

Urban Public Education and Metro Prosperity

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“Go west, young man!” was the advice proffered American pioneers in the mid-1800s. Yet, for most Americans—both men and women—and certainly for most immigrants to the United States after 1860, “seeking one’s fortune” is based on investing in one’s own skills every bit as much as in forging ahead into the new territories. By the nineteenth century and surely by the twentieth, those skills brought the highest return in the nation’s cities, where most of the good jobs could be found. To gain a competitive advantage in getting those good jobs increasingly required personal investments in human capital, and most often that took the form of education and training. In the modern era, the very prosperity of cities and suburbs depends more and more on the education of those who live there.

As cities grew during the 1800s, the political, economic, and social impact of education was a focus of considerable discussion. Mandatory education laws spread in response to increased immigration and internal migration. A common primary school education was promoted as a force for social cohesion that brought together immigrants from diverse backgrounds who lived in the burgeoning U.S. cities of the late nineteenth century. By the early twentieth century, comprehensive secondary education was being advocated by an increasing number of influential civic leaders, particularly those associated with the Progressive movement (Wraga 2006). The resulting workforce, highly educated in comparison with other industrial nations, strengthened the U.S. economy (Goldin 1998, 2001).

Today, perhaps more than ever given global competition, critics are questioning the effectiveness of America’s public schools, particularly those in inner cities. The traditional public school model itself is under attack from competing institutions such as charter schools, pilot schools, and voucher systems. If inner cities are increasingly dominated by minorities, and if the education of inner-city schoolchildren diverges in quality from the schools in the suburbs, what kind of society are we building? Of all the challenges facing cities today, assuring quality education is one of the most important and most vexing. It also turns out to be crucial for sustaining the competitive advantage of individual cities and metro areas.

The Decentralized U.S. Educational System

If the subject of this book was urban dynamics in France, there probably would not be a chapter or even a section covering urban education. France has a centralized educational system, so there is little that distinguishes education in one French city from another. A curriculum set centrally means that pretty much the same math lesson is being taught in every eighth-grade classroom throughout the country, usually on the same day.

What distinguishes the U.S. school system is its high degree of decentralization. Legal authority for the provision of elementary and secondary education does not rest with the federal government, but with state governments that have traditionally delegated the actual provision of schooling to local governments. Local school boards, most elected like other municipal officials, are responsible for setting kindergarten through twelfth grade (K–12) policy, working within broad regulations set by the state, the federal government, and, in some cases, court orders issued by the state or federal judiciary.

School funding, physical resources, staffing, assignment of students to specific schools, and other important matters are still determined largely at the local level, even as the share of total primary and secondary school funding supplied by local government has declined. As shown in **Table 8.1**, local authorities provided more than 80 percent of K–12 school funding before 1930, about 50 percent in 1973–1974, and nearly 44 percent in 2003–2004 (U.S. Department of Education 2007). Following the dictum that he who pays the piper calls the tune, the still-substantial role that local communities play in funding education means they have a large degree of discretion in setting curriculum and school pedagogy—although their control is somewhat diminished with increased state funding and, to some extent, federal aid.

As of 2002, there were more than 13,500 individual school districts in the United States—down from nearly 35,000 in 1962 and almost 109,000 in 1942, due to the merger of very small school districts into regional or consolidated districts (U.S. Bureau of the Census 2002a, 2002b). How they are structured varies enormously from state to state, as does the state's financial contribution. Hawaii has essentially a state system with the state paying 87 percent of total local school costs, the federal government another 11 percent, and local communities picking up only 1 percent of total costs. But this system of finance is quite unique. In Connecticut, Illinois, Maryland, Massachusetts, Missouri, Nevada, New Jersey, Pennsylvania, Rhode Island, and Virginia, local districts are responsible for anywhere between 50 and nearly 60 percent of total K–12 spending. In many other states, there is a more equal sharing of funding responsibility between state and local government; in some, the state picks up the majority of costs. In most cases, the share from the state takes the form of state aid to local communities based on a formula for individual city and town allocations and comes with only limited strings as to how the revenue is to be used in the schools.

There are several significant consequences of having a decentralized educational system. It allows for a wide range of choice by local decision makers about the needs

Table 8.1 Public Funding for Primary and Secondary Schools by Source, Selected Years, 1919–2004

School Year	Total (Millions of Dollars)	Local Share (%)	State Share (%)	Federal Share (%)
1919–1920	970	83.2	16.5	0.3
1929–1930	2,088	82.7	16.9	0.4
1939–1940	2,261	68.0	30.3	1.8
1949–1950	5,437	57.3	39.8	2.9
1959–1960	14,747	56.5	39.1	4.4
1969–1970	40,267	52.1	39.9	8.0
1979–1980	96,881	43.4	46.8	9.8
1989–1990	208,548	46.8	47.1	6.1
1999–2000	372,944	43.2	49.5	7.3
2003–2004	462,016	43.9	47.1	9.1

Source: National Center for Education Statistics 2007, table 158, “Revenues for Public Elementary and Secondary Schools, by Source of Funds: Selected Years, 1919–20 through 2003–2004.”

and goals of education in their particular economic and social environment. For families who can consider moving to different school districts, it allows them to consider differences in educational systems, and to include those differences in their choice of residential location. Decentralized systems also offer teachers a greater choice about where to work.

Such a decentralized system, however, can lead to great disparities in schooling. The available resources for schooling may vary considerably from one school district to the next, the quality and integrity of the decisions made by local authorities may differ from one location to another, and the employment decisions of teachers may also have consequences for the quality of the education that is provided.

The Importance of Schooling in Modern Society

Presumably, the goal of education is to produce individuals with the ability to compete in and contribute to the economy, to engage in civic life, and to enjoy society’s cultural gifts. The education provided in elementary and secondary schools plays a particularly important role. It provides essential tools for participation in the economy at the most basic level. It is a key ingredient in creating and sustaining social and political cohesion. Elementary and secondary education provide the **option value** of laying the base for higher levels of education. By completing elementary school, one has the option to go on to high school. By completing high school, one has the option of going on to college. Secondary school education also frequently serves as the foundation for subsequent vocational opportunities, increasing the possibility for on-the-job training, since the high school diploma is often used as a screening device—an indicator of ability to learn—by employers.

Through the nineteenth century and the early part of the twentieth century, an elementary education or some high school was sufficient for jobs in the manufacturing and construction sectors. As late as 1939, 37 percent of the U.S. workforce was

employed in goods-producing industries—farming, forestry, fishing, mining, construction, and manufacturing—as compared to about 16 percent today (U.S. Bureau of Labor Statistics 2007). Access to relatively well-paying jobs as assemblers or machine tenders in factories and as laborers, bricklayers, and carpenters was one of the major lures of migration for individuals from farms in the Midwest and South, workers from Appalachia, and immigrants from other countries. Given the demand for manual labor during this period of U.S. history, many newly arrived individuals could find work in the city with the skills they had, while proceeding to build greater competence in English, civic participation, and other aspects of urban life. These workers would be critical to the construction of the cities themselves—from the skyscrapers and apartment buildings to the roads, sidewalks, and, of course, the water and sewer systems that run below the surface.

Today, most employers demand greater skill from their job applicants. Many look for a high school degree as a minimum, either because of the skills required on the job or because they are using the high school degree as a screening factor for their applicants' motivation or ability to learn new things on the job. For individuals with less than a high school degree, the urban employment experience is no longer what it was in the first half of the twentieth century. Instead of being places of potential economic promise for individuals, many urban areas have become economic quagmires.

Since the labor market has changed to emphasize the obtaining of higher levels of education, one might expect that individuals would seek greater levels of learning, and that elementary and secondary school systems would respond by producing more high school graduates. Indeed, this is the case; there are more high school graduates today than there were in 1970. According to the 2000 Census, 80.4 percent of U.S. adults age 25 and older had high school degrees or higher, compared to 52.3 percent in 1970. The percentage with bachelor's degrees or higher grew from 11 percent in 1970 to 24.4 percent in 2000. The percentage with less than ninth-grade education was just 7.5 percent.

Variation in Educational Attainment across Metro Areas

However, as with many other socioeconomic characteristics, place matters when it comes to schooling. In the nation as a whole, the percentage of adults 25 and older with more education than a high school degree is slightly higher in metropolitan areas (81.3%) than the U.S. average (80.4%). However, the high school educational attainment statistics for individual metropolitan areas in the year 2000 ranged from 93.7 percent for the Iowa City, Iowa MSA to a low of just 50.5 percent in the McAllen-Edinburg-Mission, Texas MSA. Similarly, while nationally aggregated statistics show that in metropolitan areas the percentage of adults 25 and older with bachelor's degrees or higher (26.6%) is above the U.S. average (24.4%), the figures for individual metro areas vary considerably—ranging from a high of 52.4 percent in Boulder-Longmont, Colorado, to lows of 11 percent in Merced, California, and 11.3 percent in Danville, Virginia.

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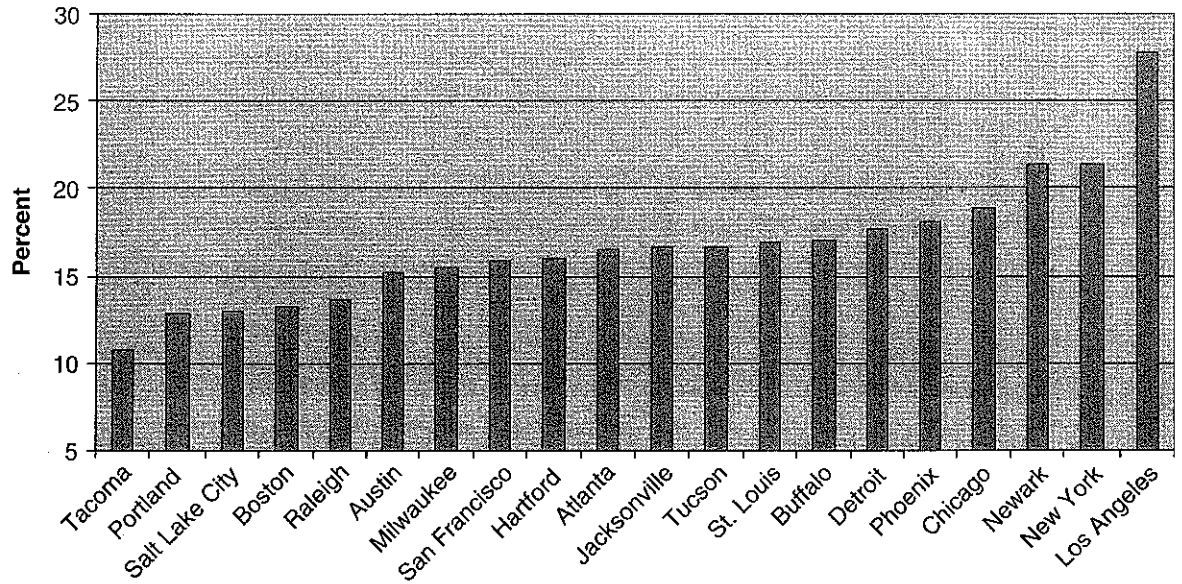


