or terrorism

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

The terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001, have increased public awareness about the threat of terrorism. A national survey taken in July 2004 by the National Center for Disaster Preparedness at Columbia University found that about three-fourths of Americans expressed concern that another terrorist attack would occur in the U.S.[10] Respondents living in the eastern region of the U.S. showed the highest level of concern at 81 percent.

Residents in greater Philadelphia expressed reasonably high levels of concern about threats to their communities. Our regional survey asked whether people were concerned about specific types of threats occurring in their communities. Respondents appear more worried about bombings and contamination of the food and water supply than about other kinds of threats (Figure 14.1a). In every instance the percentage of residents exhibiting concern was considerably higher in Urban Centers than in other types of communities.

We also asked our survey respondents how confident they are that they are personally prepared to cope with a natural disaster or a terrorism event. Figure 14.1b shows that in all community types, residents of the region express relatively high levels of confidence in being prepared—an attitude that is at odds with their actual preparedness, which is shown by the next two indicators, 14.2 and 14.3, to be well below optimal levels.

indicator 14.2: storing emergency supplies

To prepare for any disaster, including terrorism, emergency officials advise American households to purchase critical items and store them where they are easily available. For almost any emergency, supplies should include food, bottled water, first aid supplies, a battery powered radio and batteries, a flashlight, and special needs items for household members (e.g., prescription medications). In most of the region's communities, less than half of households reported having purchased and stored basic items in preparation for emergencies (Figure 14.2). A gap exists between citizens' feelings of being prepared (Figure 14.1b) and their actions, with less than one-half of households maintaining stockpiled supplies (Indicator 14.2).

