

# Leadership Through Innovation

The History of  
Boston's Economy  
1970-2000



City of Boston  
Thomas M. Menino, *Mayor*

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## The History of Boston's Economy



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Report #563

April 2003

# Historical Background

In 1625, after leaving a failed English colony near present-day Weymouth and making his way north along the Massachusetts coast, the Reverend William Blackstone (or Blaxton) found himself on a 750 acre peninsula jutting out from the mouth of the Charles River that Native Americans called "Shawmut" (for "living waters" and English explorers called the "Trimountain" (after the three hills located in its center). There, Blackstone - described as "a bachelor with a taste for his own company" - built a cabin, set up his library of almost 200 books, and began to cultivate a garden and orchard, becoming mainland Boston's first European-born resident.

Today, the city of Boston, situated on a landmass several times greater than that on which Blackstone settled, is a metropolis of nearly 600,000 people, renowned for its hospitals, colleges and universities, financial services, technological innovation, and even its professional sports teams. The development of Boston from a fringe colony on the edge of the British Empire to a world-famous center of art, technology, and culture spans nearly four centuries.

In examining the arc of Boston's development from its founding to the present day, two distinct and often intersecting ingredients are invariably responsible for the city's success: the ability of Boston's private sector to adapt to changing economic conditions, and the willingness of city government to work with the business community in a public-private partnership to promote development and benefits of growth in Boston. In almost every period of Boston's history - colonial, post-revolutionary, industrial, war-time, and post-war - the relationship between the city's political leaders and its private entrepreneurs has been the key to the city's success.

Bostonians have always been creative capitalists, and since its founding the city has flourished when city government has been able to direct and shape this entrepreneurial spirit to achieve publicly desirable ends.

## From Fur-traders to Merchant Princes: 1630-1750

Almost from the beginning, Bostonians were concerned with the economic prosperity and growth of the colony itself - even when this concern went against England's wishes. Boston traders and merchants

found innovative means of continuing to reap profits. The community's leaders, recognizing the power of economic incentive, simultaneously directed the efforts of these private entrepreneurs toward publicly beneficial endeavors.

In 1630, the Puritans, seeking to establish a pious community free from the pernicious materialism of England, arrived on the shores of Massachusetts. They settled first in Salem, then in Charlestown, and finally - at the invitation of Blackstone - on the Trimountain, drawn by the abundance of fresh water, the protection that its geography afforded, and its suitability as a harbor. Led by the first governor of the Massachusetts Bay Colony, John Winthrop, they proved to be less than ideal guests, however. Upon arrival, they renamed the area "Boston," after the town in Lincolnshire, England, which a number of their company had called home. They appropriated all but 50 acres of the peninsula for themselves, and then in 1634 bought all but six acres back from Blackstone to create Boston Common. Boston's first settler saw that those who subsequently joined him had more ambitions where it came to community building than he did. Complaining: "Could ye not leave the hermit in his corner, Blackstone soon left Boston for the wilderness - the unexplored territory of Rhode Island - and left the industrious new Bostonians to their own devices.

But despite their energy and drive, the first few years were difficult for the colonists. While the site of the new settlement had other physical advantages, it was not well-suited for agriculture. The colonists were thus forced to rely on trade with Native Americans, as well as small-scale fishing and hunting, to survive. Yet thanks to the ingenuity of these early Yankee merchants, Boston did not fail like nearby Weymouth or Roanoke, Virginia. In the absence of a "cash crop" such as tobacco or sugar, Bostonians instead traded with Native Americans for beaver pelts, which were highly valued abroad - and became successful exporters. The first successful Bostonians were fur traders, and their success greatly contributed to the colony's survival during its nascent stages.

The opportunities that Boston afforded as a port soon drew the colonists' focus toward the seas. By the mid-1630s, thanks to its harbor, Boston was already a thriving center of commerce. Within a decade, Bostonians were engaging in profitable trade in various goods including indigo, wheat, cattle, crockery, pork, corn, wine, cloth, and fish. Despite their success, Boston merchants railed against what they perceived to be over-regulation of the mercantilist sys-

tem, in service to the philosophy that the colonials existed solely to serve the economic prosperity of the Crown. These tensions subsided during and immediately after the English Civil War of the mid-1600s. But the conflict over English economic regulations would resurface more forcefully a century later.

Clearly, then, the pious Puritans were not averse to turning a profit. The colonial government took advantage of that fact and to expand the borders of the colony - physically, socially and spiritually. Government encouraged town-founding by offering township status and official recognition of landholdings to new settlements around Boston, provided that the settlers established a town meeting, school, and church. To encourage the construction of socially desirable projects such as roads, bridges, inns, sawmills, and glassworks, land grants and tax breaks were offered. To promote maritime trade, merchants were granted the land rights to sections of the shoreline on the condition that they build wharves and warehouses. The strategy worked, and by 1645 fifteen private wharves were already in use.

From the 1660s to the 1760s, Boston emerged as the most important port in the colonies, through a combination of good fortune and creative capitalism. The good fortune came in the way that the government in England chose to regulate trade. It so happened that a series of Navigation Acts in the 1660s fell heaviest on the middle Atlantic colonies, where trade depended on highly profitable cash crops. Boston merchants, whose trade did not depend on such goods, were thereby able to trade essentially duty-free, all the while protected by the British Navy, the most powerful in the world. Bostonians took full advantage of these benefits, and by the 1690s Boston was a center for shipping and shipbuilding, engaged in trade with England and its colonies in the West Indies and Caribbean, as well as with France, Spain, Portugal, and their respective colonies. Not surprisingly, two-thirds of Boston's total wealth at the turn of the 18th century belonged to its sea captains.

From the 1690s until the 1740s, Bostonians repeatedly capitalized on international economic trends, in many cases turning potentially ruinous developments into profitable arrangements. When the English fought the Dutch from 1696 to 1713, Boston produced nearly two-thirds of the ships for Britain's newly commissioned fleet, simultaneously spurring numerous derivative industries, including grain and timber processing, caskmaking, finance, and internal transportation. When the British unwittingly deforested their West Indian and Caribbean possessions to make

room for plantations, Boston's traders sent them wood products, such as shingles and barrels. In Spain and Portugal, where Catholicism forbade the eating of meat on Fridays and during Lent, Bostonians found a profitable market for the codfish that were plentiful near Boston's shores. By this time, Boston had become a sort of distribution center for Britain's possessions in the Western hemisphere, and industries for the reprocessing and re-exportation of goods quickly developed. Felix de Beaujour, a visiting French citizen, emphasized Boston's capitalistic spirit: "A Bostonian would seek his fortune in the bottom of hell, while a Virginian would not go four steps for it."

Due to the volume and extent of the city's international trade, Boston emerged with the most advanced financial system in the colonies. Massachusetts was the first colony to issue paper currency, and to help aid the merchants' ventures a banking system was in place by the 1720s. Scholar Margaret Ellen Newell asserts that Boston's early banking industry inculcated Bostonians with an abstract concept of wealth that would eventually lead to their more regularized investments in bank stock and insurance during the 1800s, not to mention a growing sense of financial independence and emphasis on economic freedom.

While they prospered, Boston's colonial entrepreneurs continued to contribute to the welfare of the city as a whole. A group of merchants filled in "the Neck" connecting the peninsula to the mainland, and another merchant association constructed the Long Wharf (Boston's largest), both in return for land grants. Of course the most well-known example of corporate giving to the town took place in 1740, when wealthy merchant Peter Fanueil agreed to build a central marketplace - with a meeting hall above it - at his own expense.

Throughout its first century of existence, then creative capitalism merged with the realization that the economic and physical growth of the city depended on a public-private partnership between local administrators and profit-seekers. Historian Lawrence Kennedy highlighted this point in his book, *Planning the City upon a Hill*:

Although there were factions and conflicts there was also a great sense of common purpose. The interests of the entrepreneurs and the town were essentially the same. As developers built places of commerce the trading interests were aided and this acted to the

benefit of the townspeople. There was little sense of divergence between the interests of classes in regards to developing the emerging metropolis.

## **1750-1880: Independence, Industrialization, and Immigration**

Over the next century and a half, the Boston landscape assumed a character that closely resembles that which we see today. This period also marks Boston's emergence as a world-renowned center of education, medicine, banking, finance, and technological innovation. As in the first century of the city's history, Boston's prominence during this period was largely attributable to the endeavors of private entrepreneurs being harnessed to serve socially beneficial ends. More and more, however, local government began edging away from the laissez faire attitude of the past and toward making a more conscious effort to direct town growth and where certain buildings or businesses should locate.

In the two decades preceding the American Revolution, Boston's business interests, even as they prospered, played a significant role in the growing agitation for the colonies' independence from England. Despite wars among Boston's foreign trading partners and efforts by the British authorities to regulate colonial commerce, Boston's capitalists found creative means to maintain profits. And as they sought to protect their business interests, "economic freedom" soon became enmeshed with "political freedom."

In 1763, when England concluded the economically and physically taxing Seven Years' War (French and Indian War) and the Crown sought to recoup its losses by increasing tariffs and regulations on colonial trade. Accordingly, the English Parliament passed three acts which particularly threatened Boston's trade: the Sugar Act, which taxed molasses, a reprocessed good that Boston exported in abundance; the Stamp Act, which taxed all paper goods; and the Townsend Acts, which taxed imports of glass and tea, both popular consumer goods in the colonies. Prominent Bostonian entrepreneurs, including John Hancock, John Adams, and Nicholas Boylston, opposed these measures and led colonial resistance to British regulations. In 1768, Boston's merchant princes formed the Boston Society for the Encouragement of Trade, which organized boycotts leading to the British repeal of all but the tea tax - which had been imposed as a kind of Parliamentary "bailout" to try to rescue the failing East India Tea

Company. Town residents took more direct action there, dumping 90,000 pounds of tea into the harbor in what became known as the Boston Tea Party. These acts of resistance by Boston's capitalists dramatically demonstrated how their economic self-interest coincided with and reinforced the political and social movements of the time toward independence. It was, perhaps the Boston's ultimate example of a merger between private and public interests.

During the Revolution, when international trade dwindled, Boston's businessmen (at the time, women need not apply) found other ways of making money, while all the while supporting the war for independence. Goods smuggled through the British blockade, for example -including clothing, gunpowder, and other supplies - were sold to the Continental Army at high profit margins. Boston's merchant princes also financed raids by American privateers on British ships, a "patriotic piracy" that allowed them to do well financially, while doing good for the war effort.

In the decade after the American Revolution, Boston experienced another brief depression, as the resumption of British and French imports drove prices down to critically low levels while exports to Britain and the West Indies dwindled. Desperately seeking new markets for their exports, Boston's merchants began engaging in trade with countries other than Britain, France, and Spain. By the 1800s, they were trading in silk, sugar, tobacco, seal skins, pepper, tea, coffee, rum, and flour with countries around the globe, including Sweden, Denmark, Russia, South America, Africa. The most financially rewarding new market they found, however, was in China. Upon discovering that the Chinese greatly valued animal skins, Bostonians began trading with Natives Americans of the Pacific Northwest for beaver pelts to sell in China at a tremendous profit. In fact, they were so prominent in that area natives of the Pacific Northwest region began referring to all American traders as "Boston men."

As a result of their success in turn-of-the-century trading boom, Boston's merchant elite became inordinately wealthy, and many of its members began re-investing their fortunes in ways that benefited Boston's development. They built banks, insurance buildings, and shipping facilities-all derivative industries of the maritime trade. They also invested in the growth of their home town, commissioning architects and engineers to build residential developments, parks, and even public buildings. One of the most successful Boston businessman at the time was Harrison Gray Otis, who would later be elected

mayor. Otis joined with others to develop the areas of Beacon Hill, the Financial District, South Boston, and the waterfront, building up their bank accounts while they helped to build Boston.

As seen so often in the city's history, crisis became the impetus for evolution in the economy. In the years surrounding the War of 1812, American trade with England was cut off again, eliminating the country's biggest trading partner and leaving the United States with increasing shortages of textiles and manufactured products, which had been supplied almost exclusively by England. Instead of watching their prosperity erode, however, Bostonians began directing their capital investments inward.

They were led by the Bostonian who effectively began the industrial revolution in the United States - Francis Cabot Lowell. A wealthy merchant hit hard by the trade embargo with Britain, Lowell toured British factories, memorizing the design for machinery and lay out of the mills, since written plans and blueprints were closely-guarded industrial secrets. Returning to Boston, he joined with financier Nathaniel Appleton, reproduced and refined British industrial methods, and built the first textile mills in this country, first in Watertown, then in the newly created "factory towns" of Lowell and Lawrence. Despite the financial risks (it was not yet clear that factories would actually prove profitable), many Bostonian capitalists were eager to invest in the nascent industry, and factories sprung up in and around Boston. The resulting industrial boom in the city was staggering, precipitating growth that economic historian Peter Temin compared to the modern "miracles" of Korea and Taiwan. Boston - or Boston-backed - factories led the way not only in textiles, but in numerous new industries, among them meat packing, foundries, machine shops, and printing and publishing.

