



Economic Revitalization and Reinvention in Lowell, 1998- 2018

A MassEconmix Report

**Economic Revitalization and
Reinvention in Lowell, 1998-2018**

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PIONEER INSTITUTE
PUBLIC POLICY RESEARCH



Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to improve the quality of life in Massachusetts through civic discourse and intellectually rigorous, data-driven public policy solutions based on free market principles, individual liberty and responsibility, and the ideal of effective, limited and accountable government. *Pioneer Institute is a tax-exempt 501(c)3 organization funded through the donations of individuals, foundations and businesses committed to the principles Pioneer espouses. To ensure its independence, Pioneer does not accept government grants.*



This report is a publication of Pioneer Opportunity, which seeks to keep Massachusetts competitive by promoting a healthy business climate, transparent regulation, small business creation in urban areas and sound environmental and development policy. Current initiatives promote market reforms to increase the supply of affordable housing, reduce the cost of doing business, and revitalize urban areas.



Infogroup is the provider of the Licensed Database used to create the Your-economy Time Series (YTS). This work/research was authorized to use YTS through the Business Dynamics Research Consortium (BDRC) by the University of Wisconsin-System's Institute for Business and Entrepreneurship. The contents of this publication are solely the responsibility of the authors.

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Summary

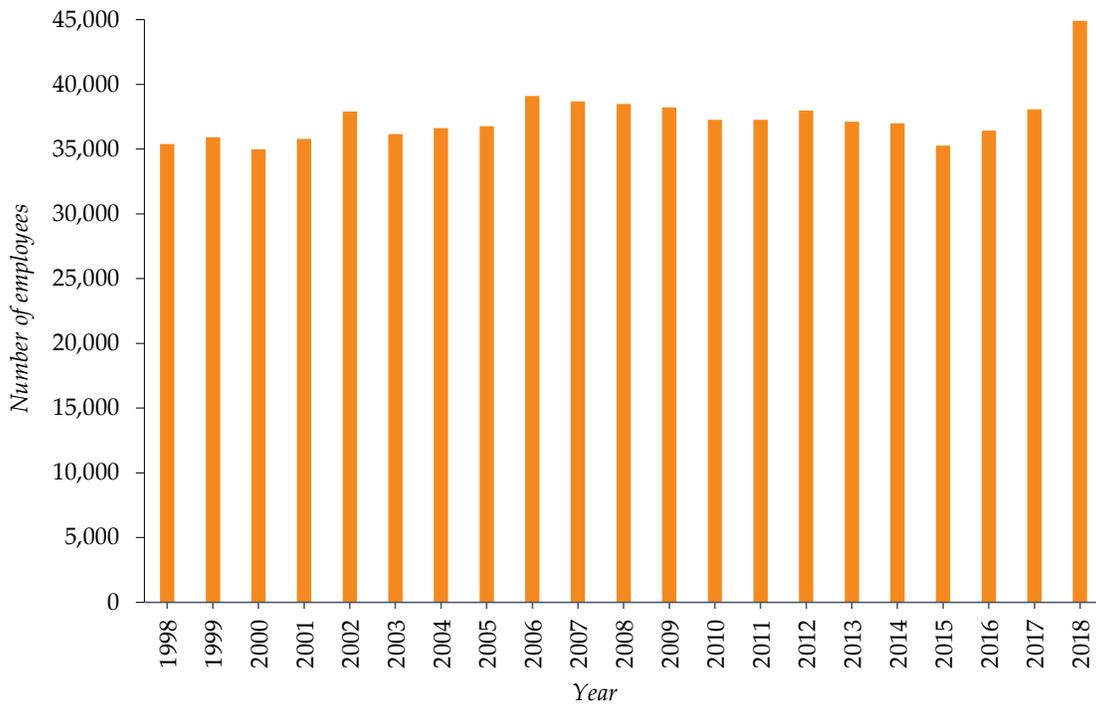
Lowell is a major regional urban center located in Middlesex County, Massachusetts.

Between 2008 and 2018, the number of people employed in the city grew by 16.6%. In 2018, there were 38.9 businesses for every 1,000 people in Lowell, compared to the state average of 54.2. In addition, the average firm employed 10.4 people in Lowell, compared to the state average of 10.7. There are 13 companies headquartered in Lowell, and the city's largest employer is Kronos Incorporated.