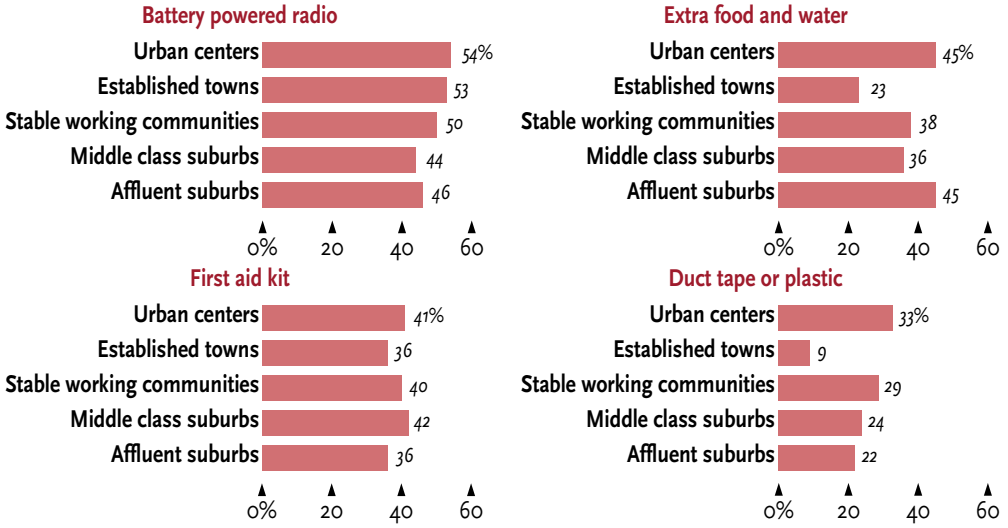


FIGURE 14.2: Have purchased these items to prepare for emergency

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

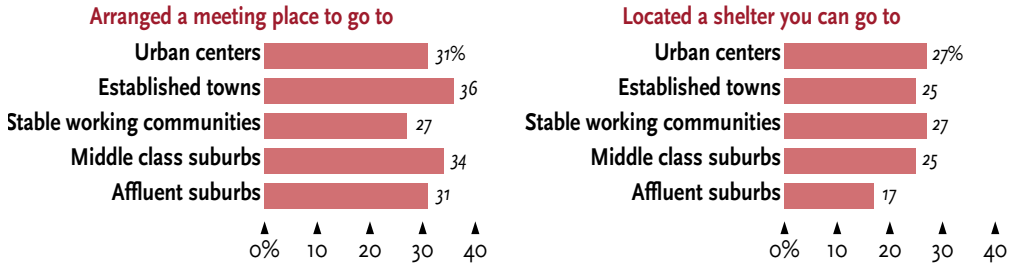


FIGURE 14.3a: Have made these plans in the event of an emergency

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

The Red Cross advises every household to devise plans in advance of emergencies so that every member has some simple instructions to follow. The most important recommendation is to decide on a pre-determined meeting place away from home in case the disaster occurs when people are not at home or the home area is affected by the disaster such as being in a flood zone. As a contingency, if it is not possible to meet, it is important to choose one person who lives out of town who can act as a point of contact, so that every member of the household can telephone or e-mail to check on the safety of others. An additional measure is to find out what procedures will be followed by children's childcare agencies or schools and by employers in case of emergencies, and to make sure those sites have appropriate emergency contact information.

Columbia University's previously cited national 2004 survey found that slightly over one-third (37 percent) of American households have a basic emergency plan which all members know about. Our regional survey showed few differences among the types of communities in their advance planning for emergencies (Figure 14.3a). A slightly smaller overall percentage of households reported having done something about preparing household plans as compared to Columbia's survey. Again, there is a gap between people's feelings of confidence and the extent to which they have made plans for times of emergency.

Our regional survey asked questions about people's likelihood of contacting different groups if they became concerned about a terrorism event that might affect their own community. Although virtually everyone is likely to rely on the media for disaster preparedness information, people also said they would contact other local sources (Figure 14.3b). Interestingly, residents of greater Philadelphia appeared about as likely to contact clergy members as they were to contact local government officials.

