



Marie Skłodowska-Curie RISE
MAPS-LED Project



MAPS-LED

Multidisciplinary Approach To Plan Smart Specialization Strategies for Local Economic Development

WP2

“Cluster Policy and Spatial Planning”

INSURANCE CLUSTER ANALYSIS

VENTURE DEVELOPMENT CENTER

CASE STUDY REPORT

Preliminary Insights from Cluster-led Initiative Analysis

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Introduction

This report takes into account two analyses: The Insurance Cluster in Boston City as well as the Case of Venture Development Center (VDC) inside the university of Massachusetts.

Section I: Insurance Cluster analysis

Insurance Cluster Overview

According to NAICS Code¹ definitions and clustermapping.us² (coded 24), the insurance cluster consists of 8 industries described as a traded Cluster as following:

This cluster consists of firms providing a range of insurance types, as well as support services such as reinsurance and claims adjustment.

Divided into 3 sub-clusters: Insurance Related Services, Insurance Carriers and Reinsurance Carriers.

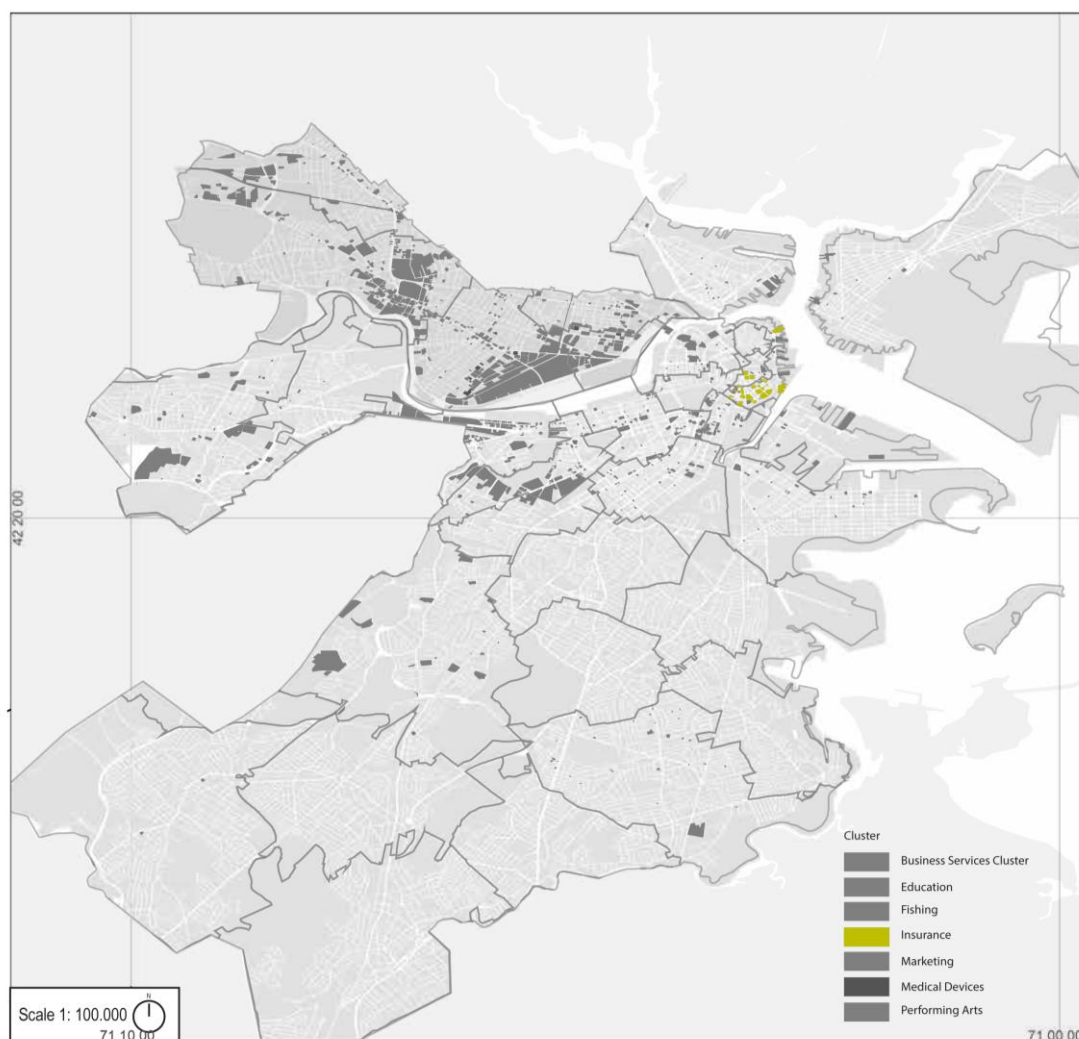


Figure 1: Spatial Concentration of Insurance Cluster over Boston and Cambridge (MA) – NAICS and Land Use association at the urban level per zip code- 2013.

