Reconnecting Massachusetts Gateway Cities:

Lessons Learned and an Agenda for Renewal

A JOINT PROJECT OF:

MassINC
RESEARCH. JOURNALISM. CIVIC LIFE.

Metropolitan Policy Program
The Brookings Institution

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Reconnecting Massachusetts Gateway Cities:

Lessons Learned and an Agenda for Renewal

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FEBRUARY 2007

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February 2007

Dear Friend:

MassINC is proud to present *Reconnecting Massachusetts Gateway Cities: Lessons Learned and an Agenda for Renewal*. This joint project with the Metropolitan Policy Program of the Brookings Institution was made possible by the generous support of the John Adams Innovation Institute of the Massachusetts Technology Collaborative and Savings Bank Life Insurance.

Massachusetts has enjoyed one of the most successful economic transitions to a knowledge-based economy anywhere in the world over the last two decades. Statewide trends describe a solid economic turnaround, built on strong institutions, soaring educational attainment and the emergence of knowledge-based industries with high-paying jobs. Yet these broader trends obscure stark geographical variations within the state. On the one hand, Greater Boston has evolved into an even more dominant focal point of the Massachusetts economy than it was 30 years ago. On the other hand, only a few Massachusetts cities and regions are fully participating in the state's economic reinvention, and the state's traditional mill communities—the Gateway Cities—may actually be falling farther behind.

This report aims to lay out a sober assessment of the Gateway Cities' current status. Since 1970, the 11 Gateway Cities studied in this report lost more than 11,000 jobs or 3 percent of their job base, while Greater Boston added 467,000 jobs to grow by 51 percent. Gateway Cities are home to 30 percent of all Massachusetts residents living below the poverty line, even though they account for only 15 percent of the state's population. Educational attainment levels remain low with just 16.5 percent of Gateway City residents possessing a four-year college degree.

But *Reconnecting Massachusetts Gateway Cities* also describes a vision for economic value and an agenda for renewal to take advantage of the enormous physical, human, and economic potential latent in these historic communities. Gateway Cities offer potential important assets to the state, including middle-class housing, infrastructure to pursue smart growth, and a growing, energetic, and diverse workforce. A new state and local partnership is needed to take advantage of the opportunities that these cities provide and overcome the obstacles that hold them back.

We are extraordinary grateful to our partners, Bruce Katz, Mark Muro, and David Warren and their colleagues at the Brookings Institution. Their analysis of the challenges facing the Gateway Cities is superb and their commitment to the economic renewal of historic mill cities throughout the Northeast is making an important contribution to national policy on economic renewal and smart growth. On the MassINC team, John Schneider, Dana Ansel, and Eric McLean-Shinaman have managed this important research project for us. We would also like to thank our advisory committee and the reviewers whose critical insights have strengthened this report.

Finally, we would like to thank all of our sponsors who have been generous and enthusiastic partners throughout this project. They have been ideal sponsors, encouraging the authors to go where the data led them. MassINC aims to inject solid, objective research into important policy debates, and to that end we hope that you find *Reconnecting Massachusetts Gateway Cities* a provocative and timely resource. We invite you to become more involved in MassINC, and we welcome your feedback.

Sincerely,

Gloria Larson
Co-Chair

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Co-Chair

Reconnecting Massachusetts Gateway Cities:

Lessons Learned and an Agenda for Renewal

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EXECUTIVE SUMMARY

Could it be? Could it be that at least some of Massachusetts' long-suffering "Gateway Cities" —the state's once-humming mill and manufacturing towns—are ready to rejoin the state's economic mainstream?

Yes, it could. Despite the latest blows of deindustrialization, signs of life are animating parts of the state's faded urban hubs beyond Boston.

Sky-high home prices in Greater Boston are motivating middle-class home-seekers to take another look at living in affordable satellite cities like Lowell, Worcester, or Brockton. Real-estate values and housing starts are up in virtually all of the older regional cities, from New Bedford to Springfield. And, in many of the mill towns, the catastrophic population losses of the 1980s have ended. For the first time in decades, these cities' reconnection to prosperity seems at least imaginable.

And yet, for all that, the condition of Massachusetts' proud, old manufacturing cities must be counted, on balance, as distressed.

To be sure, the state as a whole has enjoyed one of the most successful economic transitions anywhere over the past two decades. Recent setbacks aside, aggregate trends describe a solid economic turnaround, built on strong institutions, soaring educational attainment, and the emergence of an enviable portfolio of high-value, high-paying, knowledge-based industries.

At the same time, broader statewide trends obscure stark geographical variations within the state. On the one hand, Greater Boston has evolved into an even more dominant focal point of the Massachusetts economy than it was three decades ago, despite its difficulties in moving beyond the 2000 collapse of the national tech bubble. On the other hand, not only are few Massachusetts cities and regions fully participating in the state's long-term reinvention, but its traditional industrial mill towns actually may be falling *further* behind. Quite simply, Massachusetts continues to squander the enormous physical, human, and economic potential latent in these cities just when it may need them again.

Hence this report: A collaboration of MassINC and the Brookings Institution Metropolitan Policy Program, "*Reconnecting Massachusetts Gateway Cities*" seeks at a key moment to mobilize state and local civic, political, and business leaders around an asset-oriented agenda for reconnecting some of Massachusetts' most troubled cities to the state's most dynamic economic currents. Along those lines, the report aims to lay out a sober assessment of the Gateway Cities' current status; a vision of their potential economic value; and a preliminary agenda for renewal.

GATEWAY CITIES CAN NO LONGER BE IGNORED

In keeping with these objectives, this report draws several conclusions about the state as it seeks to maintain and enhance its economic competitiveness:

1. Massachusetts' "Gateway Cities"—its traditional mill towns—continue to lose ground as the state economy converges even more around Boston. The trend is stark. Notwithstanding the aggregate success of the Bay State economy, its increasing "unevenness" has left a significant number of the state's major population centers struggling to move from an industrialized past to a knowledge-based future. Granted, the state as a whole has in just 30 years revitalized its flagging economy and made itself a leader in knowledge-

driven, technology-led industries. Real per-capita income has soared. And yet, the economy—long anchored by Greater Boston—has grown even more concentrated there, in keeping with the tendency of today's "knowledge" economy to cluster within relatively narrow geographic areas. The Gateway Cities have continued to slip in importance in relation to Boston on key measures of economic performance such as job creation, knowledge-industry employment, educational attainment, and incomes. In sum, the Gateway Cities continue to struggle with deindustrialization, and have not yet found a niche in the specialized knowledge-oriented economy that has revitalized the Boston area in recent decades.

2. The consequences of these trends are serious, and threaten the state's economic competitiveness. Most notably, the sharpening unevenness of the state's economic map is vexing the state's housing markets, distorting land-use patterns, and likely complicating the state's labor-force challenges. In the Boston area, the intense agglomeration of high-paying knowledge jobs in a relatively small patch of close-in towns has helped bid up home prices and harmed the state's ability to retain and attract quality workers. More broadly, stark house-price differentials between Greater Boston and the rest of the state are helping to widen the vast ring of suburban sprawl that is sweeping across much of eastern Massachusetts, eroding the state's quality of life. Finally, the disproportionate concentration of the state's economic activity in the Hub may well be complicating firms' efforts to hire sufficient workers, even as the isolation and demographic tilt of many Gateway Cities cuts employers off from the human capital they need to support business growth and economic development. The bottom line: The stark geographical uneven-

KEY FINDINGS:

- Between 1970 and 2005, while Greater Boston added 467,000 jobs to grow by 51 percent, the Gateway Cities as a group lost more than 11,000 jobs, or 3 percent of their job base.
- Greater Boston contains 40 percent of the state's population and 50 percent of its private jobs but generates 60 percent of the state's total payroll. Conversely, the Gateway Cities contain 15 percent of the state's population and 13 percent of the state's jobs but generate less than 10 percent of the state's payroll.
- Greater Boston contains 52 percent of the state's college graduates and about 70 percent of its knowledge-industry employment. As a result, these 75 towns enjoy per-capita incomes 74 percent higher than the Gateway Cities and a median household income 68 percent higher.
- While Greater Boston increased its share of the state's 4,000-plus high-technology firms between 1991 and 2004 from 53 to 60 percent, the share in the Gateway Cities dropped from 8.1 to 6.3 percent, and the share in Gateway regions fell from 28.6 to 26.6 percent.
- Twenty-eight percent of Greater Boston's jobs and 43 percent of its payroll falls within four high-value, high-pay "knowledge" clusters—financial services, health care, information technology, and knowledge creation. Meanwhile, only 20 percent of jobs in Gateway Cities lie in these knowledge clusters, generating only 27 percent of the cities' payroll.
- The 11 Gateway Cities' combined loss of 134,000 manufacturing jobs since 1960 accounts for more than one-third of the state's total decline in such industries.

ness of Massachusetts' changing economy is a statewide problem, and may be placing a drag on the state's economy as a whole.

3. And yet, the Gateway Cities offer important potential assets to the state, even if daunting obstacles to their renewal persist. On the upside, these cities hold out to Massachusetts realistic hopes of responding to some of the Commonwealth's most pressing growth and development challenges. To a state struggling with high housing prices, the Gateway Cities offer more reasonably priced *middle-class housing*. To a state concerned about sprawl and traffic congestion, Gateway Cities look like a natural place for pursuing "*smart growth*," as they actually want to grow and are already served by roads, schools, and often rail links. And to a state facing anemic population growth and future worker shortages, the Gateway Cities hold out the possibilities of growing, energetic, and diverse immigrant and minority communities already contributing to the *workforce*, and already seeking the American Dream. However, these are still just potential opportunities. On the downside, serious problems hold the cities back. For all their potential, the cities' shaky fiscal condition and spotty basic service delivery; their stressed education systems; and their sometimes weak links to state and global economic currents impede their reconnection to the state's and nation's economic mainstream.

4. As for how to reconnect the Gateway Cities, this report concludes that Massachusetts needs to catalyze a major new state and local partnership to take advantage of the opportunities that these cities provide, and overcome the obstacles that hold them back. Such a partnership will require a focused state commitment and new concentration on the part of the cities them-

- Between 1980 and 2000, the gap in per-capita income between Greater Boston and the rest of the state increased from 18 percent to 28 percent.
- Just 16.5 percent of Gateway City residents and 24.6 percent of Gateway region residents now possess a four-year college degree, compared with the 42 percent Greater Boston mark.
- The 11 Gateway Cities are home to 30 percent of all state residents living below the poverty line, even though they account for only 15 percent of the state's population.
- There is a high level of concentrated poverty in the Gateway Cities. Springfield and Holyoke have among the most entrenched poverty problems in the country, with 34 and 51 percent of their poor living in high-poverty neighborhoods. By comparison, New Orleans had a concentrated poverty rate of 38 percent on the eve of Hurricane Katrina.
- Between 1994 and 2005, real median home prices in Greater Boston increased by 112 percent to reach almost $429,000. Gateway City homes had a median value of just $225,000, a little more than half of Boston's mark. However, homes in Gateway Cities have actually outappreciated Greater Boston in percentage terms since 2000, rising 78 percent versus 37 percent.
- Average annual housing unit production over the last three years in the 11 Gateway Cities rose 57 percent, an increase twice as large as the state's. Lawrence, Lowell, and Springfield all doubled their production while Brockton and New Bedford saw gains of 82 and 90 percent, respectively.

selves, as well as the support of local business and regional civic leaders. In addition, it will require a new recognition in Boston and elsewhere that the Commonwealth's future economic competitiveness critically depends on leveraging all

THE UNEVENNESS OF THE STATE'S ECONOMY IS VEXING THE STATE'S HOUSING MARKET

of the state's assets, including those latent in the Gateway Cities. To that end, this report recommends three initial strategies for better integrating these proud regional hubs into the state's economic vitality:

- ✓ **Fix the basics.** First, the Gateway Cities, in partnership with the state, must improve the cities' financial picture and provision of basic services. Most fundamentally, the Commonwealth should assure these cities a more consistent flow of local aid dollars in exchange for increased accountability, transparency, and efficiency in local expenditures and service provision. State, local, and private-sector collaboration should also build on recent efforts to turn "deal breakers" in the real-estate development and regulatory process into "deal makers."

- ✓ **Build the middle-class workforce of tomorrow.** Second, a new state-local partnership in Massachusetts must radically step up education and training efforts in the Gateway Cities. Both for individuals and cities, the more one learns, the more one earns. And so, cultivating the middle-class workforce of tomorrow will be crucial to improve the lives of individual citizens, the productivity of the Gateway regions, *and* the vibrancy of the entire state's economy. To achieve that end, the Commonwealth and its local partners must redouble their efforts at urban school reform, boost the education and language skills of the adult workforce, and bolster family assets to generate community wealth.

- ✓ **Create new economic connections for the 21st century.** Finally, the Gateway Cities, their regions, and the state must adopt a new mentality of collaborative competition. In the past, prosperity turned on the sovereign power of individual businesses, factories, and mill towns. Today, economic development depends more on establishing partnerships, nurturing networks, and building interconnected regions that can compete globally for jobs and services. In that spirit, the state and the cities themselves should work much harder at employing Gateway City colleges to spark local economic development, developing rail and Internet connections to the broader economy, and, in general, fostering an ethic of intergovernmental, inter-sectoral, human, and other forms of collaboration. In short, these cities and their regions must compete together, not against each other.

In the end, revitalizing Massachusetts' Gateway Cities is going to be a long and tough process. Without a doubt, more and different interventions will also be needed, beyond the initial ones outlined here. Yet, the time clearly has come to get started. Massachusetts' Gateway Cities have a lot to offer, including affordable housing, the room and the desire to grow, and a youthful, diverse, and upwardly mobile workforce. It's time to put these storied cities back to work for the benefit of the Commonwealth, their people, and the nation.

I. REVIVING MASSACHUSETTS' GATEWAY CITIES: Why It Matters

Worcester's Shrewsbury Street is booming.

In Brockton, young professionals are snatching up condos downtown and commuting by the MBTA train to Boston.

And in Lowell a now-mature loft apartment boom has torn through the city's famous old mill buildings and reinvented downtown.

Even remote Pittsfield completed a $21 million restoration of the once-regal Colonial Theatre, counting on an "arts-based" revival.

Could it be? Could it be that Massachusetts' long-suffering "Gateway Cities"—the state's once-humming mill and manufacturing towns—are ready to rejoin the state's economic mainstream?

Yes, it could. Even despite the latest blows of deindustrialization and continued drift, signs of life are animating parts of the state's faded urban hubs out beyond Boston. (For a definition of the term "Gateway Cities" see the nearby box, "About this Analysis.")

Sky-high home prices in eastern Massachusetts are motivating middle-class home-seekers to take another look at living in affordable satellite cities like Lowell or Brockton. Real estate values and house starts are up in virtually all of the older regional cities, from New Bedford to Springfield. And in many of the mill towns the catastrophic population losses of the 1980s have stabilized. For the first time in decades, the cities' reconnection to prosperity seems, in some places, at least imaginable.

And yet, for all that, the condition of Massachusetts' proud old manufacturing cities must be counted—on balance—distressed. In fact, notwithstanding a good deal of local variation, the facts say that Massachusetts' Gateway Cities have failed as yet to participate fully in the Commonwealth's long-term economic revival, and may actually still be falling away from reconnection. Look behind the apparently shared experience of the 1990s tech boom, 2000 bust, and current modest business recovery, and the truth is that the benefits of the Commonwealth's solid technology- and "knowledge-"oriented economic turnaround in recent decades have accrued mostly to a narrow swath of towns in the Greater Boston area. By contrast, the Gateway Cities have been left behind.

Faced with the waning of traditional manufacturing, entire communities once highly dependent on traditional industries yet without strength in the newer knowledge economy—places such as New Bedford, Lawrence, and Springfield—continue to struggle with the shift from the old order to the new. Employment growth remains feeble.

MASSACHUSETTS GATEWAY CITIES HAVE FAILED AS YET TO PARTICIPATE FULLY IN THE STATE'S ECONOMIC REVIVAL

Pay lags far behind that in Greater Boston. And poverty rates in many of these classic "weak market cities" remain some of the highest in the state.[1]

Nor is that all: Beyond long-term differentials, the unevenness of the geographically concentrated Massachusetts economy may actually be *sharpening*.

In this respect, the Commonwealth's current economic map epitomizes the tendency of today's knowledge economy to cluster, or "agglomerate," within relatively narrow geographic areas, even as it leaves other nearby places behind.[2] Greater Boston, for its part, has actually become *even more* the state's economic hub in recent years, and has attracted an increasing share of the state's high-value "knowledge" industry, whether in consult-

ing, health business, or the life sciences. To that extent, the Boston area stands out as a winner in the knowledge economy.

By contrast, the Gateway Cities—peripheral to this gravitation—have drifted, and in fact *lost* traction, as described by key indicators. Once economic powerhouses in their own right, they have lost their centrality as engines of middle-class prosperity and upward mobility. Deserted factories remain empty. Quality jobs are being created mostly elsewhere. The knowledge economy ebbs and flows and changes to a large extent somewhere else.

Why does this matter? Why should Bay Staters care about the continuing troubles of the Gateway Cities and their possible reconnection? The answer is getting clearer and clearer. The ability of the Gateway Cities to "plug in" again matters because, ultimately, the entire state's economic competitiveness may depend on it.

To be sure, pure human need and an egalitarian desire to reduce disparities also counsel concern for the Gateway Cities. Nearly 1 million Bay Staters, after all—15 percent of the state's population, one-quarter of its immigrants, one-third of its poor people—live in these cities.

RECONNECTING THE GATEWAY CITIES IS THE STRATEGIC COURSE

What is more, history makes a claim, for in these cities resides a compelling heritage of dynamism and middle-class aspiration. Worcester, Lowell, Lawrence, Brockton, and Haverhill all employed immigrants in mills that were known throughout the world for the textiles, shoes, or machine tools they produced. Springfield anchored a region that was the Silicon Valley of its day—a world center for innovation in the mass production of ordnance and where the manufacturing of interchangeable parts was perfected. And for that matter, Fall River and New Bedford drew their prosperity from the sea, while General Electric plants in Pittsfield and Fitchburg employed thousands and provided workers with jobs that supported a family. In each case, the Gateway Cities deserve Bay Staters' attention because they embody the depth of the state's tradition of innovation and the confidence the state has given so many families that the American Dream was within their reach.

But while tending to the reconnection of the Gateway Cities is surely the right course for Massachusetts it's also the *strategic* course.

Consider that many of the state's most troubling economic problems owe at least in part to the very unevenness of the economy that disfavors the Gateway Cities. As the Massachusetts Technology Collaborative's 2006 "Index of the Massachusetts Innovation Economy" has warned, high housing prices near Boston and shortages of appropriately trained workers each represent "significant weaknesses in fundamental prerequisites for robust future growth" across Massachusetts' innovation economy.[3] After all, the hyperconcentration of the state's high-value economy in Boston clearly contributes to the region's persistently high housing prices, constant traffic congestion and sprawl, and sharpening workforce challenges.

All of which means that making sure the Gateway Cities reconnect with the state's mainstream offers hope for responding to some of the state's toughest problems. For example:

- Gateway Cities offer the state a distinctive, moderately priced stock of middle-class housing, often not far from key job centers along I-495.
- Gateway Cities offer the state willing, central-

ABOUT THE ANALYSIS

Geography

This report focuses on the economic, development, and social trends in 11 historic Massachusetts manufacturing cities (the "Gateway Cities") and their regions.

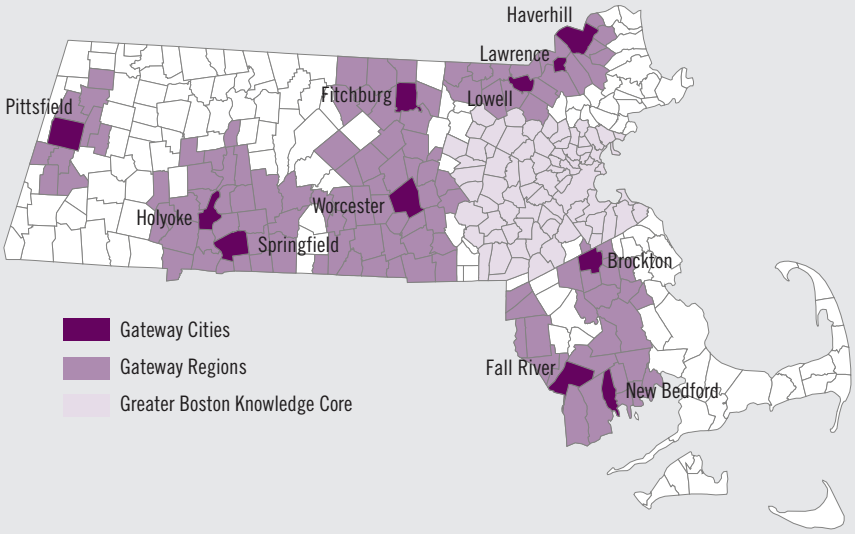
The Gateway Cities of Brockton, Fall River, Fitchburg, Haverhill, Holyoke, Lawrence, Lowell, New Bedford, Springfield, Pittsfield, and Worcester were selected based on having populations of at least 35,000, high poverty rates, and low educational attainment levels. In addition, cities were selected that exhibit a strong manufacturing heritage and which are located outside of the Greater Boston area. The municipalities are deemed "Gateways" because they are at once gateways to the next era of the state's economic success and key portals for their diverse, often foreign-born, residents' ongoing pursuit of the American dream.