Figure 8.1 Percent with Less Than High School Degree, Persons Aged 25+, Metro Areas. Source: U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

Figure 8.1 demonstrates this variation across the twenty MSAs we have been following in this book. The metro areas of Tacoma and Portland, Oregon, have the lowest proportion of their populations (age 25 and older) who have left school before completing the high school degree. In Tacoma, the proportion is just a little over 10 percent. The Salt Lake City, Boston, and Raleigh, North Carolina MSAs also benefit

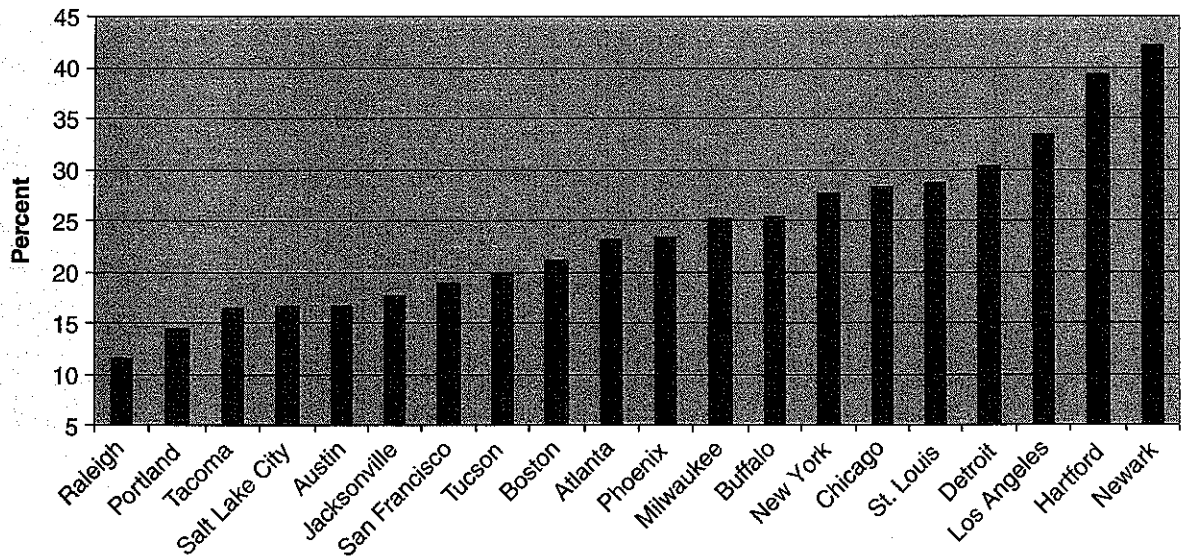


Figure 8.2 Percent with Less Than High School Degree, Persons Aged 25+, Central Cities. Source: U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

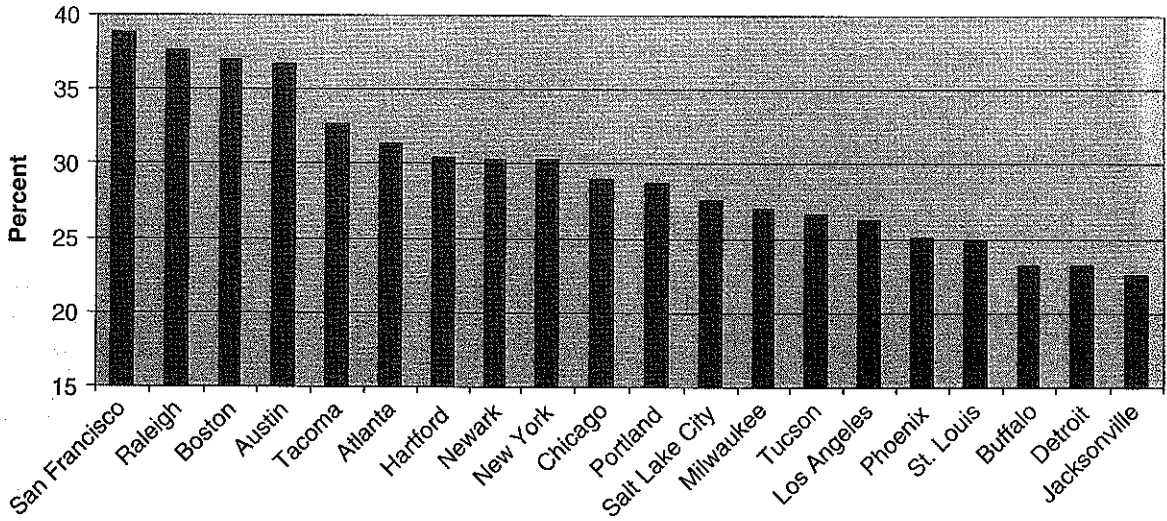


Figure 8.3 Percent with BA Degree or More, Persons Aged 25+, Metro Areas. *Source:* U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

from having adult populations in which more than 85 percent have at least completed high school. Note that even in the metro areas with the highest proportion of persons not completing high school, the percentage with a high school degree is still close to 80 percent—and in Los Angeles, with its large immigrant population, it is still nearly 75 percent.

Across central cities, the variation in those who did not complete high school is much greater. As **Figure 8.2** demonstrates, in the central cities of Raleigh and

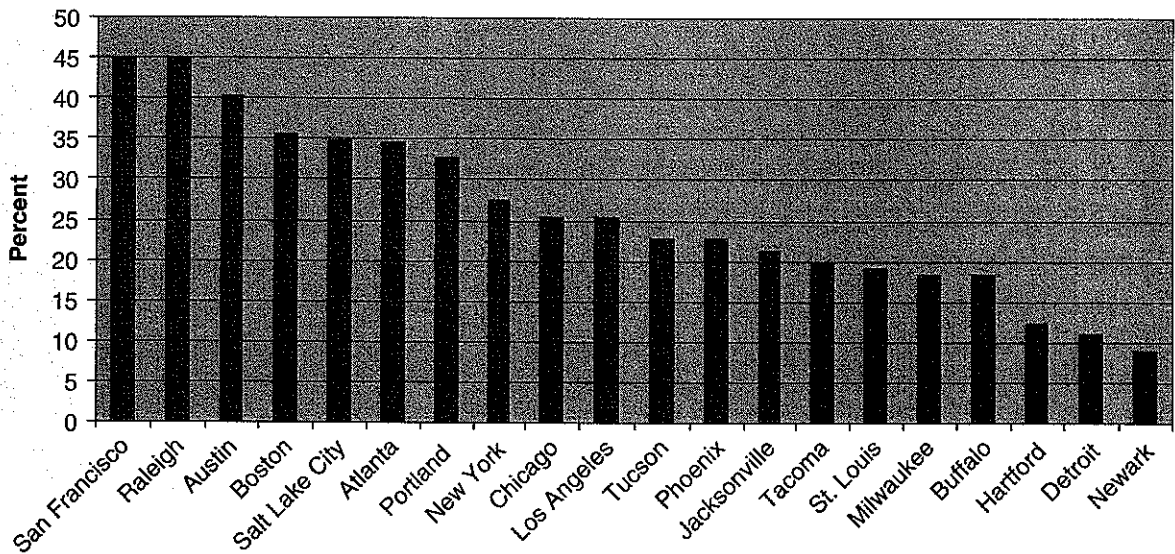


Figure 8.4 Percent with BA Degree or More, Persons Aged 25+, Central Cities. *Source:* U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

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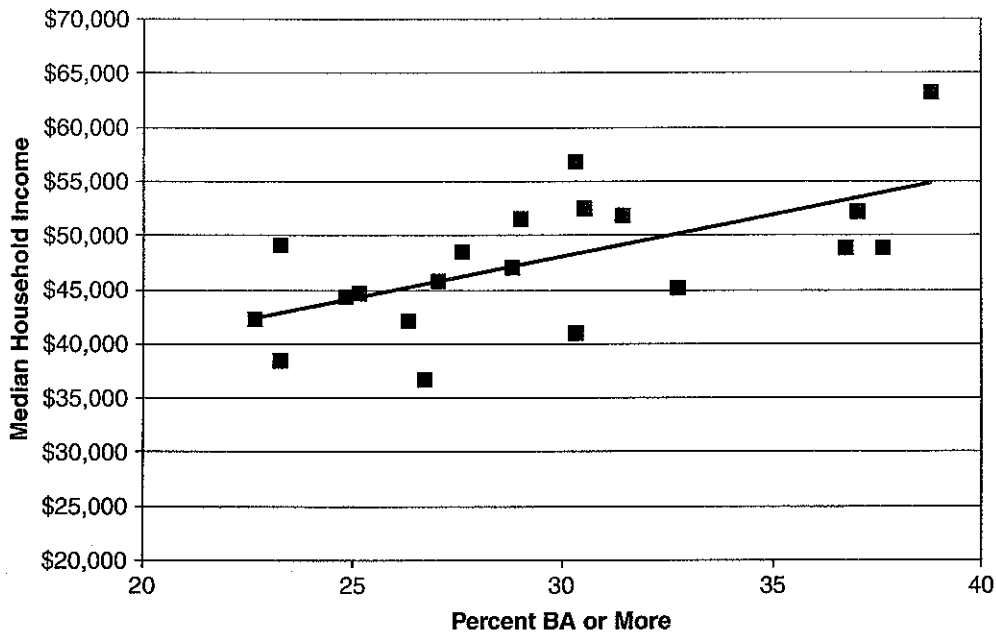


Figure 8.5 Median MSA Household Income versus Percent of Adults with BA Degree or More. *Source:* U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

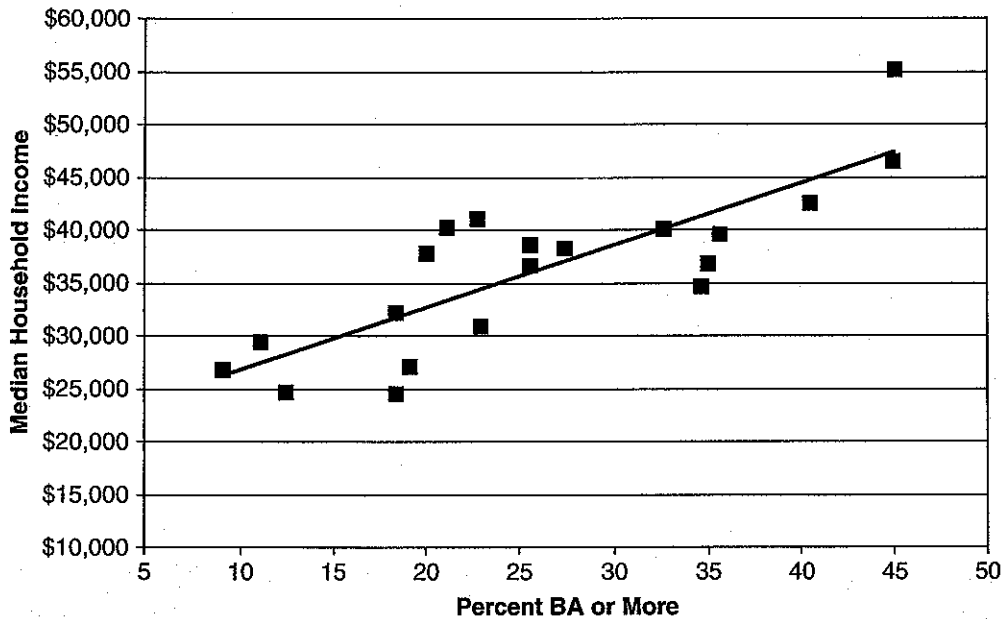


Figure 8.6 Median Central City Household Income versus Percent of Adults with BA Degree or More. *Source:* U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

