

Heading Down

The Loss of Massachusetts Headquarters

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by John Friar and Megan Gay



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PUBLIC POLICY RESEARCH

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Foreword

The Massachusetts economy has suffered – along with those of other states – through the effects of the latest recession. Massachusetts has faced the same economic pressures as the rest of the country, shedding jobs in 2008 and 2009. The state’s unemployment rate has soared; hundreds of thousands of people are out of work, while the threat of a ‘jobless recovery’ looms for many workers.

In January, Pioneer Institute released *Failure to Thrive*, our first white paper in our series on jobs. The authors, John Friar (Pioneer Senior Fellow and Executive Professor of Entrepreneurship and Innovation at Northeastern University) and Megan Gay demonstrated that Massachusetts has failed to create jobs over the last eighteen years, is developing a problem with entrepreneurship and should not focus on firm relocation to create job growth.

The second paper in our white paper series on jobs, *Heading Down: The Loss of Massachusetts Headquarters*, once again authored by Friar and Gay, focuses on the steep decline in headquarters in the Commonwealth. The picture *Heading Down* paints is dire enough, with the massive job losses it substantiates as resulting from the loss of headquarters. But its findings go beyond that data point, suggesting that the loss of headquarters is not due to relocation to other states, though that too has happened. Rather, the data analysis shows us that while headquarters continue to be significant employers, the birth rate of new headquarters is lagging sharply.

Over the next seven months, Pioneer will build on *Failure to Thrive* and *Heading Down*. The series will examine the determine which industries created jobs growth after the last two recessions, examine the impact of relocation on specific communities, dissect the story behind the shrinking firm size in Massachusetts and more. Our goal is simple: Knowing that what we have been doing is not working, we want to change the basic principles of economic development policy. As Massachusetts businesses and entrepreneurs take steps to enable the state to rebound from the recession, this series seeks to make sure that the government will know how best to support those efforts.

James Stergios

Executive Summary

This paper is the second in a series on employment trends in Massachusetts from 1990 to 2007, an eighteen- year period leading up to the current recession. From 1990 to 2007, the U.S. experienced net job growth of 26.6%; in the same period Massachusetts experienced a net job loss of 0.3%, losing a total of 11,816 jobs. From 1990 until 2003, Massachusetts job trends roughly followed US trends: losing jobs in 1990-1992 and 2001-2003 due to recessions and gaining jobs in intervening years.

However, from 2003 through 2007, the U.S. gained jobs while Massachusetts lost a significant number of jobs. Clearly, Massachusetts has systemic issues that differ from those in the rest of the country. In all likelihood, Massachusetts will not follow the rest of the country in terms of job creation after the current recession. In this brief, we identify specific components that affect Massachusetts job generation, starting with the role of headquarters.

All firms can be divided into two types: those with only a single site and those with multiple sites. Those with multiple sites have both corporate headquarters and branch offices. Among all individual factors, the change in the number of headquarters in the state has caused the state’s most significant decline in employment. During the 1990-2007 study period, the number of headquarters locations in Massachusetts declined precipitously (-32%). In contrast, the

number of branches grew by 74% while the number of standalones grew by 75%. As a result, Massachusetts has become a state with many more standalone establishments and branches offices for companies that are headquartered in other states.

The changes in the number of establishments means that more headquarters have closed or moved out of state than have been created or moved into state. Because headquarters, on average, employ the greatest number of people, the loss of these establishments has been acutely felt, with a net loss of 257,250 jobs over the 1990 to 2007 period. Headquarters closure has had a particularly dramatic effect because it has not been counterbalanced by a proportional increase in headquarters births. The net job loss from headquarters closures and openings accounts for over 93% of the job losses related to headquarters.

An examination of headquarters employment levels provides significant insight into a major driver of job loss (See Figure 1). These headquarters job flux data reveal the following:

- **Decline in the number of headquarters, as standalones and branches grew:** Massachusetts has lost 5,106 headquarters on a net basis from 1990 to 2007 and headquarters have shrunk from 7% of establishments during that period to just 2.87%.

Figure 1: Summary of Headquarters Job Flux

	Headquarters			All Firms		
	# of Firms	Jobs	Firm Size	# of Firms	Jobs	Firm Size
1990	16,223	1,066,362	65.73	231,860	3,870,637	16.69
Births	5,564	174,095		508,194	3,086,217	
Death	(10,456)	(414,253)		(350,509)	(3,401,710)	
Expansion		720,053			2,494,262	
Contraction		(730,890)			(2,166,497)	
Moved In	985	56,872		4,823	92,493	
Moved Out	(1,199)	(63,127)		(6,975)	(116,581)	
2007	11,117	809,112	72.78	387,393	3,858,821	9.96

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- **Massive job loss at headquarters:** Headquarters in Massachusetts shed 257,250 jobs during the period 1990 – 2007 whereas overall employment in the state declined only slightly.
- **Headquarters births have lagged:** Using our paired drivers of job creation and loss, the largest net loss of jobs during the 1990-2007 time period has resulted from headquarters deaths compared to headquarters births. Headquarters deaths resulted in the loss of 414,253 jobs while headquarters births resulted in the creation of 174,095 jobs, a net loss of 240,158 jobs.
- **Headquarters establishment size increases:** Even during this period of decline in overall job numbers, headquarters is the only category of establishment to grow in terms of individual establishment size, rising from an average of 65.7 employees to 72.8 employees. The 2007 establishment size of 72.8 employees is almost nine times larger than the average size of other establishment types, demonstrating the relative importance of headquarters as large employers.
- **Relocation remains a minor factor:** As with the overall employment picture, headquarters relocation (both in and out) is relatively unimportant compared with other drivers of job creation and loss. However, headquarters relocation, because of the large establishment size, causes over half of the jobs gained and lost through relocation.

Headquarters have proven to be significant employers and have sustained their establishment size throughout the study period. Their large average size makes them disproportionately important to employment levels, and they are subject to some employment rules and regulations imposed by the state on larger businesses. In contrast, the average size of standalones and branches is now under ten people, so that many of these firms are beneath the size thresholds for certain stricter employee regulations.

Policymakers should first strive to create a business climate that promotes the start-up of new headquarters and prevents existing headquarters from leaving the state. However, as the largest employers in the state, headquarters bear the brunt of the high cost of doing business in Massachusetts. Massachusetts is rated 47 out of 50 for corporate income taxes and 49th on unemployment insurance by the Tax Foundation.¹ In addition, Massachusetts' overall rankings, on these measures, have worsened over time.

As with the overall employment picture in Failure to Thrive, the employment trend for headquarters suggests a problem with entrepreneurship. The level of headquarters death has remained proportional to that of all establishments. But it is not counterbalanced by the birth of new headquarters, resulting in a net loss of almost 250,000 jobs across the two drivers.

Second, policy makers should create an environment that encourages existing headquarters to expand; surviving headquarters continue to lay off more people than they hire. The expansion of headquarters is the biggest job creator across all the drivers and should be encouraged.

The findings in the first paper in this series, Failure to Thrive, suggest that establishment relocation is of minimal importance to job growth. For headquarters relocation, the findings are consistent given the impact of headquarters' large and sustained establishment size, a tertiary concern for policy makers should be to attract headquarters with a large and stable or growing employee base.

Headquarters are large employers. Their failure to create jobs over the last 18 years has had a strong negative effect on job growth. Nurturing and sustaining headquarters is an important component of creating a strong, growing economy that retains and creates jobs.

Introduction

This brief seeks to analyze the impact of changes in the composition of workplaces in Massachusetts to determine the specific impacts the changes in the raw number and percentage share of headquarters have had on job creation and loss.

We isolate the effect of changes in headquarters by first dividing all establishments in Massachusetts into three categories: headquarters, branches, and standalone. Then, we determine the number of headquarters and their levels of employment. Combining these two data points provides vital insight into changes in establishment size at headquarters.

To determine what is effecting these changes, we analyze the key employment drivers identified in *Failure to Thrive* – establishment birth, death, expansion, contraction, relocation in, relocation out. We then analyze each of these factors to determine how they impact overall headquarters employment.

Methodology and Data

The data used in this brief are from the National Establishment Time-Series Database² (NETS Data), which has been used in a number of different studies examining the effects of business relocation on employment change. These data follow all establishments in Massachusetts, both private and public, over time. With this information, we can track total flows at the industry level and not just net results, as other data sources do. Each establishment is permanently assigned a unique number that stays with it whether it moves or is acquired, so we can consistently track factors like number of employees, place of business and operational status.

