INVESTMENT CONSULTING ASSOCIATES

Comprehensive Evaluation of Maine's Research & Development and Economic Development Incentive and Investment Programs

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Executive Summary

While business location, investment, and hiring decisions are the direct purview of the private sector, the public sector can influence these decisions through the use of incentives, credits, technical assistance, and other programs aimed to enhance a community's business competitiveness. Such programs are a critical, active component of many economic development, innovation, and economic sustainability strategies. However, no such program can completely change the nature of a community's strengths and weaknesses, nor can such programs work effectively in the absence of a coordinating economic development strategy.

The State of Maine has developed a suite of organizations, policy and investment tools, and assistance programs aimed at attracting investment and at meeting the State's overall economic development goals. These tools vary in usefulness based on changing business requirements, as well as dynamic political and economic conditions. Economic conditions and business needs and targets change over time, and the toolset must be evaluated and updated accordingly.

Incentives and special economic zones are among the most visible economic development tools available to attract new companies. They allow existing businesses to expand and encourage other forms of inward domestic and foreign direct investment. Likewise, direct public investment in research and in developing businesses can help nourish innovation and entrepreneurship. A successful competitive business climate positively contributes to a state's domestic economic development goals through job creation, capital investment, knowledge, and R&D creation with spill-over effects to economic achievement and quality-of-life as a whole.

In order to examine how well its programs have been achieving these goals, the State of Maine has performed Biennial Progress Reports on all Economic Development and Research & Development (R&D) efforts. The next evaluation report will be due in 2018. Also due in 2018 is a Comprehensive Evaluation of Investments in Research and Development report covering six years.

Through 2014, the evaluation of Economic Development and R&D programs were reported on in two separate but significantly redundant documents. These reports have been combined – without redaction - as a result of recommendations from the 2014 and earlier reports. The present report contains all of the information and analyses previously contained in both the Economic Development and R&D reports.

Methodology

The present report has been constructed to meet the Maine Legislature's requirement to examine the effectiveness of Economic Development and R&D programs on a biennial basis. This has been accomplished through performing the following analyses and actions:

- Reviews of the previous studies performed for the State of Maine on the use and effectiveness of its programs;

- Interviews with public sector entities and their partners responsible for the administration of the State's various economic development programs;
- Interviews with a sample of private sector companies who have received benefits and assistance from the State;
- Benchmarking the State of Maine's natural competitiveness against several of its peer states, both in terms of basic location fundamentals and of the incentive and credit tools available;
- Data collection through rigorous survey efforts collecting information on program usage, hiring trends, salary rates, and capital investment to allow for calculation of return on investment to the State (recipient lists provided by program administrators where those lists could be released under confidentiality agreement);
- Cost-benefit analysis of survey data for select programs; and
- Examination of annual reports (for those programs that generate annual reports and provided those reports along to the consultant team).

Note that the DECD survey referenced above (created for the 2014 reporting cycle) has provided a means for direct reporting on behalf of the private sector companies benefitting from the State's economic development and R&D programs. While the requirement to report is indicated in each of the State's current programs, a comprehensive means for reporting does not otherwise exist.

Findings

While this report provides detailed findings for the entire suite of tools available to the state, the project team found broadly that:

- Companies reported that the current programs are generally effective in allowing them to grow faster than they otherwise would have and, in some cases, to sustain the company through difficult or changing business times.
- This finding is somewhat tempered by the frustration that companies and institutions alike expressed on the difficulty finding, understanding, applying for, and reporting on the State's programs. Many asked that program offerings be simplified so an incoming or growing company can better understand the benefits they may be eligible for.

> *"… MTI provides critical funding, but also advice, mentorship, and connections to other key resources enabling young companies to build their skills, find their market, and execute effectively…"* Pika Energy

- This confusion and lack of information was also cited as characteristic of doing business in the State of Maine. Companies and individuals expressed significant negative perception about doing business in the state of Maine because of lack of clarity and lack of incentive stability due to politics (discussed in greater detail below).
- Companies also expressed a great deal of concern about the stability of incentive programs as well as the overall operating and regulatory environment in the state. Companies rely on a degree of stability and predictability in regulation to be able to plan effectively. Several companies cited concerns about making business decisions because of the instability of the incentive programs and the current debates in the State Capitol. The situation in Augusta is

seen to be extremely uncertain and there are concerns about making business decisions in such an environment.

- It is important to acknowledge and accept that companies regard any award made as a contract between the company and the state. Such awards need to be recognized as commitments between the two parties for as long as the company remains in compliance and for the length of the award. To rescind payments for reasons other than compliance – in other words, breaking the contract - would significantly damage the State's reputation as a reliable partner that fulfils its own contractual obligations.
- Interviews, benchmarking, and other statistics strongly suggest that Maine should have a unifying vision for economic development and innovation that is shared by all state governing bodies. Interviewees in particular suggested that Maine would be well-served by putting forth a bold and assertive plan for growth and then executing on it effectively.
- The infrastructure for implementing such a strategy is at least partially in place. Institutions and companies did cite changes in philosophy subsequent to the 2014 program review suggesting that inter-organizational cooperation is providing for more comprehensive approaches to economic development and innovation assistance.
- The state has difficulty supporting and assisting companies in the 20-100 employee range as currently available support programs do not directly address the most critical needs of companies of this size. These companies have a great need for soft service assistance to fill certain administrative roles that larger companies fill with a dedicated employee or department. For example, one smaller manufacturing company cited a need for advice on how to best handle a worker's compensation case in a situation where contacting the State workers compensation office did not yield any answers.
- There was a repeated suggestion that the state might wish to examine a shift in focus to emphasize and support the disproportionately large role that small and entrepreneurial business plays in the Maine economy.
- Many companies and institutions cited problems finding qualified workforce in the State. Companies expressed concerns about a lack of qualified workforce from manufacturing and operations personnel to high tech engineers to hotel staff. The state should work to develop workforce skills and provide better transferrable skills. Companies cited difficulty in attracting employees with high tech skills to Maine in part because of job security concerns and lack of alternative career opportunities.
- Other states' economic development organizations commonly call Maine companies in attempt to recruit them to move. This is a generally accepted practice in business attraction around the globe. Maine DECD should consider countering these efforts by establishing a team to contact existing Maine companies to see how they are doing and to work towards company retention and growth. DECD staff does perform this role for company retention for Pine Tree Development Zone (PTDZ) recipients, but should broaden the scope of these efforts to include all companies participating in any Maine economic development and R&D programs as well as those outside the incentive programs.

- Institutions (universities and non-profits) and enterprises (such as R&D companies) supporting innovation, research, and development noted that while there is a growing desire to be more aggressive in support of Maine innovation, the state still does not have the embedded relationships between research, business, and finance inherent in innovation clusters/hubs like Route 128 Corridor in MA, the Research Triangle of NC, and Silicon Valley in CA. These relationships will need to be developed over time to ensure a long-term innovation advantage for the state.
- Several of the research institutions and start-up firms interviewed specifically noted that the metrics of R&D programs need to be held to a different timescale than that for other economic development programs. While the goal of any public investment in either research or private enterprise has at some point the goal of a return on investment, the state needs to understand that the timeline on which to realize this return on investment will be longer when research and pure science are involved. As an example, one of the bioscience interviewees noted that the process of moving pharmaceutical or biotech research into a commercial product can easily take 5-10 years or more.

> *"The technology and expertise that will be housed in The Jackson Laboratory's Center for Biometric Analysis will assist researchers and medical professionals in their efforts to improve the prevention, treatment and cures of human disease. Access to competitively awarded, matching funds administered by the Maine Technology Institute, make critically important projects like the Center, possible in Maine."*
>
> Quote from Edison Liu, President and CEO on JAX Center for Biometric Analysis – $10m General Fund Bond Appropriation, administered by MTI

- The DECD Portfolio Survey developed for the 2014 review was used again during this evaluation to obtain information from participating companies on doing business in the State of Maine as well as to collect input values for the Cost Benefit Models (CBM). With much hard work from both DECD and MTI staff, a completed response rate of over 70% was obtained for those included in the survey request.
- The CBM's were constructed for four programs. Business Equipment Tax Reimbursement (BETR), Finance Authority of Maine (FAME) and Maine Technology Institute (MTI) programs were evaluated using an unmodified internal rate of return (IRR) method. The IRR model for PTDZ was similar but included a sensitivity factor keyed to assumption that companies made their decision to locate in Maine based on the "but for" clause in the PTDZ legal agreement. In other words, that if not for the incentive, the project may not have proceeded in Maine.
  The results are as follows (Please note that the rate of return on a 10 year US Treasury Bond is 2.02% as of January 26, 2016):
  - BETR provides a positive IRR of 21.3%.
  - As noted above, PTDZ is a program designed to attract businesses and expansions that would not otherwise locate or expand in Maine. Assuming all projects would not have happened BUT FOR the PTDZ, the program shows a positive IRR of 122.5%.

  - FAME, which operates as a loan insurance program rather than as a credit or incentive, shows a positive IRR of 18.9% for CLI/ERLP. This is somewhat to be expected given the more commercial, fee- and interest-based design of the program.
  - MTI, the state's marquee program for direct investment in innovation, shows a positive IRR of 7.2% for the development loan program.
- All in all, Maine's incentive productivity is similar to that of New Hampshire, Vermont, and Rhode Island.
  - Maine's number of incentive awards makes up 3% of all incentive awards in New England from 2010-2015. Maine's total value of awards represents 5.8% of the total amount awarded in New England. Likewise, Maine's total capital investment related to the incentive programs represents 4.1% of New England's overall incentivized capital investment. Maine's job creation related to incentive programs makes up 3.4% of New England's total creation affected by incentive programs.
  - Connecticut and Massachusetts gave a greater number of incentive awards with higher value of those awards, with resulting greater capital investment and higher job creation. However, Connecticut's programs appear less efficient, spending a higher dollar value in awards with less capital investment realized and fewer jobs created than Massachusetts.
  - These results further underline how programs can drive economic development results, but also accentuate the need to evaluate overall effectiveness and efficiency on a regular basis.
- Maine continues to trail most other US states in measures of incentives transparency. Maine's score puts the state on rank 44th out of 50th. The state has only slightly improved its ranking over the last two years, moving from 45th to the 44th. The change was due to improvements in information disclosed on the number of incentives awarded countered by less information released on capital investment.

Recommendations

The following recommendations cover the state's programs overall. Additional detail on specific programs is contained in the body of this report.

Maine has a constellation of economic development and research & development (R&D) programs that developed organically over time. Each was a response to a perceived need or opportunity. The present analysis has begun the process of evaluating current effectiveness and providing a path forward to more efficient and impactful programs. As with the 2014 report, the recommendations below showcase both long-term strategic suggestions as well as more technical program by program recommendations.

The recommendations are presented below in five separate categories:

- Structure and targets of programs;
- Eligibility and benefits of programs;
- Monitoring and evaluation of incentive programs;
- Summary of Programs and Recommendations;

- General recommendations; and
- Implementation.

This is followed by a discussion of suggested next steps and implementation.

Structure and Targets of Incentive Programs

Public and private sector interviews – coupled with location selection analysis – suggest several recommendations for the structure and targeting of economic development and R&D programs:

A1. Program design should conform to the best practice principles of simplicity, clarity, certainty and objectivity.

A2. The State of Maine should explicitly match performance measurements to the type of assistance provided. The ROI and breakeven point for a direct R&D investment in a university or small business setting will likely be very different to that for a tax credit for a large established company. The MIEAB (Maine Innovation Economy Advisory Board) has in past played a role in establishing and validating the State's R&D efforts. This role needs to be re-examined and perhaps reaffirmed.

> *"… When we began to work with MTI, they became part of our team. They are not just a resource for funding, they are a great group of smart people … to build a strong innovation economy, Maine needs the whole startup eco system…" Rockstep*

A3. The State should examine programs to determine which may be altered or augmented to meet the needs of post start-up companies (20-100 employees) who may still require assistance to best meet their potential.

A4. A common framework could be developed within each program that is clear, transparent, and coherent for investors and recipients. This approach would facilitate coordination and harmonization where possible.

A5. The best economic development programs build on existing strengths and expand these over time. Incentives, grants, and other programs can make this happen. Each must be monitored and evaluated to make sure goals are being met.

A6. There is considerable confusion and probable misapplication of the PTDZ standards for how an employee or position is tracked. This language must be clarified. In addition, all institutions responsible for awarding and administering PTDZ must be given explicit training on the proper application.

A7. Change the requirements for personal equipment tax exemptions in the PTDZ program such that equipment does not need to be operated by specified new employee so long as the equipment benefits the entire company.

A8. Rather than focusing on the 7 specific sectors to grow Maine, it may be more advisable for the State to focus on growing all business sectors and supporting all successful businesses as a strategy for developing a more diversified, resilient economy. Focusing on one industry may not enhance economic sustainability and could instead mean that the state is not using the money for the greatest positive effect.

Eligibility and Benefits of Programs

B1. Any investment incentive program succeeds best in achieving its goals when it is clear, simple and certain, and is performance-based against pre-determined criteria.

B2. All administrative processes should be as simple and clear as possible. It is important to develop incentive frameworks that can be effectively administered and monitored. Simplicity and clarity make compliance possible.

B3. This clarity and transparency should be further applied to description and details on incentive program websites.

Monitoring and Evaluation of Incentive Programs

C1. Economic development and R&D programs require easy to find documentation that includes a clear statement of goals and outcomes, as well as clear evaluation and monitoring procedures. Apart from assessing and measuring the investment incentive regimes, providing results and information also enhances transparency, credibility and public accountability.

C2. Economic development and R&D program administrators (specifically MTI) should follow up with applicants to grant and credit programs when they either do not quality or are not chosen to receive funding or credits. While not all companies will get accepted into all incentive program, the debrief will help ease any frustration and negativity that unsuccessful companies might otherwise associate with that loss.

C3. The state should establish a standardized reporting tool for all economic development and R&D program recipients. Reporting requirements should be clear, coherent and transparent. These should be directly linked to the award and to the program's conditional criteria. Repercussions for non-compliance should be clearly spelled out in program legislation, along with the protocols for such sanctions.

C4. The reporting tool should also provide a means for recipients to provide feedback to the state on their own experiences on the utility and efficacy of the programs. Such measures may include but not be limited to workforce readiness, program applicability and reporting, program utility, and suggestions for improvement.

C5. Once a company receives an incentive award, it is very important that the state continue to honor the award until the award expires as stipulated in the program terms. Any award made is recognized as a contract between the company and the state and needs to be honored as such. Other states have experienced significant backlash and company outmigration in similar situations, such as was the case in New Jersey upon cancellation of payments for the Business Employment Incentive Program (BEIP)[1].

C6. Notwithstanding the statements above, the State should also consider revising the metrics it uses to evaluate the effectiveness of its research programs. Licenses, reputation, jobs, skills, patents, and wage levels may all be factors, but the matrix of measures should reflect the mix of investment desired and an appropriate understanding of their development and business cycle.

[1] See for example http://www.northjersey.com/news/after-companies-create-jobs-nj-cuts-funds-for-tax-breaks-1.1272924?page=all

C7. Institutional collaboration should be facilitated by an Incentive Working Group consisting of members of various government institutions as well as corporate representatives. The Working Group would advise legislators and staff on incentives, discuss specific incentive policies, and could act as ombudsmen addressing concerns of corporate investors in incentive application processes. This Working Group could serve as a coordination, consultation and knowledge center for the State and the stakeholders.

C8. Holders of investment incentives should be held responsible to report within the standard fiscal reporting system, even where "tax holiday" incentives exist. The Maine Revenue Service and DECD must make an explicit effort to coordinate both the provision of incentives and the Monitoring and Evaluation (M&E) process.

C9. A review of incentives and purge of non-compliant companies should take place every year with a full fiscal review completed by an independent non-bias third party on a biannual basis. The independent party should be selected through a bid process and only be open to entities independent of the state government with the resources to complete a truly neutral assessment of the programs.

C10. Programs that require fund matching should present clear guidelines for the types of matches allowed and should be reasonably consistent with federal guidelines where possible.

> *"Matching funds from the Maine Technology Asset Fund will enable the Laboratory to test and validate an innovative concept and state-of-the-art automation equipment at our new facility in Ellsworth. The new vivarium will create jobs in Maine and confirm JAX position as an industry leader for the foreseeable future."*
>
> - Quote from Executive Vice President and COO Charles E. Hewett, Ph.D. on JAX Ellsworth Vivarium Pilot Project - $1.74m grant from MTAF and administered by MTI

C11. The state should establish and ensure fixed program durations to allow for regular independent evaluation, assessing the program's relevance and benefits. This requires the full authority and capacity of the DECD or administering agency to do this and should be implemented in its follow-up strategies.

The above recommendations provide a number of action items that can be implemented over time and provide a better incentive screening, data collection process as well as institutional collaboration among various government departments of the State of Maine.

General Recommendations

In addition to the items above, the following general observations on the effective role for incentives, credits, and similar programs:

D1. Continually Examine and Refine Economic Development and R&D Strategy: It is important to have a coherent strategy for growth, with a clear role for how incentives and similar programs will emphasize comparative advantages of states or compensate for the lack of these comparative advantages. As a result, the strategy for credits, incentives, and R&D assistance

would be in effect an operational expression of the state's strategy for economic sustainability and innovation.

D2. **Continue to Support Large Non-Profit Laboratories**: Private, non-profit research institutions are marquee institutions bolstering Maine's reputation and also draw significant talent to the state. They are economic drivers and help set the tone for a successful R&D climate in the state. The institutions' presence also positively impacts the overall presence of angel, venture capital, and private equity involvement in the State.

D3. **Central Website and/or Guiding Organization:** The state should construct a website which allows the user to search by category and find the assistance programs for which the company is eligible. Once those programs are returned, the site should direct link to the incentive websites and provide full contact information for that group. In addition, an individual fluent with the incentive program should be available by phone to walk companies through this process or to do it for them should they request that level of service.

D4. **Improve Searchability for Information:** Make sure to refer to programs consistently by their correct name. In certain cases, the names for the same programs are similar but not identical. This can make finding the correct program information difficult, especially if the name has changed over time, which may confuse potential incentive applicants. Make sure all programs accurately use metadata keywords and not exclusively use abbreviations so internet search engines can effectively find the program information.

D5. **Improve Accuracy of Program Data Online:** Ensure that programs have clear evaluation criteria, clear program requirements, and clear purge requirements listed on the program administrator's website. This transparency of evaluation procedures was specifically noted as an issue of concern for MTI.

D6. **Develop Central Storage for Reporting Documentation:** To evaluate the incentive programs going forward, it is necessary for the evaluating party to obtain as many recipient lists and as many annual reports from as many incentive programs as possible. Legislative changes should be made to allow the analyst team designated by the State of Maine to have full access to program data as required.

D7. **Program Confidentiality:** Legislative changes should be made to provide for full access to - and evaluation of - program data as required, whether this is performed internally by a program administrator, by a designated state agency, or by an independent evaluator under a confidentiality agreement. There appears to be a particular challenge to obtaining data where MRS administers part of a program for another economic development or R&D program administrator. If this program data is made more directly available, the evaluator will be able to request a much smaller subset of data from companies and obtain more accurate and detailed information for analysis.

D8. **Work Collaboratively Across State Entities:** Organizations, economic development representatives, town and city leaders, and business leaders across Maine should work together for the betterment of the state. In addition to positive collaboration, parties should also avoid speaking negatively certain regions or organizations in conversations with outside companies, consultants, or new organizations. The state and all of its partners should positively showcase both its accomplishments and its forward efforts.

D9. Understand Workforce Recruitment and Retention as an Economic Development Issue: Retaining Maine's talent and attracting new talent is as much as a factor in economic sustainability and innovation as is attracting and fostering businesses. The University of Maine's recent efforts to recruit students from across New England is a useful first step. This should be augmented with other efforts to keep this talent in state.

D10. Expand the Current Opportunity Maine Program: Expanding the current Opportunity Maine program (at a lower credit rate) to include recruited employees with Associate's and Bachelor's degrees who move to the state of Maine, pay taxes in the State of Maine, and work in the State of Maine. As requested by the business community, consider expanding the program to certain Master's and Doctorate degrees for attracted employees with critical skills needed by Maine businesses.

D11. Help Maine Residents Identify Future and Ongoing Career Paths: Students and older transitioning members of the labor force both benefit from better understanding the needs of the modern and emerging economy. Efforts may include working with schools to expose students to non-traditional career paths where there is a great need for trained talent. Likewise, it may be helpful to offer networking among industries with similar skill sets, so that both companies and employees may adapt to changing requirements.

D12. Work with Businesses to Determine Greatest Educational Need: Businesses understand where their greatest talent needs will be over the next few years. The state should work with the businesses to help residents understand where future opportunities will lie, recruit into appropriate education tracks, and train to the current and future employment needs in the State of Maine.

D13. Business Retention: Consider adding a business retention program which would be tasked with both ongoing relationships with Maine companies and immediate retention action when required. Note that this program does not need to reside within DECD and may operate well in a public private partnership setting.

D14. Consolidate Programs as Suggested in the Program Specific Recommendations Section: Consider consolidating like programs administered by the same entity into one larger program. As identified in the section above, many of the tax credit programs are very similar or identical but geared towards a different type of company. These should be consolidated to enhance applicability, impact, and efficiency.

Implementation

As a means for implementing a general recalibration of the State's economic development and research & development, we propose the following measures:

E1. Develop a coordinating team of individuals to include members of the Executive branch, the Legislature, and selected stakeholders to facilitate conversation and action on economic development and research & development activities. The current project's steering committee may act as the core for this team.

E2. Confirm the State's economic development goals and overall strategy, including a plan for coordinating business establishment, growth, retention, and attraction. This plan should

contain a firm understanding of the State's advantages and disadvantages, the profiles of business types that this naturally attracts, and the motivations behind their location decisions. It should also include an explicit identification of the organization which will act as the coordinating entity for economic development activities and investments.

E3. Review the list of consolidation, expansion, reconfiguration, and elimination recommendations made above. Work with the State legislature to make appropriate program changes and also to implement new mechanism for reporting and for information sharing between and among responsible parties within the government of the State of Maine.

E4. Develop (or alter) enabling legislation for the new (or repurposed) Centralized Coordinating Agency for economic development activities and investments. This may take the form of something similar to the model used by Enterprise Florida, or it may be an entirely new concept. It may be created out of an existing organization or it may be new. Regardless, such an organization is recommended.

These four measures should be taken alongside the State's continuing efforts to analyze the effectiveness of economic development and research & development programs in supporting Maine's continued economic sustainability and success. The current program – of which the current report is a component – provides an important periodic opportunity to evaluate results and change tactics based on data and on changing economic need.

Introduction

History of the Science and Technology Plan

The Maine Innovation Economy Advisory Board (MIEAB) was established in 2007 by Title 5, section 12004-I, subsection 6-G to coordinate the State's research and development activities and to foster collaboration among its higher education and nonprofit research institutions and members of the business community. MIEAB replaced the Maine Science and Technology Advisory Committee (MSTAC), which had been established by Executive Order in 2003 and generated the 2005 Science and Technology Plan. The original Science and Technology Plan was produced in 2001 by the Science and Technology Foundation.

Starting in 2010, the advisory board was tasked with developing a Science and Technology Plan beginning in that year and then every five years thereafter. MIEAB also was tasked with submitting yearly Science and Technology Plan updates.

Moving Forward – A New Plan for Evaluation of State Incentives

The Investment Consulting Associates team (Team) was retained by the Maine Department of Economic and Community Development (DECD) to generate a series of action plan reports to examine the state's investments in both economic development and in research & development. Reports in generated in 2014 as well as those due in 2016 and 2018 are and will be based on the format of the 2010 Science and Technology with some modifications and additions. Major changes include:

- Moving definitions, abbreviations, and other general support/detailed sections to the appendices;
- Integrating Economic Development and R&D analysis, findings, and recommendations (recommendation from the 2014 reports); and
- Providing more direct, refined, and implementable action items.

The body of the current report contains summaries, general findings, and action items while the appendices contain the full research behind the concepts presented. This revised format was approved by the Department of Community & Economic Development and is intended to bring focus to:

- What is working and what does not work;
- Examination of competitive advantages, disadvantages, and opportunities;
- What changes need to be made or what actions need to be performed;
- Who will perform future activities; and
- When these activities should be completed.

Vision

Incentives and special economic zones are among the most visible economic development tools available to attract new companies, expansions, or other forms of domestic and foreign direct investment. These tools complement a state or community's innate characteristics to enhance the overall competitiveness of the business climate. Likewise, direct investment on the part of the public sector can help nourish innovation and entrepreneurship. A successful competitive business climate positively contributes to a state's domestic economic development goals through job creation, capital investment, knowledge, and R&D creation with spill-over effects to quality-of-life as a whole.

The benefits of investments are highlighted and frequently cited by business owners, policy makers and politicians, yet less is known about how the benefits of these investments compare either directly or indirectly to the costs of incentives awarded to attract the investment. Greater knowledge of the role and efficiency of incentives to attract investment is required to gain insight into policy effectiveness and the return on investment for taxpayer's money. This is even more urgently required when the situation is viewed against the background of increased public scrutiny of tax expenditures in general and corporate incentives in particular.

Incentives have also increased in apparent importance due to changes in the technology and data used in the location selection process. Due to the widespread availability of location databases and associated tools, answers regarding workforce availability, logistics, infrastructure, and other major location drivers are often largely resolved before companies or their consultants contact local economic development agencies. As a result the remaining open questions – usually incentives and real estate – appear to take on greater importance than perhaps is properly due.

As noted earlier, there is considerable scrutiny on the awarding of incentives and on direct public investment in private enterprise. As a result, there has been considerable debate on the effectiveness of such programs, resulting in three basic perspectives: the incentives have no impact, great impact, or that they are but one component of a holistic location offering.

The academic view normally claims that incentives have little or no effect on investment decisions and location selection behaviors. A more industry-based perspective, however, usually claims that site selection and investment decisions are all about incentives. Between those two extremes is a more mixed and balanced view that claims that incentives do matter, but do so within a larger context of other business-based factors like competitiveness of business environment, industry, business activities of investment, investment motives, availability of labor and resources, access to market, etc.

Ultimately, there is a fairly fixed set of reasons for governments to provide incentives to attract investment:

- To overcome a competitive weakness such as high costs or weak business climate (so-called site-equalization outlays);
- To promote investment in deprived areas by offering incentives;

- To attract particular industries by offering specific incentives;
- To correct for market failures in the provision of capital and risk-taking of companies; and
- To change the image of a location to convey a more pro-business and marketable message.

Broadly, the most successful incentive regimes – as measured by both financial return to the community and success in attracting, retaining, and nurturing economic growth – are those which have a well-coordinated suite of programs that are based in enhancing the region's existing strengths and in addressing target industries' specific business needs. A well-designed incentive regime should also provide tangible benefits for both the company ***and*** for the public sector; such that the community's competitive economic position is enhanced even if the specific deal or project in question does not meet all of its goals.

A Note on Transparency

Governments around the world over are making considerable efforts to ascertain and then demonstrate the true effectiveness of incentives, credit, and direct investment programs. The public sector wants to know what works, what does not, and ideal measures for the return on the investment. This information will provide critical guidance at a time when governments are increasingly mindful of budgets and need to maximize results to their communities and their electorate.

At the same time, companies and the general public alike are seeking clarity into how incentives are awarded and the mutual responsibilities that such programs require from both the granting community and the receiving company. Such transparency allows frank discussion on business needs and how the public sector can help bring in attractive companies. It can also help to build an understanding of the expectations made of companies as they invest in a community.

The study team has worked with many governments to comprehensively evaluate the economic development incentive programs used to attract and retain companies. Each project has been a robust review of costs, benefits, program goals, and outcomes. Important as well are proper institutional alignment, clear eligibility criteria development and monitoring and evaluation mechanisms that are workable. Additionally, the Team has produced a transparency index that uses a global incentives deal database to rank US states on the level of disclosure and the availability of information on how awards are granted.

Lessons learned from both areas are included throughout this and follow-on reports. This will also result in suggested best practices for the State of Maine and for its communities on to how construct and evaluate incentive programs that work effectively.

Analysis and Findings

Findings from Previous Studies

The team reviewed previous reports and documents prepared for the State in an effort to understand incentive and investment history in the State of Maine. One concern echoed by multiple entities is that this series of evaluation reports should be performed differently and to suggest new strategies for enhancing economic development within the State of Maine. While the present report does suggest new action items, many of these items were are also presented in earlier reports, but have not been enacted. Many are still relevant, and the team has included additional specific implementable action items to address these ongoing concerns as well.

There is a recurring suggestion to merge the Science and Technology required Economic Development report with the Research and Development report. The team fully supports this suggestion and has implemented this approach with DECD's concurrence. To include all of the incentive and investment programs in one report allows the reader and policy makers a more comprehensive opportunity to assess the State's efforts towards innovation and economic sustainability. Progress in the R&D field can and should still be analyzed by a slightly different metric than general Economic Development programs. However, placing the R&D section in the same report will not change the analysis method.

Some of the most frequently discussed concerns from previous reports are:

- The need to merge the Economic Development evaluation with ongoing R&D evaluation efforts;
- Address the difficulty of navigating Maine's incentive programs in order to reduce confusion among current and potential business customers;
- Improve current collaboration efforts between DECD and its partners;
- Develop a better, more efficient company reporting mechanism;
- Address reporting requirements - Survey response rate of 30% must be significantly improved;
- Develop a business support portal that can be accessed online and via phone;
- Improve marketing and outreach programs to promote existing programs and initiatives;
- Work with assisted companies to better quantify program impacts;
- Increase per capita income by increasing the skills of Maine workers;
- Reassess the PTDZ program to include specific performance requirements[2];
- Explore methods to increase willingness of local angels to invest in high tech;
- Increase Maine's total R&D/innovation through:
    - Incentivizing the academic world;
    - Continue offering incentives that support R&D/innovation company creation;
    - Creating an attractive environment in Maine that will encourage existing R&D companies to move to Maine;

[2] The current Pine Tree Development Zone program is scheduled to sunset in 2018. While no additional awards will be made under the program after that point, the State will continue to administer the programs for companies who have already received awards until 2028.

- Encouraging knowledge transfer from university settings to companies so products can be commercialized;
- Aligning K-20 education with R&D/innovation goals;
- Considering creation of a statewide patent fund that invests in protecting innovative ideas developed within the State of Maine; and
- Benchmarking Maine against other smaller states (small in population) with more robust R&D programs and modifying incentive programs based on the findings.

Recommendations from the 2014 Reports: Economic Development

The series of reviews in 2014 confirmed several of the same concerns found in earlier analyses, but also provided a series of further suggestions. This series of small and large improvements could enhance both effectiveness and transparency of Maine's Economic Development programs. The most critical of these recommended changes are:

- **Develop Central Storage for Incentive Report Documentation:** Legislative changes should be made to allow the analyst team designated by the State of Maine to have full access to program data as needed.
- **Incentive Contingency Clauses and Reporting:** Checks and balances should be worked into the Legislative Mandate behind each of the incentive programs to allow the programs to perform more successfully and to have the reporting to understand their own success.
- **Incentive Confidentiality:** Legislative changes should be made to provide for full access to and evaluation of program data as needed, whether this performed by a State agency or by a contracted third party under a confidentiality agreement.
- **Central Website and/or Guiding Organization:** The state should construct a website which allows the user to refine by category and find the incentives for which the company is eligible. Once those programs are returned, the site should direct link to the incentive websites and provide full contact information for that group.

With regards to the design of the programs themselves, the State of Maine should:

- Align the State's programs to emphasize the comparative advantages of the state or compensate for the lack of these comparative advantages;
- Develop a clear, transparent, and coherent common framework within each incentive program to facilitate coordination and harmonization where possible;
- Design the investment incentives to conform to good practice principles of simplicity, clarity, certainty, and a minimum of subjective evaluation;
- Tailor the State's programs so that they are more directly aligned to operational requirements of companies and tap into the value chains of companies (this does not imply that these incentives are more complex in terms of their structure);
- Change the application and administration processes to be as simple and as concise as possible – avoid bureaucratic overload while maintaining sufficient rigor in the process (do not develop incentive frameworks that cannot be monitored);

- Provide a clear mechanism and expectation for transparency, reporting, evaluation and monitoring;
- Develop means for full costing and reporting of incentives annually, with an analysis of the cost of the fiscal incentive relative to the benefits arising from the investment (such as employment, sales, jobs etc.);
- Ensure reporting requirements monitor obligations of the company to receive incentives are included in the incentives law;
- Ensure clawbacks are clearly enshrined in incentives law, as well as the protocols for applying the clawbacks and sanctions if the company does not comply;
- Write reporting requirements in a clear, coherent and transparent manner and link to the incentives being awarded and the conditionality criteria; and
- Form an Incentive Working Group consisting of members of various government institutions and corporate representatives whose mission is to advise the state on incentive policy modifications and the concerns of corporate investors in the incentive application process.

Findings from the 2014 Reports: Research and Development

In addition to the items above, the following recommendations were made specifically to enhance both the reporting and the function of the Research & Development programs offered by the State of Maine.

- Consider revising Maine's primary R&D programs with the following enhancements featured in competitive states:
    1. Include donations to State research organizations as qualified R&D expenses;
    2. Align programs to target industry sectors for State (MTI);
    3. Allow excess credits to be sold back to the State for a portion of their value; and
    4. Link directly to primary industry attraction program – Pine Tree Development Zone.
- Continue to seek ways to fill the funding gap between early stage research and full commercialization for small companies. This may take the form of adjustments to the FAME program, for example.
- While coaching should be provided to companies in developing their business and financing plans, care should be taken to also evaluate the business viability of both the product/service/technology and of the prospective entrepreneur and business team.
- Some business cases from applicants contained over-optimistic projections of results. In future situations, lack of realism in ex-ante investment projections must result in a formal warning. In case of two formal warnings, there must be a legal provision to revoke the incentive certification.
- Develop a clear, transparent, and coherent common framework within each program to facilitate coordination and harmonization where possible – both with other research programs and within the broader economic development framework.
- Design the research investment programs to conform to good practice principles of simplicity, clarity, certainty, and a minimum of subjective evaluation.
- Change the application and administration processes to be as simple and as concise as possible – avoid bureaucratic overload while maintaining sufficient rigor in the process.

- Provide a clear mechanism and expectation for transparency, reporting, evaluation and monitoring.
- Develop means for evaluative each award annually, with an analysis of the cost of the fiscal incentive relative to the benefits arising from the investment (such as knowledge creation, capital investment, employment, sales, jobs, etc.).
- Write reporting requirements in a clear, coherent and transparent manner and link to the incentives being awarded and the conditionality criteria.

Public Sector and Private Company Interviews

The Team has conducted interviews with 50 different companies and organizations, stakeholders, and policy makers in the State of Maine. Interviews were conducted to record first-hand experience with Maine's incentive programs, to gain insight into what appears to work, and to collect perceptions on areas for improvement. The lists of interviewees separated into two categories:

- Those in the public realm who administered the programs, and
- Those in the private realm representing companies in the market.

Most of the companies on the interview list are also incentive recipients. Please see Appendix D for the complete write-up and list of the public sector entities interviewed for this report.

Public Sector Interviews

Interviews with elected officials, administrators, and other public sector individuals provide insight into the details of the numerous incentive programs and their importance to the state and to industries. The Team also obtained incentive recipient lists and/or annual reports from these contacts. Public sector interviewees were asked to identify any difficulties they or the companies face and make any suggestions that could improve business within the State of Maine.

The interviews performed in this year's review built upon the knowledge, insight, and experience gained from reviewing the state's programs in 2013. In addition to an overall assessment of the programs and of how the responsible agencies were administering the programs, the project team also asked questions to evaluate how different programs and agencies were working together collaboratively towards either solving problems by the private sector and/or working together to enhance Maine's economic competitiveness, innovation, and sustainability.

Overall

Some of the most significant and frequently discussed suggestions from the public sector include:

- Simplify the incentives offered so an incoming company can understand the eligible benefits;
- Eliminate unused programs and use resources in a more flexible manner across more popular programs;
- Provide more direct support to small business. Perhaps examine a shift in focus to emphasize the disproportionate role that small and entrepreneurial business plays in the Maine economy;
- Develop workforce skills and provide better transferrable skills;

- Provide earlier education for students about career paths where they will find immediate employment out of college;
- Provide viable, Maine-based career options to young residents as they start their careers;
- Additionally, continue to invest in education that will provide talents for both "thinking" (traditional academics) and "doing" (application, experimental, and vocational skills);
- Measure company success on more than employment growth, perhaps by adding measures for wealth generation and capital investment;
- Standardize terms so that policy makers and companies understand similarly in order to complications (i.e., growth means jobs to the public sector but means capital to the private sector);
- Provide Portland with options to spur Economic Development and R&D; and
- Continue tax exemptions for Maine Manufacturing.

Operating Updates

Several of the departments and agencies interviewed noted that their operating philosophy subsequent to the 2013 review has not necessarily been to operate independently in providing one program. Instead, most noted that they are most effective when working collaboratively with other agencies to address client companies' needs or to address community concerns. In this way, they can:

- Provide business-based solutions to business needs (rather than simply applying the prescriptions of a particular program);
- Leveraging multiple programs to solve a particular problem or to create a stronger opportunity; and
- More proactively and strategically provide for innovation, entrepreneurship and economic competitiveness.

As one example, MTI funding is often coupled with borrowing assistance through FAME. In this way, innovative entrepreneur companies are given both the capital required and the technical guidance needed to vet concepts and gain financial backing. This is also the case for federal Economic Development Administration and Rural Development funds. CDBG can also improve possibilities for leveraging municipal TIF, as can the possibility of using BETI property. Likewise, state level programs such as MEP and PTAC see significant cross-pollination.

FAME also noted that the organization has altered its operating philosophy somewhat. Recognizing that the institution is often called in when commercial financing is not appropriate or available, FAME has changed it underwriting protocols to be more proactive about finding and funding companies and projects that will lift others.

The public sector entities generally reported an increase in activity as compared to the previous examination period. Part of this was due to an uncharacteristic lack of activity through 2011 due to the recession. Activity has only just recovered and grown in the current analysis period.

Some programs noted significant initiatives to reach out to program participants to gather data about both usage as well as their interactions with the organization. As a response to just such an initiative, MTI has begun initiatives to address what was perceived as prescriptive, cumbersome administrative burdens.

Identified Needs

The organizations responsible for the programs were also asked if they had any current or prospective needs that were not being met by current programs. They were asked to identify improvements or new services that would be helpful.

The state's film office suggested that while the program has been successful in luring activity to the state, a small incentive pool for independent productions (films with budgets of $3-5 million) would be helpful in attracting this level of production.

MEP noted that its efforts for training and workforce development could be enhanced by additional cooperative efforts with employers to secure modern machinery for training. Machines have changed significantly in the past 10-15 years. As the US sees more manufacturing opportunity, there is an ongoing need to produce workers with talents in operating sophisticated, computerized machining and milling equipment. This is complicated by the fact that these expensive machines may now just have a lifecycle of a few years rather than a generation or two (as had previously been the case). Training centers do not have the critical mass to be able to capitalize the machines, but it may be possible and advantageous to find means to provide cooperative training with local manufacturers to provide access to advanced machinery.

Economic Development Interviews

Maine companies participating in the programs were interviewed gather information on the business climate in the State and to understand how the incentive programs are working. The companies selected were from a wide range of industries and ranged in size from one person start-ups through companies with hundreds of employees. Interviews were requested from 53 companies as part of this effort and a total of 32 interviews were performed based on availability of company staff. 10 of the companies were responsive but unable to accommodate due to scheduling difficulties.

Overwhelmingly, companies reported that the incentive programs are effective in allowing companies to grow faster than they otherwise would have and, in some cases, sustain the company through difficult business periods. This finding is somewhat tempered by the frustration that companies experienced while trying to apply for, complete reporting for, and understand the state offered incentive programs.

Companies also suggested that the state should have an overall vision for moving forward that is shared by all state governing bodies. Too often, Maine officials, residents and companies are positive about their own communities but express negative views about other aspects of their state. It is more beneficial to say "I am worried about ____ County but don't know how to help" than to say "they have worked hard but nothing will ever come of ____ County."

More generally, companies and individuals expressed significant negative opinions about doing business in the state of Maine. For example, companies note that the workers compensation rules are currently structured to more heavily tax new employees in the first 6 months than is the case in surrounding states. They also feel taxes are high overall and the incentive system is complicated and frustrating. Companies in urban areas are negative about the rural areas, companies in rural areas feel left out. Most companies regardless of their location think of Maine as having more obstacles to doing business than other states. State workers need to feel more positive and less helpless about their work and encourage others to feel the same. In particular, staff should be advised to improve collaboration, positive vision, and business collaboration.

All individuals noted the high quality of life in Maine. Some moved out for college or after college, but many moved back once they established their career and started with kids. They wanted to be back with family and raise their kids in a safe environment where the kids can play outside without fear.

Workforce and Education

Just about every company interview sited a problem finding qualified workforce in the State. For some, low wages may be an issue, but not for most. Companies expressed concerns about a lack of qualified workforce from manufacturing and operations personnel to high tech engineers to hotel staff (in certain locations).

Companies from most industries from high tech to manufacturing cited trouble finding talent (pre-educated or untrained) to fill the positions available. Southern Maine is perceived to provide better access to workforce, but still does not provide for all workforce needs. One interviewee suggested that companies are much less interested in training their workforce and would prefer to hire people who are already completely trained. However, it was also suggested that some companies are having trouble hiring workers who even show up on time and who have appropriate reading and writing skills. Generally the workforce does not become reliable until they are old enough to have family responsibilities. Many companies noted that they would be growing faster if they had better access to potential employees.

Some companies are taking the innovative step of sponsoring scholarships at the local Community Colleges for certain career paths, participating in technology challenges at the High School and College level, hiring interns, or providing tours of their facility for students and parents. All of these steps are designed to promote interest and understanding in career paths the students may not have considered.

Recruiting workforce for skills not present in Maine is very difficult north of Portland, but is seen as being somewhat easier in the Portland area. One issue cited is that recruited employees compare salaries against what they can make in an area with a much higher cost of living. For example, it is estimated to be approximately 40% cheaper to live in Portland rather than in Boston and this is reflected in salaries. But a worker from the Boston area only sees an offering salary of 40% less than they would make in Boston without realizing the reduced cost of living. This misperception only gets magnified as one looks at more rural areas in Maine.

Companies cited difficulty in attracting employees with high tech skills to Maine in part because of job security concerns. They suggested as an example that if a high tech company on Rt 128 in Massachusetts fails or downsizes, the employee has opportunities for another job in the same vicinity since it is a "Tech Hub" for high tech companies. This is not the case in Maine as the state does not have the same overall concentration of tech companies and associated career opportunities. However, if Portland or Brunswick were to become the focus for an incubator (similar to the Cambridge Innovation Center) or a concentrated area for high tech jobs (a tech hub), this perception could be challenged and reversed.

