Back to Basics: A Pro-Growth Public Investment Strategy

Joel Kotkin

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For more than a decade, rising asset prices have driven the economy, benefiting the wealthy but doing relatively little to improve either the economic status of the majority of Americans or the country's overall competitiveness. Rising stock and housing prices created staggering short-term increases in wealth for some, but did little to bolster the nation's preeminence in technology, industry, or agriculture.

In order to retool the economy and generate balanced, robust job growth, the government should focus on rebuilding and enhancing the nation's energy, transportation, and communications infrastructure.[1] Judicious investment in renewing and creating critical public goods will provide opportunities to all income classes and help ensure that employment keeps pace with population growth. We refer to this approach as "back to basics," a return to the sort of sensible public agenda that strengthened the economy and promoted societal well-being in the past.

In contrast, over the past 20 years, while returns to capital and the incomes of those in certain elite occupations grew rapidly, wages for lower-income and middle-class workers stagnated.[2] To be sure, most families spend much less on food than they did in 1960, and the number of people earning over $100,000 a year has risen by over 13 percent since 1979.[3] Yet, it has become increasingly difficult for families with two incomes to maintain a "middle-class lifestyle," and single-earner households find it hard to keep pace with the rising costs of education, housing, and health insurance.[4]

Almost all of the recent gains in wealth have been achieved by the relatively small number of Americans with incomes more than seven times the poverty level. In the meantime, middle-tier educated and skilled workers have been losing ground.[5] This striking disparity is evident in income and wealth data, which show that the top 1 percent of U.S. households now accounts for as much of the nation's total wealth as it did in 1913, when monopolistic business practices were the order of the day. The net worth of the top 1 percent is now greater than that of the bottom 90 percent of the nation's households combined.[6] Nearly three-quarters of all income gains from 1979 to 2000 were realized by the top 20 percent of taxpayers.[7]

In view of these trends, it is not surprising that Americans are increasingly pessimistic about the prospects for upward mobility. For the first time in our nation's history, two-thirds of all Americans think life will not be better for their children.[8]

A large measure of this national unease is related to our failure to invest in and maintain critical infrastructure. In the past, the belief that it was possible to better one's economic condition by working hard was reinforced by the public and private investment in transportation systems, scientific research, and technological development that fueled

economic advancement. At present, however, Americans see government as being incapable of providing up-to-date transportation systems, reliable water supplies, or even basic education. The Katrina disaster, which led to the near-destruction of New Orleans and was largely caused by local, state, and federal failures to build and repair infrastructure, crystallized these concerns.

Historically, periods of muscular public investment—such as from 1936 to 1970—strongly correlate with significant upward mobility.[9] In contrast, the current period of persistent public underinvestment has coincided with a striking concentration of wealth and opportunity. These trends are particularly apparent in America's greatest cities, including New York and Los Angeles, where the divide between rich and poor has widened and the number of middle-class neighborhoods has rapidly decreased. In 2006, despite its surface opulence, Manhattan had the widest gap between rich and poor in the nation.[10]

In the past, America's largest urban areas traditionally invested in the sorts of basic infrastructure and resources—transportation, communications, education—that generated significant upward mobility. In recent years, this pattern shifted toward less effective investments in high-tech sectors and urban entertainment centers in an effort to attract the "creative classes." This new strategy has done little to advance opportunities for most middle-class, working-class, or low-income families.

We need to redirect public investment in ways that will reenergize our economy and put Americans back on the path of upward mobility.

Our Progressive Past

For much of our history, we were the model of an upwardly mobile society. From the earliest period of American settlement, European observers were struck by the remarkable social mobility in America's cities. In the 19th century, American factory workers, and their offspring, had a far better chance of entering the middle or upper classes than their European counterparts.[11] The mid-century agricultural and industrial expansion gave substance to the American Dream. Manufacturing value added rose by nearly 10 percent every decade from the 1840s to the 1880s, with the exception of the Civil War decade. But as the nation's economy grew, wealth became increasingly concentrated in hands of the country's first crop of aggressive monopolists.[12]

The growing conflict between America's promise of upward mobility and the concentration of wealth stimulated a new kind of politics—the Progressive movement—which focused on expanding opportunities through democratizing infrastructure. For example, Progressives sought to regulate key transportation resources, such as railroads, to assure widespread access at relatively fair prices. Progressives translated their political agenda into an unprecedented commitment to build infrastructure. The construction of massive public works projects, including water and sanitation systems, and new roads, libraries, schools, and parks, redirected the nation's wealth so as to improve the lives of its less affluent citizens.[13]

The decades from the 1890s to the 1920s saw the development of new national and state parks, the beginnings of suburban transportation systems, the nation's first major water and power systems, and the implementation of agricultural conservation practices, workforce safety measures, and financial innovations such as home mortgages. Progressive ideals, inextricably linked with large-scale public infrastructure investment, helped drive the expansion of the middle class and reverse the crippling concentration of wealth that imperiled the country's future.

The economic catastrophe engendered by the Great Depression sparked an unprecedented increase in infrastructure spending. Much of this investment was directed toward improving roads, bridges, electrical generation, and waterways, and provided employment for large numbers of people who had no other means of finding work. It led to the modernization of vast areas of the country, including rural communities largely bypassed in earlier periods of economic expansion. Programs such as rural electrification under the Tennessee Valley Authority significantly enhanced agricultural

productivity and helped people move upward out of what can only be described as a quasi-feudal existence.

Equally critical, the focus on public investment reduced the concentration of wealth and assured that much of the nation's income and productivity gains benefited the working and middle classes. Wealth concentration in the top 10 percent of all households fell from the mid-1930s through the immediate postwar years and remained at historically low levels until the mid-1980s.

In the postwar years, the Eisenhower administration continued to support a broad range of public spending, including for defense-related projects and basic scientific research and technology development. The Eisenhower era in fact triggered an unprecedented period of growth in public infrastructure and research and development spending that did not reach its peak until the mid-1960s. The Eisenhower years stand out as a period of considerable economic growth and of growing middle-class opportunity. One of the primary reasons for this result was the administration's support for the Interstate Highway System.