Gateway "regions" include the Massachusetts portions of the Gateway Cities' metropolitan statistical areas.[4] Both cities and metropolitan areas are employed as units in our analysis.

To identify the economic heart of the Boston-area metropolis, meanwhile, we designated a group of 75 cities and towns, earlier identified by the University of Massachusetts' Donahue Institute as a key state region, as the "Greater Boston knowledge core," or simply, "Greater Boston." Located along or inside of the I-495 corridor, these 75 municipalities contain a significant concentration of the state's knowledge-economy and technology firms and jobs.[5]

Figure 1:

Massachusetts' Gateway Cities and the Greater Boston Knowledge Core



Data

Most of the data analyzed and presented in the report derive from federal and state data sources. When data for certain indicators or years were unavailable from federal or state institutions, respected private vendors were utilized.

At the federal level, the U.S. Census Bureau was an oft-cited source for decennial socio-economic data, annual estimates, and building permit data. Information on employment and wages by industry was gleaned from the Bureau of Labor Statistics, while the Office of Federal Housing Enterprise Oversight provided useful housing price indices.

The Massachusetts Department of Unemployment Assistance provided datasets on historic labor force, employment, wages, and firms. Land consumption and build out data were obtained with help from the state's Executive Office of Environmental Affairs.

To better analyze historic trends in the state's high tech industries, datasets were acquired from Corporate Technology Information Services (CorpTech), a subsidiary of InfoUSA that manages a database of over 95,000 U.S. high tech company profiles. The CorpTech datasets were cleaned to remove duplicate entries and to organize the data by town.

Finally, town-level data on median home sale prices were obtained from the Warren Group, a leading provider of real estate information in New England.

ly located places with preexisting infrastructure in which to pursue "smart growth."

- Gateway Cities offer a youthful, growing, immigrant and minority workforce that with the requisite training can replenish the state's aging labor force.

In this sense, the Gateway Cities hold out important promise to the Commonwealth. Places that can play a role in reducing the unevenness of the state economy, the mill cities have the potential to provide Massachusetts with important new sources of economic prosperity even as they provide a portal to the American Dream for their diverse, often foreign-born, residents. To that extent, these cities look like possible "gateways" to the next era of the state's economic success if their genuine strengths can be leveraged and their serious problems addressed.

Which is where this report comes in. A collaboration of MassINC and the Brookings Institution Metropolitan Policy Program, this report seeks to describe the unevenness of the Massachusetts economy, examine its implications for the 11 Gateway Cities and the state, and suggest some ways the cities might be better connected to the wider economy.

The report begins with two chapters that review the contrasting economic trends enveloping Greater Boston and the Gateway Cities, and describe some of their consequences for the state as a whole. The paper then considers both the potential benefit of the Gateway Cities' revitalization to the state, and a series of persisting obstacles to their reconnection. Finally, the report suggests some practical strategies to help state, regional, and local leaders to make sure the Gateway Cities again play a major role in advancing the state's prosperity. Several case-study sidebars provide practical examples. Overall, these pages contend that by focusing on the basics, becoming urgent about developing the skills of a new middle-class workforce, and strengthening and broadening the Gateway Cities' economic connections these proud and distinctive cities can regain their prosperity and importance to the state.

As to the main idea here, it reflects an abiding conviction that the state as a whole requires the reconnection of its proud Gateway Cities as much as the cities do. And it reprises the challenge to the state laid down by five former Massachusetts economic development secretaries in MassINC's 1998 publication, "Lessons Learned: 25 Years of State Economic Policy." In that document, the MassINC panel declared that "confronting the persistent disparities between higher-growth areas surrounding Boston and areas of low growth remains one of the most difficult challenges facing the Commonwealth," and added: "What's most needed is an updated statewide strategy and a redoubled effort to inject life into communities that are lagging behind." Now, nearly a decade later, some of the Gateway Cities are on their way to at least a partial sort of revitalization, some are not, but the need for a new sense of commitment and urgency remains.

And that is why we ask: Can the state truly prosper if just one region is truly flourishing? To which question, we would answer: No, it cannot.

II. BOSTON AND THE GATEWAY CITIES: Contrasting Economic Situations Within A Single State

The story of Massachusetts, Boston, and the Commonwealth's Gateway Cities is above all a study in contrasts. As a whole, to be sure, the state has enjoyed one of the most successful economic transitions anywhere over the past two decades. Recent setbacks aside, aggregate trends over the last 25 years define a solid economic turnaround built on the emergence of a variety of knowledge-based industries.

At the same time, though, the broad statewide trend obscures stark geographical variations within the state. Not only are relatively few Massachusetts cities and regions fully participating in the state's long-term reinvention, but its traditional industrial mill towns may actually be falling *further* behind.

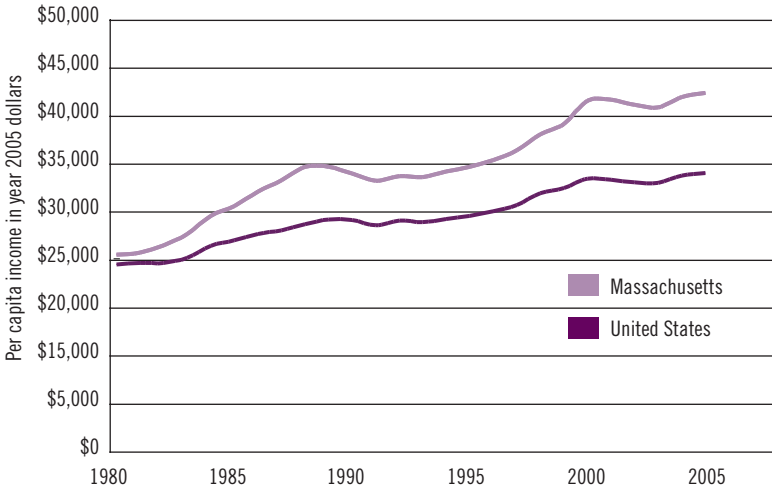
The state as a whole: Massachusetts has moved up

The aggregate story is well-known. During the 1990s, the state recovered from the deep recession that ended the Massachusetts Miracle in the late 1980s, and generated some 445,000 jobs to enlarge the state's private-sector job base by 14 percent. While modest by national standards, this gain was accompanied by a more remarkable increase in wealth, at least in aggregate, as the Commonwealth's real per-capita income (total personal income divided by the population) surged 74 percent from $25,100 to $43,700 between 1980 and 2005. Today, the Commonwealth ranks 3rd among states on this measure.[6] Not even the virtual cessation of population growth and the loss of 118,000, or 3.6 percent, of the state's jobs between 2001 and 2005 in the wake of the late-2000 bursting of the technology bubble has fundamentally altered the story.[7] In just 30 years Massachusetts revitalized a flagging state economy and made itself a leader in the shift to a "knowledge-driven, technology-led, increasingly global economy," as a recent report by the state's Executive Office of Economic Development and the University of Massachusetts has put it.[8]

Crucial to this transformation has been the Commonwealth's high and rising educational attainment, which has dovetailed with the state's world-class university and private research and development capabilities.[9] In 1970, no more than 12.5 percent of adult Bay Staters—just 1.8 percent more than the national average—possessed a college degree or more. By 2000, the diploma rate had nearly tripled to 33.2 percent and the edge over the national average had widened to 9 points.[10] And by 2005 that gap had widened to almost 10 points as the state's BA attainment rate soared to 36.9 percent.[11]

Figure 2:

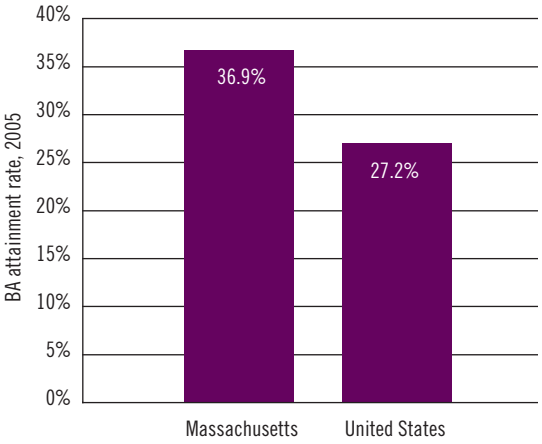
Since 1980, Massachusetts' real per-capita income has increased far more rapidly than the national average



Source: Bureau of Economic Analysis Regional Economic Information System

Figure 3:

Massachusetts' college attainment rate now exceeds the national average by nearly 10 percentage points



Source: U.S. Census Bureau American Community Survey

In essence, the Commonwealth opened a lead in the skills race just as new clusters of knowledge-intensive industries began to matter intensely. Massachusetts by these measures must be judged a success story.

Looking closer: Massachusetts' economy remains geographically concentrated and highly uneven

And yet, notwithstanding the state's progress, aggregate trends obscure a more troubling reality. Most starkly, the Commonwealth's uneven economic map epitomizes the tendency of today's "knowledge" economy to cluster within relatively narrow geographic areas, even as it leaves other nearby industrial places behind.[12]

Greater Boston has become even more the state's economic hub

On the one hand, Greater Boston—with its dense core of 75 knowledge-industry oriented cities and suburban towns—has evolved into an even more dominant focal point of the Massachusetts economy than it was three decades ago, notwithstanding its difficulties in moving beyond the 2000 collapse of the national tech bubble.[13]

In this respect, not even the fact that Greater Boston's 2005 job base remained nearly 99,000 jobs, or 6 percent, below its 2001 high point can negate the area's growing centrality.[14]

A high-value renaissance. To a large degree, the state's economic renaissance since 1970 has been Greater Boston's, as an agglomeration of specialized knowledge-oriented industries developed and flourished there.[15] The renaissance has been one of quality, moreover, reflected not so much in huge increases in the region's quantity of jobs but instead in a steady march of its economy up the value chain.

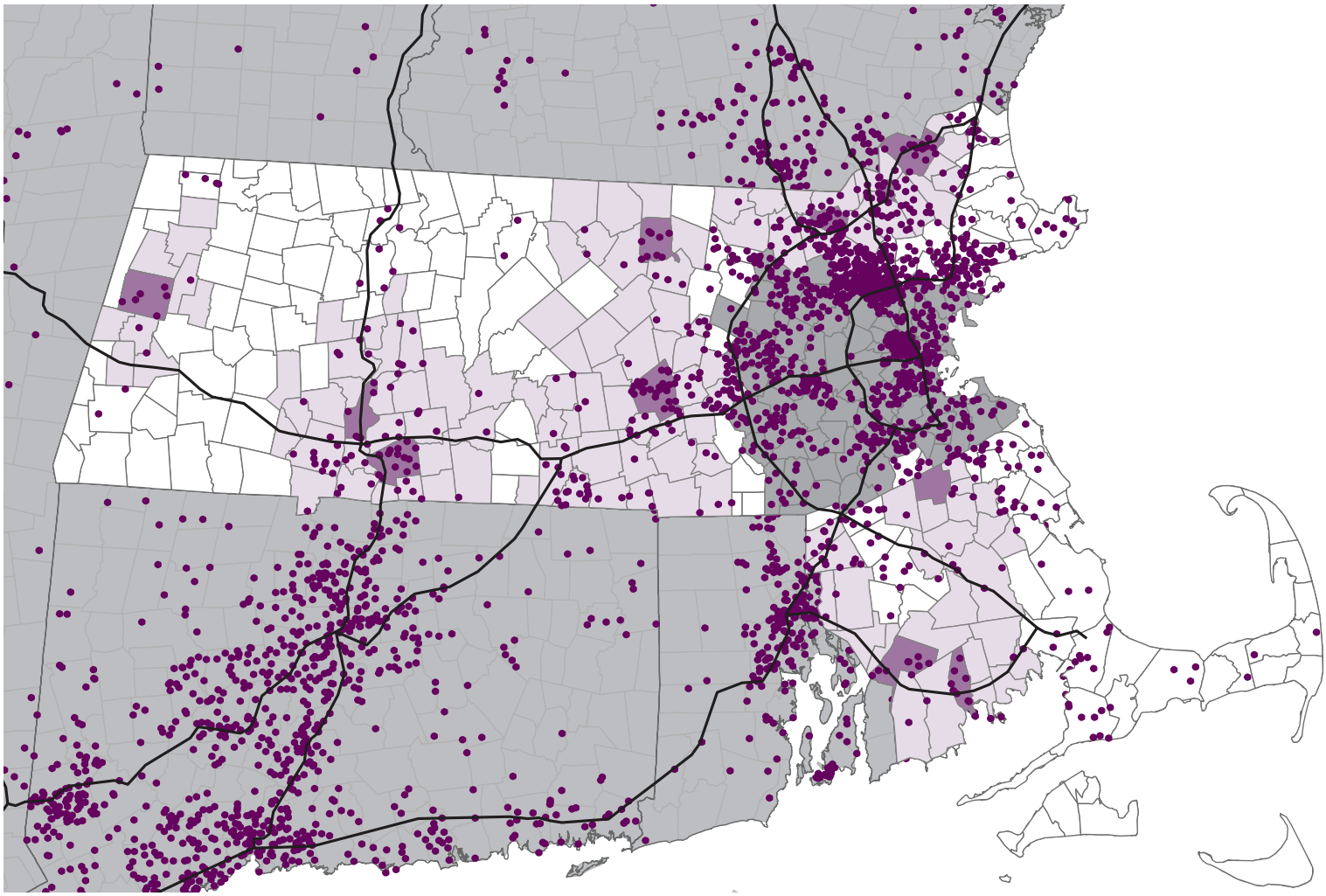
In terms of quantity, Greater Boston generated about 467,000 new private jobs, or 45 percent of the state total between 1970 and 2005, roughly proportional to the region's 40 percent share of the state's population. During that time, the region's share of the state's total employment actually slipped—from 53 to 50 percent. At the same time, though, the quality of Boston's economic performance—as reflected in its payroll—rose. Despite slower job growth than the rest of the state and a 50 percent share of the Bay State's private jobs, the knowledge core now contains 60 percent of the state's total payroll.[16]

Knowledge-industry dominance. What accounted for this feat? The region's economic resurgence has been driven by its increased specialization and preeminence in high-technology and other knowledge-intensive, high-value industries, which in turn has been enabled by its soaring educational attainment.

Greater Boston has outstripped other regions of the state in educational attainment. Starting

Figure 4:

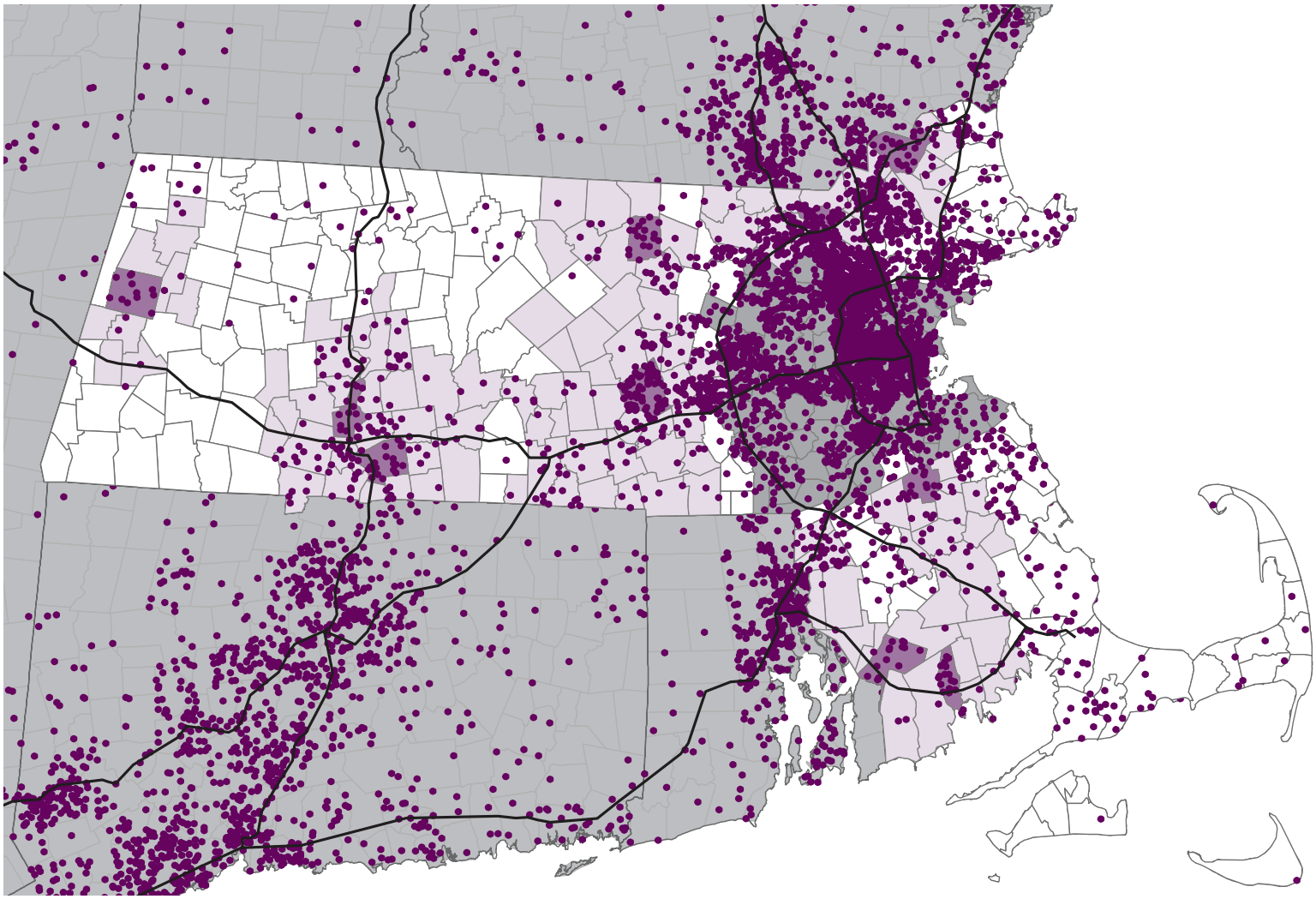
Statewide Distribution of Massachusetts Tech Firms, 1991



Source: Brookings analysis of CorpTech data

Figure 5:

Statewide Distribution of Massachusetts Tech Firms, 2004



Source: Brookings analysis of CorpTech data

with an edge in 1980, Greater Boston quickly pulled ahead of the rest of the state and nation. In 1980, 25 percent of the region's residents aged 25 and older had a bachelor's degree, compared with 16 percent in the rest of the Commonwealth. By 2000, that nine-point edge had widened to 15 points even as education levels grew generally: An incredible 42 percent of the region's adult population held at least a bachelor's degree, compared with 27 percent of adults living in the rest of the state. If Boston's knowledge core were a complete metropolitan area it would rank first among the country's 100 largest metros for B.A. attainment.[17]

And so the Greater Boston knowledge core—the select group of 75 Boston-area towns and cities that specializes in such activities—has come to dominate the state's sizable stake in the knowledge economy even more than it once did.