Portland, Oregon, less than 15 percent of the adult population is without a twelfth-grade education. In sharp contrast, more than 40 percent of Newark's adults lack the high school degree. The same is true for 30 percent or more of the population in Detroit, Los Angeles, and Hartford. With so much of the workforce lacking even this basic educational credential, it is not surprising that these central cities have high poverty rates and stagnating or declining incomes. While many of the immigrants who have come to the United States in recent years arrived with advanced education and skill—working in fields such as engineering, medical care, and computer technology—some central cities house a disproportionate share of new immigrants who arrive in the United States with less than a high school diploma.

At the high end of the educational spectrum are such metro areas as San Francisco, Raleigh, Boston, and Austin. In each of these, well over a third of the adult population has a minimum of a college degree. In their central cities, the well-educated comprise, if anything, even a higher proportion of the population. Indeed, in both San Francisco and Raleigh, 45 percent of the adults have completed college or done postgraduate studies. Not surprising, these are regions with a high proportion of universities and research centers, where much of the pathbreaking work in such emerging fields as biotechnology and nanotechnology is being done (see **Figures 8.3 and 8.4**).

Educational Attainment and Metro Area Income

Figures 8.5 and 8.6 clearly demonstrate that higher education pays off, not only for individual households but also for entire metro areas and cities. In the first of these charts, we have created a scatter plot of median household income in each of the twenty metro areas we are tracking against the percentage of adults 25 and older who have at least a bachelor's degree. The trend line confirms that those metro areas with more college graduates have significantly higher median incomes. San Francisco, with nearly two out of five (38.8%) of its adults having a college education, had a median household income of over \$63,000—more than 64 percent higher than the typical household income in Buffalo, where only a little more than one out of five (23.2%) adults is comparably educated. In central cities, the relationship appears even stronger, given the steeper trend line. With 45 percent of its central city adults having at least completed college, median household income in Raleigh is more than double that of Newark (\$55,221 versus \$26,913), where only 9 percent have completed four or more years of college.

Education, New Growth Theory, and the Well-Being of Cities and Suburbs

To understand why education has become such an important factor in the well-being of cities and suburbs, it is useful to consult what now is known as **new growth theory**. Pioneered by Paul Romer (1986, 1994, 1996) and Robert Lucas (1988), new growth theory considers education to be one of the central factors that determines economic growth at both the metropolitan and national levels, not only because of

its direct effect on the productivity of individual workers who receive advanced schooling but also because of the spillover effects that enhance the productivity of others who work with them.

New Growth Theory

To explore the impact of education as seen by new growth theory, follow a fictional chemist, Julie, who is in the early stages of her career. She has just been hired by a biotech firm in Boston and given several initial assignments that she executes well, using the skills and knowledge that she has acquired through her formal education and training. Her existing human capital, which partially consists of what she learned in high school and college, has made her a productive worker and her value to the firm has been clearly demonstrated.

But existing skill levels are not the only consideration here. More highly educated workers are also more valued because they may have gained the advantage of learning *new* things on the job faster than those with less education. Consequently, when employers invest in on-the-job training for their workforce, those individuals who are more highly educated may acquire additional knowledge and skills more quickly and thoroughly. For example, if the employer provides Julie with details about the organizational structure of the firm or about current research going on in the firm, Julie may be able to absorb this information faster because she has become adept at learning through her many years in the school classroom.

As Julie continues to settle into her new job, she is assigned to a group working on a new prototype for a product. The team to which she is assigned consists of several workers with different skills and training, including a physicist and an engineer. As they discuss their ideas, the engineer proposes a design and the physicist exclaims, "That's a very novel idea, but there is a better way to achieve the same result." Julie chimes in, saying, "Yes, and we can also modify the chemical structure of the input using some new techniques that I have just learned." In short, in situations where individuals work together, an employee with a larger amount of knowledge and skills may complement the knowledge and skills of coworkers, leading to better products and/or increased productivity for the entire group.

The effect of education on coworkers is only one aspect of knowledge spillovers. As new growth theory emphasizes, the potential role of education on economic well-being extends beyond the firm. Knowledge can also spread between firms and between industries. Julie and her coworkers may get together with friends from other firms after work, discussing both the theories they learned in school and specific ideas from their workplaces. Visitors to Julie's firm and customers buying its products might also come away with new ideas. Members of Julie's work team might be offered new jobs by competitors. The insights that she and her coworkers have adduced may be distributed within their industry and others through manuals, trade magazines, and other written records.

In contrast to the emphasis that human capital theory places on knowledge embodied directly in individuals, new growth theory highlights the role of written

knowledge, calling it **disembodied knowledge**. The combination of embodied and disembodied knowledge, creative ideas, and their application to old and new endeavors can lead to innovation, new skills, new technology, new products, new firms, and new ways of organizing production throughout a geographic area and beyond.

The important point is that cities are particularly important and powerful settings for these dynamics, since the numerous interactions among people in dense urban areas and the rapid spread of written material can facilitate the adoption of these new developments and their diffusion across firms. The Internet and other forms of long-distance communication increasingly make it possible for researchers to collaborate in “virtual” laboratories, but much of the best research still relies on face-to-face interaction in real ones. Those who study this type of activity sometimes refer to the **bump rate** in a community—the number of times workers “bump” into each other at work or during leisure time and exchange ideas and new ways to solve problems (Krim et al. 2006). Dense areas are places where the bump rate is unusually high and, therefore, unusually productive. That is why places like Silicon Valley in California; the Boston area, with its rich array of universities, colleges, and teaching hospitals; Raleigh-Durham-Chapel Hill, with its “Research Triangle”; and Austin, Texas, with its great university, have become prosperous metro areas with equally prosperous central cities.

Education and Urban Economic Development

Clearly, the educational level of the workforce is critical to the economic and social success of a city or metro area. But the quality of local schools also has an independent effect on the well-being of urban regions for another very important reason. Blair and Premus (1987) have demonstrated that while in the early to mid-1900s, U.S. firms were particularly drawn to sites that minimized transportation costs (as depicted in the Weber graphs of Chapter 4), the educational environment of metropolitan areas has become an increasingly important factor in location decisions since 1960. Indeed, a study of business location dynamics by Natalie Cohen (2000) concludes, “Corporate real estate executives’ litany has changed from ‘location, location, location’ to ‘education, education, education.’”

Why is local education playing such an important role in the modern economy of metropolitan areas? Let’s explore this question by returning to that young chemist, Julie. Because of the skills she has acquired, she is highly sought after by a variety of firms in a number of industries, each engaged in research and development of new product lines. The young chemist receives offers from firms in several different metropolitan areas, including the one in which she was raised.

What enticements can the firms in each area offer to get her to join their company? How does the young chemist decide which offer to accept? Certainly, wages and benefits will weigh heavily in her decision. She also may have some attachment to the area where she grew up and, if she is a rational actor, she will consider the local cost of living, including the cost of housing. But another important consideration is the quality of the elementary and secondary education that will be available to her young children. Prospective employees make decisions about where to work and live

not only considering their salaries but also the overall interests of their families. In situations where highly educated workers are the source of a firm's competitive advantage, its continued success might depend upon whether those workers find the firm's location attractive along many dimensions. Consequently, successful recruitment of a talented staff may depend in part upon the quality of schools available to the families of potential employees.

According to Harvard University economist Edward Glaeser, this is especially true of "cold weather cities," which increasingly have trouble competing for young professionals who seek out municipalities with warmer climates. "Cities with average January temperatures under 30 degrees Fahrenheit grew in population only one-third as quickly from 1960 to 1990 as did cities with average January temperatures above 50 degrees" (Glaeser 2005, p. 1). To counteract this population shift, cold-weather cities need to focus on recruiting a high-skilled workforce, and Glaeser argues that highly skilled individuals who are concerned about their children will look for communities with good public schools.

There is good evidence for this conjecture. The U.S. Department of Education reported that in 2003, nearly one in four students (24%) in grades 1–12 had parents who moved to their current neighborhoods for the quality of the school system. This suggests that where employers are competing for highly skilled employees, the firm may choose to locate in a community with a well-regarded public school system. Conversely, a poor school system may be a serious hindrance to the recruitment of skilled young workers. Metropolitan areas that cannot provide high-quality educational facilities might even experience a "brain drain," as talented employees leave in search of a more suitable environment in which to raise their families.

Education Production Functions

Since education has such great significance to metropolitan areas in the twenty-first century, it is important to understand the forces that shape its production. What are the economic, political, and social factors in metropolitan areas that affect the quality and quantity of education? How do the urban dynamics of race, social class, and housing segregation interact to influence—positively or negatively—the production, distribution, and accumulation of schooling?

In Chapter 7, we discussed human capital, the idea that individuals pursue education hoping to receive higher wages in the future. In that initial discussion, we did not discuss variations in the *quality* of education received, just the quantity of education as measured by years of schooling. Yet, this is an important issue. Families who seek the best schools for their children, businesses that extol the academic reputations of nearby schools, and school system officials who compare test scores or other measures of their students' achievement against test scores from schools in other cities and metro areas all recognize that the quality of education varies from one place to another. School quality is determined by a number of different inputs that go into the process of education.

If we recognize that these inputs comprise (1) school system characteristics, (2) individual student characteristics, and (3) geographically specific socioeconomic environments, it is clear that no two educational outcomes have precisely the same inputs. However, we can try to identify the factors that are most important.

Economists and other social scientists often try to do this using the form of an **education production function**. Expressed in mathematical terminology, an education production function is like any other production function that tries to explain how inputs are converted into some output. In this case, we are interested in the overall process that turns education inputs into educational outcomes measured by, say, graduation rates or test scores.