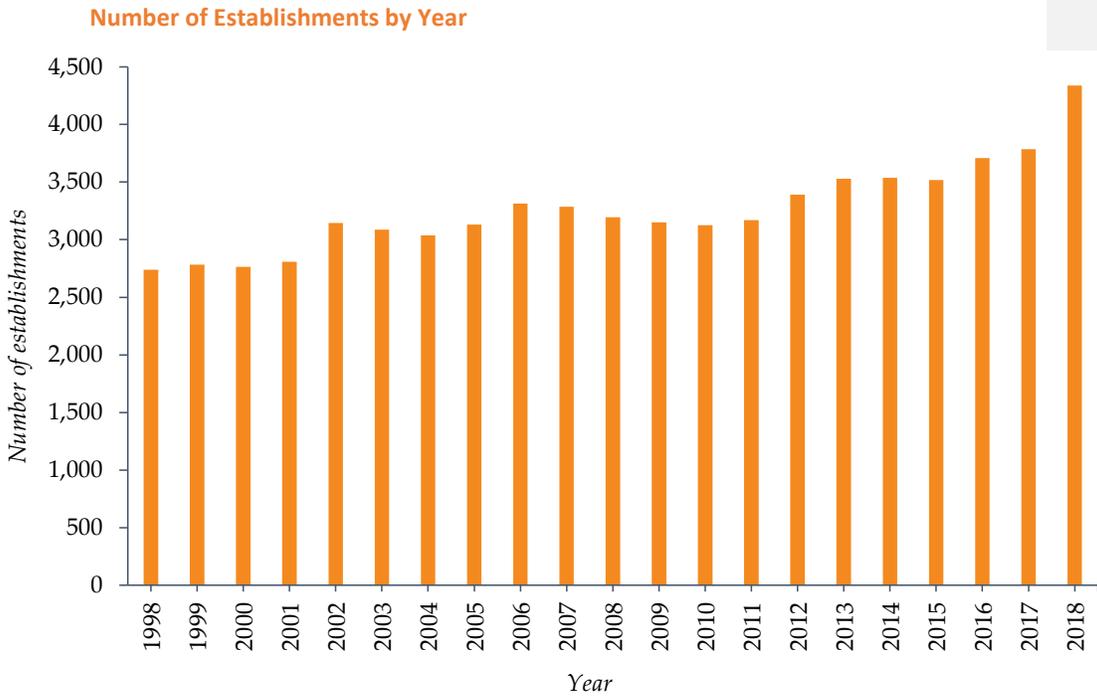
In Lowell, Health Care and Social Assistance is the most common industry to work in, and the Health Care and Social Assistance industry also has the most individual employers in the city. Meanwhile, Manufacturing is the most economically specialized industry.

Basic Metrics of Growth

Number of Employees by Year



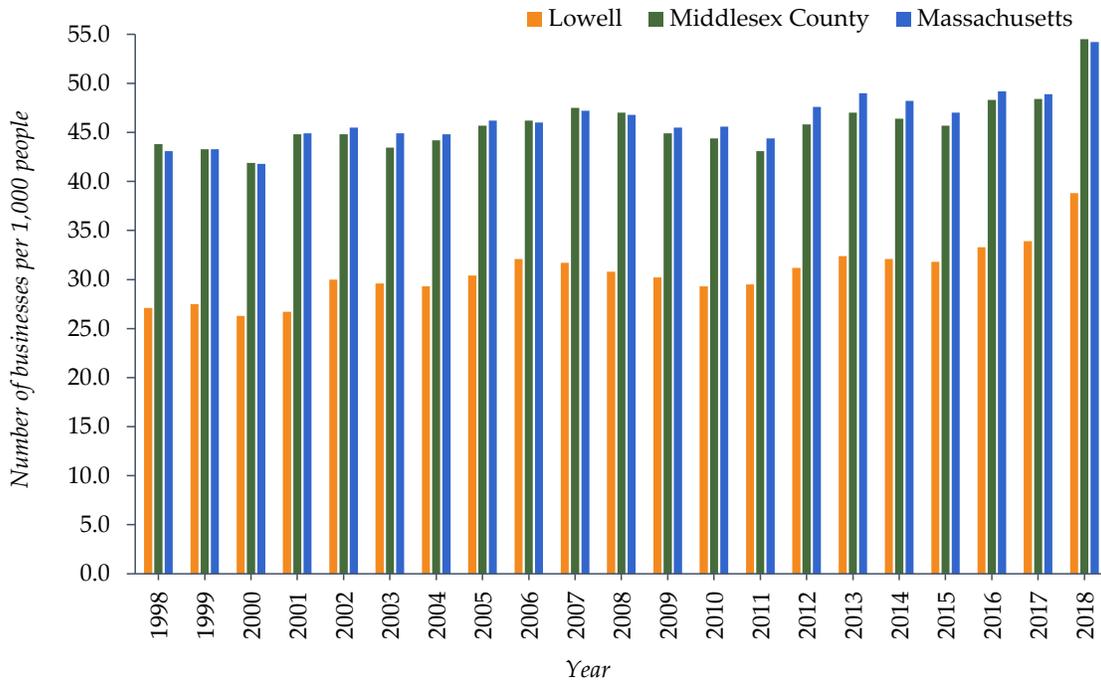
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Business Concentration

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Businesses per 1,000 Residents by Year