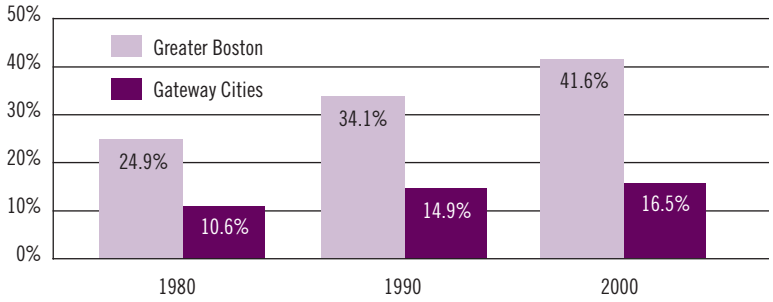
Between 1991 and 2004, the share of the state's 4,000-plus high-technology firms located in the Greater Boston region *increased* from 53 to nearly 60 percent, according to data gathered by the industry research firm CorpTech. The effect has been even more concentrated for specific high-tech industries: The biotechnology, pharmaceutical, and software firms found in Greater Boston comprise 79, 76, and 71 percent of the state total respectively.[18]

More broadly, the share of Greater Boston jobs generated by the four high-value, high-pay "knowledge" and export clusters—financial services, health care, information technology, and knowledge creation—that Michael Porter deemed crucial in his 1991 study, "The Competitive Advantage of Massachusetts," has also increased substantially.[19] By 2005, 28 percent of Greater Boston's jobs came from these industries, far outpacing the 20-percent state figure. Moreover, 43 percent of Greater Boston's total payroll in 2005 was generated by these four sectors, compared to the state's mark of 33 percent and the nation's 31-percent figure. Taken together, these high-value sectors paid almost $89,000 per employee in Greater Boston. Greater Boston, in short, has assembled one of the truly formidable centers of high-value knowledge-oriented industry in the world.

One result: Real per-capita income in Greater Boston soared relative to that elsewhere in the

Figure 6:

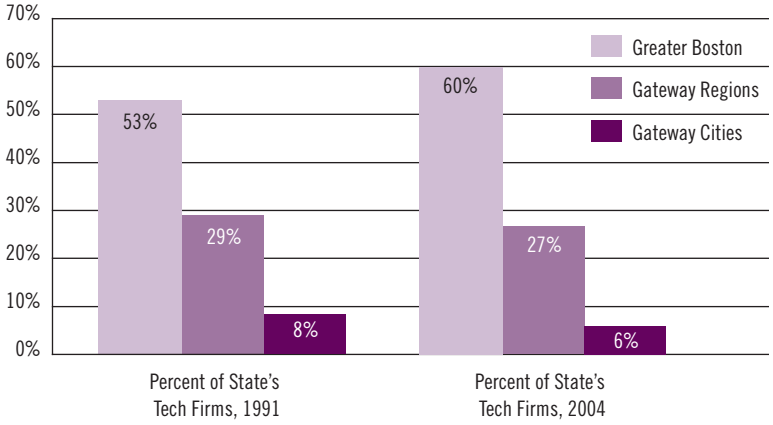
The gap between BA attainment in Greater Boston and that of the Gateway Cities has widened



Source: Brookings analysis of 1980, 1990, and 2000 U.S. Census Bureau data

Figure 7:

Tech firms continue to cluster in Greater Boston. Meanwhile, the share of the state's tech firms in the Gateway Cities and regions is falling



Source: Brookings analysis of Corp Tech firm data

Figure 8:

The state's knowledge jobs are concentrated in Greater Boston, where they make a much larger share of the local employment than they do in the Gateway Cities

	NUMBER OF KNOWLEDGE INDUSTRY JOBS, 2005	KNOWLEDGE JOBS AS SHARE OF TOTAL EMPLOYMENT, 2005	STATE SHARE OF KNOWLEDGE INDUSTRY JOBS, 2005
Greater Boston	444,289	28.5%	70.0%
Gateway Cities	83,809	19.9%	13.2%
Gateway Regions	147,383	13.9%	23.2%

Source: Brookings analysis of ES-202 data from the Massachusetts Department of Unemployment Assistance

Figure 9:

The state's knowledge industry payroll is even more concentrated in Greater Boston

	SHARE OF STATE KNOWLEDGE INDUSTRY PAYROLL, 2005	ALL KNOWLEDGE INDUSTRIES, AVERAGE PAYROLL PER EMPLOYEE, 2005
Greater Boston	77.1%	$88,896
Gateway Cities	8.6%	$52,685
Gateway Regions	17.6%	$61,332

Source: ES-202 data from the Massachusetts Department of Unemployment Assistance

Commonwealth between 1980 and 2000. During those years, Greater Boston's real income rose 59 percent (from $22,000 to $35,000 in 2005 dollars) compared with 46-percent growth in the rest of the state (from $18,600 to $27,300).[20] That means the gap in per-capita income between Greater Boston and the rest of the state increased from 18 to 28 percent. And so while the remainder of Massachusetts followed a trajectory similar to the rest of the nation, Greater Boston became one of the most prosperous places in the country.[21]

The bottom line: Greater Boston's dominance of the state's high-value knowledge economy has been growing, despite its recent troubles. Representing just 13 percent of the state's land area and 40 percent of the state's population, the Boston knowledge core now contains 50 percent of its jobs, 52 percent of its college graduates, 60 percent of its payroll, 60 percent of its high-tech firms, and about 70 percent of its knowledge-industry employment.[22] As a result, these 75 towns enjoy per-capita incomes 28 percent higher than the rest of the state and household incomes 13 percent higher.

The "Gateway Cities," in contrast, continue to lose ground.

For their part, the Gateway Cities continue to struggle in ways far more profound than Greater Boston does in its recent downturn.

Granted, the collapse of the tech bubble brought a less dire economic slowing to these cities than that suffered by Greater Boston—or no slowing at all—given their narrower involvement in technology sectors. In fact, the Gateway Cities collectively lost just 3.5 percent of their private jobs in the 2001–2005 period, compared with the knowledge core's 6-percent loss.

However, unlike Greater Boston, these 11 smaller industrial cities—saddled by both the legacies of their economic past and newer chal-

Figure 10:

The Gateway Cities and their regions are more specialized than Greater Boston in only a handful of knowledge industries, such as junior colleges, trade schools, printing, electrical equipment, and health care

	LOCATION QUOTIENTS			SHARE OF STATE EMPLOYMENT			SHARE OF STATE PAYROLL		
	GREATER BOSTON	GATEWAY CITIES	GATEWAY REGIONS	GREATER BOSTON	GATEWAY CITIES	GATEWAY REGIONS	GREATER BOSTON	GATEWAY CITIES	GATEWAY REGIONS
All Industries				**49.9%**	**13.5%**	**34.0%**	**59.5%**	**10.7%**	**27.6%**
All Knowledge Industries	**1.40**	**0.98**	**0.68**	**70.0%**	**13.2%**	**23.2%**	**77.1%**	**8.6%**	**17.6%**
All Knowledge Creation Industries	**1.51**	**0.76**	**0.51**	**75.6%**	**10.2%**	**17.4%**	**81.1%**	**7.0%**	**13.3%**
Junior Colleges	1.35	2.43	0.97	67.2%	32.8%	32.8%	66.4%	33.6%	33.6%
Colleges and Universities	1.71	1.10	0.44	85.2%	14.8%	14.8%	87.4%	12.6%	12.6%
Business, Computer & Management Training	1.73	0.54	0.40	86.3%	7.3%	13.7%	91.2%	3.8%	8.8%
Technical and Trade Schools	1.32	1.69	0.84	65.7%	22.8%	28.5%	67.7%	20.0%	25.4%
Printing and Related Support Activities	0.86	1.73	1.09	43.1%	23.4%	36.9%	47.2%	21.4%	32.6%
Legal Services	1.40	0.99	0.61	69.7%	13.4%	20.7%	81.5%	8.6%	12.6%
Accounting and Bookkeeping Services	1.43	0.78	0.60	71.3%	10.5%	20.6%	80.5%	7.2%	14.0%
Architectural and Engineering Services	1.39	0.38	0.54	69.5%	5.2%	18.5%	72.7%	4.3%	17.3%
Management & Technical Consulting Svc	1.59	0.32	0.37	79.3%	4.3%	12.6%	85.7%	2.8%	8.3%
Scientific Research and Development Svc	1.59	0.24	0.39	79.2%	3.2%	13.4%	82.4%	2.7%	12.0%
All Health Care Knowledge Industries	**1.42**	**1.92**	**0.85**	**70.8%**	**25.9%**	**28.8%**	**76.3%**	**20.3%**	**23.2%**
Hospitals	1.42	2.04	0.86	70.6%	27.5%	29.4%	76.2%	22.3%	23.8%
Pharmaceutical & Medicine Manufacturing	1.47	0.00	0.70	73.3%	0.0%	23.8%	77.7%	0.0%	19.0%
Medical Equipment and Supplies Mfg	1.45	0.41	0.52	72.5%	5.5%	17.5%	77.8%	4.7%	14.0%
All Information Technology Industries	**1.23**	**0.53**	**0.85**	**61.3%**	**7.1%**	**28.8%**	**66.0%**	**4.7%**	**25.8%**
Computer and Electronic Product Mfg	0.94	0.74	1.13	46.8%	10.0%	38.5%	52.5%	6.5%	34.7%
Internet Publishing and Broadcasting	1.95	0.00	0.07	97.4%	0.0%	2.6%	98.5%	0.0%	1.5%
Telecommunications	1.18	1.01	0.84	58.9%	13.6%	28.4%	62.2%	11.8%	26.7%
ISPs, Search Portals, & Data Processing	1.96	0.10	0.04	98.0%	1.3%	1.3%	98.8%	0.8%	0.8%
Software Publishers	1.71	0.10	0.40	85.3%	1.3%	13.8%	84.7%	1.4%	14.6%
Computer Systems Design and Rel Services	1.41	0.20	0.69	70.3%	2.7%	23.6%	72.6%	1.7%	22.2%
Electrical Equipment and Appliances	0.28	1.54	1.79	14.0%	20.8%	60.8%	12.5%	17.0%	59.0%
All Financial Services Industries	**1.38**	**0.99**	**0.67**	**68.9%**	**13.4%**	**22.8%**	**82.0%**	**8.5%**	**13.4%**
Credit Intermediation & Related Activity	1.17	0.91	0.82	58.4%	12.3%	27.8%	73.1%	7.5%	17.5%
Financial Investment & Related Activity	1.85	0.23	0.13	92.2%	3.1%	4.5%	95.6%	2.1%	2.9%
Insurance Carriers & Related Activities	1.25	1.60	0.90	62.5%	21.6%	30.7%	66.7%	20.4%	27.8%

Source: Brookings analysis of Massachusetts Department of Unemployment Assistance and the Bureau of Labor Statistics

Note: A Location Quotient of 1.00 means that an area has the same share of employment in that industry as the state as a whole.
A number greater than 1.0 means the area has a greater share of employment than the state, and a number under 1.0 means it has a smaller share.

lenges—have continued to contend with the long-term decline of traditional manufacturing and so far have failed to connect fully to the global knowledge economy.[23]

Declining economic significance. The Gateway Cities, to begin with, failed to reap the benefits Greater Boston did from the last several business cycles. Between 1970 to 2005, while Greater

Boston added 467,000 jobs to grow by 51 percent, the Gateway Cities as a group *lost* 11,000 jobs, or 3 percent of their job base, with Fitchburg, Lawrence, New Bedford, and Worcester all taking double-digit hits.

To put these figures into perspective, while the state job base has grown by 60 percent since 1970 and Greater Boston's 51 percent, the total number of private jobs in the Gateway Cities today remains what it was in 1960. Consequently, the Gateway Cities have seen their share of the state's total private employment decline precipitously from 21 percent in 1970 to just 13 percent in 2005. Equally disturbing is the fact that while the knowledge core possesses a disproportionately higher share of the state's payroll, the Gateway Cities suffer from the opposite condition: Despite containing 13 percent of the state's jobs, the Gateway Cities generate less than 10 percent of the state's payroll.[24]

Incomes in these cities have also slipped. Between 1980 and 2000, the per-capita incomes (in real terms) increased by 25 percent, compared with the 59-percent income growth posted by Greater Boston. As a result, the Gateway Cities' $20,060 real per-capita income has fallen to just 57 percent of Greater Boston's $34,930 mark.[25] Especially troubling is the fact that the cities' real per-capita income growth *slowed* during the 1990s boom, slumping to a sluggish 3.3 percent while the Boston knowledge core's income was growing by another 13.5 percent (although Haverhill and Fall River did manage to advance 12.0 and 9.4 percent respectively).

Perhaps inevitably, population has also slumped. On that front, while Greater Boston added 105,000 residents to eke out a small yet positive 4.3-percent population increase between 1960 and 2005, the Gateway Cities together lost nearly 34,000 residents over those years—a 3.4 percent decline. Not surprisingly, the cities with the most troubling economic stories are also those that have suffered the steepest population losses: Holyoke and Pittsfield each lost 24.2 percent of their populations between 1960 and 2005 while Springfield shed 13 percent.[26]

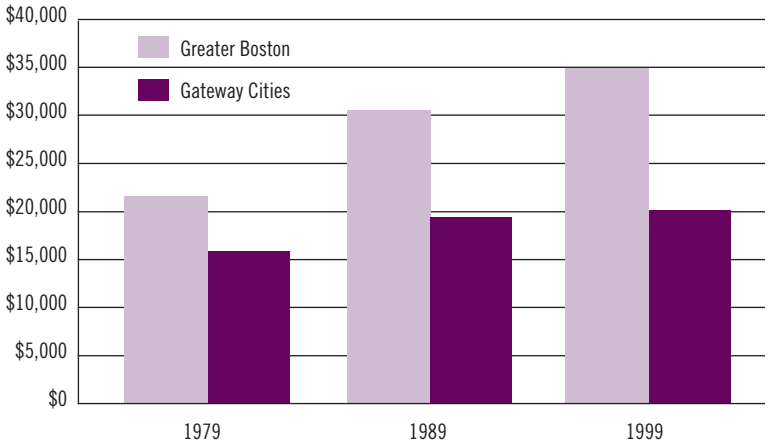
Legacies of the industrial past. Behind these trends, meanwhile, lie the brute facts of deindustrialization, which continue to complicate adaptation and renewal.

Most obviously, the Gateway Cities' long reliance on manufacturing has exposed them to disproportionate job losses in a critical export sector.

Altogether, the 11 Gateway Cities' loss of 134,000 manufacturing jobs since 1960 accounts for more than one-third of the state's total decline in such industries. Between them, for example, Springfield, Worcester, and Fitchburg have lost more than 50,000 manufacturing jobs since 1960, as each lost over 70 percent of its manufacturing base. Nor have the losses eased in recent years, with the 11 cities collectively losing another 29,000 jobs—29 percent of their total—in the

Figure 11:

Greater Boston's per-capita income has far outstripped that of the Gateway Cities in the last two decades



Source: Brookings analysis of 1980, 1990, and 2000 U.S. Census Bureau data

1990s and another 7,000 or so, or 11 percent more, in the recession years of 2000–2003.

Moreover, continued reliance on manufacturing exposes the cities and their regions to further uncertainty. Even now, cities like Fall River, Lawrence, and New Bedford depend on manufacturing for more than one quarter of their employment.[27] What's more, several of the Gateway Cities remain heavily dependent on highly vulnerable lower-skill, lower-wage, non-durable manufacturing, as opposed to higher-skill, higher-wage, more capital-intensive industries. In this respect, while Fitchburg, Haverhill, Holyoke, and Lawrence all retain competitive printing or plastics concentrations and numerous Gateway Cities engage in metal and machinery fabrication, Fall River and New Bedford continue to absorb losses in sizable textile milling and apparel specializations while Brockton perseveres with its traditional—and vulnerable—leather products focus.

But the Gateway Cities must contend with another challenging legacy of their industrial past. Reflective of the nature and decline of the past economy, low education levels and the out-migration of young workers circumscribe future prospects even more starkly than continuing reliance on manufacturing.

On the education side, just 16.5 percent of Gateway City residents and 24.6 percent of Gateway region residents now possess a four-year college degree, compared with the 42-percent Greater Boston mark. Similarly, just 23 and 32.4 percent of Gateway City and Gateway region adults have at least an associate's degree although 48 percent of Boston knowledge core residents do. These education levels leave the Gateway regions just average in a national context, and the cities far below average.

Exacerbating the problem has been the ongoing out-migration of young workers who are leaving the Gateway cities and regions as young adults. From 1990 to 2000, the cities' year-2000 age cohort of 25–34 year-olds declined by 12,065 people. This loss translates into a net out-migration rate of 8.0 percent.[28] The regions fared even worse, losing 37,732 people for a -10.4 percent rate. Solid gains in this young cohort within Boston (7,792 people) and the knowledge core (39,543 people) reinforce a stark contrast in workforce vibrancy.[29]

Implications for the future: Limited standing in the knowledge economy. Given these challenges, it is not surprising that most of the Gateway Cities continue to struggle with the transition to a knowledge- and technology-oriented new economy. Today, for example, only 20 percent of the cities' collective workforce is employed in the four key knowledge-based clusters Michael Porter deemed critical to future growth (IT, health care, financial services, and knowledge creation), while across the Gateway regions that share drops to 14 percent.[30] By contrast, participation in knowledge sectors runs to 28 percent of the workforce in Greater Boston.

JUST 16.5 PERCENT OF GATEWAY CITY RESIDENTS POSSESS A FOUR-YEAR COLLEGE DEGREE

In technology categories, meanwhile, the picture is more promising but still spotty. To be sure, Gateway regions contain some 1,100 of the state's 4,000-plus high-tech firms, more than one-quarter of the Commonwealth's total. And some regions, particularly Lowell, Springfield, and Worcester, have built up solid specializations in a number of important high-technology industries, including advanced materials, high-tech manufacturing, and photonics.[31] High-tech chemical work, computer hardware production, and test and meas-

urement are also relative strengths of the regions, while their cities contain nearly a quarter of all of the state's high-tech chemicals firms.

For all that, however, the Gateway Cities' standing in high-tech activities remains limited. Gateway Cities contained only 250 or so of the state's high-tech firms in 2004, according to the CorpTech count—a tiny share. And as a whole both the regions and the Gateway Cities saw their shares of the state's total high-tech locations actually *decline* between 1991 and 2004. Today, just 26.6 percent of the state's high-tech firms are located in Gateway regions, down from 28.6 percent in 1991. Likewise, the cities proper have seen their share slip to 6.3 percent of the state total from 8.1 percent. Moreover, neither the Gateway Cities nor their regions have mustered significant positions in the state's important but Boston-focused biotechnology and pharmaceutical industries. Only 13 and 14 percent of the Commonwealth's biotechnology and pharmaceuticals firms, respectively, operate in the Gateway regions, and only a handful do in Gateway Cities. In this respect, the Gateway Cities and their regions have yet to gain significant traction in the high-value economy of the present and future.

FULLY 30 PERCENT OF THE STATE'S POOR LIVE IN THE 11 GATEWAY CITIES

Implications for the future: Social distress. Economic distress has also brought social distress. Household income growth has been anemic; poverty rates exceed the state average; and with those factors has come heavy racial and poverty concentration.

Gateway City households saw their real median income increase by only 10 percent to $40,100 (in 2005 dollars, using a weighted average) between 1980 and 2000, at a time when the Boston knowledge core enjoyed a 32-percent increase to $67,300. Gateway regions did somewhat better, as incomes there increased 17 percent to $55,400, but they also lagged Boston. So tepid was the growth in the 1990s expansion, in fact, that in real terms the typical household in nine of the 11 selected Gateway Cities (Fitchburg and Haverhill were the exceptions) *lost* ground. In fact, the median household in a Gateway City actually made 6 percent less in 2000 than in 1990. The result: Typical Gateway City households made do with real incomes $27,900—or 40 percent—less than their counterparts in the Boston knowledge core.

Poverty statistics are stark, too. Fully 30 percent of the state's poor live in the 11 Gateway Cities—a share that has remained steady over the last decade. Although the Gateway City and regional poverty rates are similar to Greater Boston's, all of the Gateway Cities but Haverhill had poverty rates in 2000 that exceeded the 9-percent state average. In Holyoke more than 26 percent of the population is poor, for example. In Lawrence, more than 24 percent is poor. In Springfield and New Bedford roughly 23 and 20 percent of the population live below the poverty line.

Exacerbating the cities' poverty challenge is its concentration: Nearly 15 percent of the Gateway Cities' poor live in neighborhoods with super-high poverty rates of 40 percent or higher.[32] On this measure, Springfield, Holyoke, and Worcester each exceed Boston's rate of 10.8 percent, while New Bedford, Lowell, and Brockton all have rates exceeding the state concentrated-poverty figure of 6.5 percent. On this measure, Springfield and Holyoke have two of the most entrenched poverty problems in the country, with 34 and 51 percent of their poor populations living

in high-poverty neighborhoods (by comparison, New Orleans had a concentrated poverty rate of 38 percent on the eve of Hurricane Katrina).[33]

And there is a final dimension to the Gateway Cities' social trajectory: Increasingly, these municipalities stand out as what the development scholar Beth Siegel has called the "tenements" of the state—places that provide cheap housing to new immigrants or minority citizens.[34]

By 2000, 42,000 more foreign-born residents (including Puerto Ricans) resided in the Gateway Cities than in 1990—a 22-percent increase that ensured that in 2000 more than one-fifth of the cities' collective population was foreign-born. Immigrants make up the highest shares of the population in Lawrence, where they comprise 43 percent of the population, and in Lowell and Holyoke with 26.7 and 26.3 percent respectively. At the same time, the non-white population has been growing as well, and now composes about one-third of the Gateway Cities' collective population. With percentage point increases of 21, 19, 15 percent, for example, the non-white population shares of Lawrence, Brockton, and Springfield increased to 66, 42, and 51 percent in the 1990s, ensuring that the cities must contend with significant concentrations of poverty and social need.