Interviewees suggested that young people may choose to work in Portland rather than in nearby communities or rural Maine because of the easy access to amenities during the day and after work. For example, one company chose to stay in a more expensive space in downtown Portland because the employees did not want to move 20 minutes away to an industrial park and loose easy access to all Portland has to offer.

Interviewees also suggested that Maine should make efforts to retain students after they graduate from Maine universities. The state does offer the Opportunity Maine program, which provides a tax credit for students that live in Maine, graduate with a bachelor's degree or an associate's degree from a Maine university, and continue to live and work in the state. This is a very important tool in keeping young Maine students in the state, but it is not marketed well enough, and awareness of the program is low. A marketing campaign to inform high school students, educators, and parents about this program would be helpful.

The state should also consider expanding the Opportunity Maine program (or develop a variation of it) to help with employee attraction. One option could, for example, allow recruited employees 50% to 100% of the tax credit offered in the regular Opportunity Maine program as long as they are making payments on student loans and continue to live and work in the State of Maine. If companies still report difficulties hiring employees for positions that require Masters or Doctorate degrees, perhaps the state could consider expanding the program to include targeted Master's and Doctorate degrees.

Incentive Program Observations

Due to the listings available, interviewees for the state's incentive programs were mostly recipients of PTDZ and MTI awards. However, many companies did take advantage of other programs and those comments are captured in this section.

All companies noted that the state incentive programs helped them grow and expand. Several companies shared in confidence how the incentive programs actually sustained their company as they moved through difficult business periods. They would have closed their doors without access to the state funds but are now prospering, many jobs were saved, and the companies are very enthusiastic supporters of Maine's incentive programs.

Many companies found the incentive process complicated and stated that it was very hard to understand what would work for the company. They also suggested that the incentive programs should be explicitly designed to work together in a comprehensive way. Several companies indicated it would

be highly preferable to use a single reporting tool for all programs. There is also a need for marketing the available programs to companies in need. Many companies stated that others in their networks are not aware of the State's incentive programs.

The Pine Tree Development Zone (PTDZ) program overall helped all of the companies once they met the employment requirements and were able to take advantage of the incentive. However, many did not understand the program well during the application process. In some smaller companies, this led to frustration due to misunderstanding or inability to use the program due to changes in the general economy beyond their control. This confusion and rigidity leads to considerable and possibly avoidable negative feedback about the PTDZ program.

The restrictions on the PTDZ do not allow companies to effectively develop and promote staff within their organizations, favoring instead hiring from outside. For example, a company that hires an entry level individual and promotes them a year later, that individual become ineligible for reporting under the program. If the company hires a new individual into the vacated position, the company still is only able to report one employee rather than the two that were actually hired. Companies have asked to track the hired individuals themselves rather than the positions to fulfill the reporting requirements for the PTDZ program.

Many companies noted the PTDZ helped them make connections through referrals to other advisors or other incentive programs. However, it can still be difficult to achieve these interactions as networking is based on a good connection with the DECD representative and information known to a single point of contact. Some companies have had great success with this setup and others have not.

Several companies utilized FAME loans or loan guarantees. They stated the interaction was positive and the process worked as expected. A couple companies noted that FAME by its very nature should support more risky investments than are generally allowed in the SBA program. Otherwise FAME provides little additional value beyond what is already offered at the federal level for the loan side of the incentive programs. The loan guarantees were used by a few companies and those companies were happy with the process.

Companies suggested forming a new program implemented which encourages companies from Maine to buy local made Maine products instead of out-of-state suppliers where an equivalent product exists. Companies would also like to see a new program implemented that assists companies (specifically in the 20-100 employee range) with workers compensation guidance, healthcare, audits, reporting, energy cost, etc. Companies also suggested adding a program for loan forgiveness for out of state employees that move to Maine and work for a number of years.

Business Attraction and Retention

Companies require some degree of stability and predictability in regulation to be able to plan effectively. Several companies cited concerns about making business decisions because of the instability of the incentive programs and the current debates in the State Capitol. They see the situation in Augusta as extremely uncertain and they are concerned about making business decisions to stay or expand in the state while the uncertainty is there.

The state has had difficulty supporting companies in the 20-100 people range due to a lack of applicable supports. As these mid-sized companies grow, they often need guidance and support services of a softer nature rather than simply financial. For example, a company might need assistance navigating workers comp, assistance with healthcare decisions as they grow from 49 to 51 employees, marketing and branding guidance, grant writing assistance, and the like. Many of these companies asked the interview team to connect them to these services if they exist within the state programs.

Other states' economic development organizations have directly called on Maine companies in attempt to recruit them to move. Maine DECD may wish to consider establishing a team to contact existing Maine companies to see how they are doing and to work towards company retention and growth. The simple gesture of reaching out to the company may help to identify and address problems – as well as identify opportunities – early, make the companies feel welcome, appreciated by the state, and more willing to further their investments in Maine.

Energy costs are a huge concern and voiced in many places even where cheap natural gas is available. Companies suggested that the state can help by working with electric companies to provide companies fair electricity rates rather than inflated "on demand" rates.

Additional General Comments

There continues to be a perception of manufacturing as a "dirty" profession when in fact the sector provides considerable opportunity and career challenges for talented individuals. Job availability does fluctuate with the economy, but this is the case across most industry sectors, including white collar sectors. Interviewees noted that there is a profound need to expose students, parents, guidance councilors, and teachers at the high school level to opportunities in manufacturing and production jobs, blue collar jobs, and certification programs which may be a better fit for some students. They further suggested considering offering assistance for internship programs, mechanical building challenges, etc. Additionally, many manufacturing processes have migrated to computers and high tech equipment which need skilled, trained operators. Access to this equipment and talent has given these more traditional companies an edge over competitors.

Research and Development Interviews

General findings from the Economic Development programs also have applicability to the state's Research and Development programs. This is in part due to the fact that many companies and institutions are working with both types of programs. However, it is also due to the fact that some general observations and suggestions apply to the full suite of Maine's programs, regardless of the coordinating entity or the purpose of the program.

General Research and Development Observations

As in the prior evaluation period, interviewees noted that competition for new, innovative companies is not necessarily with another state. Instead, the challenges involve having a business case that receive financing. The institutions supporting innovation, research, and development noted that while there is a growing desire to be more aggressive in support of Maine innovation, the state still does not have the embedded relationships between research, business, and finance that other innovation hubs like

Cambridge or the Bay Area have. As a result, it is still struggle to move from idea to development to business plan to commercial viability and a sustainable business.

Current efforts have focused on building more public private partnerships to leverage both state and university research into additional support in order to coach, develop the networks, and otherwise help nascent innovation companies through to financial self-sufficiency. Efforts have included finding research space to be used, developing business accelerator partnerships, and attempting to develop means for evaluating ideas quickly through a "fail cheap/fail fast" approach to better concentrate both efforts and resources.

University interviewees also noted the efforts underway to engage individuals from Maine who have prior venture capital experience. These individuals are better equipped to provide sage wisdom, mentoring, and when the time comes, direction to the forms of capital and financing best suited to the concepts at hand. Groups such as Maine Angels and Maine Ventures help fulfill this role and augment MTI's efforts to address the mentoring and financing need.

R&D Funding Program Review

Several of the research institutions and start-up firms interviewed specifically noted that the metrics of research and development programs need to be held to a different timescale than that for other economic development programs. While the goal of any public investment in either research or private enterprise has at some point the goal of a return on investment, the state needs to understand that the timeline on which to realize this return on investment will be longer when research and pure science are involved. As an example, one of the bioscience interviewees noted that the process of moving pharmaceutical or biotech research into a commercial product can easily take 5-10 years or more.

If the state does wish to include investment in or assistance to research and development of this kind as a financing priority, it should be prepared to accept timeframes of this length and to develop metrics which are scaled to this reality.

Universities, Colleges and Workforce

In addition to the agencies administering the various direct credit, grant and other economic development and R&D programs, our team also spoke with representatives from higher education in Maine, both at the community college and state university levels.

Community and Technical College

In addition to its traditional associate's degree role, the Maine Community College system is working to develop more capacity in non-credit side for training. In this situation, the "incentive" is not a tax credit, and not a direct payment to a company. Instead payment comes to the school to provide the training. Funding may come through other programs found by MEP or DECD.

The community college system is also working to help the current workforce adapt to new challenges and opportunities. While this includes training such as language and technical training, it also involves changes in the relationship between the community colleges and the business community. For example, the community college system has created a system level foundation supported by the business

community. There is a considerable amount of discussion right now into industry certifications. Several companies have stepped forward to make facilities, equipment and funding available but more must be done to make these efforts self-sustaining.

University Education

The University of Maine system has been an active partner in the state's R&D and innovation system, and has previously served on the advisory board for these evaluation reports. As such, the university system has insight into the state's economic needs, opportunities, and the role that the University may play.

Demographics are impacting the overall student makeup at the university, and will soon be doing so in the broader workforce. The Millennial generation (those born between the early 1980's and early 2000's) have mostly already moved through their college ages. As a result of this population bubble having moved through, the graduating senior population is beginning to decline and will eventually exacerbate existing talent shortages.

The University of Maine System is itself working to better differentiate the roles of its different campuses across the state. The effort to coordinate efforts across the state's seven campuses is intended to provide better coordination across the system itself. There are some concerns ongoing about the balance among the individual campuses regarding course offerings and capital expenditure planning.

In understanding that the role of the university system, officials noted that the three parties in the education equation - education, students, and business – have historically had difficulty coordinating. Businesses often state that education isn't offering the skills needed in the current economy; however students are the customers of the education system. Unless and until business educates the customer (student) on what the needs are, they will not seek and buy the higher education offering.

R&D Investment

There is concern as well as support for MTI R&D investments, directly on the issue of the perceived and real uncertainties surrounding investments in early stage companies. Some stated a concern that MTI makes investment choices that are too risky for state funds, while others hold the opposite view and believe that MTI should make the risky decisions that others can't make directly.

Still, all agree that the review process for awards should remain clear and transparent. It has also been suggested that MTI should follow up with applicants who do not receive an award and let them know why they did not receive it.

Individuals participating in MTI programs expressed more comfort in collaboration within their industry and within Maine than those not participating. Specifically, companies cited the MTI Top Gun and entrepreneurial access programs as invaluable to small tech companies. Many companies were very happy with the personal effort MTI employees invested to help the growing company. The assistance goes way beyond simple dollars and cents. One company even noted that MTI became like a family to them.

Additional interview details may be found in Appendix D.

DECD Portfolio Survey

The survey was sent to PTDZ and MTI participants in the autumn of 2015. The purpose of the survey was both to collect information necessary for the evaluation of the programs and also to collect insights from participants on the usefulness and possible improvement of the state's offerings. The analysis of the survey findings is based on data derided from the DECD survey as well as results submitted outside the survey instrument by program administrators.

As a result of discussions with MTI and DECD, the survey was deadline was extended from October 31st through mid-November. It was closed on a rolling basis as we commence the CBA and survey analysis for the report. We received just over a 70% response rate from both MTI and DECD companies after an extensive outreach effort. The company representatives in the DECD offices took on most of the outreach efforts to encourage PTDZ companies to complete the survey. MTI assigned a staff member to provide the same outreach efforts to their own companies. ICA answered specific questions, helped those having difficulty receiving the survey link, and handled general email requests.

The survey was divided into two parts to prioritize information delivery (see Appendix E for the questions included in the survey):

- Part 1 included questions on the actual incentive benefits and company characteristics required for the CBAs (please see Appendix H); and
- Part 2 included additional questions on characteristics of the beneficiaries and the quality of incentive support and services provided by the State of Maine (e.g. DECD, FAME, MRS and MTI) (Please see Appendix F).

251 companies and organizations opened and actually started the survey. Out of the 251 respondents, 209 (or 82.0%) completed the first section of the survey. A total of 196 (or 76.9%) respondents completed both parts of the survey. This implies a total of 55 (or 21.6%) respondents did not complete the survey, of which 42 (or 16.0%) did not complete either part of the survey.

The following table shows the final response rates at the end of January just prior to the completion of this report.

Survey sample characteristic

Companies and Organizations Invited to Take The Survey[3]	Started the Survey	Complete		Partial and Completed	
		PTDZ	MTI	PTDZ	MTI
294	246	151 (71.9%)	59 (70.2%)	174 (82.8%)	72 (85.7%)

Source: Own calculations and survey

Please see Appendix F for the full survey results.

[3] This table does not include responses for ETIF only companies or those removed because they are active PTDZ companies that have never actually used the incentive.

Annual Report Review Findings

Annual reports were retrieved from state departments' (e.g. DECD and Revenue Services) and organizations' (e.g. FAME, DECD and MTI) websites. As opposed to the previous 2014 review, a separate data request was not submitted this year as concerns about violating confidentiality clauses in the various programs prohibited the analysis team from obtaining enough information for comparison purposes. No progress was made in the intervening time that would allow our team to access confidential data denied in the 2014 review.

In order to consistently evaluate the extent to which annual reports are produced as well as the traceability of incentive programs, our team designed a template consisting of various elements that capture ease of access and quality of content. For each program, we evaluated the following questions:

1. **Availability of Annual Reports**
    - Does it (i.e. the program website) include annual reports in a location that you can readily find?
2. **Traceability**
    - Is there a program website you can find with an internet search?
3. **Content**
    - Does it include application process and forms online?
    - What are the target sectors of the program?
    - Are the benefits of the program clearly stated?
    - Are the eligibility requirements posted online and clear?
    - Are there any caps on benefits?
    - Open enrollment or periodic?
4. **Non-Compliance**
    - Does the program claim to purge non-compliant companies?

The results for each of the questions have been further analyzed and generalized below.

Availability of Annual Reports

In essence, programs that produced annual reports in 2013 continued to do so for 2014 and 2015. Some of the reports included useful but basic data on incentive recipients, budgets allocated, jobs created and jobs retained (e.g. FAME) whilst some of them disclosed little information regarding the incentives that had been distributed. MTI, in particular, does not include specific numbers for many of their programs, however, they worked with us to give us the information we needed for analysis purposes. For some incentive administrators, data is available through annual reports which include data on not only the incentive programs but also other expenditures. For instance, for incentive programs registered by the MRS, the Maine State Tax Expenditure Report published by the MRS Department of Administrative and Financial Services provides useful data on its incentive programs but is incorporated in a wider report that covers all tax expenditures on income tax reimbursements, property tax reimbursements and sales and excise tax exemptions.

Traceability

Given the data difficulties, we focused on reviewing the tractability, ease of access and program-related information. One of the main concerns is the fact that programs and organizations registering incentive programs are often difficult to trace online. This can be related to the name of the incentive programs – which may be too specific and need to be generalized – as well as the abbreviation of the administrative authorities. For instance, the MTI website could not be found by googling the commonly recognized abbreviation MTI. The user instead must google Maine Technology Institute to reach the website. This could easily be remedied by changing the metadata keywords in the website.

Content

In terms of the content, most websites clearly listed targets, eligibility requirements and incentive benefits. These concepts are interrelated to a certain extent and should always be listed together. After all, even within incentive programs, the incentive benefits may be directly related with certain eligibility criteria. Such eligibility criteria usually relate to certain target industries as well as investment thresholds and are contingent upon the type of incentive. For instance, grants may have different structures where eligibility criteria are linked with certain benefits (i.e. amount of cash grant or tax credit) than loans (i.e. rates and loan amounts). Clearly, due to their specific nature, technical incentives usually do not impose strict eligibility criteria.

One element where incentive programs generally lack information relates the fact whether incentive benefits are capped. In certain cases, the potential incentive recipients' needs to look beyond the website information and comb through documents and laws to find out for which exact benefits its investment may qualify. This implies that, if potential investors do not look further than the website and/or have the resources and capability to study and understand the particular incentive legislation, incentive applicants may have different expectations of the incentive programs and benefits than they are actually eligible for. To solve this issue, exceptions, thresholds and caps that may apply to the incentive should be clearly listed on the website. This relates not only to the amount of incentives but also to the duration.

In addition, one element that frequently is overlooked is whether an (annual) application deadline applies. Some programs do explicitly mention application deadlines and whether the application to the incentive program is year-round open or only periodical accessible. Again, to avoid any confusion among potential incentive recipients, the website should clearly list whether applications can be submitted on a year-round or periodic basis.

In general, FAME had the best program traceability and content, listing all the critical details of the programs with applications in a structured, comprehensive, understandable and consistent manner (i.e. eligibility, benefits, types, terms, guarantees, fees, application process, application documents and application requirements). The FAME website and individual programs were easy to find with both a google search and from the homepage. MTI programs had the clearest information to accompany the online applications. For the most part, objectives, application procedures, and deadlines were clearly stated. The application review process was also clearly stated, however, their review process is in practice very labor-intensive and complicated. Nevertheless, for potential investors, it is critical to

understand the application review process in order to anticipate on and comply with (future) requirements.

Non-Compliance

Specific attention should be paid to non-compliance of incentive recipients (i.e. recipients that to not meet certain requirements agreed on prior to awarding the incentive). In general, there is little to no information describing any purge practices for non-compliant incentive recipients. Being a financial institution, non-compliance for FAME by definition means expulsion from the program. However, it is not as straightforward for the other programs. For example, conversations with the PTDZ administrators found that PTDZ does purge non-compliant companies. However, this is not stated on the program website. It is important to describe purge circumstances and practices to purge non-compliant recipients so companies have the chance to comply with the requirements and are well informed regarding the consequences of not complying with requirements and eligibility criteria throughout the period in which the incentive is awarded and the immediate time afterwards (some incentive programs require maintaining certain thresholds after the incentive has been fully distributed). Please not that just posting the requirements is insufficient. There needs to be dedicated legislation behind the requirements to allow the program to purge non-compliant companies.

General

Both FAME's and MTI's website include elements necessary for best practice incentive program websites and which thus may function as guides to other Maine incentive administrators as they look to improve their own program's traceability, program descriptions, eligibility criteria and benefits. In general, program administrators need to focus on changes that will allow the yellow cells in the charts below to be green. Many of these changes are easily implemented with the assistance of the entity's web designer. Some of the changes recommended would take more effort. For example, posting an annual report is simple, but generating a report for a program that has not historically published a report is more difficult.

Cost Benefit Analysis

Many US States make use of a comprehensive set of fiscal and financial incentives to attract investment, and increasingly, legislation is forcing State Governments to conduct periodic Cost Benefit Assessments (CBAs) in order to evaluate the effectiveness of their programs. This review's effectiveness is, in essence, the outcome of a formula that incorporates the extent to which programs are being utilized and what economic development benefits are welcomed at which financial costs.

For smaller (lower funding level) incentive programs, the most common means for evaluating costs and benefits is to assess the additional number of jobs created or retained as well as the amount of attracted capital investments. The cost of the program equals the taxes foregone or the annual amount of public money that has been awarded in the form of a grant or subsidy. This static approach is appropriate when there is little additional documentation or data availability of the specific program aside from these parameters. In addition, from a resource perspective, a straightforward Cost Benefit Analysis (CBA) approach is justified for less critical programs, especially when different programs must be evaluated simultaneously.

If the incentive program is more substantial and involves a larger group of certified companies, it is preferable to measure the direct and indirect costs and benefits by means of an Internal Rate of Return (IRR) simulation technique. The IRR is a measurement used in capital budget planning to estimate the profitability of potential or existing investments. In this case, the IRR measures the interrelated economic and financial impacts of the aggregated group of firms benefitting from the economic development or R&D program.

The additional personal income taxes and additional dividends taxes resulting from more jobs or higher dividends, as well as the additional corporate income taxes and sales taxes though increased local sales are direct benefits for the State of Maine show how all these economic developments interrelate. This type of financial modeling incorporates the dynamic economic effects over time (i.e. a 3 to 5 year period) and uses a more holistic approach towards the economic development indicators.

Consider for instance the Pine Tree Development Zone (PTDZ) program, which offers corporate income tax reductions, sales tax exemptions and Employment Tax Increment Financing (ETIF) Benefits. The incentive program impacts the overall operating and fiscal costs, thus, subsequently the aggregated profitability. Additional profits are re-invested or partly paid in the form of dividends to Maine residents. The amount that is paid in dividends also is not "lost" but rather increases the net disposable income to be spent on local products and services which in turn creates more local demand for product. This is the indirect or multiplier benefit. The State of Maine also recognizes direct benefits from additional personal income taxes, additional tax dividends (resulting from more jobs or higher dividends), additional corporate income taxes, and additional sales taxes (through increased local sales).

Similarly from a cost perspective, it is necessary to assess what would have happened to Maine's economy if the specific incentive program was not provided at all. Economists refer to these as "counterfactual arguments". In other words, what would have been the direct and indirect financial consequences when, for instance, the number of retained jobs had to be deducted from the total headcount as a result of abandoning this program? How would this loss in employment impacted the total labor costs, total sales revenues, and profitability, resulting in lower personal income taxes, sales taxes and corporate income taxes? Does this loss in tax revenues compensate for not having to spend public means to finance this incentive program?

Four programs are included in this comprehensive Cost Benefit Analysis:

- Business Equipment Tax Reimbursement (BETR);
- Pine Tree Development Zone (PTDZ);
- MTI Development Loans (DL); and
- FAME Commercial Loan Insurance (CLI) together with Economy Recovery Loan Program (ERLP).

The methodology and results are outlined in the next sections.

Results of the Cost Benefit Assessment

The Internal Rate of Return (IRR) approach allows for a straightforward and consistent comparison of the positive (or negative) multiplier effects for Maine's economy over an extended period of time. In

this case, this analysis shows the financial feasibility by calculating the amount of dollars the State of Maine can expect in the form of additional tax returns for each invested dollar that was spent on the program over a period of three years. The financial amounts in previous years have been discounted at a rate of 5% (in order to adjust for inflation and opportunity cost) to present the current values (i.e. 2015).

The financial effects of *not* spending public funds have also been incorporated. Negative effects incur when companies are not able to retain their jobs as a result of not providing or abandoning the program. Pro rata, the aggregated total sales output, total taxable income, and total amount of spendable income will be lower. Our analysis calculates the direct financial tax returns in the situation in which companies enjoy an incentive benefit versus a situation in which the same incentive program was not offered.

Input from Survey and Annual Report

Various sources have been used to augment the analysis and assist in the development of the CBAs. The two most important primary sources are annual reports of the respective programs and a survey of companies receiving state aid. The survey contained specific questions to identify the direct and indirect benefits that can be calculated and attributed to the specific programs. In addition, the survey helped to identify important company-specific indicators such as, amongst others, total sales revenues, cost to sales, salary costs, headcount, ownership structure and geographical distribution of shareholders and sales. The averages per company were then multiplied with the actual number of companies certified for a specific incentive program to get an understanding of the aggregated totals and calculate the direct and indirect benefits of the incentive programs.

Other sources were consulted to validate important tax rates, such as corporate income tax, personal income tax, sales taxes as well as payroll and dividends tax. At federal level, the Internal Revenue Service (IRS) provided corporate and personal income tax rates.

Labor cost statistics for different job functions in the State of Maine were sourced from the Bureau of Labor Statistics (BLS). Finally, business literature and trusted media sources such as Bloomberg, the Wall Street Journal and others were consulted to verify commercial loan rates and other underlying financial ratios.

Cost Benefit Model Findings – Economic Development Programs

The direct benefits and costs (in the form of reduced tax revenues) for the State of Maine are differentiated into the following direct tax revenues:

- Corporate income tax;
- Personal income tax;
- Dividends tax;
- Sales tax;
- Payroll tax; and
- Property Tax (BETR only).

A positive IRR suggests that the program is a financially viable investment for the State. However, incentive programs with negative IRR may still be of critically important to the economy of Maine, albeit from a socio-economic or community welfare perspective. Important indirect benefits in the form of additional capital investment, increased exports, higher demand for local goods and services have been calculated in the CBA of each incentive program. The appendix also provides further details with regards to the specific methodologies, sources, assumptions and cash flow calculations. The next sections strictly concentrate on the direct financial revenues (or losses) and of the four programs.

Business Equipment Tax Reimbursement - MRS

The Business Equipment Tax Reimbursement (BETR) program is designed to encourage new capital investment in Maine and provides a reimbursement of property taxes paid on qualified tangible, personal, depreciable property held for business use, and first placed into service in Maine after April 1, 1995[4]. A reimbursement of 100% of property taxes paid is limited to 12 years. After 12 years, the reimbursement percentage is reduced by five percentage points annually until the reimbursement rate is 50%. The 50% reimbursement rate remains in effect for the remaining life of the property.

For the application period beginning August 1, 2013, the total reimbursement otherwise allowed will be reduced by 10%. For the application period beginning August 1, 2014, the total reimbursement which would otherwise be allowed will be reduced by 20%. As the law currently stands, the rate will revert to 100% for the application period beginning August 1, 2015.

This reduction in reimbursement rates has been integrated into the CBA since data on the total amount of BETR payments made in FY 2015 for eligible property taxes paid in CY 2013 has been integrated into the CBA. This yields the average amount of BETR incentives received per recipient.

The results of the CBA and the IRR for the BETR incentive program are portrayed in the table below.

BETR CBA benefits for the State of Maine, with and without incentives

Benefits for State of Maine	With Incentive	Without Incentive
Corporate income tax	$223,083,234	$174,810,700
Personal income tax	$226,982,912	$177,901,224
Dividends tax	$765,009,124	$567,731,884
Sales tax	$31,861,125	$29,661,032
Payroll tax	$370,174,250	$274,715,317
Property tax	$-	$107,428,498
Tax Revenues	$1,617,110,644	$1,332,248,654
Cost of administrating the program	$554,783	$-
Direct Revenues after incentive costs	$1,616,555,861	$1,332,248,654
IRR Incentive Program: Direct Benefits	**21.3%**	

Source: ICA calculations

[4] Public utilities, cable television companies, or providers of radio paging, mobile communications, satellite direct TV, or television distributions services are ineligible for BETR reimbursement. In addition, office furniture, lamps and lighting fixtures, buildings, and land are excluded.

The IRR shows a positive percentage of 21.3%, which implies a return of slightly more than $1.21 on each dollar invested in the BETR program. Aggregating the property tax reimbursements for the three years (i.e. 2012, 2013 and 2014) and discounted at a rate of 5% equals $107.4 million. Combined with the administration costs of the program (estimated at $554,783 for the three-year period), the total cost of the BETR program is approximately $108 million. This is sufficiently offset by higher tax revenues.

A total of 319 companies have been certified as BETR recipients. Of the 12 companies who responded to the survey *exclusively* using the BETR program, it was found that these companies on average created 1.7 new jobs and retained 11.0 jobs. However, the averages for companies that benefit from the BETR program in combination with other incentive programs are much higher. Companies that used BETER in conjunction with other programs created 10.8 new jobs and retained 85.2 jobs.

Averaging the two groups BETR only and BETR plus other programs shows an average of 6.3 new jobs and 48.1 retained jobs for BETR recipients overall. These averages may also be more realistic and justified given the limited sample of 12 companies that make exclusively use of the BETER program. It should be noted that a small number of companies have created and retained disproportionately large numbers of jobs, capital investment and exports, with a noticeable impact on the results.

Nevertheless, the data shows that the 319 companies certified as BETR recipients created 2013 new jobs and retained 16,787 jobs in 2014. Additional jobs and salary result in additional personal income tax revenues and a higher aggregated disposable income, which, in turn, results in a higher local demand and increased sales taxes. Higher corporate income tax revenues can be explained by the fact that the reimbursement (all other things being equal) improves the bottom line.

BETR Findings

The BETR program has been shown to effectively improve the economic development environment in the State of Maine, while also providing a positive financial return on investment to the state.

Pine Tree Development Zone - DECD

The Pine Tree Development Zone (PTDZ) program offers eligible businesses in Maine the chance to greatly reduce (or in some cases virtually eliminate) a range of state taxes for up to ten years. Eligible businesses include firms engaged in any of the following sectors: biotechnology; aquaculture and marine technology; composite materials technology; environmental technology; advanced technologies for forestry and agriculture; manufacturing and precision manufacturing; information technology; and financial services. Potential benefit highlights include:

- 100% Corporate Income Tax credit;
- Elimination of Property Sales & Use Tax; and
- 80% Employment Tax Increment Finance (ETIF).

An assumption is made in the model that all eligible companies maximize their benefits. However, the extent to which eligible companies may enjoy the previously mentioned PTDZ benefits differs based on their location within Maine. Since 2010, Maine is divided into two geographical “Tiers.”

- Tier 1 is comprised of municipalities in all counties of the state except Cumberland and York counties, plus the municipalities in Cumberland and York counties that have an unemployment rate that is at least 15% higher than the local labor market unemployment rate for the calendar year. Qualified businesses located in Tier 1 locations are eligible for tax benefits for up to ten years.
- Tier 2 locations are all municipalities that do not qualify for Tier 1 designation. Income tax, franchise tax, insurance premiums tax, sales tax and the ETIF benefits of Tier 2 PTDZ businesses are limited to five years.

Eligibility for Tier 1 and Tier 2 changes each year. As a result, there is a different set of municipalities in Cumberland and York Counties that are eligible for Tier 1 and Tier 2 each year. No Tier 2 PTDZ certifications have been awarded from the beginning of 2014 onwards. Prior to that, DECD produced lists of municipalities within Cumberland and York counties that were eligible for Tier 2 status rather than for Tier 1 status. Tier 2 sunset on December 31st of 2013, which implies any beneficiaries that were already certified under Tier 2 will continue receiving benefits. Given the three years of the PTDZ CBA (i.e. 2012, 2013 and 2014), this change will not significantly impact the CBA apart from the fact that no now Tier 2 certifications have been awarded in 2014.

To guarantee the soundness of the PTDZ CBA, we included this difference between Tier 1 and Tier 2 PTDZ recipients based on the location of actual PTDZ recipients derived from DECD data. For 2012, 35 out of the 261 participating companies were located in Tier 2 locations, resulting in a geographical distribution of 86.6% of the PTDZ recipients located in Tier 1 municipalities while the remaining 13.4% of the PTDZ recipients is located in Tier 2 municipalities. This distribution has been used for 2013 and 2014 to guarantee consistency and has been integrated into the CBA to safeguard its accuracy.

Corporate Income Tax Credit Component of PTDZ

The effective corporate income tax rate for non-eligible PTDZ companies equals 8.92%. The corporate income tax credit can be used to calculate the effective tax burden for eligible PTDZ companies by using the following formula:

- Tier 1: (5yrs x 0% x 8.92%)+(5yrs x 50% x 8.92%)/10yrs period. This results in an effective corporate income tax rate of 2.23% during the ten years the eligible company located in Tier 1 receives PTDZ benefits.
- Tier 2: (5yrs x 0% x 8.92%)/5yrs period. This results in an effective corporate income tax rate of 0.00% during the five years the eligible company located in Tier 2 receives PTDZ benefits.

Property Sales & Use Tax Component of PTDZ

The sales and use tax exemption set forth in 36 M.R.S.A. § 1760(87) applies to sales of tangible personal property made on or after July 1, 2005, to a certified PTDZ business "for use directly and primarily in one or more qualified business activities." Tangible personal property that is taxable usually includes items like portable machinery and equipment, office furniture, tools, vehicles, and supplies held by businesses.

Employment Tax Increment Financing (ETIF) Component of PTDZ

Employment Tax Increment Financing (ETIF) assists in financing business investment projects that create at least five net new, quality jobs in Maine. The following is the description of a "new job":

- Meets the income requirements for the current year. Income includes income derived from employment or employee earnings and employer payments toward employee benefits including retirement, health insurance, education, and dependent care. That total for any new, quality job must exceed the per capita personal income for that county.
- Includes access to group health insurance with an employer contribution encouraged but not required.
- Includes access to group retirement benefits subject to the Employee Retirement Income Security Act (ERISA) with an employer contribution encouraged but not required.

An ETIF-approved business in Pine Tree Development Zones may be reimbursed 80% of the state income tax withholdings from the net new payroll for up to ten years. Despite the fact that eligible companies located in Tier 2 municipalities do only receive five years of PTDZ benefits, they do not need to reapply as the original ETIF continues for five additional years at a reduced rate of 30%.

Given the fact that this CBA only evaluates the performance of the PTDZ and the benefits for Tier 2 locations have been limited to five years, the extended ETIF benefits are not evaluated in the PTDZ CBA.

PTDZ Model Findings

The three integrated benefits in the form of a reduced corporate income tax rate, sales and use tax exemption, as well as the reimbursement of payroll taxes leave different marks in the direct financial revenue streams. As stated by the "but for" language in the PTDZ contract signed by each company, the following table assumes that all companies participating in the program would not have gone forward with the PTDZ project without the incentive.

PTDZ CBA benefits for the State of Maine, with incentives

Benefits for State of Maine	With Incentive	Without Incentive
Corporate income tax Maine State Level - Total	$491,677,293	$1,487,534,301
Sales Tax revenues	$2,204,250,117	$0
Personal income taxes for the State of Maine	$284,281,655	$0
Residents dividends tax	$301,497,371	$0
Payroll taxes employer State of Maine	$28,714,699	$0
Direct Tax Revenues	$3,310,421,135	$1,487,534,655
Cost of administrating the program	$554,783	$0
Direct Revenues after incentive costs	$3,309,866,351	$1,487,534,655
IRR Incentive Program: Direct Benefits	**122.5%**	

Source: ICA calculations

Sensitivity Index for PTDZ

While it can be assumed for other programs that the company would have completed the project without the financial benefit of the program, it is not appropriate to apply this factor to the PTDZ model.

When companies sign the PTDZ contract, they are signing an agreement to say that the project would happen and would not locate in the state of Maine ***BUT FOR*** the PTDZ incentive. This means the project never would have taken place if it were not for the assistance of the PTDZ program. To assume that some companies would have done it anyway would basically assume the companies were misrepresenting the project on the contract they signed with the state.

PTDZ sensitivity index and the corresponding IRR

PTDZ Sensitivity index	IRR	Return on one dollar spent (rounded)	Additional revenue recognized by Maine for each dollar spent
0.0% (0 out of 10 would have conducted the project anyway)	122.5%	$2.23	$1.23
10.0% (1 out of 10 would have conducted the project anyway)	112.8%	$2.13	$1.13
20.0% (2 out of 10 would have conducted the project anyway)	99.6%	$2.00	$1.00
30.0% (3 out of 10 would have conducted the project anyway)	84.5%	$1.84	$0.84
40.0% (4 out of 10 would have conducted the project anyway)	68.4%	$1.68	$0.68
50.0% (5 out of 10 would have conducted the project anyway)	52.5%	$1.53	$0.53
60.0% (6 out of 10 would have conducted the project anyway)	37.4%	$1.37	$0.37
70.0% (7 out of 10 would have conducted the project anyway)	23.4%	$1.23	$0.23
80.0% (8 out of 10 would have conducted the project anyway)	10.7%	$1.11	$0.11
89.4% (Just under 9 out of 10 would have conducted the project anyway - break even)	0.0%	$1.00	$0.00
90.0% (9 out of 10 would have conducted the project anyway)	-0.7	$0.99	-$0.01
100.0% (10 out of 10 would have conducted the project anyway - only negative if one assumes more than 89% of all companies would have moved forward regardless and misrepresented their intentions on their PTDZ applications)	-10.8%	$0.89	-$0.11

Source: ICA calculations

The table shows how the return to the state changes based on more and more companies conducting the project in the State of Maine regardless of the PTDZ program. According to the contract, at 0% sensitivity, indicating that none of project would have taken place in Maine without the PTDZ, the return is 122.5% which means the state gets back $2.32 for every dollar spent. The breakeven point assumes that 89.4% of projects would have happened regardless of the PTDZ which indicates the state gets back its dollar spent but nothing more. However, this implies that 89.4% of companies misrepresented their intentions on their PTDZ application and did not really need the incentive to move forward with the project. If all projects would have gone forward regardless of the incentive, the state would only realize $0.89 cents for each dollar spent which is a loss of $0.11 cents for each dollar spent. While this is statistically relevant, it is very unlikely to be reality given the ***BUT FOR*** clause in the PTDZ contract.

Overall PTDZ Findings

The PTDZ program has been shown to effectively improve the competitive economic development environment for the State of Maine with a positive return on investment. The costs involved in the PTDZ program are outweighed by the direct returns of the additional investment it has attracted.

FAME CLI and ERLP

FAME Commercial Loan Insurance (CLI) and Economy Recovery Loan Program (ERLP) were evaluated together. The following text includes a description of each program as well as the CMB results.

Commercial Loan Insurance (CLI) - FAME

Loan Insurance helps address a bank's credit risk when loaning to a new enterprise. For a start-up business, it may mean the difference between obtaining a loan, going out of business, or never getting the opportunity to start a business. Loan insurance is available for almost any prudent business activity, and insures up to 90 percent of a loan to a maximum FAME insurance exposure of $4 million. This maximum insurance amount is set at least annually in accordance with FAME's Direct Loan and Loan Insurance Credit Policy.

In FY 2015, FAME provided approximately $42.0 million in loan insurance to banks for loans to 251 Maine businesses, leveraging approximately $72.0 in financing. This helped to create and retain 2,444 Maine jobs. In FY 2015, FAME made a total of $725,575 in payments on its loan insurance obligations for eleven separate insurance claim payments. This constituted 0.65% of FAME's total insurance obligations.

Two types of loans exist under the CLI program:

1. Pro-rata: covers a certain percentage of lender's loss after a default and liquidation, up to 100%; and
2. Leveraged: Covers 100% of lender's loss up to 25% of the loan balance at the time of default.

Additional interview details may be found in Appendix D.

A loan is assumed to be “leveraged” if the incentivized or insured amount is 25% or less of the total loan amount while a loan is considered “pro-rata” if the incentivized or insured amount is greater than 25% (but less than 100%) of the total loan amount. It appears that the current CLI portfolio ratio is 90% leveraged loans and 10% pro-rata loans. In addition to classification in these two types, the actual application procedure affects the insurance rates and application fees. Generally, potential lenders can apply through the traditional, paper and personnel-based means or through the “Online Answer Application” (OLA) application process. This process allows lenders to apply for up to $375,000 loan insurance online and receive an immediate response.

The following loan amounts and exposure rates apply in the traditional application process:

- Term Loans: up to 90% of a lender’s loan on a pro-rata basis or up to 25% on a leveraged basis (up to $1,000,000); 100% insurance may be available for loans to veterans and to oil storage facility projects. FAME exposure to any one relationship may not exceed $5,000,000.
- Refinance of Existing Debt: up to 40% of lender's loan on a pro rata-basis.
- Working Capital Lines: up to 90% pro-rata limited to $1,000,000 of FAME exposure or up to 20% leveraged insurance limited to $500,000 of FAME exposure.

Under the OLA application process, lenders can receive up to 75% of one of these three types of loans on a pro-rata basis.

Economic Recovery Loan Program (ERLP) - FAME

The ERLP program provides subordinate (gap) financing to assist businesses in their efforts to remain viable and/or improve productivity. From time to time, FAME utilizes funds in this program to address specific business community needs. Eligible companies are Maine-based businesses that exhibit a reasonable ability to repay the loan and demonstrate that other sources of capital have been at least temporarily exhausted. Loans provided under the ERLP have a fixed rate, which consist of the Wall Street Journal Prime plus 2% at time of the loan commitment with a maximum of five years.

The ERLP provides subordinate or gap-financing to businesses affected by their current economic situation. In FY 2015, FAME provided 20 loans to Maine businesses totaling approximately $5 million.

CBA Evaluation

The results of the CBA and the IRR for the CLI and ERLP incentive programs are portrayed in the table below.

CLI/ELRP CBA benefits for the State of Maine, with and without incentives

Benefits for State of Maine	With Incentive	Without Incentive
Corporate income tax for the State of Maine	$935,943,688	$787,789,191
Sales Tax revenues	$870,250,496	$733,711,702
Personal income taxes for the State of Maine	$193,910,004	$158,066,098
Residents dividends tax	$124,836,567	$109,775,634
Payroll taxes employer State of Maine	$96,864,187	$78,959,021
Direct Tax Revenues	$2,221,804,941	$1,868,301,646
FAME Revenues from CLI	$878,017	
FAME Revenues from ERLP	$871,550	
Cost to cover for default	$700,485	
Cost of administrating the program	$554,783	
Direct Revenues after incentive costs	$2,222,299,239	$1,868,301,646
IRR Incentive Program: Direct Benefits	18.9%	

Source: ICA calculations

The IRR shows a positive percentage of 18.9%, which implies a return of almost $1.19 on each dollar invested in the CLI/ERLP.

Particular to this incentive program are the revenues directly generated from the CLI and ERLP provisions, which certainly contribute to the strong IRR. For the CLI, annual insurance fees range from 1.0% to 2.0%, depending on the exposure amount and type of loan. For instance, the highest annual insurance fees apply to the term loan insurance leveraged (smaller than $1 million) and working capital lines loan insurance leveraged (smaller than $500 million). Together with a first year commitment fee, this yields average finance costs of $1,045 for ten year per CLI lender. For an ERLP lender, this equals a five year average of $9,909 due to a fixed rate of 5.25% (3.25% Wall Street Journal Prime plus 2.0%) and a first year commitment fee of 1.0%. This remains lower than commercial interest loan terms of 6.0%

for loans larger than $350,000 (just as with the DLs). The default rate, to cover the costs for default, is set at 0.72%, which is in line with the delinquency rate on business loans provided by all commercial banks as of Q4 2014.

These revenues together with the increased local sales (reflected by higher sales tax revenues) and additional job creation and retained jobs (reflected by higher personal income taxes and higher sales tax revenues) offset the default and administrative costs. Based on calculations, the programs are expected to have contributed to 705 and 413 new jobs in 2013 and 2014, respectively, as well as to the retention of 3,438 and 2,013 jobs in 2013 and 2014, respectively.

In the absence of these incentive programs, the lower number of jobs would have resulted in considerably lower local sales and sales revenues, leading to lower aggregated corporate income tax revenues. However, because of the job creation and retention encouraged by this incentive program, the corporate income tax revenues have actually increased, which is one of the key drivers behind the strong IRR.

Case Study

How do MTI's activities align with its mission? MTI's current trajectory is in line with the mission statement as written on the MTI website. In Fact, MTI is the focal point of the State's R&D incentive programs. The tax credits available from MRS certainly encourage MTI's efforts, but MTI encourages growth in a more active, collaborative and hands-on way. Bottom line: MTI is true to its mission.

How do MTI's efforts align with its legislative mandate? The legislative mandate includes minimal information on how the organization should be run in addition to the legislative mandate. Bottom line, YES, MTI is true to its mandate.

Findings

The combined FAME programs have been shown to effectively improve the economic development environment in the State of Maine, while also providing a positive financial return on investment for the state.