Establishments with the Highest Number of Locations in 2018

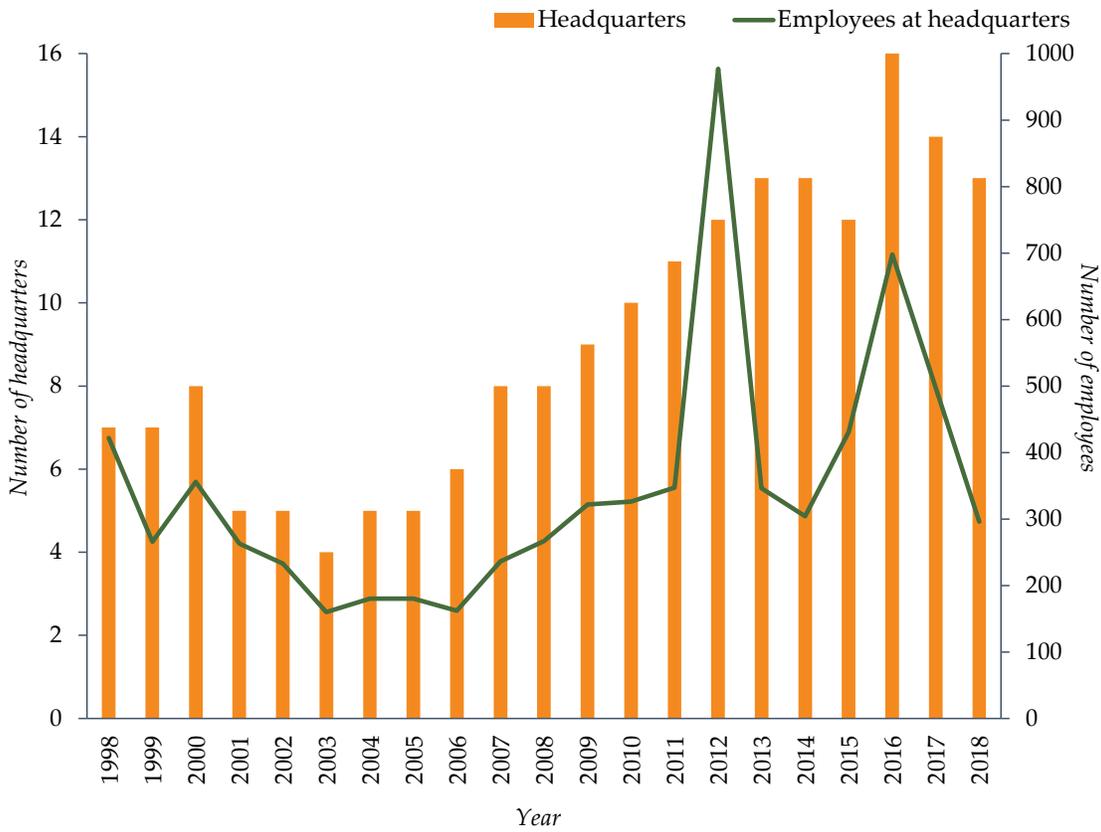
<i>Name of Company</i>	<i>Number of Locations (2018)</i>	<i>Name of Sector</i>	<i>Employment Growth, 2008-2018</i>
Dunkin' Donuts	16	Accommodation and Food Services	29.4%
7-Eleven	7	Retail Trade	292.3%
CVS/Pharmacy	5	Retail Trade	-37.1%
Lowell General Hospital ¹	5	Health Care & Social Assistance	81.7%
Subway	5	Accommodation and Food Services	34.8%
Enterprise Bank & Trust Co.	4	Finance and Insurance	4.4%
Sage Bank	4	Finance and Insurance	N/A ²
(18 companies)	3	Various	N/A

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¹ Figures for this establishment may not include certain subsidiaries that are listed under a different name.

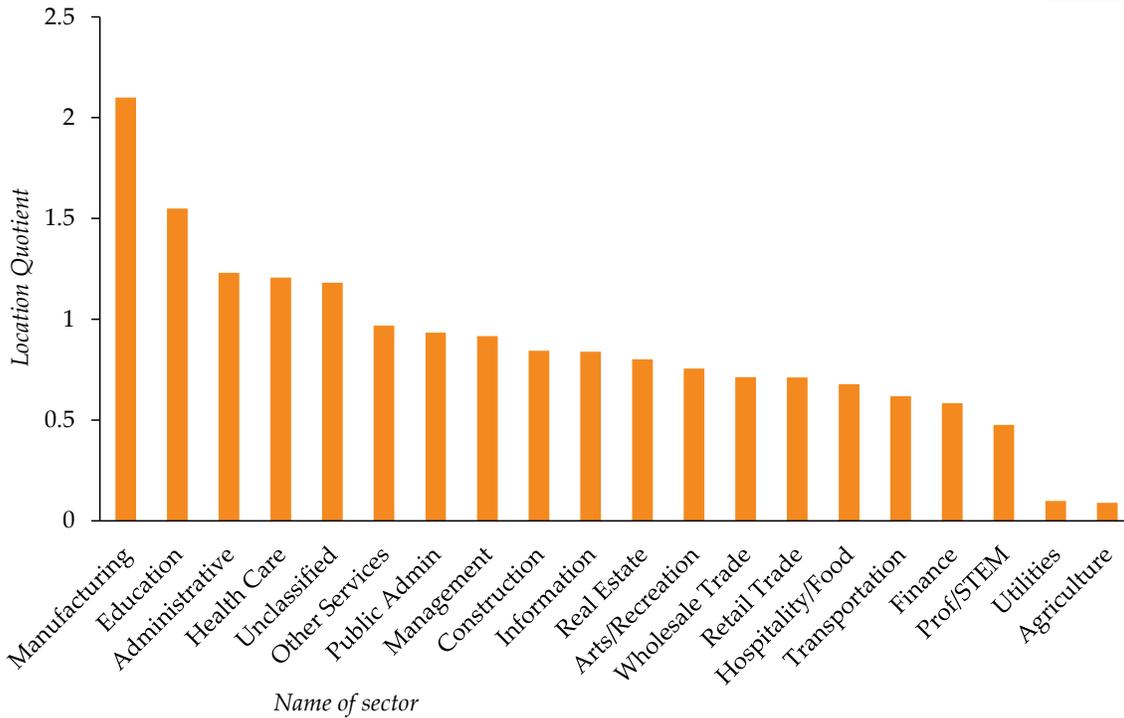
² This establishment did not exist in 2008.