¹ 6-digits Naics code for the year 2012 are (524291 – 524298 – 524113 – 524114 – 52126 – 524127-524128-524130) referring to (Delgado, Porter, and Stern 2014)

² Check http://www.clustermapping.us/cluster/insurance_services#related-clusters

Insurance Cluster Localization

Mainly concentrated in the north – eastern zone of the city of Boston, specifically in Zip codes 02109 and 02110. According to NAICS subdivisions the number of establishments of insurance carriers raised up for the year 2013 in respect to the start year of 2008 in both zip codes, this might be explained due to: the connection to the financial district zone, the proximity to the public transportation development in South station area (along the red line) – as shown in [Figure 2](#)- and multiple regeneration projects occurrence.

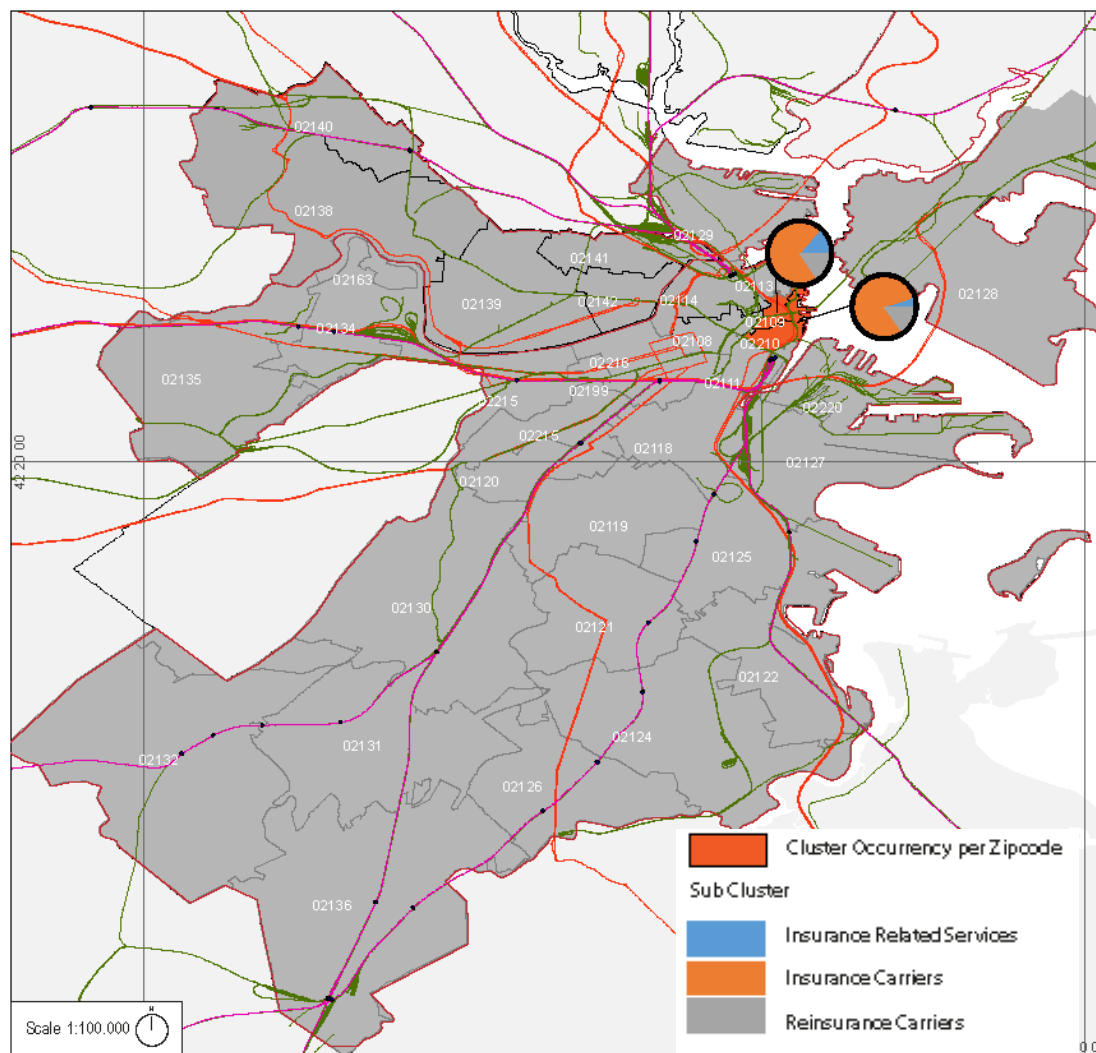
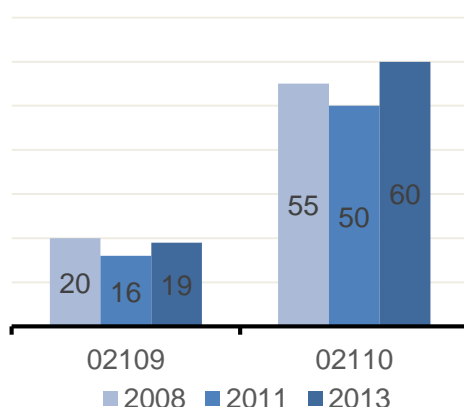


Figure 2: Insurance Cluster occurrence and sub-cluster structure by Zip Code concentration-year 2013.