Like their predecessors, as this new generation of Boston's elite grew increasingly wealthy, they invested their fortunes in ventures which generally benefited the city as a whole. Soon after Boston was incorporated as a city in 1822, these businessmen privately financed the construction of railroads and "commuter rails" during the 1830s and 1840s, which connected Boston to its suburbs as well as to more distant cities such as Providence and Worcester. While private interests profited, all Bostonians benefited from the innovative transportation system. These same private interests also reaped enormous profits on investments in the western railroads on the frontier built prior to the Civil War, and then on the

transcontinental railroads built after the war. As their investments became increasingly complicated and risky, they created investment banks and insurance companies in the city, the first generation of what would eventually become Boston's financial services sector. By the 1870s and 1880s the Boston Stock Exchange served as the nation's leading market for industrial securities.

During the 1840s and 1850s, shipbuilding experienced a revival with the rise of the clipper ships to facilitate commerce with California during the Gold Rush and trade with China for tea and opium. Boston's shipbuilders capitalized on the new market, building some of the world's fastest clippers. Donald McKay's Flying Cloud, for example, launched from an East Boston boat yard, set a record in 1854 for the fastest trip between New York City and San Francisco. The era of the great clipper ships was short-lived, for they were replaced in the 1850s and 1860s by steam-powered vessels.

During the nineteenth century, Boston also distinguished itself as a center of art and learning, due largely to cooperation between Boston's public and private interests. Already home to the first public school and private college in the country (Boston Latin School, founded in 1635, and Harvard College, founded a year later), the construction of Massachusetts General Hospital was undertaken in 1820, through a public subscription campaign that received the bulk of its contributions from wealthy donors. In 1831, Thomas Perkins, a wealthy commercial trader, donated his home for use of what would become the Perkins Institute for the Blind. In 1836, the Lowell family established the Lowell Institute, which utilized an innovative and comprehensive lecture system for its students. Boston was also home to two of the world's three largest libraries-Harvard's College Library and the Boston Athenaeum-and the Western world's first aquarium. In 1846, Boston dentist William Morton performed the first successful operation using anesthesia at Massachusetts General Hospital. In 1872, Boston opened the nation's first training hospital for nurses, the New England Hospital for Women and Children.

As evidence of public support for intellectual pursuits, the municipal government passed an ordinance in 1859 specifying that certain areas of the city be set aside for educational or cultural purposes only, and in 1861 the Boston Society of Natural History and the first buildings of the Massachusetts Institute of Technology (MIT) were constructed on Boylston Street in the newly-created Back Bay. MIT was

unique among private colleges at the time because it focused on functional subjects—such as science and engineering—as opposed to language, philosophy, and classical studies. It would take several decades before other schools made this transition, and as a result, MIT graduates quickly established dominance over the fields of technology and engineering which continues today.

In the 1860s and 1870s, Boston responded to increasing population growth and commercial development by increasing its physical borders through land-filling and annexation. Roxbury, Dorchester, Charlestown and Brighton, the West End, and West Roxbury were all annexed, and the filling in of the Back Bay commenced. By 1880, all but the Fenway area of the Back Bay had been filled in, transforming what was once a festering bog into an area for residential and commercial development.

In addition to economic and physical changes, Boston's demography also shifted with the first major influx of non-Anglo immigrants to Boston, the Irish. Thousands of Irish-Catholic immigrants escaped poverty and famine to come to Boston, and their arrival not only dramatically increased and changed the population of the city, but also led to conflict with Boston's economic and political leaders, who were almost exclusively Anglo-Saxon Protestants. The 1840s and 1850s witnessed the first major ethnic conflicts in Boston, although not the last. During these years and afterwards, Boston's Yankee establishment, concerned by the arrival of so many of these new immigrants and worried at their increasing political influence, began to disassociate themselves from the public projects. But their retreat precipitated a parallel development: the municipal government took an increasingly interventionist role in directing Boston's economic development. As it had by the end of the colonial period, the locus of the public-private partnership shifted more toward the public sector.

The Boston of 1880 was dramatically different from the Boston of 1750. Trading and shipping had largely given way to manufacturing. Nearly 30 percent of New England's labor force worked in factories in the Greater Boston area, and roughly 40 percent of the nation's textiles were produced in Massachusetts alone. Other cities, like Philadelphia, languished in old traditions such as farming and artisanship, and other regions, like that of the plantation South, clung to dying economic systems. On the other hand, Boston, with its creative entrepreneurs, was able to adjust and flourish under the burgeoning industrial

system. As a result of Boston's prosperity, the city's landmass increased almost three-fold from 1750 to 1880, as nearby towns were annexed and marshland filled in. While the city in 1750 was relatively homogeneous in ethnicity and income, Boston in 1880 contained its first ethnic enclaves, and the physical separation of classes into residential areas on the basis of income became more pronounced. Even as the Yankee establishment took a less pronounced role in promoting the city's development, the public-private partnership through the nineteenth century played an influential role in Boston's rise to prominence in finance, health care, education, and technological innovation.

## **1880-1940: The Partnership Breaks Down**

In the last two decades of the nineteenth century, Boston's economic growth abated, but limited city development and population growth continued. Boston, at this time, was concerned mainly with the same internal problems that faced each American metropolis—waste management, traffic congestion, water purification, ethnic conflict, and the increasing presence of slums. The relationship between the public and private sector became increasingly antagonistic. Often, publicly-supported development occurred in opposition to business interests—not in concert with them. More and more, private interests detached themselves from promoting development. This rift coincided with—and prolonged—the most extended depression in Boston's history.

In the last few decades of the nineteenth century, Boston's municipal government continued to give business wide latitude in its own internal dealings, however. Many of the nation's largest companies during this period including AT&T, General Electric, the Boston Fruit Company, and the United Shoe Machinery Company all were formed largely through Boston capital. Despite the success of these companies, however, Boston would still be hit hard by imminent economic disruptions.

Boston's response to transportation problems in the 1880s and 1890s, however, represented one example of the still-possible partnership between public and private interests. Competition between rival streetcar companies had resulted in a confusing, inefficient, and irrationally-priced mosaic of rail routes, and citizens complained to the municipal government. In response, the city allowed prominent streetcar owner Henry Whitney to consolidate all of the competing

companies into the West End Rail Company. Soon Whitney's conglomerate had established the largest streetcar system in the world, which in 1894 also became the world's first to electrify. While the new consolidated system was more efficient than the previous one, heavy traffic nevertheless persisted downtown, and in 1897 Whitney's West End Rail Company constructed the nation's first subway system, on the condition that West End Rail have a monopoly over the resulting line. Using economic incentives, the city had induced private interests to help resolve its public traffic problems.

In the 1880s and 1890s, the municipal government more directly influenced the physical development of Boston. The city commissioned Frederick Law Olmsted, a prominent landscape architect, to beautify the city with a new park system. Olmsted designed numerous interconnecting parks throughout Boston that became known collectively as the Emerald Necklace. Complementing these parks, Olmsted designed several scenic throughways—the Fenway, the Arborway, the Riverway, and the Jamaica Way. As Olmsted was completing his Boston projects, Charles Eliot, another landscape architect, helped gain support for establishment of the Metropolitan Park Commission, which acquired and began to develop park land along the Charles River. And in the 1880s, when sewage and waste disposal became a city-wide issue, the city constructed the nation's first expanded drainage system. The last two decades of the nineteenth century were highly productive ones for Boston's city planners, but changing economic conditions at the turn of the century did not augur well for the city's continued physical and economic growth.

In the years preceding World War I, Boston entered the beginning stages of what would become a prolonged depression. Shipping fell significantly: in 1900, Boston was the nation's second-largest port; in 1920, it had fallen to sixth. Boston's competitive advantage in textiles also declined, as other areas, particularly the South, closed the productivity gap between their factories and those of New England. Textile employment nevertheless continued to grow, and World War I demand for boots, shoes, and uniforms propped up the wool and leather industries. When the war ceased, however, the manufacturing sector collapsed. From 1920 to 1940, 25 percent of manufacturing jobs disappeared, a contraction that would continue until the 1980s. Boston's two economic pillars, maritime trade and manufacturing, were crumbling, and the Great Depression only compounded and prolonged the decline.

During this period, Boston's city government began to assume a more regulating and limiting role in directing development, placing height limits on buildings in the 1890s and establishing its first zoning codes in the early 1920s. In the 1920s and 1930s, Boston's Mayor Curley angered business interests, instituting a property tax system that over-valued low population districts—where businesses were located—to generate more tax revenue. This antagonized existing businesses and discouraged new businesses from building in Boston. Predictably, the creation of office and retail space dwindled. To make matters worse, housing construction during the Great Depression dropped by 95 percent from pre-Depression levels, and overall housing quality began to decline.

From the 1880s through the 1920s, Boston for the first time received a tremendous influx of immigrants from Southern and Eastern Europe—countries such as Italy, Poland, and Lithuania—and the city continued to separate into ethnic and class-based communities. By 1920, one-third of Boston's population was foreign born, and nearly another third were first-generation Americans. The majority of these immigrants were unskilled workers who occupied the manufacturing jobs hit hardest after World War I and especially during the Depression. In the years preceding World War II, housing conditions in some of Boston's ethnic enclaves deteriorated to near-slum status, and unemployment ran exceptionally high—40 percent in the North End, for example.

While conditions in Boston had deteriorated greatly by the onset of World War II, there was hope for the future. In the 1920s, MIT was pouring out a whopping half of the nation's doctorates and a third of its master's degrees, and from 1910 to 1938 the high school graduation rate had risen to 60 percent. Of those who were employed, the proportion of Bostonians in the service sector of the economy was growing, a development which preceded a dramatic regional and national shift from manufacturing to service-based industries. In 1948, 55 percent of New England jobs were in manufacturing compared to only 12 percent in the service sector. Boston's manufacturing sector still employed many Bostonians even as it continued to contract, but its relative importance compared to other sectors of the economy was decreasing. In Boston only 29 percent of jobs were in manufacturing while the service sector had grown to 23 percent. As they had so many times before, Bostonians were adjusting favorably to adverse economic conditions, and their adjustment preceded and led national trends. Nevertheless, the Boston economy was in rough shape entering the war. Relief rolls



were growing but federal funds were slow to arrive (Mayor Curley had contentious relations with national leaders as well), and businesses had all but ceased to build in Boston. It would take a revival of the public-private partnership to rejuvenate Boston - fortunately, that was just what was about to occur.

## **1940-1970: Revival of the Partnership**

The public-private partnership that had eroded in the first half of the twentieth century resumed after the Second World War - and the election of John Hynes as Mayor of Boston. Slowly, Boston's economy began to mature and modernize. Cooperation between national, state, and city leaders with business interests led to the resumption of modest economic growth. As the Boston economy began to shift, Boston's leaders once again directed city development in a way that encouraged business development while benefiting the city as a whole. Already an important center of education, health care, finance, and technology, Boston in the post-war years leaped even farther ahead of the rest of the country in these fields.

The last gasp of the manufacturing age came as a result of World War II, when demand for boots, shoes, uniforms, and munitions generated demand for textiles, leather goods, and machinery soared - as it had in the previous world war. When the war ended, however, this brief resurgence in demand evaporated, and the associated industries resumed their decline.

While manufacturing employment fell, the rise of Greater Boston's superiority in intellectual capital and capacity for technological innovation was becoming apparent. During and following World War II, MIT received large federal grants for military-related research, which spawned numerous private companies. In the 1950s, for example, an MIT graduate founded Raytheon, which would become one of the nation's most powerful defense contractors. Other high-tech entrepreneurs, most notably An Wang (Wang Laboratories) and Kenneth Olsen (Digital Equipment Corporation), were instrumental in creating the computer cluster in Greater Boston. These companies, among others, put Boston on the map as a haven for technological innovation and helped sow the seeds for the modern economy the city enjoys today.