Number of Company Headquarters and Associated Employees by Year



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Location Quotient³ by Sector in 2018⁴



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³ The location quotient is an industry’s share of employment in a given city or town relative to its share of employment in Massachusetts as a whole. It is often used as an indicator of economic specialization within an industry. Specifically, it is calculated as follows:

$$\frac{(\text{no. of employees in industry in city})/(\text{total employees in city})}{(\text{no. of employees in industry in state})/(\text{total employees in state})}$$

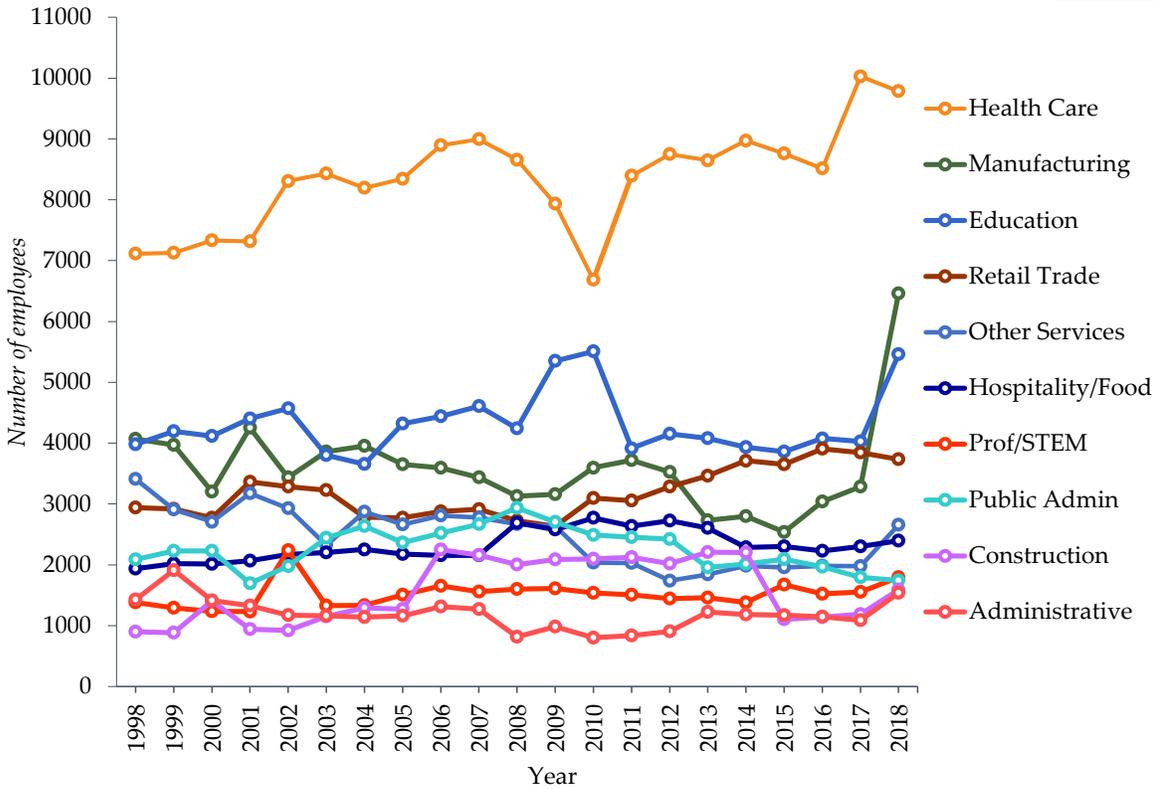
Any industry with a location quotient more than 1 is more highly concentrated in the specified city than in Massachusetts as a whole. Any industry with a location quotient less than 1 is more concentrated in Massachusetts as a whole than in the specified city.

⁴ The “unclassified” label is used to denote missing data, or otherwise business types that don’t neatly correspond to categories in the North American Industry Classification System.