Cost Benefit Model Findings – Research and Development

Direct investments in Research and Development are traditionally designed to spur the creation of new, commercially-viable ideas and products, to enhance the formation of new industry clusters, or to facilitate the growth of innovating companies.

As with several of the Economic Development programs described earlier, one of the R&D programs may be evaluated using traditional CBA methods; that of the Maine Technology Institute (MTI) Development Loans. Other MTI programs are targeted at much earlier stage companies and are not effectively evaluated using traditional CBA methods.

Development Loans - MTI

Development Loans of up to $500,000 are offered three times a year to fund later stage R&D activities leading to commercialization of new products such as prototype development, testing and manufacturing pilot projects. All projects must fall under one of Maine's seven technology sectors and require matching investments of 1:1. Loan repayment is triggered by commercialization of the

technology. A significant interest penalty is incurred if the loans are not repaid within two years of commercialization. MTI is administering this soft-loan program and during the period 2012 – 2014 the institute approved 32 business projects and provided just over $9.0 million in conditional loans, leading to an average investment DL of $281,650 over the period 2012 to 2014.

The results of the CBA and the IRR for the DL incentive program are portrayed in the table below.

DL CBA benefits for the State of Maine, with and without incentives

Benefits for State of Maine	With Incentive	Without Incentive
Corporate income tax for the State of Maine	$555,091	$333,389
Sales Tax revenues	$625,149	$366,783
Personal income taxes for the State of Maine	$1,466,299	$525,494
Residents dividends tax	$108,742	$39,090
Payroll taxes employer State of Maine	$728,469	$261,070
Direct Tax Revenues	$3,483,750	$1,525,826
Cost of DL and grant program	$1,293,364	
Cost of administrating the program	$554,783	
Direct Revenues after incentive costs	$1,635,603	$1,595,478
IRR Incentive Program: Direct Benefits	**7.2%**	

Source: ICA calculations

The IRR shows a positive percentage of 7.2%, a return of just over $1.07 on each dollar invested in the DL.

Several DL funding categories have been incorporated into the CBA. Two types of companies engaged in later stage R&D activity and preparation for sale of new product/service and process are eligible for DL funding. These include:

- Established private or publicly traded company
  - Option 1: Low-interest unsecured subordinated 5 years note. This yields an effective interest rate of 4.2%.
  - Option 2: 0% interest until 3 years post commercialization; 4 years low-interest unsecured subordinated note. This yields an effective interest rate of 2.4%.
- Start-up or early stage company:
  - Option 1 (only): 0% interest until 3 years post commercialization; 4 years low-interest unsecured subordinated note. This yields an effective interest rate of 2.4%.

According to Evaluation of Maine Technology Institute Programs 2013, the distribution between the established private or publicly traded companies on one hand, and start-up or early stage companies receiving DLs on the other, is 38% against 62%, respectively. It has been assumed half of the established private or publicly traded companies selected DL Option 1 while the other half selected DL Option 2 (i.e. 19% each). As a resulted, the weighted interest rate for DLs can be calculated using the formula (19%*2.4%) + (19%*4.2%) + (62%*4.2%), which yields a rate of 2.74%. In addition to these DL funding

categories, the Business Accelerator Grant has been included. According to statistics, this grant is awarded to 10% of the awarded DLs and does not require repayment.

Because start-up or early stage companies have seven years from commercialization to repay the loan, only the difference between the commercial interest rate, which is set at 6.0[5]%, and the effective DL interest rate (i.e. 2.74%) results in a direct loss of revenues. Adding the costs to administer the DL program results in the total costs of this incentive program.

DL recipients employ nine employees on average but expect to add an additional 5.5 jobs per year. This is not surprising given the start-up and early stage nature of most DL recipients. Particularly in 2014, with 17 DLs in progress as opposed to nine in 2013 and six in 2012, new jobs created and the gross income effects outweigh the costs of the DLs. This is reflected by the strong contribution of the personal income tax revenues to the state of Maine to the robust IRR.

Findings

MTI's Development Loans program has been shown to effectively improve the innovation, economic development, and R&D environment in the State of Maine while also providing a positive financial return on investment to the state.

State Benchmark Assessment

Introduction

This section of the report provides the following five benchmark analyses based on various databases to which the ICA Team has access. The full analysis of the ranking by benchmark can be found in appendices.

Benchmark 1 – State Investment Trends: The State Investment Benchmark uses proprietary FDI and domestic investment data from FDI markets, a database by FDI intelligence of the *Financial Times*, that tracks greenfield investment projects (i.e., cross state and foreign) as well as expansion projects. It does not include mergers and acquisitions (M&A) or other equity-based or non-equity investments. Retail projects have also been excluded from this analysis. The benchmark explores the competitive position of the State of Maine in attracting FDI and domestic investment from various source markets and in different industries and business activities.

Benchmark 2 – Business Environment Competitiveness: This section highlights the competitive position of the primary Maine MSAs compared to other MSAs across the US which a site selector may consider during the evaluation process. A set of public indicators and indices have been collected from various sources that allow for interstate comparisons across a range of dimensions of competitiveness. The location benchmark of the ICA team provides a different approach than more conventional location analyses. Rather than analyzing location parameters such as unemployment rates, number of issued patents or educational attainment, this location benchmark uses existing benchmarks based on a wide range of such parameters. Comparing and contrasting multiple location benchmarks and rankings

[5] Loans larger than $350,000

enables performing a wider and more profound MSA and state-level analysis since such an analysis is based on a wide range of rankings that complement one another.

Benchmark 3 – Incentive Award Productivity: This analysis shows trends in incentives across the United States, highlights recently awarded incentives to companies investing in different states and shows which incentive programs offered by state governments are most active. The analysis uses data from ICA's proprietary incentives deal database: ICAincentives.com.

Benchmark 4 – Transparency in Incentives: This analysis shows transparent statutory incentive programs and transparency in the public communications regarding the amount of public funds that have been allocated to different incentive programs are fundamental to a successful and sustainable incentive policy framework. In line with the incentive trend analysis, this section will also introduce a State Incentive Transparency Index developed by ICA. This Transparency Index is a composite measure that ranks the States according to their incentive transparency policies. Finally, this section concludes with detailed research that shows how other states have implemented successful evaluation and monitoring techniques to assess the effectiveness of incentive programs.

Benchmark 5 – Competitive States Programs: This benchmark focuses on specific incentive programs across competing states. ICA has selected three competitive states as its benchmark for analyzing incentive programs across these states, Connecticut, Massachusetts and New Hampshire.

Benchmark 1 – State Investment Trends

Absolute State Investment Performance

The investment figures for the US, New England and Maine show that for the period of 2007 to 2015, a total of 35,431 investment projects have been registered for the US, of which 1,713 (or 4.8%) have been located in New England. In turn, out of these 1,713 projects, 96 have been located in Maine.

The more than 35,000 investment projects in the US represent a capital investment of $1,346 billion. The investment projects generated $49.9 billion and $4.8 billion of capital volume in New England and Maine, respectively. Over 3,064,000 new jobs have been created as a direct result of these investment projects throughout the US. The more than 1,700 New England investment projects resulted in 113,569 new jobs while the 96 investment projects in Maine created over 9,000 new jobs.

In terms of overall state ranking, economically powerful states such as California, Texas, New York and Florida have attracted considerable investment. Maine ranks 46th between Rhode Island (47th) and Hawaii (45th). Looking at Maine's peers and neighboring states, it appears states as Vermont, Rhode Island and New Hampshire perform more or less similar to Maine. In fact, with attracting $4.8 billion worth of capital investment and creating over 9,000 new jobs, Maine slightly outperforms its peers and neighboring states.

Relative State Investment Performance

Interpreting these absolute figures does not reveal much on the actual state investment performance as there is a direct relationship between the size of a state's economy and the number of attracted

investment projects. Therefore, correcting the state investment performance with the actual size of the economy measured by its Gross State Product (GSP) provides a better understanding of the actual state investment performance of Maine and other states.

Comparing the share of a state's contribution to the national Gross Domestic Product (GDP) with the national share of state investment (i.e. in terms of number of projects, capital volume and job creation) results in a more comprehensive analysis of a state's investment performance. A positive differential indicates the state has attracted disproportionately more investment, capital or new jobs and thus performed better than "expected" based on its share of the national GDP. On the contrary, a negative differential indicates the state has attracted disproportionately fewer investment projects, capital or new jobs compared with its share of the national GDP. Maine performs slightly below its relative importance to the US economy as the difference between its share of the national GDP and its share of national attracted investment projects is -0.1%.

A same analysis has been undertaken for the benefits of state investment whereby the relative performance for capital investment has been plotted against the relative performance for job creation. New England states Connecticut and Massachusetts perform weakest with negative percentages for both indicators whilst Maine attracted 0.04% more capital investment and -0.03% fewer new jobs compared to its share to the national economy. A group of 17 other states perform very similarly, including the remaining New England states of Vermont, New Hampshire and Rhode Island.

Given these differences are so small, it can be concluded Maine performs on par with its contribution to the US economy vis-à-vis its state investment performance.

Average State Investment Performance

Comparing average project values reveals that Maine outperforms both the US as well as New England for both average capital volume and number of newly created jobs per investment project. An average investment project in Maine equaled a capital volume of $50.3 million and created 93 new jobs. For the US and New England, these numbers equal average capital investments of $38.0 million and $29.1 million and 86 and 66 new jobs, respectively.

Maine State Investment Trends

In 2013 – the most successful year for Maine - 15 new investment projects have been announced, closely followed by 14 new investment projects in 2011 and 2013 and 13 in 2009. So far, the number of new investment projects in Maine for 2015 equals 11. The years 2008 and 2012 were the most modest years for Maine as only six new investment projects were announced, while only seven were announced in 2010. Despite the fact that 2010 was not a year in which the number of new investment projects peaked, both economic benefits peaked in this year, with capital investment adding up to nearly $1.8 billion while over 3,300 new jobs had been created.

Most investment projects that have been realized in Maine are in business services (15 or 15.6%), followed by communications (13 or 13.5%), financial services (12 or 12.5%) and software & IT services (11 or 11.5%). Combined, nine alternative & renewable energy projects and three transportation investment projects account for nearly $3.4 billion (more than 70.0%). Most jobs have been created by

investment projects in transportation (3,119 or 34.6%), software & IT services (1,304 or 14.5%) and financial services (1,153 or 12.8%).

Comparing the industry-specific statistics of investment into the state of Maine with the national average annual growth rates per industry reveals whether Maine has actually attracted investment in the fastest growing industries. Aerospace is the fastest growing industry in which Maine has attracted investment.

Industries which have experienced an above-average GDP growth over the last ten years and in which Maine has attracted a reasonable number of investment projects include software & IT services as well as business services. On the contrary, industries as healthcare, medical devices, transportation, industrial machinery, equipment & tools and, in particularly, aerospace are industries in which Maine has attracted only a marginal number of investment projects whereas these industries have seen significant annual GDP growth rates.

The majority of investment that Maine has attracted has been in logistics, distribution & transportation ($1.6 billion or 33.2% of the capital volume and 3,249 new jobs 36.0% of the total job creation) and electricity ($1.75 billion or 36.4% of the total capital investment), followed by business services (686 new jobs or 7.6% of total job creation), manufacturing (1,038 new jobs or 11.5%), customer contact center (2,062 new jobs or 22.9%) and ICT & internet infrastructure (capital volume of $635 million or 13.2% of total capital investment).

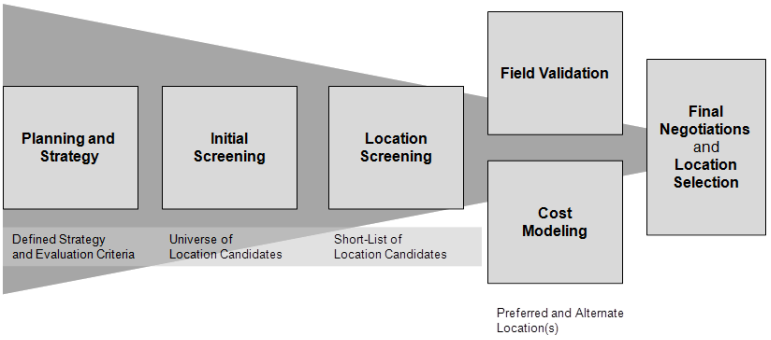
The large majority of state investment into Maine is US-sourced (mostly Massachusetts and New York). More than 70 of the 96 investment projects (75%) are sourced from within the US as opposed to 8 (or 8.3%) from Canada, 5 (or 5.2%) from the UK and 10 (or 10.3%) from continental Europe, including Germany, Sweden, France, Iceland, Norway, Spain and Switzerland.

Looking within Maine, Portland has attracted by far the largest share of state investment with 19 investment projects (nearly 20%), followed by Auburn, which has attracted six investment projects (6.3%) that have generated over 900 new jobs (10.0%). Oakfield has attracted the largest share of capital investment: $525 million has been invested in Oakfield.

Benchmark 2 – Business Environment Competitiveness

A proper evaluation of Maine's incentive, credit, and other economic development tools must begin with an understanding of the State's natural advantages and disadvantages for attracting investment. Companies making expansion and relocation decisions typically go through a process similar to that which is shown on this page. This process begins with the company identifying their business opportunities, constraints and needs for the new facility, and then progresses through an evaluation of location options. This evaluation process continues to narrow the list of options until the company is prepared to negotiate with the last (and best-fit) handful of communities and sites remaining on the list.

Importantly, this process usually starts with a regional, national, or even international long list of location options. Metropolitan areas are usually the units of geography being evaluated at this point, not towns or sites. Once an appropriate MSA is selected, the process advances to selecting a town and a site.



In the site selection process, three or four locations usually emerge from the screening model as the clear leaders. Local economic development agencies in those locations are typically contacted at this point. This then gives them the opportunity to present incentives, specific communities and sites within the broader region. It is important to note that the economic development agencies and incentive programs are not considered until this step.

The Maine Competitive Analysis compares the Portland, Bangor, and Lewiston Auburn MSAs with 22 other MSAs with similar attributes likely to be considered when making a location decision.

Overall Findings

The overall findings from the Maine Competitive Analysis rank Portland MSA as performing moderately well at 11 overall in an unweighted ranking. In the same circumstance, Lewiston-Auburn MSA (referred to as Lewiston) ranks 25 and Bangor MSA ranks 23 out of the 25 candidates. The Tax Regime category is ranked by state rather than MSA. Before incentives, the State of Maine has a very negative Tax Regime ranking at 23 out of 25. This is important since site selectors are looking at the overall ranking at this point and may have no awareness of the incentive programs offered by the state. The location could be removed from the shortlist simply because of a poor ranking for tax regime.

Portland has favorable education rates that are much better than seen in the 2013 analysis. Portland also has favorable household statistics which include favorable renter to owner percentages, positive projected housing growth, and good median household and disposable income. Even with harsh New England winters, Portland ranks fairly well for climate and natural hazards.

Portland ranks slightly above average for Occupation Specific Salaries (meaning lower salary costs), Labor Force Availability, Transportation and Market Access, and Crime and Quality of Life. Portland struggles with retaining population and (specifically) working age population, as well as transportation and market access. Portland has difficulty with low or negative growth rates for working age population and labor force but also have a very low unemployment rate which indicates a potential workforce availability problem. Portland has average access to Population and Demographics and struggles with a higher cost of living and is overall a more expensive operating location.

Lewiston has a reasonably low crime rate paired with a good quality of life. Additionally, Lewiston has the lowest average salaries of all the candidates in the screening model (tied with Bangor). Lewiston is showing much more difficulty with labor force availability in 2015 than in 2013 with negative labor force

Business Environment Competitiveness ranking by MSA and category

	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Population and Demographics	12	19	17	11	17	19	19	12	4	12	1	3	4	4	2	4	19	4	19	12	19	12	4	19	4
Household Statistics	6	24	21	1	6	14	14	3	2	13	6	14	6	14	24	6	21	14	14	20	6	5	12	23	3
Labor Force Availability	9	14	14	3	16	22	19	9	6	16	1	7	12	16	2	9	24	7	25	3	22	12	3	19	19
Industry-Specific Employment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupation-Specific Employment (per 1000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupation-Specific Salaries (Annual Mean 2010)	8	1	1	25	22	8	8	4	13	16	16	20	4	4	3	8	8	13	24	4	18	18	15	20	23
Education 2010	5	25	22	3	5	7	10	14	15	23	4	17	24	17	17	17	15	10	17	1	13	9	2	10	7
Transportation and Market Access	10	21	21	4	1	25	20	1	7	10	21	14	21	17	17	3	5	6	10	17	14	16	7	7	10
Tax Regime	23	23	23	19	8	8	21	21	2	15	2	2	5	8	8	16	6	6	8	8	1	8	17	17	19
Climate and Natural Hazards	6	19	19	6	6	22	16	2	6	6	2	2	24	16	25	19	16	13	6	13	15	22	6	2	1
Crime and Quality of Life	10	7	4	13	8	1	4	2	8	14	14	21	24	21	25	18	10	21	18	2	12	14	4	17	18
Overall Rank	11	25	23	9	7	19	21	6	4	17	1	5	18	16	14	10	20	8	24	3	15	13	2	22	12

Source: ICA calculations

Maine Competitive Analysis – Industry/Sector Analysis

The analysis in the section is based on a standard site selection or evaluation model designed to show how likely a company would be to select Portland, Bangor or the Lewiston Auburn areas. This model has been further modified to develop insights to show how likely a company in a particular industry or function would be to select Portland, Bangor, or the Lewiston Auburn area.

The following 7 industries or sectors are defined as current areas of focus for Maine incentive programs:

- Biotechnology,
- Composites & Advanced Materials,
- Environmental Technologies,
- Forest Products & Agriculture,
- Information Technology,
- Marine Technology & Aquaculture, and
- Precision Manufacturing.

Methodology

For each of the industry sectors, the team assigned a series of drivers particularly valued by a company in that industry. These drivers were chosen based on our proprietary incentives database tool and our experience as site selection consultants for the private sector. The team assigned a series of factors to measure each driver. Factors were limited to statistics that are available for the entire US by state or MSA.

It is important to note that this analysis by industry/sector does not take into account incentive programs in place which might help make up for drawbacks identified in this analysis. Incentive programs normally come into the site selection process further into the process when the candidates have been narrowed to less than four.

Overall Findings

Portland ranks 7th for Marine Technology & Aquaculture and 10th for Forest Products & Agriculture (primarily for the agriculture component). For all other industries, Portland ranks 21st or 22nd against the competitors. Lewiston Auburn ranks 23rd for Forest Products & Agriculture and 24th or 25th for all industries. Bangor ranks 2nd for Forest Products & Agriculture (primarily for the forest products component) and 23rd for Composites & Advanced Materials. Bangor ranks between 24th and 25th for all other industries.

Overall rankings by industry

Industry/Sector Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Biotechnology Score	22	25	24	1	2	7	6	3	11	21	12	14	23	10	9	16	8	5	15	4	19	17	18	20	13
Composites & Advanced Materials	21	25	23	4	1	22	16	3	11	17	14	18	24	15	20	10	5	9	6	2	12	7	13	19	8
Environmental Technologies	22	25	24	3	7	13	4	6	14	19	12	16	23	15	18	2	1	5	9	10	11	8	17	21	20
Forest Products & Agriculture	10	23	2	4	12	20	7	5	17	18	21	24	25	16	19	3	13	8	15	11	9	14	1	22	6
Information Technology	21	25	24	8	16	23	19	15	9	14	4	10	20	6	7	12	18	3	17	1	13	2	11	22	5
Marine Technology & Aquaculture	7	24	25	6	5	4	23	15	9	22	16	19	20	1	2	21	8	12	13	10	17	18	11	14	3
Precision Manufacturing	22	25	24	18	10	20	15	11	12	4	21	9	19	17	23	5	2	13	1	7	3	6	14	16	8

Source: ICA calculations

Please see Appendix J for a more detailed review of the Maine Competitive Analysis Industry/Sector Analysis

Biotechnology

Maine is not a natural fit for biotechnology companies because of lack of talent and lack of reputation in the field. The Greater Boston area is fairly close to southern Maine, has better access to talent, and the 495 area has similar costs of living and quality of life to the Portland area. Companies would rather select a location closer to the biotech hub in Cambridge/Waltham than situate the company 2 hours north in Southern Maine.

The Portland MSA ranked slightly better than Lewiston and Bangor for Biotech, but all locations ranked poorly against the competitors. If this industry was expanded to biotech and life sciences, Maine would have a starting point for this industry sector based on some of the company interviews conducted in the Interviews section and Appendix D. With a starting base, it would be much easier for the state to grow the industry.

Composites & Advanced Materials

Composites and Advanced Materials is both a subset of and a partnering activity to precision manufacturing. Maine in general does not competitively rank well for composites and advanced materials. Portland does have some companies focusing on the more high tech part of this industry while Bangor focuses on the lower tech parts of this industry. The Lewiston area does not appear to be a good match primarily because of location and a lack of skilled workforce availability.

Certain composite manufacturers are experiencing difficulties from outside influences that the State is unlikely to influence. However, the state may be able to support these industries with networking, employee retraining, and equipment upgrade opportunities. For example, the specific plastic used to make canoes and kayaks is still patented but the manufacturer had decided not to produce any more plastic because it is not profitable enough. Canoe and Kayak manufacturers are scrambling to source their boats out of fiberglass at a similar volume and cost.

Environmental Technologies

Maine as a state does not have a particularly competitive ranking for Environmental Technologies. Many businesses that work with R&D and implementation for green technologies are struggling both in the economy and in the state. High energy costs help drive the need for environmental technologies, but ironically make such products more costly to produce. Bangor and Lewiston do not rank well for any of the factors that drive environmental technologies. Only Portland has one positive ranking category with skilled workforce availability comparing well for this industry as compared to the competitors.

Forest Products & Agriculture

Maine as a whole should do much better for forest products and agriculture. The state has access to a tremendous amount of unharvested land that could supply paper mills and other value added industries. However, extracting this resource is expensive and the supporting industries that add value are struggling. Cheaper energy costs and or access to natural gas would help and possibly save the forestry products industry. For example, paper mills that now have access to natural gas went from almost closing their doors to operating successfully and even expanding operations over the course of well under 10 years.

Not surprisingly, Bangor ranks the best out of the Maine candidates and very highly overall for forest products and agriculture industries. Interestingly, the Portland MSA also ranks highly for this industry but for the agricultural part rather than the forestry side. For example, the Sanford area has a surprising number of indoor and outdoor farms. Lewiston scores second to last for this industry with poor access to forestry land and very little farming.

The agriculture component is actually missing a large farming industry outside the Presque Isle area by the Amish for two reasons. Presque Isle is not considered an MSA (thought they may have the population mass to become a NECTA). More importantly, it is unclear and unlikely that the Amish are included in the census. While not all our sources are census based, several are census based or are separate sources also based on census statistics. If the area became a NECTA, statistics would be collected differently and by more sources.

Information Technology

Maine is not a natural choice for Information Technology companies. The cost of electricity is very high and access to reliable broadband is difficult in many areas of the state. More broadly speaking, most of New England is not a natural match for a large Information Technology company. Maine does not produce enough students for IT careers and Portland is the only location reliably able to attract these workers into the state. The access to natural gas in southern Maine reduces heating costs enough to make it more attractive to an Information Technology company, but the computers, servers and equipment still run on electricity.

Marine Technology and Aquaculture

Portland has the best access to marine technology and aquaculture among the three Maine MSAs simply due to its proximity to the ocean. Portland itself is not the best place for aquaculture activities, but is a great location for research and marine technology development. Due to low cost of land and great access to natural resources, Bangor MSA, Hancock County, and Washington County are great locations for marine based aquaculture.

Precision Manufacturing

While Lewiston and Bangor don't rank particularly high for manufacturing, there is a historical precedence set in these areas for the manufacturing and precision manufacturing fields. Many manufacturing companies in more traditional manufacturing fields are transitioning to using CNC machines to help alleviate the pressures on employees and add accuracy to key points in the manufacturing process. Most companies have struggled but managed to find enough employees to efficiently run the business. However, many companies are looking at a mass retirement of up to 50% of their workforce over the next 5 to 10 years.

Please find the full Business Environment Competitiveness in Appendix J.

Benchmark 3 – Incentive Award Productivity

The Incentive Award Productivity benchmark has been developed from incentives data obtained from the IncentivesMonitor.com[6] database. The database registers all types of incentives offered to companies to establish new operations or to expand an existing operation.

Absolute State Incentive Productivity

Out of the 13,383 incentives, 928 (or 7%) have been awarded in the six states that comprise New England, equaling a total budget spent on incentives of $2.8 billion. Incentives granted in Maine represent a small portion of the New England incentive distribution since only 28 of the 928 incentives (or 3.0%) have been awarded to businesses located in Maine. Together, the 28 awarded incentives represent a value of $160.0 million.

In terms of benefits, the incentivized investment projects have created over 46,000 new jobs throughout New England, of which just under 1,600 jobs have been allocated in Maine. This employment creation has been accompanied by a total capital investment of $10.3 billion in New England and $420.0 million in Maine.

Together with New Hampshire and Rhode Island, Maine is among the states that have awarded the least incentives. Their economic performance is very similar as their shares of capital investment and job creation exactly match the shares of number and value of awarded incentives, which all represent 0.1% to 0.2% of the national total.

Relative State Investment Performance

Expressing the total number of awarded incentives compared to the total value of awarded incentives reveals the states that spent disproportionately more or less on incentive packages. Maine spent $162.7 million (0.2% of the total amount spent on incentives) on its 28 registered incentive awards (0.2% of the total number of incentives) and is therefore on par (i.e. a differential of 0%).

Plotting the total job creation and attracted capital investment allows an evaluation of which state has performed best in terms generating economic benefits as a result of the awarded incentives. Maine ranks among the states that have performed very modestly, both for attracting new capital as well as for new job opportunities. Together with its New England peers New Hampshire, Rhode Island and Vermont along with Alaska, Montana, North Dakota, Washington DC and Wyoming, Maine has performed relatively weakly with regards to generating economic benefits by means of awarding incentives. Massachusetts forms an exception within New England as companies that received incentives in this state created just over 23,000 new jobs.

Maine's performance – along of that of the other states - should however be put into perspective as these states have generally spent a small budget on a limited number of incentives. Therefore, the following indicators can be calculated and analyzed to normalize for the budget spent on incentives:

[6] Incentives Monitor was originally launched in 2010 as ICAIncentives.com, developed jointly by ICA and WAVTEQ

- **Incentive per Job Created**, which is the result of dividing the total value of awarded incentives by the total number of newly created jobs per state. This indicator provides a value of what states have "paid" by incentives for one newly created job.
- **Return on Investment**, which is the result of dividing the total volume of capital investment by the total value of awarded incentives. This indicator provides a value of what the return on one dollar of incentive is. For instance, a Return of Investment of $3 means that every dollar a state spent on incentive generated a capital investment with a value multiplied by three.

Plotting these two indictors provides an overview of how the incentives actually preformed as these two indicators compensate for the size of the budget that has been spent on awarded incentives.

It becomes clear that Maine has one of the lowest returns on investment ($2.6 for every $1 of awarded incentive) with a relatively high incentive value per newly created job ($102,108). To this extent, it performs very similar to Connecticut, California and New Jersey though these states have attracted considerable larger numbers of new jobs as well as amounts of capital investment.

Average State Incentive Productivity

Comparing the average values of awarded incentives demonstrates a national average incentive value of $6.8 million. Governments and authorities across New England and Maine have granted considerably lower average incentive packages of $3.1 million and $5.8 million, respectively. The average benefits these granted incentives have generated are considerably smaller in New England and Maine. An average US awarded incentive attracted $42.2 million of capital investment combined with 122 new jobs. For New England, these numbers equal $15.6 million and 50 new jobs, respectively. Incentives awarded in Maine generated benefits that are ranked between the US and New England averages with an average capital investment of $20.2 million and 57 newly created jobs.

Maine State Incentive Trends

The vast majority of the 28 incentives that have been captured for Maine have been awarded in 2015 as the database registered 11 incentives in Maine against only one in 2010. The number of incentives has gradually increased from 2010 to 2015. The trend for the total value of the 28 awarded incentives shows a different pattern with a peak in 2011 ($102.6 million) and a gradual decline of the total value of awarded incentives towards 2015 ($5.8 million). This implies the average value of an incentive awarded in Maine has decreased over the last five years. The reason for the peak in 2011 is a $102.0 million incentive package granted to an investment in the renewable energy sector.

Coming from low values in 2010, 2011 has proven to be a favorable year in terms of capital investment (partly due to the large renewable energy investment) while 2012 has peaked in terms of number of newly created jobs (due to an investment in the aerospace industry creating 600 new jobs). From 2013 onwards, both capital investment and newly created jobs run parallel with a gradual increasing trend in 2015.

In terms of industries targeted by incentives, the food and drink industry has been a priority target with eight incentives (or 28.6%) out of the 28, equaling a total value of $2.2 million (or 1.4%). This industry is

followed by the aerospace, defense and marine industry with five incentives (or 17.9%), equaling a total value of $33.7 million (or 20.7%), and life sciences, equaling a total value of $4.8 million (or 3.0%).

Comparing the strongest growing US industries with the allocation of Maine incentives enables to indicate potential opportunities for awarding incentives and targeting. Maine has awarded most of its incentives to the food and drink industry. This industry has experience an annual GDP growth of 4.4%, which is above the US average of 3.4%.

However, industries that have grown at a much faster pace but to which Maine has awarded a limited number of incentives include aerospace, defense and marine (7.3% annual growth; 17.9% of total number of awarded incentives) and, in particular, information, technology and telecom (7.3% annual growth; 3.5% of total number of awarded incentives). The focus on awarding incentives to companies in industries with a modest growth rate (e.g. industrial goods and consumer goods) seems to be limited in Maine.

With regards to the business activities Maine's incentives have targeted, it is clear the manufacturing sector represents the strongest targeted business activity with 16 incentives (57.1%), representing $34.4 million (or 21.1%). This sector is however not the largest in terms of value that has been allocated to incentives as the electricity and extraction sector (i.e. the renewable energy investment) represents the largest share of the budget ($114.0 million or 70.0%).

Apart from one Canadian recipient, all other incentives have been awarded to domestic investors. No other community other than Brunswick, Gardiner, Madawaska and Presque Isle awarded more than one incentive. The largest incentive package ($102.0 million or 62.7%) has been awarded in Roxbury, generating $153.0 million (or 36.1%) of capital investment but only eight new jobs. This can be attributed to the capital-intensive nature of the investment project, which is in the renewable energy industry.

Benchmark 4 – Transparency in Incentives

As has already become evident from the Incentive Productivity Benchmark, great variety exists among US states regarding the public provision of information on awarded incentives. In order to shine more light on the transparency of incentive programs across US states, ICA developed the Incentive Transparency Index in 2013.

Methodology

To produce the Incentive Transparency Index, the IncentivesMonitor.com data, which has also been used for the Incentive Productivity Benchmark, has been analyzed. The process to construct the Incentive Transparency Index consists of four steps:

- Step 1 – Calculate values for each indicator;
- Step 2 – Convert each indicator value into state rankings ;
- Step 3 – Calculate total scores; and
- Step 4 – Producing final Index.

Calculate values for each indicator

For each state, the values for three indicators (number of awarded incentives, total value of capital investment and total number of newly created jobs) have been collected and calculated.

Convert each indicator value into state rankings

The assumption is that when a state is transparent in disclosing information on its awarded incentives, it would rank more or less similar for all three indicators. The national state ranking of the number of awarded incentives (i.e. Indicator 1) forms the baseline of the Index, which is then measured and verified against the ranking of the two other indicators (i.e. Indicator 2 and Indicator 3). When the discrepancy between the rankings of the three indicators is considerable, a state is most likely inconsistent in publically disclosing information on its incentives and thus not transparent.

Calculate total scores

The third step involves calculating the total scores for rankings of the three indicators. This yields the final score per state.

Producing final Index

The final step includes ranking the total scores and clustering these total scores. This results in the final Incentive Transparency Index. States are ranked by averaging the ranks of the three indicators.

- **Green**: scores from 1.0 up to and including 16.9. Includes states with high incentives transparency that frequently disclose information on awarded incentives.
- **Amber**: scores from 17.0 up to and including 33.9. Includes states with moderate or average incentives transparency that disclose information on awarded incentives from time to time.
- **Red**: scores from 34.0 up to and including 50.0. Includes states with very little or absent incentives transparency that randomly disclose information on awarded incentives.

The same procedure has been repeated for 2014 and 2015 for the version of the Incentive Transparency Index.

Results

For the 2015 edition of the Index, Maine, with an overall score of 43, ranks 44th out of the 50 states, exactly between Vermont (rank 43) and Alaska (rank 45). Other New England states Rhode Island and New Hampshire score more or less similar (rank 46 and 47, respectively) while Connecticut (rank 24) and Massachusetts (rank 19) have performed considerably better.

Comparing the results of 2013 and 2015 provides an indication of whether states improved the transparency of their incentive programs. Looking specifically at Maine, it becomes clear Maine has only slightly improved its ranking over the last two years, as Maine went up from the 45th to the 44th rank. Maine went up two ranks with regards to information it disclosed on the number of incentives it has awarded (from rank 46 in 2013 to rank 44 in 2015) but lost two ranks on transparency regarding capital investment (from rank 43 in 2013 to rank 45 in 2015) while it stayed similar for newly created jobs (rank 40 in both years).

Incentive Transparency Index Comparison 2013-2015

2013			2015			2013-2015
Rank	State	Score	Rank	State	Score	Change
1	Ohio	3.0	1	Indiana	4.0	+2
2	Michigan	3.3	1	Michigan	4.0	+1
3	Indiana	3.7	1	Ohio	4.0	0
4	Kentucky	5.7	4	New York	5.7	+3
5	North Carolina	6.3	5	California	6.0	+18
6	Louisiana	7.0	7	Kentucky	7.0	-3
7	New York	8.0	7	Louisiana	7.7	-1
8	Texas	9.3	8	Tennessee	8.7	+1
9	Tennessee	9.7	9	North Carolina	9.0	-4
10	Florida	10.3	10	Texas	10.7	-2
11	Pennsylvania	11.0	11	Florida	11.3	-1
12	Iowa	16.0	12	Pennsylvania	11.7	-1
14	New Jersey	16.3	13	Missouri	13.0	+4
14	Virginia	16.3	14	Virginia	14.0	0
15	South Carolina	17.0	15	Wisconsin	14.7	+1
16	Wisconsin	17.3	16	New Jersey	15.3	-2
17	Missouri	17.7	17	Iowa	18.0	-5
18	Massachusetts	18.0	18	South Carolina	18.3	-3
19	Utah	18.7	19	Massachusetts	21.7	-1
20	Colorado	19.3	20	Mississippi	22.0	+5
21	Alabama	21.3	21	Alabama	22.7	0
23	California	22.0	22	Illinois	23.3	+2
23	Georgia	22.0	24	Connecticut	23.7	+3
24	Illinois	22.3	24	Utah	23.7	-5
25	Mississippi	22.7	25	Colorado	24.3	-5
27	Connecticut	24.7	27	Nevada	25.7	+5
27	Oklahoma	24.7	27	Oklahoma	25.7	0
29	Kansas	29.7	28	Georgia	27.7	-5
29	Maryland	29.7	29	Maryland	28.0	0
30	Minnesota	30.0	30	Minnesota	30.0	0
31	Arizona	30.7	31	Washington	31.0	+12
32	Nevada	32.0	32	New Mexico	32.3	+2
33	Oregon	32.7	34	Arizona	33.3	-3
34	New Mexico	34.0	34	West Virginia	33.3	+3
35	Delaware	34.7	35	Oregon	35.7	-2
36	South Dakota	35.0	37	Delaware	36.0	-2
37	West Virginia	35.7	37	Kansas	36.0	-8
38	Arkansas	38.3	38	Idaho	37.3	+2
39	Alaska	39.0	40	Nebraska	37.7	+4
40	Idaho	39.7	40	South Dakota	37.7	-4
41	Vermont	39.7	41	Arkansas	38.0	-3
43	Rhode Island	41.3	42	Montana	40.7	+5
43	Washington	41.3	43	Vermont	42.0	-2
44	Nebraska	41.7	44	Maine	43.0	+1
45	Maine	43.0	45	Alaska	44.0	-6
46	New Hampshire	44.7	46	Rhode Island	45.3	-3
47	Montana	45.3	47	New Hampshire	46.3	-1

2013			2015			2013-2015
Rank	State	Score	Rank	State	Score	Change
48	Wyoming	46.3	48	Wyoming	46.7	0
49	North Dakota	47.3	49	North Dakota	48.3	0
50	Hawaii	49.7	50	Hawaii	50.0	0

Source: IncentivesMonitor.com and Investment Consulting Associates (ICA)

Benchmark 5 – Competitive States Programs

From the latest version of the Incentive Transparency Index, it appears Maine ranks among the bottommost states in terms of transparency of its incentive programs. Remarkable is the modest performance of a number of New England states since Maine, with a 44th rank, ranks similar to its New England peers Vermont (43rd), Rhode Island (46th) and New Hampshire (47th). This calls for a further investigation into the distinctive incentive programs and the characteristic features these competing states offer. The selection of Vermont, Rhode Island and New Hampshire for the competitive state incentive programs benchmark is furthermore justified given their modest economic size and structure, which is similar to that of Maine and the comparable economic position of these four states within New England. Also, as can be concluded from the Incentive Productivity Benchmark, Maine's incentive productivity can be grouped together with that of New Hampshire, Rhode Island and Vermont.

Methodology

This competitive state incentive programs benchmark is structured as follows. The first section introduces the incentive regimes across the three competitive benchmark states after which the state incentive programs are evaluated in-depth. The incentive programs have been grouped according to the type of incentive. A broad distinction can be made between direct financial or fiscal incentives (e.g. tax credits and cash grant) as opposed to indirect incentives (e.g. technical incentives). Direct incentives can be further grouped into investment incentives, land and infrastructure incentives, training and employment incentives and incentives related to R&D. Indirect incentives can be split into regulatory and administrative incentives on the one hand and technical incentives on the other hand.

This general overview is followed by an incentive profile per state and in-depth comparison of a number of selected competitive state incentive programs. To safeguard consistency, a customized template has been designed to compare these selected competitive incentive programs across state borders. This template consists of multiple questions which have been categorized according to three components: Structure and Targets, Eligibility and Benefits and Performance and Evaluation. The incentive programs that have been benchmarked by means of this template have been selected based on their uniqueness and competitiveness in combination with the fiscal and financial impact for potential recipients.

Incentive Regimes across Competitive States

What becomes evident from the overview of incentive regimes across New Hampshire, Rhode Island and Vermont is that the focus of the incentive programs seems to revolve around encouraging training and employment and, to a lesser extent, investment and R&D (particularly Rhode Island). Only Vermont offers a program specifically designed at land and infrastructure incentives.

Furthermore, no competitive state offers any incentives specifically focused at reducing the regulatory and/or administrative burden. Offering such incentives – complementary to highlighting its existing incentive regime - may put Maine at a competitive advantage vis-à-vis its peer states. It should be noted Foreign Trade Zones (FTZs), which usually ease the regulatory burden for companies, are located in each of the three peer states: Portsmouth, New Hampshire, Providence, Rhode Island and Burlington, Brattleboro and St. Johnsbury, Vermont.

Overview of key incentive programs of New Hampshire, Rhode Island and Vermont

	Type of Incentive	New Hampshire	Rhode Island	Vermont
Direct Fiscal and Financial Incentives	**Investment Incentives** Provision of financing options primarily aimed to offset capital expenditures required for start-up, upgrade and/or stabilization of operation(s)	Economic Revitalization Zone Tax Credit New Hampshire Business Finance Authority Loans and Guarantees	Rebuild Rhode Island Tax Credit I-195 Redevelopment Fund Tax Increment Financing Non-Manufacturing Investment Tax Credit Manufacturing Investment Tax Credit High Performance Manufacturing Investment Tax Credit Innovation Tax Credit	Brownfield Redevelopment Grants
	Land and Infrastructure Incentives Reduced rates and/or direct provision of land, public utilities or transportation granted for specific investments			Economic Development Incentive Program (EDIP)
	Training and Employment Incentives Subsidized training programs and education subsidies to reduce investors' training costs to develop workforce skills	Coos County Job Tax Credit New Hampshire Job Training Fund	Qualified Jobs Incentive Tax Credit Anchor Institution Tax Credit Real Jobs Rhode Island Wavemaker Fellowship Job Training Tax Credit	Employment Growth Incentive (VEGI) Vermont Training Program Workforce Employment Training Fund (WETF)
	R&D Incentives Grants, credits and lending instruments to support investments in R&D and innovation	New Hampshire R&D Tax Credit	R&D Expense Credit Innovation Vouchers Industry Cluster Grants Innovation Networking Matching Grants Innovate Rhode Island Small Business Fund	Vermont R&D Tax Credit
Indirect	**Regulatory and Administrative Incentives** Grating exceptions from rules and regulations in combination with streamlined and simplified administrative procedures			
	Technical Incentives Investment facilitation services, information	New Hampshire Procurement Technical	Small Business Assistance Program	Vermont Procurement Technical Assistance

Type of Incentive	New Hampshire	Rhode Island	Vermont
provision and aftercare to ensure a "soft landing" of the investment project or further expansion	Assistance Program (NH PTAP) New Hampshire Manufacturing Extension Partnership (MEP)		Center (VT PTAC) Vermont Global Trade Partnership (VGTP)

Source: Investment Consulting Associates (ICA)

Economic Development Incentive Program Benchmark

A total of five of competitive incentive programs have been selected to be benchmarked:

- New Hampshire's Economic Revitalization Zone (ERZ) Tax Credit;
- New Hampshire's Research and Development Tax Credit;
- Rhode Island's Innovation Tax Credit;
- Rhode Island's Qualified Jobs Incentive Tax Credit; and
- Vermont's Employment Growth Incentive (VEGI).

For the full incentive profiles of New Hampshire, Rhode Island and Vermont as well as the in-depth comparisons for these five selected Economic Development incentive programs, please see Appendix M.

Research and Development Incentive Program Benchmark

The State of Maine established its current R&D program in 2007. It seeks to encourage companies to create jobs and innovation throughout the State. As part of its wider program of economic development assistance, the R&D program focuses on technical advancement within existing and operating companies. The individual programs are the following:

- The Research Expense Tax Credit;
- The Research and Development Super Credit; and
- The High-Technology Investment Tax Credit.

These are all based on the Federal Credit for Increasing Research Activities of the Internal Revenue Code Section 41; qualifying for the Federal R&D Tax Credit is a pre-requisite. All are credits against State taxes.