The advancement of technological research occurred in Boston for several reasons. For one, Boston was home to an abundance of so-called human capital:

the Boston's numerous private colleges and universities produced scores of the well-educated, highly-skilled graduates the technological firms sought after. Secondly, physical and residential conditions were favorable to these new industries: in the 1950s the Commonwealth of Massachusetts constructed Route 128 as a beltway around Boston, allowing businesses to locate on the outskirts of the city, in industrial parks developed by the Boston-based company Cabot, Cabot, & Forbes. Finally, the expansion of financial services firms in Boston aided investment in technological firms. Whereas textiles and manufacturing had depended on physical capital-that is, tangible investments and products-the new defense and technology industries relied more on human capital and the capacity for innovation. Boston's expanding financial services sector served to control and direct investment in these abstract and uncertain technological ventures, as they had a century before when Bostonians began investing in far-away railroads. Boston's investors, as they had so many times before, engaged in potentially risky ventures that resulted in high profits for themselves and beneficial effects on the health of the Boston economy.

The city government also began taking steps to redevelop Boston. The creation in 1957 of the Boston Redevelopment Authority (BRA), with power of eminent domain and a mission to revitalize Boston, was an important step. While the BRA's initial redevelopment projects in the Boston's New York Streets area and the West End were highly controversial, these efforts and others prompted a revived cooperation between the city's public and private sectors.

In the early 1960s, Boston's Mayor John Collins and BRA Director Edward Logue brought private and public interests back together. They consolidated, redirected, and expanded the powers of the BRA in promoting city development, and at the same time worked to pass legislation that provided businesses with reasons to invest in the city. With the passage of Chapter 121A legislation, Boston businesses were granted tax incentives to build downtown, and the plan worked miracles. In 1965, the Prudential Center in downtown Boston was completed, and the effect was monumental-it signaled to private enterprises that the public-private partnership was back. Through the 1960s, banking giants like the State Street Bank, the Bank of New England, and Shawmut Bank all constructed new downtown offices, and the Christian Science Center was built next to the Prudential Center.

As skyscrapers were being built downtown in the 1960s, the BRA, in collaboration with the Mayor and business interests, undertook widespread city redevelopment projects. The BRA organized the creation of Government Center and Downtown Crossing, the redevelopment of Faneuil Hall/Quincy Market area, Copley Square, and the waterfront, and initiated urban renewal projects in Roxbury and Charlestown, and other parts of the city. In all of the downtown ventures, the BRA sought to encourage the growth of private businesses, and by 1970 Boston was thriving again.

In many ways, the Boston of 1970 paralleled the Boston of previous centuries. Boston led the way in burgeoning industries such as computing and electronics, just as factories and mills had led the way in the 1820s and 1830s. Financial intermediaries and insurance companies invested and protected the growing wealth of the region, as they had for the merchant princes in the 1800s and the textile magnates of the 1870s and 1880s. The higher education system was without parallel in the United States, as had been the case in the 1630s. Moreover, the city's economy had adjusted favorably to potentially crippling economic developments, just it had in the 1780s and 1790s when Bostonians traded with far-off countries when commerce with western Europe dwindled, and again in the 1820s when they began investing their fortunes in industrial enterprises.

Most importantly, Boston in 1970 had rediscovered the potential of the public-private partnership. In the 1630s Puritans had used charters and land grants to encourage public projects; in the 1790s the city had allowed Bulfinch almost free reign to develop parts of Boston using private funds; and in the 1890s it had granted a monopoly to the West End Rail Company to re-organize municipal transportation. In the 1950s and 1960s, with the formation of the BRA and the passage Chapter 121A, Boston once again recognized the power of economic incentives in promoting the city's development. As had been the case for over three centuries, the Boston economy thrived when city leaders managed to harness and direct the innovation of Boston's creative capitalists.

## The Modern Era

The economy that has emerged is currently one of the strongest in the nation. Boston has completed its shift to a service based economy and, as a result, has high concentrations of professional service and finance jobs. Education and health care, traditionally

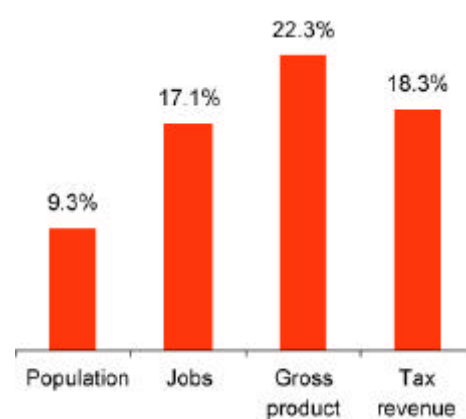
associated with Boston, have continued to flourish in the city while blue collar jobs in manufacturing, wholesale trade and transportation, communications and public utilities (T.C.P.U.) remain available, but in smaller numbers. Tourism has emerged as a cornerstone of the city's economy, strengthening the hotel, retail, cultural, and restaurant industries.

## Boston's place in the region

Today, Boston is the center of New England's economy, its importance to the region shown by its role as a generator of jobs and tax revenues. Although Boston accounts for only 9.3 percent of the state's population, Boston accounts for over 17 percent of the state's jobs, 22 percent of total goods and services in the state, and over 18 percent of the state's tax revenues. Similarly, the city's economic impact is felt throughout the region as nearly one out of every 13 jobs in New England is in Boston. The city is also the center of the seventh largest metropolitan area in the nation. Greater Boston continues to be a hotbed of innovation and discovery in the life sciences, software, and communications industry. The many companies and industries created in Boston, show how the city's influences stretches far beyond its borders. Boston is also home to so many of the region's important public and private institutions and agencies, serving as the educational, medical, cultural, and governmental center of the region.

Boston's economy has fluctuated with the nation's and rest of New England's, often preceding the region into recession or leading the region into a period of recovery and growth. Boston's business cycles are

**Figure 1. Boston is the economic center of Massachusetts**



often more pronounced than the region's and the nation's in terms of duration and employment showing dramatic job growth and prosperity in good times

and deeper unemployment in periods of slow economic activity. For example, with the exception of the 1980-1982 recession, the number of jobs in Boston began to drop in absolute terms the year before a nationwide recession and did not begin to rise until a year after the national downturn was over.

Conversely, the city's unemployment rate was up to three percentage points lower than in the boom years of the 1980s. From 1989 to 1995 the city's unemployment rate was lower than the state's, in contrast to previous trends. From 1995 to 2000, the unemployment rate in Boston was higher than the state's, but still at a record low of 2.9 percent.

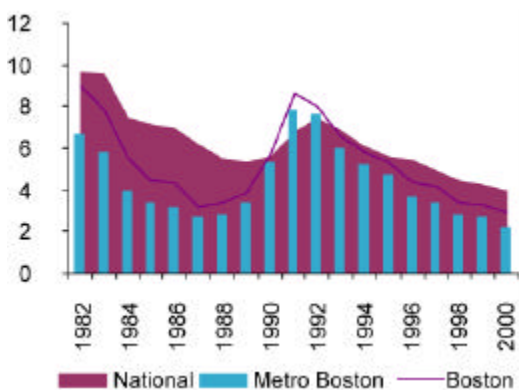
## Employment

The number of jobs in Boston peaked in 1969 at 564,906 after which the city entered into a seven year recession lasting from 1970 to 1976. In 1976, the lowest year of the recession, there were 518,513 jobs, a loss of over 46,000 jobs from 1969.

In 1977 the number of jobs in the city began to rise and employment numbers had reached their 1969 levels by 1981. Employment held steady at this level until 1983, setting the stage for the so-called "Massachusetts Miracle," a six-year period of phenomenal growth and prosperity, led by strong growth in the defense, computing, and software industries. Between 1983 and 1988, employment grew at an annual rate of 2.3 percent to 643,615; an addition of 68,000 new jobs.

The 1989-1992 recession spurred a series of annual job losses that totaled over 70,000 jobs by 1992. This loss represented nearly 11 percent of the total labor

**Figure 2. Boston's unemployment rates well below the national average**

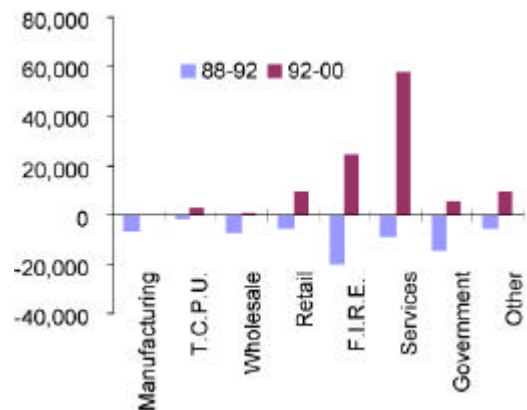


force, the largest decline of the last three decades. Nevertheless, in 1992, the lowest point of the recession, the 578,620 jobs in Boston were still more than in the peak years of the 1960s and 1970s.

The recession also caused unemployment to hit a nine-year high of 8.4 percent in 1991. The drop in unemployment in 1992 was not due to a recovery in the number of jobs but more likely due to the combination of people moving out of the city and others stopping their search for employment. During this time, demand for office space declined sharply and downtown office vacancy rates soared to 17.1 percent in 1991, up from 5.2 percent just four years earlier.

Between 1993 and 2000, following a nationwide recovery, Boston has added over 110,000 jobs and grown at an annual growth rate of 2.2 percent to

**Figure 3. Job growth has been strong since the 1988-1992 recession**

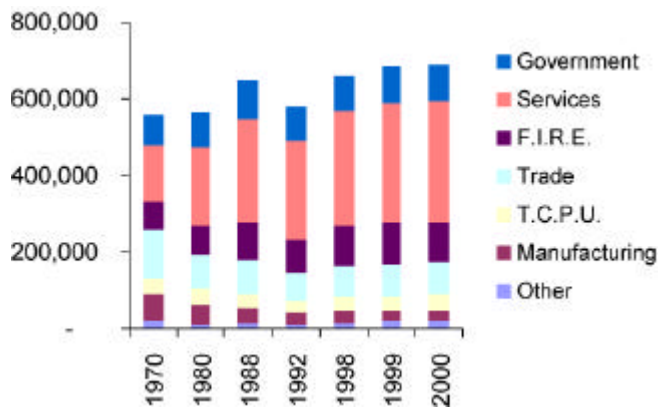


688,079 jobs, a record high. The health and professional services and financial sectors were particularly strong during this growth period prompting developers to begin the development process of new office towers in the Financial District, Back Bay and the South Boston Waterfront.

As of 1997, Boston had regained all the jobs lost during the latest recession, but there has been a structural change. Boston's economy is relying less upon manufacturing and industrial jobs in favor of white collar, knowledge based jobs, such as financial services, health care and other professional and business service industries. Gains in the stock market allowed firms, especially technology and mutual fund companies, to expand rapidly. The strong stock market also spurred many start-ups capitalizing on the innovation taking place in the region.

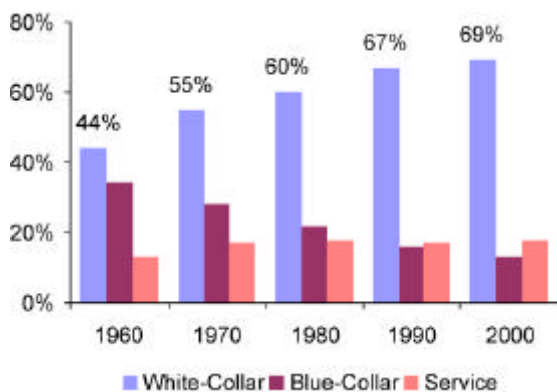
The occupations of Bostonians have changed along with the industries in the city. In 1960, 44 percent of the workers in Boston were classified as white collar workers and 34 percent were considered blue collar. By 2000, that had changed dramatically to 69 percent white collar and only 13 percent blue collar.

**Figure 4. The industry mix in Boston has changed over 30 years**



This change is occurring rapidly. At the time of 1988 peak, the service sector comprised 40.5 percent of the total jobs in Boston. By 2000, the service sector had grown to include almost 46 percent of all Boston jobs. In contrast, manufacturing jobs dropped from 5.4 percent to 4.1 percent over the same period. Within the service sector, professional and business services and health care grew rapidly since the 1992 employment trough, adding a combined 45,853 jobs or nearly 80 percent of the service sector growth from 1992 to 2000. Retail and education continue to be strong while the government sector has yet to regain its losses since the recession.