The ideal school output is presumably an individual equipped with the knowledge and social skills to compete and contribute successfully in the modern economy, to engage intelligently in civic life, and to enjoy the many cultural gifts society has to offer. A simple education production function might be written as follows (King, Swanson, and Sweetland 2003):

$$O = f(C, R, I)$$

where O = Educational Outcome (e.g., graduation rate, test scores) for a single cohort of students, C = Student Characteristics (e.g., family income, parents' education), R = School Resources (e.g., per-student spending, pupil/teacher ratio), and I = Instructional Processes (e.g., type of curriculum); and where (f) stands for "a function of."

This simple function states that a measured educational outcome such as the tenth-grade reading scores across tens of thousands of students in perhaps hundreds of different schools or school districts is related to the socioeconomic background of the students in each district as measured by such factors as parents' income and education; the school resources available to students in each particular school or district; and the type of instructional program or processes used in each school or district.

The goal of such research is to reveal how much of the variance in educational outcomes across students is related to each of these factors. This is a critical question for cities and metro areas across the country, for it greatly influences the types of policies that might be used to improve educational outcomes in their school districts. For example, if statistical analysis reveals that the amount of school spending per child is the critical factor in educational outcomes, then one might advocate for boosting spending in the school districts where children are performing poorly on standardized tests. If the pupil-teacher ratio in each class is important to educational outcomes, then this information might inform school reform.

Variation in School Spending

To be sure, because of the decentralized school system in the United States, spending per student can vary dramatically from school district to district, both within states and across states. Rothstein (2004) identifies no less than five types of school resource inequality:

Type I: Disadvantaged children live disproportionately in *states* that spend less money on education than other states.

Type II: Within any state, disadvantaged children may attend schools in *districts* that spend less on education.

Type III: Within any district, disadvantaged children may attend *schools* that command fewer resources than others.

Type IV: Within any school, disadvantaged children may be placed in *classrooms* that have fewer resources at their disposal.

Type V: Within any classroom, disadvantaged children may be offered less adequate *assistance* than others.

Rothstein finds that the *interstate* gap in state and local government school spending (Type I) is where the greatest variance lies. Using data for 1996–1997, he finds that actual school spending per pupil ranges from 159 percent of the national average in New Jersey (\$9,667) and 143 percent in Connecticut to only 61 percent in Mississippi (\$3,704), 74 percent in Alabama, Arkansas, and Louisiana, and 75 percent in Oklahoma and South Dakota. That means that New Jersey spends, on average, more than 2.6 times as much on education per student as Mississippi. Of course, the cost of providing education varies across states because of differences in cost of living and teachers' salaries. But even after controlling for these factors, New Jersey spends twice as much as Mississippi, and Connecticut spends 1.45 times as much as Alabama.

These differences reflect, at least in part, variations in each state's ability to pay. Using state personal income per student (PIPS) as a measure of school spending capacity, Rothstein finds that, on average, an additional \$1,000 in PIPS corresponds to approximately a \$25 difference in annual per-pupil spending. Adjusted for regional cost differences, New Jersey had \$172,816 in personal income per student in 1996–1997, while Mississippi could claim only \$104,813. Accordingly, just on the basis of funding capacity, New Jersey could have spent 64 percent more than Mississippi on its public school students, but it spent nearly 100 percent more than Mississippi, which suggests that it was also willing to spend a higher *proportion* of its income on its schoolchildren.

Supposedly, federal spending on K–12 public schools should redress some of these imbalances in spending and spending capacity. But, given that federal funds represent only about 7 percent of total school expenditures, the federal government's ability to equalize spending is severely limited. Mississippi receives more federal funds per student than New Jersey, but even the local, state, and federal funds combined per pupil (after controlling for regional cost differences) leaves the typical student in New Jersey with 75 percent more school resources than his or her counterpart in Mississippi. Not surprisingly, with such differences, cost-adjusted per-pupil spending in New Jersey's cities and suburbs far outpaced those in Mississippi's urban communities.

Type II inequalities—*interdistrict* gaps within each state—are driven by the common reliance on the local property tax to fund schools. Because of differences across cities and towns in property wealth, in the amount of nonresidential industrial and commercial property available to be taxed, and differences in **tax effort**—the

tax rate per dollar of assessed property value—differences in per-pupil spending vary within states. These gaps persist despite state funding designed to offset the effect of local property tax differences. For each state in 2005, the Education Trust (2006) has compared the average state and local revenues per student in the highest-poverty school districts—those in the top 25 percent statewide in terms of the percent of students living below the federal poverty line—to per-student revenues in the lowest-poverty (highest-income) school districts, after controlling for differences in district cost of living. The Trust concludes that in twenty-seven of the forty-nine states studied (no comparable data for Hawaii), the highest-poverty school districts receive fewer resources than the lowest-poverty districts. Nationwide, \$907 less is spent per pupil in the poorest districts. Using a similar analysis for low- versus high-minority school districts, the Trust finds a discrepancy of \$614 in favor of districts with the lowest minority enrollments.

The largest interdistrict gaps in spending by income are found in New York State (\$2,280), Illinois (\$2,065), and Wyoming (\$1,149). Large gaps by race/ethnicity are found in New Hampshire (\$1,892), North Dakota (\$2,046), and South Dakota (\$1,617) in addition to New York, Illinois, and Wyoming. Other states have used state funds to equalize spending across districts and, in some cases, to offset the higher costs of schooling disadvantaged students. Thus, in Massachusetts, spending in high-poverty districts averages \$8,416, versus \$7,946 in cities and towns with the fewest poor children. Likewise, New Jersey spends more in poor districts than in wealthier districts, as do Alaska, Minnesota, and Nevada.

One might think that such differences favoring either rich districts or poor would violate the U.S. Constitution, but in a famous 1973 U.S. Supreme Court case (*San Antonio Independent School District v. Rodriguez*), the justices ruled in a 5–4 decision that education was *not* a fundamental right and that states were therefore free to balance the values of local control and equality of educational resources. According to Rothstein (2004), there have been no indications that the federal court is prepared to reconsider the *San Antonio* decision.

Litigation in individual states has often led to a different conclusion. While equal educational opportunity may not be guaranteed by the Constitution, according to the U.S. Supreme Court, some state courts have ruled that extreme inequality across districts violates their state constitutions. As such, in at least nineteen states, the courts have invalidated a school finance system that disadvantaged poor cities and towns. Cases are pending in at least another dozen states.

Michigan provides one of the most extraordinary examples of disparity leading to state action (Rothstein 2004). Because of the growing disparity in wealth between rich suburbs and poor inner cities and rural communities, by 1993, property-rich districts in Michigan—mostly in the suburbs—were spending nearly \$11,000 per student, while poor, rural districts spent barely \$3,000. After a small, rural, poor district in the northern part of the state voted to close its public schools rather than raise local property taxes further, Republican governor John Engler, with both Democratic and Republican support, agreed to a radical system of state financing for public schools. Increasing the state sales tax and tripling taxes on cigarettes, the state

took over nearly 80 percent of the financing of K–12 education. The new system immediately increased per-pupil spending in poor districts by a third. Accordingly, by 2005, the gap in spending between rich and poor districts had been reduced to under \$750 (Education Trust 2006).

Does Spending Matter?

Despite enormous differences in spending per student across school districts—and one presumes, therefore, differences in the quality of teachers, the size of the average class, the number of high school electives, and the number of extracurricular activities offered through the school—how much these school resources matter in terms of student outcomes is still a matter of empirical analysis.

One of the first and most cited studies of the impact of school inputs on educational outcomes—as measured by standardized tests—was undertaken for the federal government in 1966 by James S. Coleman, a leading education expert from Johns Hopkins University. With President Lyndon Johnson pursuing his declared war on poverty, there was the need to demonstrate that spending additional money on public schools would improve the educational outcomes of poor children, especially those in inner-city schools. Coleman administered tests to thousands of students across the country, collected data on school resources in hundreds of school districts, and gathered data on the demographic and economic characteristics of the students' families (Coleman 1966).

Having analyzed the data and then reanalyzed them over and over again, Coleman concluded, to his own consternation, that variations in school resources—including teacher/pupil ratios, the number of books in the school library, and the amount of spending per student—had almost nothing to do with explaining the gap in test scores between black and white children, after controlling for such family background variables as parents' education and income (Rothstein 2004). Most of the difference in test scores was attributable to family background and the social and economic conditions of the neighborhoods where students lived.

Since the Coleman report, a plethora of studies have addressed the question of how much school resources matter. The results are extraordinarily mixed, depending on the type of sample and the statistical methods used. Take class size as an example. Alan Krueger (1997), using data from Tennessee, finds that smaller classes matter, especially for poor and minority children, with kids educated in smaller classes performing significantly better on standardized tests than kids who are in classes with twenty to twenty-five children. Eric Hanushek (1997a, 1997b), in summarizing the results of many studies, comes to nearly the opposite conclusion. He finds that class size generally has no effect on test scores. Caroline Hoxby (2000), using data from Connecticut, agrees with Hanushek that class size does not appear to affect students' performance in school. This disagreement regarding the effect of something that should be so simple to measure—class size—is because there are so many variables that affect test performance and no two studies using different data sources hold constant the same set of factors.

If it is not funding or class size that matters, are there other school variables that can explain the difference in student performance? How about the quality of teachers?

Where Teachers Teach

The ideal teacher is knowledgeable about the subject matter being taught, well-versed in the learning process for students in the classroom, skilled and experienced in the ability to convey ideas and maintain a classroom environment that is conducive to learning, relates well to students, and has a sincere interest in the educational development of his or her students. While this is the ideal, teacher quality in fact varies considerably and, as with many other variables that affect metropolitan areas, place matters.

Unlike other inputs for the production of education, teachers have some choice about where they look for work, which job offers they will accept, how much effort to put forth on the job, and whether or not to seek a change in employment after they have been in the job for a while. While there is great variation in the quality of teachers within cities and within suburbs, the overall quality of teachers may differ between central city and suburban schools. For example, a principal in New York City interviewed by education specialist Jonathan Kozol (1992) complained that his school got only the "tenth-best" tier of qualified teachers. This viewpoint has been advanced in other, more recent studies from researchers who have contributed to a growing literature attesting that schools in central cities may have more trouble recruiting and hiring highly qualified teachers, on the whole, than do suburban schools (Lankford, Loeb, and Wyckoff 2002; Buckley, Schneider, and Shang 2004).

Boyd and his colleagues (2005) find that applicants for teaching positions generally search in the school district in which they were raised and in others that they perceive as being similar. This limits their job search to a relatively small geographic area. In fact, Boyd et al. find that, in the state of New York, more than one-third of new teachers were hired by the same school districts where they attended high school, while in Pennsylvania, 40 percent of new teachers found jobs in their own high school districts. While the "draw of home" may also apply to prospective teachers from central cities, Boyd found that central city school districts in New York have more job openings than they have qualified applicants who were raised in the city. Consequently, New York City school districts have to import teachers who come from suburban backgrounds. However, the preference of suburban-raised teachers for teaching in schools like the ones they attended may mean that there are fewer applicants from whom central city school districts can choose, resulting in the hiring of poorer-quality teachers.