Number of Establishments



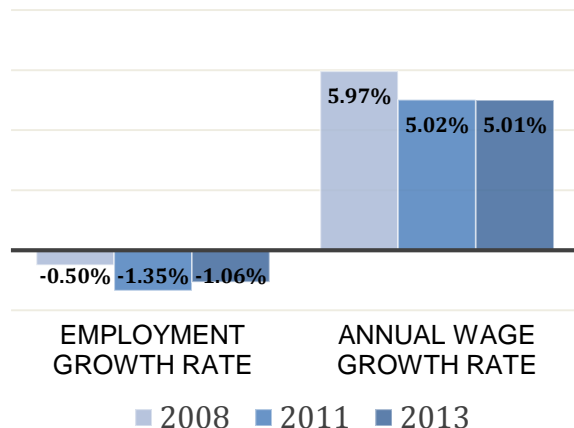
It is deducted that a higher number of insurance establishments is simply the (insurance carriers) as shown above. The insurance carriers' category covers a wide range of services such as:

- Direct Life Insurance Carriers
- Direct Health and Medical Insurance Carriers
- Direct Property and Casualty Insurance Carriers
- Direct Title Insurance Carriers
- Other Direct Insurance (except Life, Health, and Medical) Carriers

Insurance Cluster Key Indicators

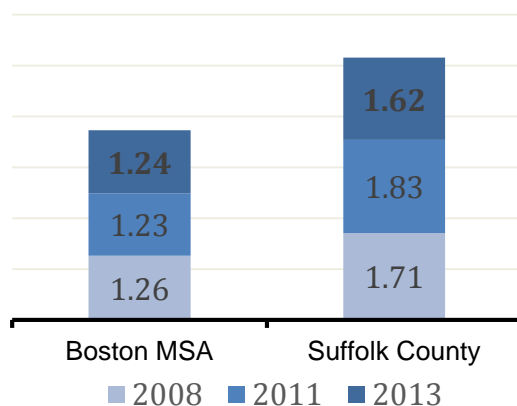
Three indicators have been analyzed in order to perceive an accurate understanding to the insurance cluster:

1. Performance indicator



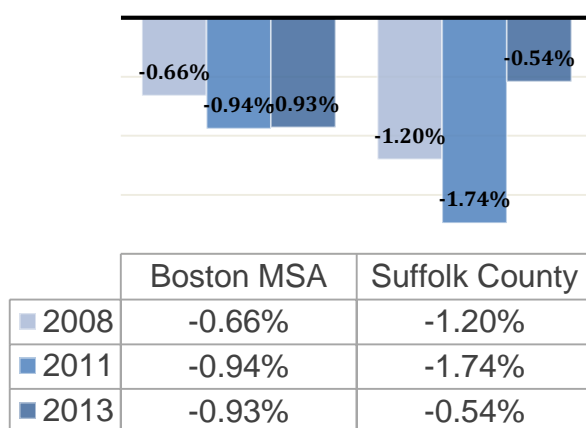
A noticeable decline in the performance indicator of the insurance cluster occurred between the years 2008, 2011, and 2013. This is showcased by the employment growth rate on a negative scale rate from -1.35% in 2011 to -1.06% in 2013; as well as a decrease in annual wage growth rate from 5.97% in 2008 to 5.01% in 2013. More recently in 2014, employment growth rate showed a decline of **-3.84%** as well as the annual wage growth rate declined to **4.17%**.³

2. Specialization indicator (by location quotient)



The specialization index showed a high employment specialization and share in Boston MSA, that is up to ≈ 1.25 even though still with a declining rate from the years 2008, 2011, and 2013. However, Suffolk County showed a higher specialization rate in insurance cluster than Boston MSA yet still with a declining rate from 1.71 in 2008 till 1.62 in 2013. More recently in 2014, the insurance specialization index raised back up to 1.27 in Boston MSA as well as up to 1.66 in Suffolk county.⁴

3. Establishment Growth rate



The number of establishments diminished as per consequences to employment and wage decrement. However, on one hand the negative trend of establishments growth rate remained stable in Boston MSA from -0.66% in 2008 to -0.94/0.93% between the years 2011 and 2013. On the other hand, the negative trend fluctuated in Suffolk county from -1.20% in 2008 up to -1.74% in 2011 and then down to -0.54% in 2013.