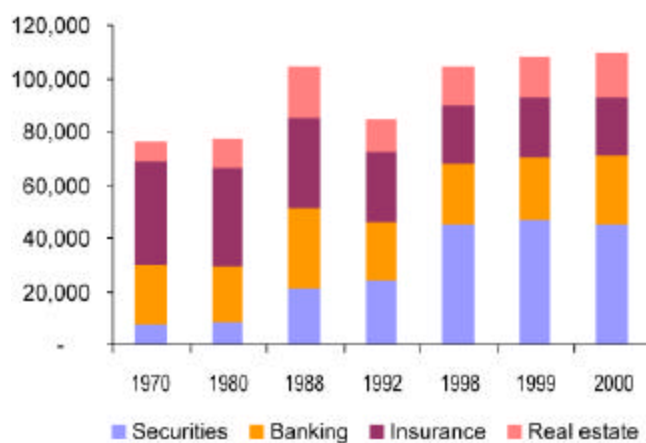
**Figure 5. Boston's workforce has become more white-collar since 1970**



### Finance, Insurance, and Real Estate (F.I.R.E.)

The finance, insurance and real estate industries encompass some of the largest employers within the city. As of 2000, Fidelity Investments (FMR Corporation) employed over 11,000 people in the city, most of them in the Financial District. State Street Corp., Thomson Financial, Putnam and Massachusetts Financial Services are other large securities and brokerage firms that continue to make Boston a financial center. Consolidation in the banking industry continues to occur in Boston, reflecting national trends. Nevertheless, Boston remains the headquarters of FleetBoston Financial, the seventh largest bank in the nation. Two insurance giants find homes in Boston as well; Liberty Mutual and John Hancock Mutual Life Insurance Company. Together, these companies employ approximately 6,000 people.

**Figure 6. The securities industry accounted for nearly all the growth in the F.I.R.E. sector**



The venture capital (VC) industry is as important today to Boston's economy as it has ever been. VC has always been associated with high-tech ventures from the mills in the 1800s to new pharmaceuticals today. VC's role in the creation of new industries and firms has always kept Boston on the cutting edge of technology and the new wave of economic growth. In 1996 \$1.09 billion in venture capital was invested statewide, much of this in Boston-based companies. By the end of the millennium, over \$10 billion was invested statewide. The presence of VC firms is a major competitive advantage for Boston that cannot be overlooked. Massachusetts is now the second largest recipient of venture capital, trailing only California, but receives more on a per-capita basis.

The F.I.R.E. sector lost 19,772 jobs in Boston between 1988 and 1992, more than any other major industry grouping, but has regained all of these jobs and employed 109,088 people in 2000. Phenomenal growth in securities and brokerage industries should continue to drive growth in the finance sector, although these industries are volatile in times of recession.

Security and brokerage services are the fastest growing industries in the F.I.R.E. sector, mostly due to the popularity of mutual funds. In 1970 7,551 people worked in securities comprising less than 10 percent of the F.I.R.E. industry in terms of employment. By 2000, the sector employed 45,079, making it the largest industry within F.I.R.E. Securities comprise 41.3 percent of the industry and account for one of every 15 jobs in Boston. The city continues to be a global financial center as nearly one in twelve of the nation's securities jobs are in Boston and the city is among the world's leaders with Tokyo, New York City, and London in institutional assets managed.

The securities industry generates \$7.3 billion in payroll and supports employment growth in producer and business services industries such as telecommunications, computer technology, printing, advertising, law, and accounting. Average earnings for those employed in the securities sector are high at \$148,000 per year.

Massachusetts and Boston have made strides to attract and retain the mutual fund industry, through tax policy, investment in telecommunications, and a vibrant and safe downtown. In the city where the mutual fund was born, innovation and competitive advantage continue to make Boston the a worldwide financial center.

Boston's banking industry has followed national trends of reducing employees because of mergers, the proliferation of ATMs and other automated functions. Technological changes have accelerated the Boston job loss in this industry sector because many back office functions can be moved into the suburbs where rent is often less. In 1970, almost 23,000 people worked in the banking industry, by 1988 the number had grown to 30,140. Since then, the number of employees has slowly declined to 26,224 in 2000.. In 1997, BankBoston merged with Fleet Bank, and U.S. Trust was purchased by Citizen's Bank, reflecting national trends. Nevertheless, Boston remains one of the nation's leading banking centers.

Employment in the insurance industry continues to decline as insurance needs and practices change. In 1970, the insurance business employed 38,780, but by 2000 that number had shrunk to 21,720.

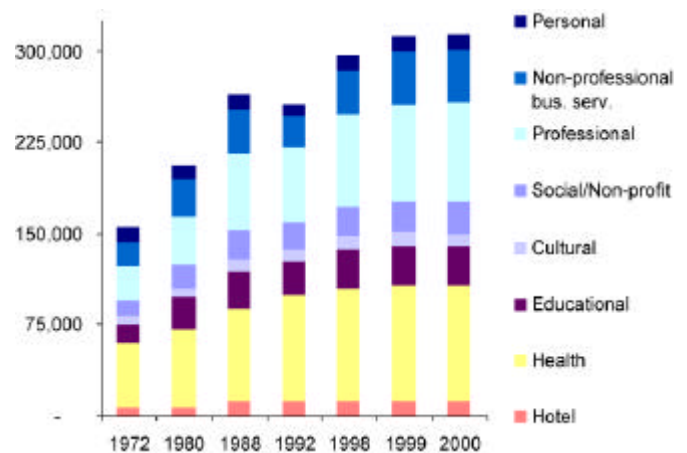
Insurance companies now operate more like security trading and brokerage firms than they did in the past. For example, the American Council of Life Insurance reports life insurance companies had 63 percent of their reserves backing life insurance. They had less than 30 percent of their reserves for this purpose in 1995. By 1995, two thirds of life insurance companies' reserves were invested in group and individual annuities.

The number of employees in real estate and other related industries has been increasing slowly since the employment low in 1992, employing 16,065 people in 2000, up over 4,123 since 1992. Much of this gain is due to the strength of the residential market for both rentals and sales.

### Service Sector

The service sector in Boston has been fastest growing industry in the last 25 years. In 1970 there were 145,080 service sector jobs, representing just over one-quarter of the total job market. Today there are 314,442 service jobs, or 46 percent of all the jobs in Boston. While it is true that the services industries were the largest employment sector in 1970, there were other sectors employing nearly as many people such as Trade and Finance, Insurance and Real Estate (F.I.R.E.). Today the next largest sector, F.I.R.E., is barely a third the size of the service sector, even after substantial growth of the F.I.R.E. sector.

**Figure 7. Health and professional services drive growth in the services sector**



The service sector is large and varied. It encompasses lawyers, health care providers, teachers, accountants, architects, consultants, barbers, janitors and

hotel workers. The two largest industries in the service sector are health care and professional and non-professional business services. Together, they account for 218,807 jobs in the city (70 percent of the service sector).

*Professional and Business Services*

The professional services sector in Boston employs 80,768 people in Boston. Consultants, lawyers, architects and engineers not only sell their services to other businesses in the Boston area, but also to other businesses outside the state and nation. Because firms in the professional services sector benefit from their proximity to producer and export businesses, many professional service jobs are located in the Financial District and Back Bay. Employment in professional services is closely tied to fluctuations in other industries such as securities and banking.

The professional services sector lost 2,457 jobs during the 1988-1992 recession but re-gained over 20,000 jobs by 2000, more than recouping the loss over eight times. Law firms employed over 17,000 people in 2000. Growth in employment in law firms has leveled off since the 1988 peak. Consulting, engineering, accounting, and architectural firms together employed about 35,000 workers among them. This is a healthy increase since 1992 levels, partially resulting from an increase in engineering and architectural services related to the depression of the Central Artery following a period of slow growth. Robust growth in the F.I.R.E. sector and other professional services has driven job creation in consulting and accounting firms.

Computer, software, and data processing firms accounted for 11,903 jobs in Suffolk County as of 2000. This industry has been the beneficiary of extremely strong worldwide demand for communications equipment and services, business software, web-page design, and internet-based commerce.

The non-professional business services sector provides support services such as temporary workers and graphic designers as well as copying, mailing, security and janitorial services to Boston's businesses. This sector employed 43,319 people in 2000, representing about 14 percent of the service sector. The large number of temporary workers classified in this sector makes it very volatile during economic downturns. The sharp rise in employment in business services after 1992 is evidence to the growing use of these temporary workers. In 1992, there were 6,591 tem-

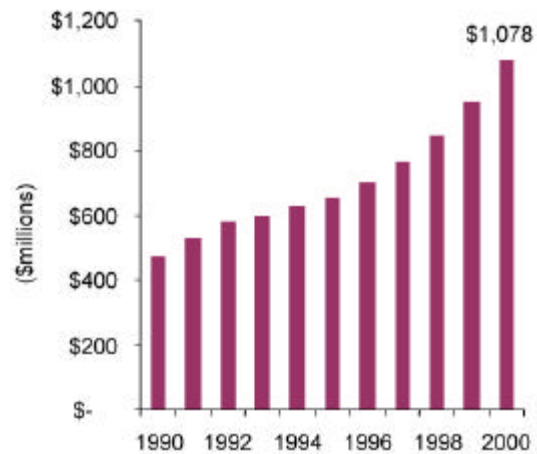
porary workers in Suffolk County. By 1996, this number had grown to over 9,800 and by 2000 to over 14,000.

*Health Care*

The most stable sector of the Boston economy is the health care industry. By 2000, there were 94,721 people employed in health care in the city. Health care jobs represent about 1 out of every 7 jobs within the city. Growth in the health care sector has been steady, despite varying economic conditions and major changes nationally within the industry. Jobs in health related services grew nearly twice as fast during the economic downturn between 1988 and 1992 (3.5 percent annually) as they did during the boom years of 1980 through 1988 (1.8 percent annually). Growth between 1992 and 2000 remained a steady 1.1 percent.

Hospitals still retain the a strong presence in Boston's health care industry, but the national trend toward Health Maintenance Organizations (HMOs), downsizing and mergers with other facilities has been felt here. Twenty-two in-patient hospitals with 5,900 are currently located within the city limits, including Beth Israel Deaconess Hospital, Boston Medical

**Figure 8. Boston tops \$1 billion in NIH awards**



Center, Brigham and Women's Hospital, Children's Hospital, Massachusetts General Hospital, and the New England Medical Center. In 1992, there were 30 hospitals, today there are eight less, but 1,200 more beds. MGH is the largest employer in the city, employing 14,907 workers. The city also has approximately 34 long-term care facilities, 1 hospice and 14 rest homes and numerous private practices. Boston is also home to the Harvard, Tufts and Boston Universities' medical and dental schools and twenty-five neighborhood health clinics, not including health maintenance organizations and membership clinics.

Boston's health care industry does more than provide first rate medical care to the populace, it is a major source of employment and funding. In 1994, when it surpassed New York City, Boston became the leading city in the nation in receiving National Institute of Health (NIH) funds. It has been the nation's leader ever since then. By 2000, Boston was receiving \$1.078 billion. If the Longwood Medical Area were ranked as a city, it would rank fourth, just ahead of Philadelphia and Baltimore. These research grants have helped the city's hospitals and institutions invest over \$1.1 billion in research facilities between 1985 and the end of the millennium. NIH grants account for 88 percent of the Federal research and development (R&D) spending in Boston. This federal spending creates over 18,000 jobs in Boston in a wide range of industries and occupations.

As new discoveries are made, Boston is sure to be leading the world in health care technology. Bio-technology has emerged as a leading industry in the region and promises to become even larger as health care needs around the world grow. Boston institutions and companies are conducting research in genetics, pharmaceuticals, and diagnostic technologies and the region is taking steps to attract the production and marketing of the products made possible by discoveries occurring here. Major bio-tech corporations such as Genzyme and Merck have major production and research facilities in Boston, and the city is looking to capitalize on industry growth occurring elsewhere in the region.

### *Education*

The city's 36 universities, colleges and community colleges had a combined enrollment in fall 2000 of 135,125. Included in this figure are the 5,095 students enrolled in graduate schools of Harvard University and Tufts University located in Boston. The students enrolled in Boston universities contribute \$4.8 billion to the Boston economy. Based on total graduate and undergraduate enrollment, Boston University is the largest university in Boston, with 28,318 students in 2000.

Latest figures show that 32,343 people work in the city's private elementary and high schools and colleges and universities. The city's public school employees and workers at the two public community colleges and one public university are counted under the public sector for statistical purposes. Private school employment represents 10.3 percent of the jobs in the service sector. Employment in the educa-

tion sector dropped by 2,107 jobs during the 1988-1992 recession but has regained over 3,500 by the turn of the century.

The economic impact of the educational institutions extends well beyond the number of people directly employed by the sector. Boston area colleges and universities are a source of new highly skilled professionals and innovation. According to the Massachusetts Institute of Technology, although only 10 percent of its enrollees over the decade of the 1980s were from the Boston area, 24 percent remained in the area after graduation, helping to attract firms needing highly educated workers. The intellectual capital also creates job opportunities for the Commonwealth and the city. According to a BankBoston study, firms founded by MIT graduates employ 125,000 people in the state (5 percent of total) and comprise 10 percent of the state's economic base. Technology transfer agreements, patents, and research grants provide funding for many of the schools in Boston and throughout the region. This discovery and innovation is a cornerstone to the regional economy, attracting top thinkers and venture capital to the city.