A study by Neumark, Zhang and Wall³ assessed the reliability of the NETS data on a number of dimensions and found it to be a reliable data source. According to the Neumark, Zhang and Wall analysis, the NETS data includes the

following strengths: (1) it contains data on almost all establishments operating in the U.S. (both small and large) rather than only a small sample; (2) it is a commercial data set and therefore lacks confidentiality restrictions; (3) it allows researchers to track physical establishment relocations via annual changes in business address; (4) it gives researchers the ability to assess changes in employment at a given establishment over time; and (5) it provides researchers the ability to identify new business creation (“births”) and elimination of existing establishments (“death”).

Our sample includes 759,707 observations comprising all of the establishments operating in Massachusetts from 1990 to 2007. It includes annual data for all Massachusetts establishments with respect to their business location, annual sales, number of employees, operational status, industry classification (4-digit SIC code), type of establishment and business relocation details (if applicable).

Establishment (used interchangeably with firms in this paper) categories are defined as follows:

- Headquarters – a location that has other locations reporting to it and is designated by the company as a headquarters. The underlying database is based on Dun & Bradstreet data, which regularly crosschecks their database through direct contact and surveys of media releases, to ensure accurate identification.
- Branch – a non-headquarters establishment with another location that serves as a headquarters
- Standalone – a single location business

This series utilizes six employment drivers to analyze employment trends. It pairs them together to determine how certain job flows counteract others.

- The first driver is “Firm Births”, which is the creation of new establishments in the

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state. The creation of these firms generates a positive change in the number of firms in the state and an increase in total employment. It is paired with the second driver, “Firm Deaths”, which refers to the elimination of existing establishments, generating a negative change in the number of firms and a decrease in total state employment.

- The third driver is “Firm Expansion”, which involves the addition of at least one employee to existing firms. The expansion of these firms generates an increase in total state employment. It is paired with the fourth driver, “Firm Contraction”, which involves the elimination of employees from existing firms. The contraction of these firms generates a decrease in total employment.
- The fifth driver is “In-Relocation” which is the movement of a firm from another state to Massachusetts, generating an increase in jobs

and total state employment. It is paired with the sixth driver, “Out-Relocation”, which is the movement of a firm to another state from Massachusetts, generating a decrease in jobs and total state employment.

Analysis of Net Changes

This section provides a detailed look at the net changes in the number of headquarters, headquarters employment, and headquarters size relative to all establishments in Massachusetts. It provides a broad overview of the impact that the last eighteen years have had on headquarters in the context of the broader economy.

A. Number of Establishments

The change in headquarters can be seen in the reduction of both the actual numbers of headquarters, as well as in the reduction in their share of total establishments in Massachusetts.

Figure 2: Change in Headquarters – Absolute Numbers and Percentage of Establishments

Year	Number of MA Establishments	Number of Branches in MA (% of Yearly Total)	Number of Headquarters in MA (% of Yearly Total)	Number of Standalones in MA (% of Yearly Total)
1990	231,860	20,266 (8.74%)	16,223 (7.00%)	195,371 (84.26%)
1991	235,358	19,610 (8.33%)	16,023 (6.81%)	199,725 (84.86%)
1992	243,888	20,051 (8.22%)	15,806 (6.48%)	208,031 (85.30%)
1993	269,882	28,414 (10.53%)	15,720 (5.82%)	225,748 (83.65%)
1994	274,211	28,102 (10.25%)	15,371 (5.61%)	230,738 (84.14%)
1995	295,784	32,016 (10.82%)	14,995 (5.07%)	248,773 (84.11%)
1996	295,050	32,302 (10.95%)	14,489 (4.91%)	248,259 (84.14%)
1997	310,648	36,714 (11.82%)	13,851 (4.46%)	260,083 (83.72%)
1998	318,811	38,111 (11.95%)	13,624 (4.27%)	267,076 (83.78%)
1999	312,627	38,072 (12.18%)	13,351 (4.27%)	261,204 (83.55%)
2000	306,758	39,204 (12.78%)	13,066 (4.26%)	254,488 (82.96%)
2001	316,826	40,728 (12.86%)	12,800 (4.04%)	263,288 (83.10%)
2002	336,046	41,450 (12.33%)	12,471 (3.71%)	282,125 (83.96%)
2003	349,826	40,530 (11.59%)	12,360 (3.53%)	296,936 (84.88%)
2004	350,640	39,282 (11.20%)	11,903 (3.39%)	299,455 (85.41%)
2005	366,234	38,150 (10.42%)	11,739 (3.21%)	316,345 (86.37%)
2006	380,405	35,972 (9.46%)	11,361 (2.99%)	333,072 (87.55%)
2007	387,393	35,189 (9.08%)	11,117 (2.87%)	341,087 (88.05%)

As Figure 2 demonstrates, the total number of establishments in Massachusetts has grown over 50% in the eighteen-year period while the number of headquarters has dropped by almost a third. Both the number of headquarters and the percent of all establishments that are headquarters have steadily decreased from 1990 to 2007. On average, 300 headquarters disappeared from Massachusetts every year.

In contrast to headquarters numbers, the number of branches increased steadily from 1990 to 2002. At the same time, the percent of all establishments that were branches also increased. However, beginning in 2003, both the number of branches and the share of branch establishments decreased.

During the 1990-2007 study period, the number of standalones in Massachusetts increased almost every year. From 1990 to 2002, the share of all Massachusetts establishments that were standalone remained relatively consistent at approximately 84% (+/- 1%). However, between 2002 and 2007, the share of all Massachusetts establishments that were standalone gradually increased from approximately 84% to 88%.

For both branch and standalone establishments, growth in the number of establishments over the 1990-2007 period has been almost 75% while the number of headquarters decreased by 32%. Due to this disparity, headquarters now account for fewer than 21% of total establishments in the state, a substantial drop from 27.5% in 1990.

B. Number of Jobs

Although the number of establishments provides important basic information, jobs are the focus of this series and total employment is the key metric. Unsurprisingly, headquarters employment mirrors the decline in the number of headquarters. (See Figure 3).

Total state employment has stayed relatively stable over the eighteen year period, yet headquarters employment has dropped by 257,250. This absolute decline also results in a decline of headquarters jobs as a percentage of total jobs from 27.55% in 1990 to less than 21% in 2007.

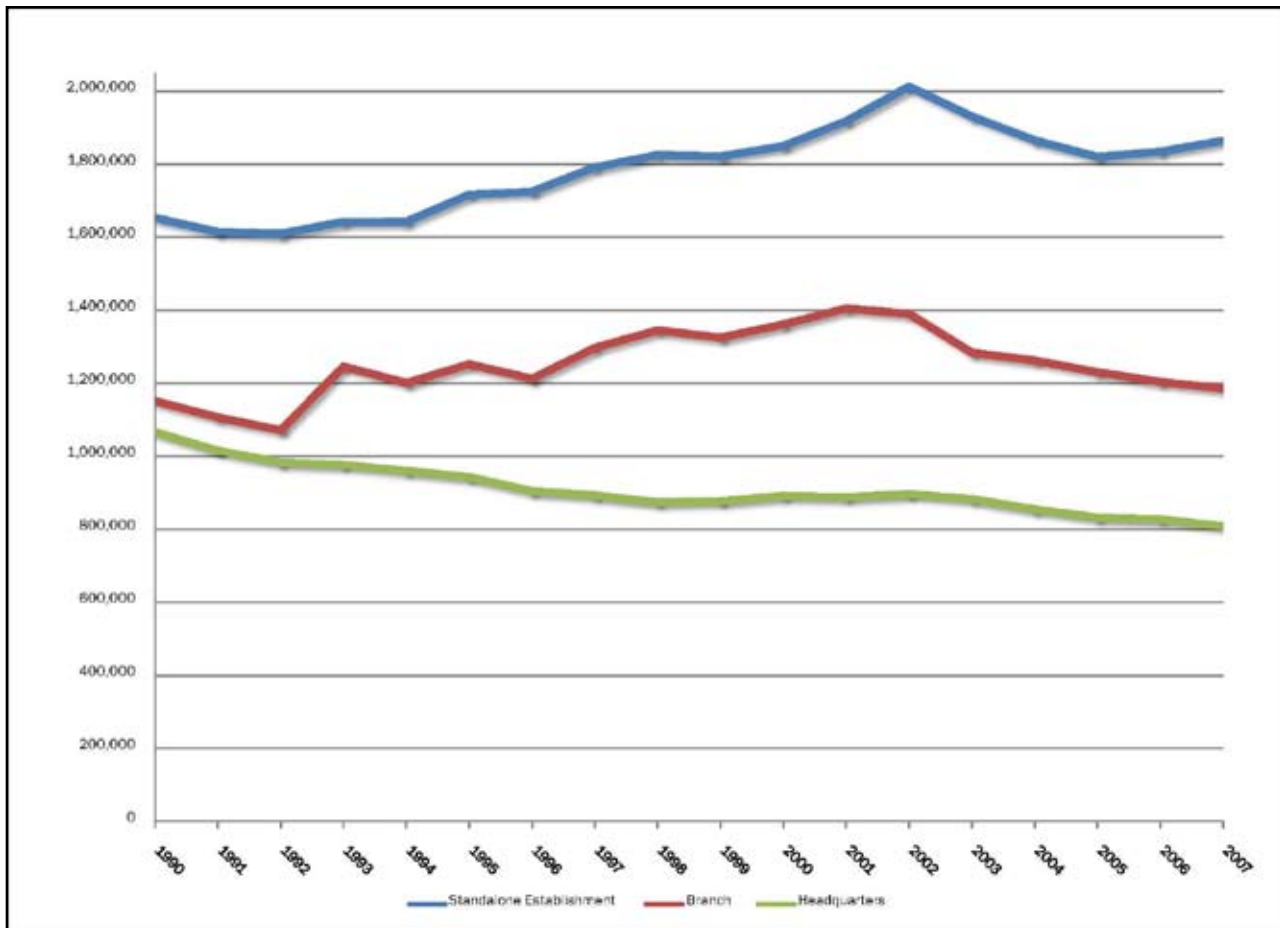
Figure 4 shows employment levels at the three types of establishments. Headquarters shows a steady decline while branches and standalones increase steadily until a drop in overall employment during the 2001 recession.