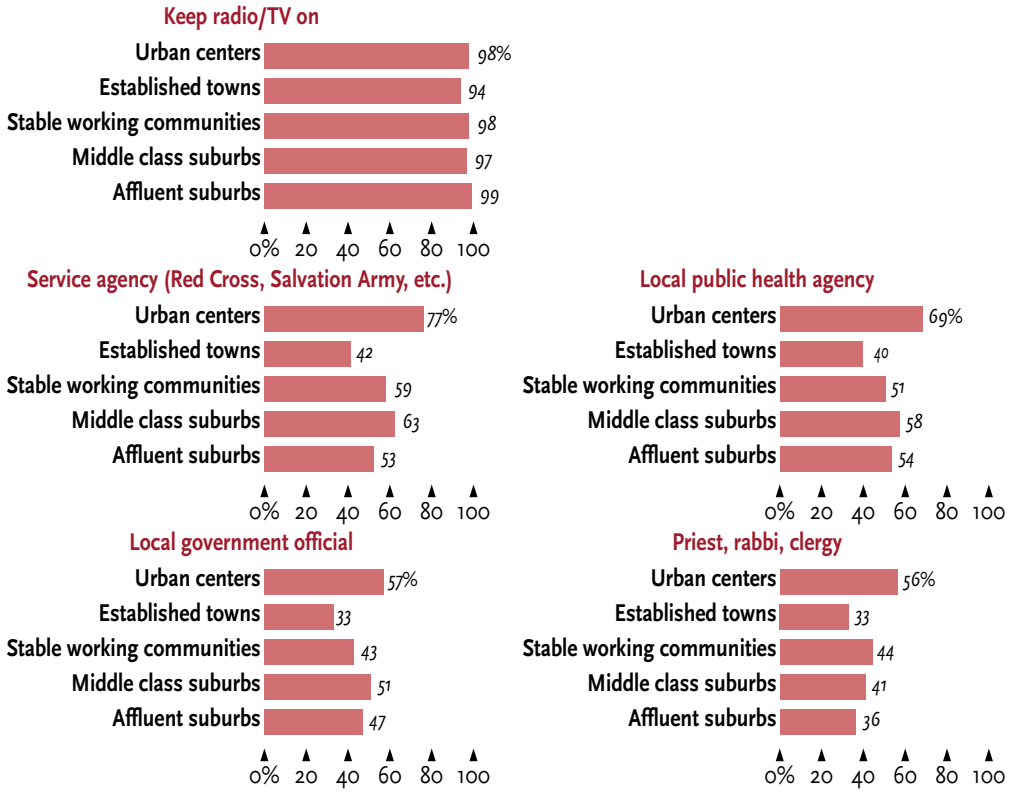


FIGURE 14.3b: Would contact if concerned about a terrorism event that might affect community

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

indicator 14.4: confidence in government efforts

To engage citizens actively in planning for emergencies, government must establish confidence in its agencies' ability to respond effectively to threats. Columbia University's previously cited 2004 survey found that only about half of Americans expressed confidence that the federal government could protect the area in which they lived from terrorist attack. Public confidence was lowest in the eastern U.S., where only 43 percent were confident that federal efforts could protect their home communities.

We asked residents of greater Philadelphia whether federal security efforts had changed their sense of safety within their communities. Over half of the respondents told us they felt safer as a result of steps taken by the federal government (Figure 14.4a). Balanced against these increases in people's sense of safety were their fears about losing privacy rights. More than half the region's residents voiced concerns about losing privacy rights as a result of new security policies (Figure 14.4b).

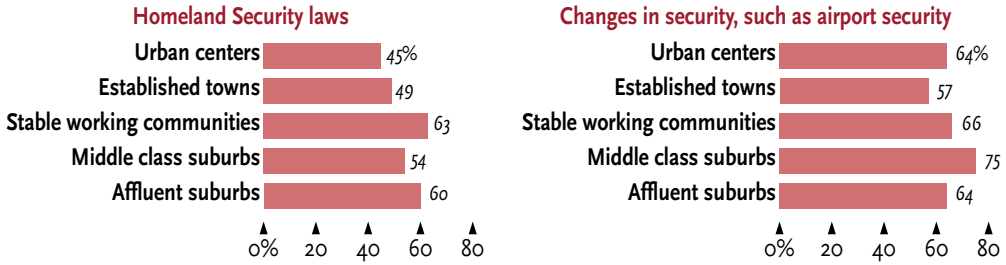


FIGURE 14.4a: Feel safer because of federal security efforts

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

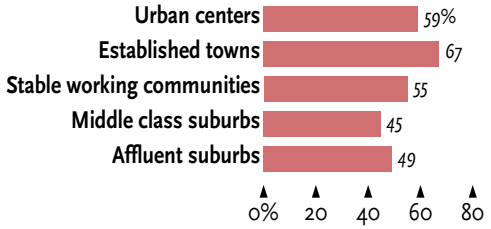


FIGURE 14.4b: Strongly concerned or concerned about losing privacy rights

Source: Temple University, Philadelphia Metropolitan Area Survey 2004.

MAP 1.1: We created a typology of five kinds of communities where communities were defined differently for the city and suburbs. To define communities in the city, we used the 12 planning analysis districts which the Philadelphia Planning Commission has historically used in its work; in the suburbs, the communities are the municipalities. The typology is based on a cluster analysis, a statistical procedure that divided the communities into relatively homogenous groups using variables from the 2000 U.S. Census. The planning analysis districts were placed in three of the five community types. Thirteen variables were used: five housing, six socioeconomic, and two household characteristics. The housing variables were percent of units built before 1940, percent of units built after 1995, percent vacant, percent detached single units, and percent owner-occupied; the socio-economic variables were percent black, percent with less than a high school education, percent with a bachelor's degree or better, percent of families less than 150 percent of the poverty line, percent working outside municipality of residence, and percent of males not in the labor force; the household variables were percent of families with children under 18 and percent of families which were female-headed

MAP 1.2 and FIGURE 1.2a: Population change was computed by subtracting the 2000 population from the 2003 estimated population and dividing by the 2000 population.