³ See Appendix, P8. Please refer to http://www.clustermapping.us/region-cluster/insurance_services/msa/boston_cambridge_newton_ma_nh

⁴ See Appendix, P9. Please refer to http://www.clustermapping.us/region-cluster/insurance_services/county/suffolk_county_ma#related-clusters

Findings On Spatial Oriented Approach at Urban Level

- Spatially, the insurance cluster is mainly concentrated in the financial District of Boston MSA (zip codes 02109 – 02110), this might be due to the kind of related services that establishments provide primarily; it is noticeable as well that in zip code 02110 a high occurrence of clusters is taking place, see [Figure 3](#).
- Statistical findings sheer that this cluster is strongly connected to other clusters as a 'Support Cluster' such as: financial, business, marketing and educational clusters as it offers a variety of insurance related services, like health, financial, life, property and medical care insurances, see [Figure 7](#).

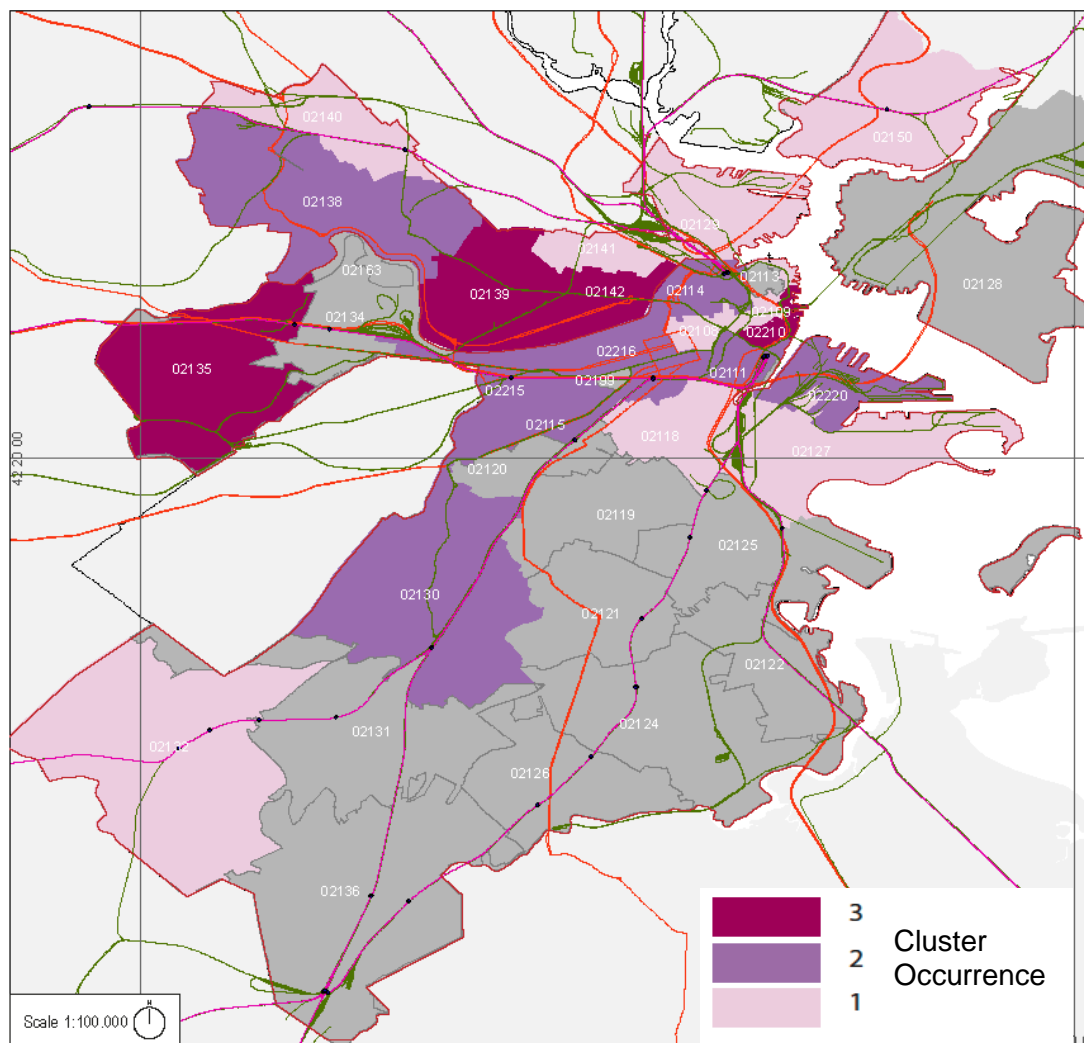
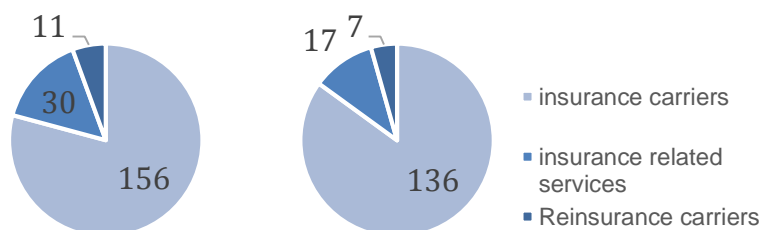


Figure 3: Clusters occurrence concentration by Zip Code in Boston and Cambridge (MA) - 2013.