In addition to these R&D incentive programs, the state established the Maine Technology Institute (MTI) to encourage the growth of technology companies that create high-quality jobs in 1999. Funded by the Department Economic and Community Development (DECD), MTI is a private, non-profit organization and offers assistance in the form of early-stage capital, loans and grants, as well as commercialization assistance. The center focuses its effort on seven technology sectors leveraging off strengths in knowledge and skill sets within the State. MTI's core activities revolve around three critical stages in the business life cycle, being funding, growing and connecting.

In line with the Economic Development incentive program benchmark, a total of three of competitive R&D incentive programs have been selected to be benchmarked:

- New Hampshire's Research and Development Tax Credit;
- Rhode Island's Research and Development Expense Credit; and
- Vermont's Research and Development Tax Credit.

For the full in-depth comparisons for these three selected R&D incentive programs as well as a further description of Maine's R&D incentive programs, please see Appendix M.

Recommendations and Implementation

Maine has a constellation of economic development and research & development (R&D) programs that developed organically over time. Each was a response to a perceived need or opportunity. The present analysis has begun the process of evaluating current effectiveness and providing a path forward to more efficient and impactful programs. As with the 2014 report, the recommendations below showcase both long-term strategic suggestions as well as more technical program by program recommendations.

The recommendations are presented below in five separate categories:

- Structure and targets of programs;
- Eligibility and benefits of programs;
- Monitoring and evaluation of incentive programs;
- Summary of Programs and Recommendations;
- General recommendations; and
- Implementation.

This is followed by a discussion of suggested next steps and implementation.

Structure and Targets of Incentive Programs

Public and private sector interviews – coupled with location selection analysis – suggest several recommendations for the structure and targeting of economic development and R&D programs:

A1. Program design should conform to the best practice principles of simplicity, clarity, certainty and objectivity.

A2. The State of Maine should explicitly match performance measurements to the type of assistance provided. The ROI and breakeven point for a direct R&D investment in a university or small business setting will likely be very different to that for a tax credit for a large established company. The MIEAB (Maine Innovation Economy Advisory Board) has in past played a role in establishing and validating the State's R&D efforts. This role needs to be re-examined and perhaps reaffirmed.

A3. The State should examine programs to determine which may be altered or augmented to meet the needs of post start-up companies (20-100 employees) who may still require assistance to best meet their potential.

A4. A common framework could be developed within each program that is clear, transparent, and coherent for investors and recipients. This approach would facilitate coordination and harmonization where possible.

A5. The best economic development programs build on existing strengths and expand these over time. Incentives, grants, and other programs can make this happen. Each must be monitored and evaluated to make sure goals are being met.

A6. There is considerable confusion and probable misapplication of the PTDZ standards for how an employee or position is tracked. This language must be clarified. In addition, all institutions

responsible for awarding and administering PTDZ must be given explicit training on the proper application.

A7. Change the requirements for personal equipment tax exemptions in the PTDZ program such that equipment does not need to be operated by specified new employee so long as the equipment benefits the entire company.

A8. Rather than focusing on the 7 specific sectors to grow Maine, it may be more advisable for the State to focus on growing all business sectors and supporting all successful businesses as a strategy for developing a more diversified, resilient economy. Focusing on one industry may not enhance economic sustainability and could instead mean that the state is not using the money for the greatest positive effect.

Eligibility and Benefits of Programs

B1. Any investment incentive program succeeds best in achieving its goals when it is clear, simple and certain, and performance-based against pre-determined criteria.

B2. All administrative processes should be as simple and clear as possible. It is important to develop incentive frameworks that can be effectively administered and monitored. Simplicity and clarity make compliance possible.

B3. This clarity and transparency should be further applied to description and details on incentive program websites.

Monitoring and Evaluation of Incentive Programs

C1. Economic development and R&D programs require easy to find documentation that includes a clear statement of goals and outcomes, as well as clear evaluation and monitoring procedures. Apart from assessing and measuring the investment incentive regimes, providing results and information also enhances transparency, credibility and public accountability.

C2. Economic development and R&D program administrators (specifically MTI) should follow up with applicants to grant and credit programs when they either do not quality or are not chosen to receive funding or credits. While not all companies will get accepted into all incentive program, the debrief will help ease any frustration and negativity that unsuccessful companies might otherwise associate with that loss.

C3. The state should establish a standardized reporting tool for all economic development and R&D program recipients. Reporting requirements should be clear, coherent and transparent. These should be directly linked to the award and to the program's conditional criteria. Repercussions for non-compliance should be clearly spelled out in program legislation, along with the protocols for such sanctions.

C4. The reporting tool should also provide a means for recipients to provide feedback to the state on their own experiences on the utility and efficacy of the programs. Such measures may include but not be limited to workforce readiness, program applicability and reporting, program utility, and suggestions for improvement.

C5. Once a company receives an incentive award, it is very important that the state continue to honor the award until the award expires as stipulated in the program terms. Any award made is recognized as a contract between the company and the state and needs to be honored as

such. Other states have experienced significant backlash and company outmigration in similar situations, such as was the case in New Jersey upon cancellation of payments for the Business Employment Incentive Program (BEIP)[7].

C6. Notwithstanding the statements above, the State should also consider revising the metrics it uses to evaluate the effectiveness of its research programs. Licenses, reputation, jobs, skills, patents, and wage levels may all be factors, but the matrix of measures should reflect the mix of investment desired and an appropriate understanding of their development and business cycle.

C7. Institutional collaboration should be facilitated by an Incentive Working Group consisting of members of various government institutions as well as corporate representatives. The Working Group will advise legislators and staff on incentives, discuss specific incentive policies, and can act as ombudsmen addressing concerns of corporate investors in incentive application processes. This Working Group can serve as a coordination, consultation and knowledge center for the State and the stakeholders.

C8. Holders of investment incentives should be held responsible to report within the standard fiscal reporting system, even where "tax holiday" incentives exist. The Maine Revenue Service and DECD must make an explicit effort to coordinate both the provision of incentives and the Monitoring and Evaluation (M&E) process.

C9. A review of incentives and purge of non-compliant companies should take place every year with a full fiscal review completed by an independent non-bias third party on a biannual basis. The independent party should be selected through a bid process and only be open to entities independent of the state government with the resources to complete a neutral assessment of the programs.

C10. Programs that require fund matching should present clear guidelines for the types of matches allowed and should be reasonably consistent with federal guidelines where possible.

C11. The state should establish and ensure fixed program durations to allow for regular independent evaluation, assessing the program's relevance and benefits. This requires the full authority and capacity of the DECD or administering agency to do this and should be implemented in its follow-up strategies.

The above recommendations provide a number of action items that can be implemented over time and provide a better incentive screening, data collection process as well as institutional collaboration among various government departments of the State of Maine.

Summary of Programs and Recommendations

The following is a summary of current and recommended new programs which includes a review of general effectiveness and suggested changes. These are listed by the department or organization that administers each program.

[7] See for example http://www.northjersey.com/news/after-companies-create-jobs-nj-cuts-funds-for-tax-breaks-1.1272924?page=all

Note that the following programs do not have specific recommendations as they represent local implementation of Federal programs:

- EDA Economic Development Program;
- Community Enterprise Grant Program; and
- Downtown Revitalization Grant Program.

Likewise, the following programs included in the 2014 report have been removed from analysis as they are now inactive or have been de-established:

- Maine Micro-Enterprise Initiative Fund;
- North Star Alliance Cluster Award Matching Fund (MTI);
- Jobs and Investment Tax Credit; and
- High-Technology Investment Tax Credit.

Department of Economic and Community Development

Both the Loring Development Authority and the Brunswick Naval Air Station Job Tax Increment Financing programs are self contained and affect only the respective former military installations. While these programs should be retained in place, they should be removed from the 2018 evaluation process.

Program	Program Type	Recommendation
Certified Media Production Tax Credit	Economic Development	• Retain in place • Develop thorough measures for program reporting including jobs creation and/or local impact (e.g. sales tax)
Maine Tourism Marketing Promotion Fund	Economic Development	• Retain in place • Develop thorough measures for program reporting including jobs creation and/or local impact (e.g. sales tax, lodging tax)
Maine Made - Maine Products Marketing Program	Economic Development	• Further build awareness • Consider incorporating a component of this program that encourages Maine companies to use other Maine companies for material, product, or input sourcing where a local option exists • Consider consolidation with Maine Tourism Marketing Fund
Maine International Trade Center	Economic Development	• Retain in place • Operated as a trade advisory program, and not as a grant or credit program

Program	Program Type	Recommendation
Business Ombudsman	Economic Development	• Retain and enhance program to more fully coordinate **ALL** incentive program information, interaction and reporting • Note that this program does not need to reside within DECD and may operate well in a public private partnership setting • See recommendations in the General section below
Communities for Maine's Future	Economic Development	• Relatively low funded program • No economic development parameters, hence difficult to review
Loring Development Authority	Economic Development	• Program in place to help the Loring Air Force Base Area with redevelopment • Retain in place and remove from evaluation in 2018
Maine Technology Centers	Economic Development	• Retain in place • Develop more thorough measures for program reporting, including jobs creation or local investment
Brunswick Naval Air Station Job Tax Increment Financing	Economic Development	• Program in place to help the Brunswick Naval Air Station area with redevelopment • Retain in place and remove from evaluation in 2018
Municipal Tax Increment Financing	Economic Development	• All reporting is local and therefore out of the scope of the information available to this evaluation
Development Loans (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs • Change the payback terms so the significant payback penalty will be encored 4 or 5 years after commercialization rather than year 2-3 after commercialization
Seed Grant Program (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
Equity Capital Fund (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
TechStart Program (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
Phase 0 and Phase II SBIR Application awards plus TAP support (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
Cluster Initiative Program (MTI)	Research & Development	• Very low funding • Consolidate into Seed Grant, Equity Capital Fund, TechStart, and Phase 0 Programs
Maine Technology Asset Fund (MTI)	Research & Development	• Retain program
Marine Research Fund (MTI)	Research & Development	• Retain program

Program	Program Type	Recommendation
Maine Biomedical Research Fund (MTI)	Research & Development	• Retain program

Several common suggestions were received and should be considered regarding MTI programs. In particular, program recipients strongly suggested that MTI programs require improved transparency in the application process, additional follow up and suggestions for improvement to companies that did not receive awards, and to develop a more simple and equal project evaluation process.

Several companies also noted that while MTI is nominally tasked with the role of supporting innovation, there appears to be a subset of companies who have received multiple MTI awards over a number of years. Put another way, there are concerns about the concentration of MTI funding and about the fairness of the evaluation process. This is not a concern associated with one MTI director. Suggestions to change this include modifying the evaluation process for companies applying for MTI programs.

Department of Economic and Community Development/ Maine Revenue Services

Program	Program Type	Recommendation
ETIF	Economic Development	• Continue with non-compliance purging as begun in 2013-14 • Perform on a yearly basis around the start of the new financial year based on the previous year • Modify program description on the website to note non-compliance purging
Pine Tree Development Zones	Economic Development	• There is considerable confusion and probable misapplication of the standards for how an employee or position is tracked. This language must be clarified. In addition, all institutions responsible for awarding and administering PTDZ must be given explicit training on the proper application. • Change the requirements for personal equipment tax exemptions such that equipment does not need to be operated by specified new employee so long as the equipment benefits the entire company • Generally improve marketing and awareness of the program and the specific location of PTDZ areas • Improve description of program on website for clarity and transparency purposes • PTDZ is not helpful if you are an owner paying income tax in another state

Maine Revenue Services (MRS)

Due to MRS confidentiality requirements, there are transparency difficulties inherent in any program which includes a tax rebate component. This is further compounded by issues with responsiveness on MRS's part in responding to requests for data requested by program managers who should nominally be allowed access to aggregated data. Those program managers are then subject to transparency scrutiny for their inability to provide data they are unable to collect.

Program	Program Type	Recommendation
Business Equipment Tax Reimbursement	Economic Development	• *This program is no longer in effect for new property and equipment acquired, but there are ongoing participants.* • *Program continues modified as BETE*
Business Equipment Tax Exemption	Economic Development	• Retain in place • Use the template of the information request to enhance their annual evaluation effort • Using a uniform reporting standard improves the accountability and improves monitoring and adjustment
Sales Tax Exemptions (Manufacturing Machinery , Equipment and Tangible Personal Property)	Economic Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Sales Tax Exemptions (Fuel and Electricity for Manufacturing)	Economic Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Sales Tax Exemptions (Products Used in Agricultural and Aquaculture Production, and Bait)	Economic Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Sales Tax Exemptions (Commercial Agriculture, Commercial Fishing, and Commercial Wood Harvesting Machinery and Equipment)	Economic Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Sales Tax Exemptions (Machinery and Equipment for Research)	Research & Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Shipbuilding Facility Credit	Economic Development	• Eliminate Program or significantly alter it so that it applies to a broad selection of Maine's shipbuilding community • Credit only applies to very large shipbuilding facilities with more than 5,000 employees that do not qualify for BETE and make more than $200,000,000 investment • Consider modify BETE rules to include all shipbuilding companies under current BETE rules with current BETE caps
Credit for Rehabilitation of Historic Properties	Economic Development	• Not strictly applicable for economic development purposes

Program	Program Type	Recommendation
Super Credit for Substantially Increased Research and Development	Research & Development	• Combine with RETC
Research Expense Tax Credit (RETC)	Research & Development	• Combine with Super Credit

Finance Authority of Maine (FAME)

In general, FAME is a self sustaining organization with most of the funding coming from user's fees and interest rather than being wholly funded by the state. The programs are evaluated with clear end-of-year reporting statistics with an eye towards fiscal stability. While it is important to review FAME periodically, the programs are self sustaining and the internal annual evaluations are combined with readjustments as needed.

Program	Program Type	Recommendation
Commercial Loan Insurance Program	Economic Development	• Retain in place
Economic Recovery Loan Program	Economic Development	• Retain in place
Maine Seed Capital Investment Tax Credit	Economic Development	• Retain in place
Regional Economic Development Revolving Loan Program	Economic Development	• Retain in place
Linked Investment Program for Commercial Enterprises	Economic Development	• Retain in place
Maine New Markets Capital Investment Program	Economic Development	• Retain in place
Linked Investment Program for Agriculture	Economic Development	• Retain in place
Maine Economic Development Venture Capital Revolving Investment Program (VCRIP)	Research & Development	• Retain in place

Department of Economic and Community Development/ U.S. Department of Labor

Program	Program Type	Recommendation
Maine Manufacturing Extension Partnership (MEP)	Economic Development	• Retain in place • Please note: operated as a trade advisory program, and not as a grant or credit program

Small Business Administration/ Department of Economic & Community Development

Program	Program Type	Recommendation
Small Business Development Centers (SBDC)	Economic Development	• Retain in place • Please Note: operated as an advisory and incubator program and not as a grant or credit program

Rural Development Authority

Rural Maine has several clearly identified problems including lack of access to reliable broadband, cell coverage, and natural gas. Addressing these core infrastructure needs addresses may more directly improve these economic opportunities.

Program	Program Type	Recommendation
Commercial Facilities Development Program	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core rural issues, including basic infrastructure
Speculative Industrial Buildings Program	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core rural issues, including basic infrastructure

Maine Community College System

Program	Program Type	Recommendation
Maine Quality Centers	Economic Development	• Retain in place • Operated as a trade advisory program, and not as a grant or credit program • Ensure that workforce training and improvement is incorporated in comprehensive economic development efforts, not as stand alone

Department of Defense

Program	Program Type	Recommendation
Maine Procurement Technical Assistance Center (PTAC)	Economic Development	• Retain in place • Encourage PTAC to take a more active role on lobbying for transparency and improvements in the bid process for government and university system projects • Operated as a trade advisory program, and not as a grant or credit program

Center for Law and Innovation - University of Maine Law School

Program	Program Type	Recommendation
Maine Patent Program	Research & Development	• Program has been largely dormant and should be revived • Previously operated as a trade advisory program, and not as a grant or credit program • Consider housing this program within another organization with complementary functionality such as MTI

Department of Agriculture/ Administered by FAME

Program	Program Type	Recommendation
Agricultural Marketing Loan Fund	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core agricultural issues, including basic infrastructure
Maine Farms for the Future Grants	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core agricultural issues, including basic infrastructure
Potato Marketing Improvement Fund	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core agricultural issues, including basic infrastructure
Agricultural Development Grant Program	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core agricultural issues, including basic infrastructure

General Recommendations

In addition to the items above, the following general observations on the effective role for incentives, credits, and similar programs:

D1. **Continually Examine and Refine Economic Development and R&D Strategy:** It is important to have a coherent strategy for growth, with a clear role for how incentives and similar programs will emphasize comparative advantages of states or compensate for the lack of these comparative advantages. As a result, the strategy for credits, incentives, and R&D assistance would be in effect an operational expression of the state's strategy for economic sustainability and innovation.

D2. **Continue to Support Large Non-Profit Laboratories:** Private, non-profit research institutions are marquee institutions bolstering Maine's reputation and also draw significant talent to the state. They are economic drivers and help set the tone for a successful R&D climate in the

state. The institutions' presence also positively impacts the overall presence of angel, venture capital, and private equity involvement in the State.

D3. **Central Website and/or Guiding Organization:** The state should construct a website which allows the user to search by category and find the assistance programs for which the company is eligible. Once those programs are returned, the site should direct link to the incentive websites and provide full contact information for that group. In addition, an individual fluent with the incentive program should be available by phone to walk companies through this process or to do it for them should they request that level of service.

D4. **Improve Searchability for Information:** Make sure to refer to programs consistently by their correct name. In certain cases, the names for the same programs are similar but not identical. This can make finding the correct program information difficult, especially if the name has changed over time, which may confuse potential incentive applicants. Make sure all programs accurately use metadata keywords and not exclusively use abbreviations so internet search engines can effectively find the program information.

D5. **Improve Accuracy of Program Data Online:** Ensure that programs have clear evaluation criteria, clear program requirements, and clear purge requirements listed on the program administrator's website. This transparency of evaluation procedures was specifically noted as an issue of concern for MTI.

D6. **Develop Central Storage for Reporting Documentation:** To evaluate the incentive programs going forward, it is necessary for the evaluating party to obtain as many recipient lists and as many annual reports from as many incentive programs as possible. Legislative changes should be made to allow the analyst team designated by the State of Maine to have full access to program data as required.

D7. **Program Confidentiality:** Legislative changes should be made to provide for full access to - and evaluation of - program data as required, whether this is performed internally by a program administrator, by a designated state agency, or by an independent evaluator under a confidentiality agreement. There appears to be a particular challenge to obtaining data where MRS administers part of a program for another economic development or R&D program administrator. If this program data is made more directly available, the evaluator will be able to request a much smaller subset of data from companies and obtain more accurate and detailed information for analysis.

D8. **Work Collaboratively Across State Entities:** Organizations, economic development representatives, town and city leaders, and business leaders across Maine should work together for the betterment of the state. In addition to positive collaboration, parties should also avoid speaking negatively certain regions or organizations in conversations with outside companies, consultants, or new organizations. The state and all of its partners should positively showcase both its accomplishments and its forward efforts.

D9. **Understand Workforce Recruitment and Retention as an Economic Development Issue:** Retaining Maine's talent and attracting new talent is as much as a factor in economic sustainability and innovation as is attracting and fostering businesses. The University of Maine's recent efforts to recruit students from across New England is a useful first step. This should be augmented with other efforts to keep this talent in state.

D10. **Expand the Current Opportunity Maine Program:** Expanding the current Opportunity Maine program (at a lower credit rate) to include recruited employees with Associate's and Bachelor's degrees who move to the state of Maine, pay taxes in the State of Maine, and work in the State of Maine. As requested by the business community, consider expanding the program to certain Master's and Doctorate degrees for attracted employees with critical skills needed by Maine businesses.

D11. **Help Maine Residents Identify Future and Ongoing Career Paths:** Students and older transitioning members of the labor force both benefit from better understanding the needs of the modern and emerging economy. Efforts may include working with schools to expose students to non-traditional career paths where there is a great need for trained talent. Likewise, it may be helpful to offer networking among industries with similar skill sets, so that both companies and employees may adapt to changing requirements.

D12. **Work with Businesses to Determine Greatest Educational Need:** Businesses understand where their greatest talent needs will be over the next few years. The state should work with the businesses to help residents understand where future opportunities will lie, recruit into appropriate education tracks, and train to the current and future employment needs in the State of Maine.

D13. **Business Retention:** Consider adding a business retention program which would be tasked with both ongoing relationships with Maine companies and immediate retention action when required. Note that this program does not need to reside within DECD and may operate well in a public private partnership setting.

D14. **Consolidate Programs as Suggested in the Program Specific Recommendations Section:** Consider consolidating like programs administered by the same entity into one larger program. As identified in the section above, many of the tax credit programs are very similar or identical but geared towards a different type of company. These should be consolidated to enhance applicability, impact, and efficiency.

Implementation

As a means for implementing a general recalibration of the State's economic development and research & development, we propose the following measures:

E1. Develop a coordinating team of individuals to include members of the Executive branch, the Legislature, and selected stakeholders to facilitate conversation and action on economic development and research & development activities. The current project's steering committee may act as the core for this team.

E2. Confirm the State's economic development goals and overall strategy, including a plan for coordinating business establishment, growth, retention, and attraction. This plan should contain a firm understanding of the State's advantages and disadvantages, the profiles of business types that this naturally attracts, and the motivations behind their location decisions. It should also include an explicit identification of the organization which will act as the coordinating entity for economic development activities and investments.

E3. Review the list of consolidation, expansion, reconfiguration, and elimination recommendations made above. Work with the State legislature to make appropriate program changes and also to implement new mechanism for reporting and for information sharing between and among responsible parties within the government of the State of Maine.

E4. Develop (or alter) enabling legislation for the new (or repurposed) Centralized Coordinating Agency for economic development activities and investments. This may take the form of something similar to the model used by Enterprise Florida, or it may be an entirely new concept. It may be created out of an existing organization or it may be new. Regardless, such an organization is recommended.

These four measures should be taken alongside the State's continuing efforts to analyze the effectiveness of economic development and research & development programs in supporting Maine's continued economic sustainability and success. The current program – of which the current report is a component – provides an important periodic opportunity to evaluate results and change tactics based on data and on changing economic need.

Appendix A - Definitions

Item	Definition
Angel Investors	Individuals who back emerging entrepreneurial ventures, sometimes as a bridge to venture capital. Funding levels typically range from $50,000 to $2 million. Usually successful, sophisticated business people but the term can apply to all individual investors in a company regardless of business experience.
Applied research	Original investigations undertaken in order to acquire new knowledge but are directed primarily towards a specific, practical aim or commercial objective.
Basic Research	Experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying phenomena and observable facts, without any particular application or use in view.
Commercialization	Sequence of actions necessary to achieve market entry and general market competitiveness of new innovative technologies, processes, and products.
Entrepreneurship	The art or science of innovation and risk-taking for profit in business; the quality of being an entrepreneur.
EPSCoR	Experimental Program to Stimulate Competitive Research is a federal program to assist those states that have historically received lesser amounts of federal R&D spending and have demonstrated a commitment to develop their research bases and to improve the quality of science and engineering research conducted at their universities and colleges. Maine has been a member of EPSCoR since 1980.
Industry Cluster	Groups of competing, collaborating and interdependent businesses working in a common industry and concentrated in a geographic region. Clusters draw on shared infrastructure and a pool of skilled workers and represent the specialization and comparative advantage of the region.
Innovation	A new way of doing something. It may refer to incremental and emergent or radical and revolutionary changes in thinking, products, processes, or organizations. A distinction is typically made between invention, an idea made manifest, and innovation, ideas applied successfully.
Invention	The creation of a new technology, item, or process, as opposed to its application in widespread use.
License	A legal agreement where an owner of a technology allows another organization to use or develop that technology in return for consideration.
NAICS	Stands for North American Industry Classification System.
Open Innovation	A paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology.
Targeted Technologies	Established in statute - 5 MRSA Chapter 407 - biotechnology, aquaculture and marine technology, composite materials technology, environmental technology, advanced technologies for forestry and agriculture, information technology and precision manufacturing technology.
Technology Transfer	The transfer of the commercialization rights for a technology from the originator to another organization, typically private. Also involves the legal protection of intellectual property.

Appendix B – List of Abbreviations

Acronyms and definitions used in this report

Acronym	Definition
ADM	Aerospace, Defense and Marine
CBA	Cost-Benefit Analysis
CEO	Chief Executive Officer
DC	District of Columbia
EDO	Economic Development Organization
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HQ	Headquarters
ICA	Investment Consulting Associates
ICT	Information and Communication Technology
IPA	Investment Promotion Agency
IRR	Internal Rate of Return
IT	Information Technology
ITT	Information Technology and Telecom
MNE	Multinational Enterprise
NAFTA	North American Free Trade Association
NPV	Net Present Value
R&D	Research and Development
RDD	Research, Design and Development
US	United States
USD	United States Dollar
VAT	Value Added Tax

Lead agency acronyms and full program names used in this report

Lead Agency Acronym	Full Program Name
DECD	Maine Department of Economic and Community Development
MTI	Maine Technology Institute
DOL	Department of Labor
FAME	Finance Authority of Maine
MRDA or RDA	Maine Rural Development Authority
MITC	Maine International Trade Center
MCED	Maine Center for Entrepreneurial Development
REDC	Regional Economic Development Corp
MPP	Maine Patent Program
MRS	Maine Revenue Services
CDBG	Community Development Block Grant program
LDA	Loring Development Authority program
MTC	Maine Technology Centers
SBIR	Small Business Innovation Research
STTR	Small Business Technology Transfer
SBA	Small Business Administration loan program
ETIF	Employment Tax Increment Financing
PTDZ	Pine Tree Development Zone

Lead Agency Acronym	Full Program Name
BETR	Business Equipment Tax Reimbursement
JITC	Jobs and Investment Tax Credit
VCRIP	Maine Economic Development Venture Capital Revolving Investment Program
MEP	Maine Manufacturing Extension Program
SBDC	Small Business Development Centers
MPTAC or PTAC	Maine Procurement Technical Assistance Center
AMLF	Agricultural Marketing Loan Fund
PMIF	Potato Marketing Improvement Fund

Appendix C – Programs Identified for Evaluation

Economic Development Programs

- Department of Economic and Community Development
  - Certified Media Production Tax Credit
  - Economic Development Program - FEDERAL
  - Maine Tourism Marketing Promotion Fund
  - Community Enterprise Grant Program - FEDERAL
  - Maine International Trade Center
  - Downtown Revitalization Grant Program - FEDERAL
  - Business Ombudsman
  - Communities for Maine's Future
  - Loring Development Authority
  - Maine Technology Centers
  - Brunswick Naval Air Station Job Tax Increment Financing
  - Maine Made - Maine Products Marketing Program
  - Municipal Tax Increment Financing
  - Maine Micro-Enterprise Initiative Fund – INACTIVE/CLOSED
- Department of Economic and Community Development/ Maine Revenue Services
  - ETIF
  - Pine Tree Development Zones
- Maine Revenue Service (MRS)
  - Business Equipment Tax Reimbursement
  - Sales Tax Exemptions (Manufacturing Machinery , Equipment and Tangible Personal Property)
  - Sales Tax Exemptions (Fuel and Electricity for Manufacturing)
  - Business Equipment Tax Exemption
  - Shipbuilding Facility Credit
  - Sales Tax Exemptions (Products Used in Agricultural and Aquaculture Production, and Bait)
  - Sales Tax Exemptions (Commercial Agriculture, Commercial Fishing, and Commercial Wood Harvesting Machinery and Equipment)
  - Jobs and Investment Tax Credit - INACTIVE/CLOSED
  - Credit for Rehabilitation of Historic Properties
- Finance Authority of Maine (FAME)
  - Commercial Loan Insurance Program
  - Economic Recovery Loan Program
  - Maine Seed Capital Investment Tax Credit
  - Regional Economic Development Revolving Loan Program
  - Linked Investment Program for Commercial Enterprises

  - Maine New Markets Capital Investment Program
  - Linked Investment Program for Agriculture
- Department of Economic and Community Development/ U.S. Department of Labor
  - Maine Manufacturing Extension Partnership (MEP)
- Small Business Administration/ Department of Economic And Community Development
  - Small Business Development Centers (SBDC)
- Rural Development Authority
  - Commercial Facilities Development Program
  - Speculative Industrial Buildings Program
- Maine Community College System
  - Maine Quality Centers
- Department of Defense
  - Maine Procurement Technical Assistance Center (PTAC)
- Department of Agriculture
  - Agricultural Marketing Loan Fund
  - Maine Farms for the Future Grants
  - Potato Marketing Improvement Fund
  - Agricultural Development Grant Program

Research and Development Programs

- Department of Economic and Community Development
  - Cluster Initiative Program (MTI)
  - Development Loans (MTI)
  - Seed Grant Program (MTI)
  - Equity Capital Fund (MTI)
  - TechStart Program (MTI)
  - Phase 0 and Phase II SBIR Application awards plus TAP support (MTI)
  - North Star Alliance Cluster Award Matching Fund (MTI) – INACTIVE/CLOSED
  - Maine Technology Asset Fund (MTI)
  - Marine Research Fund (MTI)
  - Maine Biomedical Research Fund (MTI)
- Maine Revenue Service (MRS)
  - High-Technology Investment Tax Credit – INACTIVE/CLOSED
  - Sales Tax Exemptions (Machinery and Equipment for Research)
  - Super Credit for Substantially Increased Research and Development
  - Research Expense Tax Credit
- Finance Authority of Maine (FAME)
  - Maine Economic Development Venture Capital Revolving Investment Program (VCRIP)
- Center for Law and Innovation - University of Maine Law School
  - Maine Patent Program

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
Certified Media Production Tax Credit	Economic Development	A media production company engaged in a media production that is certified by the Department of Economic and Community Development is allowed a credit equal to the Maine income tax related to the income from the certified media production. The credit may not reduce the entity's tax liability below zero and unused credit amounts may not be carried over to prior or future years.	Encourage the creation of production related jobs in Maine, improve the general economy of the State, and attract visual media productions to the State	General Fund	Tax Reimbursement	Production companies and companies serving an ancillary function to production companies
Economic Development Program - State-wide implementation of federal program	Economic Development	The Economic Development Program provides gap funding in the form of grants and loans for communities to assist businesses in the creation/retention of quality jobs for low and moderate-income persons.	Create quality jobs for low and moderate-income persons	Federal Funds - CDBG Money	Grants and Loans	Communities receive funds and assist businesses
Maine Tourism Marketing Promotion Fund	Economic Development	To create and implement programs to stimulate and expand the travel industry within the tourism regions while strengthening the State's image by coordinating the promotional efforts of private industry and the Office of Tourism. To support development of special events that attracts visitors to Maine and provides impact on multiple regions.	Statutory-must be used for regional marketing promotion and regional special events promotion	Minimum of 10% of the Tourism Marketing Promotion Fund (sub-section 2 of section 13090-K)	Grant that requires specific level of matching funds	Eight official regional tourism marketing organizations and two special events groups each year
Community Enterprise Grant Program - State-wide implementation of federal program	Economic Development		Assist small and micro-businesses and revitalize downtown business districts	Federal Funds - CDBG Money	Grants	Communities and micro-enterprises
Maine International Trade Center	Economic Development	MITC offers global exposure to Maine's small and medium-sized businesses that want to succeed in international markets. MITC's staff helps businesses with a range of issues, provides technical trade assistance and trade education workshops, and organizes international trade show booths and trade missions to help SMEs develop export sales. MITC also runs the Invest in Maine and Study Maine international business attraction and student attraction programs.	Enhance the competitive advantage of state businesses desiring to compete in the international market and to attract new international businesses and international students to the state	State General Fund and private sector match	Technical Trade Assistance and International Business Attraction	Maine small and medium sized businesses engaged in international business
Downtown Revitalization Grant Program – State-wide implementation of federal program	Economic Development	The Downtown Revitalization Grant Program provides funds for communities to implement comprehensive, integrated and innovative solutions to identified problems facing their downtown districts. These downtown revitalization projects must be part of a strategy that targets downtown service and business districts and will lead to future public and private investment.	Encourage public and private investment in downtown services and business districts	Federal Funds - CDBG Money	Grants	Communities
Business Ombudsman	Economic Development	A program that provides quick access to information about local and state business assistance programs, Maine's regulatory requirements and a host of other business-related issues.	Assist new and existing businesses with start-up and expansion	State General Fund	Business Assistance	Businesses
Communities for Maine's Future	Economic Development	Establishes a dedicated, non-lapsing fund for the rehabilitation, revitalization and enhancement of downtowns, village centers, and main streets in the State.	Assist and encourage communities to revitalize and to promote community	State General Funds	Grants	Communities

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
			development and enhance projects			
Loring Development Authority	Economic Development	The Loring Development Authority provides businesses with assistance needed to address concerns and meet the due diligence and business research, development and operation requirements.	Support economic development at the former Loring Air Force Base	State General Fund	Business Assistance	Businesses Investing in former Loring Air Force Base Property
Brunswick Naval Air Station Job Tax Increment Financing	Economic Development	The Brunswick Naval Air Station Job Tax Increment Financing program reimburses Midcoast Regional Redevelopment Authority and Southern Maine Community College 50% of the personal income tax withholdings of net new jobs created at the former Brunswick Naval Air Station. The program is in effect from 2011 to either 2030 or when 5,000 jobs have been created within the base area, whichever comes first.	Provide a funding source for the Midcoast Regional Redevelopment Authority and the Brunswick campus of Southern Maine Community College	State Income Tax Withholdings	Tax Reimbursement	Midcoast Regional Redevelopment Authority and the Brunswick campus of Southern Maine Community College
Maine Made - Maine Products Marketing Program	Economic Development	The Maine Products Marketing Program builds recognition for hundreds of Maine made products, their producers, and Maine's industries in general. MPMP also provides marketing assistance through the Business Ombudsman Program and works to expand market opportunities for Maine's producers.	Promote Maine products and Maine as an investment opportunity	State General Fund	Marketing Assistance	Qualified Maine producers
Municipal Tax Increment Financing	Economic Development	Tax Increment Financing is a flexible finance tool used by municipalities, towns, plantations, and the Unorganized Territory to leverage new property taxes generated by a specific project or projects within a defined geographic district. Any portion of the new taxes can be used to finance public or private projects for a defined period of time up to 30 years.	Provide new employment opportunities; improve and broaden the tax base; and improve the general economy of the State	Local Property Taxes	Project Financing	Municipalities are eligible entities and may negotiate/execute reimbursement agreements with companies or developers.
Maine Micro-Enterprise Initiative Fund - INACTIVE/CLOSED	Economic Development	The Maine Microenterprise Initiative Fund is established as a non-lapsing fund and consists of money appropriated to it by the Legislature from the General Fund and eligible investment earnings from fund assets to encourage micro-enterprise growth in Maine.	Provide grants to community-based organizations to aid them in providing technical assistance and training to microenterprises	State General Fund	Grants	Community based organizations providing technical and training assistance to small business
ETIF	Economic Development	For-profit, non-retail, non-utility businesses adding a minimum of five net new Maine jobs within a two-year period may be eligible for Maine's Employment Tax Increment Financing. Under the ETIF program, businesses are reimbursed from 30% to 80% of their new employees' Maine income tax withholdings for up to 10 years. To qualify, new employees must receive an annual income greater the county's per-capita personal income, and be provided access to group health insurance and an Employee Retirement Income Security Act (ERISA)-qualified retirement program.	Encourage the creation of net new quality jobs in Maine, improve and broaden the tax base and improve the general economy of the State	State Income Tax Withholdings	Tax Reimbursement	Maine businesses

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
Pine Tree Development Zones	Economic Development	Works with and enhances existing programs for specific businesses meeting economic and geographic criteria. Benefits: Corporate Income Tax Credit of up to 100% for first 5 years and up to 50% for next 5 years; Insurance Premiums Tax Credits on the same schedule (financial services sector only); Personal Income Tax Reimbursement up to 80% for 10 years (ETIF); Sales and Use Tax Exemption up to 100% for 10 years on new personal property; Sales and Use Tax Reimbursement up to 100% for 10 years on new tangible property purchases to be permanently incorporated into existing real estate; and reduced Electricity Rates.	Provide new and improve existing employment opportunities; improve and broaden the tax base; and improve the general economy of the State	State General Fund	Tax Credits, Tax Reimbursements, and Rate Reductions	Maine manufacturers; financial services, biotechnology, aquaculture, composite engineering; marine, environmental, advanced forest and agricultural, information technology sectors
Business Equipment Tax Reimbursement	Economic Development	Qualified business equipment first subject to property tax assessment on or after April 1, 1996, the program reimburses local property taxes paid on qualified business property. To qualify, qualified business property must have been first placed in service in Maine after April 1, 1995.	To encourage capital investment by businesses in Maine and remove disincentives to growth.	State General Fund	Tax Reimbursement	Maine Business
Sales Tax Exemptions (Manufacturing Machinery, Equipment and Tangible Personal Property)	Economic Development	Sales of machinery and equipment used by the purchaser directly and primarily in the production of tangible personal property for later sale or lease and in the generation of radio and televisions broadcast signals by broadcast stations are eligible for a sales tax exemption. In addition items consumed or destroyed directly or primarily in production, and repair and replacement parts for qualified production equipment are exempt from sales tax.	Support manufacturing in Maine	State General Fund	Sales Tax Exemption	Maine Manufacturers
Sales Tax Exemptions (Fuel and Electricity for Manufacturing)	Economic Development	Manufacturers are exempt from paying 95% of the sales tax on fuel and/or electricity used in the manufacturing operation.	Support manufacturing facilities in Maine	State General Fund	Sales Tax Exemption	Maine manufacturers
Business Equipment Tax Exemption	Economic Development	Qualified business equipment first subject to property tax assessment on or after April 1, 2008 will be exempt from property taxes. The State is required to reimburse municipalities for property revenue loss according to the following schedule: 100% in 2008, 90% in 2009, 80% in 2010, 70% in 2011, 60% in 2012, and for 2013 and subsequent years, 50%. Alternative reimbursement may be chosen by municipalities with business property exceeding 5% of total taxable value.	Encourage capital investment by businesses in Maine and remove disincentives to growth	State General Fund	Tax Exemption	Maine Business
Shipbuilding Facility Credit	Economic Development	Tax credit for up to $3 million annually in state income taxes deducted and withheld from employees of shipbuilding facilities with at least 5,000 employees. Beginning July 1, 1999, available credit increases with number of employees up to $3.5 million and 7,000. Beginning July 1, 2003, decreasing credit is available down to $2.625 for 3,500 to 4,000 employees.	Encourage major investments in shipbuilding facilities in Maine and the preservation of substantial numbers of jobs, preserve numerous opportunities for jobs for Maine people, to make Maine more competitive in the shipbuilding industry and thus	State General Fund	Income Tax Credit	Large-scale Maine shipbuilders with over 5,000 Employees

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
			ensure the preservation and betterment of the economy of the State for the benefit of its people			
Sales Tax Exemptions (Products Used in Agricultural and Aquaculture Production, and Bait)	Economic Development	Sales tax exemption on sales of feed, hormones, pesticides, antibiotics and medicine for use in aquaculture production and sales of bait to commercial fishermen; sales of seed, fertilizers, defoliants and pesticides, including, but not limited to, rodenticides, insecticides, fungicides and weed killers, for use in commercial agricultural production; sales of breeding stock, semen, embryos, feed, hormones, antibiotics, medicine, pesticides and litter for use in animal agricultural production and sales of antiseptics and cleaning agents used in commercial animal agricultural production, including the raising and keeping of equines.	Provide funding to agricultural, aquaculture, and commercial fishing industries through a sales tax exemption.	State General Fund	Sales Tax Exemption	Qualifying Maine commercial agriculture and aquaculture businesses.
Sales Tax Exemptions (Commercial Agriculture, Commercial Fishing, and Commercial Wood Harvesting Machinery and Equipment)	Economic Development	Sales tax is refunded to any person, association of persons, firm or corporation that purchases electricity, or that purchases or leases depreciable machinery or equipment, for use in commercial agricultural production, commercial fishing, commercial wood harvesting or commercial aquaculture production.	Provide financial support to commercial agriculture, aquaculture, wood harvesting and fishing	State General Fund	Sales Tax Exemption	Commercial fishermen, farmers, aquaculturalists, and wood harvesters
Jobs and Investment Tax Credit - INACTIVE/CLOSED	Economic Development	The Jobs and Investment Tax Credit (JITC) provides a credit of 10% of the investment of at least $5,000,000 in personal property that creates at least 100 new jobs within 2 years of the investment. Retail facilities are excluded from taking the credit. The JITC used in any one year is limited to the lesser of $500,000 or the tax liability of the taxpayer. Any unused credit may be carried forward for up to six years for a maximum credit claimed of $3,500,000.	Encourage industry to make substantial capital investments in Maine and an increase of at least 100 new jobs following the investment	State General Fund	Income Tax Relief	Maine Businesses investing at least $5 million in personal property and creating 100 new jobs over 2-year period
Credit for Rehabilitation of Historic Properties	Economic Development	This credit is available to taxpayers who qualify for the federal rehabilitation credit and those who would qualify for the credit if not for the "substantial rehabilitation" test. The credit is equal to 25% of qualified rehabilitation expenditures as defined by IRC Section 47. If an eligible rehabilitation project involves affordable housing, the developer may be eligible for a credit of 30% of qualified rehabilitation expenditures. The credit is limited to $5,000,000 per project and is refundable.	Enlist private funds for the rehabilitation of historic properties	State General Fund	Tax Credit	Taxpayers rehabilitating historic Maine properties
Commercial Loan Insurance Program	Economic Development	The Loan Insurance Program insures a portion of a loan made to a business by a financial institution. The two types of loan insurance include: pro-rata which covers a certain percentage of lender's loss after a default and liquidation, up to 100%; and	Help Maine businesses access commercial credit. The program insures a portion of a loan made by a financial	No funding unless loss, then FAME's Loan Insurance Fund	Loan Insurance - dollars distributed	Maine businesses subject to some guidelines