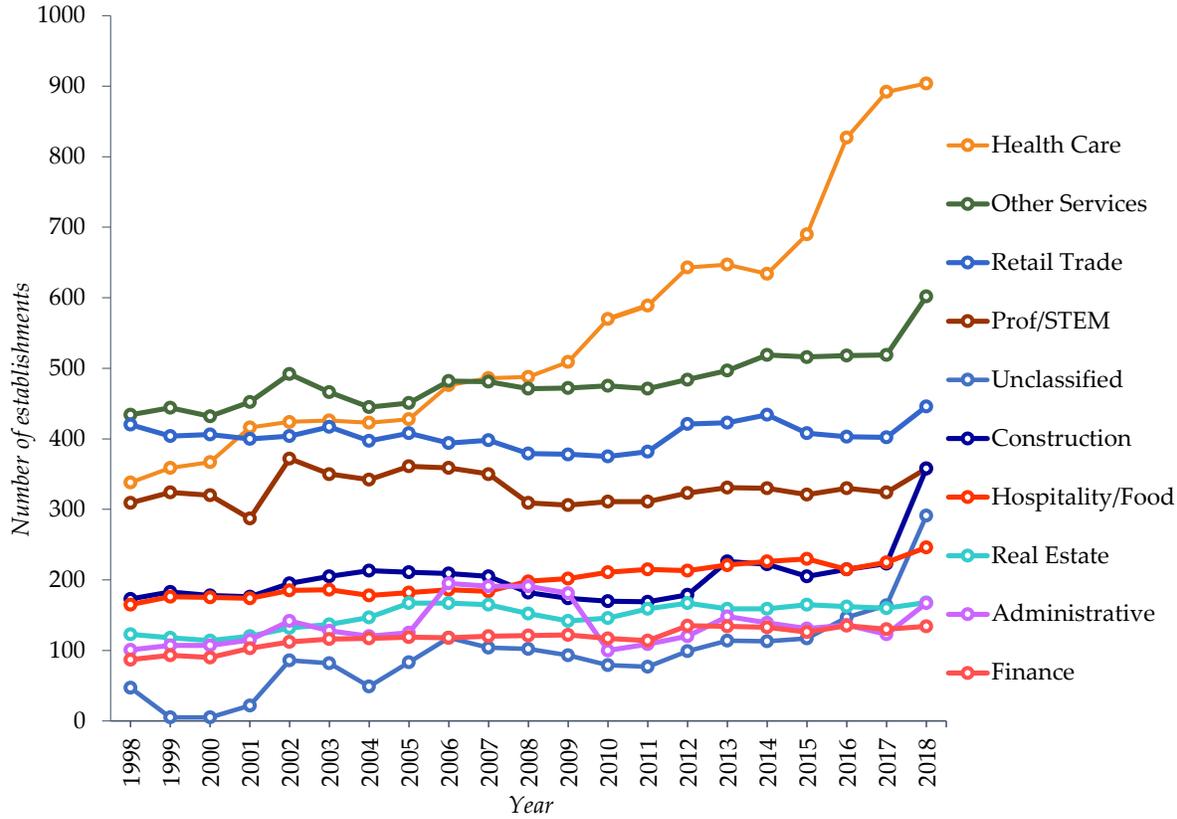
Sector Analysis

Number of Employees by Sector and Year Among Top 10 Sectors Over Time

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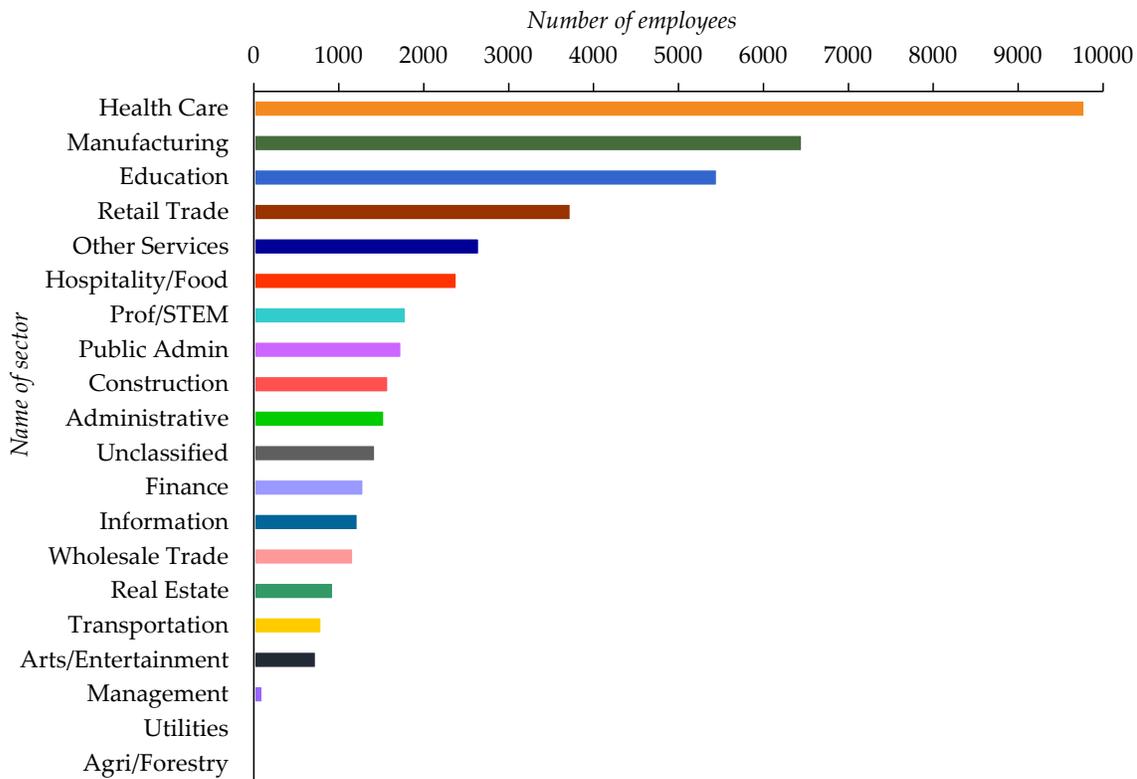