Eisenhower's fascination with high-speed roadways was sparked by his exposure to Germany's autobahns after the war. Under his guidance, the Interstate Highway System linked the country with a network of freeways and efficient highways, and it revolutionized the American economic landscape. By some estimates, it has returned more than $6 in increased productivity for every $1 invested. According to one federal study, the highway program reduced U.S. producer costs by more than $1 trillion. Travel time between Seattle and Portland, for example, declined by 25 percent and between Cleveland and New York by a third.[14] As a result, transportation costs dropped from 9 percent of GDP a century ago to about 2 percent of GDP today.

The nation's new roadways generated what one scholar has called the "democratization of mobility."[15] In 1940, fewer than 45 percent of Americans owned their own homes.[16] By the mid-1980s about 67 percent of all American families owned their homes, double the rate in Germany, Switzerland, France, Great Britain, and Norway. Nearly three-quarters of all AFL-CIO members and the vast majority of two-parent families were homeowners.[17] Once again, a period of significant public infrastructure improvement laid the groundwork for new growth and in turn stimulated widespread upward mobility.

However, beginning in the 1970s the long-established pattern of infrastructure investment and upward social mobility dramatically changed. Investment priorities shifted—in part due to the growing focus on social welfare programs and defense spending—and wealth again became more concentrated in the upper tiers of society. By the middle of the decade, inequality levels exceeded those last observed in the late 1940s and began to approximate those of the prewar era. This trend persisted during both economic expansions and contractions.

The focus on public investment reduced the concentration of wealth and assured that much of the nation's income and productivity gains benefited the working and middle classes.

Since the 1980s, public investment in basic infrastructure construction and maintenance has declined in inverse proportion to the growth of the population through natural increase and massive immigration (see fig. 1). Nor did private infrastructure investments compensate for the falling rate of public infrastructure growth. Private infrastructure growth rates increased slightly in the 1970s, but generally remained stagnant from 1950 to 2000. Overall U.S. infrastructure growth rates were driven by public infrastructure patterns and have declined since the 1960s (see fig. 2).

The strong downturn in spending on infrastructure that began in the 1980s has led to an infrastructure deficit, adversely affecting the quality of our roads, public transportation systems, public education, and productivity-enhancing investments.

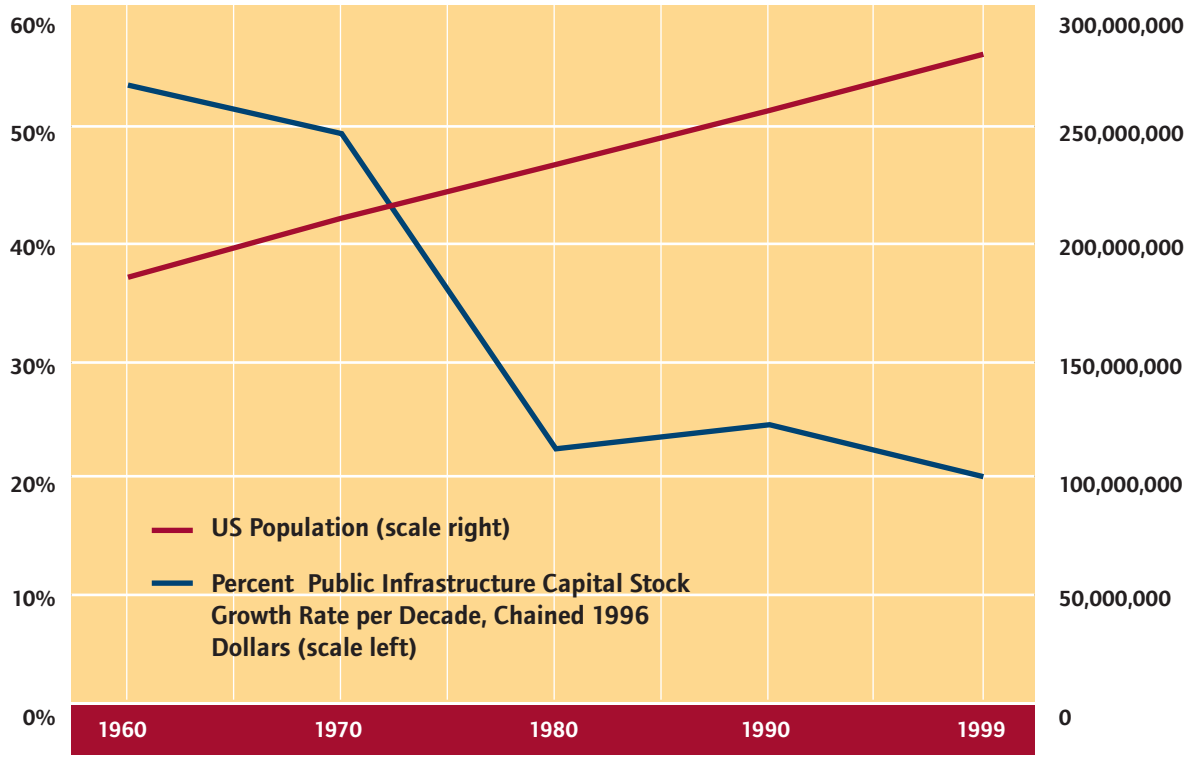

FIGURE 1: GROWTH IN PUBLIC INFRASTRUCTURE STOCK PER DECADE (CHAINED 1996 DOLLARS) AND U.S. POPULATION GROWTH, 1950–2000

Sources: Calvert-Henderson Quality of Life Indicators, table 4, http://www.calvert-henderson.com/income-table4.htm (accessed August 2006); Demographia, http://www.demographia.com (2006).

The decrease in infrastructure spending has coincided with a period in which middle- and working-class Americans have experienced rising income inequality and in which wealth has once again been concentrated in the hands of the few at a level not seen since the era of the robber barons.