FIGURES 1.2b and 1.3: American Community Survey data for Baltimore, Minneapolis, and Phoenix metropolitan areas were limited to the most populous constituent counties. In Baltimore these included: Anne Arundel, Baltimore City, and Baltimore County; in Minneapolis these included: Anoka, Dakota, Hennepin, and Ramsey; in Phoenix this included Maricopa County.

MAP 1.3 and FIGURE 1.3a: Computed by dividing the total population estimated for 2003 by the total square miles of the MCD in 2000.

MAP 1.4 and FIGURE 1.4a: The total number of Housing Permits in the MCD from 2001 to 2003 divided by the number of occupied housing units in 2000.

MAP 1.5: The original data from the USGS had 30 different classification categories. This map shows five categories: Developed (an aggregation of the four developed categories in the original data), Forest (an aggregation of three categories in the original), Agriculture (originally two categories), Wetlands (originally six categories), and Water. Other classifications such as Barren and Perennial Ice and Snow were either not represented in the region or were so small as to be insignificant on the map.

MAP 2.1a: U.S. Census, summary file 3: median household income of African-American households divided by median household income of white households.

MAP 2.2a: U.S. Census, summary file 3: median household income of Latino households divided by median household income of white households.

MAP 2.3a: U.S. Census, summary file 3: median household income of Asian households divided by median household income of white households.

MAP 2.4: U.S. Census, summary file 3: computed from the place of birth for the foreign-born population.

MAP 3.1: U.S. Census, summary file 3: households with no children was computed by dividing the number of family households with no children by the total number of family households.

MAP 3.2: Births to teenage mothers was derived from vital statistics from both New Jersey and Pennsylvania. Because the data from both states were broken into different age categories, births to mothers under 17 years of age was the only classification that fit both states' data. This variable was computed by dividing the number of births to mothers under 17 years of age by the total number of live births.

MAP 3.3: Computed by taking the percent of families in 1980 with school children aged 5 to 18 and subtracting it from the percent of families in 2000 with school-aged children and dividing the remainder by the percent of 1980 families with school-aged children.

MAP 3.4: Address information on licensed group homes from both the New Jersey Department of Human Services and Pennsylvania Department of Public Welfare was geo-referenced using geographic information system (GIS) software.

MAP 3.5a and 3.5b: New Jersey reports crimes at the municipal level. Pennsylvania reports crimes based upon the police jurisdiction necessitating allocation to the municipal level. Wherever municipal boundaries and police district boundaries coincided, no allocation occurred. Where several municipalities were served by one police district, crimes reported for the police district were allocated to the municipality based upon the population served by the police district. Where municipalities were served either full- or part-time by the state police, crimes reported for the state police jurisdiction were allocated to the municipality in the same manner. Crimes reported by other state law enforcement agencies were allocated based on the sum of the other allocated crimes for the municipality.

MAP and FIGURES 4.1a and 4.1b: U.S. Census, summary file 3: median household incomes for 1990 were inflated to 2000 dollars using the Consumer Price Index inflation multiplier (1.34) from the Minneapolis Federal Reserve Bank. The inflation-adjusted 1990 MCD median household incomes were then subtracted from the 2000 median household incomes.

MAP and FIGURE 4.2: U.S. Census, summary file 3: males aged 25 to 54 not in the labor force divided by the total number of males aged 25 to 54.

MAPS 4.3 and 4.4: Food stamp and TANF data come from the New Jersey Department of Human Services and Pennsylvania Department of Public Welfare.

MAP and FIGURE 4.5: U.S. Census, summary file 3: the percentage of the population with a bachelor's degree in 1990 was subtracted from the percentage of the population with a bachelor's degree in 2000 and divided the remainder by the percentage of the population with a bachelor's degree in 1990.

MAP 5.1: U.S. Census, summary file 3: the number of owner-occupied housing units built after 1995 divided by the total owner occupied housing units.