A second problem is that teachers who begin their careers in central city schools are more likely to leave than teachers who begin in suburban schools (Boyd et al. 2005). While there is some evidence that those who leave central city schools are not more qualified than those who stay, the effect of high turnover is that the teachers

who leave are replaced (on both a temporary and permanent basis) by less experienced teachers—leaving central city schools with a high proportion of teachers with limited experience (Hanushek, Kain, and Rivkin 2004). Attrition rates in at least some central cities appear to be fueled by an insufficiency of classroom resources and by the poor quality of school buildings themselves. Two-thirds of Washington, D.C., schoolteachers complained about the poor air quality in their buildings, with 70 percent stating that their teaching is impaired by noise in hallways and classrooms. Thus, the level of school budgets and the priorities set by school administrators are ultimately reflected in the quality of the teaching force.

School Tracking and Curriculum Choice

Other scholars believe that educational attainment is influenced greatly by curriculum issues. Bowles and Gintis (1976) argue that students are funneled into different educational experiences that correspond to the larger society's perception of the expected future work roles of students. Accordingly, we need to be sure we have enough workers who can be lawyers, doctors, and engineers, but we also have to assure a sufficient quantity of laborers, retail clerks, and janitors. According to this **correspondence principle**, the school system acts as a giant sorting machine, doing its best to prepare just the right number of workers for each occupation—equipping each student with an appropriate set of skills and social norms for the labor market.

In a given school system, this may be accomplished by establishing different “tracks” for students that reflect preparation for different occupations. In the vocational education track, students whose race or class are deemed indicators of a lesser role in the hierarchy of occupations are taught rote memorization, rule-following, and other behavioral and thinking patterns that are considered appropriate for future low-skill workers. On the other hand, students whose race or class are seen as indicators of higher-status occupations are taught in a college preparatory track the analytical, creative, and leadership skills appropriate for future high-skill workers and decision makers (Bowles and Gintis 1976, 2001). Such differences presumably engender boredom and frustration for those who are designated for lower hierarchy occupations, leading to higher dropout rates and lower educational attainment (Perry 1988, 2004). Even without explicit tracking within each school, the objective of the correspondence principle can be obtained by differences in the curriculum in inner-city schools versus suburban schools.

This seems like a subtle form of class warfare or even racism, but some scholars argue that “detracking” also has its risks when students who are not prepared for the rigors of the college preparatory track are thrown in with those who have been trained for this trajectory during much of their school career (Loveless 1999). Because many metropolitan areas are geographically divided along racial and/or income lines, these curricular issues can greatly impact central city schools and can contribute to the urban-suburban disparity.

Still other scholars believe that the disparities are connected to the expectations of teachers about their students, rather than the curriculum itself. Because of racial or

class prejudice, some teachers may believe that their students are destined to be low achievers, and consequently put less effort into teaching than they otherwise would, while also communicating the expectation of low achievement to their students.

What Really Counts in School Performance

Rothstein (2004) has reviewed virtually all of the major studies that have tried to measure the impact of school variables on student performance and comes to the conclusion that nearly all of them confirm Coleman's results of more than forty years ago. None of the research ends up attributing more than one-third of the variation in student achievement, no matter how measured, to school-related variables. Certainly, the amount of money spent per student and the quality of teachers makes a difference in the relative success of students. But, overall, other factors that include socioeconomic background are substantially more important.

On reflection, this finding is not as strange as it might seem. After all, up until they leave high school, kids spend only about one-sixth of their time in school. Most children spend no time in school until they reach the age of 5. Thereafter, they might spend up to seven hours a day in school on an average of 180 school days a year. A quick calculation indicates that between the ages of 5 and 18, youngsters might spend a maximum of 17,640 hours in school (7 hours per day \times 180 days per year \times 14 years). During their full 18 years, they are alive for (24 hours a day \times 365 days per year \times 18 years) = 157,680 hours. By these calculations, they are in school for only about 11.2 percent (17,640/157,680) of their young lives. Even if you subtract sleep time at an average of 8 hours a day, the percentage of waking time spent in school during one's childhood is only about 17 percent.

An Expanded Education Production Function

With children spending more than four-fifths of their lives *outside* of school, there is a great deal of time for factors other than formal schooling to affect their "education"—primarily, the effects of family, peer, and neighborhood. Reflecting these "other" factors, a slightly more complex specification for the education production function is in order:

$$O_t = f(C, R, I, N, P, Z)$$

where outcome O = Educational Outcome (e.g., graduation rate, test scores) for a single cohort of students, C = Student Characteristics (e.g., family income, parents' education), R = School Resources (e.g., per-student spending, pupil/teacher ratio), I = Instructional Processes (e.g., type of curriculum), N = Neighborhood Characteristics (e.g., crime rate, after-school activities), P = Peer Influences, and Z = Student Effort; and where (f) stands for "a function of."

Sociologists and psychologists have confirmed that parents of different socioeconomic status—defined by parental education, income, and wealth—tend to raise

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children somewhat differently. Better-educated parents read to their young children more often and read differently, tending to ask their children questions from the readings that make them think more deeply about the themes of the books. Cross-national studies show that the number of books in a household varies substantially by social class and affects later school performance. Poor students who go to schools with a large number of middle-class students tend to perform better in school than equally poor students who are segregated in poor inner-city schools. Peer pressure, as subtle as it might seem, makes a difference in a young student's motivation toward learning, homework, and earning good grades. Health makes a difference, too, and poorer kids in inner cities tend to be in poorer health and receive poorer medical care. Studies have shown that 50 percent or more of minority and low-income children have vision problems that interfere with their academic performance (Gould and Gould 2003).

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A higher incidence of hearing problems, poor oral health, and lead exposure also disproportionately disadvantage children from poor inner-city households. Homes with poor ventilation and mold tend to contribute to higher levels of asthma, which can reduce significantly the number of days a child spends in school. Poor nutrition due to low income or parental neglect can make kids listless in class. Parents who themselves have little education may be hampered in their efforts to help their children learn.

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Housing itself can make a big difference as well. Overcrowded housing means that students often do not have a quiet, undisturbed place to do their homework. A lack of affordable housing leads to a great deal of relocation among poor families. According to one government report, 30 percent of the poorest children have attended at least three different elementary schools by third grade, compared to only 10 percent of middle-class kids. Black children were more than twice as likely as white children to change schools (Government Accounting Office 1994). This can obviously disrupt the learning process. A recent statistical analysis concludes that if the rate of household mobility of black students was reduced to the average level for white children, the improvement in housing stability itself would eliminate 14 percent of the black-white test gap (Hanushek, Kain, and Rivkin 2004).

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The level of crime in a neighborhood may also affect school performance. Kids are more likely to skip school if they are afraid of being attacked on their way there. Worrying about the danger of the street where you live can only make it more difficult to concentrate on your studies. Neighborhoods with lots of clubs, youth sports teams, and other forms of constructive extracurricular activities provide children with the opportunity to be mentored by adults other than their parents or teachers. A good neighborhood basketball coach or dance instructor can do wonders for building the confidence of young people and provide them with good role models.

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Hence, the difference between a poor central city and a rich suburb, between a safe neighborhood and a crime-ridden one, and between a home environment that is devoted to reading and learning and one in which there are few adults to engage young minds is the difference that comprises 83 percent of the waking hours of children. Against this, it is perhaps not surprising at all that inner-city schools in

poor neighborhoods, no matter how good they are and no matter how devoted their teachers, can have only a limited impact on reducing the performance differential between poor and middle-class kids and between white children and children of color. Only the truly extraordinary inner-city school can compensate for the multiple disadvantages that poor inner-city children often experience.

Recent research into neuroscience and developmental psychology provides still another reason why schools can only partially compensate for the performance differential between advantaged and disadvantaged children. Shonkoff and Phillips (2000) have shown in a pathbreaking study that “virtually every aspect of early human development, from the brain’s evolving circuitry to the child’s capacity for empathy, is affected by the environments and experiences that are encountered in a cumulative fashion, beginning in the prenatal period and extending throughout the early childhood years.” This means that early learning—well before the child enters kindergarten—has a disproportionate impact on acquired skills and leads to self-reinforcing motivation to learn. Once a young child falls behind, there is a tendency for **circular causation with cumulative effect** to set in. This means that a small differential in early childhood education tends to be amplified throughout primary and secondary school and beyond. Small differences when one is young (up to age 4) can lead to large differences when one is an adult. No matter how many resources are devoted to inner-city schools, they simply cannot fully compensate for preschool inequality.

Educational Success: The Empirical Record

It is not surprising, then, that preschool is found to have an extremely high benefit-cost ratio. According to research on the Perry Preschool Program, a two-year intensive early intervention program for disadvantaged African American three- and four-year-olds, spending time each morning in a preschool with follow-up afternoon visits to the child’s home led to increases in measured IQ by age 10, higher achievement scores on standardized tests, higher rates of high school graduation, higher salaries in adulthood, a higher rate of home ownership, a lower probability of being dependent on welfare, and fewer arrests, as compared with a control group that was followed until the young children reached age 40 (Schweinhart et al. 2005). In measuring benefit/cost ratio of this program, Barnett (2004) finds that the total cost of the program averaged \$16,514. But the net present value of the benefits was nearly \$128,000. Of this total, there were additional earnings in excess of \$40,000, a savings in remedial K–12 education of more than \$9,000, and a savings to society of \$94,000 due to a lower incidence of crime. Altogether, the benefit-cost ratio is 8.74 to 1. Thus, this particular program returned nearly \$9 for every \$1 invested in these disadvantaged kids. With such a high payoff, it is especially unfortunate that so few children benefit from intensive preschool experiences like these.

Similar strong effects were found in a recent twenty-five-year follow-up study of participants in the Brookline Early Education Project (BEEP), a 1972–1979 program that provided health and family-centered assistance—including discussions, playgroups, visits to libraries—to the families of young children from Brookline, a

Boston suburb, and to those from part of the central city of Boston. BEEP specifically focused on the relationship between early health—from just before birth to five years old—and subsequent outcomes. The designers of BEEP believed that “health and education are linked intimately. Healthy children learn better than those who are not well, either physically or emotionally. . . . The program’s essential goal was to ensure that children in the project would enter kindergarten healthy and ready to learn” (Palfrey et al. 2005, p. 145). In evaluations during second grade, low-income BEEP participants had school outcomes comparable to those of higher-income families, and the central city BEEP participants demonstrated higher abilities in reading, planning, organizing and task completion than their central city nonprogram comparison group (Hauser-Cram et al. 1991).