Figure 3: Total and Headquarters Employment

Year	Employment	Employment at Headquarters (% of Yearly Total)
1990	3,870,637	1,066,362 (27.55%)
1991	3,736,442	1,015,373 (27.17%)
1992	3,664,423	983,263 (26.83%)
1993	3,864,484	976,300 (25.26%)
1994	3,803,913	960,518 (25.25%)
1995	3,912,202	943,249 (24.11%)
1996	3,842,236	905,050 (23.55%)
1997	3,981,583	893,039 (22.43%)
1998	4,044,532	874,274 (21.62%)
1999	4,023,161	877,164 (21.80%)
2000	4,102,716	891,922 (21.74%)
2001	4,211,034	888,211 (21.09%)
2002	4,299,190	896,436 (20.85%)
2003	4,097,508	883,070 (21.55%)
2004	3,982,735	854,935 (21.47%)
2005	3,882,886	832,491 (21.44%)
2006	3,865,766	827,566 (21.41%)
2007	3,858,821	809,112 (20.97%)

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Figure 4: Employment Levels At Headquarters, Branch and Standalone Establishments



As noted in *Failure to Thrive*, Massachusetts failed to create new jobs after the 2001 recession; Figure 4 illustrates how that failure affected each of the three types of establishments. All three establishment types experienced job losses after the recession, and standalones and branches initially faced more dramatic losses. However, standalones are the only establishment type to show an increase in employment during the post-2001 recovery and that modest recovery took several years to materialize.

C. Firm Size

A vital aspect of the discussion of number of establishments and employment levels is the issue of establishment size. In aggregate, Massachusetts has seen a significant decrease in the overall average establishment size from 16.69 employees in 1990 to 9.96 employees in

2007. During the study period, headquarters actually grew in size from an average of 65.73 employees to 72.78 employees. Meanwhile, branches and standalone establishments dropped from 13 employees, on average, in 1990 to 8.1 employees by 2007. The persistence and growth of headquarters -- especially during a period of declines in employment and the number of establishments -- reflects their outsize importance to employment relative to their proportional share of establishments.

The topic of firm size will be addressed in future papers in this series.

Analysis of Employment Drivers

The foregoing analyses of headquarters' activity in terms of the number of establishments, employment, and establishment size considered net changes. Our analysis now turns to gross numbers and the analysis of flux. We analyze the components of job creation and loss examined in *Failure to Thrive* – establishment birth and death, expansion and contraction, and relocation – to determine the key drivers of change in the numbers and employment levels of headquarters in Massachusetts.

A. Birth and Death of Headquarters

Births

Of the 508,194 new establishments that were created in Massachusetts from 1990 to 2007,

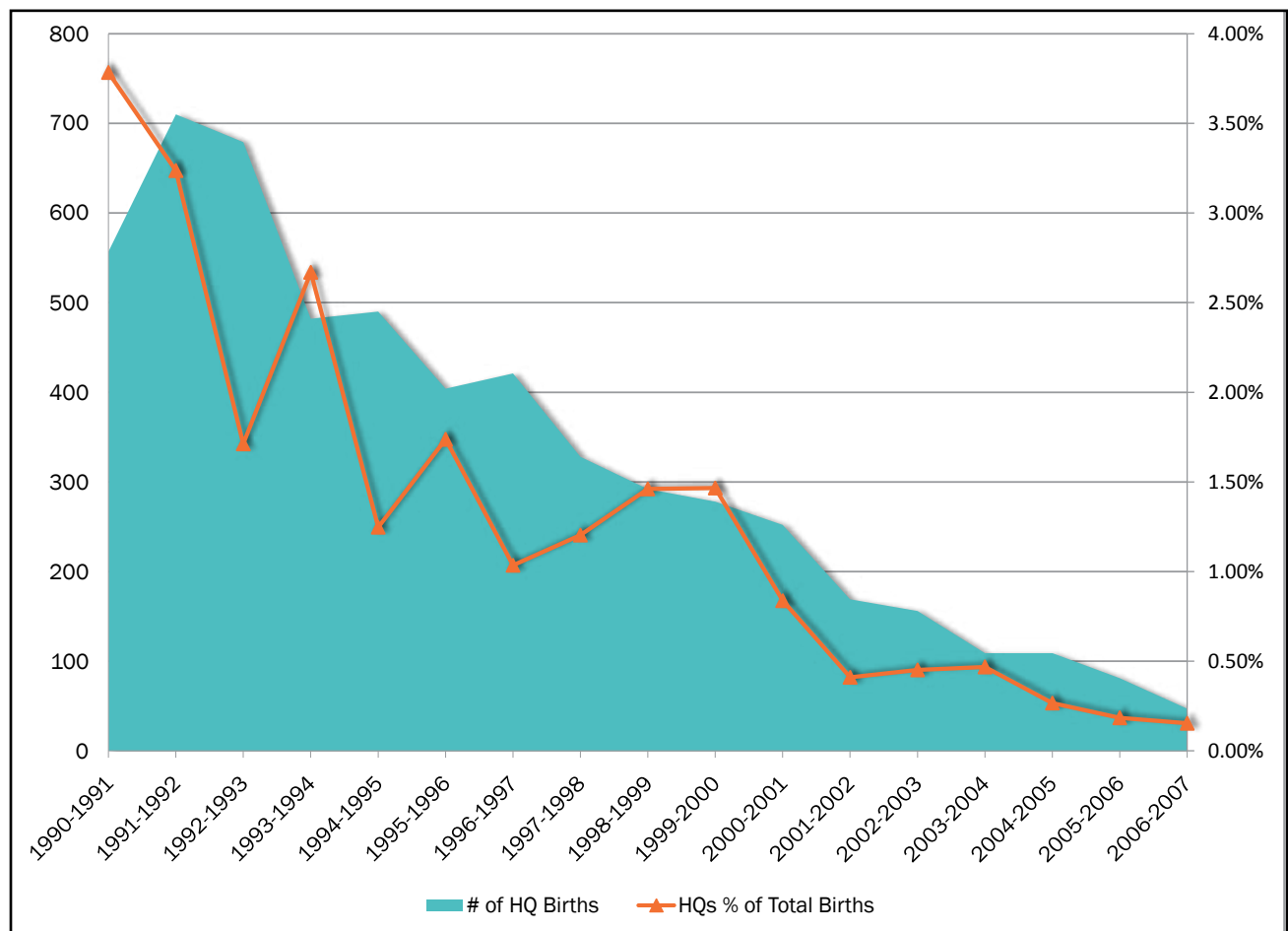
89.01% (452,363) were standalones; 9.89% (50,267) were branches; and only 1.09% (5,564) were headquarters.

Figure 5 below shows the changes in headquarters births, both in absolute terms and in percentage terms as a share of all firm births over time.

From a peak in 1991-1992, the number of headquarters births has declined, with only a few isolated years of modestly increased birth levels in the mid-90s. Since 2001, there has been a substantial decrease in the number and percent of new headquarters created in Massachusetts; with fewer than 0.50% of all the new establishments created in Massachusetts on an annual basis being headquarters.

However, even at low establishment birth levels, headquarters, like branches, produce

Figure 5: Headquarter Birth – Number of Firms and Percentage of Total Firm Births



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Figure 6: Impact of Firm Birth Across Establishment Types

Establishment Type	Number of New Establishments via Establishment Births	Percent of Total Births	Number of Jobs created by Establishment Type	Percent of Total Jobs created by Establishment Type
Branch	50,267	9.89%	1,261,495	40.88%
Headquarters	5,564	1.09%	174,095	5.64%
Standalone	452,363	89.01%	1,650,627	53.48%
TOTAL	508,194	100.0%	3,086,217 jobs	100.0%

disproportionate numbers of jobs per birth relative to standalones, as demonstrated in Figure 6.