FIGURES 5.1 and 5.4: American Community Survey data for Baltimore, Minneapolis, and Phoenix metropolitan areas were limited to the most populous constituent counties. In Baltimore these included: Anne Arundel, Baltimore City, and Baltimore County; in Minneapolis these included: Anoka, Dakota, Hennepin, and Ramsey; in Phoenix, this included Maricopa County.

MAP 5.2: We calculated lending activity by taking the average number of conventional new purchase loans from 2001 to 2003 from the Home Mortgage Disclosure Act (HMDA) data and dividing by the number of owner-occupied housing units in 2000.

MAP 5.3: Using HMDA data, we computed the average home mortgage amount by aggregating the total amount of conventional owner-occupied housing mortgages to the municipal level and dividing the total by the number of conventional owner-occupied housing mortgages in the MCD.

MAP 5.4: Fannie Mae Housing Calculator for "How Much House Can You Afford?" (http://www.mortgagecontent.net/scApplication/fanniemae/affordability.do?p=Resources&s=Calculators&t=How+Much+House+Can+You+Afford?); We used Under $50,000, $50,000 to $75,000, $75,000 to $100,000, and Over $100,000 as the income categories. We assumed a 20 percent down payment, 5 percent of monthly income for monthly debt, a 30-year mortgage term at 6 percent interest.

MAP 5.5: We divided communities into two categories. First, the percentage of home improvement loans in a community was computed by dividing the average number of loans from 2001 to 2003 by the number of housing units in a particular community. We then separated communities into two categories based upon whether they had five or fewer loans per 100 homes or more than five loans per 100 homes. Communities with more than 50 percent of their housing stock built after 1970 were excluded.

MAP 5.6: The U.S. Department of Housing and Urban Development sub-prime lender list for 2001-2003 identified lenders in the HMDA data who issued sub-prime loans. The number of mortgage loans from sub-prime lenders from 2001 to 2003 was divided by the total number of loans for that period.

MAP 6.2: The percentage of commuters working in Philadelphia was computed by taking the number of commuters from an MCD who worked in Philadelphia and dividing by the total number of commuters from that MCD. This information was obtained from the U.S. Census MCD to MCD workflow tables.

MAP 6.3: Address information on shopping centers from ESRI Business Services and the National Research Bureau was mapped using GIS software.

MAP 6.4: Road density was computed by aggregating the total number of street miles (obtained from census maps of streets and roads) to the MCD and then dividing by the total square miles of the MCD.

MAPS 7.1-7.5: *Zip Code County Business Patterns* data list the total number of establishments in nine different categories based on the number of employees. The nine categories are 1-4, 5-9, 10-19, 20-49, 50-99, 100-249, 250-499, 500-999, and 1000 and over. The total number of jobs in each zip code was computed by multiplying the number of establishments in each category by the midpoint of the category. For instance, for a given zip code, the number of establishments in the 0-5 employee category was multiplied by 2.5. Some businesses have their own zip code—a single-site zip code. Data for these zip codes were aggregated into the surrounding zip code for this report.

To calculate the number of manufacturing jobs, all establishments with six-digit NAICS codes between 311111 and 339999 (all manufacturing) were combined.

To calculate the number of Creative Class jobs, the following six digit NAICS codes were used: 323115, 323117, 323122, 334611-334613, 443120, 453920, 511110-511140, 511199, 511210, 512110, 512120, 512191, 512199, 512210, 512230-512240, 512290, 515110, 515120, 515210, 516110, 541310, 541340, 541360, 541370, 541410-541430, 541490, 541511-541512, 541519, 541612, 541620, 541690, 541710, 541720, 541810, 541830, 541840, 541850, 541860, 541870, 541890, 541910, 541922, 541990, 561439, 611110, 611210, 611310, 611410, 611420, 611430, 611512, 611513, 611519, 611610, 611630, 611691, 611699, 611710, 711110, 711120, 711130, 711190, 711310, 711320, 711410, 711510, 712110, 712120, 811210, 451211, 451220, and 451140.

