

## **MIT STUDY ANALYZES MASSACHUSETTS PERFORMANCE IN GROWING TECHNOLOGY-BASED COMPANIES TO SCALE**

**Cambridge, MA, December 10, 2015** – Massachusetts is renowned globally for innovation and its capacity to create new companies based on novel technologies, but recently concerns have been raised about the state’s ability to nurture and grow these companies to scale in the Commonwealth. Economic development experts are concerned about the downstream economic benefits that are lost if Massachusetts-based companies are not scaling to their full potential or are disproportionately scaling up out of state.

A new study recently released by the MIT Industrial Performance Center (IPC), “Growing Innovative Companies to Scale: How does Massachusetts Measure Up?” analyzed the issue and found that over the past two decades, Massachusetts has held its own compared with other leading innovation regions of the country (San Francisco/Silicon Valley and New York City) in terms of growing companies to scale. The report, which was jointly funded by The Massachusetts Technology Collaborative and The Massachusetts Competitive Partnership, found that Massachusetts is competitive with California in this dimension of performance in key sectors and surpasses New York across the sectors examined. In the Life Sciences sector, Massachusetts matches or surpasses California at multiple stages of company growth including the number of venture-backed companies and the number of IPOs. Even in the important software and internet services sector, where Massachusetts has trailed California in the rate of formation of venture-backed firms, it has held its own when it comes to growing companies to \$500 million or more in annual revenue. On the other hand, Massachusetts lags far behind California in growing ‘super-scaled’ companies with billions of dollars in annual revenue.

“Our analysis has shown that Massachusetts has a solid track record of growing innovative companies to scale,” said Elisabeth Reynolds, Executive Director of the IPC and a co-author of the report, “but to prosper in the national and global economy of the future, the Commonwealth needs to have more companies of scale and super-scale.”

## **The Importance of Scale**

The growth of companies as they develop new markets is the main mechanism by which economic benefits of inventions and innovations are realized.

“How well an innovation-oriented economy fares in growing early-stage companies to scale and creating an environment that supports them is no less important than its success in encouraging the formation of new companies in the first place,” said Richard Lester, faculty chair of the IPC, Japan Steel Industry Professor of Nuclear Science and Engineering, and a co-author of the report.

The report emphasizes the critical role played by companies of scale in the regional economy, through their generation of jobs, wealth, management talent, future entrepreneurs and role models, cluster specialization and acquisition capabilities. Scaled-up companies also feed and draw upon the regional innovation ecosystem in terms of talent and capital, and directly and indirectly support startup formation. Often this occurs through the acquisition of startups or the creation of new startups by senior managers who have left scaled companies.

## **The IPC Report**

The study was carried out over an 18-month period by a team of MIT faculty, research staff and students based at the IPC. The goal was to gain a more detailed understanding of the processes by which innovative companies scale up their businesses and to assess how the Massachusetts economy compares in this dimension of performance with other regions of the country. For the first time, the report brings together a critical mass of observations, data, and analysis on this important subject.

The report analyzed the scale-up performance of four focus industries in Massachusetts, California, and New York, comparing firm populations at various stages of development – including venture-capital-backed startups and later-stage public companies – over a 24-year period (from 1990 to 2014). By most measures California and Massachusetts are the most active in the country when it comes to technology-based innovation, and New York is also highly ranked.

The study focuses on the scale-up process in four key industry groups: advanced manufacturing; life sciences; computer-related; and software and Internet services. These are among the Commonwealth's most innovative and technology-intensive sectors. Together they account for 90 percent of all Massachusetts startups that have received financial backing from venture capital firms in recent decades.

### **IPC Report Findings**

The report found reasons for encouragement as well as areas of concern.

-- The researchers found no evidence that venture-backed Massachusetts companies are being sold at an earlier stage in their lifecycle than their counterparts in California or New York.

Moreover, the likelihood that venture-backed companies will be acquired at any point in the lifecycle seems broadly similar among the three states.

-- On a population-adjusted basis the Boston area outperformed New York City in the rate of formation of venture-backed startups in all four focus industries. . By this measure Boston also surpassed Silicon Valley in the life sciences industry, but trailed Silicon Valley in the other three focus industries.

--The Boston MSA has held its own when it comes to growing companies to scale in three of the four sectors.

-- The life sciences have been the crown jewel in the Massachusetts innovation economy, not only at the early stages of the growth cycle but also when it comes to companies that are on a pathway to scale or that have achieved scaled or super-scaled status. At each of these stages, Massachusetts has been on par with or surpassed California.

-- Massachusetts is losing ground to California in terms of the number of software and internet (S&I) startups, the number of such companies that go public, and the growth of large "super-scaled" S&I companies such as Google, Facebook and the like. Venture-backed Massachusetts S&I firms are also increasingly likely to be acquired by California-based companies.

### **Suggestions Going Forward**

The report recommends strategies for promoting the scale-up of innovative companies that include public and private interventions at multiple levels.

It emphasizes the need for a greater understanding of the direct and indirect benefits provided to the regional economy by larger companies. It also highlights the characteristics of the regional innovation ecosystem that are particularly important in supporting scale-up (as distinct from startup) such as: the regional talent pool, and especially the availability of experienced senior managers; the presence of business networks, mentors, and role models; and a business culture that provides recognition of successful entrepreneurs and successfully scaling companies.

Finally, the report strongly recommends focusing on developing talent from the university to the executive suite. Talent is the lifeblood of the region's innovation economy. The research confirms that human capital is at the core of why innovative companies start and grow here.

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Attachments:

[Executive Summary of Report](#)

[Complete Report: Growing Innovative Companies to Scale: How does Massachusetts Measure Up?](#)

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