- The number of establishments in the sub-clusters of Insurance services diminished remarkably between the years 2008 and 2013; as shown in the following graphs, insurance carriers remains the intact category of where the majority of establishments have fallen.



Establishment numbers in 2008 and 2013, respectively, showing different sub-clusters divisions.

However, job creation indicator between the years 2008 and 2013 showed a high tendency for loss in insurance carriers and a 10% gain in insurance related services, see [Appendix P1](#).

Section II: Policy Initiative Identification and Governance

Venture Development Center Overview

Venture Development Centre (VDC) is a non-profit organization spatially localized in University of Massachusetts (Zip Code 02125). Mainly identified as a **business incubator**, it delivers the needed support to start-ups companies to turn their visions and ideas into reality by providing physical laboratories, financial aids and the eco-environment for entrepreneurs to inspire and innovate. Web link to Venture Development Center: <http://vdc.umb.edu/>



Venture Development Center Description:

Founded in 2009 by **William J. Brah**⁵ and a team of entrepreneurs, experts and mentors with a physical location in the 3rd floor of Wheatley Hall, 100 Morrissey Blvd, university of Massachusetts, 02125-3393. Total floor area is around 18,000 sq. ft. with a sleek interior design, the VDC is winner of **IIDA NEW ENGLAND – best Interior Design Award Co-Working space** for the year 2010.

The venture development center encompasses a diversity of wet and dry laboratories, 3 flexible meeting rooms and shared co-working spaces, a casual-style cafeteria and 2 lounges areas; as well as personalized private spaces, offices and individual working cells, with an outer terrace overlooking the Dorchester Bay.⁶



Figure 4: Inside Pictures from the Venture Development Centre showing different locations and facilities, source the author.

⁵ Still working as the executive Director, personal Interview provided at the end of this report.

⁶ For in depth detailed information for the VDC physical facilities, refer to <http://vdc.umb.edu/space/>

Venture Development Center Vision, Mission and Objectives:

Vision:

Venture Development Centre is a managed incubator for early-stage business, university, and student entrepreneurs. The VDC delivers targeted, one-to-one support to enable ventures to attract funding and grow.⁷

Mission:

Guide **biotechnology and life-science** startup companies from vision to launch in market by providing access to experienced company builders, to develop market validation and technical assistance plans.

Objectives:

- Promotion of networking, Connecting Graduates to Job Market and pitching investments to startups.
- Offers **co-working spaces, laboratory spaces**, access to core facilities inside the university Campus resources and amenities.
- Provides access **to secure investments and funds** to launch new companies in the market in form of venture capital.

Action Programs:

- **Global Entrepreneurs in Residence (GEIR)** is a program since 2014 that promotes Economic Growth Across the Commonwealth with a **PPP** supported by the Massachusetts Technology Collaborative, Silicon Valley Bank and Goodwin Procter as well as other corporations.
- **Internship Challenge Program (ICP)** is a program that offers a variety of internships in partnership with **Massachusetts Life Sciences Center (MLSC)** like internship challenge Program to connect students with industry sectors.
- **VISA** program is an affiliated program with UMass that gives eligibility to entrepreneurs from other nationalities to facilitate accesses and receive **H-1B visas**. Hailing from many other universities as well, including MIT and Harvard, etc. to associate entrepreneurs with companies in need for innovative skills or talents and or an emerging growth company.

Special Notes:

- The Venture Development Center is spatially and economically part of LIFE SCIENCE CORRIDOR located on the red line extensions and connecting 5 cities between (Somerville, Cambridge, Boston, Quincy and Braintree). This life sciences corridor benefits from a knowledge spillover, advances in academic sciences fields, innovative research and proximity to major research hospitals and strategic presence of venture capital resources.
- Being Part of a green campus initiative, entrepreneurs in residence, employers and Staff members of the VDC commute responsibly and Consciously for reducing CO₂ in the environment. However, they are not provided a car parking lot inside the university.

⁷ Further description available from:

https://www.umb.edu/in_the_community/business_development_resources/vdc

Findings from Interviews and on-site investigation:

- The number of companies incubated in residence varied from **25 in 2014, 16 in 2015 and 27 in 2016**.
- An economic investigation and impact has been measured using a **(REMI)**⁸ which aims at improving public policy showed an investment of **\$ 123 million and 1200 jobs created in the last 5 years** (UMass Donahue Institute 2016).
- Partnerships and networks are a big deal for venture development Center, **New England Venture capital association** is investing in the VISA program to help waive for entrepreneurs from outside Boston to Live and work.
- **MASSACHUSETTS Life Sciences Centre (MLSC)** invests in physical labs within VDC – lately with an amount of **\$588,848** – to help build a fifth ready-to-use wet laboratory as well as a core facility with shared equipment in order to launch additional high-potential startup companies.⁹
- The overall number of companies since foundation is **66 -amongst which 77% are still active-** where **\$384 million** have been raised to invest in these companies in form of venture capital.
- VDC is mainly focused on **biotechnology, Pharmaceuticals, Educational and life-science** Start-up companies; a majority of incubated companies¹⁰ such as **(SQZ)**¹¹ or **(EnVolv)** are mainly specialized in engineering, biopharma, life sciences and chemicals.

