For immediate release: March 26, 2013
Contact: Ted McEnroe - 617-338-3890
ted.mcenroe@tbf.org

Halfway through 10-year, $1 billion investment, report finds Massachusetts Life Sciences Center creating jobs, driving cluster growth

Life Sciences Initiative merits continued investment, Northeastern University researchers conclude

Boston – Nearly five years and more than $300 million in investments after its launch, Massachusetts' ambitious Life Sciences Initiative and the Center charged with its implementation are driving employment and economic growth for the life sciences sectors in Massachusetts, according to a report released today at the Boston Foundation. The report, **Life Sciences Innovation as a Catalyst for Economic Development: The Role of the Massachusetts Life Sciences Center**, was unveiled at an *Understanding Boston* forum at the Boston Foundation, which featured a panel discussion and remarks from Massachusetts Governor Deval Patrick.

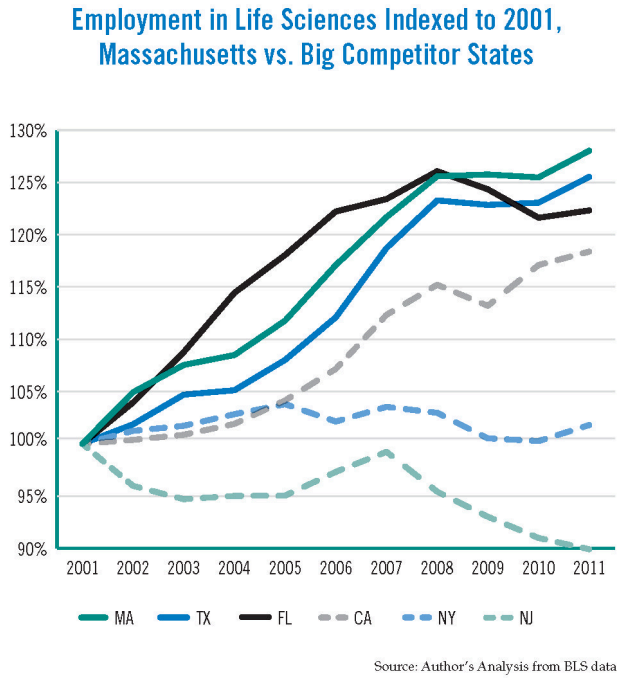
Download the report at tbf.org

Written by economists Barry Bluestone and Alan Clayton-Matthews of the Kitty and Michael Dukakis Center for Urban and Regional Policy at Northeastern University, the report incorporates both quantitative data and qualitative interviews with key industry executives, leaders of related trade associations, and a number of scientists who have an intimate knowledge of the range of activities of the Center.

The researchers found that the Massachusetts Life Sciences Center (MLSC) is making a measurable impact on job creation, noting that since the launch of the Initiative in 2008, Massachusetts has overtaken all competitor states in its rate of life sciences job creation. The state's life science cluster has created jobs at a faster pace than any other industry sector in the Commonwealth over the past decade.

"The Life Sciences Initiative is meeting its growth objectives and then some," said Governor Patrick. "Because we chose to shape the future we wanted, rather than just wait to see what happens, Massachusetts is now the world's leading life sciences supercluster, and we have the jobs and economic opportunity that comes with that."

"When the Boston Foundation first convened university leaders, educators and business representatives to discuss the life sciences cluster in Massachusetts seven years ago, it was in hopes of seeing the growth that has happened over the past decade," said Paul S. Grogan, President and CEO of the Boston Foundation. "This report suggests that the Life Sciences Initiative has provided needed investment to move the sector forward, but it also notes the opportunity that continued investment holds for creating jobs and even greater value for our economy and the broader society."



The Massachusetts Life Sciences Center seeks to drive job creation in Massachusetts using a portfolio of programs that includes loans to early stage companies, grants to support industry-academic research collaborations, cutting edge infrastructure investments, growth incentives, workforce training, and internships that help smaller companies access Massachusetts workers. The research found that the Center's investments in start-up companies are a strong draw to Massachusetts for larger companies, which rely on these "minnows" to help them access and develop new technologies at a faster rate. Bluestone and Clayton-Matthews find the Center's role in helping these start-up firms gain traction in Massachusetts has been instrumental in encouraging the "larger biosciences fish" to locate and create jobs in the Commonwealth.

"Our research shows that The Life Sciences Initiative has made Massachusetts the global leader in the field, creating jobs across disciplines and education levels," said Bluestone. "But continued investment is needed to help Massachusetts keep up with other states and countries that have their sights set on creating and strengthening their own life sciences clusters."