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
		leveraged which covers a certain percentage of lender's loss up to 25% of the loan amount at the time of default.	institution to the borrower			
Economic Recovery Loan Program	Economic Development	This program provides subordinate (gap) financing to assist businesses in their efforts to remain viable and/or improve productivity. From time to time, FAME utilizes funds in this program to address specific business community needs. Maine-based businesses that exhibit a reasonable ability to repay the loan and demonstrate that other sources of capital have been exhausted are eligible for loans up to $750,000. Loans up to $1,000,000 may be available if substantial public benefit is demonstrated and sufficient funds available.	Provide loans to businesses that do not have sufficient access to credit but demonstrate the ability to survive, preserve and create jobs, and repay the obligations	State Bonds	Loans	Businesses attempting to remain viable and/or improve productivity
Maine Seed Capital Investment Tax Credit	Economic Development	This program is designed to encourage equity and near equity investments in young business ventures, directly and through private venture capital funds. FAME may authorize State income tax credits to investors for up to 40%, or 60% in a high unemployment area, of the cash equity they provide to eligible Maine businesses. Investments may be used for fixed assets, research or working capital.	Encourage equity and near equity investments in young business ventures, directly and through private venture capital funds	State General Fund	Income Tax Credit	Investors owning less than 50% of a business located in Maine with annual gross sales of not more than $3 million
Regional Economic Development Revolving Loan Program	Economic Development	This program is designed to make loans through Maine's regional economic development agencies for the purpose of creating or retaining jobs. FAME makes disbursements to regional economic development agencies and the agencies in turn make loans to eligible borrowers. Amount any corporation may receive is limited to $3.5 million. Loans may not exceed $250,000 to a borrower or $100,000 for quality child care projects. Eligible businesses have sales under $5,000,000 or employ 50 or fewer employees, conducting business in specific categories.	Provide financial assistance to businesses needing assistance in order to create or retain jobs.	State Bonds	Grants to regional agencies	Businesses that have sales under $5,000,000 or employ 50 or fewer employees, conducting business in specific categories
Linked Investment Program for Commercial Enterprises	Economic Development	This program reduces a borrower's interest rate on a loan. Loans are approved and funded by lenders according to their own policies. The Maine State Treasurer makes a deposit at up to 2% below prevailing rate, provided similar discount is applied on the lender's loan to the business. Eligible entities are non-agriculture, for-profit Maine businesses with 20 or fewer employees and annual sales less than $2.5 million. Must be a manufacturer or have 70% of sales outside Maine and 50% owned by Maine residents. Loan proceeds are for real property, fixed assets, research or working capital and must retain one job for each $20,000 of deposited funds.	Reduce a borrower's interest rate on a loan.	Treasurer's Fund	Loan Interest Rate Reduction	Financial institutions receive money from the state to lower interest rates for non-agricultural, for-profit businesses located in Maine with 20 or fewer employees or annual sales of less than $2,500,000
Maine New Markets Capital Investment Program	Economic Development	The Maine New Markets Capital Investment Program provides refundable state tax credits of up to 39% to investors in qualified community development entities (CDEs) that reinvest in certain businesses in eligible low-income communities in Maine. The program is modeled after the federal New Markets	Attract business investment in low-income Maine communities	General Fund	Tax credits	Community Development Entities

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
		Tax Credit Program, and is administered by the Finance Authority of Maine, in cooperation with Maine Revenue Services and the Maine Department of Economic and Community Development.				
Linked Investment Program for Agriculture	Economic Development	This program reduces a borrower's interest rate. Loans are approved and funded by lenders according to their own policies. The Maine State Treasurer will make a deposit in the form of a Certificate of Deposit (CD) with the originating lender at up to 2% less than prevailing rate, provided similar discount is applied to the interest rate on the lender's loan to the business. An eligible business' principal source of income must derive from producing crops or raising livestock. Must be applied to an agricultural operating loan (for the purchase of seed, feed, fertilizer, chemicals, veterinary services, labor, production-related energy and/or other production), not loans for capital projects.	Make low-interest loans available to agricultural enterprises involved in cultivating soil, producing crops and raising livestock or their by-products. Loans are targeted to geographic areas of need	Treasurer's Fund	Loan Interest Rate Reduction	Maine Agricultural Businesses
Maine Manufacturing Extension Partnership (MEP)	Economic Development	The Maine MEP is a non-profit organization with a culture of innovation that leverages resources in the application of new ideas to clients, products and processes. The MEP is able to leverage a vast array of public and private resources and in makes these resources and services available to every manufacturing enterprise in the state. The Maine MEP is part of a nationwide network of technical, manufacturing, business specialists linked together by the US. Department of Commerce and the National Institute of Standards and Technology. The program is a resource for manufacturers to transform from a traditional to world-class organization. The program provides affordable, innovative solutions to problems facing today's manufacturing enterprises.	Guides manufacturers through enterprise-wide transformations, identifying product and process improvements, energy efficiencies, product innovations and new market opportunities that can improve the financial sustainability of Maine companies and promote the state's economic growth - This enables Maine manufacturers to expand their capacities and capabilities	State and Federal Funds; Fees for Service	Business services and workforce strategies tailored to small- to medium-size manufacturers	Maine manufacturers having less than 500 employees
Small Business Development Centers (SBDC)	Economic Development	The Maine Small Business Development Centers' mission is to engage it and others in development activities that contribute to the improvement of the economic climate for and the success of entrepreneurs and small businesses in the State of Maine. The Maine SBDC's focus is to assist in the creation, growth and the maintenance of viable small businesses and the jobs these businesses provide.	Assist in the creation of and the growth of viable small businesses and the jobs these businesses provide	Private, State and Federal Funds	Business Assistance	Maine entrepreneurs and small businesses
Commercial Facilities Development Program	Economic Development	The Commercial Facilities Development Program provides financial resources to assist in the development of new commercial facilities and the acquisition and redevelopment of nonproductive commercial facilities for subsequent return to productive use through sale or lease. The MRDA can serve as lender, principal developer, partner or investor in the acquisition of property and redevelopment of existing commercial properties. Investments for the program are	Restore or create job opportunities by serving as principal, partner, lender or investor: in the acquisition and redevelopment of nonproductive commercial facilities for return to productive use through sale or	Bond	Loans	Private or public entities developing new facilities or purchasing non-productive facilities

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
		available up to $500,000. Municipalities or other local entities must provide 25% of the funding provided by the authority. The authority may waive this requirement given a lack of local resources. Undeveloped land or personal property may be financed only as part of the overall development or redevelopment project.	lease; and in areas of economic need in the acquisition of property and development of commercial facilities for sale or lease into private productive use			
Speculative Industrial Buildings Program	Economic Development	The Speculative Buildings Program provides communities and their local development corporations with financial assistance in the form of loans for the construction and associated costs of speculative commercial and industrial buildings. Loans are available up to $500,000.	Create new employment opportunities; retain or improve existing employment; or improve the competitiveness of the occupant business	Bonds	Loans	Communities and Local Development Corporations
Maine Quality Centers	Economic Development	Maine's Community College System offers free training and education to qualified new and expanding businesses. Under this program, businesses – or consortia of small businesses – creating a minimum of eight new full-time jobs in Maine are eligible for customized recruitment and guaranteed fast-track training designed to employer specifications. An incumbent training offering is expected to be available in FY14.	Encourage and facilitate the creation of new jobs in the State by offering customized education and training programs at community colleges free to businesses seeking to create new jobs in the State	State General Fund	Workforce Training	Small businesses apply and employees receive the training
Maine Procurement Technical Assistance Center (PTAC)	Economic Development	The Maine PTAC is part of a nationwide network of Procurement Technical Assistance Centers that helps Maine small businesses obtain government contracts with the Department of Defense, other federal agencies, state and local governments and federal prime contractors.	Provide specialized and professional assistance to individuals and businesses wanting to learn about or actively seeking contracting and subcontracting opportunities, and/or performing contracts and subcontracts with Department of Defense, other Federal Agencies, or State and Local governments	State General Fund and Federal Funds	Technical Assistance	Maine businesses with a product or service the government can buy
Agricultural Marketing Loan Fund	Economic Development	This loan program offers a loan for either 75% or 90% of the total cost of a capital improvement project for the business. At a 5% interest rate, it can help agricultural enterprises making improvements save money. This program provides assistance to the design, construction or improvement of commodity and storage buildings and packing and marketing facilities; the purchase, construction or renovation of buildings, equipment, docks, wharves, piers or vessels used in connection with a commercial agricultural enterprise; the purchase of land in connection with development of new cranberry acreage; the purchase of land for irrigation reservoirs or to provide direct access to water for irrigation; the purchase of land necessary for	Provide assistance to agricultural enterprises in Maine	Bonds	Loans	Parties engaged in agricultural enterprises

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
		the start-up of a new agricultural enterprise; the expansion of an existing agricultural enterprise to comply with land use regulations; the development of a business plan; improvements to pastureland, including seeding and actions to promote rotational grazing; or as security for, payment due on any term loans insured by the Finance Authority of Maine to an eligible dairy farmer.				
Maine Farms for the Future Grants	Economic Development	This program provides grants of technical assistance to farmers developing business plans, and funds to help implement those plans. Eligibility is limited to farmers who own at least 5 acres of land in active agricultural production and have produced agricultural products commercially in the state for at least two years prior to application.	Provide selected farms with assistance in developing a detailed business plan that involves changes in the farm's operation to increase the vitality of the farm and investment money to help implement the plan	State General Fund, bonds, federal funds	Business Assistance and Grants	Farmer-landowners
Potato Marketing Improvement Fund	Economic Development	Funded through the Maine Department of Agriculture, Conservation and Forestry, this program provides low-interest financing to potato growers and packers to improve the quality and marketing of Maine potatoes. Funds may be used for new construction or improvements to storage and/or centralized packing facilities as well as for the acquisition of packing, sizing, washing and drying equipment. Funds may be used to fund programs and activities that improve the economic viability of the potato industry. Such improvements include irrigation equipment and water source development projects. The program also pays the administrative costs of processing loan applications and servicing and administering the fund and loans and grants made therein, to the extent that the costs exceed the fee for administrative costs. Loans are limited to 45%-55% of total project costs.	Provide assistance to potato farmers farming-related expenses, expansion, equipment, and industry related activities	Bonds	Loans	Any person or business engaged in growing, processing or marketing potatoes in Maine
Agricultural Development Grant Program	Economic Development	The Agricultural Development Grants assists farmers in assessing market potential of new ideas, increasing market promotion of existing businesses, or improving the adoption of new technology on the farm. At least 25% of the total project cost must be funded by the applicant and at least 10% must be from nonpublic sources.	Accelerate new market development, adoption of advantageous technologies and promotion of state agricultural products by state producers	Agricultural Marketing Loan Fund Interest	Grants	Anyone supporting agricultural products

Detailed R&D Program Descriptions

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
Cluster Initiative Program (MTI)	Research and Development	MTI's Cluster Initiative Program makes competitive awards up to $50,000 for feasibility and planning on a rolling basis and up to $500,000 semi-annually for collaborative initiatives that boost the strength and scale of Maine's high-potential technology intensive clusters.	Stimulate the growth of technology businesses and infrastructure in Maine	Appropriation from State General Fund	Grants	Collaborative projects led by non- or for-profit groups
Development Loans (MTI)	Research and Development	Up to $500,000 per project to support research and development of new products and services that lead to market, including prototype development and testing, patent applications, small scale manufacturing and scale up for manufacturing with limited production. Awarded three times per year. Match required. All projects must fall under one of Maine's seven technology clusters.	Support development of new technology products and services for commercialization in seven targeted technology sectors	State General Fund	Awards that require payback to MTI when technology is commercially successful.	Maine Businesses
Seed Grant Program (MTI)	Research and Development	MTI Seed Grants of up to $25,000 are offered three times a year to support early-stage research and development activities for new products and services that lead to the market. Funded activities may include activities such as proof of concept work, prototype development, field trials, prototype testing, pilot studies, or technology transfer activities.	Support early product development, commercialization, and business planning	State General Fund	Grants	Maine Businesses
Equity Capital Fund (MTI)	Research and Development	Investments in MTI-funded companies. Available with companies who have successfully commercialized their venture and who were previous recipients of MTI Development Loans or SBIR/STTR funding.	Help bridge the gap for companies seeking to raise equity capital needed to bring new products and services to market - intended to help ventures secure additional private equity capital	State General Fund	Co-investments with individual and/or institutional investors.	Maine businesses
Maine Technology Centers	Research and Development	Each of Maine's seven targeted technology sectors has its own incubation center. The incubation centers provide critical early-stage technical, business, administrative and financial resources and training for participating firms.	Permit early-stage development of technology-based businesses while minimizing or eliminating debilitating overhead expense	State General Fund	Technical Assistance	Businesses in one of Maine's seven targeted industries
TechStart Program (MTI)	Research and Development	This is offered to individuals and companies across Maine looking to develop their new ideas and products. Grants are awarded up to twelve times each year, for up to $5,000 per project. Funds must not be readily available from another service provider. Grants may support specific activities such as business plan development, intellectual property filings, market analysis, or planning and preparation activities related to Federal SBIR/STTR Phase I grants or Federal Broad Agency Announcement for technology development. Projects must have defined outcomes and endpoints for the specifically funded scope of work not to exceed six months. Requires a 1:1 cash or approved in-kind match.	Support early product development, commercialization, and business planning	Appropriation from State General Fund	Grants	Maine Businesses
Phase 0 and Phase II SBIR Application awards plus TAP	Research and Development	Up to $5,000 to support competitive federal Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) proposal submissions from Maine applicants.	Help prepare proposals for SBIR/STTR awards	State General Fund	Grants	Maine businesses

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
support (MTI)		Match required. Proposals accepted and reviewed on a rolling basis.				
North Star Alliance Cluster Award Matching Fund (MTI) - - INACTIVE/CLOSED	Research and Development	This Fund is available to eligible companies and non-profit organizations in Maine's boatbuilding, composite materials and related marine trade industries that win MTI seed grants, development awards and cluster enhancement awards. Resources can be used for a co-investment of up to 75% of an eligible MTI awardees' seed grant, development award, or cluster enhancement award. Program is closed.	Further the development and commercialization of new technologies in these industries (boatbuilding, composite materials, marine trade industries), thus boosting the competitiveness and growth of Maine companies in these sectors and creating quality jobs for Maine people	Federal WIRED Grant	Grants	Businesses in select industries on coastal Maine
Maine Technology Asset Fund (MTI)	Research and Development	The Maine Technology Asset Fund was a competitive award program funded by Maine State bond proceeds. The awards must be used to fund capital and related expenditures supporting research, development and commercialization projects that will lead to significant economic benefits for Maine. The program is no longer accepting applications.	Fund capital and related expenditures to support research, development and commercialization projects that will lead to significant economic benefits to Maine	State Bond Funds	Awards. Some may require repayment.	Maine private and public universities, non-profit organizations and private organizations and in seven targeted state technology sectors
Marine Research Fund (MTI)	Research and Development	Awards from $25,000 up to $500,000 to conduct high-quality, scientifically rigorous marine research programs that will have positive economic impact on the state of Maine. Private Maine companies may collaborate with these institutions as partners in proposed projects. Fund is now closed as all funds have been awarded. MTI awarded approximately $6 million of state bond funds since 2002.	Support research and development in Maine	State Bond Funds	Grants	Non-profits, laboratories, and academic organizations conducting marine research; private businesses in partnership
Maine Biomedical Research Fund (MTI)	Research and Development	Grants available to eligible Maine institutions that conduct competitive, scientific biomedical research related to the biology, causes, diagnosis, treatment, control and prevention of physical and mental diseases or impairments afflicting humans. Program is closed.	Promote economic development and job growth and support non-profit laboratories in Maine that perform peer reviewed biomedical research	State General and Bond Funds	Grants	Non-profits, laboratories, and academic organizations conducting marine research; private businesses in partnership
Sales Tax Exemptions (Machinery and Equipment for Research)	Research and Development	Sales of machinery and equipment used by the purchaser directly and exclusively in research and development are eligible for a sales tax exemption including the application of technologies such as recombinant DNA techniques, biochemistry, molecular and cellular biology, immunology, genetics and genetic engineering, biological cell fusion techniques and new bioprocesses using living organisms or	Support research and development in biotechnology applications	State General Fund	Sales Tax Exemption	R&D and Biotechnology Companies

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
		parts of organisms to produce or modify products, improve plants or animals, develop microorganisms for specific uses, identify targets for small-molecule pharmaceutical development, transform biological systems and useful processes and products or to develop microorganisms for specific uses.				
Super Credit for Substantially Increased Research and Development	Research and Development	The credit is available for taxpayers who qualify for the research expense tax credit and is based on qualified research payments exceeding 150% of the average for the three taxable years immediately preceding June 12, 1987. The credit is limited to 50% of the tax otherwise due after all other credits. Further, the credit cannot reduce tax liability below the amount due the previous year after credits. The credit cannot be carried back, but can be carried forward for up to five years.	Provide incentive for businesses to substantially increase investment in research and development in Maine	State General Fund	Income Tax Credit	Qualified Maine businesses making research investments in Maine
High-Technology Investment Tax Credit- INACTIVE/CLOSED	Research and Development	The credit is based on the adjusted basis of eligible equipment. Limitations: the credit is limited to high-tech equipment purchased (or leased) by businesses engaged primarily in high-tech activities. The credit cannot reduce tax to an amount below the previous year's tax after credits. The credit cannot be carried back, but can be carried forward for up to five years.	Provide an incentive for businesses to invest in equipment that is used in high-technology business activity	State General Fund	Income Tax Credit	Manufacturers of computer equipment, accessories, and components and providers of internet service and advanced telecommunications
Research Expense Tax Credit	Research and Development	The credit is based on a percentage of the federal credit for increasing research activities. The credit is equal to 5% of the excess qualified research expenses over the previous three-year average plus 7.5% of the basic research payments under IRC § 41(e)(1)(A). For corporate taxpayers, the credit is further limited to 100% of the first $25,000 in tax liability plus 75% of the tax liability in excess of $25,000. For taxpayers other than corporations, the credit is limited to the taxpayer's liability. The credit cannot be carried back, but can be carried forward for up to 15 years.	Encourage Maine businesses to invest in research and development in Maine	State General Fund	Income Tax Credit	Qualified Maine businesses making research investments in Maine
Maine Economic Development Venture Capital Revolving Investment Program (VCRIP)	Research and Development	Designed to allow the State to invest as an equal partner with others in eligible private venture capital funds to support emerging and early-growth businesses in Maine. It is intended to utilize professional fund managers to increase the probability of successful investments in recipient companies. It is available only to established venture capital funds with a strategy for the creation and retention of jobs in Maine through: investments in Maine high-growth businesses; a marketing and technical assistance plan; appropriate monitoring of its investment; a technical assistance program to assist the businesses in which it invests; a process for complying with proposed measurement and goals.	Provide venture capital to businesses needing assistance to create or retain jobs	FAME Economic Revolving Loan	Venture Capital	Established venture capital funds with a strategy for the creation and retention of jobs in Maine

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	Target Recipients
Maine Patent Program	Research and Design	Helping Maine inventors and small businesses understand how to identify and protect their intellectual property. A resource for information and education on the patent process and other means of intellectual property protection. Inform what needs to be done to obtain and maintain legal rights in ideas, if possible, and to provide assistance with the patent process to those who qualify. Maine Patent Fund is established as a revolving, non-lapsing fund.	Support the commercialization and manufacturing of innovations in the State by providing education and assistance with the patent process of the United States Patent and Trademark Office to companies, inventors and entrepreneurs in the State	State Funds	Technical Assistance	Maine inventors and small businesses

Appendix D – Interviews

Public Sector Interviews

The following program administrators and public sector officials were interviewed to both obtain data on their programs and also gain insight as to how the programs were being used. The officials also provided observations on ways in which the programs could be enhanced or altered to provide better outcomes both for those aided and for the overall State economy.

Public Sector Interviews

Name	Agency/Organization
Deborah Johnson	Maine Department of Economic and Community Development
Carolann Ouellette	Maine Department of Economic and Community Development
Laura Santini-Smith	Maine Department of Economic and Community Development
Karen Carberry-Warhola	Maine Department of Economic and Community Development
Janine Bisaillon-Cary	Maine International Trade Center
Bruce Wagner	Finance Authority of Maine
Jim McGowan	Maine Community College System
Sally Garand	Maine Rural Development Authority
Muriel Mosher	MEP
Larry Robinson	MEP
Brian Whitney	Maine Technology Institute
Jake Ward	University of Maine
Jason Brown	Business Answers Program/Maine Department of Economic and Community Development
Kimberly Lindlof	Central Maine Growth Council
Michael Allen	Maine Revenue Services
Ken Bloch	Procurement Technical Assistance Center
Mark Delisle	Maine Small Business Development Centers
Mike Aube	Eastern Maine Development Corporation
David Cole	City of Ellsworth

Additional Informal Phone Conversations

Name	Agency/Organization
Micki Sumpter	City of Ellsworth
Jaimie Logan	Maine Department of Economic and Community Development
Mike Hershey	Maine Department of Economic and Community Development
Diane Jackson	Maine Department of Economic and Community Development
Peter DelGreco	Maine and Company
Ben Brown	Maine Technology Institute

Private Sector/Company Interviews

ICA requested interviews from 52 companies and entities in total as part of the company interview request. 31 entities responded and granted us interviews. 10 companies responded to the request in some way but we were unable to schedule interviews. 11 companies did not respond at all.

Direct Quotes

"*RockStep is a Maine technology startup that embarked on a journey with great ideas and a great team, but without a knapsack full of business knowledge.*

When we began to work with MTI, they became part of our team. They are not just a resource for funding, they are a great group of smart people, eager to help, and an excellent resource for business guidance.

Maine has many great support and networking services for startups, such as MCED and TopGun. These organizations should be supported by the state and expanded; they are well run and essential. However, to build a strong innovation economy, Maine needs the whole startup eco system, which includes equity financing, and startup accelerators (such as MassChallenge).

Maine lacks the equity financing to support scalable technology businesses. There are very few venture capital firms in Maine; and there are none, that we are aware of, that focus on technology or life sciences. Raising over $1M in equity financing in Maine is very difficult for a technology startup. The VC firms in Boston (were it is possible to raise many millions of dollars) want the companies in their portfolio to have an address south of our border. This makes it difficult to grow our innovation economy. Our company has established a business address in Cambridge Mass to help us navigate the world of equity financing." --- Rockstep

"*Maine Technology Institute has been critical to our ability to grow, attract out-of-state capital and talent, and provide bright young Mainers with technology-driven work opportunities. MTI provides critical funding, but also advice, mentorship, and connections to other key resources enabling young companies to build their skills, find their market, and execute effectively. The entrepreneur in residence, CEO dinners, and close connection to MCEDs programs are especially helpful.*" ---- Pika Energy

"*The technology and expertise that will be housed in The Jackson Laboratory's Center for Biometric Analysis, will assist researchers and medical professionals in their efforts to improve the prevention, treatment and cures of human disease. Access to competitively awarded, matching funds administered by the Maine Technology Institute, make critically important projects like the Center, possible in Maine.*" ---- Quote from Edison Liu, President and CEO on JAX Center for Biometric Analysis – $10m General Fund Bond Appropriation, administered by MTI

"*Matching funds from the Maine Technology Asset Fund will enable the Laboratory to test and validate an innovative concept and state-of-the-art automation equipment at our new facility in Ellsworth. The new vivarium will create jobs in Maine and confirm JAX position as an industry leader for the foreseeable future.*" ---- Quote from Executive Vice President and COO Charles E. Hewett, Ph.D. on JAX Ellsworth Vivarium Pilot Project - $1.74m grant from MTAF and administered by MTI

Workforce Concerns:

Most of the findings and suggestions orient around employers having difficulty finding employees to fill positions ranging from traditional manufacturing to high tech job opportunities.

Workforce Concerns Findings	Suggestion
Real need for trained workforce, especially when the hotels are importing staff on workers visas because they can't find qualified or dedicated workforce in the area.	Dedicate state funding to help develop workforce, especially for basic business skills (how to use Microsoft software, write emails, appropriately answer the phone, etc) and blue collar skills (especially manufacturing related skills).
Need to expose students to production jobs.	Expose students at High school and college level to production jobs through intern programs, science challenges, college, etc. Companies could coordinate through high schools for facility tours and offer college scholarships for specific fields to graduating students.
Issue with drug testing, legal marijuana, and clients requiring workers to pass a drug test.	Specifically the use of Marijuana needs to be regulated federally rather than state by state because it is an issue when clients require subcontractor employees to pass drug tests. The state should lobby for federal regulation.
Drug use overall is a huge problem in rural Maine.	No specific suggestions were mentioned or implied during the interview process.
Affordable Care Act cost concern - when a company reaches more than 50 people the cost becomes based on the community health statistics instead of the company workforce statistics which makes it really expensive.	Several companies identified this concern alone as the reason they have no desire to grow beyond 50 employees. Put pressure at the state level to change this.
Give back to the community and gets kids thinking about their career path at a young age.	Work with the college or university to allow students to get class credit for working as an intern with a real company.
Competition in more rural Maine to hire employees in certain fields. Sometimes the students are hired even before they finish High School at higher salaries than rural Maine can hope to match.	For those employees available, it is hard to find good and qualified employees. Foster technical skill growth and implement programs designed to help workforce development either from the student end or from the OTJ training end.
It is difficult to find staff, especially with a molecular biology background.	Work to reinstate a Master's level curriculum such as the Applied Immunology and Molecular Biology program that was cut from USM. Please put it in southern Maine where the companies are, not Orono.
There are not enough graduates in the paper engineering field to fill open positions.	Focus on raising awareness around this concern.
Shortage of truck drivers.	This is a US wide issue. One suggestion is to allow students to start driving right at 18, but the insurance companies will not generally insure a driver unless they are 25.
Many of the industrial parks outside of New England are beautiful and include amenities. Those states generally have a much easier time attracting employees.	Improve the look and feel of industrial parks as a recruiting tool. At very least make sure the roads are well paved and the building facades look presentable.
Blackstone intern program is great.	Keep it alive and expand it! Advertize because people with any

Workforce Concerns Findings	Suggestion
	connection to Maine can be part of this program. Also please bring back the workforce training fund in its entirety.
Portland is where all the high tech companies are and where the young professionals want to be and yet we are not educating our students in high tech fields in Portland. "I have been to Boston 200 times and Orono maybe twice."	Need a good research university in Portland. Maine needs one "Tech Hub" area for high tech companies to allow those companies to have a recognizable R&D location and access to greater angel funding outside the state of Maine. Suggestion is that the Portland/ Brunswick area be the "Tech Hub" for Maine.
Perception is that wages are "too low" for employees thinking of moving to Maine.	Address the perception problem to show that salaries are lower, but so are the costs of living. That combined with a high quality of life could be a great selling point for Maine.
Companies in downtown Portland have an easier time attracting and retaining employees than those outside Portland.	Young employees are often attracted to urban cores. Companies should consider the higher cost of doing business in Portland especially if they are having difficulty hiring young employees.
Many college students move away to go to school and start careers.	But some move back to be close to family and/or to raise their kids in a safe environment. Market Maine to this population.
Consider expanding the Opportunity Maine program to include employees attracted to the State.	This program could offer the same benefits for attracted employees that live and work in the state even if they went to school outside of the state. This would help companies attract employees for positions that are difficult to fill. Consider expanding this aspect of the program to include Masters and or Doctorate degrees.

The state should also consider expanding the Opportunity Maine program (or develop a variation of it) to help with employee attraction. One option could, for example, allow recruited employees 50% to 100% of the tax credit offered in the regular Opportunity Maine program as long as they are making payments on student loans and continue to live and work in the State of Maine. If companies still report difficulties hiring employees for positions that require Masters or Doctorate degrees, perhaps the state could consider expanding the program to include targeted Master's and Doctorate degrees.

Incentive Program Concerns

Most companies used at least one incentive program and many used multiple programs from multiple organizations. However, the responses were more focused on PTDZ and MTI since those were the two program recipient lists we were able to obtain under a confidentiality agreement.

Incentive Program Findings	Suggestion
The incentive programs on the state's website are really hard to navigate to understand.	Redo the website so the programs are easy to understand (requirements, application forms), crosslink with other incentive programs, and guide the reader through so they understand how all the programs interact.
Incentive programs helped them grow and in some cases sustained them through a bad year.	Keep the programs going and keep them consistent. Businesses make decisions based the incentive money and delivering on their end of the agreement. Don't remove PTDZ.
Have the incentive programs work together and have one reporting tool for all programs.	It is very hard to understand which programs a company is eligible for. Companies using multiple programs have to report differently for each one.
For each incentive program, have clear requirements listed and a clear evaluation process described.	Improve program traceability and make sure this information is posted online.
Concerns about having DECD staff help PTDZ recipients	This is only as good as the knowledge of the staff member. Suggest

Incentive Program Findings	Suggestion
find other programs they might be eligible for.	having a concierge service with a real sales force tracking type software to track requests and make sure companies are taken care of.
Real need for mid-sized companies for assistance navigating the government systems (incentive programs, permitting process, grant writing, etc).	Offer programs (possibly through the university system) to help small companies navigate difficult government processes such as workers compensation claims, incentive program applications, audits, and reporting, etc.
Small companies in small towns really make a difference, especially since most of Maine is rural.	Encourage and support small companies in rural towns because they can make a huge difference in a town of 1,000 people.
Programs are bloated and difficult to navigate.	Have someone available to assist with incentive program applications, especially for the workforce training programs.
Even "old" manufacturing processes benefit from new technology. CNC machines can be used to help operators do their job more accurately with less waste.	Continue to support programs that both allow a company to purchase high tech manufacturing equipment and train the operators in the college system.
Incentive programs offered are really complicated to understand.	Could Business Answers program be revamped to truly act as a concierge service and business tracking program all at once?
Food hubs are tremendously helpful for the agricultural field as well as for those who use them. Food Hubs aggregate excess food and give/sell to schools, hospitals, food banks, etc.	Build a facility for the food hubs to operate. The facilities are cost prohibitive to build but relatively inexpensive to run.
We (as companies in Maine) are competing with each other where we could instead be playing off each other's strengths, learning from each other, and supporting the industry as a whole.	Support networking opportunities within different industries.
Many companies already located in Maine are struggling and have no awareness of incentive programs that might be available to them.	Get Companies to market or talk about the incentive programs with other companies in their networks.
Save the tech programs at the colleges.	These programs are very valuable to the business community. Subsidize the tech programs so they don't disappear.
Companies that cut their power usage from introducing efficiencies, leaving the heat lower, or other means are not rewarded. The rebates are for using more power not less.	Introduce an energy efficiency program for those who are being environmentally responsible.
While Maine Quality Center training funds help, they don't address retraining of incumbent workers.	Reinstate the Governors training program or similar to address this issue. Please note that certification programs should be supported, not just 2 and 4 year college programs.
Companies need stability in the incentive programs to realize their full growth potential.	Continue PTDZ among other programs.
R&D state tax credit was lost because no one in the legislature advocated for it.	Someone needs to advocate for R&D in Augusta.
There are concerns about distributing the incentive funding evenly.	Consider introducing a cap to incentive programs for large companies.
MITC was stumped by some of the international trade issues. International laws are inconsistent and difficult to understand.	No solution was suggested for this concern.
Incubators are a great way to keep companies strong or move great employees from a failing company to a successful one.	Pay attention to incubators and grow them so they are more like Cambridge Innovation Center.
Access to state funding has opened other matching funding opportunities.	Take this into account when evaluating the effectiveness of the state programs.

Incentive Program Findings	Suggestion
The MTAF application process is very helpful and fair.	Use MTAF application process as a model for all programs that similarly distribute funding.
FAME interaction was positive.	Should be more risky than what is allowed by the SBA program – they offer no better access to funding or additional value than the federal program.
If MTI went away, it would be horrible for tech companies in Maine.	Support and expand MTI.
Can be difficult to repay MTI Development Loans on time - hit with a HUGE interest rate if you can't quite repay in time.	It really makes you think about your commercialization date and (hopefully) the company has buyers already lined up and interest generated. Consider offering a year or two of lower interest rate before hitting the company with a 30% rate.
Development loan shows up as debt to other angel investors before commercialization.	Is there a way we can change how the Development Loan appears before commercialization?
Being a first time entrepreneur, it is difficult to understand the financial ramifications of everything.	Could MTI or another entity offer a program to teach first time entrepreneurs the financial things they need to know and understand (such as equity financing) so they can be successful? Consider expanding the Top Gun program to cover this.
The incubators are so spread out throughout the state and none of them offer as much help or are well enough known in the high tech community to be helpful.	Consider consolidating the high tech incubators into one place and one world class facility and market that facility so simply being a part of that facility will help a company have access to funding.
MTI Top Gun and entrepreneurial access programs are really helpful to small tech companies.	Continue to fund and support these programs. Expand the programs to help entrepreneurs write grant requests, how to best get angel funding, and how to navigate the financial issues around developing a company.
Concern about the riskiness of MTI programs – some think the programs should be riskier than the state can do itself, and others think MTI invests in too many risky opportunities.	It has also been stated that a company that receives funding once is more likely to get it again. Some feel there are personal favorites in the award process. Companies also like to understand why they fail if they are not accepted into a program.
PTDZ program tax rebate on equipment is very difficult to use.	Change process to submit once a month or once every three months instead of for every transaction.
Tax exemption portion of the PTDZ should be examined and modified in such a way that things like walkways connecting buildings are included just like other buildings and equipment.	Allow building and equipment tax deductions at the same rate whether they are being directly used by the new employee or not. Especially in the situation of a plow for winter snow - the removal benefits all employees no matter who is driving it.
PTDZ does not help owners of the company when they live out of state.	If the company is a sole proprietorship or similar, the tax benefits that the owners can claim are effective within the state. But if the owner resides in another state such as MA, the MA state taxes are higher since the ME taxes are lower. Make sure business owners understand this aspect of the PTDZ during the application process.
PTDZ does not work well for certain R&D companies where the test site itself does not pay employees directly out of that location.	Test sites can include a huge amount of capital investment but they may be in a place where a human can't work 8 hours a day such as underwater. Consider revising the PTDZ language to allow new employees to use an office in another location in the case of R&D text facilities.
PTDZ average salary is determined by county average but a single employer can skew the numbers within the county.	Consider a method of weighting the county salary against the overall state salary to fix this concern.
Significant confusion around position tracking with PTDZ which is causing companies to report incorrectly.	Everyone we spoke with who brought up this issue would prefer employee tracking rather than position tracking including state officials. This language needs to be clarified at a minimum

Incentive Program Findings	Suggestion
	potentially changed.
Companies would like to see a Maine Made incentive program to encourage companies to source inputs locally.	The program would encourage Maine companies to use local Maine suppliers for goods and services where Maine companies are comparable to those located outside of Maine.
Consider expanding the Opportunity Maine program to include employees attracted to the State. (Same recommendation as in the workforce section)	This program could offer the same benefits for attracted employees that live and work in the state even if they went to school outside of the state. This would help companies attract employees for positions that are difficult to fill. Consider expanding this aspect of the program to include Masters and or Doctorate degrees.

Business Attraction and Retention

Companies need stability in politics and regulations and the toxic situation in Augusta is not inspiring confidence in the business community. This was echoed by almost every company interviewed.

Business Attraction and Retention Findings	Suggestion
The state does not do a good job of supporting companies in the 20-100 employee range.	These companies need assistance navigating workers comp, assistance with healthcare decisions (as they grow from 49-51 employees), marketing assistance, grant writing assistance, branding guidance, etc. Companies recommended an incentive program to help with these pinch points.
Communicate with existing successful companies on a regular basis to make sure they are happy doing business in Maine.	These companies are getting regular calls from many other areas of the US to try and get them to move to another state. Some of these companies just want to get a regular call "from Augusta" to know they are an appreciated asset in the state.
Rest of the world will not easily give funding to a tech company with a Maine address, but it will if the company uses an address Massachusetts associated with the tech industry.	Build the image of Maine as a tech place, specifically the Portland/Brunswick area.
No specific company retention process in the State of Maine.	The state should check in with successful companies to make sure they are happy in Maine. The state should also focus on measures to help companies who are in trouble.
Many companies were depending on the paper mills for their success.	Help companies that were historically reliant on the paper industry to transition to other industries.
Concerns have been raised about the trade situation with Canada.	Since the Canadian Dollar dropped in value as compared to the USD, US companies are no longer able to do business with Canada. No viable suggestions were discussed during the interviews.
The cost of electricity is a huge barrier to business and many locations don't have access to natural gas.	Work to promote and increase accessibility to the energy efficiency and energy usage state programs. Work to increase access to natural gas where possible. Help companies and or cities negotiate better electricity rates since certain areas seem to have unrealistically high energy costs.

General Findings

General Findings	Suggestion
The state should have a lofty vision for moving forward and should believe in the state.	Think big, dream big, believe in yourself. Don't be negative about any aspects of the state because that shows badly to outsiders.
Focus on changing the perception that manufacturing is a "dirty" industry.	Manufacturing is hurting from a low influx of young employees. Work to change the perception among parents and high school students that manufacturing is dirty and not a good career choice. This problem does exist across the US but is especially true in New England.
No direct or frequent flights out of Bangor to Washington, NY, Boston, etc.	If Bangor had a better flight situation to Boston that would be helpful for all businesses in rural northern Maine.
Maine excessively frontloads the unemployment insurance which is a hardship for Maine businesses that NH businesses do not have.	Consider changing this at the legislative level.
Many companies can now locate in a place of their choice if they have good access to phone, cell phone and internet and an airport nearby.	Market to these kinds of companies and remind them about the quality of life in Maine.
Very few backhaul opportunities in Maine.	Can the state do anything about this?
Perception that the Governor does not like the paper industry in Maine. In 2009, the paper industry was an industry the state couldn't afford to lose, but not anymore.	The paper mills need to have some sense that Maine still wants them and is actually helping them. Work to help those dependant on the paper mills to transition to other focuses if they are in an area of a closed mill.
Focus on spreading the word about rural Maine tourism.	Presque Isle and Washington County among many other areas of the state are actually great tourism destination but are generally unknown unless by word of mouth.
Rail service is unreliable and working with rail service is challenging.	Can the state take over the management of the line?
Toll Plaza in Wells is very detrimental to tourism.	The Wells Toll Plaza is a bottleneck for tourism and is very expensive. Also consider addressing the fact that every time you get off the highway and back on, you are charged a toll. This does not promote tourists stopping at local establishments during their trip.
Aquaculture is governed by USDA laws but the Fish and Wildlife division is trying to be involved.	Is there anything the state can do to keep the FDA out of aquaculture? Lobby to keep aquaculture governed by only USDA laws.
State tax collection becomes an issue when a company grows from selling to distributors to selling off an internet website. It is hard to figure out which states you need to collect sales tax for and to properly submit the money.	Include this in the set of services offered to companies as described above. Add language on the State's website address Frequently Asked Business Concerns including an answer to this concern.
Companies working with yarns have trouble labeling the product as "made in the USA" since the USA does not produce yarn so it is technically "assembled in the USA".	Put pressure at the legislative level to allow this to change, especially if most of the value of the product is in the US part of the process.
Maine defines renewable energy as Hydro, however this does not account for all kinds of renewable energy.	Compare Maine's definition against the Federal and International definitions and upgrade Maine's language.
Bangor Economic Development Team needs help.	No money was left to use as company incentives because it had all been spent to build methadone clinics. Even when the company begged, they did not get the attention of the economic development staff.
Maine's three port strategy is important and should continue to be supported by the state.	Support various marine initiatives such as the marine highway program, the North America Port Association, etc.

Appendix E – DECD Portfolio Survey

PART 1

Hello, and thank you in advance for your attention and cooperation. As a past or current recipient/participant of state economic incentive funds/programs it is part of your responsibility under Maine law (MRSA Title 5, §13056-B) to provide certain data as requested by the State of Maine.

We are very well aware of the effort required by you to complete tasks like this and do all we can to limit the frequency and time you will spend on such legally required requests. For Example – this request had been an annual requirement in past years. We have worked on your behalf to make this legal requirement less frequent. So now, every other year, the law compels the Maine Department of Economic and Community Development to ask for, and for past and current recipients to respond to, the two sets of questions that accompany.

Please also note that we now split the questions into two sets. We ask that the first set be completed as soon as feasible and that the second set be completed before the deadline noted in your email invitation. This is another example of the Maine DECD attempting to make working with State Government easier for you.

All information is confidential, according to the contractual terms of your incentive program agreement with the State of Maine. To complete the survey, please have at hand your Profit & Loss (P&L) statement and Balance Sheet for the last three (3) years; as well as payroll data; and staff information. We will also seek information about your future strategy and plans. If you have any questions, please do not hesitate to contact Maine DECD Development Project Officer Jason Brown at [removed from report]. For technical questions, please contact Jessica Eckhardt with Investment Consulting Associates at [removed from report].

What's In It For You?

In addition to complying with the law, you will also be; A) providing valuable data that may protect a program that you benefit from, or B) help us identify programs that you are a part of but do not benefit from so future state budgets may avoid wasting taxpayer dollars on non-productive programs. The ability to offer financial assistance through a variety of incentive programs to Maine businesses is crucial to the economic vitality of our State. To ensure the continued support and funding of the programs, my department is statutorily required to perform a biennial assessment to determine their effectiveness.

We appreciate the time taken to complete this survey and value your comments. We recognize that it may be time consuming and, perhaps, inconvenient, but please know that the information you provide will help us to develop and maintain economic incentive programs that are useful and effective for Maine's job creators.

Best Regards,

George C. Gervais
Commissioner
Maine Department of Economic and Community Development

Identification

1. Contact details

Name:

Position:

Company:

Industry and Markets

2. From the industry sector classifications below, please select the industry sector that best matches your business.

3. Please identify the top three (3) markets/industries for your product(s) or service(s), the size of the market in USD, and the geography of this market. To use the "Other" field, please select "Other" from the industry pull down menu. To enter multiple other markets, separate entries with a semicolon.

	Industry	Aprox. Size in USD	Geography
Market 1			
Market 2			
Market 3			

Other (please specify)

Shareholders

4. Please provide a breakdown of the shareholder structure of your company by entering a percentage for each type of shareholder in the provided space. For example, "25%" should be entered as "25". Please note the total for all three types of shareholders should add up to 100%.

Shareholders within Maine	
US Shareholders outside of Maine	
Non US Shareholders	

Revenue, Taxes and Budget

5. What percentage of your annual revenue is based on sales? For example, "10%" should be entered as "10".

In the State of Maine	
In the US (not including the State of Maine)	
International sales	

6. What is the total annual sales revenue your company generated for the three (3) most recent fiscal years? For example, "$250,000" should be entered as "250000". Please note all amounts are in USD.

2012	
2013	
2014	

7. What is the total amount of income tax your company has paid to the State of Maine in the three (3) most recent fiscal years? For example, "$25,000" should be entered as "25000". Please note all amounts are in USD.

2012	
2013	
2014	

Maine Incentive Programs

8. For 2012, please identify the five (5) most important incentive programs to which your company applied and amount of funding received. Please note the list below does not include all of the State of Maine's incentive programs.

	Name of Incentive Program	Amount in USD for 2012
Incentive Program 1		
Incentive Program 2		
Incentive Program 3		
Incentive Program 4		
Incentive Program 5		

Other (please specify)

9. For 2013, please identify the five (5) most important incentive programs to which your company applied and amount of funding received. Please note the list below does not include all of the State of Maine's incentive programs.