Targeted Clusters:

- Business
- Biopharma
- Education
- Financial services
- IT

Bibliography

Delgado, M., M.E. Porter, and S. Stern. 2014. "Defining Clusters of Related Industries." US. Economic Development Association.

UMass Donahue Institute. 2016. "University of Massachusetts Economic Contribution Analysis FY 2015." UMASS - OFFICE OF THE PRESIDENT.

http://www.donahue.umass.edu/documents/FY_2015_UMass_Economic_Contributions_-_FINAL.pdf.

⁸ Regional Economic Model Inc. The REMI model incorporates aspects of four major modeling approaches: Input-Output, General Equilibrium, Econometric, and Economic Geography. Check <http://www.remi.com/the-remi-model>

⁹ Check

https://www.umb.edu/news/detail/venture_development_center_gets_boost_from_mahachusetts_life_sciences

¹⁰ Check the full list of incubated companies at <http://vdc.umb.edu/thriving-community-of-peers/>

¹¹ Sqz Biotechnology caused all the fuzz recently in VDC for having a \$5 Million deal with Roche drugs. As William Brah mentioned, it wouldn't because of them unless VDC were all over the news in 2015. Check <http://www.bizjournals.com/boston/blog/bioflash/2015/12/boston-biotech-startup-sqz-seals-a-500m-deal-with.html>