Background on the Massachusetts Life Sciences Initiative and MLSC

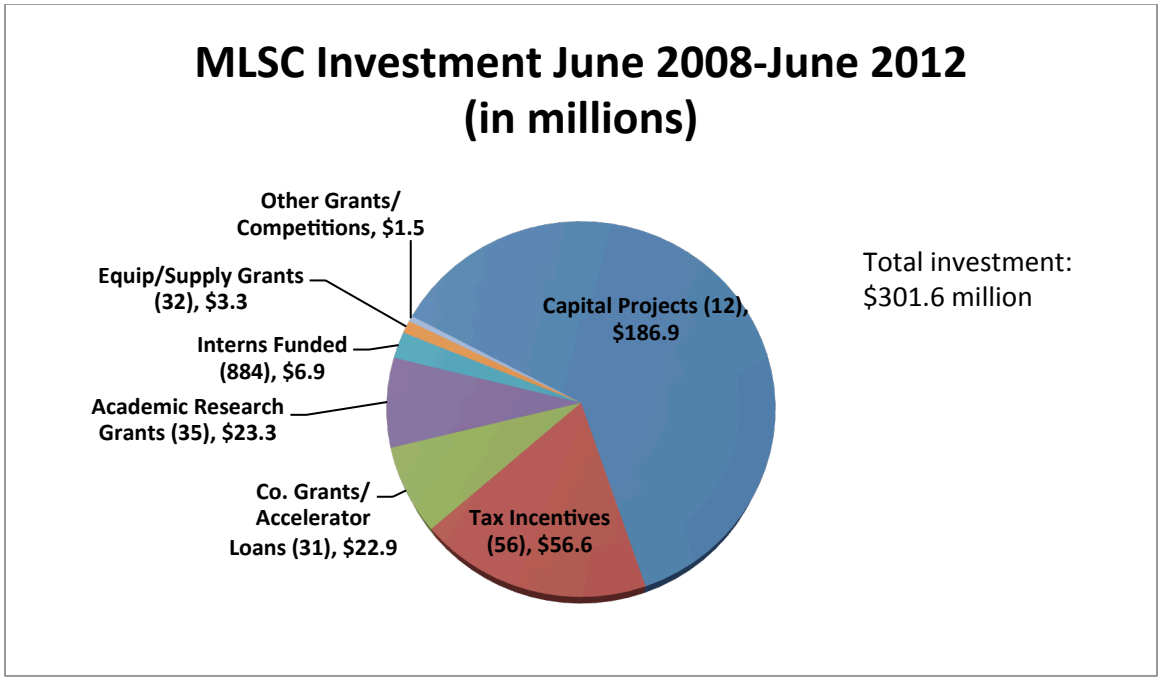
The Massachusetts Life Sciences Initiative was announced in 2007, but its roots date back to 2005, when the Boston Foundation and the Massachusetts Technology Collaborative led an effort to formalize and strengthen the ongoing conversations among the members of the Massachusetts life sciences "supercluster." That "supercluster" included universities, research institutions, hospitals, numerous private and nonprofit organizations and the venture capital firms that often fund cutting edge work in the field. A year of work led to the creation of the Massachusetts Life Sciences Collaborative in 2006, chaired by President Susan Hochfield of M.I.T., Harvard President Drew Gilpin Faust, University of Massachusetts President Jack Wilson and Henri Termeer, CEO of Genzyme.

In March 2007, at a meeting of the Collaborative, Governor Deval Patrick previewed an announcement that he would make later that year – the creation of a ten-year plan to invest $1 billion to enhance and strengthen the state's leadership in the life sciences sectors including biotechnology, pharmaceuticals, medical devices,

diagnostics and bioinformatics. The Massachusetts Legislature approved the funding for the Governor's Massachusetts Life Sciences Initiative in June 2008 and charged the Massachusetts Life Sciences Center with its implementation.

Bluestone and Clayton-Matthews note that the Massachusetts Life Sciences Center made more than $301 million in investments between June 2008 and June 2012, including nearly $187 million for capital projects and $56.6 million in tax incentives to companies that meet specific hiring goals. In addition, MLSC investments included $23.3 million in academic research grants, $22.9 million in accelerator loans for early-stage companies and other types of company support, $6.9 million to fund internships at Massachusetts life sciences firms with fewer than 100 employees, and nearly $5 million in equipment and supply grants for schools and to fund other grants and competitions.

According to the MLSC FY2012 annual report, together those investments leveraged more than $1 billion in third-party investments, most often by the private sector.



Short Term Impact and Job Creation

Bluestone and Clayton-Matthews examined the impact of the Life Sciences Initiative's tax incentives as one means of assessing short-term impact, and they find positive results. The analysis finds that participating companies that received $56.6 million in outstanding tax incentives by June 30, 2012 had created 2,537 new jobs (a cost of $22,175 per job). These jobs paid an average salary of $105,037 per year for a total of $266 million in annual salaries for the new workers. They estimate that these new workers will generate more than $93.1 million in income and sales taxes to Massachusetts over the next five years, meaning that each dollar in tax incentives awarded will generate $1.66 in added tax revenue.