A twenty-five-year follow-up study found that the preschool interventions had long-lasting benefits. As young adults, BEEP participants from the central city not only completed more years of schooling than did a central city comparison group but there were also great differences in the percentage with incomes less than \$20,000 (28 percent for inner-city BEEP participants versus 72 percent for a non-BEEP comparison group), in the number who reported themselves to be in very good or excellent health (64 percent among the BEEP participants versus 42 percent among the comparison group), and in voter registration (75 percent among BEEP participants versus 58 percent among the central city comparison group).

Challenges Facing Urban School Systems

For all the reasons just enumerated, as well as others, it is not surprising to find strong confirmation of large test score gaps between rich kids and poor, and between the average white child and the average black or Hispanic. The National Assessment of Educational Progress (NAEP) provides an indication of just how big those gaps are. NAEP is a national test of fourth and eighth graders used to assess reading and math proficiency. “Reading Proficient” students at the eighth-grade level should be able to show an overall understanding of the text, including inferential as well as literal information. “Math Proficient” students at the eighth-grade level are expected to have a thorough understanding of basic-level arithmetic operations and be able to solve math problems in practical applications (Standard & Poor’s 2006).

In 2005, 29 percent of all eighth graders who took the NAEP scored at the proficient level on the reading exam. White and Asian students scored nearly equally, with 39 percent of Asians and 37 percent of whites scoring as proficient. In contrast, only 11 percent of black students and 14 percent of Hispanics scored this well. Girls did much better than boys overall, with more than a third of the girls scoring as proficient (34%) and less than a quarter of the boys (24%). Only 15 percent of economically disadvantaged kids were judged proficient, compared with 38 percent of those who were not disadvantaged.

In math, the scores were similar in rank, but the gaps were even larger. Overall, 28 percent of eighth graders were “math proficient,” with boys this time doing

slightly better than girls (30% versus 27%, respectively). Asians led the pack at 46 percent, followed by whites at 37 percent, Hispanics at 13 percent, and blacks at only 8 percent. Economically disadvantaged kids were only one-third as likely to test proficient on the math test as those who were not disadvantaged (13% versus 39%, respectively).

The gaps in school performance hold true for high school graduation rates as well. According to a 2004 Urban Institute study, the estimated graduation rate for suburban school districts in the United States was nearly 73 percent, while the graduation rate for the nation's central city school districts was only 58 percent (Swanson 2004). A gap of five percentage points or more between suburban and central city school districts exists for thirty-three of the forty-six states for which the Urban Institute calculated estimates, with this gap exceeding ten percentage points in twenty-four of those thirty-three states (see **Table 8.2**). The largest gaps between central city and suburban graduation rates were found in New York, Ohio, Maryland, Pennsylvania, and Illinois. In each of these states, the suburban graduation rate is at least twenty-five percentage points higher than the central city rate. At the other end of the spectrum are five states (Oregon, Kentucky, West Virginia, New Mexico, and Nevada) where central city graduation rates are actually higher than suburban graduation rates.

Racial Segregation and Educational Achievement

In many cases, graduation rates are highly correlated with the racial composition of the student enrollment (Orfield et al. 2004). Among twenty of the largest school districts in the nation, as shown in **Table 8.3**, the high school graduation rate in 2000 ranges from just 30.4 percent in Oakland, California and 32.4 percent in Cincinnati, Ohio to 70 percent or more in Sacramento, California; Tucson and Mesa, Arizona; and Portland, Oregon. Of these twenty districts, the predominant racial group for the thirteen districts with the lowest graduation rates is black or Hispanic. Of the remaining seven districts with the highest graduation rates, none are predominantly black, one is Asian/Pacific, two are Hispanic, and the other four are predominantly white. We find that school performance gaps have a distinctly geographic dimension due to housing segregation by income and wealth, housing location outcomes—both imposed and self-imposed—and differences in local governments' abilities to fund local schools.

As **Table 8.3** demonstrates, many of the largest school districts across the nation have high proportions of minority enrollment and, in some cases, more than 90 percent of the students are members of minority groups. The reformers of the 1950s did not envision that things would turn out this way. Before the landmark 1954 Supreme Court decision in the case of *Brown v. Board of Education*, states from Maryland and west through Indiana, encompassing the entire South as well as Texas and Oklahoma, had laws mandating that black and white children were required to attend separate public schools (Ogletree 2004). This example of legally mandated and legally enforced segregation—called **de jure** segregation—had been considered in compliance with the U.S. Constitution based on the 1896 Supreme Court case of

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Table 8.2 High School Graduation Rates for Urban and Suburban School Districts by State, 2003–2004

States	Urban District Graduation Rate (%)	Suburban District Graduation Rate (%)	Suburban-Urban Graduation Rate Gap (% points)
Nation	57.5	72.7	15.2
New York	39.8	80.0	40.2
Ohio	41.9	77.6	35.7
Maryland	47.9	79.2	31.3
Pennsylvania	52.2	83.2	31.0
Illinois	55.3	83.9	28.6
Georgia	40.0	63.4	23.4
Massachusetts	55.3	77.8	22.5
Michigan	55.7	77.8	22.1
Connecticut	60.6	81.8	21.2
Kansas	59.6	79.7	20.1
Virginia	62.3	79.9	17.6
Oklahoma	59.0	76.3	17.3
Wisconsin	68.1	85.0	16.9
Tennessee	47.5	63.9	16.4
Vermont	59.4	75.7	16.3
Missouri	61.5	77.0	15.5
Indiana	61.1	75.8	14.7
California	61.0	74.7	13.7
Mississippi	45.4	59.1	13.7
Arkansas	62.1	74.7	12.6
South Carolina	46.1	58.7	12.6
Texas	58.6	70.4	11.8
Colorado	60.6	71.9	11.3
Washington	55.6	66.8	11.2
Nebraska	69.1	78.8	9.7
Maine	66.1	75.4	9.3
Utah	71.6	80.9	9.3
Minnesota	70.8	80.1	9.3
Iowa	70.3	79.0	8.7
South Dakota	71.4	78.1	6.7
Montana	81.0	87.2	6.2
Delaware	57.2	63.2	6.0
Rhode Island	69.3	75.3	6.0
Alabama	57.8	62.8	5.0
North Dakota	74.6	79.1	4.5
North Carolina	65.0	68.2	3.2
Idaho	85.7	88.0	2.3
New Hampshire	70.8	72.4	1.6
Florida	51.6	53.1	1.5
Louisiana	63.8	64.6	0.8
Nevada	55.2	51.7	-3.5
New Mexico	60.1	56.1	-4.0
West Virginia	71.8	67.4	-4.4
Kentucky	67.8	61.1	-6.7
Oregon	79.0	71.4	-7.6
New Jersey	— ¹	86.8	—
Hawaii	— ²	66.0	—
Wyoming	66.9	— ³	—
Alaska	69.4	— ³	—

(continued)

Table 8.2 (continued)

States	Urban District Graduation Rate (%)	Suburban District Graduation Rate (%)	Suburban-Urban Graduation Rate Gap (% points)
District of Columbia	65.2	— ³	—
Arizona	— ⁴	72.4	—

1. Reliable urban graduation estimate could not be calculated.

2. No urban districts.

3. No suburban districts.

4. Data for urban not reported.

Plessy v. Ferguson, which sanctioned segregated accommodations on passenger railroad trains.

When Oliver Brown sued the Board of Education of Topeka, Kansas, for forcing his daughter to travel past several white schools in order to attend a more distant black school, the Court overturned the precedent established in *Plessy* and required school districts to integrate their schools. Although de jure segregation was now illegal, many of the places in which it was practiced actively resisted, or at the very least were slow to make the necessary changes, even though the Court directed them to act “with all deliberate speed.”

Table 8.3 High School Graduation Rates for Selected Large School Districts, 2000

School District	Enrollment	Minority Enrollment (%)	Largest Racial Group	Graduation Rate (%)
Oakland, CA	54,863	94.4	Black	30.4
Cincinnati, OH	46,562	74.3	Black	32.4
Columbus, OH	64,511	62.9	Black	34.4
New York City, NY	1,066,516	84.7	Hispanic	38.2
Atlanta, GA	58,230	93.2	Black	39.6
Houston, TX	208,462	90.0	Hispanic	40.2
Denver, CO	70,847	78.0	Hispanic	40.5
Philadelphia, PA	201,190	83.3	Black	41.9
Los Angeles, CA	721,346	90.1	Hispanic	46.4
Baltimore County, MD	99,859	89.2	Black	47.9
Chicago, IL	435,261	90.4	Black	48.8
Dade County, FL	368,625	88.7	Hispanic	52.1
Minneapolis, MN	48,834	72.8	Black	63.8
Seattle, WA	47,575	60.0	White	66.6
San Francisco, CA	59,979	88.9	Asian/Pacific	66.7
Anchorage, AK	49,526	36.6	White	69.4
Sacramento, CA	52,734	75.1	Hispanic	70.0
Tucson, AZ	61,869	58.5	Hispanic	70.6
Mesa, AZ	73,587	32.2	White	71.7
Portland, OR	53,141	37.8	White	71.9

Source: Orfield et al. 2004.

Most of the states outside of the South did not practice de jure segregation and some along the northern tier from Massachusetts to Minnesota, including Michigan, outlawed it. In many northern cities, however, schools were segregated even in the absence of legal mandates, as a result of segregated housing patterns. In contrast with de jure segregation, this was called **de facto** segregation.

By the late 1960s, schools in the Detroit metropolitan area were overwhelmingly black inside the central city and overwhelmingly white in the surrounding suburbs. Any meaningful effort toward racial integration of the schools would have required a solution for the entire metropolitan area. However, when the Detroit metropolitan area desegregation plan was brought before the Supreme Court in 1974 in the case of *Milliken v. Bradley*, the Court ruled against integration plans that would cross central city school district boundaries unless it could be shown that suburban jurisdictions or state action contributed to de jure segregation within the central city (Friedman 2002).

This decision made it far more difficult, and often impossible, to implement metropolitan plans for desegregation. As demographic change concentrated higher proportions of minorities inside central cities, the result was a high degree of racial segregation of schoolchildren, even in the absence of laws mandating that outcome.

In the absence of any effective tools to overcome de facto segregation, the big question is: What can be done to address the substantial racial gaps in educational success that are illustrated in Tables 8.2 and 8.3? This has led many education experts and policy advisors to urge basic reform in the U.S. school system, particularly in central cities where so many students appear to perform poorly (Waldrup 1998).

Urban Schools and Reform of School Structure

The call for school reform is hardly new. By 1970, several concerns about the purpose of education and about the quality of education were converging to shape new school reform initiatives. Greater equity in the distribution of educational resources was being pursued through increased state and federal aid. The level of educational achievement became a critical issue because of the fear that competing nations were doing a better job of educating their citizens. There was growing consensus that a high school diploma was a necessary minimum for participation in most labor markets, with a college degree or more needed in an increasing number of them.