Appendix

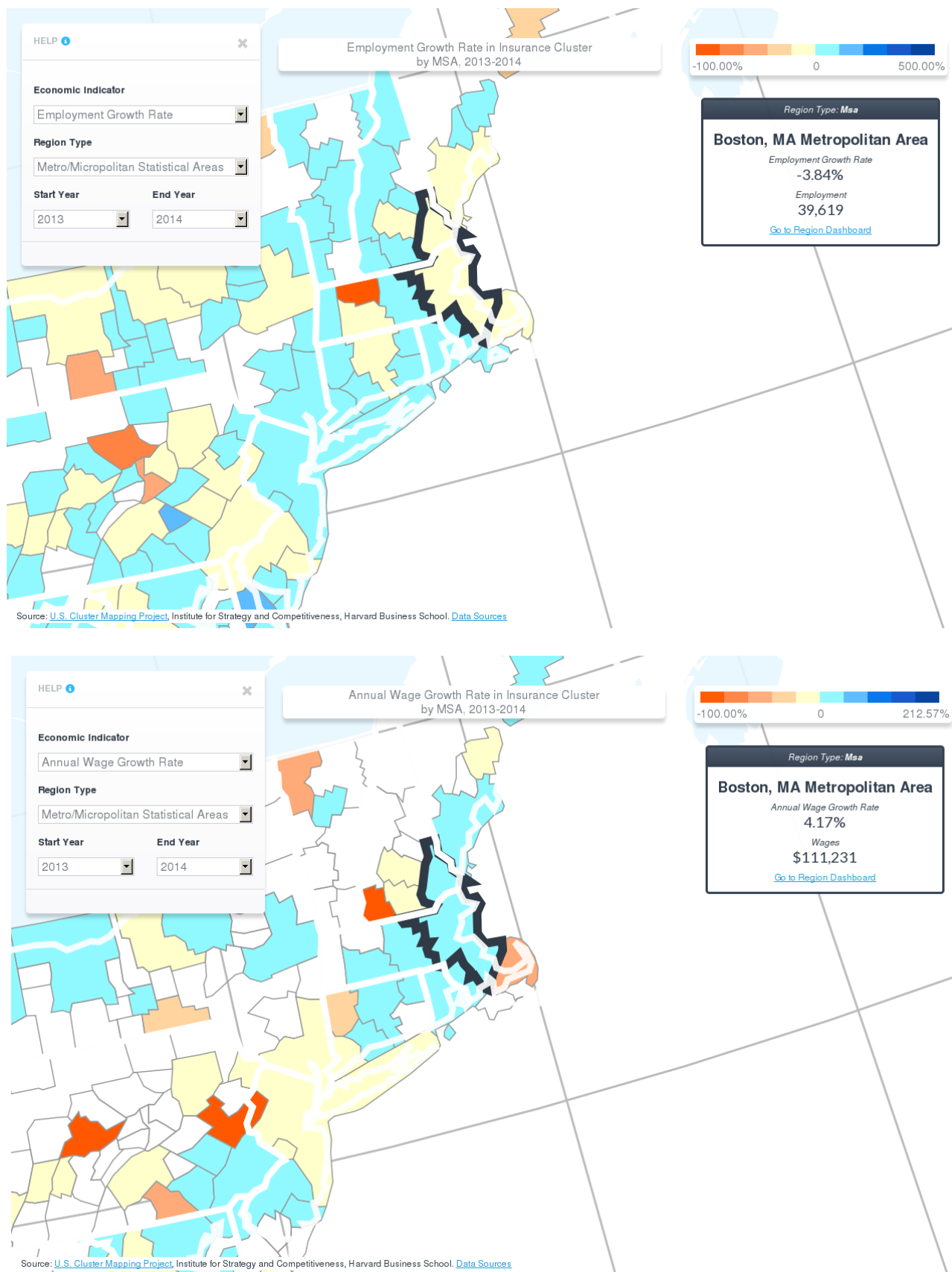


Figure 5: Performance indicators for insurance cluster, year 2014. Negative Employment growth rate as well as a diminishing Annual wage growth rate.

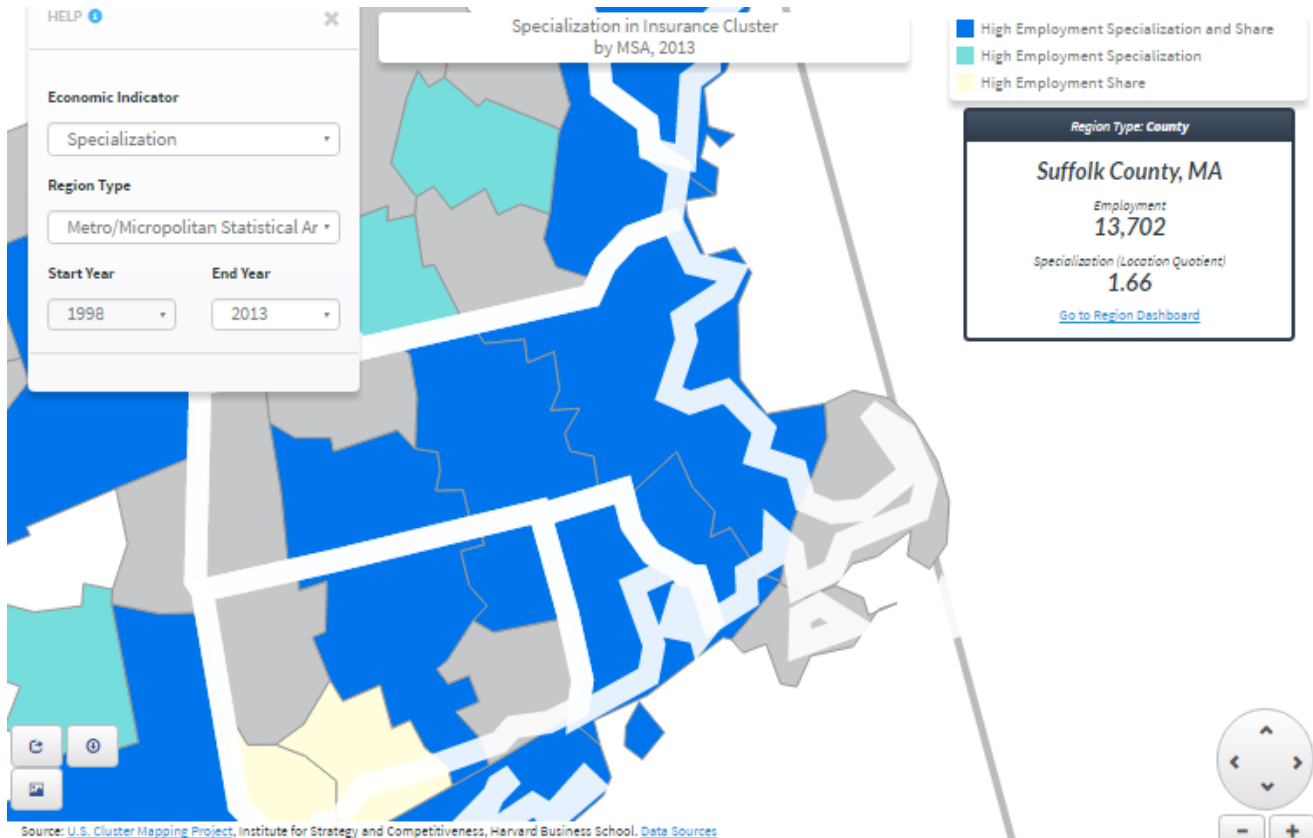
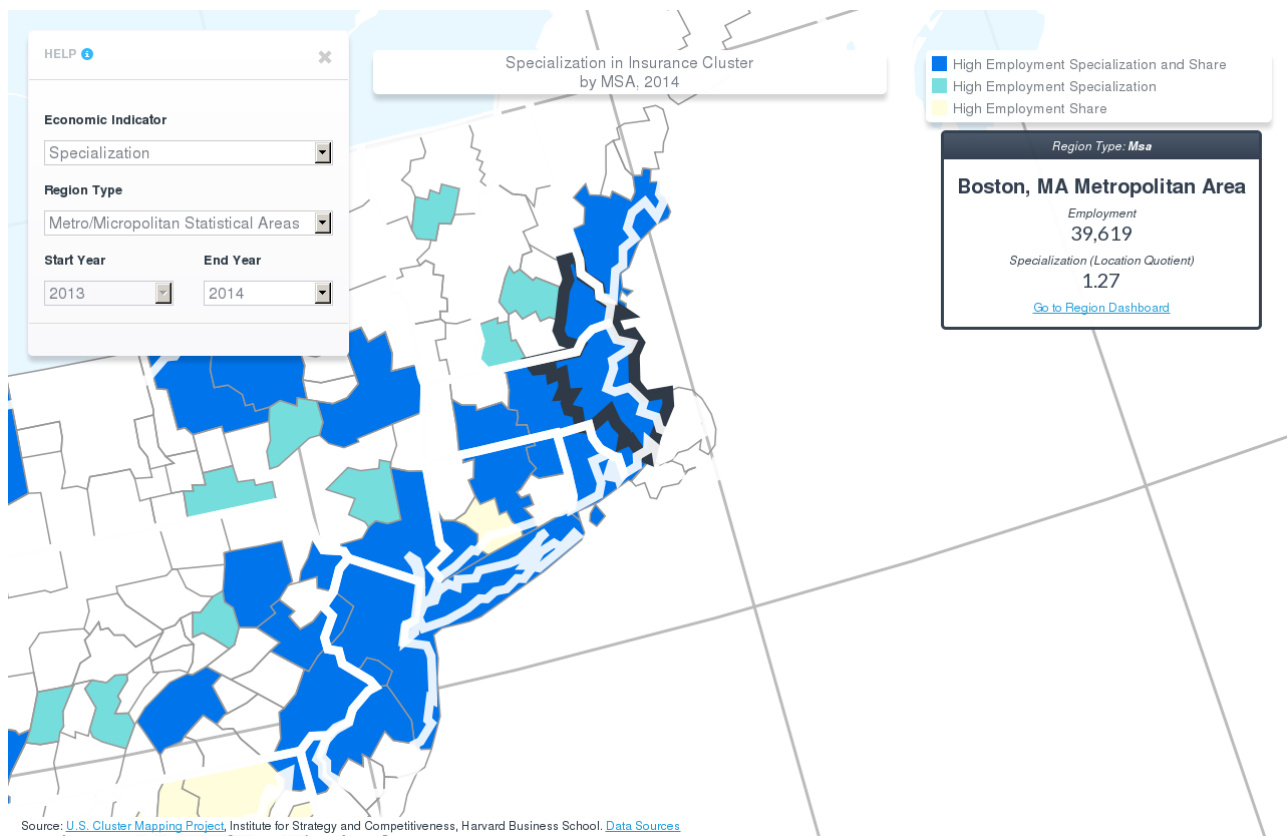