Of the jobs created by companies participating in the Center's tax incentive program, 1,843 are in the pharmaceutical sector, 481 are in the medical device sector and another 213 are in scientific research.

Bluestone and Clayton-Matthews note that the new workers come from diverse educational backgrounds – from high school or Associate Degrees to Ph.Ds. An estimated 23% of the new life sciences hires whose jobs were created by 2010 MLSC Tax Incentives had an Associate Degree or less, with over half of the new workers in the medical devices field holding less than a B.A. The jobs are high-paying, with workers holding an Associate's Degree earning an estimated $61,285 per year, and those with a Master's degree or higher earning well over $100,000 annually. The average salary in the life sciences industries in the Commonwealth exceeds the all-industry Massachusetts average by 68 percent.

The Life Sciences Center Difference

Bluestone and Clayton-Matthews note that the MLSC has key features that make it an unusual government investment program – and which may contribute to its success. It is governed by a Board of Directors that includes industry, academic and research leaders in addition to government officials. Before coming to the Board of Directors for final approval most MLSC investments are reviewed by a multi-disciplinary Scientific Advisory Board and a Peer Review panel comprised of more than 200 experts from across the state. The Peer Review Panel and SAB both include industry and venture-capital experts who can assess the economic potential of the Center's investments, as well as scientists who can assess the scientific potential.

The Center also insists on private sector matches and retains "clawback" options on tax incentives if job creation goals are not reached – giving the Center the ability to hold recipients accountable.

But the authors suggest another key element in the Center's success – its embrace of a theory of growth that places innovation at the center of growth dynamics, where technology and interdependencies between new ideas and new investment provide the basis for new industries and products. This dynamic gives rise to a regional development pattern that differs from the standard one. Traditionally, small firms have tended to cluster around a major facility such as an auto assembly plant. Cities and towns that can attract one of these big facilities often benefit from having smaller companies settle nearby as part of a supply chain. But for life sciences and other innovation-driven sectors, the reverse pattern of development appears to be true – major firms are attracted to areas that have fostered the growth of small start-ups that can create breakthrough innovations at a faster rate than any one large firm. The large firms want to settle near the smaller ones in order to have a "front row seat" when it comes to acquiring cutting edge products.

"What is special about the Massachusetts Life Sciences Initiative is that it focuses explicitly on increasing the rate of innovation by encouraging more research and development (R&D) in the life sciences and helping small firms in this supercluster convert basic research into marketable products and services," Bluestone and Clayton-Matthews write. "New growth theory posits that this activity is the very fountain of economic growth."

In their interviews, the authors found numerous cases where the creation and support of the Massachusetts Life Sciences Center provided critical capital, loans and connections that allowed small firms to translate their ideas into products, which in turn attracted larger firms to the area and additional sources of funding. The researchers found that the MLSC also provided key incentives and credits to lower the cost of doing business in the state and was successful in retaining smaller firms that might otherwise have relocated to lower-cost regions.

Whether Massachusetts can maintain that leadership position remains to be seen, but the authors note:

> "Our overall conclusion is that because of its unique comprehensive approach to an entire industry supercluster and its reliance on scientific peer-reviewed procedures for awarding grants, the Commonwealth has reaped a substantial return on its life sciences initiative investment. Moreover, given the number of firms that have been attracted to the state, in large measure

> because of the ecosystem the Center has helped nurture, the benefits from the state's investment in this initiative are likely to pay off bountifully in the years to come."

In conclusion, researchers Bluestone and Clayton-Matthews note, "All of our research suggests that the state will benefit from fully funding the remaining five years of the initiative in order to maintain the lead the life sciences have established in the Commonwealth," and that the Initiative could provide valuable lessons for other quasi-public entities in the state.

"In the end, we applaud the Governor and the Legislature for their foresight in creating the Massachusetts Life Sciences Center and the $1 billion Life Sciences Initiative," they write. "The structure put in place is fulfilling the goals set out in the original legislation and the Center's leadership has continually assured that the structure works effectively and efficiently."

******

The Boston Foundation, Greater Boston's community foundation, is one of the oldest and largest community foundations in the nation, with net assets of more than $800 million. In 2012, the Foundation and its donors made $88 million in grants to nonprofit organizations and received gifts of close to $60 million. The Foundation is a partner in philanthropy, with some 900 separate charitable funds established by donors either for the general benefit of the community or for special purposes. The Boston Foundation also serves as a major civic leader, provider of information, convener and sponsor of special initiatives that address the region's most pressing challenges. The Philanthropic Initiative (TPI), an operating unit of the Foundation, offers special consulting services to philanthropists. Through its services and its work to advance the broader field of strategic philanthropy, TPI has influenced billions of dollars of giving worldwide. For more information about the Boston Foundation and TPI, visit www.tbf.org or call 617-338-1700.