The 5,564 headquarters births resulted in the creation of 174,095 jobs, accounting for 5.64% of all jobs created as a result of establishment births. The relatively large size of headquarters establishments accounts for the disparity between the percentage of new headquarters (percentage of total establishment births) and the percentage of jobs created by headquarters birth (percentage of jobs created by establishment birth): 1.09% to 5.64%. The average new headquarters started up with over 31 employees, a number substantially

higher than the number for standalones and somewhat higher than that of branches.

Deaths

Of the 350,509 existing establishments in Massachusetts that closed from 1990 to 2007, 86.94% (304,732 establishments) were standalones, 10.08% (35,321 establishments) were branches, and 2.98% (10,456 establishments) were headquarters.

Figure 7 shows establishment closures in Massachusetts for headquarter firms in absolute numbers and as a percentage of all establishments.

Figure 7: All Establishment Death and HQ Death

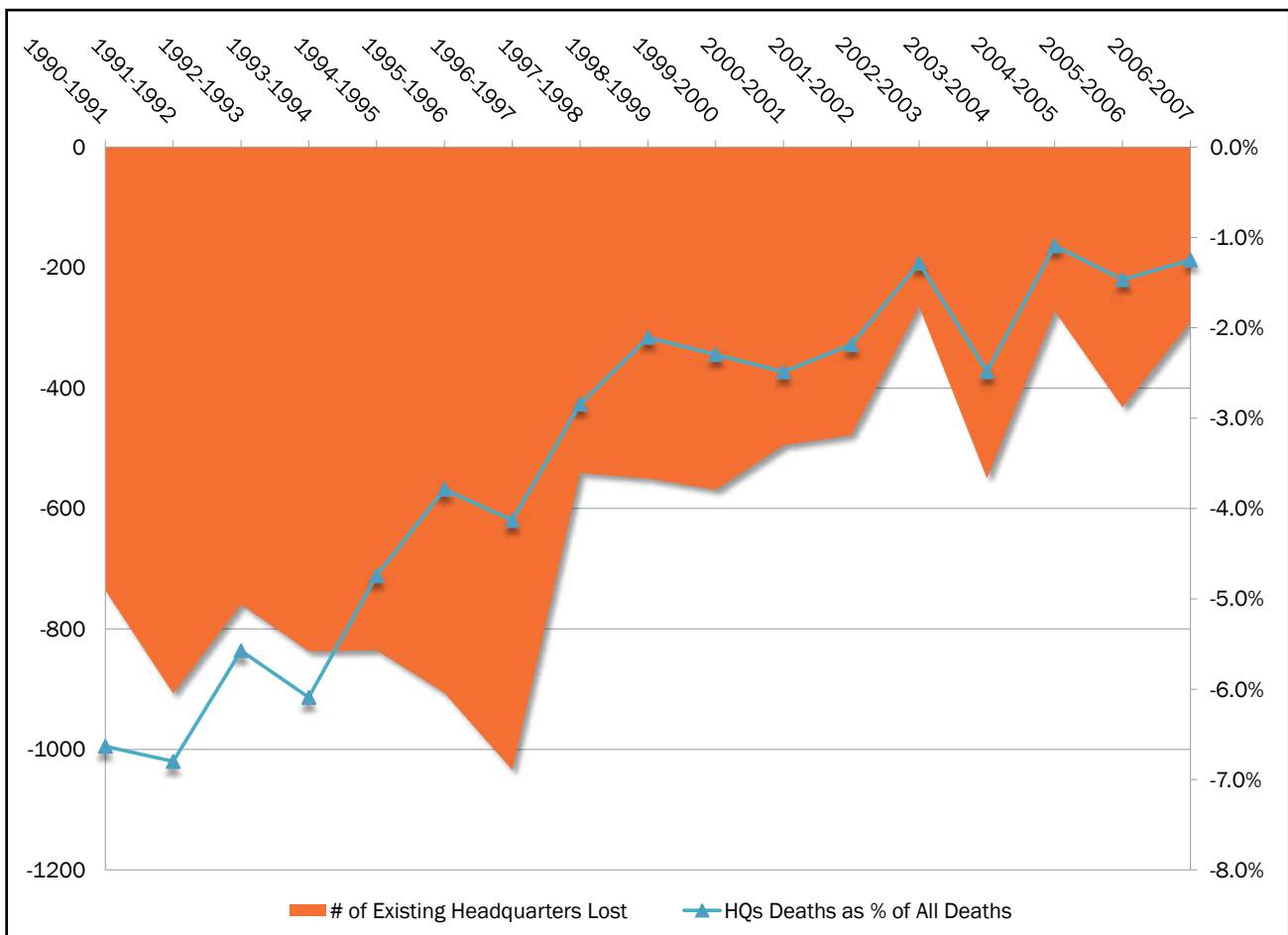


Figure 8: Impact of Establishment Deaths Across Establishment Type

Establishment Type	Number of Existing Establishments Lost in Massachusetts via Establishment Deaths	Percent of Total Establishments Deaths in Massachusetts	Number of Jobs Lost in Massachusetts by Establishment Type	Percent of Total Jobs lost in Massachusetts by Establishment Type
Branch	35,321	10.08%	1,266,627	37.22%
Headquarters	10,456	2.98%	414,253	12.20%
Standalone	304,732	86.94%	1,720,830	50.58%
TOTAL	350,509 Establishments	100.0%	3,401,710 jobs	100.0%

The data show headquarters as a percentage of establishment deaths generally falling over time. This is mainly due to the shrinking relative number of headquarters. Headquarters have declined from 7% to 3% of all establishments, while their deaths have gone from 7% to 1% of all deaths. On an absolute basis, headquarters deaths crested at over 1,000 per year in the mid-1990s and declined to 291 headquarters deaths in 2006 – 2007.

Figure 8 illustrates the impact on overall employment of the loss of headquarters.

The loss of 10,456 headquarters over the seventeen-year period resulted in the loss of 414,975 jobs. As with headquarters births, the relatively large size of headquarters establishments resulted in disproportionate job loss. As compared with establishment births, establishment deaths, on average, involve bigger companies. Each headquarters death accounts for an average of 40 lost jobs. As a result, headquarters deaths account for only 2.98% of total establishment deaths but 12.20% of overall jobs lost. In contrast, branch deaths, on average, account for 36 lost jobs per establishment while standalone deaths account for only 6 lost jobs.

Net Births & Deaths

Overall, Massachusetts realized a net gain of 157,685 establishments due to establishment birth and death, but the overall figure conceals a net decline of 4,892 headquarters due to establishment birth and death (see Figure 9).

However, as Figure 10 illustrates, the loss of headquarters due to establishment death had a significant impact on employment. Across all establishment types, establishment birth and death had a net impact of 315,493 lost jobs. Of this total, the net impact of headquarters birth and death was the loss of 240,158 jobs (or 76% of the total jobs lost through establishment birth and death). This examination of the paired drivers of firm birth and death clearly demonstrates the outsized impact of the loss of headquarters (in an overall environment of minimal net job loss) on overall employment.

Figure 9: Net Impact of Establishment Birth and Death

Establishment Type	Number of New Establishments in MA via Establishment Births	Number of Existing Establishments Lost in MA via Establishment Deaths	Net Change in Establishments via Establishment Births and Deaths
Branch	50,267	35,321	14,946
Headquarters	5,564	10,456	(4,892)
Standalone	452,363	304,732	147,631
TOTAL	508,194 establishments	350,509 establishments	157,685 establishments

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Figure 10: Net Employment Impact of Establishment Birth and Death

Establishment Type	Number of Jobs created in MA by Establishment Type	Number of Jobs Lost in MA by Establishment Type	Net Change in Employment via Establishment Births and Deaths
Branch	1,261,495	1,266,627	(5,132)
Headquarters	174,095	414,253	(240,158)
Standalone	1,650,627	1,720,830	(70,203)
TOTAL	3,086,217 jobs	3,401,710 jobs	(315,493) jobs

Beyond the sheer impact of the net loss of 240,158, Figure 11 shows how this loss was created through the sustained net losses of jobs at headquarters over a long number of years.

As the Figure demonstrates, only a modest uptick of 2,510 net jobs in 1992-1993 interrupted job losses over the eighteen year period.

B. Expansion and Contraction of Headquarters

The next pair of job drivers considered is firm expansion and contraction.

Expansion

Figure 12 illustrates headquarters expansion in absolute numbers and in comparison to all establishment expansion in Massachusetts using single year intervals.