Public Investment Failures

National interest in public infrastructure has been rekindled by recent disasters, the most dramatic of which was the destruction of much of New Orleans in 2005 due to the failure to invest in basic hurricane protection infrastructure. In the summer of 2007, an interstate highway bridge collapsed in the heart of the Minneapolis metropolitan area. Faced with stark evidence of how deferred or ignored public investment could lead to catastrophe, state and local leaders throughout the United States began to assess their own vulnerabilities. They identified billions of dollars worth of public health and safety projects needing immediate attention.[18] The national list of "sub par" public infrastructure includes not only levees, but highways, dams, ports, and bridges. And as the *New York Times* noted, "[The list] is growing as government outlays for repair lose out to budget cutting." The American Society of Civil Engineers estimates that $1.6 trillion must be spent over the next five years to prevent further deterioration. Only $900 billion is now earmarked.[19] A 2003 National Resources Defense Council study of drinking water quality found that the problem of deteriorating public supply systems was widespread, with many cities relying on antiquated treatment technologies and water delivery systems built before World War I.[20]

Despite the documented need for upgraded basic infrastructure, neither of the nation's major political parties has taken up this issue. Instead, government policy continues to be shaped by the belief that only certain sectors or groups drive economic growth.

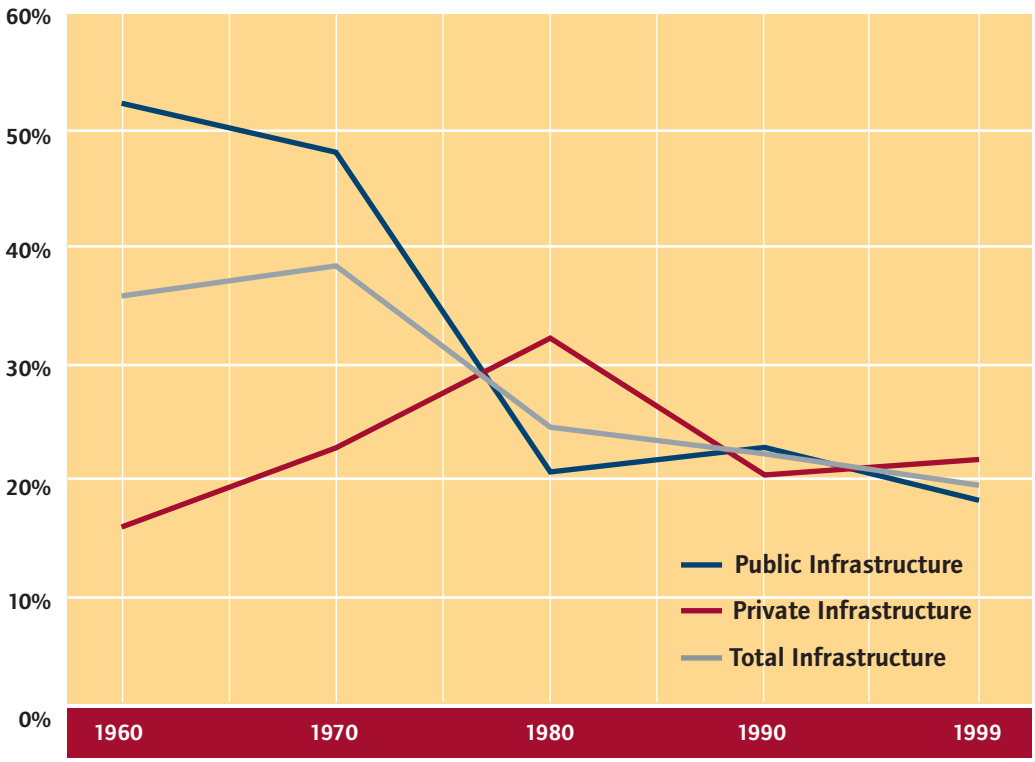

FIGURE 2: PUBLIC, PRIVATE, AND TOTAL U.S. INFRASTRUCTURE GROWTH PER DECADE, 1950–2000, (CHAINED 1996 DOLLARS)
Source: Calvert-Henderson Quality of Life Indicators, table 4, http://www.calvert-henderson.com/income-table4.htm (accessed August 2006).

Thus, the federal government continues to emphasize high-tech infrastructure, and local governments try to boost their economic fortunes by building sports stadiums, entertainment facilities, and other amenities for the "creative class."

Washington's "Technocratic Perspective"

The ascendancy of the "technocratic perspective" was first evident during the Clinton administration. According to the analyst Kent Hughes, although the administration initially supported revived infrastructure spending, it discarded this strategy in favor of funding such "twenty-first-century infrastructure" as the "information superhighway."[21] According to Robert Atkinson, a leading proponent of the technocratic view, spending on old-style infrastructure was merely "a way for government to solve a host of pressing social problems and redistribute economic resources, while being seen as supporting growth. But in an economy in which the national physical infrastructure is already complete and where knowledge and technology power growth, traditional bricks-and-mortar infrastructure spending does little to spur measured productivity."[22]

In the early 1990s, the technocrats correctly drew attention to the need for anticipatory, cutting-edge public investment. A study by the National Institute of Standards and Technology (NIST), for example, found that a lack of communication technology integration standards was disrupting U.S. manufacturing supply chains. Standardization was projected to generate a net gain of over 1 percent of the cost of sales, a significant productivity benefit in highly competitive industrial sectors.[23] Similarly, NIST found that adopting a Voice over Internet standard would likely spur new products and generate significant returns to the economy.[24] By helping to resolve these and similar issues, government involvement

could play a role in improving national economic conditions.

However, the technocratic perspective also gave rise to the mistaken belief that other forms of infrastructure spending were unneeded or counterproductive. Yet, as we have noted, "bricks and mortar" investments, as in the interstate highway system, produce returns that rival high-technology enhancements. The record of high-tech investments, moreover, is decidedly mixed. In the late 1990s and early 2000s, overinvestment in speculative Internet and related ventures resulted in one of the most spectacular misallocations and waste of capital in U.S. history.[25]

"Bricks and mortar" investments produce returns that rival high-technology enhancements.