And so the Gateway Cities find their fortunes increasingly tied to populations with especially low incomes and especially high poverty levels, given the generally low educational attainment of the new residents. According to the 2000 Census, little more than half of each population has graduated from high school, while less than 15 percent of Gateway City immigrants and 11 percent of the cities' non-white residents boasts a college degree. For that matter, nearly 30 percent of Gateway City working-age immigrants contends with limited English-speaking abilities.[35] Consequently, non-white Gateway City residents'

Figure 12:

The foreign-born share of the Gateway Cities' population increased to nearly 22 percent in the 1990s

	PERCENT FOREIGN BORN RESIDENTS (INCLUDING PUERTO RICANS)		PERCENTAGE POINT CHANGE
	1990	2000	
Greater Boston	**14.1%**	**18.8%**	**4.8**
All Gateway Cities	**17.0%**	**21.5%**	**4.5**
Brockton	13.0%	20.8%	7.8
Fall River	21.1%	20.7%	-0.4
Fitchburg	11.6%	15.2%	3.6
Haverhill	7.1%	8.8%	1.7
Holyoke	21.9%	26.3%	4.4
Lawrence	32.8%	43.0%	10.2
Lowell	20.1%	26.7%	6.6
New Bedford	23.4%	23.5%	0.0
Pittsfield	4.3%	4.3%	0.0
Springfield	15.5%	19.7%	4.2
Worcester	12.8%	20.1%	7.2

Source: Brookings analysis of U.S. Census Bureau data

Figure 13:

The non-white population of the Gateway Cities rose from one-fifth of the total population in 1990 to over one-third in 2000

	PERCENT NON-HISPANIC WHITE		PERCENTAGE POINT CHANGE
	1990	2000	
Greater Boston	**16.5%**	**24.3%**	**7.8**
All Gateway Cities	**21.3%**	**33.9%**	**12.6**
Brockton	22.3%	41.5%	19.2
Fall River	4.1%	10.4%	6.3
Fitchburg	14.7%	25.3%	10.5
Haverhill	7.5%	13.5%	6.1
Holyoke	34.3%	45.7%	11.4
Lawrence	45.2%	66.0%	20.8
Lowell	22.9%	37.7%	14.8
New Bedford	15.0%	24.7%	9.7
Pittsfield	5.1%	8.5%	3.4
Springfield	36.1%	51.4%	15.3
Worcester	16.4%	29.3%	12.8

Source: Brookings analysis of U.S. Census Bureau data

average household income of just $36,200 remained substantially below the non-Hispanic white figure of $46,500 in 2000 and helped depress the overall city income level. Poverty rates were similarly troubling. In the same year, the poverty rate among Gateway City minorities ran to about 31 percent, while that among immigrants reached about 25 percent. Minority residents in Fall River and New Bedford faced poverty rates of 42 and 37 percent while the foreign born (including Puerto Ricans) in Fitchburg and Springfield contended with 28 and 33 percent poverty rates. Holyoke, home to a large population of Puerto Rican immigrants, is also home to the state's most troubling poverty rates: 45 percent of minorities and 44 percent of immigrants there live below the poverty line.[36]

THE GATEWAY CITIES HAVE GAINED LIMITED TRACTION IN THE KNOWLEDGE ECONOMY

The bottom line: Massachusetts' Gateway Cities continue to struggle. Notwithstanding their proud industrial traditions, the Gateway Cities contend today with persistent job losses in those sectors, continued vulnerability to future losses, and burdensome legacies of their past, including out-migration and low education levels. Consequently, the cities have gained only limited traction in the knowledge economy, and as a result, have fallen farther behind Greater Boston on indicators of prosperity. Today, for example, the Gateway cities lay claim to just 271 jobs for every 1,000 in Greater Boston, down from 295 in 1990 and 344 in 1980.[37] At the same time, incomes have declined relative to Greater Boston. Most notably, per-capita income in the Gateway Cities was 73 percent of that in the knowledge core in 1980; 63 percent of it in 1990, and by 2000 had declined to only 57 percent.[38] Adding to the cities' problems are a series of social burdens—exacerbated by their anemic job creation—that depress their ability to generate the skilled workforce and new growth industries needed to create a better economic future.

III. BOSTON AND THE GATEWAY CITIES: Consequences of an Uneven Economy

How Massachusetts is growing has its advantages. Many states, in fact, would love to claim the Bay State's unbalanced but dynamic economy, dominated by Greater Boston's agglomeration of world-class employment clusters in just the sort of advanced industries projected to drive the next boom.

However, the fact remains that the relative strength of Greater Boston's economy has for decades masked the persistent unevenness of the state's economic map, which is now beginning to have increasingly negative consequences. These consequences pose serious threats to the state's overall economic competitiveness as well as the well-being of thousands of its businesses and families.

Consequence: Unbalanced housing markets threaten to drive away workers and employers

The first consequence of Massachusetts' uneven economy is hitting home most heavily in Greater Boston. There, the continuing agglomeration of high-pay knowledge jobs in a relatively small patch of 75 Boston-area communities has contributed to a quantum leap of home prices there —and quantum losses of affordability.

Housing prices would likely have risen regardless of the geography of the state's knowledge economy. After all, the desirable towns and cities near Boston—many approaching "build-out," according to a recent state analysis—have been rated some of the most "exclusionary" in the country,[39] ensuring that a thicket of restrictive development codes has conspired with genuine land shortages to keep construction far below national rates.[40]

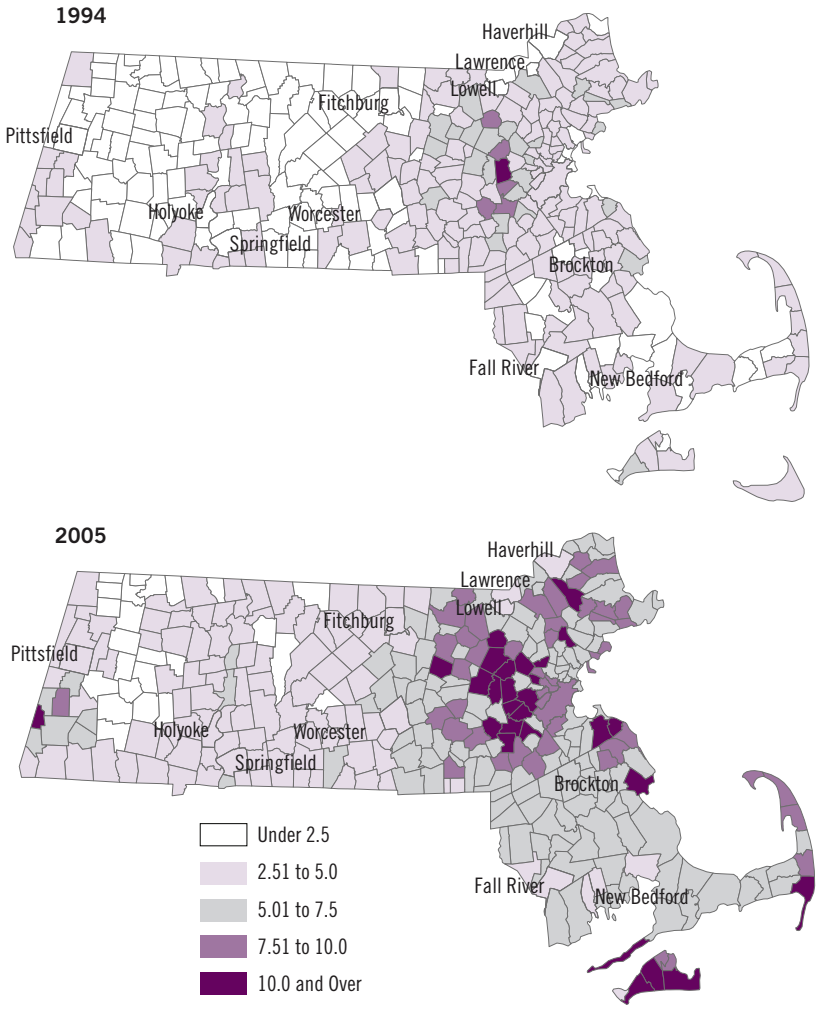
But the clustering of Massachusetts' high-value knowledge industries across a narrow portion of a small state has undoubtedly exacerbated the region's appreciation by bidding up house prices. As a result Greater Boston has seen real estate price inflation as steep as anywhere in the country. In 1994, at the onset of the last boom cycle, the real median value of a home in Greater Boston was roughly $203,000 (in 2005 dollars), according to price data from the Warren Group.[41] By 2005, the median value had increased by 112 percent to reach almost $429,000. Closer-in towns like Chelsea, Lynn, Somerville, and Medford saw real 11-year appreciation jumps of 302, 273, 164, and 120 percent. Farther-out suburban towns like Marlborough and Walpole saw housing costs double. Even factoring in the significant 5-percent price drop recorded in the last year, median home costs in Greater Boston remain stratospheric. Put these trends together with the state's high but flat household income, and the result has been a major decline in home affordability in the state's economic hub. In 1994, a median-price home in the Boston knowledge core cost roughly four times the state's median household income. In 2005, it cost nearly *eight* times more.

Hence the consequence: Home prices are consuming an unprecedented share of new and younger residents' incomes and imposing a major drag on the state's efforts to attract and retain quality workers.

No wonder Boston-area residents named "housing affordability" the top regional issue requiring "major improvement" in a 2003 survey conducted for MassINC.[42] And no wonder employers also cite housing costs as a top concern. As observed MTC's "2006 Index of the Massachusetts Innovation Economy:" "Affordable housing can help to attract and retain young, highly skilled work-

Figure 14:

Between 1994 and 2005, housing price-to-income ratios in towns throughout Greater Boston exploded, rising to over 10 in several places. The Gateway Cities, meanwhile, enjoy relatively affordable ratios



Source: Brookings analysis of Warren Group housing data

ers who have become increasingly mobile in recent years."[43] The bottom line: High housing prices sharpened by the heavy concentration of the state's knowledge economy in the Boston area represent a severe burden on workers, families, and employers in the state's key industry center and ultimately threaten to drive some of them away.

Consequence: Current development patterns are rearranging the growth map and eroding the state's quality of life

A second by-product of the state's uneven economy is the suburban sprawl now eroding the Commonwealth's quality of life.

With house prices astronomical and build-out imminent in many close-in knowledge-core towns, a powerful impetus to decentralization now dominates the Commonwealth's development landscape. Hefty cost differentials between towns close to the core and those farther out constantly motivate dispersal. So, too, does the search for buildable residential parcels and affordable business sites.

Consequently, a major new wave of low-density, larger-lot suburban sprawl has rolled out of the high-cost knowledge core, across the I-495 corridor, and into the mid-state and southeast areas in recent years.

Between Route 128 and I-495, for example, more than 33,000 acres of forests, meadows, and other open spaces have been lost to new-home construction in the last 20 years. Partly as a result, commute times have increased markedly in Greater Boston, with 45 percent of the region's commuters spending at least 30 minutes getting to work each day, up from 35 percent in 1980.[44]

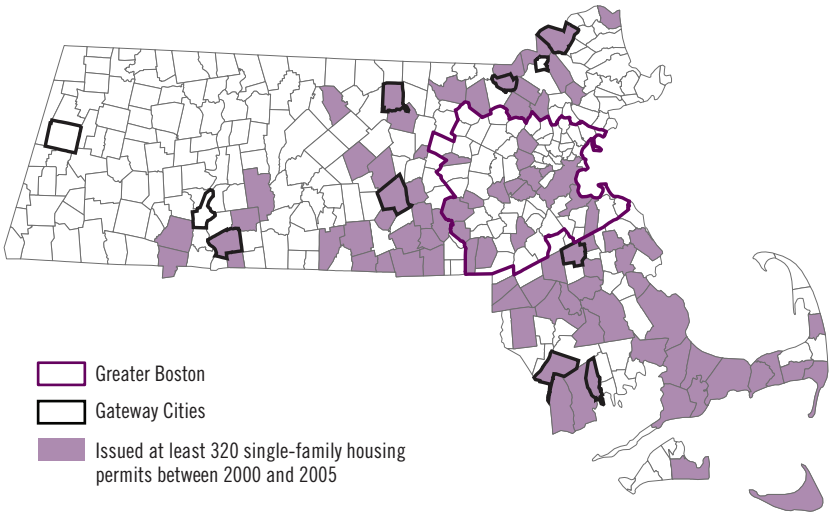
Farther out, meanwhile, a vast new ring of growth—encompassing what might be termed the state's "middle-class housing frontier"—has taken shape and spread across much of eastern Massachusetts.[45] Within this growth ring—which sweeps counter-clockwise around the Greater Boston knowledge core from northeastern Massachusetts towns like Methuen and North Andover through east-central Massachusetts and eastern Worcester County and finally encompasses such growing southeastern towns as North Attleboro, Dartmouth, Middleborough, and Plymouth (but not Cape Cod)—lie dozens of suburban and exur-

ban towns that ranked in the top quartile of Bay State towns for their issue of at least 320 single-family building permits during the 2000 to 2005 period.[46] Taken together, rapid residential development here consumed nearly 90,000 acres of undeveloped land between 1985 and 1999—43 percent of the state's 205,000-acre total land conversion—as cost-sensitive homebuyers sought affordable housing farther and farther away from the crowded knowledge core.[47]

And so sprawl must be counted a second negative consequence of the state's uneven economy. More and more, sprawl is sharpening the perception that eastern Massachusetts' quality of place is deteriorating. This bodes poorly in an era when the quality of life in a region's towns and cities has become an increasingly critical component of its ability to attract and retain quality workers.

Figure 15:

A growth ring that surrounds Greater Boston contains dozens of towns that ranked in the top 25 percent of all municipalities based on their issuance of at least 320 single-family housing building permits between 2000 and 2005



Source: Brookings analysis of U.S. Census Building Permit Data

Consequence: Current trends are exacerbating the state's workforce challenges

A final related consequence of the state's uneven economy is the extent to which that unevenness could exacerbate state and local workforce challenges. Massachusetts and the rest of the country will soon face a worker shortage. Even today, in relatively sluggish times, job vacancies persist. In the fourth quarter of 2005 alone, for example Massachusetts employers contended with 74,000 empty jobs.[48]

Yet worker shortages will likely increase as the baby boomers—born between 1946 and 1964—begin to retire in 2011. For 2008, for example, the Bureau of Labor Statistics predicts a shortage of 6 million workers nationwide, setting the stage for a national competition between states for talent.[49] And in Massachusetts, where the population is aging and younger workers are leaving, staffing will be all the more difficult. By 2029, the Commonwealth will need to replace 753,000 well-educated workers.

So who will replace the baby boomers? As the entire nation will be competing for a diminished supply of skilled employees, cold-weather Massachusetts will not be able to rely as heavily as it does now on attracting workers from elsewhere. Instead, the state will need to draw on the skills of every resident it can.[50]

Yet here, too, the unevenness of the state's development patterns complicates matters—in two ways. On the one hand, the disproportionate concentration of the state's knowledge firms and jobs in the Boston knowledge core could hamper efforts to replace the 636,000 Boston-area baby boom workers who will likely retire by 2029. Those efforts will be difficult enough given that some 61,000 fewer workers populate the region's replacement generation, composed of those who were between the ages of 7 and 25 in 2000. But the state's unbalanced development patterns will

only increase the pressure. Not only will Boston's housing market likely continue to price out low- and moderate-income households. Beyond that, the remoteness of many Boston-based employers from younger Gateway-area labor markets will keep them from drawing on those regions' replacement cohort, which is *larger* than the boomer generation by 24,000 potential workers, assuming constant workforce participation rates. From this perspective, the concentration of so much of the state's economy in Greater Boston could well complicate Boston-area firms' efforts to secure a sufficient labor force and so inhibit the state's business growth and economic development.

THE STATE'S ECONOMY DEPENDS ON ENGAGING EVERY POTENTIAL WORKER

On the other hand, the relative isolation and demographic tilt of the Gateway Cities creates additional labor supply challenges. On the job-access front, the geographic isolation of most Gateway Cities and regions from the state's areas of fastest job growth cuts many Gateway-area workers off from the state's economic mainstream. This isolation is in part a problem for workers, who are deprived of close-by opportunity and the chance to move up the ladder. But the remoteness of many Gateway-area labor markets from the state's fastest growth areas also presents a problem for the Commonwealth's economy, which may be deprived of workers. Given the Commonwealth's need to engage every potential worker it can, neither local economies, including Boston, nor the state can afford such separation.

Even more urgent are the Gateway' areas' skill challenges. Thanks in part to their historically cheaper housing, many Gateway Cities are experiencing more rapid increases in minority and immigrant populations than the Knowledge Core —which means their workforce training task will be even tougher than Boston's. In the cities, taken together, nonwhites comprised 29 percent of the boomer workforce, but 44 percent of the replacement workforce (those 7 to 25 years old in 2000). As to the Gateway regions, the figures were 14 percent and 24 percent. Similarly, immigrants make up 17 percent and 10 percent of the cities' and regions' 1990 populations, but 22 percent and 13 percent of the 2000 counts.[51]

This matters intensely because, while the Gateway Cities and regions' educational attainment is low, it is lower still for the fastest growing segment of the cities' population: non-whites. Clearly, reducing these skills deficits will be among the most difficult of challenges for the Gateway regions and for a Commonwealth economy that will need every mind it can find in the coming decades.

In sum, the stark geographical unevenness of Massachusetts' changing economy—while long troubling to generations of families, business people, and policymakers—increasingly threatens the state's future economic well-being. More and more, the housing, development, and workforce side-effects of the state's economic unevenness are becoming core issues for the economy as a whole.

IV. RECONNECTING: A Vision and the Challenges

So now what? Where does all of this leave the state and its Gateway Cities as another governor contemplates the cities' and the state's intertwined fortunes?

Without question, the trends associated with Massachusetts' uneven economy pose a tangle of seemingly intractable challenges to those concerned with revitalization.

That's why revitalizing the state's older industrial cities has been a longstanding, if frustrated, desire and vision in Massachusetts.

And yet, today the cities' reconnection seems more imaginable than in decades. On-the-ground signs of life point to it. So does the long-term logic of development. But there remain daunting obstacles to renewal.

OPPORTUNITIES

The opportunity is compelling.

By dint of their lower housing costs, eagerness to grow, and vibrant immigrant communities, the Gateway Cities hold out to Massachusetts realistic hopes of responding to some of the Commonwealth's most pressing growth and development challenges.

- To a state struggling with high home prices, the Gateway Cities offer more reasonably priced *middle-class housing*, in many cases not far at all from the region's core job centers, whether in Boston and along I-495, in Providence, or near Hartford.
- To a state concerned about suburban sprawl, inefficient development patterns, and traffic congestion, Gateway Cities look like a natural place for pursuing "*smart growth*," as they actually want to grow and can accommodate development in places already served by roads, schools, and often rail links.
- And to a state facing limited population growth and future worker shortages, the Gateway Cities hold out the resource of a growing, energetic, and diverse immigrant and minority community already contributing to the *workforce*, already seeking the American Dream.

Nor is the opportunity only theoretical. Real estate, construction, and workforce developments all show the Gateway Cities beginning to take on a new relevance.

Sources of middle-class housing

Real estate price trends confirm that many Gateway Cities are attracting the attention of many homebuyers trying to navigate the state's middle-class housing crunch. To be sure, the cities retain their historical affordability: On average, a home in a Gateway City had a median value of just $225,000, or little more than half of Boston's $429,000 figure in 2005. However, in a sign of their new appeal, the Gateway Cities have as a group actually *out-appreciated* Greater Boston in percentage terms since 2000. Since then, Gateway City home values—taken in aggregate—out-gained those in the Boston knowledge core 78 percent to 37 percent. Most strikingly, virtually all the closer-in eastern Massachusetts Gateway Cities have seen torrid home-price gains. Lawrence, New Bedford, Fitchburg, and Fall River, for example, saw gains of 96, 91, 145, and 111 percent between 2000 and 2005. Lowell and Worcester values appreciated by 80 and 82 percent, respectively. Clearly at least those Gateway Cities closest to Boston have begun to capitalize on their location and price advantages to reconnect to the mainstream.