Figure 11: Yearly and Cumulative Employment Impact of Headquarters Birth and Death

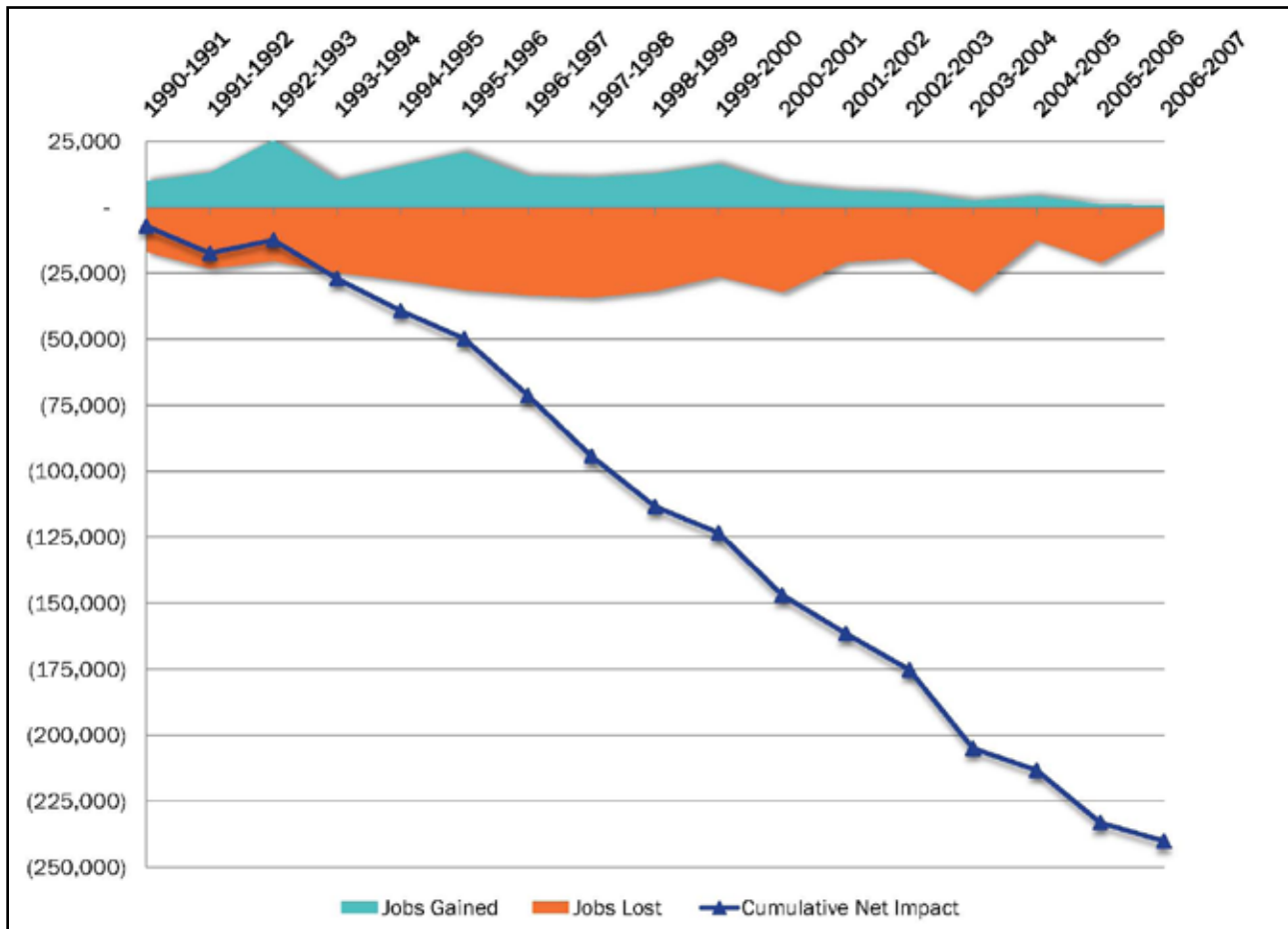
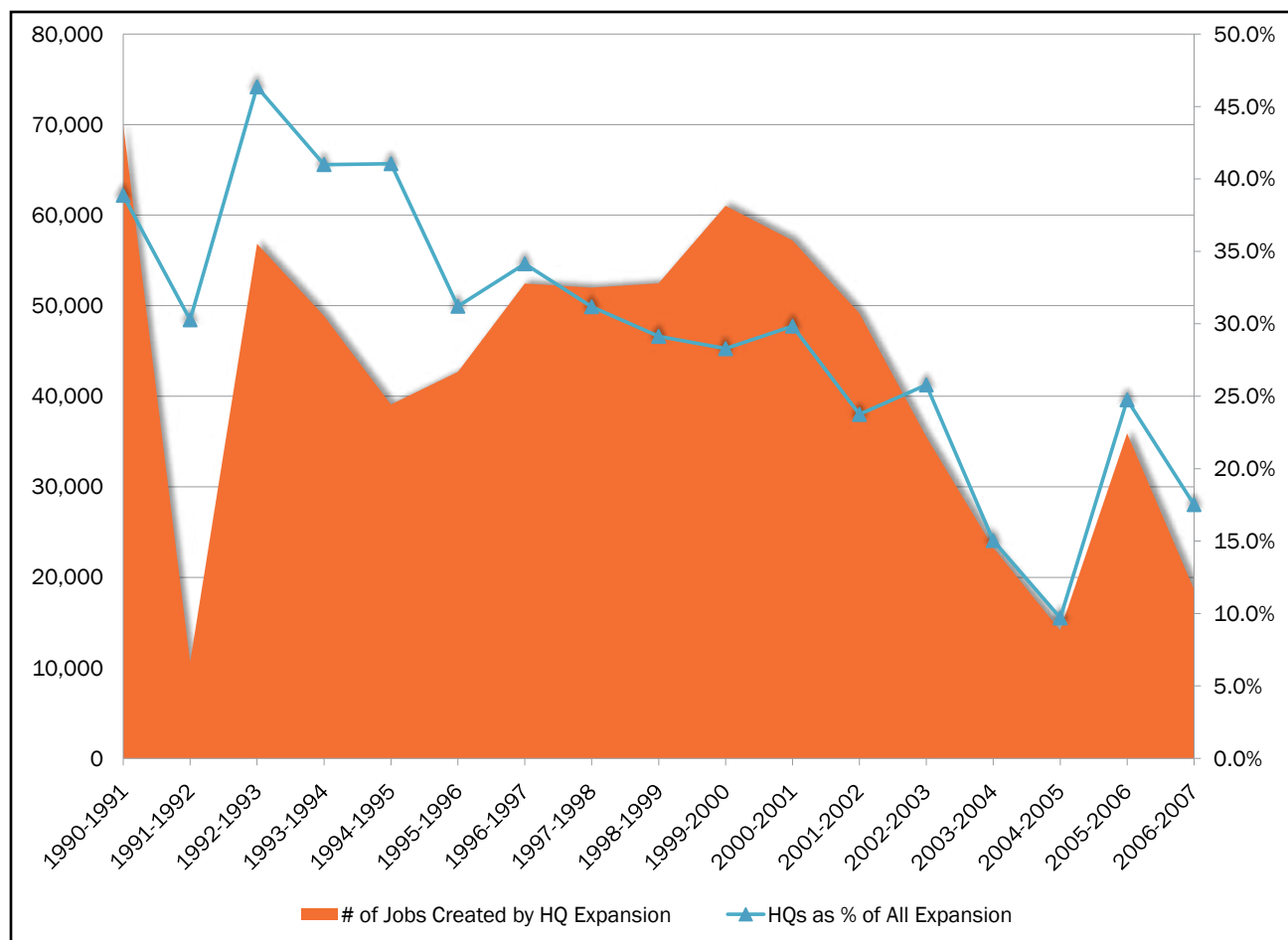


Figure 12: Employment Gains From Headquarters Expansion



Headquarters expansion has been a significant driver of job creation, accounting for almost 29% of the jobs created through expansion over the seventeen-year period. However, absolute job growth through headquarters expansion declined rapidly from 1999 – 2000 until it increased for a brief period in 2005 – 2006. As a share of overall job creation through expansion, headquarters’ share of job creation has generally decreased from a high of 46.4% of all jobs created through expansion in 1992-1993 to a low of 17.5% in 2006 - 2007. Given the large number of jobs created by headquarters expansion, this declining trend is cause for concern.