Despite the increased attention devoted to education in the 1960s and early 1970s, by the 1980s, it seemed that America's schools—and particularly its inner-city schools—were failing along with their students. In *A Nation at Risk*, which became a best-selling report, the National Commission on Excellence in Education (1983) warned that the United States was falling behind Japan and Europe in its economic prowess and that this was directly related to the quality of our public schools. It concluded that:

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- 47.9
- 48.8
- 52.1
- 63.8
- 66.6
- 66.7
- 69.4
- 70.0
- 70.6
- 71.7
- 71.9

- Out of nineteen academic tests administered to students in dozens of countries, American students were never first or second in comparison with other industrialized nations and came in dead last seven times.
- Some 23 million Americans were functionally illiterate by the simplest tests of everyday reading, writing, and comprehension.
- Average achievement of high school students on most standardized tests were now lower than in the 1950s.
- College Board Scholastic Aptitude Test (SAT) scores had suffered a virtually unbroken decline from 1963 to 1980.
- The number and proportion of students who demonstrated superior achievement on the SATs also had declined.

In trying to explain these discouraging trends, the Commission noted that part of the blame could be traced to the fact that too many teachers were being drawn from the bottom quarter of graduating high school and college students; too much teacher training focused on “educational methods” rather than on the subjects to be taught; too few highly qualified individuals went into primary and secondary school teaching because of low average salaries; too little homework was being assigned to high school students; and the school day and school year were too short. School reformers latched on to the Commission report, calling for all kinds of changes in the schools.

Advocates for the public schools claimed that the “school crisis” could be dealt with by increasing teacher salaries in order to attract better teachers to traditional public schools. Others argued for more money to extend the school day or school year. Still others stressed the need for boosting the number of teachers who were qualified to teach math and science.

A growing cadre of critics went farther, suggesting that the public school system was essentially broken and could not be fixed without at least being subject to greater competition for students. These reformers called for the creation of magnet schools, charter schools, and voucher systems—alternatives to the traditional public school. Many of these new initiatives try to loosen the link between residential location and school assignment, alter the power of particular interest groups (e.g., teacher unions), boost accountability, and through their impact on school staff, try to address low expectations or low skills of teachers and administrators.

Almost all of these innovations in K–12 education are based on the theory that competition in markets for any good or service leads to improved quality at a reasonable price. Local public schools are seen as virtual monopolies. Without competition, they have little incentive to improve quality or become more efficient in their supply of educational services (Peterson 2005). By injecting competition into the K–12 local school market, traditional public schools presumably will have to improve if they are not to lose most of their students to these new types of schools.

Magnet Schools, Charter Schools, and For-Profit Schools

Historically, students were assigned to specific schools based on their residence within distinct school districts (which may or may not have coincided with municipal

boundaries) and these were divided into smaller geographic units. Children generally went to the school nearest their homes—with the exception, of course, of those school districts that practiced de jure segregation and might send black children to a distant school to keep them from integrating a white school. In contrast to neighborhood schools, **magnet schools** are public schools with a specialized curriculum or a distinctive approach to learning and open to students throughout a school district, regardless of the school to which they would normally be assigned. The first schools with this approach were begun in Tacoma in 1968, in Boston in 1969, and in Minneapolis in 1970, and were sometimes referred to as “pilot schools” because they served as laboratories for new approaches to education. The term “magnet school” caught on after Houston opened its performing arts school, stating that it acted like a magnet for interested students (Waldrip 1998).

Magnet schools became widespread because they offered the opportunity to experiment with new learning techniques, a racially integrated environment that often was not achieved in the normal school assignment plans, and a promise of high-quality education to attract families who otherwise might leave the city in search of better educational opportunities for their children in the suburbs. In addition, by broadening the area from which students were normally drawn, many magnet schools were able to offer career-related instruction, such as schools for the arts, that may not have had an adequate number of interested students in normal school assignment schemes. Magnet schools were recognized by federal courts as a suitable way to address the impact of residential segregation on the segregation of schools, and most major cities had magnet schools by the early 1980s.

Charter schools are established by private groups that provide publicly funded education under contracts (charters) with designated government authorities, usually at the state level (Finn, Manno, and Vanourek 2000; Ladd 2002). The first charter school in the United States opened in St. Paul, Minnesota, in 1992. By school year 2005–2006, there were more than 3,600 charter schools in forty-one states (and the District of Columbia), with more than half of all charter schools (51.4%) located in central cities (National Center for Education Statistics 2006). By 2005, 30 percent of the public school students in Dayton, Ohio, were attending charter schools, while nearly a quarter (24%) of the Washington, D.C., K–12 students were in such schools. By 2006, more than 1 million students were attending charter schools nationwide (Zimmer and Buddin 2006).

While magnet schools are a modification of the traditional school assignment practices, charter schools are designed to change the management structure and behavioral incentives within schools. The advocates of charter schools perceived several problems with the traditional system of public education. They argued that entrenched interests of administrators and teachers made public schools resistant to improvement, that the practices of school employees were calcified by the gradual buildup of various agreements and regulations to the detriment of education, that schools were not being held accountable for the student outcomes they produced, and that a more decentralized system would provide better academic results.

Charter schools were seen as a solution to all of these problems. Because issues involved in public-sector decision making can be particularly complex and potentially problematic in urban settings, the charter school movement was embraced in many cities. Cutting through all the bureaucratic red tape of the public school system while still relying on public funding seemed a way to improve public schools without privatizing them. Often, charter school proposals received considerable support from poor communities, from African Americans, and from Hispanics, who were frustrated by existing inner-city public schools and were seeking new solutions to raise the quality of schooling available to their children.

Charter schools are not without their critics, however, who charge that, on average, they do not perform any better than traditional public schools and may harm traditional schools by draining them of needed resources (Carnoy et al. 2005). Since state aid to local public schools is usually tied to the number of students who attend district schools, every time a family chooses to send a child to a state-chartered school, the district loses revenue. If enough students in a district transfer to charter schools, the revenue loss to the local public school district can be severe enough to further undercut the quality of the traditional schools, which makes it even more difficult for them to offer a quality education to their students. This effect might be exacerbated if charter schools “skim off” high-achieving students from the traditional public schools with adverse social and academic effects on the students remaining behind (Wells 1998; Cobb and Glass 1999).

Another reform aimed at addressing the issue of school management has been to contract out the actual operation of public schools to for-profit **education management organizations** (EMOs). In contrast to charter schools, EMOs typically do not hire their own teachers; they simply replace the management structure of the schools, using the existing teachers and other school staff (Molnar et al. 2006). In Philadelphia, twenty-two public schools that enroll more than 12,000 students are run by Edison Schools—the nation’s largest EMO—while another six Philadelphia public schools, enrolling 3,900 students, are run by Victory Schools. Las Vegas contracted with Edison to manage seven schools with a combined enrollment of approximately 5,900 students. Baltimore contracts with Edison to manage three schools with approximately 2,200 students.

Proponents of EMOs argue that the profit incentive of such firms will lead to the efficient management of staff and other resources, while the fixed-length renewable contract given only for a set number of years provides incentive to produce successful students. In 2005–2006, there were approximately fifty such companies. While most served as subcontractors for charter schools, seven EMOs held direct contracts for the management of traditional public schools. Nationwide in 2005–2006, EMOs directly provided management for seventy-six public schools, with Edison Schools accounting for fifty-eight of these.

Other urban school systems have focused on reforming incentives for teachers. The Houston public school district, the seventh-largest school district in the United States, adopted a **merit pay** system in 2006, providing bonuses to teachers whose students’ test scores significantly improve from one year to the next. The Denver

public schools initiated a merit pay system in late 2005, awarding bonuses to teachers whose students' test scores improve, who agree to work in schools that have had poor test scores or high teacher turnover, or who take additional training to improve their teaching skills.

Educational Standards and "No Child Left Behind"

What began as an issue of merit pay for teachers that was tied to the measurable progress of their students has become part of what is now known as the **standards movement**. According to the standards movement, one of the fundamental problems with traditional schools is their lack of accountability for student outcomes (Peterson and West 2003). Whether students test well or not, no one is penalized. In 2002, the Congress enacted legislation that amended earlier federal school aid programs by adding a requirement that states impose test score standards for public schools.

The legislation authorizing these changes is named the **No Child Left Behind Act** (NCLB). Under NCLB, states are required to develop test-based criteria for measuring student progress and to annually assess each school's performance in terms of those criteria. States are required to take steps to ensure that students are taught by qualified teachers. States are also required to identify individual schools that need improvement and to take specified action in schools that fail to improve within given timelines. If schools in need of improvement fail to boost their test scores, states are required to impose specific sanctions that include providing students from such schools the option to attend other schools and changing the management of the school, or risk losing federal funds.

Critics of NCLB, however, argue that test-based standards do not adequately reflect the types of learning needed within schools, and that expected funding to implement the mandates of NCLB was not included in future federal budgets (National Education Association 2006; Karp 2007). The heads of many city school systems argue that because expenditures for the implementation of NCLB mandates have had to come from already strained budgets, their school systems are forced to cut school offerings. Putting more money into the basic subjects covered in standardized tests means less money for art classes, athletics, and other parts of the school curriculum. Another common complaint is that a number of the test criteria are harder to meet in cities with high poverty levels, substantial immigration, and other conditions that impact school performance. The performance standards instituted by states as part of NCLB have led to court cases in which cities have argued that, in light of the socioeconomic characteristics of their school population, their funding is not adequate to meet the mandated standards.

The No Child Left Behind Act is revolutionary for the decentralized U.S. school system because it centralizes many rules and sanctions under which local public school education is provided. At the same time, it enhances the possibility for school choice by encouraging the establishment of charter schools, magnet schools, and voucher programs.

School Choice and Voucher Programs

Broadly speaking, **school choice** includes any system in which parents can choose the school their children will attend, rather than having the schools assigned by residence or other criteria. As noted earlier, magnet schools and charter schools are usually open to students from throughout a school district. Many urban school districts have some form of "controlled choice," where families can designate their top choices and enrollment is determined by taking these choices and other factors, such as racial diversity, into account.

However, some advocates of school choice argue that all schools should be open to all families, without any restrictions, and that adequate accountability for results would be best achieved through such a system. They believe that such a system can function through marketlike dynamics similar to those described under perfect competition, where individual consumers (families) make decisions about the services (schools) they will buy (utilize). Invoking analogies of perfect competition, they argue that consumer choice will eventually weed out bad schools and lead to the replication of good schools, while maximizing the liberty of families to make decisions (Friedman 1962; Chubb and Moe 1990; Howell and Peterson 2006).

Critics of this argument disagree with the applicability of the theoretical world of perfectly competitive markets to education, noting that education involves many externalities, economies of scale, information problems, and interdependent utility functions (Aoki and Feiner 1995; Ladd 2002). Some critics note that research indicates that parents often choose schools for their social milieu rather than their academic rigor, asking more questions about the racial composition of schools than about data on student outcomes (Schneider and Buckley 2002). Others argue that in choosing schools, parents have to take into account the availability of transportation, parental workplaces and work schedules, the location and availability of after-school child care, and other factors. Still others believe that school choice can undermine the civic value of "common schools."