Boston has ranked in Fortune Magazine's top 10 cities list four out of the last six years, including 1993's Top Knowledge Workers. In 1999, the city was ranked among the "Hottest Corporate Locations," and in 1997, Boston distinguished itself as the third most improved city. Earlier, the city ranked as the fifth best city to live and work (1995) and in 1992 it was awarded the ninth best city for international business. Fortune cited the concentration of colleges and universities, the presence of knowledge-based firms and the high level of educational attainment as one of the prime reasons for these awards. The magazine wrote that "Bright people from all over the world show up and go to school, then they like the area so much, they never leave."

### *Other Services*

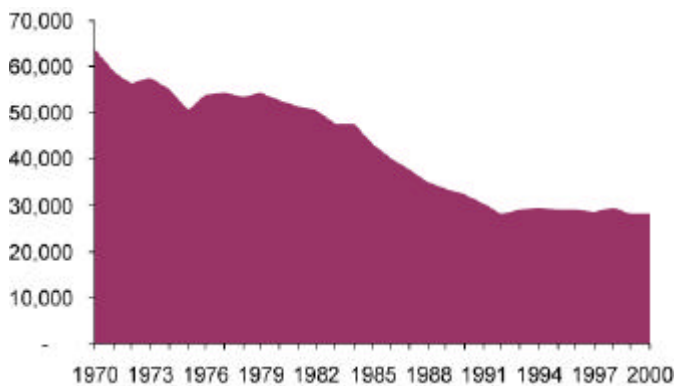
Other service sector industries do well in Boston. The hotel industry employs 12,959 people, down from the 1990 peak of 13,441, but occupancy and room rates are near historic highs. Increased demand due to the Boston Convention and Exhibition Center is spurring the development of new hotels, creating more jobs in this sector. The BCEC is also expected to improve demand for cultural and entertainment services, currently employing 10,387 people in the city. Boston has a long history of non-profit and

social organizations, such as Community Development Corporations. As of 2000, these employed just under 26,000 people.

## Manufacturing

The manufacturing industry is important to Boston's economy because it diversifies the economy, produces goods for export to domestic and foreign markets and employs a wide range of skilled and unskilled workers within the city. Many jobs in the popular, growing industries such as finance, bio-tech and software development require advanced degrees. Manufacturing jobs, while usually requiring special training and skills, often do not require formal education beyond high school, giving those without college degrees more well-paying employment opportunities. Manufacturing jobs are also very likely to be held by Boston residents. The city has been able to maintain its manufacturing base since the end of the last recession while the rest of New England's employment in manufacturing has declined slightly over the same period. The manufacturing sector lost nearly 36,000 jobs since 1970, when it comprised 12 percent of the total jobs in Boston. Much of this decline is attributable not only to less expensive rents outside the city and development pressures on manufacturing sites within the city but also a national decline in manufacturing jobs due to increased productivity and overseas migration of manufacturing jobs.

**Figure 9. The number of manufacturing jobs has held steady since the 1988-1992 recession**



The number of jobs in manufacturing has hovered around 28,000 since 1992 despite the recent loss of jobs caused by the closing of the Digital Equipment plant in 1993 and Stride Rite in 1997. Gillette is the largest manufacturing company in the city, employing 3,500 people of which approximately 1,200 are involved in manufacturing at their South Boston plant. As of 2000, there were 28,978 manufacturing jobs in Boston.

The BRA, through its Economic and Industrial Development Corporation (EDIC) arm, has an active role in the preservation and creation of manufacturing jobs. The EDIC acquired land in South Boston from the Massachusetts Land Bank in 1976 after the Economic Development Plan created a framework for the conversion of the Naval Annex, and later the South Boston Army Base, into the new Boston Marine Industrial Park (BMIP). The MIP is reserved primarily for industrial and marine uses. Over \$40 million in public investments in the park which has leveraged over \$150 million in private investment. Approximately 200 businesses, employing 3,500 people, are currently located in the BMIP's 191 acres in businesses such as food processing, ship repair, seafood distribution, light manufacturing, and importing. The BRA also manages other smaller industrial parks. Within the city-owned industrial parks, the BRA is working to maintain the number of blue collar jobs and the percentage of these jobs held by Boston residents.

Employment in Boston's manufacturing sector is likely to remain, but the value of manufacturing exports is increasing. In fact, the value of manufacturing exports per employee grew by 43 percent statewide between 1999 and 2000. Increased productivity and changes in the types of products made contribute to this phenomenal growth. The area is capitalizing on its high-tech industries to create new production opportunities. For example, pharmaceutical manufacturing is a growing industry that offers promise due to the region's bio-tech cluster. Complex manufacturing techniques make proximity to R&D facilities and skilled workers important and the city and state are partnering to take positive steps to ensure that Boston residents have the skills to obtain these jobs.

## Trade

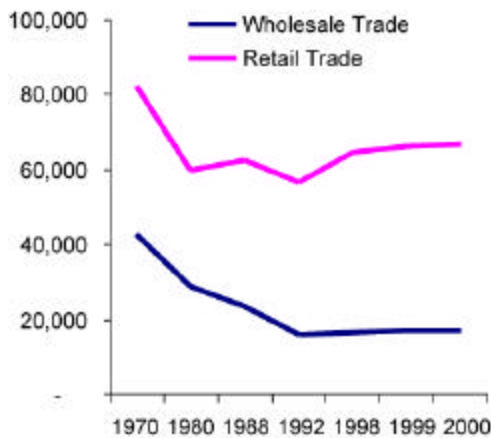
Job growth in the wholesale trade industry has lagged behind the rest of the city's posted job gains. In 1970 there were 42,630 jobs in wholesale trade. As of 2000, there are only 16,862, up slightly from the 1994 low of 15,516. Despite this slight gain it is clear that wholesale traders are leaving the city for more accessible facilities in the suburbs where more large single-story facilities are available providing better access by truck for shipping and receiving. However, it is important to protect these jobs and industrial areas as they are likely to serve other industries in the city.



The Newmarket area has traditionally been Boston's food wholesale area. The area lost some of its jobs as the food distribution industry shrank in Boston by 50 percent since 1980. The area was eyed for redevelopment in the early 1990s for a Megaplex, causing uncertainty about the future. Today, the area is growing again with the Big Dig nearing completion and the future of the area more secure. One-half of the workers in Newmarket live in Boston, two thirds of those coming from South Boston, Dorchester, Roxbury, or the South End.

Retail trade continues to do well in Boston. In 2000, the number of retail jobs hit a new high of 66,600. This is up from 57,948 in 1992. Employment in this sector fluctuates with the economy, but is partially fueled by the large resident student population, giving it some stability. Newbury Street remains Boston's premier retail market and its trendy stores are tourist attractions in their own right. The presence of a strong downtown retail market is both a cause and testament to the continued vitality of Boston. Quincy Market/Faneuil Hall and Downtown Crossing are among the most popular shopping centers in the Metropolitan area due to tourist and the large daytime population.

**Figure 10. Retail jobs are increasing & wholesale jobs remain steady**



A good indicator of Boston's neighborhood investment is the construction or expansion of 21 supermarkets between 1992 and 2000. New retail centers in the Fenway, Dudley Square, and Grove Hall are also reinvigorating neighborhoods and improving shopping choices. The South Bay Center Mall claims to have some of the nation's highest grossing stores in an urban location. The South Bay Mall includes Home Depot's first establishment in an inner city, K-Mart, and Toys-R-Us.

Boston was the first to have a citywide Main Streets program, a public-private initiative begun in 1995 to revitalize neighborhood commercial districts through locally established organizations. At the end of 2000 there were 19 neighborhood business districts operating within The Main Streets Program and West Roxbury and Jamaica Plain were to be added in 2001. This program. The program had generated, as of the end of December 2000, 347 net new and expanded businesses, created 2,490 net new jobs, and included 201 storefront improvement projects. The program has leveraged \$5.5 million of public investment into over \$40 million of private investment in Boston's neighborhoods.

Boston's restaurants are a major source of funding for the state, generating almost \$83 million (17 percent of the Commonwealth's total) in meal tax revenue in 2000. Students, tourists and residents frequent Boston's approximately 2,000 eating and drinking establishments. They also attract visitors from the suburbs, creating a vibrant street life in Boston's downtown and its neighborhoods and providing employment opportunities for over 35,000 people.

### Public Sector

Boston is both the capital of Massachusetts and the regional capital for the federal government. As a result, many public sector jobs at all levels of government are located within the city limits. These government jobs include public school teachers and public safety personnel such as fire and police departments.

Between 1988 and 1992 the public sector lost 14,529 jobs in Boston. Only 4,902 of these jobs have been recovered since. Although this job loss occurred during a recessionary period, the decline is more due to a nationwide trend of reducing the number of government employees after a period of hiring in the public sector. Beginning in 1985 and continuing through 1988 the number of government jobs in Boston rose between 2.5 and five percent annually. Beginning in 1997, the number of government jobs began to rise again, most likely due to strong growth in the economy and tax revenue. However, the 93,306 jobs in the public sector in 2000 is still well below the peak of nearly 103,000 in 1988. The job loss over the 1988-1992 recession was fairly evenly distributed across all three levels of government; federal, state and local.

## Tourism

The tourist trade spans several industries including hotel services, restaurants, retail, transportation, cultural events and entertainment services. Visitors bring outside money into Boston and create demand for cultural and civic amenities that are enjoyed by city residents as well.

According to the Greater Boston Convention and Visitors Bureau, an estimated 13.5 million people visited the Boston metropolitan area in 2000, up over 31 percent from the 10.3 million visitors in 1995. These visitors, measured as tourists, business travelers and convention and meeting delegates who traveled at least 100 miles to get to the city, had an estimated total economic impact upon the Boston metropolitan area of approximately \$8.1 billion in hotel accommodations, meals, entertainment, shopping, transportation and other services during 1998.

The city provides a venue for concerts, ice shows, circuses, plays, and other entertainment and sports events. The city is home to three major league sports franchises: the Boston Red Sox baseball team, the Boston Bruins hockey team and the Boston Celtics basketball team. The FleetCenter, home to the Bruins and the Celtics, opened in September, 1995. Annual events such as the Boston Marathon and the Head of the Charles Regatta and special events such as the 1999 All-Star Game, the 1994 World Cup, and the Tall Ships attract even more visitors to Boston.

The hotel industry employed 12,959 people in 2000, the highest number on record. This figure does not tell the entire story of the hotel industry as major industry shifts effect the way this number is counted. For example, when a hotel restaurant is handed over to an independent operator, the jobs in that restaurant are re-classified as restaurant jobs. The strength of Boston's tourism industry and large number of business travelers are prompting the development of hotels throughout the city. These hotels will be in even greater demand upon the completion of the Boston Convention and Exhibition Center.

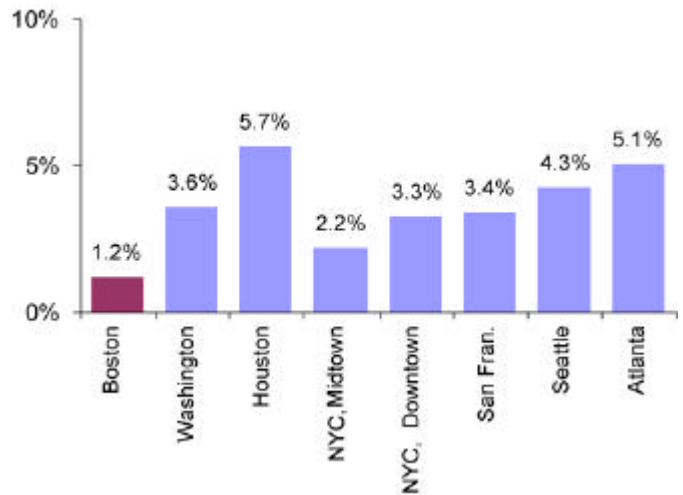
## Real Estate

### Commercial Market

Since the creation of the BRA, the public and private sectors have carried out a major expansion of capital construction and investment activity. Private commercial development investment has added over 35

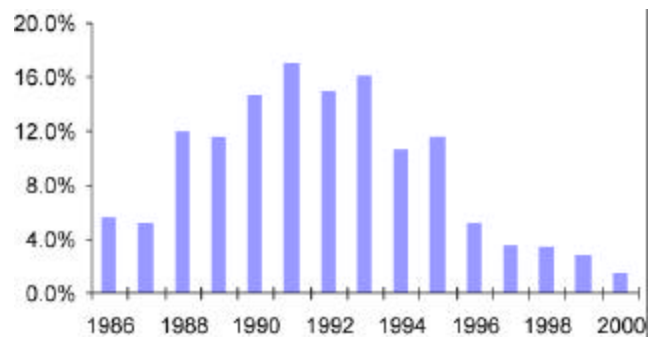
million square feet of office space to the physical inventory of the city since 1962, making Boston's commercial market one of the strongest in the nation.