Places for growth

Similarly, the Gateway Cities are providing development capacity at a time when many eastern Massachusetts towns are rejecting residential construction. Situated strategically within the state's outward-marching middle-class housing-development frontier, the cities have clearly begun to participate in the state's large-scale development patterns and trends. According to U.S. Census building permit data, Lawrence, Lowell, and Springfield all doubled their production of total housing units over the last three years compared to the previous three-year period. Lowell's production jumped 149 percent. Brockton and New Bedford increased housing unit production by 82 and 90 percent, respectively. Altogether, average annual housing unit production in the Gateway Cities rose 57 percent—an increase twice as large as the state's—underscoring that the Gateway Cities are responding as few other municipalities to the state's recent emphasis on increasing housing production and encouraging growth in town centers, downtowns, and other transit nodes. To that extent the Gateway Cities today represent the leading edge of smart growth in Massachusetts.

A new economic relevance?

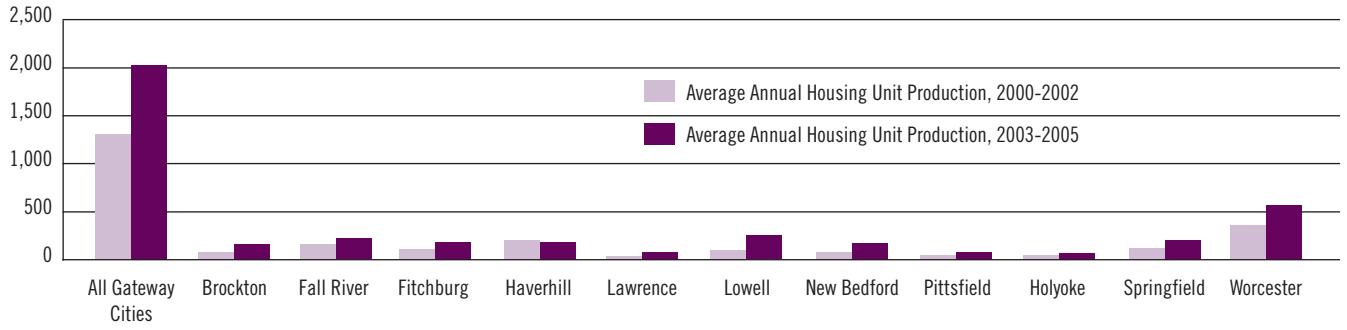
Finally, a new bustle energizes many Gateway neighborhoods as pioneer technology entrepreneurs and young professionals from Boston (now first-time homebuyers) and other relocatees mix with Asian newcomers and hard-working Latino immigrants to give troubled old cities a new lease on life.

In Lowell the 1990s brought a 177-percent increase among Southeast Asians with bachelor's degrees and a 77-percent increase in those with graduate or professional degrees.[52] Household incomes of $100,000 or more increased significantly among Latinos in Lawrence. And Hispanic homeownership increased by 6.6 percentage points in Lowell.

Beyond that, a modest uptick of job-creation has occurred in the last few years. Despite the state's loss of over 49,000 knowledge industry jobs from 2001 to 2005, the Gateway Cities actually nabbed a net gain of 1,500. The cities of Worcester, Springfield, Lawrence, Fall River, and Brockton each added at least 450 of these high-paying jobs. Meanwhile, the cities' generally dismal job picture has been somewhat offset by the Gateway regions' addition—especially in areas

Figure 16:

Significant construction of multi-family buildings has helped the Gateway Cities dramatically enhance their housing unit production in recent years



Source: Brookings analysis of U.S. Census Building Permit Data

near Boston—of about 132,000 jobs between 1985 and 2000—an increase of nearly 14 percent.[53] The Lowell region added over 26,000 jobs for a 26 percent increase while the Gateway regions of Fall River, Lawrence (including the city of Haverhill), Brockton, and Worcester all saw job increases of at least 10 percent. Only the New Bedford region experienced a decline, losing 272 jobs, or 0.4 percent.

Together, these glimpses suggest that some if not all of the Gateway Cities are beginning to experience the first hints of a new workforce and economic relevance as well as the birth of a new middle-class. Play their cards right and these communities have a chance to both grow their own industrial clusters and serve as locations for in-state "on-shoring," perhaps of biotech pharmaceutical manufacturing, as recommends a recent regional economic agenda prepared for the New England Council by A.T. Kearney.[54]

OBSTACLES TO RECONNECTION

And yet, for all that, a daunting set of obstacles to economic reconnection continues to impede renewal.

Involving not just the cities' fundamentals of government but their educational deficits and the limits of their connections to the outside world, these obstacles are serious and foundational, and must be dealt with.

Shaky basics

A first set of obstacles Gateway Cities face in renewing their economies involves the cities' current problems in providing high-quality, continuously improving, public services and the basics of good government.

People and firms locate or stay in particular cities and towns, not states, observe the urbanologists Barry Bluestone and David Soule of the Center for Urban and Regional Policy (CURP) at Northeastern University, and Alan Clayton-Matthews of The University of Massachusetts–Boston.[55] At the same time, additional research conducted by Soule, Bluestone, and Joan Fitzgerald in partnership with leading developers and real estate specialists in the Commonwealth affirms the importance of local service quality and government effectiveness among location factors.[56] Quality infrastructure, attractive amenities, timely approvals, and responsive government all matter in attracting growth.

THERE ARE A DAUNTING SET OF OBSTACLES TO ECONOMIC RECONNECTION

However, the Gateways remain challenged on these fundamentals. Many of them struggle to provide the basics.

Development "deal-breakers." Research conducted by CURP in partnership with the National Association of Industrial and Office Properties (NAIOP), for example, highlights a series of urban "deal-breakers" that act as barriers to business-site development in older industrial cities. Focused on sites in several of the Gateway Cities and on location decisions in the knowledge industries, the CURP/NAIOP research makes clear that, while the physical impediments to revitalization can be daunting, shortcomings in local and state administrative processes greatly complicate matters.

To be sure, decades of decline leave the Gateway Cities with a heavy burden of vacant or underutilized land parcels or buildings, along with tough delinquency, brownfield, and development finance issues. That Fall River, New Bedford, and Springfield contend with as many as 700, 900, and 1,000 abandoned housing structures, for example, gives just one indication

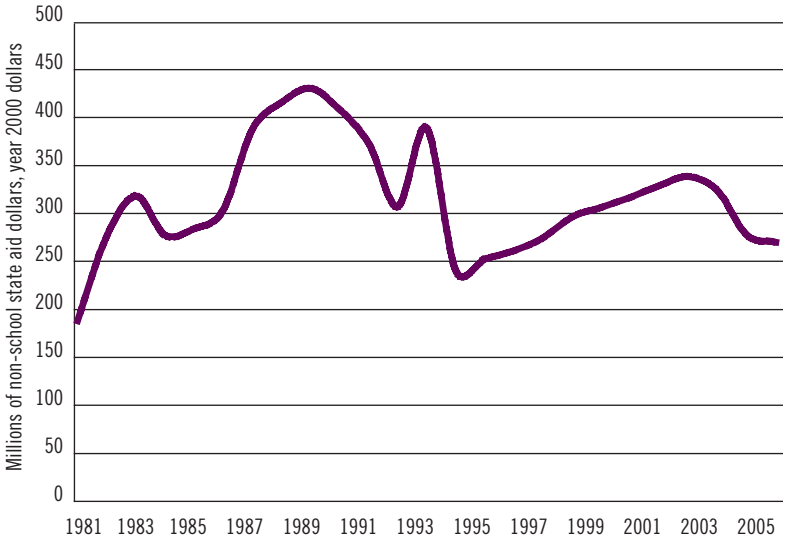
of the scale of the physical challenge.

But even so, both the CURP/NAIOP research in Massachusetts and national work by the Brookings Institution emphasizes that the many local governments frequently lack the governmental capacity to overcome deficits and "get the deal done." Municipal leaders in older industrial cities often lack the complete, up-to-date information needed to respond to specific industry requests, according to CURP's and NAIOP's interviews with business and real estate professionals. City websites don't always market available parcels well. And more broadly, say location specialists, poor management of often-convoluted state and local review and regulatory processes can bog down redevelopment deals and add excessive costs to doing business in older industrial cities. Sometimes state brownfield regulations or tax delinquency rules impede progress. Other times, a lack of communication between agencies can be a problem. And then, too, extended permitting processes, zoning problems, and limited financing for land assembly can protract deals, or deter investment. The bottom line: Too many state and local obstacles to reinvestment continue to put the Gateway Cities at a disadvantage.

MANY LOCAL GOVERNMENTS FREQUENTLY LACK THE CAPACITY TO GET THE DEAL DONE

Figure 17:

The amount of non-school state aid distributed to municipalities varies considerably from year to year and has now dropped to early-1980s levels



Source: Center for Urban and Regional Policy

Fiscal constraints

Further impeding the Gateway Cities' ability to provide the "basics" needed to attract and retain businesses and residents are their troubled fiscal straits, compounded by recent cuts in local aid.

Creating attractive streetscapes, maintaining the infrastructure, providing the quality basic services necessary to compete for growth—all of these require sound municipal finances, as well as sound management. Unfortunately, separate inquiries by the Municipal Finance Task Force, the Massachusetts Taxpayers Foundation, and CURP each emphasize that Massachusetts' cities and towns—especially low-income urban places like the Gateway Cities—face a long-term financial crunch caused by restricted and unpredictable local aid levels and spiraling health and pension costs.[57] Not even the state's relatively higher disbursements to the 11 Gateway Cities has eased these problems.

The Municipal Finance Task Force shows, for example, that the advent of education reform in Massachusetts has meant that almost all real increases in local aid since 1993 have gone to Chapter 70, the state's education local aid account. CURP demonstrates that total real non-school state aid is as low as in the early 1980s statewide, and remains at 1984 levels in the Gateway Cities. As a result, municipal budgets have seen only

modest increases over the past 20 years. Meanwhile, with fixed costs growing, critical non-education parts of municipalities' budgets—including public works, community development and planning, libraries, or culture and recreation—have been squeezed. Both CURP and the task force report, for example, that public works spending has been especially curtailed, to the point that real spending on road maintenance, snow and ice removal, and garbage collection has actually decreased since 1987. More broadly, municipalities have made layoffs, implemented hiring freezes, reduced hours of operation, and cut discretionary programs to maintain budget balance. In fact, Massachusetts municipalities have cut their number of employees more steeply than communities in any other state, according to the task force. The upshot: Cities that need to provide top-quality services to cope with special stresses and attract new jobs and residents struggle with a budget crisis that squeezes exactly these core functions most.

Weak governance. What's more, decades of economic and civic decline have left many Gateway Cities grappling with persistent governance and leadership problems—further barriers to getting the fundamentals right.

Gateway Cities' civic and political echelons, in this respect, have been depleted as large companies shut down, the middle-class moved to the suburbs, and executives were transferred away as local firms were bought out or merged. As a result, decades of disengagement have left a vacuum of energy, vision, and leadership in many cities—a vacuum in which anemic participation and reduced accountability has led, in some cases, to municipal drift and decay.

From this perspective, the Springfield corruption scandals are less the issue than are the day-to-day difficulties many Gateway Cities face in developing top-quality administrative processes in the absence of vigorous civic networks to demand them.

The lack of such a healthy civic environment makes it easier to see why municipal officials in several Gateway Cities lacked basic, up-to-date information on development challenges and industry needs—a problem identified by CURP's work on development "deal breakers." Likewise, such "thin" community engagement makes it easier to fathom why Springfield lacked an integrated accounting system as recently as last year, didn't then know how many employees were on the city payroll, made do with an IT system rooted in the 1950s, and kept many of its records by hand in ledger books, as reported in *CommonWealth* magazine.[58] In this fashion, deficits in the civic sphere have sometimes coincided with weak municipal government to undercut Gateway Cities' capacity to adapt to economic change and make themselves choice locations for families and businesses.

Stressed education systems

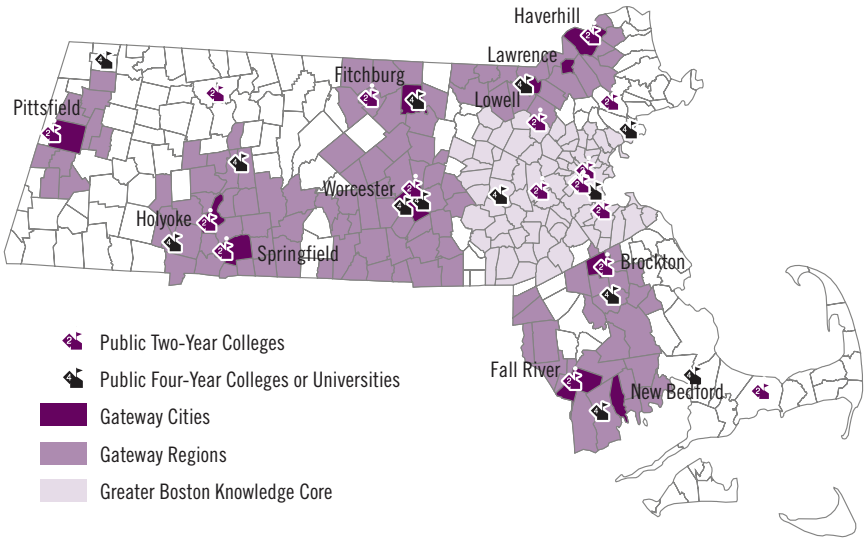
Even more limiting than the Gateway Cities' variable delivery of basic government services are their enormous skills deficits, and the challenges faced by local education systems.

What most distinguishes places like Boston that have connected to the knowledge economy and prospered? Ed Glaeser puts it simply: "Education."[59] Education allows individuals, businesses, and towns to adapt to change. Education makes a local labor pool productive and attractive to businesses. Or as the Progressive Policy Institute puts it, "When the most valuable input for many firms is the skills and talent of their workforce, a pool of skilled workers is the most important locational factor."[60]

Unfortunately, the Gateway communities lack

Figure 18:

Gateway Cities and their Neighboring Colleges



not only such a deep pool of talented workers, but a robust enough educational system to produce one. In this respect, the Gateway Cities and to a lesser extent their regions face their enormous education and training challenges with inconsistent, sometimes overwhelmed, K-16 education systems.

Struggling urban schools. At the K-12 level, Gateway City school districts contend with some of the state's greatest demographic challenges: limited English-proficiency student shares three to five times larger than the state average; low-income student proportions two to three times larger than the state figure.[61] Consequently, no more than 35 percent of Gateway City 10th graders achieved advanced or proficient ratings on the 2004/2005 MCAS achievement examination for math. That compares to the statewide 61 percent pass mark.[62] And the situation is equally stark in individual schools. Gateway Cities last year contained no less than 60 of the 108 schools in the Commonwealth where 50 percent or more of the students have been failing in math and/or English for two or more years, according to a tabulation by the Mass Insight Education and Research Institute.[63] Gateway schools, to that extent, lie at the heart of the state's urban schools crisis.

Insufficient adult literacy capacity. Additional problems hobble the cities' training capacity. Previous reports from MassINC, for example, have highlighted the inadequacy of the state's Adult Basic Education (ABE) and English for Speakers of Other Languages (ESOL) programs.[64] These programs are one of the principal places where adults with education needs begin to build their skills. And they matter especially to the 55,000 working-age Gateway City immigrants who struggle with limited English-speaking ability. However, data from the Massachusetts Department of Education confirm that even after years of heightened attention there were still over 22,000 prospective ABE/ESOL students statewide on formal, active waiting lists.[65] More than 8,000 of these applicants resided in the Gateway Cities. Thousands of these workers lack the skills needed to advance in a job, let alone advance the productivity of Gateway economies.

A variable higher-ed commitment. At the same time, MassINC, MassInsight, and other organizations have pointed to the variability of the state's public higher education system in providing skills development tuned to local employer needs.

To be sure, seven of the state's 15 community college campuses directly serve Gateway communities. That means that their geographical distribution makes them a critical resource for the Gateways in skill-raising. Unfortunately, the system remains decentralized and relatively isolated from GED, ABE, and other higher public education programs, compared to systems in other states. The result is that the state's two-year colleges remain underleveraged and vary from campus to campus in their willingness to partner with local businesses, engage with the commu-

nity, and focus on helping minority, immigrant, and low-income students obtain job-ready skills.[66]

And the same can be said about the rest of the state's higher education system. Extremely fragmented, Massachusetts' public higher education system consists of the university system, the state colleges, and the community colleges—all with their own management and oversight structures, each with their own budgets and boards and campus-level autonomy. On balance, this has precluded the rise of a deliberate, consistent system-wide public commitment to helping the Gateway Cities' harder-to-serve populations succeed in the skills race.

Spotty linkages to the state and global economy

Spotty transportation, electronic, and human linkages to the state and global economic mainstream present a final set of obstacles to the Gateway Cities' reconnection to the knowledge economy.

With information exchange now the key factor of production, full participation in the knowledge economy requires a rich, friction-free array of connections to the wider world. Unfortunately, gaps in the cities' "connectivity" continue to impede their engagement in the collaborative networks of the knowledge economy.

Transportation gaps. Incomplete transportation networks represent the most visible shortcoming in the Gateway Cities' infrastructure of connectivity.

Massachusetts is fortunate to have in place the rough outline of a comprehensive system of direct, convenient, and varied transportation links connecting at least most of Gateway Cities to each other and Boston. Completion of the Worcester connector will fill a glaring hole in the state's highway infrastructure, making downtown Worcester a straight shot from the Massachusetts Turnpike for the first time ever. Likewise, Massachusetts Bay Transit Authority (MBTA) trains currently deliver workers to and from downtown Boston from six Gateway Cities (Brockton, Haverhill, Fitchburg, Lawrence, Lowell and Worcester). Taken together, such connections place most of the easternmost Gateway Cities within a 50-minute commute of most of the region's major high-technology and financial services companies and provide them essential links to the region's economic core.

And yet, these links cannot really be called comprehensive, especially when it comes to commuter and intercity rail connections. Even in eastern Massachusetts, gaps in the network and service shortcomings on the Fitchburg and Worcester commuter rail lines likely impede revitalization.

GATEWAY CITIES FACE ENORMOUS EDUCATION AND TRAINING CHALLENGES

Currently it takes more than 90 minutes to travel the 50 miles from Fitchburg to Boston, while on the Worcester line track capacity and ownership issues mean only 10 trains depart daily on a 38-mile trip that takes a lengthy 70 minutes.[67] Fall River and New Bedford still lack a long-promised extension of commuter rail service that could serve as a catalyst for economic development.[68] Looking more widely, intercity Amtrak trains provide only minimal connections. Beyond the eight trains a day that link Springfield to Hartford, no more than one train a day links Pittsfield to Albany or Springfield to Boston or Albany or Burlington, VT. Such service shortcomings surely impede Gateway Cities' attempts to attract and retain residents who might commute elsewhere, spur revitalization near transit nodes, and link regional businesses and workers.

Broadband challenges. The expense, and limits, of available "broadband" Internet access options in the Gateway Cities represents another challenge.

More and more, participation in the global economy requires ubiquitous high-speed access to the World Wide Web. Already such access has become essential for allowing small and bigger businesses to connect to the larger world. Meanwhile, such connections grow ever more crucial to workers' efforts to obtain skills and locate opportunity.

Unfortunately, the availability of such links is still patchy in some low-income Gateway neighborhoods, while in all of the cities the standard broadband offerings—Internet via cable or DSL broadband—remain too expensive at $30 to $40 a month or more to be affordable for many of the cities' poor and immigrant families. That means that at a moment when many municipalities nationwide are finding ways to provide low-cost or free super-fast broadband to all of their residents, the Gateway Cities must too. To avoid getting left behind Gateway Cities must make sure all of their households and businesses gain full access to the next transformative wave of high-speed information exchange.

Limited regional linkages. Finally, the Gateway Cities contend with the vestiges of a last barrier to their full reconnection: The Commonwealth's persistent localism.

Increasingly, "the global economy...divides itself along regional lines, with conventional political boundaries having less and less relevance," remind the authors of "Lessons Learned."[69] Or as the Alliance for Regional Stewardship declares, "regions are where the action is and must be

"PLUGGING IN" TO OTHER HUBS

Opportunities for smaller cities to "plug in" to the currents of larger metropolitan regions do not run just west to east within Massachusetts, or solely between Boston's satellite cities and the Hub. They also run in other directions and across state lines. Pittsfield (given its relationship to Albany, N.Y.) and Fall River (with its ties to Providence, R.I.) are each already probing the importance of such ties.