	Name of Incentive Program	Amount in USD for 2013
Incentive Program 1		
Incentive Program 2		
Incentive Program 3		
Incentive Program 4		
Incentive Program 5		

Other (please specify)

10. For 2014, please identify the five (5) most important incentive programs to which your company applied and amount of funding received. Please note the list below does not include all of the State of Maine's incentive programs.

	Name of Incentive Program	Amount in USD for 2014
Incentive Program 1		
Incentive Program 2		
Incentive Program 3		
Incentive Program 4		
Incentive Program 5		

Other (please specify)

Maine Incentive Programs

11. What is the total amount of money or financial benefit your company received from ALL State of Maine incentive programs for each of the last three (3) years? For example, "$250,000" should be entered as "250000".

2012

2013

2014

12. What were the direct results of these incentives?

	Additional jobs	Total number of retained jobs*	Additional Payroll Taxes (in USD)	Additional Capital Investments (in USD)	Additional Exports (in USD)
2012					
2013					
2014					

* Retained jobs mean those existing jobs that otherwise would have been lost without direct benefit of the incentive program.

Employment and Staffing

13. Please provide a breakdown of the total number of full-time (32 or more than 32 hours per week) and part-time (less than 32 hours per week) employees within the State of Maine employees in 2014.

Total Full-Time State of Maine Employees

Total Part-Time State of Maine Employees

14. Please provide a breakdown of your full-time State of Maine employees per job function in 2014 by entering the absolute number of full-time State of Maine employees per job function.

Manufacturing/operations

Technical (engineers, researchers, scientists, etc.)

Finance

Marketing and sales

Administrative/executive

Other

15. Please provide the average annual salary in 2014 for each job function within the State of Maine that is listed below. For example, "$65,000" should be entered as "65000".

Manufacturing/operations

Technical (engineers, researchers, scientists, etc.)

Finance

Marketing and sales

Administrative/executive

Other

Expenses and Assets

16. What are your total company expenses of the last three (3) years? For example, "$250,000" should be entered as "250000".

2012

2013

2014

17. Please estimate the total company expenses entered under Question 16 as a percentage of your total company sales of the last three (3) years. For example, "10%" should be entered as "10".

2012

2013

2014

Contact and Comments

18. Is there anything else you would like to share with us regarding the State of Maine's incentive programs?

19. Please provide contact information for the individual completing this survey.

Name

Phone number

Email address

20. Thank you for completing the first part of this survey. Please choose how you would like to finish this survey.

- ☐ I would like to continue and finish the survey now
- ☐ I would like to complete the survey over the phone with the DECD representative
- ☐ I would like to return at a later date and complete the survey

** If option one is chosen, they continue along to the second part of the survey.

** If option two is chosen, they will get this message "Thank you for completing the first part of the survey. You have chosen to complete the remaining questions over a phone call with a DECD representative. Please expect to be contacted by DECD staff in the coming days." And get forwarded along to the thank you and submit page displayed at the very end of this document.

*** If option three is chosen, they will get this message "You have chosen to return at a later time to complete the remaining questions. Simply re-open the link provided in the initial email invitation and complete the survey." And the survey will remain suspended in this location waiting for them to click the next button and complete it.

PART TWO

Additional Company Information

21. Was your business founded in the State of Maine?

- ☐ Yes
- ☐ No

22. When did you first establish operations in the State of Maine?

[▼]

23. Please select the current number of business locations your company has in the State of Maine?

	1	2	3	4	5	>5
Number of business locations	☐	☐	☐	☐	☐	☐

24. Does your company have an annual budget for R&D?

- ☐ Yes
- ☐ No
- ☐ Potentially in the Future

R&D Budget Comments

25. Please identify the stage your company is in at this time (select the stage that is closest).

- ☐ Very early stage (idea and/or concept evaluation)
- ☐ Early stage (R&D and/or alpha/beta testing)
- ☐ Mid stage (product development and release)
- ☐ Growth stage (established product line with sales growth and diversification)
- ☐ Mature stage (multiple product lines, consistently growing sales and markets)

New Investments

26. Are you planning to invest in expanding your facilities or operations in the State of Maine in the next three (3) years?

- ☐ Yes
- ☐ Maybe
- ☐ No

Investments and Incentives

27. Please select the appropriate business activity for each type of new investment your company plans to make in the State of Maine in the next three (3) years. Please select all that apply.

	Manufacturing	R&D Center	Laboratory	Training Center	Shared Service Center	Headquarters	Repair Center	Customer Service Center	Call Center
Existing facility	☐	☐	☐	☐	☐	☐	☐	☐	☐
New facility	☐	☐	☐	☐	☐	☐	☐	☐	☐

28. On a scale from 1 to 10 (where 1 represents "not at all important" and 10 represents "critically important"), please rate the importance of the State of Maine's existing funding or incentive assistance programs to realize your company's growth plans.

	1	2	3	4	5	6	7	8	9	10
Importance of funding and incentives	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Economic Development Programs

29. Which of the following Maine agencies or organizations are you aware of or have you engaged? Please mark those you have engaged with even if the interaction did not result in an application or incentive award. Please select all that apply.

	Aware	Engaged
MTI: Maine Technology Institute	☐	☐
MITC: Maine International Trade Center	☐	☐
DECD: Department of Economic & Community Development	☐	☐
FAME: Finance Authority of Maine	☐	☐
MCED: Maine Center for Entrepreneurial Development	☐	☐
SBA: Small Business Administration	☐	☐
REDC: Regional Economic Development Corp	☐	☐
MEP: Maine Manufacturing Extension Program	☐	☐
MPP: Maine Patent Program	☐	☐
PTAC: Maine Procurement Technical Assistance Center	☐	☐
DOD: Department of Defense	☐	☐
DOA: Department of Agriculture	☐	☐
EMDC: Eastern Maine Development Corporation	☐	☐
RDA: Rural Development Authority	☐	☐
None of the Above	☐	☐

Other (please specify)

Incentive Performance and Suggestions

30. Based on your experience working with the State of Maine's incentive programs, on a scale from 1 to 10 (where 1 represents “very poor” and 10 represents “exceptional”), how would you rate the following aspects:

	1	2	3	4	5	6	7	8	9	10
Efficiency of process	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Knowledge of staff	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Reporting requirements	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Supporting services	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Responsiveness	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Likelihood to recommend State of Maine’s incentive programs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

31. Is there any change you can recommend or any form of funding assistance or service that would be helpful to a company like yours?

Employment Difficulties & Projections

32. On a scale from 1 to 10 (where 1 represents "very difficult" and 10 represents "very easy"), please rate how difficult it was for you to hire qualified staff per job function within the State of Maine to grow your business?

	1	2	3	4	5	6	7	8	9	10
Manufacturing/operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Technical (engineers, researchers, scientists, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Finance	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Marketing and sales	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Administrative/executive	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

33. How many additional full-time State of Maine employees do you expect to hire in the next three (3) years?

Business Needs and Concerns

34. Please identify the critical needs for the future success of your company.

35. On a scale from 1 to 10 (where 1 represents “no success” and 10 represents “significant success”), how do you rate your company's accomplishments in the State of Maine in terms of the following elements:

	1	2	3	4	5	6	7	8	9	10
Developing products	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bringing products to market	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Growing sales revenue	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Manufacturing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Providing service	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Building partnerships	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Developing supplier relationships	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Building staff	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Raising capital	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Expanding markets	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

36. What barriers prevent you from further growth? Please select the top three concerns in order (where Business concern number 1 represents the most challenging barrier). If more than one "Other" concern is selected, please separate business concerns with a colon.

	Business concern
Business concern number 1	
Business concern number 2	
Business concern number 3	

Other (please specify)

Profitability

37. Is your company profitable?

- [ ] Yes
- [ ] No

38. If your company is not yet profitable, please estimate the time in years to reach profitability.

Thank You

Thank you very much for completing this survey. Please note that you cannot go back and modify your answers after you submit your responses at the end of the survey.

George C. Gervais
Commissioner
Maine Department of Economic and Community Development

Appendix F – DECD Portfolio Survey Results

The survey was divided into two parts to prioritize information delivery:

- Part 1 included questions on the actual incentive benefits and company characteristics required for the CBAs; and
- Part 2 included additional questions on characteristics of the beneficiaries and the quality of incentive support and services provided by the State of Maine (e.g. DECD, FAME, MRS and MTI).

251 companies and organizations opened and actually started the survey. Out of the 251 respondents, 209 (or 84.5%) completed the first section of the survey. A total of 196 (or 76.9%) respondents completed both parts of the survey. This implies a total of 55 (or 21.6%) respondents did not complete the survey, of which 42 (or 16.0%) did not complete either part of the survey.

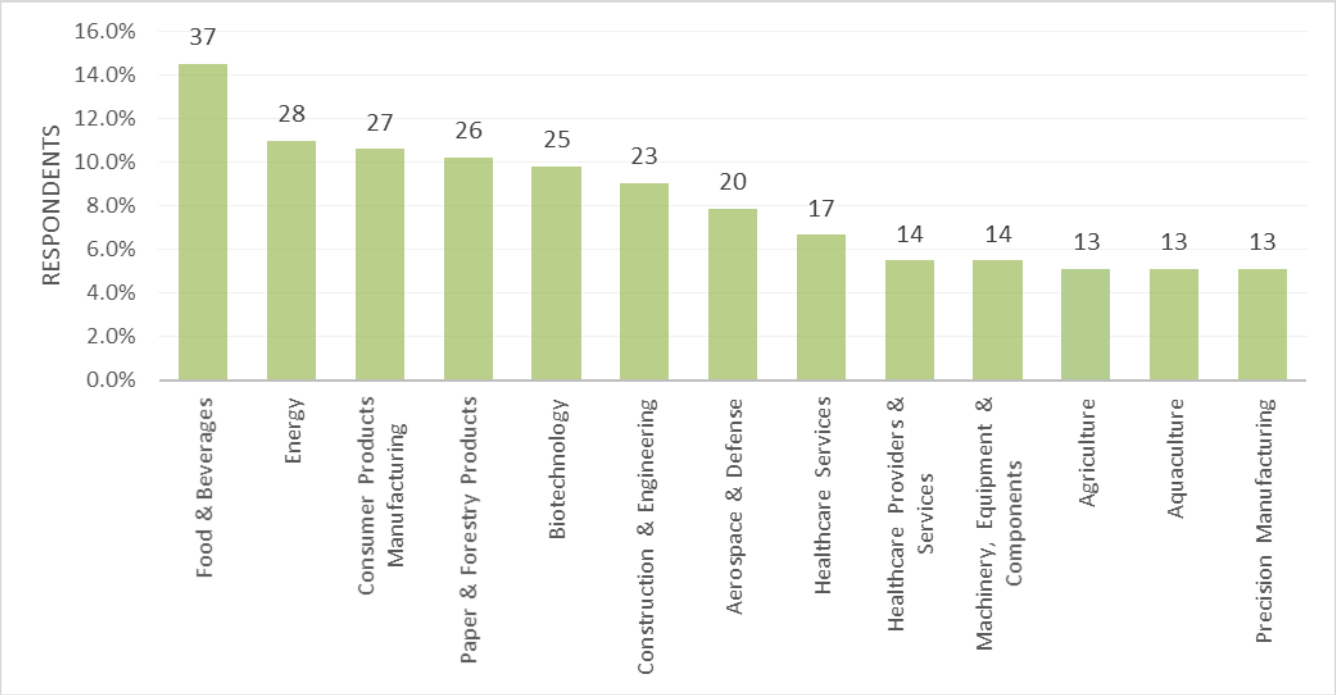
Survey sample characteristics

Total Sample Size	Started Survey	Part 1		Part 2	
		Complete	Partial	Complete	Partial
294	251	209 (84.9%)	42 (16.0%)	196 (76.9%)	55 (21.6%)

Source: Own calculations and survey

The largest group of respondents originates from the food & beverages industry (37 of the 251 or 14.7%), followed by the energy sector (28 or 11.2%), consumer products manufacturing (27 or 10.8%) and paper and forestry products (26 or 10.4%). Industries that represent between the 5.0% and 10.0% of the survey sample include some high-tech industries (e.g. biotechnology, aerospace and defense, healthcare services, healthcare providers and precision manufacturing), basic industries (e.g. construction and engineering and machinery, equipment and components) as well as industries active in extracting and processing natural resources (e.g. agriculture and aquaculture). It should be noted that the totals do not add up to 100% as recipients could identify as participating in up to three industries.

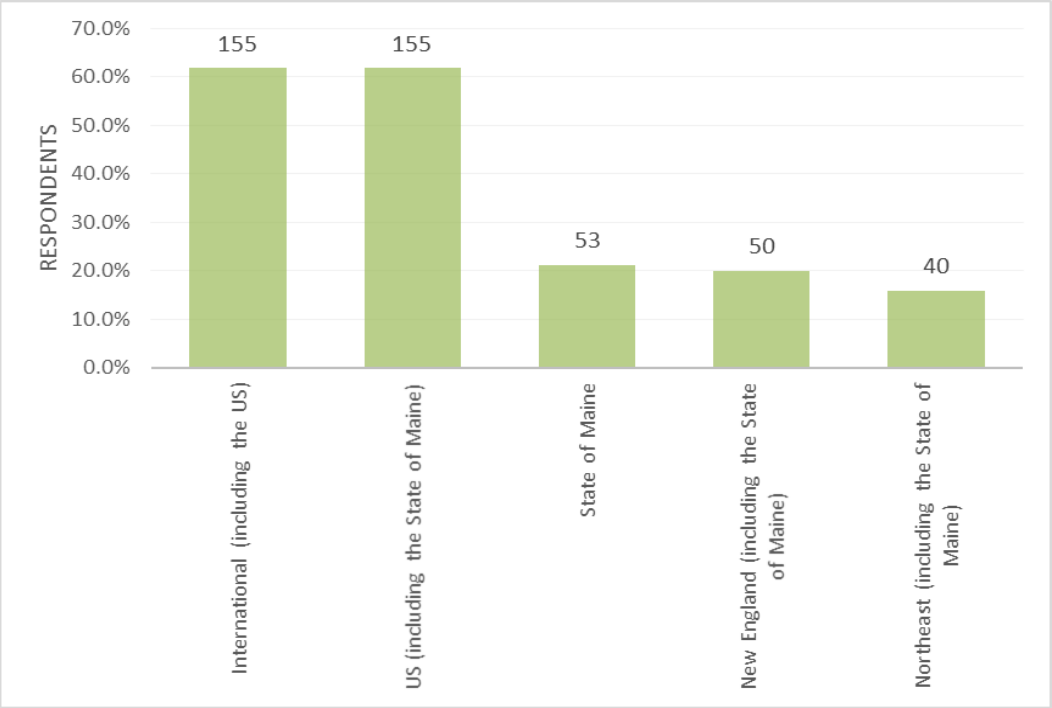
Largest industries of survey respondents



Source: Own calculations and survey

The vast majority of the respondents operate both internationally and within the US (155 of the 251 or 61.8%) or within the entire US (155 of the 251 or 61.8%). Respondents exclusively operating in Maine represent a share of 21.1% (50 out of the 251), closely followed by respondents operating in New England and the Northeast (50 or 19.9% and 40 or 15.9%, respectively).

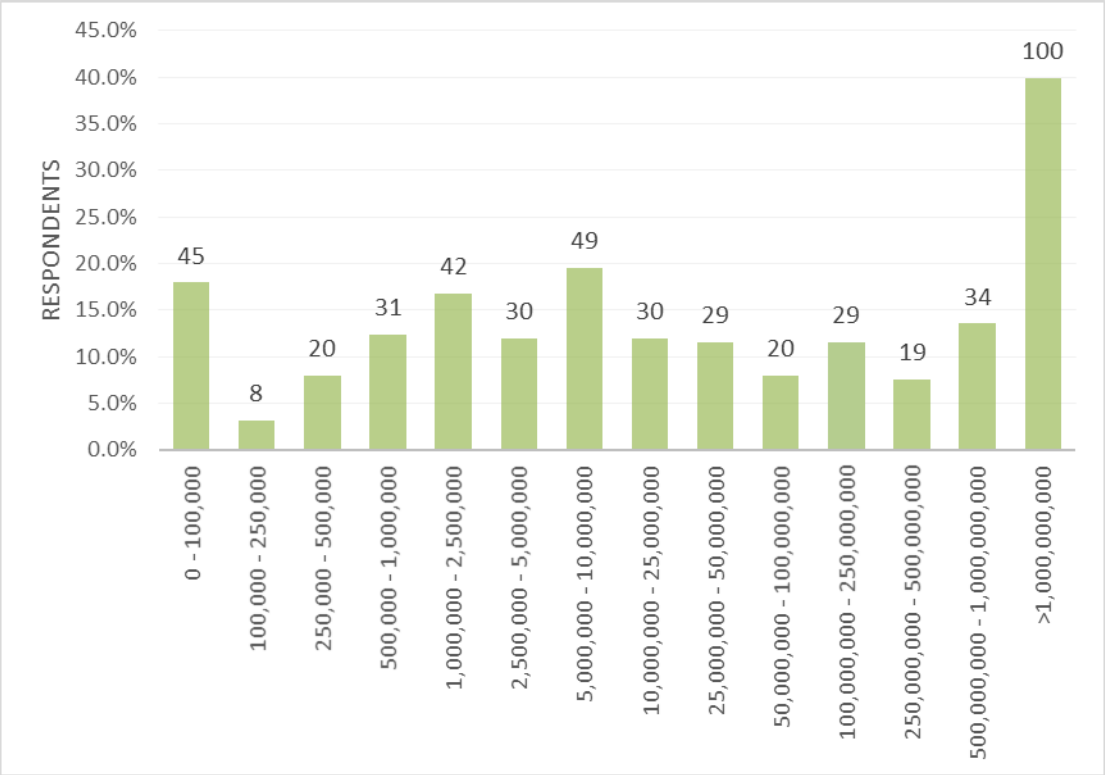
Largest geographical markets of survey respondents



Source: ICA calculations and survey

Most of the survey respondents operate in either very large marketplaces of over $1.0 billion (100 out of the 251 or 39.8%), in average markets of between $5.0 million and $10.0 million (49 out of the 251 or 19.5%) or in very small markets of less than $100,000 (45 out of the 251 or 16.7%).

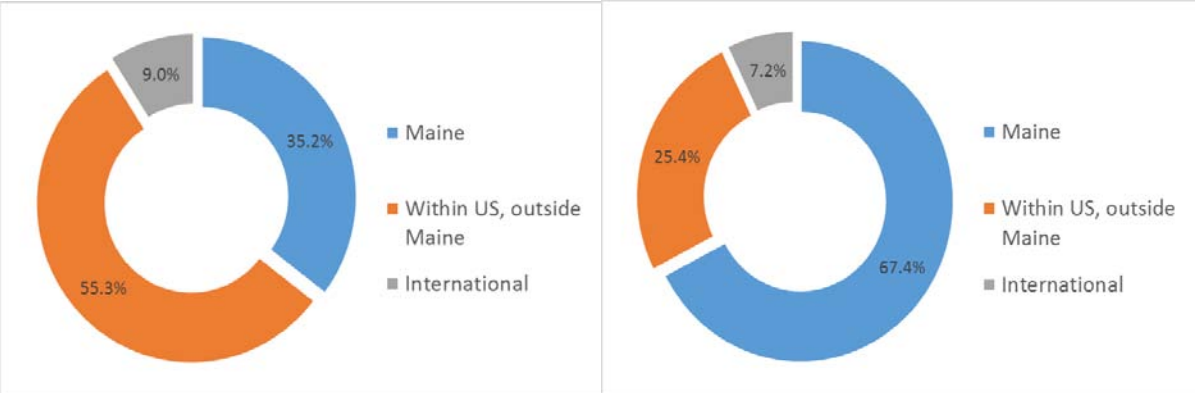
Size of markets of survey respondents



Source: ICA calculations and survey

The domestic US orientation of a great number of survey respondents is also reflected by the geographical distribution of respondents' sales. Over half (55.3%) of the sales of the survey respondents is located within the US (excluding Maine) while more than a third (35.2%) of the sales is located in Maine. In terms of shareholders, the vast majority resides within Maine (67.4%) and in the rest reside in other US locations (25.4%). The international portion of sales and shareholders is relatively minor, representing only 9.0% and 7.2% of the total survey sample, respectively.

Geographical distribution of sales (left) and shareholders (right) of survey respondents



Source: ICA calculations and survey

Out of the 251 survey respondents, 159 companies (or 63.3%) were founded in Maine, as opposed to 38 (or 15.1%) respondents whose business had not been founded within the state.

Number of Maine-founded businesses among survey respondents

Maine-founded Businesses	No. of Answers	Relative
No	38	15.1%
Yes	159	63.3%
Unanswered	54	21.5%
Total	251	

Source: ICA calculations and survey

Most survey respondents operate businesses one location in Maine rather than multiple locations. A total of 144 (or 57.4%) respondents had just one business location overall as contrasted with 35 (or 13.9%) with two locations, seven (or 2.8%) with three locations and eleven (or 4.4%) operating four or more locations.

Number of business locations among survey respondents

Number of business locations	No. of Answers	Relative
1	144	57.4%
2	35	13.9%
3	7	2.8%
4	2	0.8%
5	3	1.2%
>5	6	2.4%
Unanswered	54	21.5%
Total	251	

Source: ICA calculations and survey

In order to understand the nature of the incentive beneficiaries, respondents were asked about the current business stage of their company. The majority of companies are in growth stage (86 respondents or 34.4%) or mature stage (61 respondents or 24.3%), followed - on a distance – by the mid stage (23 respondents or 9.2%) and early stage (18 respondents or 7.2%). Very few respondents were in a very early stage in which they evaluate potential ideas and concepts (7 respondents or 2.8%). This may have implications for the design and target of future Maine incentive programs.

Company stage of survey respondents

Company Stage	No. of Answers	Relative
Very early stage (idea and/or concept evaluation)	7	2.8%
Early stage (R&D and/or alpha/beta testing)	18	7.2%
Mid stage (product development and release)	23	9.2%
Growth stage (established product line with sales growth and diversification)	86	34.3%
Mature stage (multiple product lines, consistently growing sales and markets)	61	24.3%
Unanswered	56	22.3%
Total	251	

Source: ICA calculations and survey

Survey respondents have good future expectations, based on the expansion intensions of the survey. More than two out of five respondents expect to invest in expansion in Maine within the next three years (112 respondents or 43.9%) while 62 (or 24.7%) respondents are seriously considering expansion. Just 22 (or 8.8%) respondents indicated to have no expansion plans for Maine in the next three years. Again, this may be of interest for future Maine incentive programs.

Investment expansion in Maine in the next three years

Expanding in Maine in the next three years?	No. of Answers	Relative
Maybe	62	24.7%
No	22	8.8%
Yes	112	43.9%
Unanswered	55	21.9%
Total	251	

Source: ICA calculations and survey

Respondents were also asked about their experience in working with the economic development and R&D programs provided by the State of Maine, and whether they would recommend Maine's incentive programs. Each respondent was asked to rank six different elements of the quality of Maine's incentive programs from 1 (which is extremely poor), to 10 (excellent).

Experience with the incentive programs provided by the State of Maine

Experience with State of Maine	Rate
Efficiency of process	6.9
Knowledge of staff	8.1
Reporting requirements	6.4
Supporting services	7.1
Responsiveness	7.9
Likelihood to recommend	8.0

Source: ICA calculations and survey

The element mostly appreciated by the respondents is the knowledge of staff. This element ranked at an average rate of 8.1, closely followed by the responsiveness of staff, which has an average rate of 7.9. The supporting services and the efficiency of the process are ranked more or less similar with rates of

7.1 and 6.9, respectively. The weakest element of Maine's incentive program is the reporting requirements, which follows with a rate of 6.4.

Overall, the likelihood of respondents recommending Maine's incentive programs is very high, given the average rate of 8.0.

In addition to the experience with the State of Maine, respondents have been asked to rate their own accomplishments within Maine. Respondents indicated they have been most successful within Maine to provide service (7.3), build partnerships (7.2), develop supplier relationships (7.2) and develop products (7.0). Raising capital (5.9) and expanding markets (5.8) seems to be more difficult to achieve within Maine.

Accomplishments in the State of Maine

Accomplishments in the State of Maine	Rate
Developing products	7.0
Bringing products to market	6.7
Growing sales revenue	6.3
Manufacturing	6.5
Providing service	7.3
Building partnerships	7.2
Developing supplier relationships	7.2
Building staff	6.5
Raising capital	5.9
Expanding markets	5.8

Source: ICA calculations and survey

Finally, in terms of major business concerns that the respondents cope with, it is evident that finding the right employees is a critical determinant of business success for the coming years. A total of 108 (or 43.0%) respondents indicated this as a concern which may seriously limit their growth. In addition, out of state competition is perceived a threat to the competitiveness of Maine businesses (82 respondents or 32.7%), followed by access to capital (72 respondents or 28.7%) which complements the top three of business concerns.

More than 60 respondents (24.7%) highlighted any "other" business concern not mentioned in the survey. Other of such business concerns mainly related to high electricity prices, limited access to and from customer markets and competition with Canadian companies, particularly in the paper and wood processing industry. This further underlines the concern of "out of state competition", which ranks second.

These findings are further confirmed by the findings in the previous table, where respondents indicated that raising capital (i.e. access to capital) and expanding markets (i.e. access to customer markets) are rather difficult to achieve in Maine. Maine may further tailor its future incentive programs to address some of these concerns as well as the most precarious business concerns (i.e. finding the right employees, out of state competition and access to capital).

Major business concerns in the State of Maine

Business Concern	No. of Responses	Relative
Finding the right employees	108	43.0%
Out of State Competition	82	32.7%
Finances - access to capital	72	28.7%
Other	62	24.7%
Finances - managing expense growth	52	20.7%
Government regulation	50	19.9%
Employee turnover	40	15.9%
Price increases	35	13.9%
Slow product development	29	11.6%
Technology obsolescence	15	6.0%
In State Competition	12	4.8%

Source: ICA calculations and survey

For further analytical purposes, the total sample of the survey has been classified into two groups based on the type of incentive programs from which respondents have benefited. Respondents that enjoyed the benefits of one or more MTI incentive program in 2014 (i.e. the "base year") have been classified under the "R&D" sample. Respondents that benefited from other incentive programs in 2014 have been grouped under the "Economic Development" ("EconDev") sample (e.g. PTDZ and BETR recipients). The former reflects actual R&D investment program recipients whilst the latter rather reflects Economic Development incentive program beneficiaries.

Respondents benefiting from a combination of MTI and non-MTI incentive programs have been categorized under the "EconDev" sample. Such respondents usually involve PTDZ recipients, which received considerable amounts of PTDZ incentives rather than the typically smaller sized MTI incentive benefits. Distinguishing between these two groups of incentive recipients results in the sample distribution as summarized in the table below.

Survey sample characteristics – per cluster group[8]

Total Sample Size	Started Survey	Part 1		Part 2	
		Complete	Partial	Complete	Partial
EconDev	178	170 (95.5%)	8 (4.5%)	161 (90.4%)	17 (9.6%)
R&D	37	35 (94.6%)	2 (5.4%)	32 (86.5%)	5 (13.5%)
Total	215	205 (95.3%)	10 (4.7%)	193 (89.8%)	22 (10.2%)

Source: ICA calculations and survey

Out of the 215 respondents who answered the question, 178 registered for an Economic Development investment program whilst 37 have been used programs administered by MTI for R&D. A total of 193 (or 89.8%) of the 215 respondents completed the entire survey.

Most of the Economic Development respondents completed both Part 1 (170 or 95.5%) as well as Part 2 (161 or 90.4%). For the R&D respondents, these figures are slightly lower but still acceptable as 35 (or 94.6%) completed Part 1 of the survey whilst another 32 (or 86.5%) completed the entire survey.

[8] This table includes self reported data extracted from the survey results.

The tables below provide summaries for both the Economic Development respondents as well as the R&D respondents for which programs are being used. For 2014, it seems that the vast majority either utilized the PTDZ program (128 or 71.9%) together with the BETR program (67 or 37.6%). This is no surprise given these two types of programs provided the original contact lists for the survey.

Programs registered by MTI are also listed under the Economic Development respondents as these enjoy at least one Economic Development investment program (i.e. not registered by MTI) together with an MTI incentive program. Again, respondents that only applied for MTI programs are included in the R&D sample. It would appear however that a very limited number of the Economic Development respondents combine both investment programs along with MTI's incentive programs (e.g. Commercial Loan Insurance Program, Development Loans, Economic Recovery Loan Program).

Economic Development respondents per type of program (2014)

Type of Program - 2014	No. of Respondents	Relative
Pine Tree Development Zones	128	71.9%
Business Equipment Tax Reimbursement	67	37.6%
Commercial Loan Insurance Program	4	2.2%
Development Loans	2	1.1%
Economic Recovery Loan Program	2	1.1%
Maine Seed Capital Investment Tax Credit	2	1.1%
Agricultural Marketing Loan Fund	1	0.6%
Cluster Initiative Program	1	0.6%
Phase 0 and Phase II SBIR Application awards plus TAP support	1	0.6%
Regional Economic Development Revolving Loan Program	1	0.6%
Seed Grant Program	1	0.6%
TechStart Program	1	0.6%

Source: ICA calculations and survey

The majority of R&D respondents utilize the Seed Grant Program (14 or 37.8%), Development Loans (12 or 32.4%) and the TechStart Program (11 or 29.7%). These are the respondents that have exclusively registered for MTI incentive programs.

R&D respondents per type of program (2014)

Type of Program - 2014	No. of Respondents	Relative
Seed Grant Program	14	37.8%
Development Loans	12	32.4%
TechStart Program	11	29.7%
Phase 0 and Phase II SBIR Application awards plus TAP support	4	10.8%
Cluster Initiative Program	2	5.4%

Source: ICA calculations and survey

Comparing the total and average amount of awards, it seems that a total of $75.1 million has been awarded over the last three years (i.e. 2012 to 2014) to Economic Development respondents. This results in an average award of $146,469 per respondent per year. On the other hand, a total of $7.9 billion has been awarded to the R&D respondents during the same period, resulting in an average of

$76,665 per respondent per year. According to these statistics, R&D respondents receive on average half the amount of incentives awarded to Economic Development beneficiaries.

Total and average amount of incentives per respondent group (2012-2014)

	EconDev	R&D
Total amount of incentives	$75,138,657	$7,896,446
Average amount of incentives	$146,469	$76,665

Source: ICA calculations and survey

Before examining the benefits created by these programs, a quick glance at the employment statistics suggests that currently Economic Development respondents employ a total of 25,479 Maine employees, of which just over 24,000 are full-time employees and the remaining 1,372 jobs are part-time jobs. R&D respondents employ 293 Maine workers full-time and 41 part-time.

On average, companies in the Economic Development sample employ 142 full-time employees and 8 part-time employees as contrasted with 8 and 1 for the R&D respondents, respectively. Thus, companies benefiting from MTI's R&D programs are considerably smaller than companies enjoying the advantages of investment programs such as PTDZ and BETR.

Total and average full-time and part-time jobs per respondent group

	EconDev	R&D
Total Full-Time Jobs	24,107	293
Average Full-Time Jobs	142	8
Part-Time Jobs	1,372	41
Average Part-Time Jobs	8	1
Total Jobs	25,479	334

Source: ICA calculations and survey

The fact that R&D beneficiaries are typically smaller-sized companies than Economic Development companies is also reflected in terms of the average salaries. The average salaries for Economic Development respondents - $62,154 – is considerably larger than the average salary of R&D respondents, which equals $56,113. Surprisingly, technical employees have average lower salaries within the R&D respondent group as compared to the Economic Development sample ($61,715 against $66,839, respectively). This may be linked with the scarcity of research technicians and scientists in the Economic Development sample and the fact that larger companies can pay higher wages. This is particularly the case for finance employees and administrative and executive employees. On the other hand, employees occupied with marketing and sales and manufacturing and operations have average higher wages with the R&D companies as compared to the Economic Development companies.

Average salaries per job function per respondent group

	EconDev	R&D
Manufacturing & Operations	$39,811	$42,181
Technical (engineers, researchers, scientists, etc.)	$66,839	$61,715
Finance	$61,363	$44,074
Marketing & Sales	$71,580	$82,595
Administrative & Executive	$80,772	$52,513
Other	$42,347	$42,866
Overall Average	***$62,154***	***$56,113***

Source: ICA calculations and survey

The next five tables show the number of companies that created specific benefits per year (i.e. 2012, 2013 and 2014) per respondent group (i.e. Economic Development and R&D) as a result of Maine's programs.

Job Creation

The majority of both the Economic Development and R&D beneficiaries have created either no new jobs or between one and ten new jobs (particularly R&D respondents in 2014). In addition, 12 to 13 companies within the Economic Development group created between 11 and 25 new jobs while 11 of such companies created between 25 and 50 new jobs in 2014. Noteworthy is the Economic Development respondent as well as an R&D respondent that each created between 500 and 1,000 new jobs in 2014.

Incentive benefits: new jobs created per respondent group (2012-2014)

New Jobs	EconDev				R&D		
	2012	2013	2014		2012	2013	2014
501-1,000	0	0	1		0	0	1
251 - 500	2	2	2		0	1	0
101 - 250	1	3	2		1	0	0
51 - 100	4	5	2		0	0	0
26 - 50	6	3	11		0	0	0
11-25	13	12	12		0	1	1
1-10	49	54	62		8	6	14
0	96	89	11		23	24	19

Source: ICA calculations and survey

Job Retention

Incentives and investment programs support the creation of new jobs but also can also support maintaining existing jobs. A similar picture as with the newly created jobs is noticeable, where the focus for both respondent groups is mainly on zero retained jobs or between one and ten retained jobs and points to the size of companies benefitting from the programs. This is particularly the case for the R&D beneficiaries. In this respect, the retention of more than 1,000 jobs and between 500 and 1,000 jobs by some Economic Development beneficiaries is noteworthy, as are the constant numbers for Economic Development companies that have retained between 26 and 500 jobs.

Incentive benefits: jobs retained per respondent group (2012-2014)

Retained Jobs	EconDev				R&D		
	2012	2013	2014		2012	2013	2014
More than 1,000	1	1	2		0	0	0
501 – 1,000	2	1	2		0	0	0
251 - 500	6	6	5		0	0	0
101 - 250	7	7	6		0	0	0
51 - 100	4	7	7		0	0	0
26 - 50	9	8	8		0	0	0
11-25	9	8	12		1	2	2
1-10	41	41	49		11	9	15
0	93	89	76		18	19	17

Source: ICA calculations and survey

Capital Investment

Most beneficiaries – both for Economic Development and R&D – indicated that they have invested an addition amount of less than $50.000 as a result of the investment and incentive programs. However, a closer look reveals that two R&D beneficiaries increased their capital investment with $5.0 to $10.0 million in 2013 and 2014. Also exceptional is the increase of companies where the Economic Development investment programs contributed to capital investment as in 2014, 17 companies increased their capital investment with somewhere between $10.0 million and $25.0 million. These are most likely Economic Development companies that invested $50,000 to $500,000 and $2.0 to $5.0 million additionally in 2012 and 2013 as these numbers have dropped.

Incentive benefits: additional capital investment per respondent group (2012-2014)

Capital Investment (USD)	EconDev				R&D		
	2012	2013	2014		2012	2013	2014
10 - 25 million	1	1	17		1	0	0
5 - 10 million	2	4	4		0	1	1
2 - 5 million	7	7	1		0	0	0
1 - 2 million	3	4	7		0	0	0
0.5 - 1 million	8	4	7		0	0	0
250,000 – 500,000	7	11	9		1	0	0
100,000 – 250,000	13	14	7		0	1	2
50,000 – 100,000	14	10	9		2	1	2
< 50,000	114	106	102		24	26	30

Source: Own calculations and survey

Exports

From the figures, it can be concluded these programs do not stimulate exports as much as job creation, job retention and capital investment as the vast majority of beneficiaries – for both programs – indicated to have generated less than $50,000 of additional exports. Outliers can be found back in every exports class for economic Development beneficiaries, with even four that generated $1.0 to $2.0 million exports more in 2014. For R&D beneficiaries, it is clear the nature of their activities is not as directly exportable as the business activities of Economic Development respondents.

Incentive benefits: additional exports per respondent group (2012-2014)

Exports (USD)	EconDev				R&D		
	2012	2013	2014		2012	2013	2014
25 - 50 million	3	1	1		0	0	0
10 - 25 million	1	1	1		0	0	0
2 - 5 million	3	2	1		0	0	0
1 - 2 million	0	1	4		0	0	0
0.5 - 1 million	5	4	3		0	0	0
250,000 – 500,000	0	1	2		0	0	0
100,000 – 250,000	1	3	3		0	0	0
50,000 – 100,000	4	3	4		0	0	2
< 50,000	152	143	142		26	27	31

Source: ICA calculations and survey

Payroll

Not surprisingly, the distribution of the additional payroll more or less reflects the distribution for newly created jobs with a number of Economic Development respondents that indicated to have generated substantial additional benefits (i.e. $10.0-$25.0 million, $1.0-$2.0 million and $0.5-$1.0 million) while the majority has created no or very limited additional benefits (i.e. between $0 and $100,000). The same applies to R&D respondents with an exceptional increase of $2.0 to $5.0 million in 2013 and 2014 and the majority of recipients increasing only marginally (<$50,000).

Incentive benefits: additional payroll per respondent group (2012-2014)

Payroll (USD)	EconDev				R&D		
	2012	2013	2014		2012	2013	2014
10 - 25 million	1	1	1		0	0	0
2 - 5 million	0	0	0		0	1	1
1 - 2 million	1	1	1		1	0	0
0.5 - 1 million	2	4	1		0	0	0
250,000 – 500,000	4	5	6		0	0	0
100,000 – 250,000	8	9	11		0	0	0
50,000 – 100,000	18	18	16		1	1	1
< 50,000	135	125	128		27	27	33

Source: ICA calculations and survey

Appendix G – Annual Report Review

In order to evaluate the annual reports and traceability of incentive programs, annual reports were retrieved from state departments' (e.g. DECD and Revenue Services) and organizations' (e.g. FAME, DECD and MTI) websites. As opposed to the previous 2013 review, a separate data request was not submitted this year as concerns about violating confidentiality clauses in the various programs prohibited the analysis team from obtaining enough information for comparison purposes. No progress was made in the intervening time that would allow our team to access confidential data denied in the 2013 review.

In order to consistently evaluate the extent to which annual reports are produced as well as the traceability of incentive programs, our team designed a template consisting of various elements that capture ease of access and quality of content. For each program, we evaluated the following questions:

5. **Availability of Annual Reports**
    - Does it (i.e. the program website) include annual reports in a location that you can readily find?
6. **Traceability**
    - Is there a program website you can find with an internet search?
7. **Content**
    - Does it include application process and forms online?
    - What are the target sectors of the program?
    - Are the benefits of the program clearly stated?
    - Are the eligibility requirements posted online and clear?
    - Are there any caps on benefits?
    - Open enrollment or periodic?
8. **Non-Compliance**
    - Does the program claim to purge non-compliant companies?

The results for each of the questions have been further analyzed and generalized below.

Availability of Annual Reports

In essence, programs that produced annual reports in 2013 continued to do so for 2014 and 2015. Some of the reports included useful but basic data on incentive recipients, budgets allocated, jobs created and jobs retained (e.g. FAME) whilst some of them disclosed little information regarding the incentives that had been distributed. MTI, in particular, does not include specific numbers for many of their programs, however, they worked with us to give us the information we needed for analysis purposes. For some incentive administrators, data is available through annual reports which include data on not only the incentive programs but also other expenditures. For instance, for incentive programs registered by the MRS, the Maine State Tax Expenditure Report published by the MRS Department of Administrative and Financial Services provides useful data on its incentive programs but

is incorporated in a wider report that covers all tax expenditures on income tax reimbursements, property tax reimbursements and sales and excise tax exemptions.

Traceability

Given the data difficulties, we focused on reviewing the tractability, ease of access and program-related information. One of the main concerns is the fact that programs and organizations registering incentive programs are often difficult to trace online. This can be related to both the name of the incentive programs – which may be too specific and need to be generalized – as well as the abbreviation of the administrative authorities. For instance, the MTI website could not be found by googling the commonly recognized abbreviation MTI. The user instead must google Maine Technology Institute to reach the website. This could easily be remedied by changing the metadata keywords in the website.

Content

In terms of the content, most websites clearly listed targets, eligibility requirements and incentive benefits. These concepts are interrelated to a certain extent and should always be listed together. After all, even within incentive programs, the incentive benefits may be directly related with certain eligibility criteria. Such eligibility criteria usually relate to certain target industries as well as investment thresholds and are contingent upon the type of incentive. For instance, grants may have different structures where eligibility criteria are linked with certain benefits (i.e. amount of cash grant or tax credit) than loans (i.e. rates and loan amounts). Clearly, due to their specific nature, technical incentives usually do not impose strict eligibility criteria.

One element where incentive programs generally lack information relates the fact whether incentive benefits are capped. In certain cases, the potential incentive recipients need to look beyond the website information and comb through documents and laws to find out for which exact benefits its investment may qualify. This implies that, if potential investors do not look further than the website and/or have the resources and capability to study and understand the particular incentive legislation, incentive applicants may have different expectations of the incentive programs and benefits than they are actually eligible for. To solve this issue, exceptions, thresholds and caps that may apply to the incentive should be clearly listed on the website. This relates not only to the amount of incentives but also to the duration.

In addition, one element that frequently is overlooked is whether an (annual) application deadline applies. Some programs do explicitly mention application deadlines and whether the application to the incentive program is year-round open or only periodical accessible. Again, to avoid any confusion among potential incentive recipients, the website should clearly list whether applications can be submitted on a year-round or periodic basis.

In general, FAME had the best program traceability and content, listing all the critical details of the programs with applications in a structured, comprehensive, understandable and consistent manner (i.e. eligibility, benefits, types, terms, guarantees, fees, application process, application documents and application requirements). The FAME website and individual programs were easy to find with both a google search and from the homepage. MTI programs had the clearest information to accompany the

online applications. For the most part, objectives, application procedures, and deadlines were clearly stated. The application review process was also clearly stated, however, their review process is in practice very labor-intensive and complicated. Nevertheless, for potential investors, it is critical to understand the application review process in order to anticipate on and comply with (future) requirements.

Non-Compliance

Specific attention should be paid to non-compliance of incentive recipients (i.e. recipients that to not meet certain requirements agreed on prior to awarding the incentive). In general, there is little to no information describing any purge practices for non-compliant incentive recipients. Being a financial institution, non-compliance for FAME by definition means expulsion from the program. However, it is not as straightforward for the other programs. For example, conversations with the PTDZ administrators found that PTDZ does purge non-compliant companies. However, this is not stated on the program website. It is important to describe purge circumstances and practices to purge non-compliant recipients so companies have the chance to comply with the requirements and are well informed regarding the consequences of not complying with requirements and eligibility criteria throughout the period in which the incentive is awarded and the immediate time afterwards (some incentive programs require maintaining certain thresholds after the incentive has been fully distributed). Please not that just posting the requirements is insufficient. There needs to be dedicated legislation behind the requirements to allow the program to purge non-compliant companies.