**Figure 11. Boston's office vacancy rate is among lowest in nation**



The Massachusetts Miracle in the 1980s prompted a flurry of office construction. During the height of the boom 11.2 million square feet of office space were constructed, but that barely kept up with demand. Vacancy rates remained low through 1987 but began to rise as the economy slowed and office space continued to come on-line. The recession of 1989-1992 caused a loss of office jobs and slowed absorption rates resulting in vacancy rates in excess of 17 percent in 1991. In 1993, the resumption of rapid growth in the professional and financial service industries pushed overall vacancy rates down to 1.5 percent by 2000, a record low. Average rents were in the \$50-

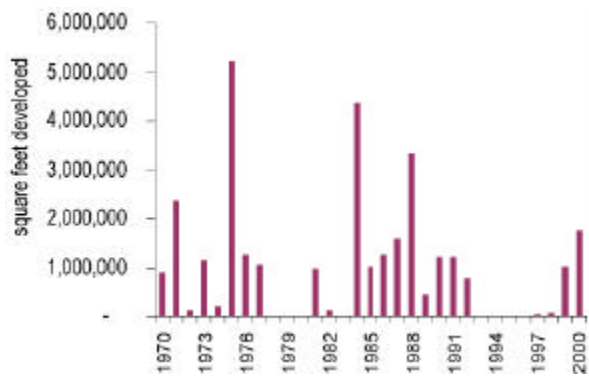
**Figure 12. Boston's vacancy rates are at historic lows**



\$60 per square foot and there were reports of top-floor space in new towers leasing for \$100 per square foot.

In the 1990s, developers and lenders moved forward with more caution than in the boom years of the 1980s. Nevertheless, 6.3 million square feet of office space were developed in the 1990s and over 30 million square feet have been added since 1970.

**Figure 13. There have been three building booms since 1970**



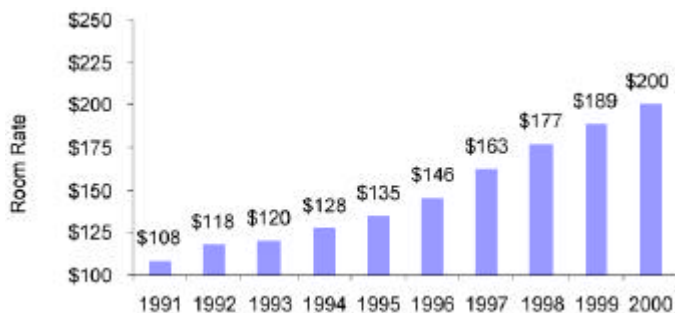
Even more is in the pipeline. Projects such as 33 Arch Street, One Lincoln Street, and 131 Dartmouth Street were beginning development as of year-end 2000. The South Boston Waterfront is primed to be home to much of the new development in Boston. New towers are already completed or underway such as Office Towers East and West, and the Manulife headquarters.

**Hotel Market**

Boston's hotel market is one of the hottest in the country. Boston's hotels had an average occupancy rate of 78.6 percent in 2000, and average daily room rates of \$200.10—a record high. The shortage and high price of hotel rooms causes many visitors to Boston to find lodging outside the city. This unmet demand sparked a flurry of hotel development in the late 1990s.

More hotel rooms will need to be constructed to meet future demand created in part by the completion of the Boston Convention and Exhibition Center in South Boston. Between 1997 and 2000, nearly 2,500 new rooms were added to Boston's stock, bringing the total to 14,094. For comparison, there were only 6,907 rooms in 1980. At year-end 2000, there were another 563 rooms under construction and about

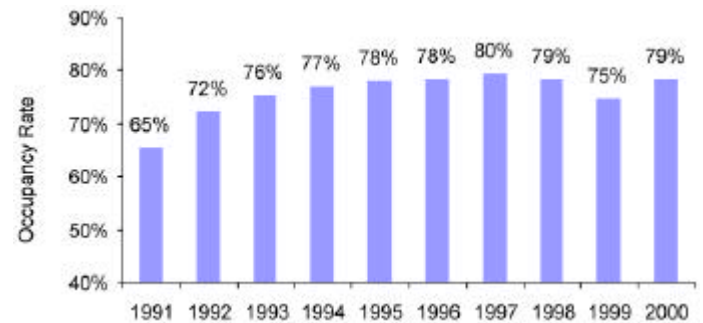
**Figure 14. The average daily room rate exceeded \$200 in 2000**



2,400 more in the pipeline. These additional rooms are clearly needed to meet the additional demand created by tourism, conventions, and business travelers. The development of hotels is an employment boon for the city's residents as every two hotel rooms generate one construction job for the duration of their construction, and once completed every ten rooms provide nearly nine permanent jobs.

The Boston Convention and Exhibition Center, along with the hotels and other developments in South Boston, will have a positive effect on the area and help bring the waterfront back into prominence. Clearly, the phenomenal performance of the hotel market in terms of occupancy and room rates has stimulated a lot of development activity and help make the city a vibrant and pleasant place to visit, attracting even more visitors.

**Figure 15. Tourists and business travelers are keeping Boston's hotel rooms full**



**Industrial Market**

Boston has just over 25 million square feet of industrial space within the city limits. A January 2000 survey revealed the vacancy rate to be 22.5 percent and rents for quality industrial space ranging from \$2.50 to \$19.00 per square foot (triple net).

Boston has seen much of its industrial land be converted to other uses. This is both a cause and effect of the decline in the number of manufacturing jobs over the past half century. More recently, several high profile companies were forced to lay off employees because of business strategies and downsizing efforts. For example, Digital Equipment Corporation (DEC) closed its Roxbury plant in late 1993 and Stride Rite Corporation closed its plant in Roxbury in 1997. These plant closings eliminated a total of 350 manufacturing jobs, representing one percent of the city's industrial jobs. In 1995, H.P. Hood decided to consolidate its operations in the suburbs and closed its Charlestown Plant.

The city has recovered from these losses. The city purchased the former DEC building in Roxbury in late December 1994. The facility houses the Boston Technology Development Center (BTDC). The BTDC opened an Innovation Center operated by the Massachusetts Biotech Research Institute (MBRI). The Innovation Center is a "super incubator" which includes four major components: a physical incubator with shared conference and reception facilities; a relationship with venture capital funding; a technology transfer office which helps locate technologies with commercial potential; and a comprehensive education and training program. The MBRI incubator space is currently fully occupied with spin-off firms. The BTDC provides many benefits to the neighborhood and citywide including construction jobs, permanent jobs, education and training programs, public school seminars, youth education, and neighborhood workforce development programs. Over \$20 million in venture capital funding is supporting the new companies that are housed at the BTDC-\$5 million in Federal funds awarded to the project leveraged these private funds. Full occupancy of BTDC was achieved in 1998 with the tenancy of HiQ Computers, which took the final 30,000 square feet for the assembly and repair of computer systems.

Other projects signal the relative strength of Boston's industrial sector. These include: the Advanced Electronics expansion to 110,000 square feet; the expansion of the Boston Freight Terminal in the Boston Marine Industrial Park (BMIP); the American Engineered Components move from Cambridge to Boston; the Zoom Telephonics building doubling in size to 150,000 square feet; Boston Ship Repair's expanded business in Dry-Dock 3 at BMIP; The Harry Miller Company development of 36,000 square feet of space with assistance in Boston's EEC; the completion of the New Boston Seafood Center, housing seven seafood companies in a 70,000 square-foot state-of-the-art facility; the International Cargo Port, a 400,000 square foot warehouse, freight forwarding, and office facility on the South Boston waterfront; and North Coast Seafood, a 60,000 square foot seafood processing facility in the BMIP.

New technologies are creating opportunities for more industrial development. In 1995, Genzyme Corporation, opened an \$85 million biopharmaceutical manufacturing plant in Allston. Genzyme has plans to build further manufacturing, research and development and headquarters facilities on the site during the 2000s. Cabot, Cabot & Forbes temporarily halted construction of Internet city, a 450,000 square feet telecommunications center in Allston.

However, the project has been recast as potential biotech manufacturing. This project, with its proximity to MIT and Kendall Square and the \$85 million Genzyme facility, could signify the beginning of a cluster of bio-manufacturing facilities in Boston.

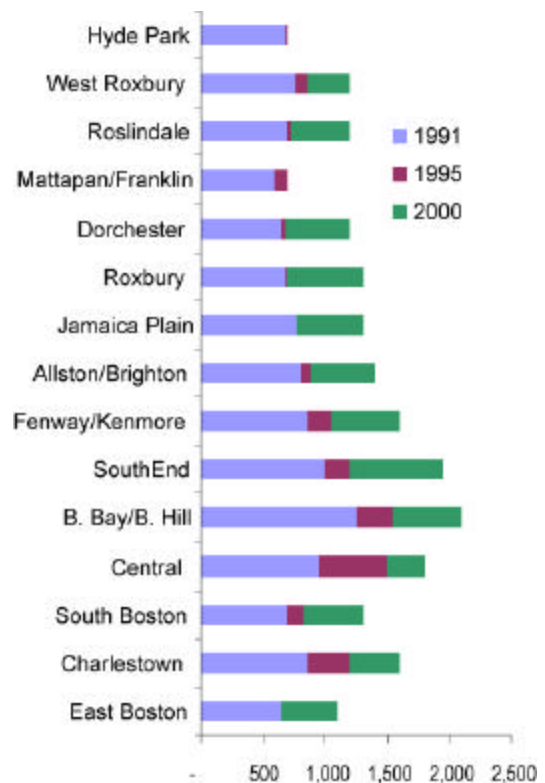
## Housing Market

The housing market in Boston is one of the tightest in the nation. A slowdown in housing production since the late 1980s has caused vacancy rates to tumble to record lows and rents and sale prices to reach record highs.

### Rents

Advertised rents in Boston continue to rise due to increased demand for rental housing, decreasing supply of rental units and increasing salaries. For example, in 1995 the citywide median rent for a two-bedroom apartment was \$825. In 1997, the median rent had climbed to \$1,350, and by 2000 the median rent was \$1,600, nearly doubling over five years. Every neighborhood saw substantial increases. The rents near downtown Boston are the highest, for example, in the Back Bay and Beacon Hill and Central Boston, the median advertised rent for two-bedroom apartments is around \$2,000 per month while in Mattapan the median rent is \$700 and in Hyde Park it is \$850.

**Figure 16. Rents doubled over the 1990s in Boston's neighborhoods**

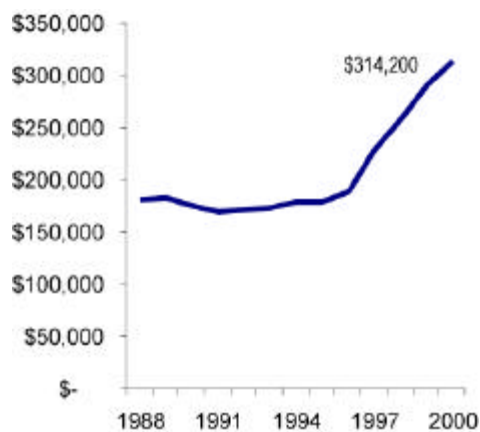


### Sales Prices

Similarly, sales prices have escalated along with rents. The median sales price of existing homes in Greater Boston (including condominiums) in 1988 was \$181,200. Beginning in 1996 or 1997, home prices began to shoot up at alarming rates as vacancies dwindled. The combination of low mortgage rates and constrained supply pushed the median sale price to \$314,200 in 2000, up 73 percent since 1988. On the whole, Boston prices rose as rapidly as the metro area's.

Boston's neighborhoods reflect the diversity of style, architecture, and price of the city's housing stock. From the grand townhomes in the Back Bay, to triple-deckers in Dorchester, to the more suburban single-family homes in West Roxbury, Boston has housing styles for everyone. However, the high prices are forcing many families out of the city, creating sprawl and traffic as people find more affordable housing in the suburbs. The construction of new housing throughout the city is a top priority and housing production numbers have begun to creep upwards in the last few years of the 1990s.