While the Bush administration has not been a captive of the technocrats, it has nonetheless evidenced no appetite for traditional infrastructure projects. Indeed, the administration's policies with respect to capital gains and tax cuts have served to reduce capital for public infrastructure spending. The Iraq war has also depleted resources that might have been available for domestic purposes. Thus, for some time there has been no significant federal commitment to expanding basic infrastructure, creating new working- and middle-class opportunities, or strengthening the nation's industrial base.

Urban Neglect: Image vs. Substance

Local governments have shown much the same lack of concern about infrastructure. Roads, municipal services, and public amenities in the nation's three largest cities, Los Angeles, New York, and Chicago, are deteriorating. "One looks back at that map 'Landscape by Moses,'" writes the noted sociologist Nathan Glazer, referring to the legacy of New York City's "master builder" Robert Moses, "and if one asked what has been added in the fifty years since Moses lost power, one has to say astonishingly: almost nothing."[26]

Indeed, despite the staggering private wealth generated by the stock market and real estate in New York, the city's public infrastructure has been largely neglected. The city controller's office has estimated that infrastructure spending levels in the late 1990s and early 2000s were barely half of what was required to maintain the city's streets, main roads, and railways in "a systematic state of good repair." Subways and rail lines in America's richest city are frequently shut down after heavy rains due to flooding caused by poor drainage. Brownouts and blackouts, in part caused by underinvestment in energy infrastructure, have become common during summer high-use periods.[27]

This neglect is evident at the state level as well. California's once envied water-delivery systems, roadways, airports, and education facilities are in serious disrepair. In the 1960s, infrastructure spending accounted for 20 percent of all state outlays, but as the technocratic perspective took hold in Sacramento, infrastructure spending fell to just 3 percent of all expenditures, despite the rapid growth of the state's population.[28]

At the same time as traditional infrastructure spending became unfashionable, cities and states began to invest in spectacular new convention centers, sport stadiums, arts and entertainment facilities, and hotels, seeking to build a "hip" image to attract the "creative classes" to their urban centers and boost economic growth.

A recent Brookings study estimates that public capital spending on convention centers doubled between 1995 and 2005 to $2.4 billion a year. Nationwide, 44 new or expanded convention complexes are in the planning stage or under construction. Yet few of these projects ever make money, and many lose considerable sums. The convention business is not growing, and the surplus of convention space has forced cities to accept revenues at or below costs to generate bookings. Los Angeles, Phoenix, Washington, and St. Louis financed unprofitable convention complexes with bonds or tax waivers that diverted resources from other, more pressing, needs. As the Brookings study observes: "The new private investment and devel-

opment that these centers were supposed to spur—and the associated thousands of new visitors—has simply not occurred."[29]

New arenas and sports stadiums have shown the same disappointing results. Some cities, including Des Moines, Kansas City, and Little Rock, have built new sports facilities to lure rather than house, a committed, professional sports franchise, only to see their plans fail.[30] Baltimore, Cincinnati, Cleveland, San Francisco, and Milwaukee, among other cities, sold voters on new sports stadiums with the promise that these facilities would spur growth and lead to urban renewal. But there is little evidence that such facilities justify the related public expenditures. In fact, according to the authors of an exhaustive study of the subject, "The direct and indirect economic impact of sports teams and the facilities they use is quite small. New facilities do not engender substantial job creation or economic development regardless of whether the frame of reference is a downtown, a city, a county or a region."[31]

Nor is the mega-project approach a substitute for basic infrastructure investment. Pittsburgh, for example, spent over a billion dollars in the last decade on sports stadiums and a new convention center. Yet this has done little to stem the loss of jobs in the metropolitan region. One assessment concluded that "future historians will look at [such] investments with amazement. Communities that were hard-pressed to keep their schools open or police on the beat nevertheless spent billions on stadiums and arenas for the use of professional sports teams."[32]

Urban leaders have also become enamored of the idea that building elite cultural, entertainment, dining, and other amenities will create "hip" communities and attract highly productive, highly paid residents. Appealing to this "creative class" of educated professionals, many believe, is a quicker path to restoring the overall health of a regional economy than fixing roads, building schools, or attending to other basic infrastructure needs.[33]

It is difficult to overstate how profoundly this approach—which grew out of a misreading of the original idea—has changed urban investment priorities. Milwaukee is a prime example of this thinking. In the early part of the last century, Milwaukee's Socialist leaders spurred economic development and improved the lives of ordinary citizens by building sewers, municipally owned water and power systems, parks, and schools. Today, as the city's anemic economic base continues to decline, the "sewer socialism" of those years is forgotten. Instead, Milwaukee's civic leaders have almost exclusively directed their efforts toward more flashy endeavors, such as funding a new art museum designed by the celebrated Spanish architect Santiago Calatrava. But unlike the sewers built during the city's heyday, the art museum has proved to be an economic albatross. After an initial flurry of interest on the part of the public when the museum opened in 2004, attendance plummeted and the anticipated economic windfall to the city center never materialized. Having learned little from this experience, city leaders next proposed to subsidize an elaborate plan—later scaled back due to local opposition—to convert the old Pabst Brewery into an entertainment and retail complex. Local businesses and taxpayers condemned the effort as an attempt to build a "Carnival City" in place of a blue-collar, livable burg. [34]

This emphasis on the ephemeral aspect of city building has pretty much failed everywhere it has been tried. The Rock and Roll Museum in Cleveland, for example, is often said to have generated a downtown renaissance, yet the city has one of the largest poor populations of any U.S. urban area.[35] Baltimore, Philadelphia, and Pittsburgh are frequently cited as examples of how enlightened gentrification and "creativity district" development can stimulate a "comeback" from a period of industrial decline. However, all of these cities still substantially under perform the nation as a whole. From 1994 to 2005, employment in these four cities taken together rose by just 1.5 percent, a rate nearly 12 times slower than for the nation as a whole; Philadelphia and Baltimore actually lost jobs (see table 1).