No Massachusetts Gateway City, however, has placed more emphasis on developing its ties to a nearby larger metropolis than Springfield. Springfield-area leaders, in fact, have placed the city's evolving north-south relationships with Hartford—the fulcrum of the so-called "I-91 Knowledge Corridor"—at the very center of their development strategies.

Interestingly, this fluid connection has developed mainly out of proximity, workforce relationships, and the similarities of industrial composition—rather than the differentials in housing prices, capacity for development, and worker availability that are beginning to produce opportunities for Gateway Cities in relation to the Boston knowledge core.

In this respect, the Corridor's storied precision manufacturing industry has created a rich network of business relationships among firms throughout the Corridor, such as those formed between the aerospace giant Pratt and Whitney and the smaller companies that supply it with components.[74] Similar inter-state relationships are evident in the healthcare, insurance, catalog and Internet retailing, and professional, scientific, and technical services industries. Further stimulating north-south connections are modest 20- to 60-minute drive times between the two major cities and other Massachusetts and Connecticut towns that enable reasonable commutes throughout the Corridor. Indeed, interviews conducted by Mt. Auburn Associates revealed extensive existing inter-state commuting patterns, with employers in the Enfield area of Connecticut suggest-

today," meaning that neither workforce development, industrial strategy, housing issues, nor quality of life issues can be adequately tackled within traditional political boundaries.[70] Instead, a given locality must coordinate, communicate, and cooperate beyond its borders.

And yet, the Commonwealth's proud traditions of strong "home rule," and its relatively small political subdivisions, have repeatedly undermined initiatives to think broadly to revive distressed areas, as observed the "Lessons Learned" authors. Tony Flint and others have described the "competitive atmosphere" that frequently surrounds localities' efforts to increase their commercial tax bases to pay for schools and services.[71] Meanwhile, municipal officials themselves have long described Massachusetts cities' and towns' fierce attachment to local control over schools and land-use. As an Acton official explained recently to researchers from the Rappaport Institute for Greater Boston, there is a "huge emphasis on self-reliance" in Massachusetts, and it is generally considered a "badge of honor to be independent of everybody else around you."[72]

STATE RULES, LAWS, AND RESTRICTIONS OFTEN DISCOURAGE LOCAL EXPERIMENTATION AIMED AT COOPERATION

And the Rappaport researchers go farther: They note that state rules, laws, and restrictions often *discourage* local intergovernmental experimentation aimed at cooperation. They observe that limits on municipal revenue raising and expenditures foster parochialism by making leaders worry they may not "come out ahead in the

ing up to 40 percent of their workforce resides in the Bay State.

Hence the Springfield area's embrace of inter-city, trans-region connections as a competitive strategy. Recognizing the compelling claims of a cross-border economy that boasts the second-largest agglomeration of people, educational institutions, and employment in New England, Springfield leaders have collaborated with Connecticut leaders to create the Hartford-Springfield Economic Partnership, aimed at "increasing cooperative efforts to more effectively position and advance the economic progress and livability" of the region.[75] For its part, the Pioneer Valley Planning Commission also recognizes the importance of harnessing the shared assets of the Corridor. Cross-border collaboration is a key component of the commission's 2004 "Plan for Progress," a comprehensive road map for the future of the region that puts heavy emphasis on taking advantage of the skilled workforce, educational institutions, and knowledge-based industries contained within the Springfield and Hartford metropolitan areas.[76]

Of course, much more still needs to be done to ensure Springfield fully participates in the region's gathering economic power. Formidable gaps exist in both educational attainment and income between the two regions: The Springfield region's BA attainment rate trails Hartford County by five percentage points and its per-capita income lags by over $6,000. Moreover, the primary cities of the two regions face alarming rates of concentrated poverty, with about 34 percent of Springfield's poor and 27 percent of Hartford's poor living in neighborhoods of extreme poverty. Fortunately, Springfield's problems persist as deficits within the larger flows of a dynamic, highly connected region. Continued inter-state coordination and planning will be essential to reduce skills deficits and provide a more prosperous future for all Corridor residents, but especially for those in the Gateway Cities of Springfield and Holyoke.

end or that they will be seen by voters to have been snookered by a competitor."[73] Alternatively, the scholars conclude that state rules "directly constrain the exercise of local experimentation aimed at cooperation" by imposing limits on what regional organizations can do, and maintaining high degrees of bureaucratic oversight.

Given these circumstances, it bodes well that a new breed of regional economic development organization has emerged in the Gateway regions to foster coordinated, outward-looking connections between cities, towns, and the world. Forums like the Merrimack Valley Economic Development Council in the Lowell-Lawrence-Haverhill area, or the SouthCoast Development Partnership in the Fall River-New Bedford area, or the Western Massachusetts Economic Development Council in the Pioneer Valley, supplement localism with collaboration. When local and regional leaders establish common goals and work together on implementation, economic development has a better chance at success.

And yet, the state's "little box" system of local government, with its tendency toward parochialism, remains a problem to be transcended.

The bottom line: Massachusetts' Gateway Cities' stand poised by dint of logic, location, real estate trends, and demography, to gain a new economic relevance. But it won't happen automatically.

Governments shaky on the basics, stressed and inadequate education systems, and the cities' variable linkages to the wider world all impede their reconnection to the mainstream and must be dealt with.

V. RECONNECTING: An Agenda for Renewal

How, then, should the state proceed? What actions should state government and the Gateway Cities take to return these proud centers of industry to their past economic relevance and vitality?

To begin the work of reducing the unevenness of the Massachusetts economic map by reconnecting the Gateway Cities, state and local leaders must negotiate a new partnership to capitalize on the cities' legitimate strengths: their affordability, centrality, and demography.

These strengths represent potent competitive assets—both for the cities themselves and the state. After years of neglect, broad national trends as well as new attitudes and preferences within the state have begun to revalue the housing, existing infrastructure, and latent supply of potential workers available in Massachusetts' urban places.

However, these assets will not be leveraged without a major state and local collaboration that commits both the state and its Gateway Cities to a focused drive to address the significant obstacles the cities face in renewing their economies: their shaky provision of basic government services; their significant education and skills shortfalls; their spotty ties to state and regional economic currents.

And so the Gateway Cities and the Commonwealth should consider pursuing a series of short- and long-term initiatives aimed at helping the Gateway Cities and their citizens better participate in the state economy. Along these lines, eight initiatives here support three major strategies:

- Fix the basics
- Build the middle-class workforce of tomorrow
- Create new economic connections for the 21st century

By moving with new concentration in these directions, Massachusetts may yet more fully profit from the compelling assets offered by its pivotal older mill cities.

FIX THE BASICS

First, the Gateway Cities—in partnership with the state—must get the basics right. That means that, without exception, Gateway municipalities must make it a point of pride to do a top-notch job of managing their own basic affairs, which in turn must entail providing reliable, high-quality public services to city residents and private-sector investors. Improving basic management will be critical if the cities are to reestablish their reputation as dynamic hubs of opportunity. Improving service delivery, likewise, will be essential in order attract and retain upwardly mobile workers, middle-class families, and investors with a high quality of life. In all of this, meanwhile, the cities must take the lead, but the state has a role too.

The work should begin with two foundational agendas:

- Stabilize local finances and basic services
- Turn deal-breakers into "deal makers" to expand private sector investment

1. Stabilize local finances and basic services

Key recommendations:

- *Link state proposals to lock in a percentage of local aid to fund basic municipal services with serious efforts at cost control at the local level.*
- *Establish data systems to track government programs and services and create high-performance governance reporting and accountability systems.*
- *Make budget systems more transparent to compare costs from community to community.*
- *Focus funding and measure results on the basics—public safety and education.*

Getting the basics right must begin with local aid stabilization. Above all, mill city leaders—in exchange for improved management of their own financial houses—require greater consistency from the state in setting aside a defined share of state revenues for local aid.

Throughout the 1990s, funding provided through the Massachusetts Education Reform Act brought Gateway City school districts up to a "foundation" level of funding that supported important reform efforts. Improvements in the state's school building assistance program have

HIGH-PERFORMANCE GOVERNMENT IN FORT WAYNE, INDIANA

Fort Wayne, IN is very much a typical Rust Belt city, struggling to contend with the decline of its once strong industrial past. The original geographic area of the city has lost nearly 37 percent of its population in the last 50 years while household incomes have fallen from over 96 percent of the U.S. average in 1980 to under 87 percent in 2000. And like the Gateway Cities, Fort Wayne's historic reliance on manufacturing in times of rapid economic change left it saddled as the 1990s ended with a host of disadvantages, from low educational attainment to high levels of poverty.

Enter Graham Richard. Elected mayor in 2000, Richard set out to fix the basics of government, mend chaotic (or nonexistent) collaborative relationships, and introduce corporate-style performance and accountability standards for all city operations. The vehicle he used to achieve these goals was a private sector program known as Six Sigma, a data-driven process for achieving quality that emphasizes speed, accuracy, and continuous evaluation of performance. Under the mayor's management, the Six Sigma philosophy of reducing costs and pleasing customers was transferred to city hall with the understanding that the tax-paying citizens of Fort Wayne deserve the highest quality service provision for their money.

The results of Fort Wayne's government-process reforms are tough to argue with. In a short time, the city reduced water main replacement costs by 18 percent, cut pothole response time by 86 percent, and slashed the waiting time for building permits from 51 days to 12 days. And because the Six Sigma process permeates all functions of the city's government, these productivity enhancements have piled up, generating more than $10 million in cost savings over the last five years. In this time, Fort Wayne's first-in-the-nation municipal foray into Six Sigma practices has proven that statistical analyses and stringent quality control standards do not lose their power outside the boardroom. Such data-centric attention to detail, in fact, is making all the difference.

Why do these relatively small-bore enhancements of basic service-provision matter? Because basic services are frequently the "deal-closers" of business and residential location decisions. And because cities that fail to fix the basics will likely be unable to address their most crucial challenges. In Fort Wayne, in this respect, high-performance governance is creating the social, political, and economic capital for major transformative initiatives designed to reduce investment barriers and strengthen the city's workforce. A streamlined permitting process is making business attraction and expansion easier. And Fort Wayne is working to make sure new jobs are high paying ones through workforce development programs that are bridging the digital divide and fostering a culture of learning. Add to this the city's continuing progress in blanketing the entire municipality with a high-speed broadband network—a prerequisite for "connecting" in the knowledge-based economy—and Fort Wayne's work on the basics is positioning it well to move toward a more prosperous future.

For more information: See www.cityoffortwayne.org

likewise created a revenue stream for popular but expensive school construction program. Still, for all that, general *non-education* local aid remains "stagnant," as reported the Municipal Finance Task Force, and that has resulted in a decline in municipal services across the state. This is especially troublesome for the Gateway Cities with their high needs and special development challenges. Reforming the state's local aid program is therefore long overdue and essential to revitalizing the mill cities.

Two principles should ground reform: fairness and efficiency. First, local aid must be distributed in a way that's predictable, fair, and understandable, as well as focused on the larger need for re-leveraging the state's older hubs. Accordingly, the various distribution formulas should be reworked to take into account changing social economic status and local needs, with a focus on providing funds that help stabilize key communities and improve the quality of life.

But in exchange for locking in a percentage of the state budget for local aid, Massachusetts towns —with the Gateway Cities in the lead—need to pursue a more aggressive drive to control costs and improve services. On the cost side this will require improved management of healthcare plans; greater cost-sharing with municipal employees; and widened use of regional purchasing consortia like the Metropolitan Area Planning Council's regional services consortium which has saved member communities $2 million over the last two years. More broadly, the drive to fix the basics will likely involve the establishment of integrated "high-performance government" programs that seek to pour efficiency savings into continuous service-quality enhancements. For example, improved policing and enhanced parks and recreation administration must become top priorities as the Gateway Cities seek to attract

SOMERVILLE'S SOMERSTAT

Somerville, a diverse community of some 80,000 located just outside Boston, turned to performance measurement technology in 2004 as a way to reign in soaring municipal costs.[77]

Modeled on the "CitiStat" program used successfully in several cities including Baltimore, Somerville's SomerStat program was initially implemented in hopes of better tracking and so controlling the rising cost of local service delivery. To that end, SomerStat's staff of three gathers a wide range of raw information on the city's various departments, including financial records, departmental reports, and consumer contact figures and statistics which is then put into a database that city officials can use to track the provision of city services.[78] In this way, SomeStat has yielded a new level of up-to-date, precise metrics and strong accountability and has helped save Somerville money. Already officials estimate that SomerStat has helped identify as much as $10 million in actual or anticipated savings for the city, including 10-year savings of $7.7 million from renegotiating a waste management contract.[79]

But the system has proven valuable in other ways, too, for it has helped Mayor Joseph Curtatone and his staff improve the quality of city operations and service delivery. Most notably, the presentation of trend data on municipal performance at regularly scheduled meetings of city department heads, a key part of the program, has proven a catalyst for problem-solving and service-innovation. The meetings allow top program administrators to come together to discuss the state of the city's departments armed with the best information on the city's performance on the "basics." Likewise, administrators gain the opportunity to discuss central issues, priorities, and challenges in a far more informed, productive, and efficient manner than they did before. Facilitating this type of regular data-based discourse among department heads, the mayor's office, and other key decisionmakers has proven one of the key benefits of SomerStat. Over time it is allowing the city of Somerville to respond to problems and improve service more quickly, creatively, and smoothly. Clearly, programs like SomerStat can greatly assist Gateway City governments as they look to monitor, streamline, and improve the delivery of public services.

For more information: See www.ci.somerville.ma.us

and retain the next generation of middle-class workers and their families. In any event, nothing matters more than fixing the basics, and that will require new partnerships between state government, municipalities, and public employee unions, and improved capacity at the local level to manage costs and monitor performance.

2. Turn deal-breakers into "deal makers" to expand private sector investment

Key recommendations:

- *Establish a partnership between Gateway Cities, state government, and regional economic development organizations to expand private sector investment.*
- *Create opportunities for local officials to learn from the private sector and each other new strategies for economic development.*

More than financial stabilization is needed if Gateway Cities are to become more competitive in the race to attract private sector investment. Gateway Cities and the state must extend the reengineering of government to a major streamlining of the local development process to get it in tune with what the private sector needs and wants as it makes investment decisions.

There are today simply too many state and local obstacles to reinvestment in the Gateway Cities. State and local regulatory and administrative processes remain convoluted and slow-moving even as capital flows accelerate. Local project recruitment, review, decisionmaking, and site preparation too often takes too long—and needs to be clarified and accelerated. For its part, the legislature took a giant step forward in July 2006 with the passage of legislation to streamline and expedite the state's permitting and appeals process. But more can still be done, especially at the local level, to erase the barriers or "deal breakers" that must be overcome if older industrial cities are to compete successfully for private sector investment and economic development.

On this front, CURP's innovative work on turning urban "deal breakers" into "deal makers"—informed by extensive consultation with the private sector—provides Gateway City leaders important guidance on how to improve their competitive position. Among CURP's "deal makers" are recommendations urging cities to: partner with the private sector to identify development priorities; simplify and expedite permitting systems; market pre-permitted development sites; and create special urban overlay zoning districts employing more flexible and rapid permitting. CURP also recommends locating state and municipal facilities in urban areas to spur investment in cities, and advises cities to undertake more self-assessment, as well as to improve their websites to make them more attractive and useful to firms, developers, and location specialists. Many Gateway Cities have taken steps to adopt some of these dealmaker strategies, but more should be done. For its part, the state should support efforts and help build knowledge and capacity at the local level to implement these common sense reforms.

BUILD THE MIDDLE-CLASS WORKFORCE OF TOMORROW

Beyond providing services better, a new state-local partnership in Massachusetts must radically step up education and training efforts in the Gateway Cities. Both for individuals and cities, the more one learns, the more one earns. And so, cultivating the middle class workforce of tomorrow will be crucial in improving the lives of individual citizens, the productivity of the Gateway Cities, *and* the vibrancy of the entire state's economy. With Massachusetts straining to compete

in a global economy, after all, the state has not a potential worker to lose. In light of that, nothing matters more than enlarging the middle-class workforce in Massachusetts' Gateway Cities—many of which are increasingly returning to their traditional role as gateways for currently poor and under-educated but upwardly mobile immigrants and minority citizens.[80] To that end, three major initiatives appear essential:

- Redouble efforts at urban school reform.
- Boost the education and language skills of the adult workforce.
- Bolster family assets to generate wealth.

3. Redouble efforts at urban school reform

Key recommendations:

- *Refocus state efforts on urban education and use new state funds to invest in reforms that are working.*
- *Don't strand kids in failing schools.*
- *Provide more school choice.*

Urban school reform remains critical. Notwithstanding Massachusetts students' often-high rankings on national tests, the achievement gap between the poor and non-poor schools remains shocking. For example, 14 out of 26 schools declared "underperforming" by the state Board of Education last year lie within Gateway Cities and may be subject to state intervention if MCAS scores do not improve. Even though recent MCAS scores showed big improvements in student achievement for 10th graders in two Gateway Cities, Brockton and Lowell (as well as Boston), education reform remains, at best, unfinished business in the mill cities. The bottom line: The Commonwealth and city leaders must redouble their efforts at urban school reform if the Gateway Cities are going to reclaim their role as training grounds for the state's future workforce and starting points for upwardly mobile immigrants and minorities.

In that regard, while money remains important, what is most needed now is a renewed focus on academic outcomes among urban students, whether it be through tough standards-based school reform, swifter diffusion of best practices, or greater school choice.

Redoubled standards-based school reform is one approach. Along these lines, Mass Insight's Great Schools Campaign lays out three very specific dicta: Raise the ceiling on standards, in particular math and science; raise the floor for passing; and make no excuses—turn around failing schools in three years. In this spirit, Mass Insight would link added investment in urban schools to additional teacher training and recruitment, incentive pay, and new program design in high-need communities. Any state funds beyond the foundation budget would be used to *selectively* support other innovations such as expanding the school day/year, dropout prevention, and academic support programs provided that schools demonstrate continually improved educational outcomes.

CULTIVATING THE MIDDLE CLASS WORKFORCE OF TOMORROW IS CRUCIAL

Another approach is to more rapidly disseminate the practices of schools where scores are going up. Reports from the state's Office of Educational Quality and Accountability provide useful information about how districts are using education reform to improve student outcomes as well as where improvements are needed. Research by the Rennie Center for Educational Research and Policy identifies five common practices that show promise for closing the achieve-

ment gap in urban schools, including: setting and communicating high standards; creating a school culture that supports teachers and students; and using data to drive change. What's unclear is how effective the state has been in helping to identify and bring to scale promising "best practices." With more than a decade of education reform under its belt, clearly the state can do more, perhaps in partnership with the University of Massachusetts, to disseminate and replicate best practices in standards-based reform.

Finally, parents in Gateway Cities need more school choice. Too few parents, for one thing, know about their rights under the No Child Left Behind Act. Under federal law, parents with students in schools needing improvement have the right to transfer their child to another school in the district or request supplemental tutoring in math and literacy. Accordingly, service through these programs should be much easier to obtain.

STRENGTHENING THE STATE'S COMMUNITY COLLEGE SYSTEM REMAINS IMPERATIVE

And other types of schools should become more available. For example, Horace Mann charter schools provide parents with more choice and encourage teachers and districts to collaborate on creating innovative school models. With only seven out of 48 Horace Mann charters issued, this model of school reform has been underutilized. More of those schools should be chartered. Vocational and technical schools should also be made more available in Gateway Cities. Much maligned by traditional academics, these schools have shown that they too can prepare students for post-secondary education. Expanding "two plus two programs", where students in their junior or senior years work toward college admission in a vocationally oriented two-year program, would offer additional alternatives to upwardly mobile families hoping to provide tomorrow's workers with the skills they will need to prosper.

4. Boost the education and language skills of the adult workforce

Key recommendations:

- *Create stronger links between English language classes and workforce development programs by using state funds to integrate ESOL with the workplace.*
- *Mobilize community leaders to support and expand literacy initiatives through media and public outreach campaigns.*
- *Establish high-performing community colleges linked to high-demand jobs.*
- *Become more welcoming to newcomers and turn diversity into strength by bringing the immigrant community into the planning process.*

Stepped-up skills-building for adults is also essential, given the large and growing need in the Gateway Cities. Quite simply, the state's "changing face," as a recent MassINC report had it, represents a major opportunity to turn diversity into economic strength—but *only* if the Gateway Cities and the state surmount a massive training deficit.

Currently, the state's ABE and ESOL programs and community colleges fall far short of responding adequately to that challenge.

Beyond the low skill level of the cities' general population, more than 50,000 working-age Gateway City immigrants struggle with limited English, and more than 70 percent of them likely lack the skills they need to compete in the knowledge economy.[81] That means they either lack a high school diploma or GED or have limited English-speaking skills or both. In many of the

Gateway Cities, one in three immigrants makes do with limited English-speaking ability.