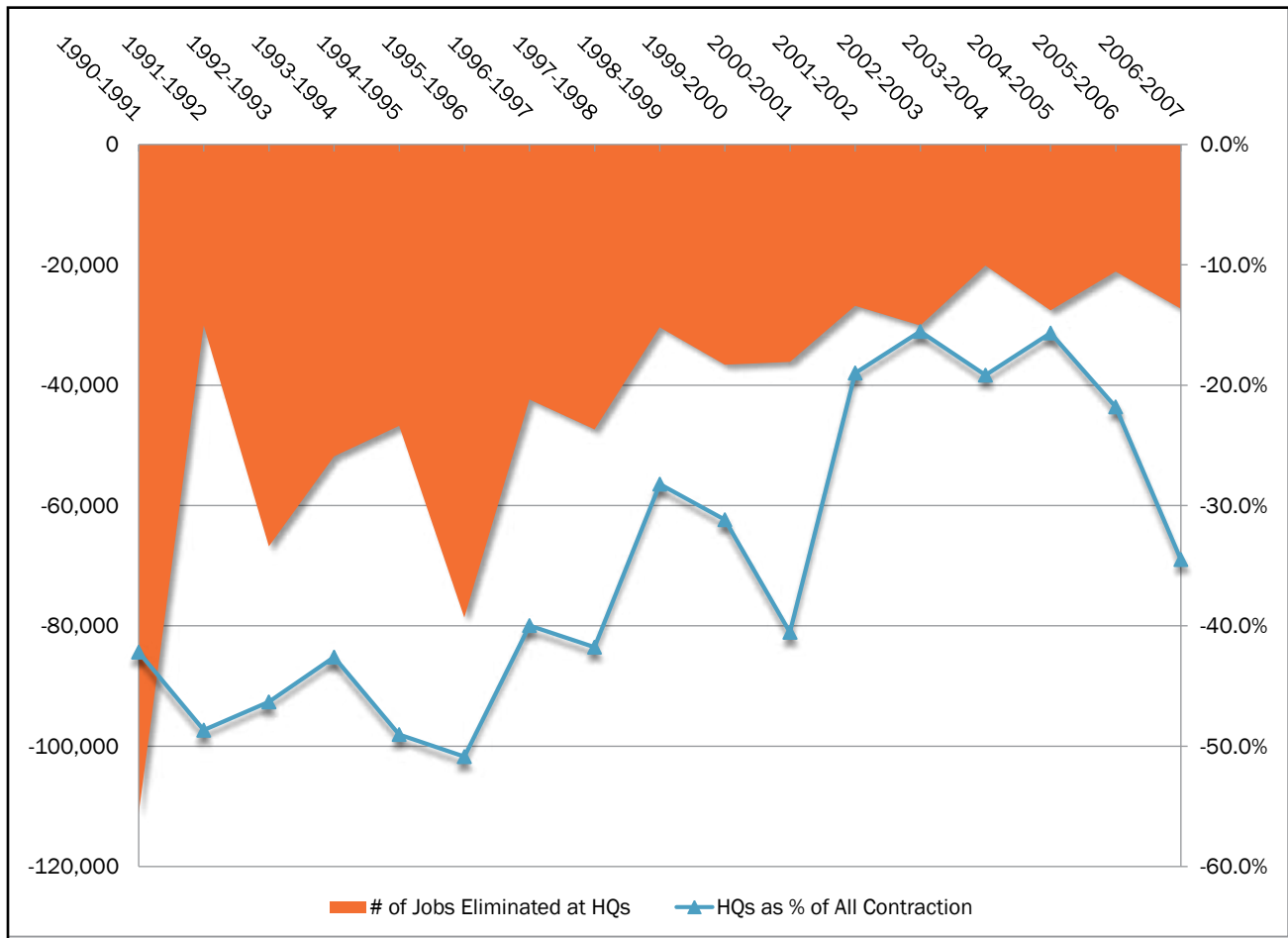
Contraction

Figure 13 shows headquarters contraction in absolute terms and in comparison to all establishment contraction in Massachusetts using single year intervals.

Of the 2,166,497 jobs that were eliminated in Massachusetts via establishment contraction from 1990 to 2007, 33.73% (730,890 jobs) were at headquarters locations. In 1990-2001, contraction at headquarters was responsible for roughly 40% to 50% of overall job loss due to contraction. However, since the 2001 recession, contraction at headquarters relative to total Massachusetts contraction has largely played a smaller role in overall job loss, most likely because of the growing importance of standalone firms in terms of total employment.

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Figure 13: Employment Losses from Headquarters Contraction



Net Change Due to Expansion and Contraction

Massachusetts realized a net loss in employment of 10,737 jobs at headquarters due to establishment expansion and contraction. This loss was mitigated by the overall increase in employment due to the net effects of expansion and contraction at branches and standalones (see Figure 14).

The minimal net impact of headquarters expansion and contraction should not obscure the gross impact of each driver. With a relatively small number of establishments, headquarters accounts for 31% of the job flux (the absolute value of job creation and elimination) in the Expansion/Contraction category despite the modest net effect on employment.

Table 14: Employment Impact of Expansion and Contraction by Establishment Type

Establishment Type	Number of Jobs created in Massachusetts by Expansion by Establishment Type	Number of Jobs eliminated in Massachusetts by Contraction by Establishment Type	Net Change in Employment via Establishment Expansion and Contraction
Branch	697,585	655,746	41,839
Headquarters	720,053	730,890	(10,837)
Standalone	1,076,624	779,861	297,763
TOTAL	2,494,262 jobs	2,166,497 jobs	327,765 jobs

Figure 15: Impact of Firm In-Relocation by Establishment Type

Establishment Type	Number of Establishments that Moved Into Massachusetts	Percent of Total Establishments that Moved to Massachusetts	Number of Jobs brought to Massachusetts by Establishment Type	Percent of Total Jobs brought to Massachusetts Establishment Type
Branch	303	6.28%	7,624	8.24%
Headquarters	985	20.42%	56,872	61.49%
Standalone	3,535	73.30%	27,997	30.27%
TOTAL	4,823 Establishments	100.0%	92,493 Jobs	100.0%

C. Relocation of Headquarters

One of *Failure to Thrive's* key findings was that establishment relocation has little impact on job creation, particularly when compared to the other drivers. In order to complete our analysis, we will look at the effects of headquarters relocation on job growth.

In-Relocation

Of the 4,823 establishments that moved to Massachusetts from 1990 to 2007, approximately 6.28% (303 establishments) of these establishments were branches, 20.42% (985 establishments) were headquarters, and 73.30% (3,535 establishments) were standalones.

Figure 15 shows the number and percent of establishments that relocated to Massachusetts from other states, accounting for establishment type and the number of jobs that were generated in the state by type of establishment from 1990 to 2007.

Of the three types of establishments under consideration, headquarters relocated to Massachusetts at disproportionately high levels in terms of both number of establishments and total jobs. The interplay of headquarters' large establishment size and their overall share of the total establishments relocating into the state resulted in a large number of jobs relocated to Massachusetts by headquarters.

Figure 16 provides a breakdown of headquarters that moved to Massachusetts compared to all establishments using single-year intervals.

These data show that headquarters are still moving to Massachusetts but after the 2001 recession, their percentage of the total dropped dramatically.

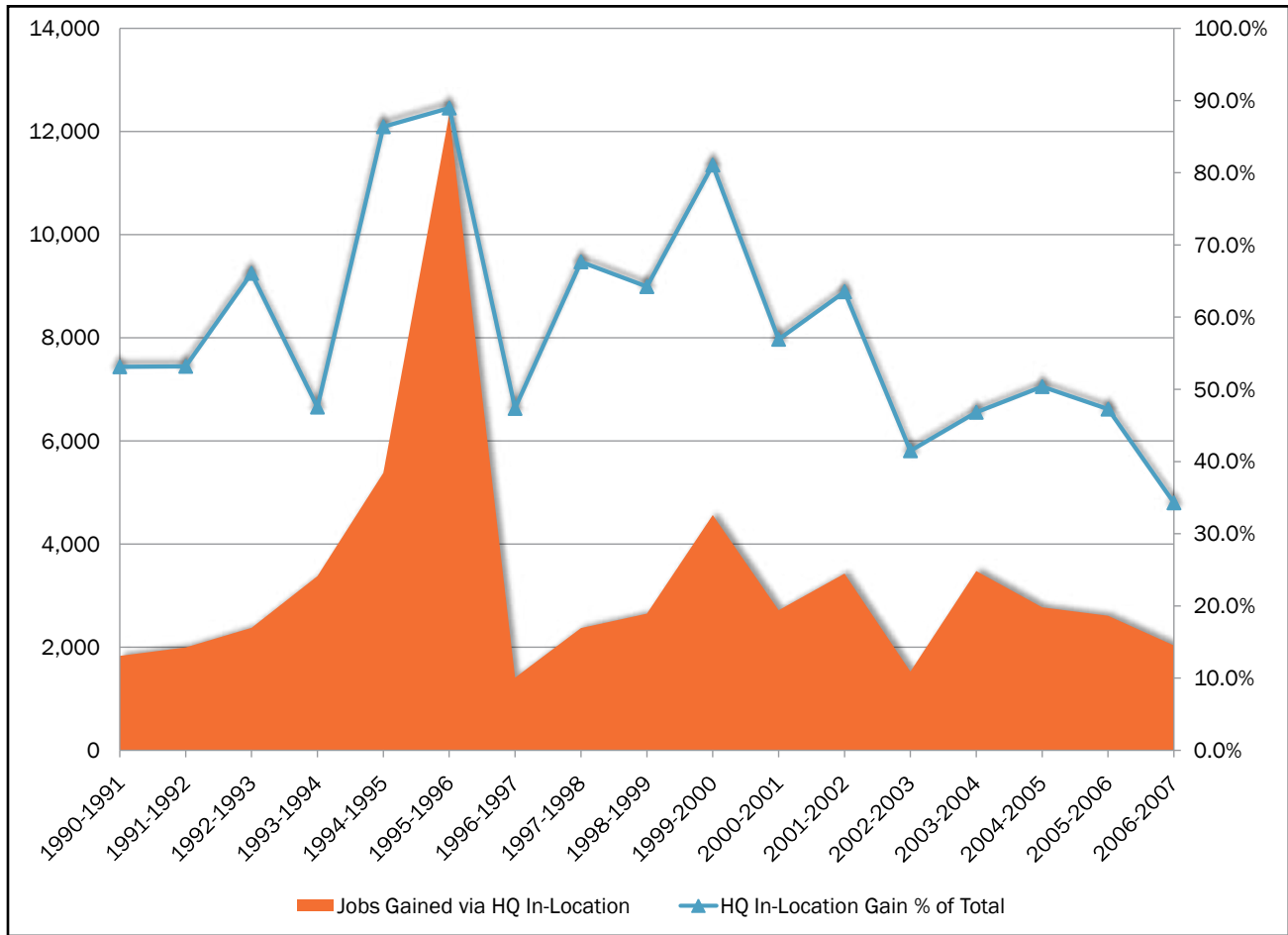
Focusing specifically on job creation by establishment type over time, we see the