To calculate the number of biotech jobs, the following six-digit NAICS codes were used: 325411, 325412 325413, 325414, 325188, 325199, 334510, 334513, 334516, 334517, 339111-339116, 541380, 541710, 423450, 423460, 541710, 621511, and 621512.

To calculate the number of tourism-and-travel-based jobs, we added together all establishments with six-digit NAICS codes between 711110 and 722410 and between 561510 and 561599.

MAP 8.1: Because tax laws differ between New Jersey and Pennsylvania, total revenues collected per municipality were computed differently for each state. In New Jersey, the total revenues collected are listed on the Department of Government affairs website. These revenues included those collected for education. In Pennsylvania, school districts, not municipalities, levy school taxes and typically a school district is made up of several municipalities. In order to compute revenues by municipality, these school tax revenues were allocated back to the municipality. To accomplish this, we first acquired housing market values for both the school districts and the municipalities within those school districts. We then computed each municipality's portion of the overall market value of the school district and then allocated the taxes collected by the school district to the municipality based on this proportion. To compute total taxes in Pennsylvania we combined these school taxes with county real estate taxes, municipal real estate taxes, municipal earned income taxes, and municipal real estate transfer taxes.

MAPS 8.3a and 8.3b: The model household tax burden was computed by adding together the average effective property tax rate for the MCD (the percent of overall market value that is paid in real estate taxes), county tax rates, local wage tax rate, and state tax rates. We then multiplied these tax rates by the median home value for the region ($119,000) and the median income for the region ($47,536). Because of the size of the Philadelphia wage tax for people who work but do not live in Philadelphia, we also calculated a value if the model householder works in Philadelphia.

MAP 9.1: The Pennsylvania Department of Education provides data on spending per pupil for every K-12 school district. In New Jersey, only a portion of the school districts cover K-12. Some New Jersey municipalities are served by two separate school districts, an elementary school district that serves the pupils from a particular township or combination of townships, and a regional secondary school district that serves several elementary school districts. Because funding levels are different for elementary and secondary students we needed to allocate the funds and students from the secondary school districts to the corresponding elementary school districts they serve. To accomplish this, we acquired the number of students in each secondary school district from the New Jersey Department of Education. We then computed the proportion of students attending the secondary district from each elementary district. The total expenditures for the secondary district were then allocated back to the elementary district based upon the proportion of students going to the secondary district from each elementary district.

MAP 9.2: We used the Common Core of Data from the U.S. Department of Education and averaged the student-teacher ratios in school districts for primary schools only.

MAP 9.3: Because New Jersey and Pennsylvania use different tests to measure student proficiency in reading, we did not compare test scores. This map represents the percent of 8th graders who were assessed as "Below Basic" in Pennsylvania and 8th graders who were assessed as "Partially Proficient" in New Jersey.

MAP 9.4: U.S. Census, summary file 3: We computed the percentage attending private school within each MCD by adding together all those enrolled in private kindergarten through 12th grade and dividing by the total by all school enrollment in each MCD.

MAP 9.5; FIGURE 9.5: Median combined SAT scores, 2000-2002, averaged.

MAPS 10.1a and 10.1b: Number of registered voters and number of voted/not-voted for the most recent presidential (2004) election were obtained at the MCD level from each county board of elections for the five counties in Pennsylvania. In New Jersey, these same data were obtained from the New Jersey State Division of Elections which compiled voter data for each county at the MCD level.

MAP 11.2 and FIGURE 11.2a: Risk Screening Environment Indicator data were provided by the EPA. The data were geo-referenced to one kilometer square grids and then aggregated and averaged to the MCD level.

FIGURE 11.2b: The air quality index for unhealthy and high ozone days for Metropolitan Areas from 2001 to 2004 was summed and averaged. Data were culled from www.epa.gov/air/data/reports.