Number of Establishments by Sector and Year Among Top 10 Sectors Over Time



Number of Employees by Sector in 2018

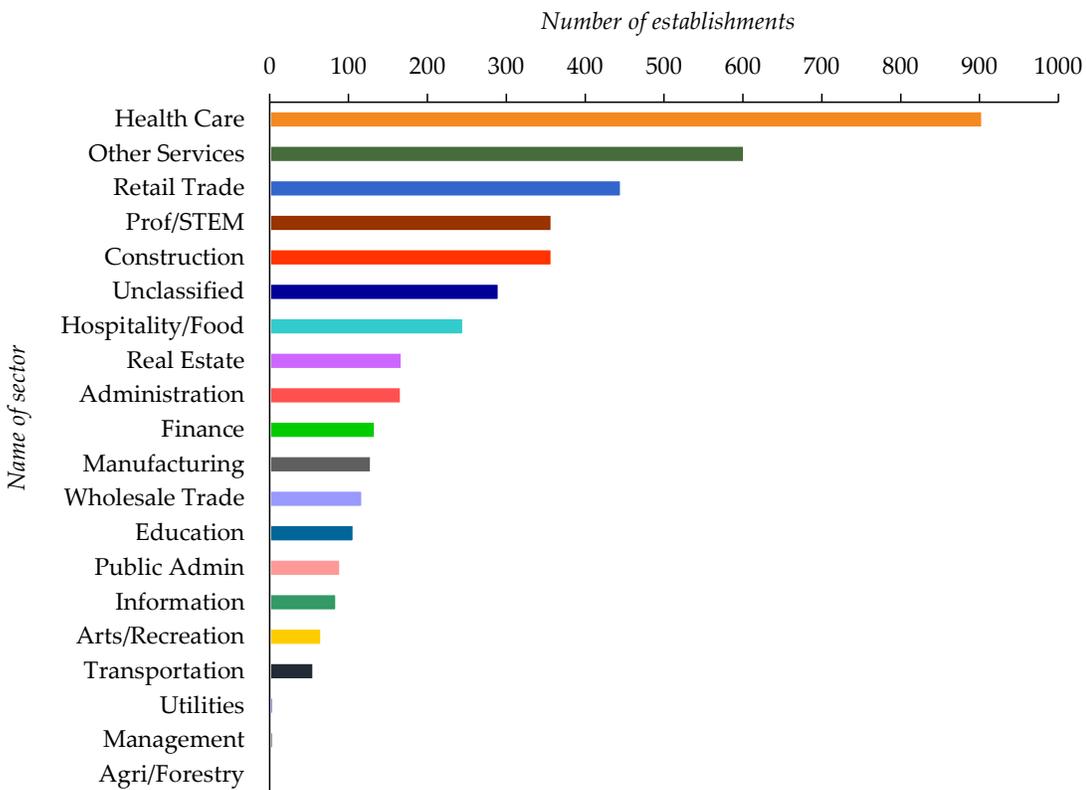
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Share of Employees by Sector in 2018

<i>Sector</i>	<i>Number of Employees</i>	<i>Share of Total Employment</i>
Health Care	9786	21.8%
Manufacturing	6460	14.4%
Education	5459	12.2%
Retail Trade	3736	8.3%
Other Services	2658	5.9%
Hospitality/Food	2394	5.3%
Prof/STEM	1795	4.0%
Public Admin	1743	3.9%
Construction	1588	3.5%
Administrative	1540	3.4%
Unclassified	1433	3.2%
Finance	1296	2.9%
Information	1228	2.7%
Wholesale Trade	1175	2.6%
Real Estate	939	2.1%
Transportation	802	1.8%
Arts/Entertainment	737	1.6%
Management	107	0.2%
Utilities	17	0.04%
Agri/Forestry	5	0.01%