**Figure 17. Metro home prices are up dramatically**

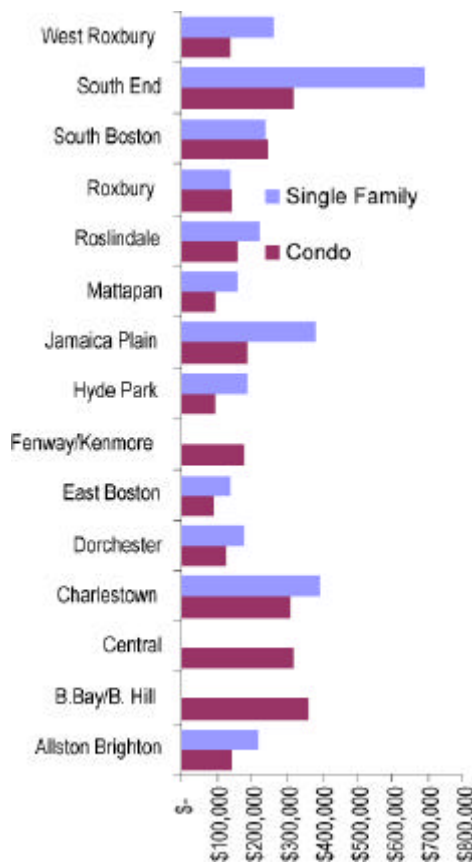


### Tenure and Housing Types

The homeownership rate in Boston was 32.2 percent as of the 2000 census, up from 30.9 percent from 1990. The neighborhoods with the highest homeownership rate are West Roxbury, Hyde Park, and Roslindale, while those with the lowest are Fenway/Kenmore, Central Boston, the South End, and Allston/Brighton.

The statewide ownership rate is 61.7 percent as of the 2000 census and the metro area (excluding Boston) had an ownership rate of 64.9 percent of the total occupied units. Clearly, the city has a greater portion of its housing stock available for rent than the state

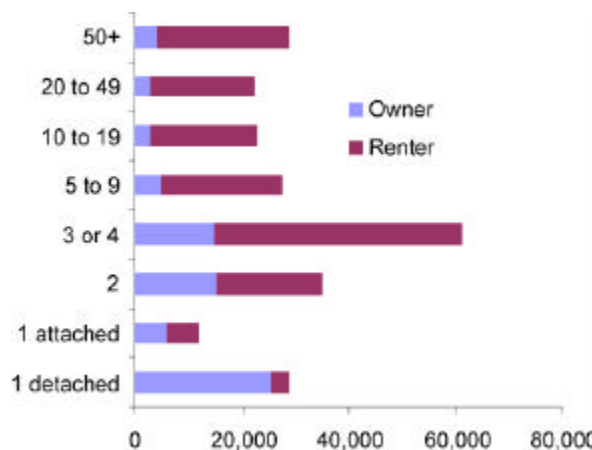
**Figure 18. Strong demand pushed home prices up to new records**



or metro region. In fact, Boston has 30 percent of the entire metro area's rental stock, but less than one-fifth of the total housing stock.

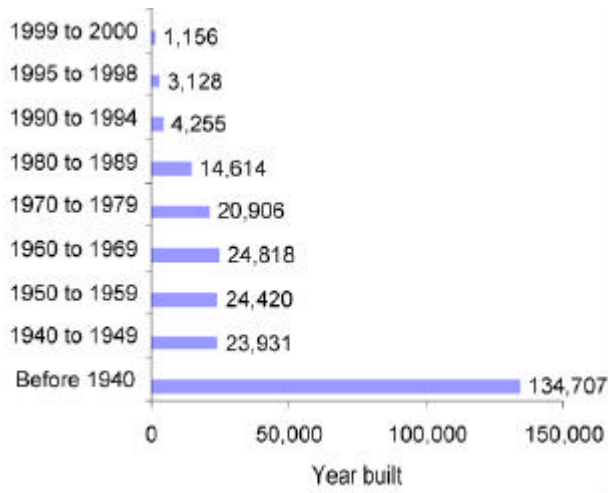
Boston's primary housing type is the triple-decker. Units in 3 or 4 family homes comprise over 25 percent of the housing stock (See Figure 18). While only 25 percent of these units are owner-occupied, nearly 60 percent of the buildings have the owner occupying one of the units. In duplexes, over 70 percent of the buildings are owner occupied. Although the owner

**Figure 19. Renter's occupy much of Boston's housing stock**



occupancy rate seems low, there are mitigating factors. First, the large number of students have a large and obvious impact upon the ownership rate. Second, many families own a triple-decker and live in one of the units, leaving three or four units for rentals. Although the homeownership rate is 33 or 25 percent in these instances, the effects of absentee landlords are noticeably absent. A recent BRA study suggests that Boston is nearing its theoretical maximum homeownership rate. However, condominium conversions will affect this figure.

**Figure 20. Most of Boston's housing stock was built before 1940**



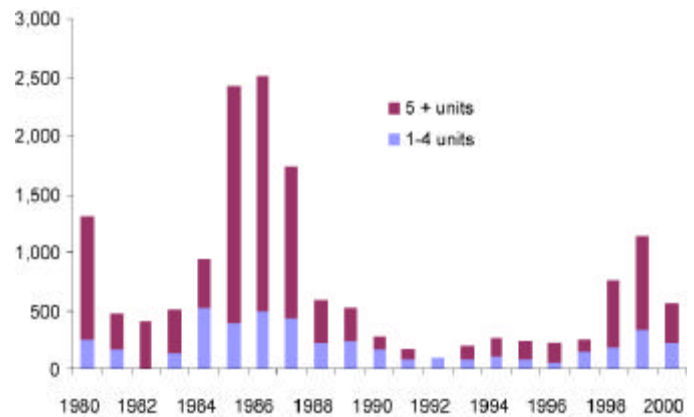
Approximately 17 percent of the housing in Boston is single family, of which 77 percent is owner occupied. In contrast, the 30 percent of the housing stock in buildings with 10 or more units is only about 14 percent owner occupied. In 1990, the ownership rate for large buildings was only 3 percent. Condominium conversions and completion of several large condominium projects have caused this figure to rise so much. Boston has one of the oldest housing stocks in the nation. According to the Census Bureau, 57.6 percent of the housing units in Boston were built prior to 1939 (See Table 1). The housing stock is dominated by rental units, especially those in three or four unit buildings (the famous Boston Triple Decker) and most of the housing units have three to five rooms.

*New Housing Production*

Boston is the center of a rapidly expanding metropolitan area. Due to Boston's constrained geography, most of the region's growth since WWII has occurred in the communities surrounding Boston. As the metro area continues to expand, encompassing communities into Maine and Connecticut, Boston accounts for a smaller portion of the growth in hous-

ing supply. For example, during the 1960s, Boston's housing growth (measured as new construction building permits) was 23.7 percent of metropolitan area's. During the 1990s, Boston housing development was just 5.3 percent of total metro development. At this rate, Boston would have declined from 18.3 percent of metro housing supply in 2000 to 17.7 percent in 2010. But in the last several years of the 1990s, city efforts led to greater production numbers, and by 1999 one of every seven new units in the region was built in Boston.

**Figure 21. City efforts since 1998 resulted in increased housing production**

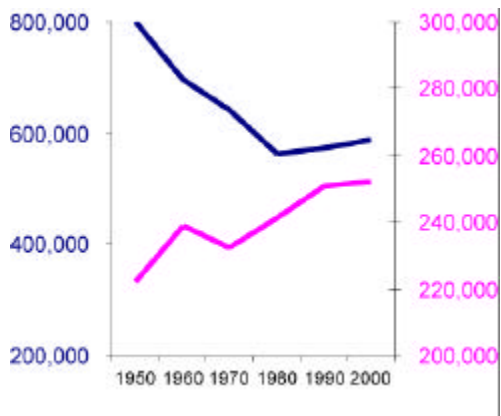


The national decline in multi-family housing construction is one reason for the decline in Boston housing production. Boston has become a very attractive place to live, attracting more people without the ability to expand it's borders. With nearly all of the city developed, multi-family housing is needed to accommodate the new growth and adhere to sound city planning principals. Furthermore, single family homes would be out of character in most of Boston's neighborhoods. Changes in U.S. tax law, reduced subsidies for production, and the reluctance of capital markets to finance large projects all contributed to the decline in multi-family housing production in Boston and throughout the nation. As a whole, the suburban communities failed to produce meaningful amounts of multi-family housing during the 1990s. During the 1990s 6,617 units in structures with five or more units were built; just 21.3 percent of the 31,090 units added during the 1980s.

Shrinking household size creates even more demand for new housing. In fact, in 1950, when the city of Boston's population hit an all-time high of 801,444, there were nearly 30,000 fewer housing units than there were in 2000 when Boston's population was 589,141. In the metro area, the number of single person dwellings increased from 7.2 percent of all house-

holds in 1950 to 25.8 percent in 1990. Single person households are much more likely to occupy rental units in multi-family structures than single family dwellings, yet production of multi-family housing has been decreasing for several decades. Rising incomes and lower interest rates also allow people to consume more housing as young people are less likely to have roommates if their incomes allow living alone.

**Figure 22. Since 1950, the number of housing units has risen dramatically while population has declined from a high of 800,000**



Boston adds substantial numbers of new units via adaptive-reuse, the conversion of industrial or commercial space to residential uses. This strategy has been a success in creating new units and rehabilitating obsolete and unused buildings.

Boston's colleges and universities held their enrollment steady over the 1990s, yet constructed 13,587 dormitory beds, bringing the total number of beds to 31,555. The addition of four dormitory beds can "free-up" at least one unit of housing in Boston's neighborhoods. The housing units that will be newly available are most likely to be near transit, large enough for a family, reasonably affordable, and surrounded by community amenities made possible by the presence of students. The shortage of rental housing makes the dormitory additions particularly welcome.

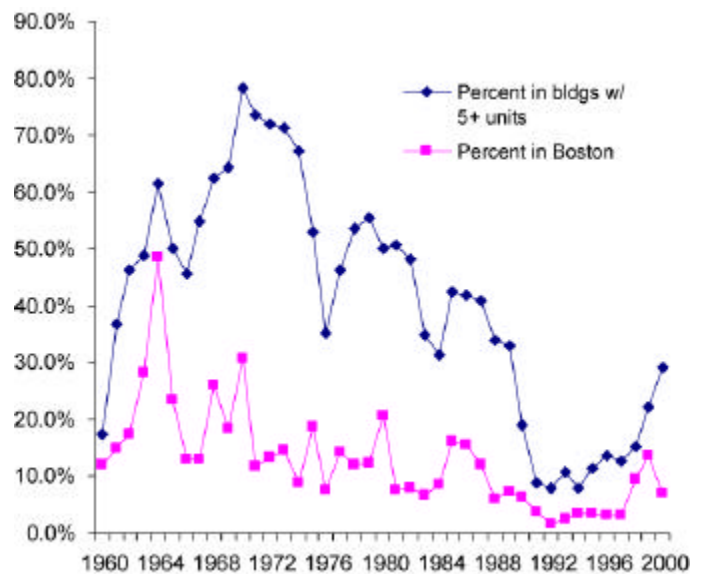
## Demographics

Boston's population reached 589,141, according to the 2000 Census, notching the second consecutive decade of population growth. This growth is contrary to population declines in other northeastern cities such as Philadelphia, Baltimore, and Washington. While the gains seem modest compared to growth in cities such as Houston and Phoenix, Boston is constrained by its small size. At 48 square miles, Boston

is the second smallest of the 20 most populous cities, behind San Francisco. Boston retains its ranking as the twentieth largest city in the United States for the third decade in a row.

Population growth is also limited by the number of housing units in the city. The number of people per housing unit has declined between 1950 and 1990 from 3.6 to 2.3. In the 1990s, this figure rose very slightly as nearly 15,000 people moved into the city with only modest growth in the number of housing units. However, the number of occupied housing units increased by over 11,000 in the 1990s, pushing the vacancy rate down. As a result, the average household size declined very slightly, mirroring national trends. An 11 percent gain in the number of single person households contributed to this trend. The 2000 Census reported an average household size of 2.31, compared to 2.37 in 1990.

**Figure 23. After years of decline, the percentage of multi-family units being built is increasing**



Boston is the core city in the Boston Primary Metropolitan Statistical Area (PMSA), which has 3.4 million people living in its 129 communities. The Boston PMSA is by far the largest PMSA in the Boston Consolidated Metropolitan Statistical Area (CMSA), which includes communities from York, Maine to Thompson, Connecticut, as well as Lawrence, Lowell, Nashua and Worcester. Almost 5.9 million people live in the CMSA's 238 communities, making it the seventh largest in the country.