MAP and FIGURE 11.3: Federal Emergency Management Agency 100 year floodplain data were geo-referenced to MCD boundaries and a proportion of land area was computed.

MAP and FIGURE 11.4: Impervious surfaces data were collected from the U.S. Geological Survey's Land Cover/Land Use database. These data were geo-referenced to MCD boundaries and a proportion of total land area was computed.

MAP and FIGURE12.1: We defined cultural nonprofits according to the National Center on Charitable Statistics' National Taxonomy of Exempt Entities major group code A (arts, culture, and humanities). Greater Philadelphia Cultural Alliance data are all organizations applying to the Five-County Art Fund, 2001-2003. New Jersey State Council on the Arts data come from all organizations applying for funding to the Burlington, Camden, Salem, and Gloucester County art councils, 2001-2003.

MAP 12.2: We obtained information on the presence of Arts and Music curricula for each school in Pennsylvania from the state's Department of Education. We then divided the number of schools with these programs by the total number of schools in the district. Comparable data were not available for New Jersey.

MAP 12.5: We defined Arts and Culture as NAICs 71110, 711120, 711130, 711190, 711510, 712110, 712120, 712130, and 712190.

MAP 12.6: We obtained library circulation data from the Census of Governments and mapped them by the address of the library. These numbers are for library systems and do not reflect individual branch circulation.

MAP 13.1: We acquired address information on general and children's hospitals in the Philadelphia region from the American Hospitals Association's *Guide 2005*, cross-referenced them with information from the Pennsylvania and New Jersey Departments of Health, and geo-referenced them in GIS.

MAP 13.2: Addresses for ambulatory surgical centers were acquired from the Pennsylvania and New Jersey Departments of Health and geo-referenced in GIS.

MAPS 13.3, 13.4 and 13.5: The data for these maps were obtained from U.S. Department of Health and Human Services, Health Resource Services Administration; these data are based on work done at the Center for the Evaluative Clinical Sciences at Dartmouth College.

Endnotes

1. Richard Florida has offered his interpretation of the economic role of creative class workers in several published articles and books, most notably *The Rise of the Creative Class* (New York: Basic Books, 2002) and *Cities and the Creative Class* (New York: Routledge, 2005).

2. Median household incomes for 1990 and 2000 were calculated for the 1990 metropolitan geographic boundaries for both years.

3. Communities with 25 percent or more of prime age males out of the labor force are excluded because of the presence of group quarters which distorts the data.

4. Mark R. Rank and Thomas A. Hirschl, 2005. "Estimating the Probabilities and Patterns of Food Stamp Use Across the Life Course." Evanston, Il: Northwestern University/University of Chicago, Joint Center for Poverty Research.

5. Charles Michalopoulos et al. 2003. "Welfare Reform in Philadelphia: Implementation, Effects, and Experiences of Poor Families and Neighborhoods." New York: MDRC.

6. The TTI congestion index is the factor by which the average trip time during non-peak hours is multiplied to estimate peak period commuting time; thus, a peak-hour trip in the Philadelphia region that would take 20 minutes under non-congested conditions would take slightly more than 26 minutes during peak conditions (20 x 1.32 = 26.4).

7. See note 1 and John Howkins. 2001. *The Creative Economy*. London and New York: Penguin Books.

8. While the RSEI offers the advantages of assessing cumulative health risk levels across all toxic releases and all toxic chemicals, one limitation is that specific health risks cannot be gauged by easy reference to a score on this index. There is, as yet, no measure that allows a direct interpretation of any specific RSEI level with a range of probabilities for particular health problems. A complete listing of RSEI levels is available on the MPIP project website.

9. Kevin McCarthy et al, *Gifts of the Muse: Reframing the Debate about the Benefits of the Arts*, Santa Monica, CA: Rand Corp., 2004.

10. National Center for Disaster Preparedness, "How Americans Feel about Terrorism and Security: Three Years After September 11," New York: Columbia University, Mailman School of Public Health, November, 2004.