Figure 6: Specialization Index (by location Quotient) Indicator for the year 2014, over all Boston MSA as well as Suffolk County.

Related Clusters

The data visualization below displays the clusters that are most related to this cluster.

More information on Related Clusters available [here](#)

Cluster Specialization
 Strong clusters above 90th percentile specialization
 Strong clusters above 75th percentile specialization
 Other specialized clusters (LO > 1.0)
 Legend:
 - Solid line: 90th & 75th pctile & HE >= 20%
 - Dashed line: 90th & 75th pctile & HE >= 20%
 - Dotted line: Need cluster: clusters not meeting above criteria



Cluster Linkages

Insurance Services, Boston, MA Metropolitan Area, 2014

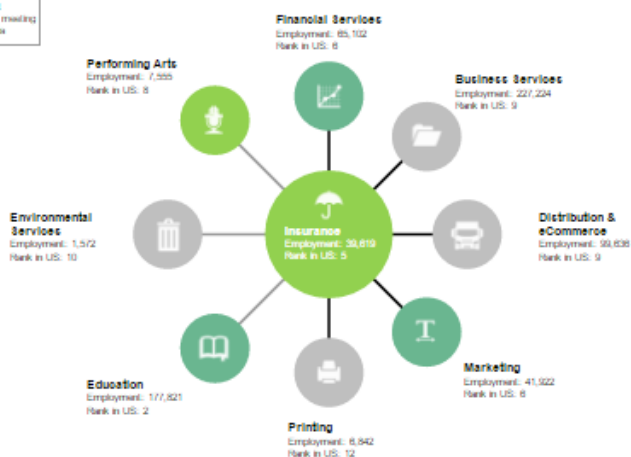


Figure 7: Insurance Cluster Linkages in Boston MSA, year 2014. High correlation to Financial cluster, Business and Marketing sector.

Boston-Cambridge-Newton, MA-NH

Insurance Services Cluster

Job Creation by Subcluster, 2008-2014