Figure 16: In-Relocation Totals and for Headquarters

Interval	Total Number of Establishments that Moved Into Massachusetts	Number of Headquarters that Moved to Massachusetts (% of Interval Total)
1990-1991	240	61 (25.4%)
1991-1992	223	72 (32.3%)
1992-1993	192	84 (43.8%)
1993-1994	275	84 (30.5%)
1994-1995	171	63 (36.8%)
1995-1996	227	82 (36.1%)
1996-1997	172	55 (32.0%)
1997-1998	172	52 (30.2%)
1998-1999	199	69 (34.7%)
1999-2000	200	49 (24.5%)
2000-2001	234	51 (21.8%)
2001-2002	347	51 (14.7%)
2002-2003	363	42 (11.6%)
2003-2004	493	46 (9.3%)
2004-2005	505	51 (10.1%)
2005-2006	420	32 (7.6%)
2006-2007	390	41 (10.5%)
TOTAL	4,823 Establishments	985 (20.42%)

■ **Heading Down**

Figure 17: Headquarters In-Location Job Creation



disproportionate role of headquarters in contributing to job growth from relocation (see Figure 17).

Within the category of jobs gained from relocation, headquarters have accounted for over 60% of the jobs gained overall, although that aggregate percentage has not been exceeded since 2001-2002.

Out-Relocation

Of the 6,975 establishments that moved out of Massachusetts from 1990 to 2007, 4.67% (326 establishments) of these establishments were branches, 17.19% (1,199 establishments) were headquarters, and 78.14% (5,450 establishments) were standalones.

Figure 18 shows establishments that relocated from Massachusetts to other states by establishment

Figure 18: Impact of Out-Relocation

Establishment Type	Number of Establishments that Moved out of Massachusetts	Percent of Total Establishments that Moved out of Massachusetts	Number of Jobs lost in Massachusetts by Establishment Type	Percent of Total Jobs lost in Massachusetts by Establishment Type
Branch	326	4.67%	10,303	8.84%
Headquarters	1,199	17.19%	63,127	54.15%
Standalone	5,450	78.14%	43,151	37.01%
TOTAL	6,975 Establishments	100.0%	116,581 Jobs	100.0%

Figure 19: Yearly Number of Relocations

Interval	Total Number of Establishments that Moved out of Massachusetts	Number of Headquarters that Moved out of Massachusetts (% of Interval Total)
1990-1991	364	82 (22.5%)
1991-1992	288	92 (31.9%)
1992-1993	240	90 (37.5%)
1993-1994	264	78 (29.5%)
1994-1995	280	94 (33.6%)
1995-1996	286	86 (30.1%)
1996-1997	227	80 (35.3%)
1997-1998	231	66 (28.6%)
1998-1999	256	84 (32.8%)
1999-2000	220	43 (19.6%)
2000-2001	334	74 (22.2%)
2001-2002	448	71 (15.9%)
2002-2003	581	45 (7.7%)
2003-2004	823	62 (7.5%)
2004-2005	869	52 (6.0%)
2005-2006	679	59 (8.6%)
2006-2007	585	41 (7.0%)
TOTAL	6,975 establishments	1,199 (17.19%)

type and the number of jobs that were lost in Massachusetts by type of establishments from 1990 to 2007.

As with Relocation In, headquarters relocating out of state play a disproportionate role relative to their share of the state’s establishment type and employment.

The yearly breakdown in Figure 19 provides additional information about changes in relocation out over time.

As with the results in Relocation In, there has been a marked decrease in the number and percent of headquarters moving out of Massachusetts to other states since 2002. Since that time, fewer than 9% of all the establishments that have moved out of Massachusetts on an annual basis have been headquarters. This apparent

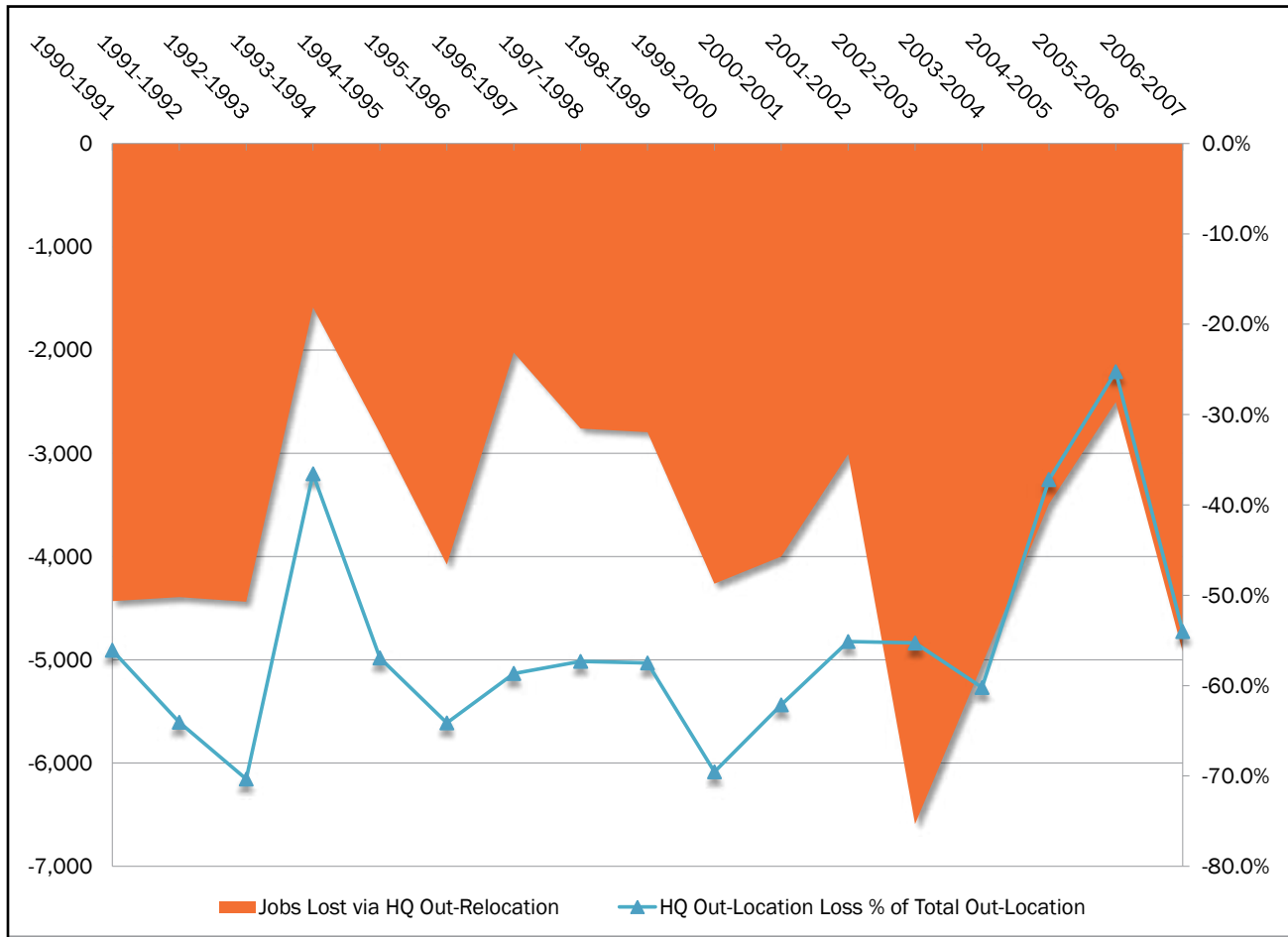
decrease in the movement of headquarters is due mostly to the shrinking number of headquarters in Massachusetts. The flux of headquarters movement in and out has remained fairly constant: around 1% of the number of headquarters in Massachusetts in any given year.