Number of Establishments by Sector in 2018

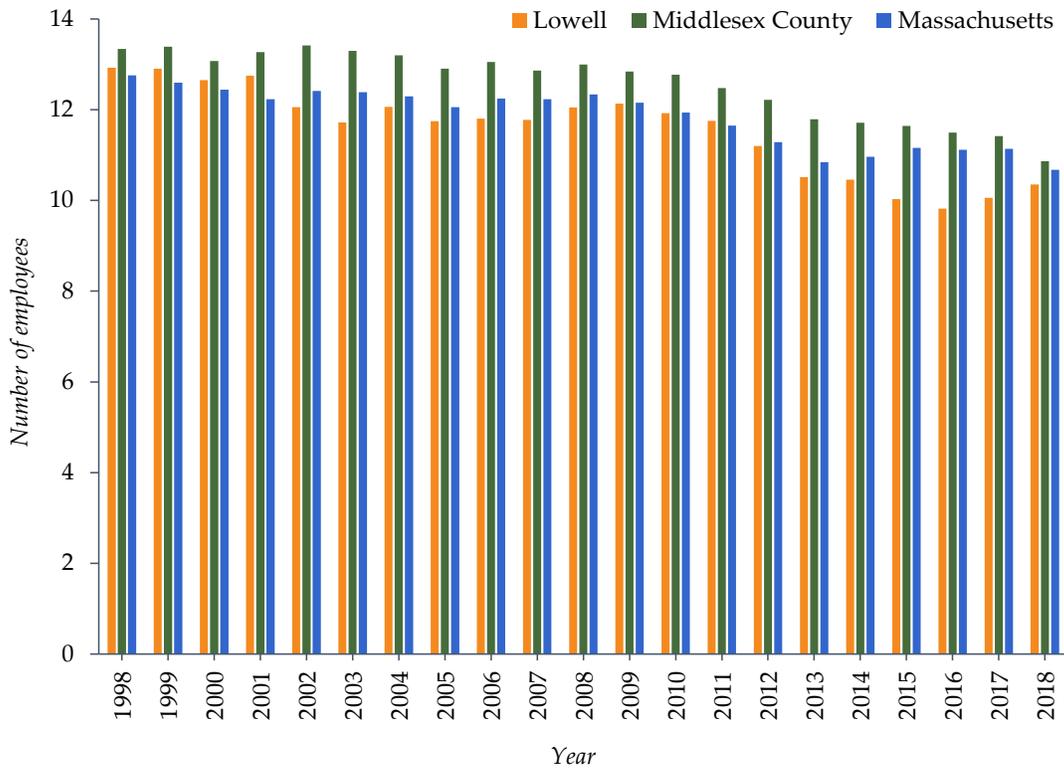


Share of Establishments by Sector in 2018

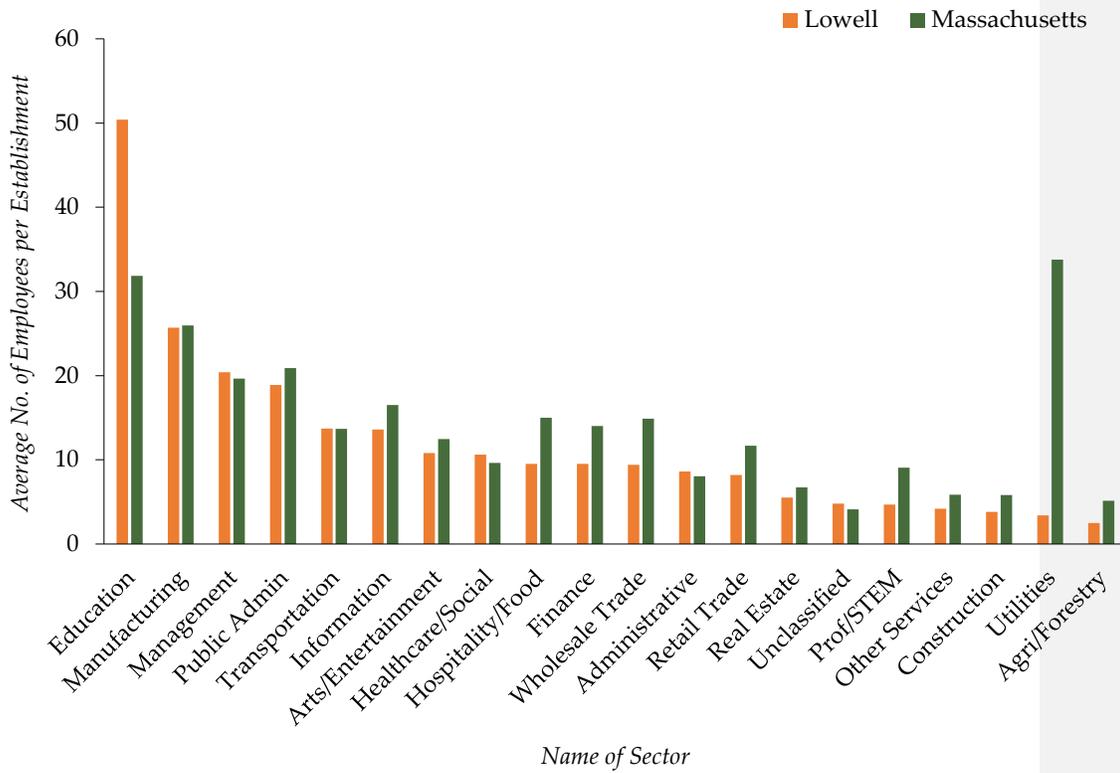
<i>Sector</i>	<i>Number of Establishments</i>	<i>Share of Total Establishments</i>
Health Care	904	20.8%
Other Services	602	13.9%
Retail Trade	446	10.3%
Prof/STEM	358	8.3%
Unclassified	291	6.7%
Construction	358	8.3%
Hospitality/Food	246	5.7%
Real Estate	168	3.9%
Administration	167	3.9%
Finance	134	3.1%
Manufacturing	129	3.0%
Wholesale Trade	118	2.7%
Education	107	2.5%
Public Admin	90	2.1%
Information	85	2.0%
Arts/Recreation	66	1.5%
Transportation	56	1.3%
Utilities	5	0.1%
Management	5	0.1%
Agri/Forestry	2	0.05%