Nevertheless, many urban policymakers and business leaders believe this approach is critical to

TABLE 1: 1994–2005 EMPLOYMENT GROWTH (1,000s), BALTIMORE, PHILADELPHIA, CLEVELAND, AND PITTSBURGH

	1994 NONFARM EMPLOYMENT	2005 NONFARM EMPLOYMENT	NET JOB GROWTH	PERCENT CHANGE 1994–2005
Cleveland-Elyria-Mentor, OH	1,041	1,077	36	3.4 %
Pittsburgh, PA	1,063	1,136	73	6.9 %
Philadelphia, PA	682	651	−30	−4.4 %
Baltimore, MD	411	380	−31	−7.4 %
TOTAL	**3,197**	**3,245**	**48**	**1.5 %**
USA	**96,244**	**113,122**	**16,878**	**17.5 %**

Source: "Best Cities," *Inc.*, May 2006, data analysis by Michael A. Shires.

improving urban areas. They direct our attention to small areas of their cities where heavy subsidies may have spawned a cluster of chic boutiques, luxury condos, and art galleries. Former mayor Martin O'Malley frequently asserted that a remodeled Inner Harbor "festival marketplace," two new sports stadiums, and an aquarium had transformed Baltimore into "the greatest city in America." His city even spent a quarter of a million dollars to solicit help from trend watcher Faith Popcorn for "brand identity" assistance.[36] By almost any economic measure, however, Baltimore remains a city in decline. It ranked 389 out of 393 U.S. regions in terms of job growth in 2006. It lost 11 percent of its population in the 1990s, and another 2.3 percent in the first half of this decade. The city still has thousands of abandoned homes and its homicide rate, already among the nation's highest, is once again rising. "What good is it to be hip and cool," asked a local talk show host, "if you're dead."[37] Finally, the city's inner suburbs, which boomed after World War II, are in chronic decline, as jobs and younger, more affluent families move farther away from the urban core.[38]

Much the same thinking motivated economic policy in Michigan, the epicenter of the nation's industrial recession. Rather than address the state's loss of blue-collar and middle-class jobs, Gov. Jennifer Granholm vowed to create "cool cities" that would attract young professionals. But art galleries, coffee houses, and other "cool" amenities have done nothing to halt the decline of the state's urban areas. Michigan's cities still consistently rank at the bottom of America's urban areas in terms of job growth, and near the top in population loss. Nearly one in three residents, according to a July 2006 *Detroit Free Press* poll, believes that Michigan is "a dying state." Two in five of the state's residents under 35 said they were seriously considering leaving.[39]

Beyond the question of the misallocation of resources, this emphasis on ephemeral spending can be dangerous when essential infrastructure needs are neglected. New Orleans, once one of the nation's great industrial and commercial centers, long ignored the needs of its traditional industries such as those tied to its port and the energy sector. At the time of the Katrina disaster, the city had roughly half the percentage of jobs in manufacturing and wholesale trade as the national average. High-wage jobs in the energy sector were drying up as the oil and gas companies moved elsewhere, mainly to Houston, which in contrast spent heavily on basic infrastructure and promoted a comparatively more business friendly climate.[40]

Instead, as its economic decline intensified, New Orleans chose to focus on the arts, culture, and tourism. This approach further depressed working- and middle-class wages. Although the city became a tourist center, nearly 40 percent of its households, or twice the national average, earned less than $20,000 a year in 2000.[41] Between coping with severe poverty and building a "cool" but ultimately uneconomic community, the city ignored its engineering needs and failed to repair and upgrade its protective levees. New Orleans did not lack money for public ventures before Katrina; it spent plenty on convention centers, sports stadi-

ums, and other glitzy, but ephemeral, projects. Instead, beguiled by the false promise that the arts and culture could drive its economy, the city gave up on building and maintaining basic infrastructure.[42]

Infrastructure vs. Elite Investment Strategies: Lessons from California

Infrastructure investment is a bellwether of a region's overall ability to generate widespread economic opportunity and upward mobility. Major California urban areas, for example, can be divided into two camps: those that invest heavily in basic infrastructure, and those that have all but completely abandoned the building of roads and other public amenities in favor of opera houses, high-end shopping centers, and million-dollar condos intended to attract elites. Northern California's Bay Area—where high tech reigns supreme—favors high-end employment and eschews significant infrastructure development. According to a recent report by a group of California-based civil engineers, the Bay Area's infrastructure ranks as the worst in the state. In contrast, Orange County, San Diego, and the Riverside-San Bernardino region of Southern California known as the Inland Empire have tried to match infrastructure investment with the needs of all of their residents—the working class, the middle class, and the wealthy—paying particular attention to roadways, water systems, schools, and other public amenities.[43]

These investment approaches have led to starkly divergent patterns of job growth and opportunity. Between 1994 and 2005, total Bay Area employment rose by just 93,000 jobs, a 6.3 percent growth rate that was a third of the national increase. In contrast, California's regions that invested in infrastructure generated more than 1.1 million new jobs and achieved a rate of growth that was more than double the national norm (see table 2). Spending on cool and trendy urban amenities may benefit a select group in the affected communities, but it does not correlate with the explosive rise in job growth and opportunity evident in regions that focus on basic infrastructure.