And yet, state-funded ABE/ESOL programs today reach no more than about 4 percent of those who might benefit from them. Statewide, the waiting list for ABE/ESOL stands at over 22,000 with more than 16,000 seeking ESOL; over one-third of those on the list reside in Gateway Cities. To be sure, the economic stimulus bill passed last summer included more funding for ABE/ESOL programs and this will help, but clearly the state needs a bold plan to, at the very least, determine how to add seats to ESOL classes. Within the Gateway Cities, moreover, much more must be done to bring ESOL providers, employers, and funders together. The development and expansion of public-private partnerships that promote literacy must become a greater priority. Literacy and English proficiency ought to become the subjects of a "coordinated campaign" involving mayors, leading business executives, nonprofit leaders, educators, and the media. Businesses can help by offering ESOL classes on-site, underwriting additional classes, and supporting efforts to expand federal and state funding of ESOL classes. State workforce dollars should be used to leverage more private sector investment, particularly in high need communities like the Gateway Cities.

Ensuring workers have the basic skills is just the first step, however. Increasingly, workers need to have some post-secondary education to advance in the workforce and there are several indications that the demand for skilled workers will only grow in the years ahead. Commonwealth Corp. projects that by 2009, almost 70 percent of new jobs statewide will be created in professional and business services and education and health care—two sectors that especially depend on a skilled workforce. For its part, the Massachusetts Department of Unemployment Assistance reports that the proportion of job vacancies requiring an associates degree or higher is growing.

In view of this, strengthening the state's community college system—which maintains strong ties in each of the Gateway Cities—remains imperative if the state is to raise the skill level of mill city workers and so replenish its workforce as it competes in the knowledge economy. To be sure, several efforts have been launched in recent years to increase the capacity of the workforce development system, improve collaboration between workforce providers and the private sector in key sectors, raise performance standards and accountability, and fully engage community colleges in workforce development. But these programs lack scale. Meanwhile, the legislature is currently considering legislation that would invest new money in public higher education, stabilize the system's finances, and toughen accountability with a focus on meeting the state's workforce development challenges. In any event, more should be done to ensure new money is used to drive change, strengthen system governance, and ensure that high-performing community colleges work more closely with Gateway-region industries to produce more graduates with solid skills.

Finally, making Massachusetts more welcoming to newcomers is another way to forge linkages. Stronger links between the state's one-stop career centers and community-based programs and businesses that serve and employ immigrants might be one way to better integrate immigrants. In Iowa the state has created "New Iowan Centers" to provide one-stop services to immigrant workers. And Boston has established a program in the mayor's office to provide one-stop services to new Bostonians. Community leaders should also focus on building the local capacity of civic lead-

ership by becoming more inclusive in community decision-making.[82] For example, Lawrence CommunityWorks established an institute to train neighborhood leaders for civic leadership and to facilitate greater involvement in housing and economic development projects. These community development efforts should receive more support from foundations, the private sector, and local business leaders and must be linked to plans for economic revitalization.

5. Bolster family assets to generate wealth

Key recommendations:

- *Partner with employers to help Gateway City workers access EITC benefits.*
- *Extend free tax preparation service.*
- *Build and protect assets, with programs like IDA's.*
- *Provide homeownership counseling.*

Another way to support the emergence of a middle-class workforce is to find ways to increase the incomes and build the wealth of low-income households. Supporting income- and wealth-growth will also support skills-building, so Massachusetts should develop efforts that help make work pay, promote homeownership, and protect and build assets.

Many working families struggle to make ends meet, leaving little opportunity to bolster skills—let alone save for college, homeownership, or retirement. Leveraging existing federal and state programs to supplement incomes, however, is one way of helping low-income families move up that should be explored.

A number of programs already exist to bolster workers' incomes, and range from increasing the minimum wage and providing income subsidies such as food stamps, to promoting the earned income tax credit (EITC)—a tax credit for working families who earn less than 200 percent of the federal poverty standard. Massachusetts complements the federal EITC for low-income families with a very generous state credit.[83] However, these federal and state programs are not being fully utilized. The U.S. General Accounting Office estimates that only 86 percent of working families with children who were eligible for the EITC filed for the tax credit and only 45 percent of eligible workers without children filed for it.[84] Similarly, only about half of the adults eligible for food stamps in major metropolitan areas actually received them.[85]

The upshot: Money is being left on the table. Or put it this way: If just 5 percent more of the eligible EITC filers in the Gateway Cities obtained the benefit, it would mean more than 4,000 additional working families would receive the credit, bringing $5.2 million new dollars into family pocketbooks and the Gateway economy.[86] According to the Massachusetts Department of Revenue only 330,290 filers made use of the state's EITC program in 2004, the most recent year for which full data is currently available. No wonder that numerous campaigns have been mounted to increase the participation rate of these programs. By partnering with major employers, the state can help connect low-income workers to benefits they are already eligible for.

Another way to get more money into pocketbooks is to make tax preparation free to low-income households, particularly for the growing number of minority and immigrant households in Gateway Cities. Commercial tax preparers often charge high fees for services and high interest rates for "rapid refund loans." Reducing the use of these tax preparers, and hence reducing the amount of money spent in fees and interest, allows low-income families more access to their own money.

In sum, by using existing programs more

effectively, Massachusetts can provide an immediate boost to low-income families' budgets that will support skills-building and upward mobility.

Just as critical as programs and policies that help boost income are those that help working people accumulate wealth and assets. Income is the flow of dollars over a period of time from salaries, wages, and tax credits. Wealth, on the other hand, includes assets such as a house, stocks and bonds, as well as any kind of savings. A two-dollar-an-hour raise, for example, might be enough for a family to break the poverty barrier, but if the family is not equipped to build wealth, the family's future economic outlook has not really changed. A household with limited wealth does not have the assets to pay for higher education, plan for retirement, or weather a medical emergency. Such a household is likely living paycheck to paycheck without progressing up the skills ladder.

Helping low-income households build and protect assets is important, then, not only in places such as Lawrence and New Bedford (where high poverty rates and a growing immigrant population make asset accumulation difficult), but also in Gateway Cities like Lowell or Worcester, where appreciating housing markets, the use of variable-rate mortgages, and a proliferation of fringe check-cashing firms and payday lenders expose lower-income households' to risk as well as opportunity.

Against this background, the state and Gateway Cities should work together to promote financial literacy and asset accumulation among Gateway City residents.

Financial literacy is a fundamental part of any policy agenda to build wealth among low income and minority households. More than ever, families need to be savvy consumers of financial products in order to be able to build wealth. Children who grow up in households with low levels of financial proficiency have little chance to learn how to balance a checkbook, understand compound interest, or know what an individual retirement account is. To promote such learning, city and state program administrators and local businesses should seek opportunities to provide education about personal finance basics whenever possible, whether in the workplace or at school, as part of state benefits programs, or in conjunction with opening a bank account.

GATEWAY CITIES SHOULD CREATE PROGRAMS TO FOSTER HOME OWNERSHIP

At the same time, state governments, non-profit groups, foundations, and businesses should support true wealth-building among Gateway City residents.

One increasingly popular strategy for stimulating asset-accumulation is the creation of matched-saving programs, such as individual development accounts (IDAs), that help low-income families save for college, job training, buying a home, or starting a business through accounts that match their savings. Typically, an IDA program matches with anywhere from one to two dollars for every dollar a participant puts into the account, with the matches funded by a combination of public and private sources.[87] Frequently, local non-profits contract to run the programs.[88] More of them should be established and more widely marketed and capitalized.

In like fashion, promoting homeownership is an especially salient component of developing the middle class in Massachusetts' Gateway Cities, and—when linked to a larger strategy of financial literacy and wealth building—can help move families and cities toward greater economic stability. A home, after all, represents American

families' largest and most important single asset, and can contribute greatly to a family's financial security and well-being.[89] Particularly in communities just beginning to enjoy rapid appreciation, homeownership represents an achievable route to wealth. Nothing more confirms progress toward the American Dream for the low-income, working-class, or immigrant communities of Lawrence, or Lowell, or Worcester.

Nor does homeownership benefit only individual families; it is also a boon to struggling municipalities like the Gateways.[90] High homeownership rates are associated with stabilizing property values—a critical need in the Gateway Cities. Moreover, homeownership seems to bring with it a higher rate of civic participation, and a lower level of social ills such as elevated school dropout rates.

And so Gateway Cities should create programs designed to foster homeownership. Free homeownership counseling for first-time homebuyers, with particular emphasis on how to avoid predatory loans and dangerous mortgage structures, is one way to promote homeownership. So, too, can city officials use federal grant dollars such as the Home Block Grant or Community Development Block Grant (CDBG) funding to help homebuyers with mortgage assistance, down payments, and closing costs. And yet, homeownership should not be promoted indiscriminately. Particularly given the historical volatility of Gateway City real estate markets, efforts should be made to help families make prudent decisions about home buying and avoid the recent proliferation of dicey mortgages and fringe financial service providers.

HELPING LOW-INCOME FAMILIES CLAIM THE EITC IN PROVIDENCE, RHODE ISLAND

In recent years leaders in numerous larger cities—including Boston—have implemented programs to help low-income families prepare their taxes and access existing public work supports like the earned income tax credit (EITC). These cities recognize that helping low-income working families boost their incomes is a crucial strategy for enlarging the middle class, and may even help lower-skilled workers and their children afford the time and expense of skills-building.

But now smaller cities are realizing how tax assistance programs can help low-income residents as they aspire to the middle class.

The Providence Family Asset Building Campaign is an innovative example of such a program. Founded in 2001, the campaign provides low-income families earning less than $38,000 with free tax assistance through eight community-focused host agencies sited in the more distressed neighborhoods within the city of Providence.

Open one or two weekday evenings and Saturdays at various sites during "tax season," campaign sites employ Internal Revenue Service-trained volunteers to meet with families, understand their tax status, and help them prepare their tax returns for free. This allows low-income families to avoid commercial preparation fees and refund anticipation loans (RALs). But what is more important, the program assists its clients in obtaining the EITC and other available credits—credits that frequently go unclaimed and can provide struggling families needed cash.

To that end, the campaign saturates low-income neighborhoods like Elmwood and the West End with outreach in order to reach more families and bring more money into struggling communities. The community organization ACORN mounts a door-to-door outreach effort to reach families, for example. Likewise, campaign organizers place flyers in local grocery stores and markets, and this year distributed 35,000 brochures through local public schools for students to take home. There is also a special emphasis on

CREATE NEW ECONOMIC CONNECTIONS FOR THE 21ST CENTURY

Finally, the Gateway Cities, their regions, and the state must adopt a new mentality of collaborative competition. In the past, prosperity turned on the sovereign power of individual capitalists, individual factories, and individual mill towns. Today economic development depends more on establishing partnerships, nurturing networks, and building interconnected regions that can compete globally for jobs and services. More and more the Gateway Cities will need to collaborate with local institutions, their suburban and rural neighbors, and across state borders to stay in the game for jobs and growth.

6. Leverage Gateway City colleges to spark economic development

Key recommendations:

- *Connect to Gateway City colleges and universities to anchor revitalization.*
- *Charge the UMass system with sparking revitalization in Gateway Cities.*

Gateway Cities can benefit from strong collaborations between "town and gown" to anchor revitalization, pursue economic development, and train local workforces. For that reason, the state should take the lead in building town-gown relationships, investing in economic and workforce development partnerships, and providing information on best practices such as Clark University's University Park Partnership in Worcester.

working with immigrant groups, especially Latin American and Southeast Asian families as EITC participation is particularly low among foreign-born residents. Many of the volunteers are bilingual, and almost every site has a language specialty. Additionally, two of the eight host agencies are immigrant-oriented community organizations (the Providence Spanish Seventh Day Adventist Church and the Socioeconomic Development Center for Southeast Asians).

What has resulted from this work has been money in the pockets of Providence's hardest-working poor residents. Thanks to the initiative's broad support—which includes promotional appearances by the mayor, the strong endorsement of the Chamber of Commerce, multiple community partners, and grants from the United Way and the Annie E. Casey Foundation—more and more tax credits that would not have been claimed have been. In 2001, when the Providence Family Asset Building Campaign started, four sites helped 366 families file returns. In 2005, some eight sites assisted 1,100 families in filing returns. These filings brought in $1 million in EITC money, and $1.6 million in total refunds, to Providence families and their neighborhoods. The campaign also saved low-income Providence residents over $200,000 in tax preparation fees and RAL interest.

As to the next step, the initiative has begun to think about broadening its mission of helping build a new middle class in Providence. This year, the campaign sought to use the provision of free tax assistance as an entrée to help families with other financial needs, such as financial literacy, access to banking, credit management, or affordable housing. And in the near future program leaders are considering adding a matched savings program to encourage middle-class aspiration through asset accumulation. In this way, the Providence EITC campaign may broaden its pragmatic efforts to foster the emergence of a new middle class in a New England mill city.

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One model worth expanding throughout the state, for example, is Southcoast Connect, a regional partnership of higher education institutions between Bristol, Massasoit, and Cape Cod community colleges; Bridgewater State College; and the University of Massachusetts at Dartmouth.[91] Through the partnership, one region's higher education institutions are collaborating to improve classroom instruction, enhance workforce development, forge links between education and business, and schools, local government, and the private sector. Along the way both Fall River and New Bedford have benefited from catalytic partnership investments in their downtowns. What's needed now is work to strengthen these partnerships and develop them in other regions. Similar public higher education partnerships are underway in northeastern Massachusetts and the Berkshires. Gateway City colleges and universities should be encouraged to collaborate on economic development projects as much as possible.

SPARKING REVITALIZATION IN THE GATEWAY CITIES SHOULD BE A CORE MISSION OF UMASS

And there is a special role in all of this for the five-campus University of Massachusetts system, anchored by its flagship Amherst campus. With campuses in Lowell, Worcester, Amherst, and Dartmouth, the system represents the largest investor in university research and development outside of Route 128 and stands as a significant and potentially transformative economic development force for virtually all of the Gateway Cities. For its part UMass-Amherst is the largest and only major research university in western Massachusetts. Strengthening these universities connections to the region's Gateway Cities through targeted investment in research and development could play a huge role in catalyzing private-sector investment, revitalization, and job-creation in the Gateway Cities. Sparking revitalization in the Gateway Cities should be a core mission of UMass– Amherst as well as the rest of the UMass system.

7. Grow the regional economy through "hard" and "soft" connections

Key recommendations:

- *Put rail connections on the fast track.*
- *Promote regional, interstate, and global linkages through collaboration.*

Additional types of "hard" and "soft" connections need to be forged.

The state's enviable but incomplete web of rail links requires attention. Few doubt that Brockton, Haverhill, Fitchburg, Lawrence, Lowell, and Worcester have greatly benefited from commuter rail connections. Affordable housing and access to commuter rail have made these Gateway Cities in part "bedroom" communities for workers in Greater Boston. The train stations also provide opportunities for smart-growth housing development and new business ventures that take advantage of locations near the rail station to serve commuters. Along all of these corridors, bolstering service with increased train service represents a sound investment. Further west, Springfield and Holyoke are also poised to benefit from expanded rail service to Hartford and New York City, a growing corridor for that region. That will help Springfield and Holyoke immensely.

And yet, Southeastern Massachusetts—one of the fastest growing regions in the state—remains unserved. With state dollars earmarked for "transit oriented development," both New Bedford and Fall River lose out. Closing this gap in the state's

transportation web should be an important goal.

But with competing priorities for public transportation funds and with the commuter rail system currently under-funded, paying for expansion remains a problem. It is not clear how the $700 million needed to expand commuter rail service to New Bedford/Fall River will be financed any time soon under traditional models of infrastructure financing. And so it is time to think creatively. Perhaps the state should think outside traditional finance models and use projected revenue from future development along the corridor to secure bonds that can be used to reduce the cost of the project and complete this missing piece of the commuter rail system.

Another sort of linkage to foster are those of the city to the region, and region to the world. Massachusetts municipalities have a long and fiercely defended tradition of home rule, but fortunately, a new breed of region-oriented organization has begun to pursue more collaborative economic development strategies in most Gateway City regions. These new civic organizations encourage public-private collaboration, provide a forum for focusing on big-picture issues, and promote regional assets to an increasingly global audience. The state can encourage the growth of regional organizations by leveraging them for economic planning and information sharing. In areas near state borders, the state can promote a range of activities to help regional economies develop. Simple activities like providing economic research to Gateway City communities on neighboring regions to more complex efforts like supporting bi-state economic development corridors make a difference. And Massachusetts should look for opportunities to collaborate with its New England neighbors, especially on key issues like energy, transportation, education, and trade.

PURSUING STRATEGY ACROSS BOUNDARIES IN GREATER LOUISVILLE

Deindustrialization has not been kind to the manufacturing city of Louisville, KY., which in the 1980s and 1990s continued to lose quality industrial jobs (though not so precipitously as the Gateway Cities). Over the course of a decade, however, the city has begun to reinvent itself—in large part by dint of Greater Louisville, Inc. (GLI), one of the nation's most robust cross-jurisdictional, multi-state regional business organizations. Few development entities have worked so concertedly to transcend local and state boundaries to modernize a regional economy as GLI.

GLI was formed in September 1997 through the merger of the Greater Louisville Economic Development Partnership and the Louisville Area Chamber of Commerce. This merger came about after a lengthy process of study and discussion, from which emerged a growing consensus that economic development activities in the region had been divided among too many organizations. In short order GLI emerged as the dominant business-led civic organization in the region, and began a major drive to make the region's economic development efforts more efficient and productive.

GLI's efforts have ever since been resolutely research-driven, highly strategic, and—above all—regionalist in a potentially fragmented service area.

Catalyzing the organization's creation was a 1996 study by the University of Louisville economist Paul Coomes, which "benchmarked" Louisville against 18 competing cities and showed the region seriously lagging on a number of important socio-economic indicators, such as educational attainment, entrepreneurial activity, retention of young people, and overall population growth. Soon thereafter, GLI hired consultant Ross Boyle to help its Visioning Committee develop a true regional economic strategy. This document urged a tight focus on two niches (health industries and logistics) as well as work to build on traditional strengths such as manufacturing and agribusiness—emphases that GLI has maintained.

But what has been perhaps most impressive about GLI's work to revitalize and expand the greater Louisville economy has been its drive to transcend boundaries and work across municipal, county, and state lines. GLI serves the region encompassing Louisville

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PURSUING STRATEGY *continued from page 51*

and a significant portion of Southern Indiana. It takes as its focus not just the 13-county metropolitan area defined by the Census Bureau but the 25 counties that fall within the U.S. Bureau of Labor Statistics (BLS) labor shed—an area in which lie numerous incorporated municipalities.

Given this wide two-state purview, GLI has made cross-boundary collaboration central to its operations, and has moved to strengthen its Kentucky-Indiana partnership, putting much time and effort into building relationships across county and state lines. Securing funding for two new bridges across the Ohio River has been an important unifying success. More broadly, GLI cultivates shared perspectives by flying a bi-state delegation to Washington, D.C. each year to meet with bi-state congressional leaders. And at the state level, GLI has tended to have a more active role in Frankfurt, but has recently begun to focus more on Indianapolis. Beyond that, a new push to craft a greater Louisville "brand" is fully integrating Kentucky leaders and organizations in plans to replace "fragmentary" current messaging with a pro-active "place brand" that promotes the 25-county bi-state economic region as a whole. Comments GLI's chief operating officer Joe Reagan: "Playing as a region is critical if we're going to play globally, because that's the way global firms think. They don't think about whether it's Louisville, KY, or a part of the metro in Indiana. All they know is Louisville, the approximate region, so we need to reduce the clutter if we want to attract them."

As to how all of this works day-to-day, at least one success—the region's 2004 landing of a 130-job new research and engineering facility in the auto parts industry—suggests that concentration on the regional good really is beginning to trump intramural turfism. In this instance, Toyoda Gosei North America—a supplier to Toyota—approached GLI about a site in the city of Louisville, toured several buildings, but could not find the ideal site. However, GLI—with its regional perspective—was determined to bring the company to the area, and turned for help to a cross-river affiliate, the Southern Indiana Economic Development Council (SIEDC). On short notice, a team at SIEDC scheduled a tour of properties in the towns of Jeffersonville and New Albany. The perfect location was found and Toyada Gosei announced their new location in October, 2004. In short, GLI had facilitated a siting in nearby southern Indiana that was considered a coup for the region with considerable spillover benefits for the city of Louisville. In this way, step by step, transcending jurisdictional barriers and thinking like a region is helping a once-fading Rust Belt city rebuild its competitiveness in a globalizing economy.