Boston has a diverse population, with non-whites comprising over half (50.5 percent) of the population for the first time in the city's history. Of people of color, blacks and African-Americans are the largest

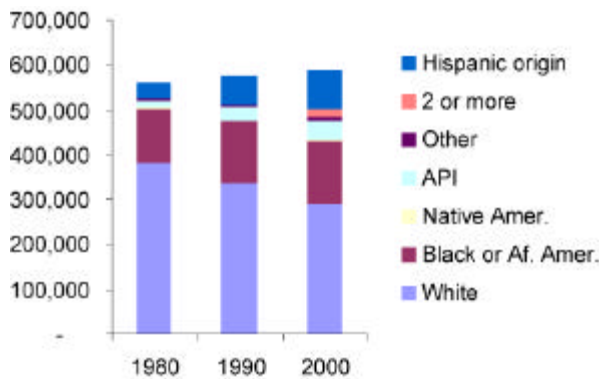
group, comprising 23.8 percent of the total population. People of Hispanic origin make up 14.4 percent of Boston's populace and can be of any race. Asians, American Indians and Aleuts comprise the remaining population. Asians and Hispanics are the fastest growing racial and ethnic groups in the city.

**Immigration**

Boston historically has been a city of immigrants and this trend continues to the present. Over a quarter (152,000) of the people living in Boston in 2000 were foreign-born - nearly 74,000 of them arriving in the United States since 1990. Residents from Latin America make up nearly half of the foreign born people in Boston followed by those born in Asia at 24 percent. Nine percent of the foreign born residents were from Africa. The immigration statistics are reflected in the ancestry characteristics of the city. While Irish is the largest ancestry group, West Indian and sub-Saharan African each grew by over 11,000 people during the 1990s while the number of Irish shrank by over 35,000. Although these figures represent population growth due to natural increase as well as immigration, it gives a good picture of trends in Boston.

The number of people speaking languages other than English at home is also rising in Boston. In 1980, 81 percent of the people in Boston five years and older spoke only English at home. In 1990, only 74 percent did. That number has declined to 66.6 percent in 2000. Spanish is the second most common language spoken in Boston with more than 75,000 speakers. Other languages include mostly Asian and Pacific Island languages, Portuguese and Russian.

**Figure 24. Non-whites are now the majority in Boston**

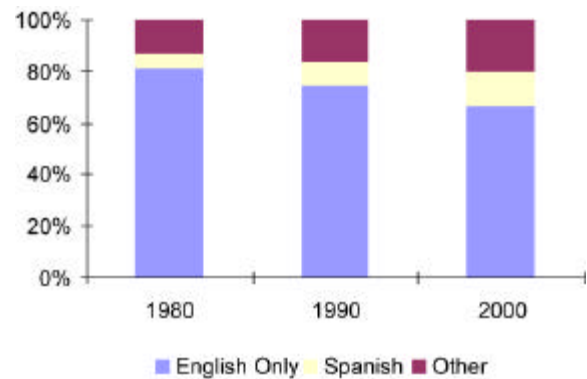


**Educational Attainment**

Boston is known as the Athens of America because of the strong presence of its educational institutions.. Boston's economy depends upon the highly skilled

workforce that the city's colleges and universities provide. The state has a strong secondary school system in terms of math and science. The Massachusetts Technology Collaborative reports that Massachusetts eighth-graders have among the highest National Assessment of Educational Progress (NAEP) scores in the nation, surpassing other high-tech and technology-rich states such as New York, Texas, California and Florida. Boston's schools are below the state's average in terms of test performance, but nevertheless the city benefits from the high educational attainment of other towns in the Commonwealth. The

**Figure 25. Many Bostonians speak a language other than English**



number of college graduates has steadily increased since 1970, due to the city becoming more attractive to well educated professionals and to more Boston Public School graduates attending college. Over the same period, the percentage of residents 25 years and older without a high school degree has dropped from 46 percent in 1970 to just 21 percent as of 2000. Over half of the population has completed some college in 2000, compared to a fifth in 1970.

In 1970, only 53.4 percent of the city's population aged 25 and over held at least a high school diploma. By 1980, this was up by 68.5 percent. The latest data show that more than three-fourths of Boston's residents aged 25 and older have at least a high school diploma. Nearly half have at least some college experience. Eighteen percent have earned a bachelor's degree, and 40 percent of these people have earned a graduate or professional degree.

Many Boston jobs require a high level of education and training. There are almost 286,000 employed people living in Boston and 688,000 jobs within the city limits. As a result, people living outside the city hold most of the jobs in Boston. Despite the high level of education of city residents, Bostonians are under-represented in industries that have high-pay-



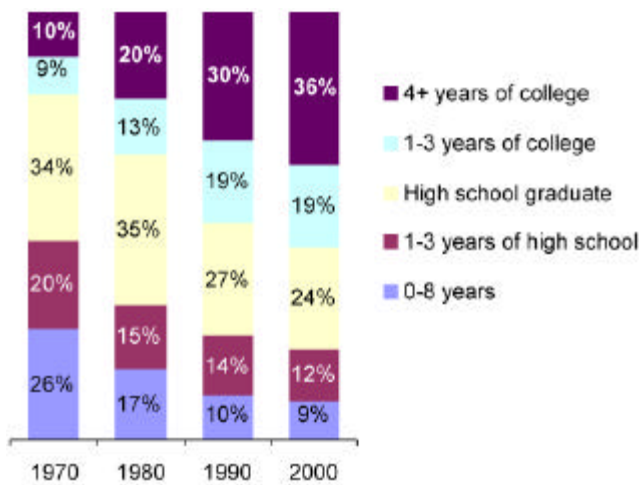
ing occupations and positions. A Boston resident is more likely to hold a job in manufacturing, wholesale or retail trade, or construction than a suburban worker.

### Daylong Population and Commuting Patterns

During a typical workday, Boston's population doubles to nearly 1.2 million, as people come to Boston to work, shop, go to school, receive health care or attend special events. The large number of people coming into Boston brings in business and money, adds to the vitality and gives a telling picture of the true importance of the city and its impact upon the region.

Boston has a very accessible public transportation system, so there are many choices of commuting methods. Even so, 41 percent of Boston's residents drove alone to work, up slightly from 1990, while 31 percent took a bus, subway or train to work. Roughly nine percent carpooled. Boston is also very fortunate to be a very walkable city and 13 percent of the residents took advantage of this fact. Despite advances in telecommunications and the internet, only 6,593 of Boston's residents worked at home, up only slightly from 1990 when 6,255 did so. The 2000 Census reports that Boston's average commute time is nearly 29 minutes up from 23 minutes in 1990.

**Figure 26. Educational attainment is improving in Boston**

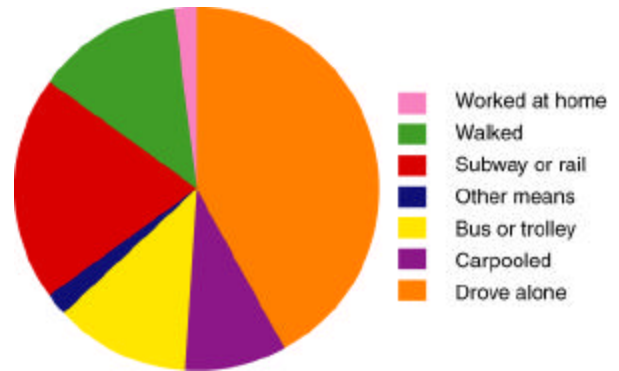


### Income and Poverty

The median family income did not keep pace with inflation over the 1990s, growing 28 percent to \$44,151. This is lower than the state and national medians of \$61,664 and \$50,046, respectively. However, the percentage of households in Boston earning more than \$100,000 rose dramatically from 4.7 percent in 1989 to 12.8 percent in 1999, and the

average wage for a job in Suffolk County in 1999 was \$49,671. This is substantially higher than the state's average wage at \$39,352. These dichotomies would suggest that many of the higher paying jobs in Boston are held by commuters.

**Figure 27. Hi-Ho, Hi-Ho, it's off to work we go!**

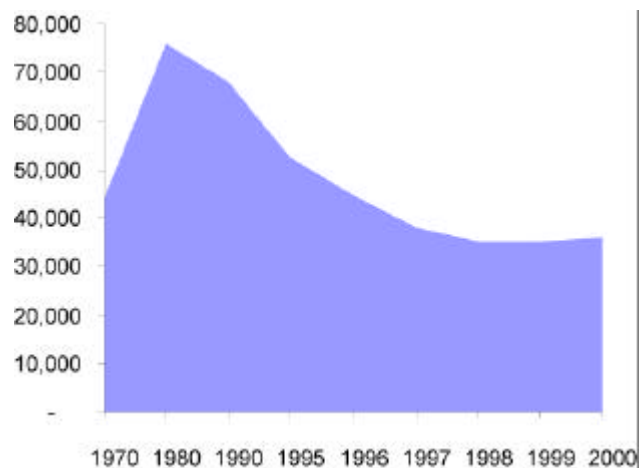


In 2000, Boston's poverty rate grew by 4.3 percent, rising from 18.7 percent of the population to 19.5 percent. The total number of people living in poverty in Boston rose from 102,092 in 1990 to 109,128 in 2000. The average for the top 50 cities in 2000 was 17.2 percent, a 3.4 percent increase. The poverty rate for children under 18 fell during the 1990s from 28.0 to 25.6 percent, still higher than the overall rate, but good news for the city. The poverty rate among the elderly and adult population accounted for all of the increase in Boston's poverty rate over the 1990s.

### Crime

Boston has been nationally recognized for its declining crime rate. As in most other large U.S. cities, the number of both violent crimes (homicide, rape, robbery, and aggravated assault) and property crimes (burglary, larceny, and vehicle theft) are down substantially over the past decade.

**Figure 27. Crime has declined markedly over the past 30 years**



# Sources of Data

This report covers the history of Boston's economy through the end of 2000. The purpose of this report is to explain how the city developed its economy and highlight the changes of the past 30 years. Much has happened in Boston's economy, and indeed in the world, since the end of the 20th century that is not captured in this report. The BRA prepares and releases reports on the state of the city's economy each year. These reports, and nearly all BRA publications completed since 1997, are available at the agency's website:

[www.BostonRedevelopmentAuthority.org](http://www.BostonRedevelopmentAuthority.org)

Statistical data relating to population, employment and income are derived primarily from four separate sources: the U.S. Bureau of the Census, the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis (the BEA), and the city of Boston/Boston Redevelopment Authority (the BRA), each of which is described below.

The U.S. Bureau of the Census publishes information about population, housing and the economy. Data from the 2000 Decennial Census of Population and Housing is now available. In addition, some monthly and quarterly data are available through July 2001 on certain topics for the region, Massachusetts, and the Boston metropolitan area. The U.S. Bureau of the Census does not publish such interim data for the city.

The U.S. Bureau of Labor Statistics publishes data and reports about the workforce and related subjects including unemployment rates, area wages, and cost-of-living adjustments. Final data for 2001 are the most recent annual data available; the most recent monthly data are for December 2002.

The U.S. Bureau of Economic Analysis publishes quarterly and annual statistics on income and employment. The most recent annual figures for the nation, New England and Massachusetts are from the September 2002 Regional Economic Information System (REIS) and from the January 2003 REIS revised series for the metropolitan counties and Suffolk County, which consists of the city plus the municipalities of Revere, Chelsea and Winthrop. The most recent quarterly statistics are for the third quarter of 2002. The city comprises approximately 87% of Suffolk County's population and approximately 96% of its employment.

The city and the BRA prepare reports and compile data on the population and economy of the city and its neighborhoods. BRA also provides data and trends from various local, regional, state and national sources on such topics as employment and occupation, large employers, city schools, universities and colleges, medical institutions, tourism and lodging, transportation, office and industrial markets, housing, building activity and urban redevelopment and infrastructure projects. Statistical data do not necessarily reflect current activity because of delays resulting from the time data readily available to it in the discussion in this section, because of such necessary delays, the data contained herein may not reflect current conditions or trends. Additionally, statistical data are approximations and generalizations subject to various sources of error inherent in the statistical process, and may be revised on the basis of more complete data. Within such limits, the statistical data contained herein describe past activity and are not presented with a view to predicting future economic activity either in particular categories or in general.

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C.B. Richard Ellis  
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Greater Boston Convention and Visitors Bureau  
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- <sup>3</sup> Newell, *Engines of Enterprise*, 34-35.
- <sup>4</sup> Adams, Russell B. *The Boston Money Tree* (New York: Thomas Y. Crowell Company, 1977), 7.
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- <sup>12</sup> Temin, Peter. "The Industrialization of American Capitalism," from *Engines of Enterprise*, 131-132.
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- <sup>19</sup> Rosenbloom, *Engines of Enterprise*, 170-171.
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