The contrasting California scenarios are mirrored in other parts of the country. New York City has for years pursued a low-infrastructure, high-end investment strategy. This policy has been especially damaging to the outer boroughs where the city's manufacturing and wholesale trade sectors are located.[44]

In contrast to the low-growth, low-infrastructure investors such as New York, Cleveland, Pittsburgh, Baltimore, and Philadelphia, cities like Dallas, Houston, Charleston, and Phoenix have consistently allocated funds over the past two decades to improve highways and other basic infrastructure. Houston recently announced plans to double its

TABLE 2: CALIFORNIA HIGH INFRASTRUCTURE AND ELITE INVESTMENT REGIONAL, JOB GROWTH (1,000s), 1994-2005

	1994 NONFARM EMPLOYMENT	2005 NONFARM EMPLOYMENT	NET JOB GROWTH	PERCENT CHANGE 1994–2005
HIGH INFRASTRUCTURE SPENDING REGIONS				
San Diego-Carlsbad-San Marcos	955	1,277	322	33.7 %
Riverside-San Bernardino-Ontario	749	1,169	420	56.1 %
Santa Ana-Anaheim-Irvine Metropolitan Division	1,127	1,487	360	31.9 %
TOTAL	**2,831**	**3,933**	**1,102**	**38.9 %**
HIGH ELITE, LOW INFRASTRUCTURE SPENDING REGIONS				
San Francisco-San Mateo-Redwood City, CA Metropolitan Division	903	947	44	4.9 %
San Jose-Sunnyvale-Santa Clara	811	860	49	6.0 %
TOTAL	**1,714**	**1,807**	**93**	**5.4 %**

Source: "Best Cities," *Inc.*, May 2006, data analysis by Michael A. Shires.

TABLE 3: EXAMPLES OF U.S. HIGH INFRASTRUCTURE AND ELITE INVESTMENT REGIONAL JOB GROWTH (1,000s), 1994–2005

	1994 NONFARM EMPLOYMENT	2005 NONFARM EMPLOYMENT	NET JOB GROWTH	PERCENT CHANGE 1994–2005
HIGH INFRASTRUCTURE SPENDING REGIONS				
Charleston-North Charleston, SC	209	282	73	34.7 %
Dallas-Plano-Irving, TX Metropolitan Division	1,533	1,929	396	25.8 %
Houston-Baytown-Sugar Land, TX	1,879	2,320	441	23.5 %
Phoenix-Mesa-Scottsdale, AZ	1,138	1,737	599	52.6 %
TOTAL	**4,759**	**6,268**	**1,509**	**32 %**
HIGH ELITE, LOW INFRASTRUCTURE SPENDING REGIONS				
New York, NY	3,314	3,573	259	7.8 %
San Francisco-San Mateo-Redwood City, CA Metropolitan Division	903	947	44	4.9 %
San Jose-Sunnyvale-Santa Clara, CA	811	860	49	6.0 %
Boston-Cambridge-Quincy, MA - New England City and Town Area (NECTA) Division	1,555	1,651	97	6.2 %
TOTAL	**6,582**	**7,031**	**448**	**6.8 %**

Source: "Best Cities," *Inc.*, May 2006, data analysis by Michael A. Shires.

investment in new transportation infrastructure to $77.3 billion by 2025. Dallas-Ft. Worth, El Paso, and other Texas cities are also preparing new large-scale transportation projects.[45]

All of these urban areas grew far more rapidly than those that focused on high-end or creativity-based infrastructure. Since 1994, Charleston, South Carolina, which has invested heavily in its port and industrial facilities, has generated more net new jobs than all of greater New York, despite starting with a job base one-sixteenth the size of New York's.[46] Houston, Phoenix, and Dallas each exceeded or nearly matched the net employment growth of New York, Boston, San Francisco, and the Silicon Valley combined (see table 3).

Not surprisingly, areas that do not generate strong job growth and allow basic amenities to decline also tend to have the greatest class bifurcation. Recent studies by the Brookings Institution have found that since 1970 middle-income neighborhoods have declined most rapidly in low-spending cities such as New York, Los Angeles, and San Francisco.[47] The San Francisco–based Public Policy Institute of California found that when the cost of living is taken into consideration, Washington, D.C., New York, San Francisco, Monterey, and Los Angeles—all urban centers of considerable wealth—also have poverty rates of over 20 percent, bringing them within the range of the 10 poorest counties in the nation.[48]

Reengineering Infrastructure Policy

Infrastructure investment in recent years has increasingly been allocated to the building of convention centers, arts districts, museums, and other projects of dubious value. Here we suggest five criteria for deciding how to allocate infrastructure

spending in ways that will enhance productivity and broad-based opportunity.

1. Focus on Needs, Not Ideology

It is vital that infrastructure spending address actual needs. In many cases, decisions regarding public expenditures are motivated by ideological concerns or faulty thinking. For example, some policymakers have urged that spending on suburban roadways be curtailed to promote more "efficient" development in the urban centers.[49] However, suburban areas have accounted for 90 percent of all metropolitan growth since 1950, and implementing such a policy would direct spending away from areas where it is needed and could do the most good.[50]

Similarly, urban policymakers have been attracted to light rail systems as a means of dealing with congested roads, even though such systems are several times more expensive than other transit options and the costs are almost never defrayed by user revenues. Light rail projects almost always cost more than planners project, which means that there is less money to maintain heavily used roads and bridges. Minneapolis might have avoided the recent unnecessary loss of life from the collapse of a highway bridge if the funds it spent on a politically popular light rail system had been spent to maintain existing infrastructure.[51]

A recent study of the St. Louis MetroLink system concluded that given the annual subsidies required to keep the system operating, the community could provide more flexible transit opportunities to the poor, at lower cost, by simply buying each disadvantaged rider a new, low-emission vehicle. "And there would still be funds left over—about $49 million per year. These funds could be given to all other MetroLink riders (amounting to roughly $1,045 per person per year) and be used for cab fare, bus fare, etc."[52]

This is not to say that investments in rail transit systems are not worthy of government support. The heavy ridership of Houston's Main Street Line, connecting the Texas Medical Center and the downtown may be one such case, due to the rapid growth of employment in the energy, medical, and other industries in that relatively confined area. In areas built around existing networks, the improvement and development of such systems often make good sense. Yet for rail-based investments to be beneficial and cost-effective, it is critical to have a large centralized employment center. This is the case in only a handful of areas. In the New York City region, 20 percent of workers labor in the downtown core. In Chicago, the number is approximately 14 percent.