For more information: Visit www.greaterlouisville.com

8. Develop broadband and wireless infrastructure to prepare for the future

Key strategy:

- *Don't wait to get in the new game — plan now for the broadband future.*

Finally, business leaders are more and more telling Gateway City policymakers that ubiquitous, high-quality broadband coverage is now a prerequisite for participation in the global economy. At the same time, hundreds of communities all across the country are realizing the role that high-speed access plays in boosting efficiency and lowering the costs of government, addressing issues of social justice, and fostering civic engagement. For all of these reasons, each of the Gateway Cities should now be assessing its broadband capacity and how it will provide it universally.

Fortunately, cities will not be alone as they seek suitable approaches. State legislation has already created a broadband office within state govern-

ment and a broadband council at MTC's John Adams Innovation Institute that will help with the design, testing, and implementation of wireless networks. Meanwhile, dozens of efforts are now underway around the state to create low-cost, robust, and ubiquitous broadband access. In southeastern Massachusetts, a regional cooperative effort is working to extend neighboring Rhode Island's statewide system and blanket the region with low-cost wireless coverage. In Boston, the so called "Boston Model" created by a task force and supported by Mayor Menino proposes an innovative plan to build and deploy a wireless mesh network that would blanket the city with low cost, high-speed coverage. And for its part, Brookline has approved licenses for vendors to completely blanket their community with ubiquitous broadband in 2007, while Brockton, Springfield, Chelsea, and many other cities are either planning or testing localized "hot spots" as a first step to full coverage.

The point here is that while no "one size fits all" municipal broadband solution exists, the time has come for all of the Gateway Cities to begin looking for an appropriate, cost-effective way to provide universal broadband service. Quite simply, universal broadband access is no longer a novelty or "PR" item for cities to install; it is a basic requirement of business, a potential municipal cost saver, and a driver of innovation and growth.

Nearly 10 years have passed since MassINC published "Lessons Learned." And yet, the challenges of Massachusetts' uneven economic map identified in that report remain. The heavy concentration of the state's knowledge economy in a narrow collection of Greater Boston municipalities has left the Gateway Cities and other major population centers struggling to move beyond an industrialized past and into a knowledge-based future.

THE TIME HAS COME FOR LEADERS TO HELP GATEWAY CITIES BETTER PLUG INTO THE KNOWLEDGE ECONOMY

The time has come to act. The time has come for a new governor, the legislature, and local leaders to forge a new campaign that will help Gateway Cities better plug into the knowledge economy, and so better contribute to the entire state's prosperity. Massachusetts' Gateway Cities have a lot to offer, including affordable housing, room and the desire to grow, and a youthful, upwardly mobile workforce. It's time to put these cities back to work for the benefit of the Commonwealth.

Endnotes

1. "Weak market cities" are the subject of a broad national research initiative being led by the Brookings Institution Metropolitan Policy Program. A forthcoming national "framing" paper will at once define the economic characteristics of "weak market cities" and provide a cross-cutting state policy agenda for their revitalization. See Jennifer Vey, "Revitalizing Americas Weak Market Cities" (Washington: Brookings Institution, forthcoming).

2. For a discussion of the tendency of high-tech and "knowledge"—oriented firms to cluster see Ross DeVol and Perry Wong, "America's High-Tech Economy: Growth, Development, and Risks for Metropolitan Areas" (Santa Monica: The Milkin Institute, 1999).

3. Massachusetts Technology Collaborative, "2006 Index of the Massachusetts Innovation Economy." (Westborough: 2006).

4. Based on the June 30, 1999 Census metropolitan statistical area definitions.

5. The 75 cities and towns that make up the Greater Boston Knowledge Core are: Acton, Arlington, Ashland, Bedford, Bellingham, Belmont, Bolton, Boston, Boxborough, Braintree, Brookline, Burlington, Cambridge, Canton, Carlisle, Chelsea, Cohasset, Concord, Dedham, Dover, Everett, Foxborough, Framingham, Franklin, Hingham, Holbrook, Holliston, Hopkinton, Hudson, Hull, Lexington, Lincoln, Littleton, Lynn, Malden, Marlborough, Maynard, Medfield, Medford, Medway, Melrose, Milford, Millis, Milton, Nahant, Natick, Needham, Newton, Norfolk, Norwood, Quincy, Randolph, Revere, Saugus, Sharon, Sherborn, Somerville, Southborough, Stoneham, Stow, Sudbury, Swampscott, Wakefield, Walpole, Waltham, Watertown, Wayland, Wellesley, Weston, Westwood, Weymouth, Winchester, Winthrop, Woburn, and Wrentham.

6. BEA Regional Income Accounts, SA1-3, available at www.bea.gov/bea/regional/spi/drill.cfm; adjusted to 2005 dollars.

7. Brookings analysis of ES-202 data from the Massachusetts Department of Employment and Training.

8. Donahue Institute, University of Massachusetts; "Toward a New Prosperity: Building Regional Competitiveness Across the Commonwealth (Boston: Massachusetts Department of Economic Development).

9. The Milken Institute's 2004 "State Technology and Science Index" rates Massachusetts' "research and development inputs" by far the nation's deepest. Massachusetts ranks in the top five in 16 out of 18 categories, which assess the state's university and private technology-related research activities, funding flows, patenting levels, and technology transfer. See Ross DeVol and Rob Koepp, with Junghoon Ki, "State Technology and Science Index: Enduring Lessons for the Intangible Economy" (Santa Monica: Milken Institute, 2004).

10. Brookings analysis of decennial U.S. Census Bureau data.

11. Brookings analysis of U.S. Census American Community Survey data.

12. Ross DeVol summarizes the literature on the tendency of knowledge- and technology-based economic activity to cluster in Ross DeVol, "America's High-Tech Economy: Growth, Development, and Risks for Metropolitan Areas" (Santa Monica: Milken Institute, 1999).

13. The terms "Greater Boston" and the "knowledge core" or "tech core" refer to a cluster of 75 metropolitan Boston cities and towns that contained some 70 percent of the state's knowledge industry jobs in 2005, and contain them in especially high concentrations. See the box, "About the Analysis," on page 11.

14. Brookings analysis of data from the Massachusetts Department of Employment and Training.

15. Recent theory in economic geography holds that knowledge-based industries tend more than others to cluster in close proximity to educated workers, to excellent educational and research institutions, and each other—where ideas and practices can be generated, transmitted, and commercialized most efficiently. For more on this see DeVol, "America's High-Tech Economy."

16. Brookings analysis of data from the Massachusetts Department of Employment and Training.

17. Brookings analysis of 2000 U.S. Census Bureau data.

18. Brookings analysis of 2004 CorpTech data.

19. Michael Porter, "The Competitive Advantage of Massachusetts" (Cambridge: Monitor Company, 1991).

20. Per-capita income numbers for Greater Boston and the Gateway Cities are derived from decennial Census data, which differ from the BEA per-capita personal income numbers. The Census data allow for calculating the per-capita incomes of smaller geographies while the BEA data include more types of income. Per-capita incomes calculated from the Census data are generally lower than the amounts calculated with the BEA data.

21. It bears noting that the 1990s boom failed to significantly boost the income of the typical greater-Boston household despite significant per-capita income gains. In real terms, median household income in the area edged up from $62,815 in 1990 to $65,136 in 2000 to grow by just 3.6 percent. That compared favorably to the 2.4 percent growth in the rest of the state (the median household income of which moved from $54,915 to $56,228). But it placed the region's average household only modestly ahead of where it was a decade before, and since 2001 Boston-area households have given back some of their gains.

22. Brookings analysis of U.S. Census Bureau data.

23. The 11 Gateway Cities include Brockton, Fall River, Fitchburg, Haverhill, Holyoke, Lawrence, Lowell, New Bedford, Pittsfield, Springfield, and Worcester.

24. Brookings analysis of data from the Massachusetts Department of Employment and Training.

25. Even comparing Gateway regions collective $25,650 figure to the Greater Boston trend rates their per-capita income just 73 percent of the knowledge core's.

26. Brookings analysis of U.S. Census Bureau data.

27. Massachusetts Department of Employment and Training. Regional figures utilized BLS ES-202 data and used NECTAs containing the Gateway Cities as proxies for the Gateway regions.

28. The net migration rate was found by subtracting the year-1990 population of 15–24 year-olds from the year-2000 population of 25–34 year-olds and then dividing by the average of the two. For other work utilizing this technique, see Paul Gottlieb, "Labor Supply Pressures and the 'Brain Drain': Signs from Census 2000" (Washington, D.C.: The Brookings Institution, 2004).

29. Brookings analysis of 1990 and 2000 U.S. Census data.

30. Michael Porter, "The Competitive Advantage of Massachusetts."

31. Brookings analysis of 2004 CorpTech data.

32. Concentrated poverty calculations are derived from year-2000 Census data and express the percentage of the population living below the federal poverty line who live in Census tracts with poverty rates of 40 percent or higher.

33. For a discussion of concentrated poverty, see Alan Berube and Bruce Katz, "Katrina's Window: Confronting Concentrated Poverty Across America" (Washington, D.C.: The Brookings Institution, 2005).

34. Beth Siegel, Barbara Baran, and Suzanne Teegarden, "Small Cities, Big Problems: Urban Economic Development Is Tougher Outside the Metropolis." CommonWealth Magazine (Spring, 2001).

35. Brookings analysis of 2000 U.S. Census Bureau data.

36. Ibid.

37. Massachusetts Department of Employment and Training.

38. Brookings Analysis of U.S. Census Bureau data.

39. See Rolf Pendall, Robert Puentes, and Jonathan Martin, "From Traditional to Reformed: A Review of the Land Use Regulations in the Nation's 50 Largest Metropolitan Areas" (Washington: Brookings Institution, 2006).

40. In 2004, Massachusetts ranked 46th in the nation in terms of the number of total housing permits issued per 1,000 people (at 3.5 permits per 1,000 residents), according to data from the U.S. Census Bureau. Across the Greater Boston knowledge core the permitting rate was even lower (2.75), ensuring that supply-side constraints conspired with high demand to drive prices to super-high levels. For a detailed review of housing supply constraints in Greater Boston see Charles Euchner with Elizabeth Frieze, "Getting Home: Overcoming Barriers to Housing in Greater Boston" (Boston: Pioneer Institute for Public Policy Research and Rappaport Institute for Greater Boston, 2003). For statewide perspectives see Ardon, DeSantis, MacLeod, Rissman, and Simon, "Bringing Down the Barriers;" Sum, Khatiwada, and Trub'skyy, "Home Ownership in Massachusetts;" and Goodman and Palma, "Winners and Losers in the Massachusetts Housing Market." See, also, Edward Glaeser, Jenny Schuetz, and Bryce Ward, "Regulation and the Rise of Housing Prices in Greater Boston" (Cambridge: Rappaport Institute for Greater Boston, and Boston: Pioneer Institute for Public Policy Research, 2005) and Edward Glaeser and Bryce Ward, "The Causes and Consequences of Land Use Regulation: Evidence from Greater Boston" (Cambridge: Harvard Institute of Economic Research, 2006). Finally, for a detailed case study of how anti-development rules and processes have gained sway in one town, see Alexander Von Hoffman, "Creating an Anti-Growth Regulatory Regime: A Case from Greater Boston" (Cambridge: Rappaport Institute for Greater Boston, 2006).

41. The discussion of Bay State housing prices in this section and the following one relies on Brookings analysis of median home price data from the Warren Group compiled by MassINC. Reported median values for regions were calculated by aggregating town-level median values which were weighted based on each town's share of sales volume for each year.

42. MassINC, "The Pursuit of Happiness: A Survey on the Quality of Life in Massachusetts" (Boston, 2003).

43. Massachusetts Technology Collaborative, "2006 Index of the Massachusetts Innovation Economy."

44. Brookings analysis of Census 2000 commuting data provided by MassINC. For an in-depth look at Massachusetts commuting trends and problems see Michael Goodman, Dana Ansel, and Robert Nakosteen, "MASS.commuting" (Boston, 2004). MassINC reported that one in five Greater Boston commuters spent at least 45 minutes getting to work each way in 2000 (up from 13.6 percent in 1980).

45. MassAudubon's report "Losing Ground" deemed western and southeastern sections of this ring the Commonwealth's "sprawl frontier" in its report "Losing Ground," calling attention to the high rates of land consumption per new household in some of these areas. This analysis was partly suggested by that analysis.

46. Brookings analysis of U.S. Census Bureau building permit data, accessible online at www.census.gov/const/www/permitsindex.html.

47. Brookings analysis of data from Executive Office of Environmental Affairs.

48. Massachusetts Department of Workforce Development, "Massachusetts Job Vacancy Survey: Hiring Trends by Industry and Occupation —4th Quarter 2005."

49. Weld Royal, "Countdown to the Great Labor Shortage." New York Times August 22, 2001, Section G Column 1.

50. Ross DeVol, as quoted by Royal, 2001.

51. The calculations in this section were done using the Census's Advance Query System.

52. U.S. Census Bureau.

53. Brookings analysis of data from the Massachusetts Department of Employment and Training.

54. A.T. Kearney, "Sustainable Prosperity: An Agenda for New England" (Boston: New England Council, 2005).

55. Barry Bluestone, Alan Clayton-Matthews, and David Soule, "Revenue Sharing and the Future of Our Massachusetts Economy." Presentation to the Massachusetts Municipal Association Statewide Economic Forum, October 18, 2005.

56. David Soule, Joan Fitzgerald, and Barry Bluestone, "The Rebirth of Older Industrial Cities: Exciting Opportunities for Private Sector Investment" (Boston: Center for Urban and Regional Policy, Northeastern University, 2004).

57. See Municipal Finance Task Force, "Local Communities at Risk: Revisiting the Fiscal Partnership Between the Commonwealth and Cities and Towns" (Boston: Metropolitan Area Planning Council, 2005); Massachusetts Taxpayers Foundation, "Municipal Financial Data, 35th Edition." Boston; and Barry Bluestone, Alan Clayton-Matthews,

and David Soule, "Revenue Sharing and the Future of Our Massachusetts Economy." Presentation to the Massachusetts Municipal Association Statewide Economic Forum, October 18, 2005.

58. B.J. Roche, "Under Control?" *CommonWealth*. Summer 2005: 50–60.

59. Edward L. Glaeser, "Smart Growth: Education, Skilled Workers, and the Future of Cold-Weather Cities" (Cambridge: Rappaport Institute for Greater Boston, 2005).

60. Progressive Policy Institute, "The 2002 State New Economy Index."

61. Selected Populations Report Data, Massachusetts Department of Education, 2005.

62. Brookings analysis of Massachusetts Comprehensive Assessment System data from the Massachusetts Department of Education, 2005.

63. Boston tops the list, with 35 "failing" schools, but after that come seven Gateway City school districts. Springfield has the most struggling schools, with more than half the students failing a MCAS test in 15 schools. Following Springfield are Worcester with 12 "failing" schools, Lawrence with 9, Holyoke with eight, Lowell with six, Fall River with five, and New Bedford with three.

64. See John Comings and others, "New Skills for a New Economy: Adult Education's Key Role in Sustaining Economic Growth and Expanding Opportunity" (Boston: MassINC, 2000), and Beth Siegel, Peter Kwass, John Schneider, and Dana Ansel, "Getting the Job Done: Advancing the New Skills Agenda" (Boston: MassINC, 2004).

65. MassINC / Brookings analysis from data supplied by Massachusetts Department of Education. No personal information on students was released.

66. See Comings and others, "New Skills for a New Economy;" Richard Kazis, "Best in Class: Community Colleges Could Take Notes from the Nation's Top Schools," CommonWealth, Summer 2002, pp. 19–24; and Mass Insight, "A Call to Action: Expanding the Links Between Business and Higher Education in Massachusetts" (Boston, 2000).

67. See McMahan Associates, Inc., "Fitchburg Commuter Rail Line Improvement Implementation Plan." 2005 and "Commuter Rail West of Boston: The Demand and the Dilemma." City of Worcester. 2005.

68. Michael Jonas, "South Coast Railing Gets Commuter Line on Track—Sort of." *CommonWealth*. Summer 2004: 39–40.

69. MassINC, "Lessons Learned: 25 Years of State Economic Policy." Boston. 1998.

70. Doug Henton, John Melville, Kim Walesh, Chi Nguyen, and John Parr, "Regional Stewardship: A Commitment to Place" (Palo Alto: Alliance for Regional Stewardship, 2000).

71. See, for example, David J. Barron, Gerald E. Frug, and Rick T. Su, "Dispelling the Myth of Home Rule: Local Power in Greater Boston" (Cambridge: Rappaport Institute for Greater Boston, 2004); Tony Flint, "Planning the Fragmented Metropolis: Acting Regionally and Locally," in Charles C. Euchner, ed., "Governing Greater Boston: The Politics and Policy of Place" (Cambridge: Rappaport Institute for Greater Boston, 2002); Edward Glaeser, Jenny Schuetz, and Bryce Ward, "Regulation and the Rise of Housing Prices in Greater Boston" (Boston: Pioneer Institute for Public Policy Research and Cambridge: Rappaport Institute for Greater Boston, 2006).

72. Barron, Frug, and Su, "Dispelling the Myth of Home Rule."

73. Ibid.

74. For an excellent analysis of regional relationships up and down the I-91 Corridor, see Mt. Auburn Associates, CERC, and The Citistates Group, "Regional Dimensions of the I-91 Corridor: An Exploration" (2003).

75. For more in formation on the Hartford-Springfield Economic Partnership, please visit www.hartfordspringfield.com.

76. Pioneer Valley Planning Commission. "The Pioneer Valley Plan for Progress" (West Springfield, 2004). Available at www.planforprogress.org/web-content/html/tier3/docs/pfp_report.pdf.

77. See www.ci.somerville.ma.us/Division.cfm?orgunit=MAYOR (all information cited in this sentence is included in write up on the "Mayor" page on Somerville's website.)

78. From a Somerville News article dated 2/16/06 "Focus: SomerStat Reports" available at http://somervillenews.typepad.com/the_somerville_news/2005/02/focus_somerstat.html

79. Figures on savings drawn from "SomerStat Budget Presentation", page 5 http://www.ci.somerville.ma.us/CoS_Content/documents/SomerStatBudgetHearing6.19.06.pdf and separate discussions with SomerStat Director Stephanie Hirsch on 11/15 and 11/16/06.

80. See Eric S. Belsky and Daniel McCue, "Comeback Cities or the New Melting Pots: Explorations into the Changing Large Cities of New England" (Cambridge: Lincoln Institute of Land Policy, 2006).

81. See Comings and others, "New Skills for a New Economy," and Andrew Sum and others, "The Changing Face of Massachusetts" (Boston: MassINC and Center for Labor Market Studies, 2005).

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Acknowledgements

The Brookings Institution Metropolitan Policy Program would like to thank the Fannie Mae Foundation, the Ford Foundation, the George Gund Foundation, the Heinz Endowments, the John D. and Catherine T. MacArthur Foundation, and the Rockefeller Foundation for their general support of our work.

MassINC and Brookings also wish to thank the following people for their observations or guidance: Alan Berube, Brookings Institution; Barry Bluestone, Northeastern University; Timothy Brennan, Pioneer Valley Planning Commission; Tom Davis, Greater New Bedford Industrial Foundation; Michael Dukakis, Northeastern University; Bill Ennen, John Adams Innovation Institute; David Forsberg, Worcester Business Development Corporation; Doug Foy; Richard Franks, L*awrence Eagle Tribune*; Michael Goodman, University of Massachusetts Donahue Institute; William Guenther, Mass Insight Corporation; Robert Halpin, Merrimack Valley Economic Development Council, Inc.; Mitch Horowitz, Battelle Memorial Institute; Michael Kane, Mount Auburn Associates; Bruce Katz, Brookings Institution; Richard Kennedy, Worcester Chamber of Commerce; Ed Lambert, City of Fall River; Robert Luongo, New Bedford Economic Development Council; Massachusetts Division of Unemployment Assistance; Eric Nakajima, University of Massachusetts Donahue Institute; Jane Pfister, Massachusetts Executive Office of Environmental Affairs; Andrew Reamer, Brookings Institution; Zvi Rozen, John Adams Innovation Institute; Deana Ruffer, Pittsfield Office of Community Development; Beth Siegel, Mount Auburn Associates; David Soule, Center for Urban and Regional Policy, Northeastern University; Michael Sullivan, City of Holyoke; Mike Tavilla, John Adams Innovation Institute; David Tibbetts, Merrimack Valley Economic Development Council, Inc.; Kendall Wallace, *The Lowell Sun*.

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