Firm Size

Average Firm Size by Year



Average Firm Size by Sector in 2018



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Largest Employers in 2018

<i>Name of Establishment</i>	<i>Sector</i>	<i>Employment Growth, 2008-2018</i>
Kronos Inc.	Manufacturing	N/A ⁵
Lowell General Hospital	Health Care & Social Assistance	81.7% ⁶
Middlesex Community College	Educational Services	3.5% ⁷
Community Teamwork Inc.	Health Care & Social Assistance	371.5%
Market Basket	Retail Trade	80.5%
Macom Technology Solutions	Manufacturing	3.2% ⁸
Enterprise Bank & Trust Co.	Finance & Insurance	4.4%
Lowell High School	Educational Services	3.7%
Lowell Police Department	Public Administration	2.1%
Dunkin' Donuts	Accommodation & Food Services	29.4%
Lowell Sun	Information	-14.3%

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⁵ Kronos Inc. moved to Lowell from Chelmsford, MA in 2017, and thus this figure is unavailable.

⁶ This figure may not include certain subsidiaries of Lowell General Hospital that are listed under a different name.

⁷ The period is 2007-2017 for this figure instead of 2008-2018 because of a lapse in the data.

⁸ 2010 is the base year for this figure instead of 2008 because of a lapse in the data.

Methodology

YTS stands for “Your-economy Time Series”, a database compiled by the Business Dynamics Research Consortium (BDRC), which is housed at the University of Wisconsin System Institute for Business and Entrepreneurship in Madison, Wisconsin. YTS contains annual, establishment-level, time series data on companies that are considered to be “in-business” in a given year. In order to be considered as an “in-business” company, an establishment must have intent on conducting commercial activities in that year, or have a DBA (doing business as) physical location. Businesses included in YTS are for-profit (both private and public), nonprofit, and government establishments. The YTS database provides access to information regarding employment trends, establishment level affiliations, relocation, and industrial sectors in any geographical area.

YTS is assembled from annual Infogroup Business Data historical files. This “snapshot” reflects the first half of a calendar year for all years except 2018, after which the snapshot includes the full calendar year to ensure the most accurate account of active establishments. Infogroup business records are culled from public and government sources (secretaries of state, city clerks, county courthouses, and business journals). Infogroup then works to verify this information through internet “crawling” of URLs and website scripts, telephone calls, U.S. Yellow Pages, industry directories, business registrations, and press releases. Teams also work to identify new businesses each year, and also corporate linkages between companies that may have experienced mergers or acquisitions. Infogroup contacts 55,000 businesses daily to verify company information. Over a typical month, 15% of the dataset is re-verified. For employment data specifically 49% of establishments have their jobs data verified via telephone interview. For the remaining 51%, a model using already-verified employment numbers estimates employment size at individual locations.

The Business Dynamics Research Consortium (BDRC) compiles all yearly snapshots and links businesses using the unique ABI (American Business Identifier) number for each listing. This creates a time-series database of active companies for the years after 1997. BDRC then adds more time-series variables to the data, derived from the original Infogroup variables. BDRC also removes “gaps” in missing years of data for an individual firm by “rolling” values for existing years into the next or previous year until a company’s record is complete. Algorithms are occasionally used to identify and remove major outliers, although BDRC states this occurs with less than 1 percent of the data. This process occurs with each annual snapshot release and the entire YTS database (1997-last year) is assembled and released.

Pioneer Institute then aggregates and visualizes this data using various software, including SQL, Tableau, QlikSense, and Microsoft Excel. Most of the core summary statistics, such as the number of employees over time, are extracted directly from Pioneer’s interactive tool,

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[MassEconmix](#). All sector codes used in compiling this report are from the North American Industry Classification System, any population figures referenced are from the U.S. Census Bureau, and any other external sources consulted are referenced in footnotes.