But, for the most part, in many of the nation's largest, fastest-growing metropolitan areas—Las Vegas and Orlando, as well as Los Angeles—the proportion of those who work downtown is far lower.[53] Despite this divergence, however, most urban areas cling to the notion that solutions appropriate for New York are equally appropriate in Nevada or Florida or California. In less centralized areas, however, a variety of more flexible options, including bus rapid transit, or even private jitneys, would generate greater public benefits at lower cost. Infrastructure investments need to reflect sober assessments rather than a reflexive belief in politically favored approaches.

Infrastructure investments must reflect real needs, not idealogy.

2. Preempt Costly Catastrophic Infrastructure Failures

A second criterion for sound infrastructure spending is to focus on clearly identified public health and safety risks. Addressing these potential problems before they occur can not only prevent disasters but also save money.

New Orleans is, of course, the most potent illustration of how shortsighted infrastructure spending can lead to shocking—but preventable—human and economic costs. A comprehensive $14 billion plan to buttress the Southern Louisiana levee system by rebuilding the region's protective wetlands, for example, was scuttled by Congress in 1998 due to cost concerns. The costs of the damages from Hurricane Katrina, however, may well exceed $300 billion. These estimates do not

include the loss of more than 1,800 lives (1,500 in New Orleans alone), the environmental damage caused by flooding, and the far-reaching implications of the loss of the natural wetland barrier.[54] A $14 billion investment over the seven years leading up to Katrina would have saved many times that amount later on.

While most American cities do not suffer from the sort of underinvestment in basic infrastructure as New Orleans, the list of major system vulnerabilities across the country is long. Among the items on that list is the California water conveyance system built 50 years ago to extract fresh water from the Sacramento Delta. Approximately 23 million people, 7 million acres of cropland, and Silicon Valley makers of computer chips, among other industrial users, depend on this aging system.[55] Experts predict that the delta's levee system and the state's major water conveyance facilities are likely to be hit by a devastating earthquake or flood at least once in the next 66 years. This level of risk—comparable to the level in New Orleans prior to Katrina—is far greater than insurers or government analysts consider acceptable. New bond financing and multibillion-dollar remedial plans have been proposed to address at least some of the necessary system repairs,[56] but to date no action has been taken. Given the potentially catastrophic losses the failure of this system would entail, it is difficult to account for the lack of urgency on the part of policymakers.

Improving our roadways, supply chains, communication systems, and technical education would help us retain, or even expand domestic manufacturing capabilities.

3. Invest in Transportation, Logistics, and Efficiency

Improving our roadways, supply-chain standards, communication systems, and technical education would help us retain, or even expand domestic manufacturing capabilities. Such an undertaking would increase the number of high-quality working-class jobs throughout the country and reduce our reliance on foreign manufacturing and industry. It would also facilitate the development of new products and technologies that would strengthen the domestic economy.

The high social and economic returns we could expect from improving even our most basic transportation infrastructure is a case in point. Trucks now carry about 86 percent of all commodity shipments in the United States.[57] Highway congestion is estimated to cost the national economy $70–$78 billion in wasted fuel and $3.5 billion in lost productivity annually.[58] Transit system tie-ups cost shippers $7 billion a year.[59] A recent analysis concluded that each $1 billion California spent on transit system improvements (including on roads) would generate 18,000 new jobs and nearly the same level of induced indirect investment.[60]

Improved ground transportation links to airports and ports are also critically needed. Denver's new airport has become an international transportation hub employing 30,000 workers, with an estimated $7 billion payroll. By 2025, according to some estimates, the airport could pump $85 billion into the regional economy, up from $15.3 billion today. Smaller communities, such as Ontario, California, are pursuing economic growth in part by increasing passenger and cargo handling through regional airports.

Reinvestment in port complexes is another key factor in generating employment growth. The Los Angeles–Long Beach trade complex, the world's third-largest port system, accounts for as much as 20 percent of the region's total employment, much of it in highly paid blue-collar jobs (unionized longshoremen are among the best-paid blue-collar workers in the nation). But the lack of investment in the port may well lead to the loss of jobs to competitors with more modern facilities—in this case to the Baja region of Mexico.[61]

Similarly, New York City and its environs could benefit from significant new investment in trade infrastructure, notably the proposed rail freight tunnel under the East River. The disproportionate

loss of warehouse and other blue-collar employment from New York can be traced to a reluctance to build significant new infrastructure. New York should take a look at how Charleston, South Carolina, and Savannah, Georgia, invested in their ailing ports and boosted employment as a result.[62] The $2 billion Tennessee-Tombigbee canal connecting inland cities with the Gulf of Mexico, which was completed by the U.S. Army Corps of Engineers in 1985, has been a huge boon to Chattanooga and Knoxville. The waterway took trade away from Baltimore, which had failed to modernize its port, and has helped spur upward mobility in the South.[63]

4. Revitalize the Industrial Base

Infrastructure investment has historically been associated with the growth of industrial jobs. It has become fashionable in recent years to dismiss the industrial sector as antiquated, low-paying, and destined for places like China, India, or other low-wage nations. Yet, investments in new roads, port facilities, and rail systems have a proven record of sparking growth in manufacturing activities and supporting upward mobility.

Manufacturing's role in promoting job and income growth is often understated. Although manufacturing employment overall has dropped, the percentage of higher-wage, skilled industrial jobs has been climbing over the last two decades. Much of this growth has been concentrated in rural regions in the West and South, as well as in small towns.[64] More than 80 percent of the 800 U.S. manufacturing firms surveyed in 2005 by the National Association of Manufacturers, the Manufacturing Institute, and Deloitte Consulting reported that they were "experiencing a shortage of qualified workers overall." Nine in 10 firms said that they faced a "moderate-to-severe shortfall" of qualified skilled production employees, such as machinists, machine operators, craft workers, and technicians.[65] Communities wishing to attract such jobs would do well to invest in training and skill development.