Suggested Improvements

Concluding, both FAME's and MTI's website include elements necessary for best practice incentive program websites and which thus may function as guides to other Maine incentive administrators as they look to improve their own program's traceability, program descriptions, eligibility criteria and benefits. In general, program administrators need to focus on changes that will allow the yellow cells in the charts below to be green. Many of these changes are easily implemented with the assistance of the entity's web designer. Some of the changes recommended would take more effort. For example, posting an annual report is simple, but generating a report for a program that has not historically published a report is more difficult.

- Make sure to refer to programs consistently by their correct name. In certain cases, the names for the same programs are similar but not identical. This can make finding the correct program information difficult, especially if the name has changed over time, which may confuse potential incentive applicants.
- Ensure programs are listed on one dedicated website and prevent from overlapping websites (i.e. same programs listed on the website of multiple administrators) or, in case really necessary, cross-link between incentive program websites, especially where programs need to be mentioned on two different agency's websites for certain application or regulatory purposes.
- Make sure all programs accurately use metadata keywords and not exclusively use abbreviations so internet search engines can find the program information.

- Make sure all programs have updated program information on the their respective websites. This relates to the annual reports (update the most recent annual report as soon as it is available) as well as to the application procedure (e.g. update the status of the incentive program in case the program changes to inactive or when a submission deadline has passed).
- Make sure program requirement information is both updated, consistent and comprehensive if the program is described on more than one website or webpage or if the website includes multiple incentive programs.

DECD

Program Name	Economic Development Program	Main Tourism Marketing Promotion Fund (MTMPF)	Community Enterprise Grant Program	Maine International Trade Center	Downtown Revitalization Grant Program	Business Ombudsman	Communities for Maine's Future	Brunswick Naval Air Station Job Tax Increment Financing	Maine Made - Maine	Municipal Tax Increment Financing	Maine Micro-Enterprise Initiative Fund
Program Administrator	DECD	DECD	DECD	DECD	DECD	DECD	DECD	DECD	DECD	DECD	DECD
Type of program	Grant and Loan	Grant	Grants	Technical Assistance	Grants	Business Assistance	Grants	Tax	Business Assistance	Tax	Grants
Annual report = online	No	No	No	Yes	No	No	No	No	No	No	No
Is There a Program Website you can find with an Internet Search?	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Does it Include Annual Reports in a Location That You Can Readily Find?	No	No	No	Yes	No	No	No	No	No	No	No
Does it Include Application Process and Forms Online?	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	No
What are the Target Sectors of the Program?	Maine communities	Tourism Industry	Micro-businesses	Maine companies	Maine communities	Small businesses	Municipalities	Unclear	Maine industries	Municipalities	Micro-businesses
Are the Benefits of the Program Clearly Stated?	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Are the Eligibility Requirements Posted Online and Clear?	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Does the Program Claim to Purge Non-Compliant Companies?	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	No	Unclear	Unclear
Are There any Caps on Benefits?	Yes	No	Yes	Yes	Yes	Unclear	Unclear	Yes	No	Yes	Unclear
Open enrollment or Periodic	Periodic	Periodic	Periodic	Open	Periodic	Unclear	Unclear	Unclear	Open	Periodic	Periodic

Color code with yes being green, no non action being gray and no action being yellow

MTI

Program Name	Cluster Initiative	Development Awards	Seed Grant	Equity Capital Fund (MTI)	TechStart Program (MTI)	Phase 0 Program	Pre phase II SBIR/STTR Matching Grants	Technical Assistance securing federal SBIR/STTR funding	Maine Technology Asset Fund
Program Administrator	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI
Type of program	Grant	Grant (with payback)	Grant	Grant	Grants	Grant	Grant	Technical Assistance (and grant)	Grant (some require repayment)
Annual report = online	Yes	Yes	Yes	Yes	Yes	?	Yes	No	Yes
Is There a Program Website you can find with an Internet Search?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does it Include Annual Reports in a Location That You Can Readily Find?	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Does it Include Application Process and Forms Online?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
What are the Target Sectors of the Program?	R&D	R&D	R&D	Innovative businesses	Innovative businesses	Innovative businesses applying for SBIR/STTR grants	Innovative businesses applying for SBIR/STTR grants	Innovative businesses applying for SBIR/STTR grants	R&D
Are the Benefits of the Program Clearly Stated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Are the Eligibility Requirements Posted Online and Clear?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Does the Program Claim to Purge Non-Compliant Companies?	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear
Are There any Caps on Benefits?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear
Open enrollment or Periodic	Periodic	Periodic	Periodic	Open	Periodic	Open	Periodic	Unclear	Periodic

Please note that North Star Alliance Cluster Award Matching Fund (MTI), Maine Marine Research Fund, and Maine Biotechnology Research Fund are not included above as those programs are either inactive or terminated.

DECD and MRS

Program Name	ETIF	PTDZ
Program Administrator	DECD	DECD
Type of program	Tax	Tax
Annual report = online	Yes	Yes
Is There a Program Website you can find with an Internet Search?	Yes	Yes
Does it Include Annual Reports in a Location That You Can Readily Find?	Yes	Yes
Does it Include Application Process and Forms Online?	Yes	Yes
What are the Target Sectors of the Program?	No Specific Sector	No specific targets
Are the Benefits of the Program Clearly Stated?	Yes	Yes
Are the Eligibility Requirements Posted Online and Clear?	Yes	Yes
Does the Program Claim to Purge Non-Compliant Companies?	Unclear	Unclear
Are There any Caps on Benefits?	Yes	Yes
Open enrollment or Periodic	Periodic	Periodic

MRS

Program Name	BETR	Sales Tax Exemptions (Manufacturing Machinery , Equipment and Tangible Personal Property)	Sales Tax Exemptions (Fuel and Electricity for Manufacturing)	Business Equipment Tax Exemption	Shipbuilding Credit	Sales Tax Exemptions (Products Used in Agricultural and Aquaculture Production, and Bait)	Sales Tax Exemptions (Commercial Agriculture, Commercial Fishing, and Commercial Wood Harvesting Machinery and Equipment)	Sales Tax Exemptions (Machinery and Equipment for Research)	Super Credit for Substantially Increased Research and Development	Research Expense Tax Credit
Program Administrator	MRS	MRS	MRS	MRS	(MRS)	MRS	MRS	MRS	MRS	MRS
Type of program	Tax	Tax	Tax	Tax	Tax	Tax	Tax	Tax	Tax	Tax
Annual report = online	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is There a Program Website you can find with an Internet Search?	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes
Does it Include Annual Reports in a Location That You Can Readily Find?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does it Include Application Process and Forms Online?	Yes	No	No	Yes	No	No	No	No	No	Yes
What are the Target Sectors of the Program?	No Specific Sector	Agricultural Production	Manufacturing	No Specific Sector	Shipbuilding	Aquacultural Production	Commercial Agricultural Production	Research Activities	Research Activities	Research Activities
Are the Benefits of the Program Clearly Stated?	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes
Are the Eligibility Requirements Posted Online and Clear?	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes
Does the Program Claim to Purge Non-Compliant Companies?	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear
Are There any Caps on Benefits?	Yes	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Yes
Open enrollment or Periodic	Periodic	Periodic	Periodic	Closed	Unknown	Unknown	Unknown	Periodic	Unknown	Periodic

Please note that the Jobs and Investment Tax Credit and the High-Technology Investment Tax Credit programs are not included above as those programs are either inactive or terminated.

FAME

Program Name	Commercial loan Insurance Program	Economic Recovery Loan Program	Maine Seed Capital Tax Credit Program	Regional Economic Development Revolving Loan Program	Maine Economic Development Venture Capital Revolving Loan Investment Program	Linked Investment for Commercial Enterprises	Maine New Markets Tax Credit Program	Linked Investment Programs for Agricultural Enterprises
Program Administrator	FAME	FAME	FAME	FAME	FAME	FAME	FAME	FAME
Type of program	Loans	Loan	Tax	Grant	Equity	Loan	Tax	Loan
Annual report = online	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is There a Program Website you can find with an Internet Search?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does it Include Annual Reports in a Location That You Can Readily Find?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does it Include Application Process and Forms Online?	Yes	Yes	Yes	Yes	No	No	Yes	No
What are the Target Sectors of the Program?	No Specific Sector	No Specific Sector	No Specific Sector	small technology businesses	Early growth business	No Specific Sector	No Specific Sector	Agriculture
Are the Benefits of the Program Clearly Stated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are the Eligibility Requirements Posted Online and Clear?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does the Program Claim to Purge Non-Compliant Companies?	Yes	No	No	Unknown	Unknown	Unknown	Unknown	Unknown
Are There any Caps on Benefits?	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Open enrollment or Periodic	Open	Open	Periodic	Open	Open	Open	Open	Periodic

Other Programs

Program Name	MEP	Small Business Development Centers	Commercial Facilities Development Program	Speculative Industrial Buildings Program	Maine Quality Centers	PTAC	Agricultural Marketing Loan Fund (ALMF)	Maine Farms for the Future	Potato Marketing Improvement Fund Program	Agricultural Development Grant Program	Maine Technology Centers
Program Administrator	SBA	SBA	RDA	RDA	MQC	Department of Defense	Department of Agriculture (FAME)	Department of Agriculture, Conservation and Forestry	Department of Agriculture	Department of Agriculture	
Type of program	Technical Assistance	Business Assistance	Loan	Loan	Workforce Training	Technical Assistance	Loan	Grant AND Loan	Loan	Grant	Technical Assistance
Annual report = online	No	Yes	No	No	Yes	No	Yes	No	Yes	No	No
Is There a Program Website you can find with an Internet Search?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Does it Include Annual Reports in a Location That You Can Readily Find?	No	Yes	No	No	Yes	No	Yes	No	No	No	No
Does it Include Application Process and Forms Online?	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
What are the Target Sectors of the Program?	Manufacturing	Small Businesses	Real Estate	Municipality	Education	Military	Agriculture	Agriculture	Potato Farming	Farming	Unclear
Are the Benefits of the Program Clearly Stated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Are the Eligibility Requirements Posted Online and Clear?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Does the Program Claim to Purge Non-Compliant Companies?	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unclear
Are There any Caps on Benefits?	Unknown	Unknown	Yes	Yes	Unknown	Unknown	Yes	Unknown	Yes	Unknown	Unclear
Open enrollment or Periodic	Unknown	Open	Open	Open	Open	Unknown	Open	Periodic	Open	Unknown	Unclear

Please note that the Maine Patent Program is not included above as the program is either inactive or terminated

Appendix H – Cost Benefit Findings

Based on program classifications, and in close collaboration with DECD and associated stakeholders, the review team conducted full scale CBA for four comprehensive programs:

- BETR program,
- DECD's Pine Tree Development Zone (PTDZ) program,
- MTI's Development Loans (DL) and
- The programs offered by FAME, the Commercial Loan Insurance (CLI) and the Economic Recovery Loan Program (ERLP).

The methodology for computing the CBA involves aggregating the average individual firm characteristics in terms of, amongst others, headcount, salary costs, sales revenues, cost to sales, job creation and retained jobs and geographical distribution of sales and shareholders. This aggregated level simulates the total number of certified companies that is actually making use of the program. For all four CBAs, this forms the point of departure for further analysis.

In an ideal world, all required statistics are available. However, evaluating rather complex incentive programs per definition requires a mixture of primary data gathering, desk research and the use of assumptions where data is missing, incomplete or non-existing.

Since the model examines financial flows from 2012 – 2014, benefits and costs incurred in the past. It is therefore important to discount the cash flows to the current value. The CBA uses general cash flow analysis practices to discount cash flows to current values, and below is the formula used:

$$\text{Current Value} = \sum_{t=0}^{T} \frac{X_t}{(1+r)^{-t}}$$

(X_t) represents the specific amounts one specific year (t). This value is 'discounted', by dividing it by the 'discount rate' (r = 5%) for each year (t). This rate (1+r) is the yield (or return on investment) that normally should have been made on the investment, and *-t* is the number of years in the past.

The model calculated two scenarios:

1. The incentive is provided; and
2. The incentive is not provided;

For both scenarios the direct tax revenues for the following taxes are calculated:

- Corporate income tax;
- Personal income tax;
- Dividends tax;

- Sales tax; and
- Payroll tax.

If the second scenario leads to lower tax revenues (i.e. as a result of less employment) than this can be considered a cost in the form of revenues foregone. If the revenues foregone are larger than the cost of providing and monitoring the incentive program than the model shows a positive rate of return.

It might also be possible that a specific aspect of an incentive program results in a lower tax revenue in one field but compensated by higher tax revenues in other fields. For instance a corporate income tax reduction (as a form of incentive) results in lower corporate income tax revenues, but this loss is compensated by companies being able to hire more personnel, resulting in higher personal income taxes and higher sales tax revenues. If this is the case, the model also shows a positive rate of return.

There will be a negative IRR if the tax revenue stream in the first scenario, as a result of the benefits provided to companies, is lower compared to the revenue stream in the second scenario.

Important Indicators

Corporate Income Taxes

The revenue generated from the corporate income tax is based on the corporate tax liability. The tax liability is calculated as the aggregated taxable income after (tax) incentives and depreciation. The corporate income tax revenue is then derived by applying the effective corporate income tax rate against the tax liability. There are progressive corporate income tax brackets depending on the amount of taxable income. Below is an overview of Maine's Corporate Income Tax brackets as well as the federal Corporate Income Tax brackets.

State of Maine Corporate Income Tax brackets

Taxable Income ($) Minimum	Taxable Income ($) Maximum	Fixed amount	State of Maine CIT Rate	Of the amount over
-	$25,000.00	$0.00	3.50%	$0.00
$25,000.00	$75,000.00	$875.00	7.93%	$25,000.00
$75,000.00	$250,000.00	$4,840.00	8.33%	$75,000.00
$250,000.00	…	$19,417.50	8.93%	$250,000.00

Source: Tax Foundation's 2014 State Business Tax Climate Index

Federal Corporate Income Tax brackets

Taxable Income ($) Minimum	Taxable Income ($) Maximum	Fixed amount	Federal CIT Rate	Of the amount over
$0.00	$50,000.00	$0.00	15%	$0.00
$50,000.00	$75,000.00	$7,500.00	25%	$50,000.00
$75,000.00	$100,000.00	$13,750.00	34%	$75,000.00
$100,000.00	$335,000.00	$22,250.00	39%	$100,000.00
$335,000.00	$10,000,000.00	$113,900.00	34%	$335,000.00
$10,000,000.00	$15,000,000.00	$3,400,000.00	35%	$10,000,000.00
$15,000,000.00	$18,333,333.00	$5,150,000.00	38%	$15,000,000.00

Taxable Income ($) Minimum	Taxable Income ($) Maximum	Fixed amount	Federal CIT Rate	Of the amount over
$18,333,333.00	…	$6,416,666.54	35%	$18,333,333.00

Source: Tax Foundation's 2014 State Business Tax Climate Index

In order to customize the effective tax rate to the actual sample of incentive recipients (i.e. BETR, PTDZ, DL and CLI/ERLP beneficiaries), the average tax liability and tax amount have been calculated for each CBA. Based on these numbers, the state as well as the federal effective corporate income tax rates have been calculated and integrated into the model. Using these numbers provides a more realistic picture of the corporate income tax revenues for Maine and the federal government as the effective rates have been based on the actual survey of incentive recipients rather than on an aggregated sum. The effective corporate income tax rates have therefore been adjusted to the characteristics (e.g. size and profitability) of the incentive recipients. The table below provides an overview of the effective corporate income tax rates per CBA.

As an example: A BETR recipient has an average tax liability of $2,404,045.83. This implies the BETR recipient pays a state corporate income tax amount of $211,773.79, which equals an effective state corporate income tax rate of 8.81%. The formula is as follows:

- Fixed amount of $19,417.50 plus 8.93% x $2,404,045.83 – $250,000 = $211,773.79.
- Effective State of Maine corporate income tax rate: $211,773.79 expressed as a percentage of $2,404,045.83 = 8.81%.

Similarly the effective federal corporate income tax rates have been derived using the same principle. Again, the example for the effective BETR federal corporate income tax rate:

- Fixed amount of $113,900.00 plus 8.93% x $2,404,045.83 – $ 335,000 = $817,375.58.
- Effective State of Maine corporate income tax rate: $817,375.58 expressed as a percentage of $2,404,045.83 = 34.00%.

Average tax liability, average tax amount and effective corporate income tax rates per incentive program

Incentive Program	Average Tax Liability	Average Tax Amount (State)	Effective State of Maine CIT Rate	Average Tax Amount (Federal)	Effective Federal CIT Rate
BETR	$2,404,045.83	$211,773.79	8.81%	$817,375.58	34.00%
PTDZ	$31,358,428.92	$2,797,400.20	8.92%	$10,975,450.11	35.00%
DL	$187,493.78	$14,210.73	7.60%	$56,372.57	30.07%
CLI/ERLP	$12,502,552.61	$1,113,570.45	8.91%	$4,275,893.42	34.20%

Source: Own calculations

It should be noted the CBA assumes similar corporate income tax rates in both scenarios (with and without incentive program). However, the model is designed in such a way that it allows for easy adjustments should this be necessary to represent a reduced corporate income tax rate under a specific incentive program, which is for instance the case in the PTDZ program.

Salary Costs

The salary costs in the state of Maine are a critical component of each of the four CBAs. This indicator is – amongst others - used to calculate the gross income effects and total annual salary costs of the incentive programs, which, in turn, are critical inputs for calculating the additional personal income tax and tax liability, respectively.

In order to calculate the average annual salary costs per Maine employee for each of the incentive programs, we calculated the distribution of employees in the sample that has been used per incentive program. We have included 14 different job profiles representing six job functions (based on the Bureau of Labor Statistics – BLS). These six job functions match with the job functions asked in the survey. As such, this relative distribution of job functions has then been used to calculate the average salary cost per person employed. The result is a weighted annual salary cost per employee per incentive program which, just as with the effective corporate income tax rates, is typical for the incentive recipients and reflects the characteristics of the actual incentive recipients.

For the DL, we sample was too limited to calculate a representative distribution of occupations. Therefore, we used the total annual labor costs per company indicated in the survey and divided this by the total number of employees of the incentive applicants. This yielded an average salary cost per person employed of $46,359, which is more or less in line with the salary averages of the other three programs.

Occupational distribution, annual mean wage and average salary cost per person employed per incentive program

Occupation	Annual mean wage	BETR	PTDZ	CLI/ERLP
		% in survey sample	% in survey sample	% in survey sample
First-Line Supervisors of Production and Operating Workers	$45,410	12.7%	11.9%	11.9%
Team Assemblers	$31,730	12.7%	11.9%	11.9%
Assemblers and Fabricators All Other	$25,780	12.7%	11.9%	11.9%
Logisticians	$63,230	12.7%	11.9%	11.9%
Welders, Cutters, Solderers, and Brazers	$46,080	12.7%	11.9%	11.9%
Manufacturing/operations		63.4%	59.4%	59.4%
Life, Physical, and Social Science Occupations	$59,270	4.9%	3.5%	3.6%
Architecture and Engineering Occupations	$71,270	4.9%	3.5%	3.6%
Computer and Mathematical Occupations	$67,570	4.9%	3.5%	3.6%
Technical (engineers, researchers, scientists, etc.)		14.7%	10.6%	10.8%
Business and Financial Operations Occupations	$61,310	2.4%	1.8%	1.9%
Finance		2.4%	1.8%	1.9%
Marketing & Sales Managers	$93,680	2.7%	2.3%	2.3%
Sales Representatives, Services	$57,280	2.7%	2.3%	2.3%

Occupation	Annual mean wage	BETR	PTDZ	CLI/ERLP
		% in survey sample	% in survey sample	% in survey sample
Marketing and sales		5.5%	4.6%	4.7%
General and Operations Managers	$88,450	1.8%	1.5%	2.2%
Administrative Services Managers	$72,740	1.8%	1.5%	2.2%
Administrative/executive		3.5%	3.0%	4.3%
All Occupations	$42,140	12.1%	12.1%	12.1%
Other		10.5%	20.6%	18.9%
Average salary cost per person employed		$50,149	$44,316	$45,655

Source: Bureau of Labor Statistics (2014) and own calculations

Personal Income Tax

The average salary cost per person employed as calculated in the previous section are critical for calculating the effective personal income tax rates at state and federal level. Similar to the corporate income tax rates, different personal income tax rate brackets apply at state and federal level depending on the type of household (i.e. married or single).

State of Maine Personal Income Tax brackets – single taxpayers

Taxable Income ($) Minimum	Taxable Income ($) Maximum	Fixed amount	State of Maine PIT Rate	Of the amount over
$0.00	$5,099.00	$0.00	2.00%	$0.00
$5,100.00	$10,149.00	$101.98	4.50%	$5,100.00
$10,150.00	$20,349.00	$329.19	7.00%	$10,150.00
$20,350.00	…	$1,043.12	8.50%	$20,350.00

Source: Bankrate.com (2015)

State of Maine Personal Income Tax brackets – married taxpayers

Taxable Income ($) Minimum	Taxable Income ($) Maximum	Fixed amount	State of Maine PIT Rate	Of the amount over
$0.00	$10,199.00	$0.00	2.00%	$0.00
$10,200.00	$20,349.00	$203.98	4.50%	$10,200.00
$20,350.00	$40,699.00	$660.69	7.00%	$20,350.00
$40,700.00	…	$2,085.12	8.50%	$40,700.00

Source: Bankrate.com (2015)

State of Maine Personal Income Tax brackets – single taxpayers

Taxable Income ($) Minimum	Taxable Income ($) Maximum	Fixed amount	Federal PIT Rate	Of the amount over
$0.00	$8,925.00	$0.00	10.00%	$0.00
$8,925.00	$36,250.00	$892.50	15.00%	$8,925.00
$36,250.00	$87,850.00	$4,991.25	25.00%	$36,250.00
$87,850.00	$183,250.00	$17,891.25	28.00%	$87,850.00

Taxable Income ($) Minimum	Taxable Income ($) Maximum	Fixed amount	Federal PIT Rate	Of the amount over
$183,250.00	$398,350.00	$44,603.25	33.00%	$183,250.00
$398,350.00	$400,000.00	$115,586.25	35.00%	$398,350.00
$400,000.00	…	$116,163.75	39.60%	$400,000.00

Source: Bankrate.com (2015)

State of Maine Personal Income Tax brackets – married taxpayers

Taxable Income ($) Minimum	Taxable Income ($) Maximum	Fixed amount	Federal PIT Rate	Of the amount over
$0.00	$17,850.00	$0.00	10.00%	$0.00
$17,850.00	$72,500.00	$1,785.00	15.00%	$17,850.00
$72,500.00	$146,400.00	$9,982.50	25.00%	$72,500.00
$146,400.00	$223,050.00	$28,457.50	28.00%	$146,400.00
$223,050.00	$398,350.00	$49,919.50	33.00%	$223,050.00
$398,350.00	$450,000.00	$107,768.50	35.00%	$398,350.00
$450,000.00	…	$125,846.00	39.60%	$450,000.00

Source: Bankrate.com (2015)

The first step to calculate the effective personal income tax rates is to integrate the average salary cost per person employed as calculated before. This average salary cost is applied against the respective tax brackets and rates. This yields both an average personal income tax amount for single taxpayers as well as for married taxpayers. These amounts are averaged and weighted according to the distribution of single taxpayers and married taxpayers (50.2% against 49.8%, respectively). Based on the New York Times (2014), the single adults now outnumber married adults. Single Americans account for 50.2% of the 16-and-over US population according to BLS statistics. The final step is to express this average personal income tax amount as percentage of the average salary cost which results in the effective personal income tax rate. This process is carried out at state and federal level.

To illustrate, the average salary cost per person employed of a BETR recipient equals $50,149.12. This implies an employee of a BETR recipient pays a state personal income tax amount of $3,576.04 (single) or $2,888.29 (married), which equals an effective state personal income tax rate of 6.45%. The formula is as follows:

- Fixed amount of $1,043.12 plus 8.50% x $50,149.12 – $20,350.00 = $3,576.04 (single taxpayer);
- Fixed amount of $2,085.12 plus 8.50% x $50,149.12 – $40,700.00 = $2,888.29 (married taxpayer);
- Average tax amount (State) is $3,576.04 x 50.2% plus $2,888.29 x 49.8% = $3,233.54; and
- Effective State of Maine personal income tax rate: $$3,233.54 expressed as a percentage of $50,149.12 = 6.45%.

The same principle has been repeated for the other three incentive programs as well as the effective Federal PIT rate.

Average salary cost, average tax amount and effective state personal income tax rates per incentive program

	BETR	PTDZ	DL	CLI/ERLP
Average salary cost per person employed	$50,149.12	$44,315.95	$46,359.34	$45,655.11
Average tax amount - single taxpayers	$3,576.04	$3,080.22	$3,253.91	$3,194.05
Average tax amount – married taxpayers	$2,888.29	$2,392.47	$2,566.16	$2,506.30
Average tax amount (State)	$3,233.54	$2,737.72	$2,911.41	$2,851.55
Effective State of Maine PIT rate	6.45%	6.18%	6.28%	6.25%

Source: Own calculations

Average salary cost, average tax amount and effective federal personal income tax rates per incentive program

	BETR	PTDZ	DL	CLI/ERLP
Average salary cost per person employed	$50,149.12	$44,315.95	$46,359.34	$45,655.11
Average tax amount - single taxpayers	$8,466.03	$7,007.74	$7,518.58	$7,342.53
Average tax amount – married taxpayers	$6,629.87	$5,754.89	$6,061.40	$5,955.77
Average tax amount (Federal)	$7,551.62	$6,383.82	$6,792.91	$6,651.92
Effective Federal PIT rate	15.06%	14.41%	14.65%	14.57%

Source: Own calculations

Dividends Tax

The Maine Revenue Service describes that in the State of Maine dividends is considered the same as any other type of individual income and therefore taxed according the personal income tax scheme as presented above and the effective PIT rates calculated per incentive program. Therefore, the effective dividends tax rate is the same as the effective PIT rates (ranging from 6.18% for PTDZ to 6.45% for BETR). For the Federal dividends tax rate, the assumption is that a 15.00% dividends tax rate on qualified dividends and long term capital gains applies[9].

A first assumption is that, of the net profit, 50% of the earnings is retained (the other 50% is saved or invested). This means half of the net profit is allocated as dividend.

For calculating the effective dividends tax rate, it is important to know the distribution of the shareholders and which portion is located in Maine. The State of Maine dividends tax can only be applied against this portion of the 50% of the net profit (i.e. share of earnings which is not retained) while the remaining portion is only taxed at Federal level. For instance, for the BETR program, 63.5% of the shareholders are resident within Maine. Thus, a State dividends tax of 6.45% applies to this portion.

Geographical distribution of shareholders per incentive program

Incentive Program	Within Maine	Within US (excl. Maine)	International
BETR	63.5%	28.5%	8.0%
PTDZ	60.8%	31.1%	8.1%
DL	75.8%	21.7%	2.5%
CLI/ERLP	66.9%	25.8%	7.3%

Source: Own calculations

[9] Taxes: What's New for 2015?

Sales Tax

The sales tax is important from two perspectives:

1. Sales tax paid by consumers; and
2. Sales tax paid by companies.

Sales tax paid by consumers

End consumers pay sales tax on top of the cost of the final product. The exact amount of sales tax generated by incentive beneficiaries has been calculated by aggregating the percentage of sales within the state of Maine. The sales tax is only applicable to this portion of the sales of the incentive beneficiaries. For instance, for the BETR recipients, only 26.3% of their annual sales were allocated in Maine which implies the sales tax applies to this portion.

Geographical distribution of annual sales per incentive program

Incentive Program	Within Maine	Within US (excl. Maine)	International
BETR	26.3%	63.2%	10.5%
PTDZ	30.3%	60.0%	9.7%
DL	75.8%	21.7%	2.5%
CLI/ERLP	33.1%	57.2%	9.7%

Source: Own calculations

Sales tax paid by companies

As has already been indicated, the reason why the Federal corporate and personal income taxes are included is to calculate the portion of the disposable income which is allocated by companies and consumers to purchase local goods and services from Maine suppliers. This, in turn, leads to additional sales tax revenues for the State of Maine. The following two assumptions apply:

- Local Purchases by corporates from local Maine suppliers : 25%; and
- Local Purchases by local residents from local Maine suppliers: 40%.

In addition, as the sales tax for the State of Maine has been raised in October 2013 from 5.0% to 5.5%, the "new" rate of 5.5% has been used for 2013 and 2014 while the "old" rate of 5.0% has been used for 2012.

Payroll Taxes for employers

The following Federal and State of Maine payroll taxes have been applied for the CBAs of the four incentive programs. The rate of the FUTA of 0.60% applies after a credit of 5.4% has been awarded in case employers paid wages subject to state unemployment tax that file Form 940. Maine's SUTA rate of 3.12% is the basic new employer rate and has been raised from 3.08% in 2013.

Payroll taxes for employers

Level	Type of Tax	Rate
Federal	Social Security taxes (up to the annual maximum)	6.20%
Federal	Medicare taxes (of wages)	1.45%
Federal	Federal unemployment taxes (FUTA)	0.60%
State	State unemployment taxes (SUTA)	3.12%

Source: Own calculations

Administrative Costs

Assuming a total of seven employees - ranging from senior managers to support staff – and overhead costs equaling a rate of 20% of the total annual salary cost of all staff, the total Administrative Costs per incentive program for 2012 have been estimated at $164,400. This has been increased with a wage inflation rate of 2.0% for 2013 and 2014, resulting in Administrative Costs of $167,688 and $171,042, respectively.

Annual administrative costs

	Annual wages	Number	Total
Senior managers	$75,000	1	$75,000
Middle managers	$30,000	1	$30,000
Assistants	$10,000	2	$20,000
Support staff	$4,000	3	$12,000
	Total	7	$137,000
		Annual salary costs administrative staff	$137,000
		Overhead rate (% of total wage bill)	20%
		Overhead costs (% of total wage bill)	$27,400
		Total estimated Administrative Costs (2012)	$164,400
		Total estimated Administrative Costs (2013)	$167,688
		Total estimated Administrative Costs (2014)	$171,042

Source: Own calculations

Findings

BETR CBA

Year of operation		-3	-2	-1	
Category\Year		2012	2013	2014	TOTAL - Value in 2015 US$
General Information					
Number of active firms in the program (Average over 1 year)		319	319	319	
Number of persons employed		70940	70940	70940	
Total annual salary cost		$ 3,416,675,251	$ 3,486,403,318	$ 3,557,554,406	$ 11,534,420,472
Total Annual Sales Revenues		$ 4,521,048,063	$ 4,933,600,675	$ 5,241,157,148	$ 16,176,188,014
Total Cost of Sales (including manufacturing, R&D and marketing, etc.)	84.3%	$ 3,813,264,622	$ 4,161,230,903	$ 4,420,638,501	$ 13,643,757,956
Tax liability amount		$ 707,783,441	$ 772,369,772	$ 820,518,647	$ 2,532,430,058
Incentive type					
Business Equipment Tax Reimbursement (actual results)		$ 32,454,514	$ 32,454,514	$ 32,454,514	$ 107,428,498
With Incentive status					
Corporate income tax Maine State Level*:	8.81%	$ 62,349,054	$ 68,038,502	$ 72,279,964	$ 223,083,234
Corporate income tax US Federal Level*:	34.0%	$ 240,646,370	$ 262,605,722	$ 278,976,340	$ 861,026,220
Net profit under incentive program		$ 437,242,531	$ 474,180,062	$ 501,716,857	$ 1,555,749,102
Retained earnings	50%	$ 218,621,265	$ 237,090,031	$ 250,858,428	$ 777,874,551
Dividends payable to Maine residents	64%	$ 138,876,556	$ 150,608,620	$ 159,354,830	$ 494,135,548
Dividends payable to non-residents	36%	$ 79,744,709	$ 86,481,411	$ 91,503,598	$ 283,739,003
Benefits					
Additional job creation					
New Jobs Created		1587	2387	2013	$ 6,583
Gross Income Effects		$ 79,606,945	$ 119,727,830	$ 100,937,036	$ 330,138,811
Additional payroll taxes	3.12%	$ 2,483,737	$ 3,735,508	$ 3,149,236	$ 10,300,331
Federal level personal income tax	15.00%	$ 11,987,478	$ 18,029,015	$ 15,199,434	$ 49,713,399
State level personal income tax	6.45%	$ 5,132,937	$ 7,719,872	$ 6,508,270	$ 21,286,859
Net income after personal income taxes for Maine residents		$ 62,486,530	$ 93,978,943	$ 79,229,332	$ 259,138,553
					$ -
Personal income from employment and dividend					$ -
Employment benefit					$ -
Gross income effects for Maine residents		$ 3,416,675,251	$ 3,486,403,318	$ 3,557,554,406	$ 11,534,420,472
Personal income tax for State of Maine	6.45%	$ 220,302,135	$ 224,798,097	$ 229,385,813	$ 743,722,265
Federal level personal income tax	15.00%	$ 514,494,312	$ 524,994,196	$ 535,708,363	$ 1,736,891,361
Net income after personal income tax for Maine residents		$ 2,681,878,804	$ 2,736,611,025	$ 2,792,460,229	$ 9,053,806,846
Net income after dividends tax for Maine residents		$ 97,128,813	$ 105,334,095	$ 111,451,104	$ 345,593,241
Total net income benefits Maine residents		$ 2,841,494,147	$ 2,935,924,064	$ 2,983,140,665	$ 9,658,538,640
					$ -
Total Annual Sales in the State of Maine	26.3%	$ 1,188,389,777	$ 1,296,832,177	$ 1,377,675,593	$ 4,252,026,564
Sales Tax Maine (sales side - paid by consumers) 2012 old rate	5.00%	$ 59,419,489	$ -	$ -	$ 68,785,486
Sales Tax Maine (sales side - paid by consumers) 2013-2014 new rate	5.50%	$ -	$ 71,325,770	$ 75,772,158	$ 158,197,427
Total sales tax benefits for Maine		$ 59,419,489	$ 71,325,770	$ 75,772,158	$ 226,982,912
					$ -
Average additional capital expenditures		$ 206,560,095	$ 167,130,683	$ 219,284,651	$ 653,629,591
Average additional exports		$ 255,215,190	$ 348,168,246	$ 352,029,159	$ 1,048,929,593
Total Capital and Exports benefits for Maine		$ 461,775,286	$ 515,298,929	$ 571,313,810	$ 1,702,559,184
					$ -
Indirect goods and services purchased in the State of Maine					$ -
Local Purchases by BETR corporates from local Maine suppliers	25.0%	$ 953,316,156	$ 1,040,307,726	$ 1,105,159,625	$ 3,410,939,489
Local Purchases by local residents from local Maine suppliers	40.0%	$ 1,136,597,659	$ 1,174,369,625	$ 1,193,256,266	$ 3,863,415,456
Benefit of use of local suppliers		$ 2,089,913,814	$ 2,214,677,351	$ 2,298,415,891	$ 7,274,354,945
					$ -
Tax income revenues for State of Maine					$ -
Corporate income tax for the State of Maine	8.81%	$ 62,349,054	$ 68,038,502	$ 72,279,964	$ 223,083,234
Sales Tax revenues		$ 59,419,489	$ 71,325,770	$ 75,772,158	$ 226,982,912
Personal income taxes for the State of Maine		$ 225,435,072	$ 232,517,969	$ 235,894,083	$ 765,009,124
Residents dividends tax	6.45%	$ 8,954,554	$ 9,711,020	$ 10,274,962	$ 31,861,125
Payroll taxes employer State of Maine	3.12%	$ 109,084,005	$ 112,511,292	$ 114,144,933	$ 370,174,250
Property tax (BETR)		$ -	$ -	$ -	$ -
Direct tax benefits for Maine		$ 465,242,173	$ 494,104,552	$ 508,366,100	$ 1,617,110,644
					$ -
Tax benefits at Federal Level					$ -
Corporate income tax at federal level	34.00%	$ 240,646,370	$ 262,605,722	$ 278,976,340	$ 861,026,220
Personal income tax at federal level	15.00%	$ 526,481,791	$ 543,023,211	$ 550,907,798	$ 1,786,604,760
Dividends tax at federal level	15.00%	$ 32,793,190	$ 35,563,505	$ 37,628,764	$ 116,681,183
Total other benefits		$ 799,921,350	$ 841,192,438	$ 867,512,902	$ 2,764,312,162
					$ -
Total Dirct Benefits		$ 465,242,173	$ 494,104,552	$ 508,366,100	$ 1,617,110,644
Total Inrect Benefits		$ 6,193,104,597	$ 6,507,092,781	$ 6,720,383,268	$ 21,399,764,931
Costs					
Costs incentive program		$ 32,454,514	$ 32,454,514	$ 32,454,514	$ 107,428,498
Number of persons employed - minus retained jobs		55231	57386	54153	
Total annual salary cost		$ 2,608,171,852	$ 2,661,399,849	$ 2,715,714,131	$ 8,804,978,111
Total Annual Sales Revenues		$ 3,519,947,324	$ 3,991,031,160	$ 4,000,918,302	$ 12,675,855,092
Total Cost of Sales (including manufacturing, R&D and marketing, etc.)	84.3%	$ 2,968,889,164	$ 3,366,223,432	$ 3,374,562,713	$ 10,691,412,501
Tax liability amount		$ 551,058,160	$ 624,807,727	$ 626,355,589	$ 1,984,442,590
No Incentive status					
Corporate income tax MaineState Level:	8.81%	$ 62,349,054	$ 68,038,502	$ 72,279,964	$ 223,083,234
Corporate income tax US Federal Level:	34.00%	$ 240,646,370	$ 262,605,722	$ 278,976,340	$ 861,026,220
Net profit - no incentive		$ 404,788,017	$ 441,725,548	$ 469,262,343	$ 1,448,320,604
Retained earnings	50%	$ 202,394,008	$ 220,862,774	$ 234,631,172	$ 724,160,302
Dividends payable to Maine residents	64%	$ 128,568,384.34	$ 140,300,447.80	$ 149,046,658.47	$ 460,014,211
Dividends payable to non-residents	36%	$ 73,825,624	$ 80,562,326	$ 85,584,513	$ 264,146,091
Opportunity cost Net income (salary and dividends)		$ 2,175,822,013	$ 2,229,334,763	$ 2,280,714,327	$ 7,371,377,578
Total Annual Sales in the State of Maine	26.29%	$ 925,243,297	$ 1,049,071,048	$ 1,051,669,954	$ 3,331,939,053
Sales Tax Maine (sales side - paid by consumers) 2012 old rate	5.00%	$ 46,262,165	$ -	$ -	$ 53,554,239
Sales Tax Maine (sales side - paid by consumers) 2013-2014 new rate	5.50%	$ -	$ 57,698,908	$ 57,841,847	$ 124,346,985
Opportunity cost total sales tax benefits for Maine		$ 46,262,165	$ 57,698,908	$ 57,841,847	$ 177,901,224
Indirect goods and services purchased in the State of Maine					
Local Purchases by corporates from local Maine suppliers	25.0%	$ 742,222,291	$ 841,555,858	$ 843,640,678	$ 2,672,853,125
Local Purchases by local residents from local Maine suppliers	40.0%	$ 870,328,805	$ 891,733,905	$ 912,285,731	$ 2,948,551,031
Benefit of use of local suppliers		$ 1,612,551,096	$ 1,733,289,763	$ 1,755,926,409	$ 5,621,404,156
Tax income revenues for State of Maine					
Corporate income tax for the State of Maine	8.81%	$ 48,543,033	$ 55,039,675	$ 55,176,027	$ 174,810,700
Sales Tax revenues	34.00%	$ 46,262,165	$ 57,698,908	$ 57,841,847	$ 177,901,224
Personal income taxes for the State of Maine	6.45%	$ 168,171,039	$ 171,603,101	$ 175,105,205	$ 567,731,884
Residents dividends tax	6.45%	$ 8,289,898	$ 9,046,364	$ 9,610,307	$ 29,661,032
Payroll taxes employer State of Maine	3.12%	$ 81,374,962	$ 83,035,675	$ 84,730,281	$ 274,715,317
Property tax (BETR)		$ 32,454,514	$ 32,454,514	$ 32,454,514	$ 107,428,498
Direct tax benefits for Maine		$ 385,095,611	$ 408,878,237	$ 414,918,181	$ 1,332,248,654
Admimistrative costs					
Total wage costsadministrative support staff		$ 137,000	$ 139,740	$ 142,535	$ 462,320
Overhead costs (% of total wage bill)	20%	$ 27,400	$ 27,948	$ 28,507	$ 92,464
Total administrative costs		$ 164,400	$ 167,688	$ 171,042	$ 554,783
Opportunity costs of taxes at Federal Level					
Corporate income tax at federal level	34.00%	$ 187,359,774	$ 212,434,627	$ 212,960,900	$ 674,710,481
Personal income tax at federal level	15.00%	$ 392,747,184	$ 400,762,432	$ 408,941,258	$ 1,325,882,861
Dividends tax at federal level	15.00%	$ 30,359,101	$ 33,129,416	$ 35,194,676	$ 108,624,045
Total opportunity cost federal taxes		$ 610,466,060	$ 646,326,476	$ 657,096,834	$ 2,109,217,387