There are three basic forms of choice systems. **Intradistrict choice** allows families to select any public school within the boundaries of the school district in which they reside. **Interdistrict choice** allows families to select public schools in school districts other than the ones in which they reside. For example, a student living in a poor neighborhood in Chicago would be able to choose a school in the upper-income suburb of Winnetka, and vice versa. Such a program in Minnesota, in fact, allows families to choose any public school in the state.

Voucher programs extend choice not only to public schools but also to private schools. Vouchers are essentially entitlements to a certain amount of public funding for a child's education, regardless of whether the child attends public, private, or parochial (religiously oriented) schools. Parents of school-age children receive a voucher check that can be used to pay tuition at any school in the voucher system.

Milwaukee is the city most noted for implementing a voucher program (Euchner and McGovern 2003). Following a failed desegregation plan, black parents decided

to support a school choice program that provided \$2,500 vouchers for each student. The program was targeted to families who earned less than 1.75 times the poverty level. By 2001, 11,000 children in Milwaukee were receiving vouchers that permitted them to choose between public and private schools, including religious ones.

Cleveland followed Milwaukee in implementing a taxpayer-funded voucher plan with more than 4,500 children from poor neighborhoods taking advantage of it. Florida adopted a statewide voucher program in 1999, such that students in any underperforming public school are eligible for vouchers worth up to \$4,000 per year to attend schools of their choice (Euchner and McGovern 2003). However, the Florida State Supreme Court decided in January 2006 that the program violated the state constitution.

One problem, of course, is that with private schools charging tuitions well above the value of the voucher, only those parents willing and able to make up the difference between tuition and the voucher check can take advantage of the plan. Indeed, about the only private schools that charge low tuition are religious-affiliated parochial schools, where the question of church-state relations remains cloudy.

The debate about school choice and its relationship to civic values and to urban dynamics has continued in the early twenty-first century, as legislation at the federal and state levels has encouraged states and municipalities to consider choice-based systems. Debate on the impact of test-based standards continues as well. Metropolitan areas are not only the cauldrons in which many school reform initiatives were born but also have been the context in which many of their complexities and perplexities have become apparent and have been hotly debated.

Do These School Reforms Work?

With all of the school reforms and experiments under way, one would have expected by now to see some real improvement in school performance and a significant decline in the test score gap between wealthier and poorer students and across racial and ethnic groups. But the results are mixed, at best.

In a well-publicized study of charter schools across the country, Caroline Hoxby (2004) compared reading and math scores of fourth-grade students in charter schools with fourth graders in neighboring traditional public schools. On average, she found that the charter school students were 3.8 percent more likely to be proficient on their state's reading exam compared to the children who attended the local district elementary school. On math tests, the charter school students were 1.6 percent more likely to be proficient. This seems to suggest that charter schools were doing a slightly better job of educating children.

Yet, other studies using the same data as Hoxby came to the conclusion that even this small charter school advantage completely vanishes when you control for the income of the children's families, as well as their race (Carnoy et al. 2005; Roy and Mishel 2005). Because the families who select charter schools for their children tend to be higher income and presumably provide more educational benefits to their kids at home, it is not surprising that they perform somewhat better in school.

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Miron and Horn (2002) come to a somewhat more nuanced conclusion about the success of charter schools. They conclude that there is a slight improvement in average test scores in some states, while research in other states finds a negative impact. Most studies report both positive and negative impacts, so that many experts caution against any definitive conclusion for or against charter schools. Clearly, there are some successes where administrators, teachers, and parents are heavily involved and resources are adequate, but there seem to be at least this number, if not more, where students in charter schools fall behind those in traditional public schools on test scores, after controlling for family background and neighborhood effects.

The claims for charter schools seem to be somewhat overblown, not just on test scores but also on their claims to be more innovative and responsive to parental pressure. A study of charter schools in Arizona concludes that the actual innovation in these schools was less than anticipated by charter school advocates (Gresham et al. 2000). Accountability, which should be the hallmark of the charter school, was also found lacking (Maranto et al. 1999; Finn, Manno, and Vanourek 2000). State oversight and parental involvement was supposed to take the place of the local school board. The evidence suggests that in many cases, once the school board was out of the picture, there was no one stepping in to assure quality or innovation.

Zimmer and Buddin (2006) provide perhaps the best overall analysis of charter schools in their study of the California system. They conclude that charter schools perform about the same as regular public schools and therefore have done little to close the achievement gaps for minorities. They do, however, provide a different education model that often emphasizes non-core subjects (e.g., art, music, language study) and often uses fewer public resources than traditional schools. As a result, charter schools do not provide a "silver bullet" for school improvement, but represent a reform initiative that Zimmer and Buddin consider worth continuing, at least in California.

Pretty much the same conclusion seems to be valid for voucher programs. While voucher systems give students more school choice and therefore should contribute to greater educational achievement, evaluation studies show little more support for this proposition than the studies of charter schools. Studies of the Milwaukee system found that parents were "more satisfied" with the private schools their children attended, but there was little evidence that voucher students did any better on reading and math tests (Witte 2000). A RAND Corporation study (Gill et al. 2001) that surveyed many choice systems found only modest gains for African American children after one to two years in voucher schools, but none for Latino students. Martin Carnoy (2001) finds even less.

By 2003, after much more experience with charter schools and voucher systems, the effect of these reforms on school performance appeared to be no better. In a large-scale study that compared reading and math test scores for fourth- and eighth-grade students in nearly 7,000 public schools and more than 530 private schools, the National Center for Education Statistics—a division of the U.S. Department of Education—found that children in regular public schools generally performed as well as or better than comparable children in private schools, after controlling for race,

ethnicity, income, and parents' educational background (Schemo 2006). That is, children in private schools do test better than children in public school, but only because they usually come from wealthier families where the parents are better educated and provide educational opportunities outside the school environment. Once these demographic factors are held constant, the alleged superiority of private schools largely disappears.

What are we left to conclude? The evidence seems to suggest that parental background and community factors play the pivotal role in how kids perform in school and ultimately, how they do in the labor market and in life more generally. Differences between the environments in many central cities and suburbs are critical. Because education now plays such a critical role in the labor market and in the earning potential of workers, gaps in central city/suburban school achievement can only lead to greater income and wealth inequality as education becomes more important in determining income. We need to better understand the impact of decent housing, safe neighborhoods, preschool programs, after-school programs, and health disparities to better understand why the achievement gaps by family income, race, and ethnicity are so hard to overcome. As the saying goes, "It takes a village to raise a child." The evidence seems to confirm this conjecture. Essentially, we need to change a lot about cities and suburbs to make a difference in the success of the children growing up there.

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Chapter 8 Questions and Exercises

- As this chapter discusses, educational attainment within metropolitan areas, and the cities and towns that comprise metropolitan areas, has changed over the years. Using the *Urban Experience* CD, find out how educational attainment has changed since 1970 in two CBSAs (metropolitan area or micropolitan area) of your choice (other than the twenty MSAs in our charts in this chapter).

To obtain these data in the *Urban Experience* CD, follow these steps:

- Go to the "Get Data" screen.
- Click on "Percentages."
- Then double-click on "Educational Attainment," and check each box in the drop-down list that appears.
- In the "Locations" segment, choose one CBSA from the list.
- Finally, check all of the years that are available and click on "Go."

How have the percentages of the population with “less than 12 years,” “high school diploma,” “some college,” and “bachelor’s or more” changed between 1970 and 2005?

- Repeat this process for a second CBSA of your choice. Educational attainment within metro areas may vary, with possible gaps between the attainment levels found in principal cities and suburbs. Use the *Urban Experience* CD to explore this for the two CBSAs you selected for the previous exercise.

- Go back to the *Urban Experience* CD’s “Get Data” screen.
- In the “Year” segment of the screen, check only the year 2005.
- In the “Locations” segment, double-click on the name of one of the CBSAs you chose for the previous exercise. A drop-down list of all principal cities and all suburbs in the CBSA will appear. Note that in the drop-down list, totals for all principal cities are at the top, followed by totals for all suburbs, a list of each separate principal city, and a list of each separate suburb.
- Check the box for “CBSA-principal cities” and the box for “CBSA-suburbs.”
- Then go to the second CBSA you chose, double-click on it, and choose the same boxes for that CBSA. Then click on “Go.”

Within each CBSA, what differences, if any, do you find between the educational attainment in the principal cities and the educational attainment in the suburbs? Comparing the two CBSAs, what similarities or differences do you see in the patterns? (*Note:* There may be some geographic areas where 2005 data was not available. If the table that results from your selection is blank, go back to the main screen and select the year 2000 instead of 2005.)

- There may also be major differences between individual principal cities within the same CBSA and between individual suburbs within the same CBSA. To explore this, return to the *Urban Experience* CD’s “Get Data” screen and look once again at the drop-down menu of principal cities and suburbs within the CBSA you chose. This time, for each of the CBSAs you selected, pick one or two of the separate principal cities (some CBSAs have only one principal city) and one or two of the suburbs (principal cities are listed alphabetically; they are followed immediately by an alphabetical listing of the suburbs). Change the year to 2000, because data is not available for many individual suburbs for 2005. Then click on “Go.”

- For those CBSAs with more than one principal city, what differences, if any, do you find between the two principal cities you chose?
- What differences, if any, do you find between the suburbs?
- If you were asked to do further research on the differences/similarities within the CBSA, what ideas from Chapter 8 would you draw upon in your investigations?

- The Department of Education’s annual *Digest of Education Statistics* can be found at the following Web site:

<http://nces.ed.gov/programs/digest>

In the drop-down menu on the left choose the most recent year available, and when the next screen comes up click on "Elementary and Secondary Education" and then choose "Schools and School Districts." Scroll down just a bit and choose the table titled "Selected statistics on enrollment, teachers, dropouts, and graduates in public school districts enrolling more than 15,000 students." This table is sorted by state (found in column 2).

Find the school districts that you identified in question 1 above and answer the following questions for the most recent year available:

- ✦ What is the enrollment for that school district?
- ✦ What is the racial composition of the district?
- ✦ What is the teacher/pupil ratio?

5. Go back to the *Digest of Education Statistics* Web site and, as you did for question 3, choose the most recent year available, "Elementary and Secondary Education," and "Schools and School Districts." This time choose the table titled "Revenues, expenditures, poverty rate, and Title I allocations of public school districts enrolling more than 15,000 students." Once again, find the school districts that you identified in question 1 above and answer the following questions for the most recent year available:

- ✦ What percentage of the school district's revenues come from local government?
- ✦ What percentage comes from state government?
- ✦ What percentage comes from the federal government?
- ✦ What is the poverty rate among five- to seventeen-year-old students who attend the school?
- ✦ What is the current expenditure per pupil?