Dubuque, Iowa, revived its moribund manufacturing sector by fostering a pro-business climate through a strong commitment on the part of local educational institutions to supply industry with skilled workers. Dubuque now enjoys the fastest rate of job growth of any city in the Midwest, with low unemployment and rising wages.[66]

Places like Dubuque, Bismarck, North Dakota, and other fast-growing industrial areas tend to place great emphasis on road, rail, and air travel improvements and local training programs. "We've gone with the basics; we've tried to stay good at things that matter, including things like manufacturing and agriculture," Rick Dickinson, director of the Greater Dubuque Development Association, explains. "We look at attracting people who might have a reason to be here. Everyone talks about doing the glitzy stuff, but we think this is a model for Middle America."[67] In fact, the Dubuque experience is a suitable model for all of America. Industrial expansion should be one of the criteria for allocating infrastructure investments throughout the country.

5. Improve Energy Infrastructure

A reduction in the consumption of imported oil through the development of domestic energy alternatives could positively affect the U.S. balance of payments, spur domestic job creation and investment, reduce greenhouse gas emissions, and reduce American dependence on imports from hostile nations. Yet, we are unable to efficiently deliver coal to power plants due to a lack of railcars.[68] Producers with surplus power, such as electricity plants in North Dakota, lack the transmission capacity to deliver power to states that need it. California, New York City, and Chicago are vulnerable to blackouts and brownouts due to insufficient energy infrastructure.[69]

The costs of failing to invest in energy infrastructure are apparent in the state of the nation's power transmission grid. From 1975 to 1999, the United States spent a miniscule $83 million a year on average on power lines and facilities that deliver electricity from generation plants to end users. Since 1999, increases in transmission spending have covered only a third of new demand. As a

result, many regions of the country experience shortages because power cannot be delivered from surplus regions to high-consumption areas, leaving major metropolitan systems vulnerable to catastrophic failures. In August 2003, for example, the power grid failed in a large part of the Northeast, largely due to overtaxed and outdated transmission lines.[70] This widespread vulnerability has been attributed to the lack of a mandatory national investment policy as well as to the failure of individual utilities to voluntarily maintain the country's electrical grid capacity. On the other side of the coin, places that have invested in energy resources have seen a strong economic payoff. The cities in the Northwest's Columbia River region, with its massive, cheap, and clean sources of hydroelectric power, have become attractive locations for high-technology firms.[71]

More generally, our chronic energy infrastructure problems stem from our failure to seriously consider all of our options when it comes to energy. In addition, there are the serious delays associated with the building of new, more efficient facilities due to environmental or aesthetic objections, or jurisdictional conflicts. Moreover, energy facilities are often built in regions that already possess significant resources or in undesirable geographic locations—as, for example, along the storm-prone Gulf Coast. Overall, our system is frighteningly fragile, as we saw after the Katrina disaster, when oil supplies were severely disrupted.[72]

Compounding these problems is the nation's failure to address its dependence on foreign oil and the direct and indirect costs of relying on non-market-driven producers to meet significant energy needs. The United States imports approximately 12 million barrels of oil a day, which satisfies 60 percent of domestic needs. Economists have estimated that the "premium" paid above natural market prices to OPEC and similar coordinated sellers at anywhere from $5 to $14 a barrel, at an annual cost of between approximately $21 billion and $59 billion. Equally high are the secondary costs of protecting the oil supply. The costs of the attack on and occupation of Iraq, which was partially an attempt to reduce the influence of an unstable regime on world oil markets, are staggering. The total net costs generated by foreign oil dependence, and the failure to create domestic supply options, can reasonably be estimated to exceed $100 billion annually.[73] Investments of this magnitude in domestic alternatives could be expected to significantly reduce the oil import premiums that we now pay to overseas cartels, generate cleaner fuel options, foster job and technology development at home, and reduce the possibility of armed conflict abroad.

Conclusion

We believe that robust job creation—including in high-wage, blue-collar fields—is far better for America as a whole, particularly in view of population increases, than the slow-growth, elite investment approach that we have seen in the Northeast and in the California Bay Area. Infrastructure investment is a key component of expanded employment. Rapidly growing areas should be focused on building new roadways, sewers, communications linkages, state-of-the-art business services, and reliable utilities to keep pace with and encourage economic development. Infrastructure spending by itself cannot guarantee prosperity, but if it is neglected, opportunity also tends to lag.

In the current political climate, with its extraordinary level of partisan acrimony and small-mindedness, it is no doubt true that finding the will to identify and carry out large-scale infrastructure projects may prove exceedingly difficult, not least because "budget hawks" cling to the notion that a regime of low spending and low taxes is the best way to promote American prosperity and upward mobility. However, there is abundant historical evidence that intelligent investment in basic infrastructure constitutes the best means to secure a future congruent with our national values.

A renewed focus on infrastructure, economic growth, and social mobility will require a departure from the policies of recent decades, which have focused predominately on the redistribution of

income in favor of the rich or the poor. Indeed, much of what is now called "progressive" policy has diverged dramatically from the standards of traditional progressivism and is often either indifferent or outwardly hostile to major infrastructure development. The need for a rigorous, forward-looking approach to infrastructure development has never been more apparent.[74]

What we require today are leaders in Washington as well as in the states and at the local level who are ready to think afresh about our needs and to be bold in putting forward solutions to the problems we face in our economy. An energetic approach to rebuilding America's infrastructure will create opportunities for economic advancement for a broad spectrum of the American people. ■

Joel Kotkin is a Presidential Fellow in Urban Futures at Chapman University in Orange, California, and the author of The City: A Global History.

Zina Klapper contributed to research for this report.

Notes

[1] As used in this paper, the term "infrastructure" refers to public, collective goods and encompasses systems such as roads, water treatment systems, airports, and similar facilities as well as technical standards established by the government to facilitate communications or computer interoperability, product development, and integration. Hence, the concept of infrastructure includes both "hard" and "soft" public goods.

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