Figure 20 shows jobs lost in Massachusetts via establishments that moved out of Massachusetts using single-year intervals and establishment type.

Just as with Relocation In, Relocation Out of headquarters plays a disproportionate role in job loss from relocation relative to headquarters’ share of overall state employment. Unlike Relocation In, there is no pronounced decline in the trend, with three years since the 2001 recession exceeding the overall average of 54.15%.

■ **Heading Down**

Figure 20: Job Loss from Out-Relocation



Net Effect of Relocation

Overall, Massachusetts realized a net loss in all three types of establishments (branches, headquarters, and standalones) because of the combined effects of In-Relocation and Out-Relocation. Most of the net loss in the number of establishments in Massachusetts via relocation resulted from a loss of 1,915 standalones, which constituted 88.99% of the total loss in Massachusetts establishments via relocation from 1990 to 2007.

Headquarters account for a much smaller net loss of 214 establishments during the study period (see Figure 21).

Similarly, Massachusetts realized a net loss in employment at all three types of establishments (branches, headquarters, and standalones) because of the combined effects of In-Relocation and Out-Relocation. Most of the net loss in employment in Massachusetts via relocation resulted from a loss of 15,154 positions at standalones.

Figure 21: Net Impact of Relocation By Establishment Type

Establishment Type	No. of Establishments that Moved to MA via In-Relocation	No. of Establishments that Moved out of MA via Out-Relocation	Net Change in Establishments via Relocation
Branch	303	326	(23)
Headquarters	985	1,199	(214)
Standalone	3,535	5,450	(1,915)
TOTAL	4,823 establishments	6,975 establishments	(2,152) establishments

Figure 22: Employment Impact of Relocation

Establishment Type	Number of Jobs Generated in Massachusetts via In-Relocation	Number of Jobs lost in Massachusetts via Out-Relocation	Net Change in Employment via Relocation
Branch	7,624	10,303	(2,679)
Headquarters	56,872	63,127	(6,255)
Standalone	27,997	43,151	(15,154)
TOTAL	92,493 Jobs	116,581 Jobs	(24,088) jobs

Figure 22 provides a breakdown of the overall change in the number of establishments in Massachusetts and overall employment totals due to the combined effects of In-Relocation and Out-Relocation.

This figure shows the high levels of job gains and losses from the relocation of headquarters relative to the other two categories. The net effect of relocation of headquarters is a loss of 6,255 jobs. This net loss is less than the loss of jobs from relocation of standalones but greater than that of branches. Nonetheless, as with expansion and relocation, the net change in employment masks the contribution of headquarters to relocation job flux, accounting for 57% of gross relocation job creation and loss.

Even with the disproportionate impact of headquarters on gains and losses from firm relocation, it should be noted that the impact of relocation is much smaller than that of the other drivers.

Summary and Conclusion

The decline in headquarters jobs cost Massachusetts 257,250 net jobs from 1990 to 2007. During the study period, only the expansion of existing branches and standalones kept state employment levels from plummeting (see Figure 23).

Massachusetts is losing headquarters while the number of standalone firms increases. The state lost a net 5,106 headquarters from 1990 to 2007 and headquarters shrunk from 7% of establishments to just 2.87% of establishments during the study period.

Still, headquarters remain important employers; they have shown surprising durability especially with respect to sustaining and increasing firm size. Even during this protracted period of decline, headquarters are the only category of establishment to grow in terms of individual establishment size – rising from an average of 65.7 employees to 72.8 employees. The 2007

Figure 23: Summary of Headquarter and Total Job Flux

	Headquarters			All Firms		
	# of Firms	Jobs	Firm Size	# of Firms	Jobs	Firm Size
1990	16,223	1,066,362	65.73	231,860	3,870,637	16.69
Births	5,564	174,095		508,194	3,086,217	
Death	(10,456)	(414,253)		(350,509)	(3,401,710)	
Expansion		720,053			2,494,262	
Contraction		(730,890)			(2,166,497)	
Moved In	985	56,872		4,823	92,493	
Moved Out	(1,199)	(63,127)		(6,975)	(116,581)	
2007	11,117	809,112	72.78	387,393	3,858,821	9.96

■ Heading Down

establishment size of 72.78 employees is almost nine times larger than the average size of other establishment types, demonstrating the relative importance of headquarters as large employers.

Given their large size and the decline in number of headquarters, it follows that Massachusetts has experienced a significant loss of headquarters jobs – a net loss of 257,250 jobs during the period 1990 – 2007 – whereas overall employment in the state declined only slightly.

Using our framework of drivers and paired drivers, the strongest driver among the pairs is the combination of headquarters birth and death. Employment for headquarters birth lags significantly behind the employment losses from headquarters deaths. Headquarters deaths resulted in the loss of 414,253 jobs and headquarters births resulted in the creation of 174,095 jobs, a net loss of 240,158 jobs.

The primary driver of job loss at headquarters has been contraction, a factor which accounted for the loss of 730,890 jobs. However, when paired with headquarters expansion, which sparked a gain of 720,053 jobs, the net result of the paired drivers is a loss of a little over 10,000 jobs.

Consistent with the findings for all establishments in *Failure to Thrive*, firm relocation is a minor factor. However, it is important to note that headquarters relocation, because of the large establishment size, comprises over half of the jobs gained and lost through relocation.

Individual headquarters are large employers that have sustained their establishment size throughout the period. Their large average size makes them disproportionately important to employment levels, but these employers are subject to the employment rules and regulations imposed on larger businesses by the state. In addition, as the largest employers in the state, headquarters bear the brunt of the high cost of doing business in Massachusetts. Massachusetts is rated 47 out of 50 for corporate income taxes and 49th on unemployment insurance by the Tax Foundation.

Plus, Massachusetts' rankings in these categories have been getting worse.

In contrast, the average size of non-headquarters – standalones and branches – is now under 10 people. The majority of these firms, therefore, are not subject to the many of state's myriad regulations.

These findings establish a clear set of priorities for policymakers. Their primary concern should be to create a business climate that promotes the start-up of new headquarters and prevents headquarters from leaving the state

As with the overall employment picture in *Failure to Thrive*, signs of an entrepreneurship problem are evident in our examination of headquarters. Within the matched pair of headquarters death and birth, headquarters death has remained proportional to headquarters as a percentage of all establishments. The real issue is that the creation of headquarters in Massachusetts is lagging at a cost of close to 250,000 net jobs across both drivers.

Also, policies should be created that encourage existing headquarters to expand. The state's surviving headquarters still terminate more employees than they hire. The expansion of existing headquarters is the largest single driver of job growth and should be encouraged.

The findings in the first paper in this series, *Failure to Thrive*, suggest that establishment relocation is of minimal importance to job growth. For headquarters, the findings are generally consistent but given the impact of headquarters' large establishment size, policy makers should create mechanisms to attract headquarters with high employment levels.

Headquarters are large employers. Their failure to create jobs over the last eighteen years has had a strong negative effect on job growth. Nurturing and sustaining headquarters is an important component of creating a strong, growing economy that retains and creates jobs.

Endnotes

1. Barro, J. *2009 State Business Tax Climate Index*, Tax Foundation, October 2008.

2. The NETS Data is time-series data assembled by Walls and Associates and Dun and Bradstreet. Dun and Bradstreet gathers annual information from all establishments on firm operating in the United States. In its data collection process, Dun and Bradstreet assigns a unique identification number, referred to as a DUNS number, to each establishment as a means of tracking the establishment. Walls & Associates uses the DUNS number to link the Dun and Bradstreet cross-sections into a longitudinal file for each establishment.

3. Neumark, D. Zhang, J. and Wall, B. "Employment Dynamics and Business Relocation: New Evidence from the National Establishment Time Series," NBER Working Paper No. W11647, (November 2005). The authors concluded that use of the unique DUNS number and annual business address information ensured that the NETS data on firm relocation was highly accurate. They also compared NETS data to a variety of other data sources for employment levels and changes, and found it to be as good as or superior to all others available.

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