PTDZ CBA

Year of operation		-3	-2	-1	
Categon\Year		2012	2013	2014	TOTAL - Value in 2015 US$
General Information					
Number of active firms in the program (Average over 1 year)		246	246	246	
Number of persons employed		28067	28067	28067	
Total annual salary cost		$ 1,194,549,572	$ 1,218,928,134	$ 1,243,804,219	$ 4,032,703,146
Total Annual Sales Revenues		$ 37,839,838,605	$ 40,606,793,052	$ 45,211,234,287	$ 136,045,128,505
Total Cost of Sales (including manufacturing, R&D and marketing, etc.)	81.29%	$ 30,758,127,826	$ 33,007,247,846	$ 36,749,969,731	$ 110,584,336,692
Total tax liability amount		$ 7,081,710,779	$ 7,599,545,206	$ 8,461,264,556	$ 25,460,791,814
Tax liability amount - Tier 1 companies	86.59%	$ 6,132,056,077	$ 6,580,449,105	$ 7,326,612,221	$ 22,046,509,387
Tax liability amount - Tier 2 companies	13.41%	$ 949,654,702	$ 1,019,096,100	$ 1,134,652,335	$ 3,414,282,427
With Incentive status					
Corporate income tax Maine State Level - Tier 1:	2.23%	$ 136,756,013	$ 146,755,994	$ 163,396,790	$ 491,677,293
Corporate income tax Maine State Level - Tier 2:	0.00%	$ -	$ -	$ -	$ -
Corporate income tax Maine State Level - Total		$ 136,756,013	$ 146,755,994	$ 163,396,790	$ 491,677,293
Corporate income tax US Federal Level:	35.00%	$ 2,478,598,770	$ 2,659,840,820	$ 2,961,442,592	$ 8,911,277,127
Net profit under incentive program		$ 4,466,355,995	$ 4,792,948,392	$ 5,336,425,174	$ 16,057,837,394
Retained earnings	50.00%	$ 2,233,177,998	$ 2,396,474,196	$ 2,668,212,587	$ 8,028,918,697
Dividends payable to Maine residents	60.79%	$ 1,357,440,014	$ 1,456,699,811	$ 1,621,876,329	$ 4,880,388,183
Dividends payable to non-residents	39.21%	$ 875,737,983	$ 939,774,385	$ 1,046,336,258	$ 3,148,530,514
Benefits					
Additional job creation					
New Jobs Created		3492	3090	5133	
Gross Income Effects		$ 154,766,413	$ 136,951,703	$ 227,486,335	$ 569,011,374
Additional payroll taxes paid by employers at reduced rate	0.62%	$ 965,742	$ 854,579	$ 1,419,515	$ 3,550,631
Federal level personal income tax paid by employees	14.41%	$ 22,294,479	$ 19,728,227	$ 32,769,961	$ 81,967,476
State level personal income tax paid by employees	6.18%	$ 9,561,056	$ 8,460,511	$ 14,053,499	$ 35,152,006
Net income after personal income taxes for Maine residents		$ 122,910,878	$ 108,762,965	$ 180,662,875	$ 451,891,892
Personal income from employment and dividend					
Gross income effects for Maine residents		$ 1,194,549,572	$ 1,218,928,134	$ 1,243,804,219	$ 4,032,703,146
State level personal income tax	6.18%	$ 73,796,088	$ 75,302,130	$ 76,838,909	$ 249,129,649
Federal level personal income tax	14.41%	$ 172,077,779	$ 175,589,571	$ 179,173,031	$ 580,920,723
Net income after personal income tax for Maine residents		$ 948,675,705	$ 968,036,433	$ 987,792,279	$ 3,202,652,773
Net income after dividends tax for Maine residents		$ 938,604,289	$ 1,007,237,651	$ 1,121,449,245	$ 3,374,553,008
Total net income benefits Maine residents		$ 2,010,190,872	$ 2,084,037,049	$ 2,289,934,398	$ 7,029,097,673
Total Annual Sales in the State of Maine	30.35%	$ 11,483,296,476	$ 12,322,987,115	$ 13,720,301,843	$ 41,285,761,312
Sales Tax Maine (sales side - paid by consumers) 2012 old rate	5.00%	$ 574,164,824	$ -	$ -	$ 664,667,554
Sales Tax Maine (sales side - paid by consumers) 2013-2014 new rate	5.50%	$ -	$ 677,764,291	$ 754,616,601	$ 1,539,582,563
Total sales tax benefits for Maine		$ 574,164,824	$ 677,764,291	$ 754,616,601	$ 2,204,250,117
Average additional capital expenditures		$ 120,120,190.22	$ 114,846,488.15	$ 153,156,663.73	$ 426,486,885
Average additional exports		$ 135,277,450.00	$ 164,936,917.49	$ 173,312,125.00	$ 520,421,241
Total Capital and Exports benefits for Maine		$ 255,397,640	$ 279,783,406	$ 326,468,789	$ 946,908,126
Indirect goods and services purchased in the State of Maine					
Local Purchases by PTZD corporates from Maine suppliers	25.00%	$ 7,689,531,956	$ 8,251,811,961	$ 9,187,492,433	$ 27,646,084,173
Sales tax revenues (buy side paid by companies)	0.0%	$ -	$ -	$ -	$ -
Local Purchases by local residents from local Maine suppliers	40.00%	$ 804,076,349	$ 833,614,820	$ 915,961,759	$ 2,811,639,069
Benefit of use of local suppliers		$ 8,493,608,305	$ 9,085,426,781	$ 10,103,454,192	$ 30,457,723,242
Tax income revenues for State of Maine					
Corporate income tax Maine State Level - Tier 1:	2.23%	$ 136,756,013	$ 146,755,994	$ 163,396,790	$ 491,677,293
Corporate income tax Maine State Level - Tier 2:	0.00%	$ -	$ -	$ -	$ -
Corporate income tax Maine State Level - Total		$ 136,756,013	$ 146,755,994	$ 163,396,790	$ 491,677,293
Sales Tax revenues		$ 574,164,824	$ 677,764,291	$ 754,616,601	$ 2,204,250,117
Personal income taxes for the State of Maine		$ 83,357,144	$ 83,762,642	$ 90,892,408	$ 284,281,655
Residents dividends tax	6.18%	$ 83,859,025	$ 89,991,031	$ 100,195,196	$ 301,497,371
Payroll taxes employer State of Maine	0.62%	$ 8,419,732	$ 8,460,690	$ 9,180,853	$ 28,714,699
Direct tax benefits for Maine		$ 886,556,738	$ 1,006,734,648	$ 1,118,281,848	$ 3,310,421,135
Tax benefits at Federal Level					
Corporate income tax at federal level	35.00%	$ 2,478,598,770	$ 2,659,840,820	$ 2,961,442,592	$ 8,911,277,127
Personal income tax at federal level	14.41%	$ 194,372,258	$ 195,317,797	$ 211,942,993	$ 662,888,200
Dividends tax at federal level	15.00%	$ 334,976,700	$ 359,471,129	$ 400,231,888	$ 1,204,337,805
Total other benefits		$ 3,007,947,729	$ 3,214,629,746	$ 3,573,617,473	$ 10,778,503,131
Total Dirct Benefits		$ 886,556,738	$ 1,006,734,648	$ 1,118,281,848	$ 3,310,421,135
Total Indirect Benefits		$ 13,767,144,546	$ 14,663,876,983	$ 16,293,444,852	$ 49,212,232,172
Costs					
Costs incentive program (would have been generated regardless of incentive)					
Number of persons employed - minus retained jobs		16647	20418	18062	
Total annual salary cost		$ 768,719,088	$ 784,407,233	$ 800,415,544	$ 2,595,133,730
Total Annual Sales Revenues		$ 22,444,230,767	$ 29,540,916,054	$ 29,094,429,925	$ 89,100,014,011
Total Cost of Sales (including manufacturing, R&D and marketing, etc.)	81.29%	$ 18,243,801,885	$ 24,012,345,337	$ 23,649,418,910	$ 72,424,981,746
Tax liability amount		$ 4,200,428,882	$ 5,528,570,717	$ 5,445,011,015	$ 16,675,032,265
No Incentive status					
Corporate income tax MaineState Level:	8.92%	$ 631,740,168	$ 677,934,770	$ 754,806,411	$ 2,271,288,028
Corporate income tax US Federal Level:	35.00%	$ 2,478,598,770	$ 2,659,840,820	$ 2,961,442,592	$ 8,911,277,127
Net profit - no incentive		$ 3,971,371,840	$ 4,261,769,616	$ 4,745,015,553	$ 14,278,226,659
Retained earnings	50.00%	$ 1,985,685,920	$ 2,130,884,808	$ 2,372,507,777	$ 7,139,113,330
Dividends payable to Maine residents	60.8%	$ 1,207,001,648	$ 1,295,260,972	$ 1,442,131,793	$ 4,339,518,888
Dividends payable to non-residents	39.21%	$ 778,684,272	$ 835,623,836	$ 930,375,983	$ 2,799,594,442
Opportunity cost Net income (salary and dividends)		$ 1,817,495,461	$ 1,918,213,843	$ 2,077,797,987	$ 6,400,496,831
Total Annual Sales in the State of Maine	30.35%	$ 6,811,174,824	$ 8,964,813,533	$ 8,829,317,908	$ 27,039,276,979
Sales Tax Maine (sales side - paid by consumers) 2012 old rate	5.00%	$ 340,558,741	$ -	$ -	$ 394,239,313
Sales Tax Maine (sales side - paid by consumers) 2013-2014 new rate	5.50%	$ -	$ 493,064,744	$ 485,612,485	$ 1,053,496,990
Opportunity cost total sales tax benefits for Maine		$ 340,558,741	$ 493,064,744	$ 485,612,485	$ 1,447,736,303
Indirect goods and services purchased in the State of Maine					
Local Purchases by corporates from local Maine suppliers	25.00%	$ 4,560,950,471	$ 6,003,086,334	$ 5,912,354,727	$ 18,106,245,437
Sales tax revenues (buy side paid by companies) 2012 old rate	5.00%	$ 228,047,524	$ -	$ -	$ 263,993,514
Sales tax revenues (buy side paid by companies) 2013-2014 new rate	5.50%	$ -	$ 330,169,748	$ 325,179,510	$ 705,450,633
Local Purchases by local residents from local Maine suppliers	40.00%	$ 726,998,184	$ 767,285,537	$ 831,119,195	$ 2,560,198,733
Benefit of use of local suppliers		$ 5,515,996,179	$ 7,100,541,620	$ 7,068,653,432	$ 21,635,888,317
Tax income revenues for State of Maine					
Corporate income tax for the State of Maine	8.92%	$ 374,708,843	$ 493,188,765	$ 485,734,632	$ 1,487,534,301
Sales Tax revenues		$ 568,606,372	$ 493,064,851	$ 485,612,592	$ 1,711,730,171
Personal income taxes for the State of Maine	6.18%	$ 47,489,416	$ 48,458,588	$ 49,447,538	$ 160,320,443
Residents dividends tax	6.18%	$ 74,565,344	$ 80,017,770	$ 89,091,057	$ 268,083,908
Payroll taxes employer State of Maine	3.12%	$ 23,984,036	$ 24,473,506	$ 24,972,965	$ 80,968,172
Direct tax benefits for Maine		$ 1,089,354,010	$ 1,139,203,480	$ 1,134,858,784	$ 3,708,636,995
Administrative costs					
Total wage costs administrative support staff		$ 137,000	$ 139,740	$ 142,535	$ 462,320
Overhead costs (% of total wage bill)	20.00%	$ 27,400	$ 27,948	$ 28,507	$ 92,464
Total administrative costs		$ 164,400	$ 167,688	$ 171,042	$ 554,783
Opportunity costs of taxes at Federal Level					
Corporate income tax at federal level	35.00%	$ 1,470,150,107	$ 1,934,999,749	$ 1,905,753,854	$ 5,836,261,287
Personal income tax at federal level	14.41%	$ 110,735,859	$ 112,995,775	$ 115,301,811	$ 373,835,343
Dividends tax at federal level	15.00%	$ 297,852,888	$ 319,632,721	$ 355,876,166	$ 1,070,866,999
Total opportunity cost federal taxes		$ 1,878,738,855	$ 2,367,628,245	$ 2,376,931,831	$ 7,280,963,630

DL CBA

Year of operation		-3	-2	-1	
Category\Year		2012	2013	2014	TOTAL - Value in 2015 US$
General Information					
Number of "in progress" DL in the program		6	9	17	
Number of persons employed		54	80	152	
Total annual salary cost		$ 2,431,275	$ 3,719,851	$ 7,166,912	$ 14,440,898
Total Annual Sales Revenues		$ 3,891,974	$ 5,837,961	$ 11,027,259	$ 22,520,420
Total Cost of Sales (including manufacturing, R&D and marketing, etc.)	66.29%	$ 2,580,054	$ 3,870,081	$ 7,310,154	$ 14,929,162
Total Loan Amount		$ 1,687,768	$ 2,102,290	$ 5,222,637	$ 9,755,346
Financing costs	2.74%	$ 46,279	$ 57,645	$ 143,205	$ 267,492
Tax liability amount		$ 1,265,641	$ 1,910,234	$ 3,573,901	$ 7,323,767
With incentive status					
Corporate income tax Maine State Level:	7.58%	$ 95,927	$ 144,783	$ 270,877	$ 555,091
Corporate income tax US Federal Level:	30.07%	$ 380,532	$ 574,338	$ 1,074,542	$ 2,201,991
Net profit under incentive program		$ 789,182	$ 1,191,114	$ 2,228,481	$ 4,566,685
Retained earnings	50%	$ 394,591	$ 595,557	$ 1,114,241	$ 2,283,343
Dividends payable to Maine residents	76%	$ 299,231	$ 451,631	$ 844,966	$ 1,731,535
Dividends payable to non-residents	24%	$ 95,359	$ 143,926	$ 269,275	$ 551,808
Benefits					
Additional job creation					
New Jobs Created		33	50	94	
Gross Income Effects		$ 1,499,665	$ 2,294,487	$ 4,420,712	$ 8,907,470
Additional payroll taxes paid by employers	3.12%	$ 46,790	$ 71,588	$ 137,926	$ 277,913
Federal level personal income tax paid by employees	14.65%	$ 219,742	$ 336,205	$ 647,755	$ 1,305,187
State level personal income tax paid by employees	6.28%	$ 94,180	$ 144,096	$ 277,625	$ 559,397
Net income after personal income taxes for Maine residents		$ 1,185,743	$ 1,814,186	$ 3,495,333	$ 7,042,885
Personal income from employment and dividend					
Gross income effects for Maine residents		$ 2,431,275	$ 3,719,851	$ 7,166,912	$ 14,440,898
State level personal income taks	6.28%	$ 152,686	$ 233,610	$ 450,089	$ 906,902
Federal level personal income tax	14.65%	$ 356,248	$ 545,060	$ 1,050,148	$ 2,115,985
Net income after personal income tax for Maine residents		$ 1,922,341	$ 2,941,181	$ 5,666,676	$ 11,418,011
Net income after dividends tax for Maine residents		$ 221,251	$ 333,934	$ 624,765	$ 1,280,291
Total net income benefits Maine residents		$ 3,329,334	$ 5,089,302	$ 9,786,773	$ 19,741,188
Total Annual Sales in the State of Maine	34.83%	$ 1,355,704	$ 2,033,556	$ 3,841,162	$ 7,844,613
Sales Tax Maine (sales side - paid by consumers) 2012 old rate	5.00%	$ 67,785	$ -	$ -	$ 78,470
Sales Tax Maine (sales side - paid by consumers) 2013-2014 new rate	5.50%	$ -	$ 111,846	$ 211,264	$ 345,137
Total sales tax benefits for Maine		$ 67,785	$ 111,846	$ 211,264	$ 423,607
Average additional capital expenditures		1,687,768	2,102,290	5,222,637	$ 9,755,346
Total Capital and Exports benefits for Maine		$ 1,687,768	$ 2,102,290	$ 5,222,637	$ 9,755,346
Indirect goods and services purchased in the State of Maine					
Local Purchases by corporates from local Maine suppliers	25.0%	$ 645,014	$ 967,520	$ 1,827,538	$ 3,732,290
Sales Tax Maine (sales side - paid by companies) 2012 old rate	5.0%	$ 32,251	$ -	$ -	$ 37,334
Sales Tax Maine (sales side - paid by companies) 2013-2014 new rate	5.5%	$ -	$ 53,214	$ 100,515	$ 164,208
Local Purchases by local residents from local Maine suppliers	40.0%	$ 1,331,734	$ 2,035,721	$ 3,914,709	$ 7,896,475
Benefit of use of local suppliers		$ 2,008,998	$ 3,056,455	$ 5,842,762	$ 11,830,308
Tax income revenues for State of Maine					
Corporate income tax for the State of Maine	7.58%	$ 95,927	$ 144,783	$ 270,877	$ 555,091
Sales Tax revenues		$ 100,036	$ 165,059	$ 311,779	$ 625,149
Personal income taxes for the State of Maine		$ 246,867	$ 377,706	$ 727,714	$ 1,466,299
Residents dividends tax	6.28%	$ 18,792	$ 28,363	$ 53,065	$ 108,742
Payroll taxes employer State of Maine	3.12%	$ 122,645	$ 187,647	$ 361,534	$ 728,469
Direct tax benefits for Maine		$ 584,267	$ 903,558	$ 1,724,968	$ 3,483,750
Tax benefits at Federal Level					
Corporate income tax at federal level	30.07%	$ 380,532	$ 574,338	$ 1,074,542	$ 2,201,991
Personal income tax at federal level	14.65%	$ 575,990	$ 881,264	$ 1,697,903	$ 3,421,172
Dividends tax at federal level	15.00%	$ 59,189	$ 89,334	$ 167,136	$ 342,501
Total other benefits		$ 1,015,711	$ 1,544,936	$ 2,939,581	$ 5,965,665
Total Direct Benefits		$ 584,267	$ 903,558	$ 1,724,968	$ 3,483,750
Total Indirect Benefits		$ 8,041,811	$ 11,792,983	$ 23,791,754	$ 47,292,506
Costs					
Cost of soft loan program		$ 54,987.48	$ 68,492.61	$ 170,153.51	$ 317,829
Cost of non-repayable grant		$ 168,776.80	$ 210,229.00	$ 522,263.70	$ 975,535
Costs incentive program		$ 223,764	$ 278,722	$ 692,417	$ 1,293,364
Number of persons employed - minus retained jobs		31	47	88	
Total annual salary cost		$ 1,408,776	$ 2,155,427	$ 4,152,790	$ 8,367,623
Total Annual Sales Revenues		$ 2,255,162	$ 3,382,744	$ 6,389,627	$ 13,049,215
Total Cost of Sales (including manufacturing, R&D and marketing, etc.)	66.29%	$ 1,494,985	$ 2,242,477	$ 4,235,790	$ 8,650,542
Tax liability amount		$ 760,178	$ 1,140,266	$ 2,153,837	$ 4,398,673
No incentive status					
Corporate income tax MaineState Level:	7.58%	$ 95,927	$ 144,783	$ 270,877	$ 555,091
Corporate income tax US Federal Level:	30.07%	$ 380,532	$ 574,338	$ 1,074,542	$ 2,201,991
Net profit - no incentive		$ 283,719	$ 421,146	$ 808,418	$ 1,641,591
Retained earnings	50%	$ 141,859	$ 210,573	$ 404,209	$ 820,796
Dividends payable to Maine residents	76%	$ 107,577	$ 159,684	$ 306,525	$ 622,437
Dividends payable to non-residents	24%	$ 34,283	$ 50,888	$ 97,684	$ 198,359
Opportunity cost Net income (salary and dividends)		$ 1,221,456	$ 1,863,920	$ 3,590,019	$ 7,238,480
Total Annual Sales in the State of Maine	34.83%	$ 785,548	$ 1,178,322	$ 2,225,720	$ 4,545,477
Sales Tax Maine (sales side - paid by consumers) 2012 old rate	5.00%	$ 43,205	$ -	$ -	$ 50,015
Sales Tax Maine (sales side - paid by consumers) 2013-2014 new rate	5.50%	$ -	$ 64,808	$ 122,415	$ 199,986
Opportunity cost total sales tax benefits for Maine		$ 43,205	$ 64,808	$ 122,415	$ 250,001
Indirect goods and services purchased in the State of Maine					
Local Purchases by corporates from local Maine suppliers	25.0%	$ 373,746	$ 560,619	$ 1,058,948	$ 2,162,636
Sales tax revenues (buy side paid by companies) 2012 old rate	5.0%	$ 18,687	$ -	$ -	$ 21,633
Sales tax revenues (buy side paid by companies) 2013-2014 new rate	5.5%	$ -	$ 30,834	$ 58,242	$ 95,149
Local Purchases by local residents from local Maine suppliers	40.0%	$ 488,582	$ 745,568	$ 1,436,008	$ 2,895,392
Benefit of use of local suppliers		$ 881,016	$ 1,337,021	$ 2,553,197	$ 5,174,809
Tax income revenues for State of Maine					
Corporate income tax for the State of Maine	7.58%	$ 57,616	$ 86,424	$ 163,246	$ 333,389
Sales Tax revenues		$ 61,892	$ 95,642	$ 180,657	$ 366,783
Personal income taxes for the State of Maine		$ 88,472	$ 135,363	$ 260,799	$ 525,494
Residents dividends tax	6.28%	$ 6,756	$ 10,028	$ 19,250	$ 39,090
Payroll taxes employer State of Maine	3.12%	$ 43,954	$ 67,249	$ 129,567	$ 261,070
Direct tax benefits for Maine		$ 258,691	$ 394,707	$ 753,519	$ 1,525,826
Admimistrative costs					
Total wage costsadministrative support staff		$ 137,000	$ 139,740	$ 142,535	$ 462,320
Overhead costs (% of total wage bill)	20%	$ 27,400	$ 27,948	$ 28,507	$ 92,464
Total administrative costs		$ 164,400	$ 167,688	$ 171,042	$ 554,783
Opportunity costs of taxes at Federal Level					
Corporate income tax at federal level	30.07%	$ 228,558	$ 342,837	$ 647,581	$ 1,322,521
Personal income tax at federal level	14.65%	$ 206,424	$ 315,829	$ 608,497	$ 1,226,085
Dividends tax at federal level	15.00%	$ 21,279	$ 31,586	$ 60,631	$ 123,119
Total opportunity cost federal taxes		$ 456,261	$ 690,252	$ 1,316,709	$ 2,671,726
Total direct costs		$ 646,855	$ 841,116	$ 1,616,978	$ 3,373,973
Total indirect costs		$ 2,558,733	$ 3,891,193	$ 7,459,925	$ 15,085,015

CLI/ERLP CBA

Year of operation		-3	-2	-1	
Category\Year		2012	2013	2014	TOTAL - Value in 2015 US$
General Information					
Number of active projects in the program (Average over 1 year)		248	261	253	
Number of persons employed		19431	20450	19823	
Total annual salary cost		$ 887,129,795	$ 933,632,567	$ 905,015,477	$ 3,006,559,784
Total Annual Sales Revenues		$ 9,635,592,288	$ 10,140,683,820	$ 9,829,858,262	$ 32,655,857,609
Total Cost of Sales (including manufacturing, R&D and marketing, etc.)	67.78%	$ 6,531,067,692	$ 6,873,422,047	$ 6,662,742,444	$ 22,134,354,609
Total Finance costs based on outstanding leveraged debt	6.00%	$ 4,043,360	$ 3,495,753	$ 2,820,000	$ 11,495,763
Total Commercial Loan Insurance Amount		$ 37,659,126	$ 27,750,080	$ 22,000,000	$ 97,289,608
Total Cost for the Loan Insurance per company per year x total # of companies	1.14%	$ 259,072	$ 272,652	$ 264,295	$ 878,017
Total ERLP amount		$ 4,407,706	$ 4,815,411	$ 4,000,000	$ 14,611,461
Total Cost for the Economic Recovery Loan Program	9.90%	$ 262,591	$ 307,182	$ 218,000	$ 871,550
Tax liability amount		$ 3,099,959,573	$ 3,263,186,186	$ 3,163,813,523	$ 10,508,257,670
With Incentive status					
Corporate income tax Maine State Level*:	8.91%	$ 276,105,487	$ 290,643,664	$ 281,792,795	$ 935,943,688
Corporate income tax US Federal Level*:	34.20%	$ 1,060,191,237	$ 1,116,015,005	$ 1,082,029,392	$ 3,593,841,287
Net profit under incentive program		$ 1,763,662,850	$ 1,856,527,516	$ 1,799,991,336	$ 5,978,472,695
Retained earnings	50%	$ 881,831,425	$ 928,263,758	$ 899,995,668	$ 2,989,236,348
Dividends payable to Maine residents	35%	$ 589,624,557	$ 620,670,904	$ 601,769,831	$ 1,998,712,121
Dividends payable to non-residents	15%	$ 292,206,868	$ 307,592,854	$ 298,225,837	$ 990,524,226
Benefits					
Additional job creation					
New Jobs Created		810	705	413	$ 2,148
Gross Income Effects		$ 36,980,638	$ 32,170,675	$ 18,841,643	$ 98,061,606
Additional payroll taxes paid by employers at reduced rate	3.12%	$ 1,153,796	$ 1,003,725	$ 587,859	$ 3,059,522
Federal level personal income tax paid by employees	14.57%	$ 5,388,055	$ 4,687,247	$ 2,745,215	$ 14,287,513
State level personal income tax paid by employees	6.25%	$ 2,309,755	$ 2,009,332	$ 1,176,821	$ 6,124,781
Net income after personal income taxes for Maine residents		$ 29,282,827	$ 25,474,096	$ 14,919,607	$ 77,649,311
Personal income from employment and dividend					
Employment benefit					
Gross income effects for Maine residents		$ 887,129,795	$ 933,632,567	$ 905,015,477	$ 3,006,559,784
Personal income tax for State of Maine	6.25%	$ 55,408,799	$ 58,313,292	$ 56,525,912	$ 187,785,223
Federal level personal income tax	14.57%	$ 129,254,246	$ 136,029,670	$ 131,860,178	$ 438,053,845
Net income after personal income tax for Maine residents		$ 702,466,751	$ 739,289,605	$ 716,629,387	$ 2,380,720,717
Net income after dividends tax for Maine residents		$ 420,522,776	$ 442,665,165	$ 429,184,838	$ 1,425,490,103
Total net income benefits Maine residents		$ 1,152,272,354	$ 1,207,428,865	$ 1,160,733,832	$ 3,883,860,131
Total Annual Sales in the State of Maine	33.06%	$ 3,185,585,208	$ 3,352,571,529	$ 3,249,810,716	$ 10,796,224,440
Sales Tax Maine (sales side - paid by consumers) 2012 old rate	5.00%	$ 159,279,260	$ -	$ -	$ 184,385,654
Sales Tax Maine (sales side - paid by consumers) 2013-2014 new rate	5.50%	$ -	$ 184,391,434	$ 178,739,589	$ 390,968,125
Total sales tax benefits for Maine		$ 159,279,260	$ 184,391,434	$ 178,739,589	$ 575,353,779
Indirect goods and services purchased in the State of Maine					
Local Purchases by corporates from local Maine suppliers	24.00%	$ 1,632,766,923	$ 1,718,355,512	$ 1,665,685,611	$ 5,533,588,652
Sales Tax Maine (sales side - paid by companies) 2012 old rate	5.00%	$ 81,638,346	$ -	$ -	$ 198,703,373
Sales Tax Maine (sales side - paid by companies) 2013-2014 new rate	5.50%	$ -	$ 94,509,553	$ 91,612,709	$ 628,669,474
Local Purchases by local residents from local Maine suppliers	40.00%	$ 460,908,942	$ 482,971,546	$ 464,293,533	$ 1,553,544,053
Benefit of use of local suppliers		$ 2,093,675,865	$ 2,201,327,058	$ 2,129,979,144	$ 7,087,132,705
Tax income revenues for State of Maine					
Corporate income tax for the State of Maine	8.91%	$ 276,105,487	$ 290,643,664	$ 281,792,795	$ 935,943,688
Sales Tax revenues		$ 240,917,607	$ 278,900,987	$ 270,352,298	$ 870,250,496
Personal income taxes for the State of Maine		$ 57,718,554	$ 60,322,624	$ 57,702,732	$ 193,910,004
Residents dividends tax	6.25%	$ 36,827,067	$ 38,766,175	$ 37,585,643	$ 124,836,567
Payroll taxes employer State of Maine	3.12%	$ 28,832,246	$ 30,133,061	$ 28,824,342	$ 96,864,187
Direct tax benefits for Maine		$ 640,400,960	$ 698,766,512	$ 676,257,810	$ 2,221,804,941
Tax benefits at Federal Level					
Corporate income tax at federal level	34.20%	$ 1,060,191,237	$ 1,116,015,005	$ 1,082,029,392	$ 3,593,841,287
Personal income tax at federal level	14.57%	$ 134,642,301	$ 140,716,917	$ 134,605,394	$ 452,341,358
Dividends tax at federal level	15.00%	$ 132,274,714	$ 139,239,564	$ 134,999,350	$ 448,385,452
Total other benefits		$ 1,327,108,252	$ 1,395,971,486	$ 1,351,634,136	$ 4,494,568,097
Total Direct Benefits		$ 640,400,960	$ 698,766,512	$ 676,257,810	$ 2,221,804,941
Total Indirect Benefits		$ 4,573,056,471	$ 4,804,727,409	$ 4,642,347,112	$ 15,465,560,933
Costs					
Default rate and associates costs of the insurance	0.72%	$ 271,146	$ 199,801	$ 158,400	$ 700,485
Costs incentive program		$ 271,146	$ 199,801	$ 158,400	$ 700,485
Number of persons employed - minus retained jobs		15528	17012	17810	
Total annual salary cost		$ 708,937,907	$ 776,690,160	$ 813,097,827	$ 2,530,737,864
Total Annual Sales Revenues (Pro Rata number of employees)		$ 7,700,154,667	$ 8,436,048,200	$ 8,831,491,394	$ 27,487,700,651
Total Cost of Sales (including manufacturing, R&D and marketing, etc.)	67.78%	$ 5,219,215,370	$ 5,718,008,836	$ 5,986,042,828	$ 18,631,343,904
Financing costs	6.00%	$ 4,043,360	$ 3,495,753	$ 2,820,000	$ 11,495,763
Tax liability amount		$ 2,476,895,937	$ 2,714,543,611	$ 2,842,628,566	$ 8,844,860,984
No Incentive status					
Corporate income tax MaineState Level*:	8.91%	$ 276,105,487	$ 290,643,664	$ 281,792,795	$ 935,943,688
Corporate income tax US Federal Level*:	34.20%	$ 1,060,191,237	$ 1,116,015,005	$ 1,082,029,392	$ 3,593,841,287
Net profit - no incentive		$ 1,140,599,213	$ 1,856,527,516	$ 1,799,991,336	$ 5,257,198,653
Retained earnings	50%	$ 570,299,607	$ 928,263,758	$ 899,995,668	$ 2,628,599,326
Dividends payable to Maine residents	67%	$ 381,323,055	$ 620,670,904	$ 601,769,831	$ 1,757,577,095
Dividends payable to non-residents	33%	$ 188,976,551	$ 307,592,854	$ 298,225,837	$ 871,022,231
Opportunity cost Net income (salary and dividends)		$ 942,689,961	$ 1,235,686,898	$ 1,245,614,950	$ 3,761,521,968
Total Annual Sales in the State of Maine	33.06%	$ 2,545,717,801	$ 2,789,008,663	$ 2,919,744,579	$ 9,087,600,427
Sales Tax Maine (sales side - paid by consumers) 2012 old rate	5.00%	$ 127,285,890	$ -	$ -	$ 147,349,328
Sales Tax Maine (sales side - paid by consumers) 2013-2014 new rate	5.50%	$ -	$ 153,395,476	$ 160,585,952	$ 337,733,762
Opportunity cost total sales tax benefits for Maine		$ 127,285,890	$ 153,395,476	$ 160,585,952	$ 485,083,091
Indirect goods and services purchased in the State of Maine					
Local Purchases by corporates from local Maine suppliers	24.00%	$ 1,304,803,842	$ 1,429,502,209	$ 1,496,510,707	$ 4,657,835,976
Sales Tax Maine (sales side - paid by companies) 2012 old rate	5.00%	$ 65,240,192	$ -	$ -	$ 75,523,677
Sales Tax Maine (sales side - paid by companies) 2013-2014 new rate	5.50%	$ -	$ 78,622,622	$ 82,308,089	$ 173,104,934
Local Purchases by local residents from local Maine suppliers	40.00%	$ 377,075,984	$ 494,274,759	$ 498,245,980	$ 1,504,608,787
Benefit of use of local suppliers		$ 1,747,120,019	$ 2,002,399,590	$ 2,077,064,776	$ 6,411,073,374
Tax income revenues for State of Maine					
Corporate income tax for the State of Maine	8.91%	$ 220,610,799	$ 241,777,471	$ 253,185,671	$ 787,789,191
Sales Tax revenues	34.20%	$ 192,526,082	$ 232,018,098	$ 242,894,041	$ 733,711,702
Personal income taxes for the State of Maine	6.25%	$ 44,279,200	$ 48,510,904	$ 50,784,873	$ 158,066,098
Residents dividends tax for the State of Maine	6.25%	$ 23,816,867	$ 38,766,175	$ 37,585,643	$ 109,775,634
Payroll taxes employer State of Maine	3.12%	$ 22,118,863	$ 24,232,733	$ 25,368,652	$ 78,959,021
Direct tax benefits for Maine		$ 503,351,811	$ 585,305,381	$ 609,818,879	$ 1,868,301,646
Admimistrative costs					
Total wage costsadministrative support staff		$ 137,000	$ 139,740	$ 142,535	$ 462,320
Overhead costs (% of total wage bill)	20%	$ 27,400	$ 27,948	$ 28,507	$ 92,464
Total administrative costs		$ 164,400	$ 167,688	$ 171,042	$ 554,783
Opportunity costs of taxes at Federal Level					
Corporate income tax at federal level	34.20%	$ 847,102,456	$ 928,378,349	$ 972,183,612	$ 3,024,956,903
Personal income tax at federal level	14.57%	$ 103,291,801	$ 113,163,261	$ 118,467,835	$ 368,726,894
Dividends tax at federal level	15.00%	$ 85,544,941	$ 139,239,564	$ 134,999,350	$ 394,289,899
Total opportunity cost federal taxes		$ 1,035,939,198	$ 1,180,781,174	$ 1,225,650,798	$ 3,787,973,696
Total Direct Costs		$ 503,787,357	$ 585,672,870	$ 610,148,321	$ 1,869,556,914
Total Indirect Costs		$ 3,725,749,178	$ 4,418,867,661	$ 4,548,330,523	$ 13,960,569,038

Appendix I – Benchmark 1 – State Investment Trends

This benchmark of state investment trends is based on the fDiMarkets.com database, which tracks new (i.e. Greenfield) investment projects as well as expansion (i.e. Brownfield) FDI projects. It does not include mergers and acquisitions (M&As) or other equity-based or non-equity investments. The data presented includes FDI projects that have either been announced or opened by the investing company. This benchmark focuses not only on the actual number of investment projects that have been announced for and realized in US states. Just as important are the economic benefits these investment projects have generated in terms of capital expenditures and employment opportunities. As such, this benchmark will assess three key indicators for investment projects:

- Number investment projects attracted to a particular location;
- Capital volume attracted to this location as a result of these investment projects; and
- New jobs created in this location as a result of these investment projects.

The investment figures for the US, New England and Maine in table below show that for the period of 2007 to 2015, a total of 35,431 investment projects have been registered for the US, of which 1,713 (or 4.8%) have been located in New England. In turn, out of these 1,713 projects, 96 have been located in Maine.

The more than 35,000 investment projects in the US represent a capital investment of $1,346 billion. The investment projects generated $49.9 billion and $4.8 billion of capital volume in New England and Maine, respectively. Over 3,064,000 new jobs have been created as a direct result of these investment projects throughout the US. The more than 1,700 New England investment projects resulted in 113,569 new jobs while the 96 investment projects in Maine created over 9,000 new jobs.

Comparing average project values reveals that Maine outperforms both the US as well as New England for both average capital volume and number of newly created jobs per investment project. An average investment project in Maine equaled a capital volume of $50.3 million and created 93 new jobs. For the US and New England, these numbers equal average capital investments of $38.0 million and $29.1 million and 86 and 66 new jobs, respectively.

Headline Investment Figures for the US, New England and Maine (2007-2015)

	U.S.	New England	Maine
No. of Investment Projects	35,431	1,713	96
Total Capital Investment	$1,346.3 billion	$49.9 billion	$4.8 billion
Average Capital Volume per Investment Project	$38.0 million	$29.1 million	$50.3 million
Total Job Creation	3,064,581	113,569	9,020
Average Job Creation per Investment Project	86	66	93

Source: fDiMarkets.com database

The table above provides a ranking of the 50 states and Washington DC with regards to attracting investment into the state. It shows the top and bottommost five performers as well as states that perform most similarly to Maine. Not surprisingly, economically powerful states such as California, Texas, New York, Florida and North Carolina make up the top five. California alone has attracted more

than 10% of all inward investment. However, in terms of economic benefits, Texas has attracted the largest share of capital ($139.1 billion or 10.3%) as well as newly created jobs (277,355 or 9.1%).

On the other side of the spectrum, small-sized states in terms of population such as Alaska, Wyoming, Vermont and Montana only attracted a limited number of state investment (around 50 or 0.15% each). Apart from Wyoming, which attracted disproportionately more capital investment vis-à-vis number of investment projects (0.7% against 0.1%), most of the investment in these states generated a proportionate amount of economic benefits.

Maine just performs above these bottommost five states as it ranks 46th, between Rhode Island (47th) and Hawaii (45th). Looking at Maine's peers and neighboring states, it appears states as Vermont, Rhode Island and New Hampshire perform more or less similar to Maine. In fact, with attracting $4.8 billion worth of capital investment and creating over 9,000 new jobs, Maine slightly outperforms its peers and neighboring states.

Absolute State Investment Performance (2007-2015)

Rank	State	No. of Investment Projects		Total Capital Investment		Total Job Creation	
		Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
1.	California	3,761	10.6%	$92.4 bln.	6.9%	239,355	7.8%
2.	Texas	3,114	8.8%	$139.1 bln.	10.3%	277,355	9.1%
3.	New York	2,443	6.9%	$67.9 bln.	5.0%	142,318	4.6%
4.	Florida	2,005	5.7%	$49.3 bln.	3.7%	168,838	5.5%
5.	North Carolina	1,487	4.2%	$47.5 bln.	3.5%	147,057	4.8%
43.	New Hampshire	109	0.3%	$3.7 bln.	0.3%	7,048	0.2%
44.	South Dakota	100	0.3%	$3.3 bln.	0.2%	6,889	0.2%
45.	Hawaii	99	0.3%	$5.3 bln.	0.4%	10,910	0.4%
46.	**Maine**	**96**	**0.3%**	**$4.8 bln.**	**0.4%**	**9,020**	**0.3%**
47.	Rhode Island	82	0.2%	$2.3 bln.	0.2%	5,884	0.2%
48.	Montana	55	0.2%	$3.5 bln.	0.3%	3,301	0.1%
49.	Vermont	53	0.1%	$2.3 bln.	0.2%	2,792	0.1%
50.	Wyoming	49	0.1%	$9.0 bln.	0.7%	2,956	0.1%
51.	Alaska	46	0.1%	$3.2 bln.	0.2%	4,278	0.1%

Source: fDiMarkets.com database

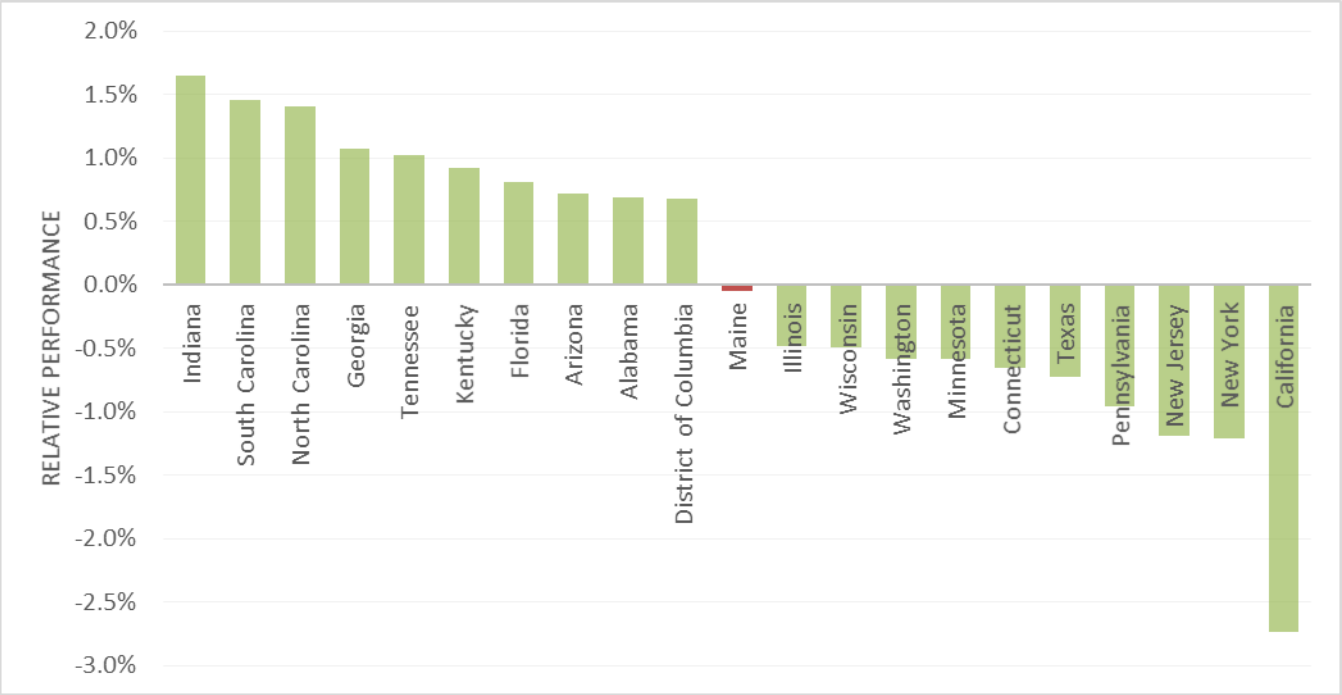
Interpreting the absolute state investment trends does not reveal much on the actual state investment performance as there is a direct relationship between the size of a state's economy and the number of attracted investment projects. Therefore, correcting the state investment performance with the actual size of the economy measured by its Gross State Product (GSP) provides a better understanding of the actual state investment performance of Maine and other states.

Comparing the share of a state's contribution to the national Gross Domestic Product (GDP) with the national share of state investment (i.e. in terms of number of projects, capital volume and job creation) results in a more comprehensive analysis of a state's investment performance. A positive differential indicates the state has attracted disproportionately more investment, capital or new jobs and thus

performed better than "expected" based on its share of the national GDP. On the contrary, a negative differential indicates the state has attracted disproportionately fewer investment projects, capital or new jobs compared with its share of the national GDP.

The figure below summarizes the ten top and bottommost performers as well as Maine's performance for number of attracted investment projects. It demonstrates Maine performs slightly below its relative importance to the US economy as the difference between its share of the national GDP and its share of national attracted investment projects is -0.1%. States with very large positive differentials – which thus attracted disproportionately more investment than its contribution to the US economy – include a wide range of eastern and southeastern states known for their strong attractiveness for large (foreign) investors: Indiana, both Carolina's, Georgia, Tennessee, Kentucky and Florida. On the other hand, states that attracted large absolute numbers of investment but actually attracted disproportionately fewer investment projects than their contribution to the national economy include California, New York, New Jersey, Pennsylvania, Texas and Illinois as well as one New England state; Connecticut.

Relative State Investment Performance – Number of Investment Projects (2007-2015)



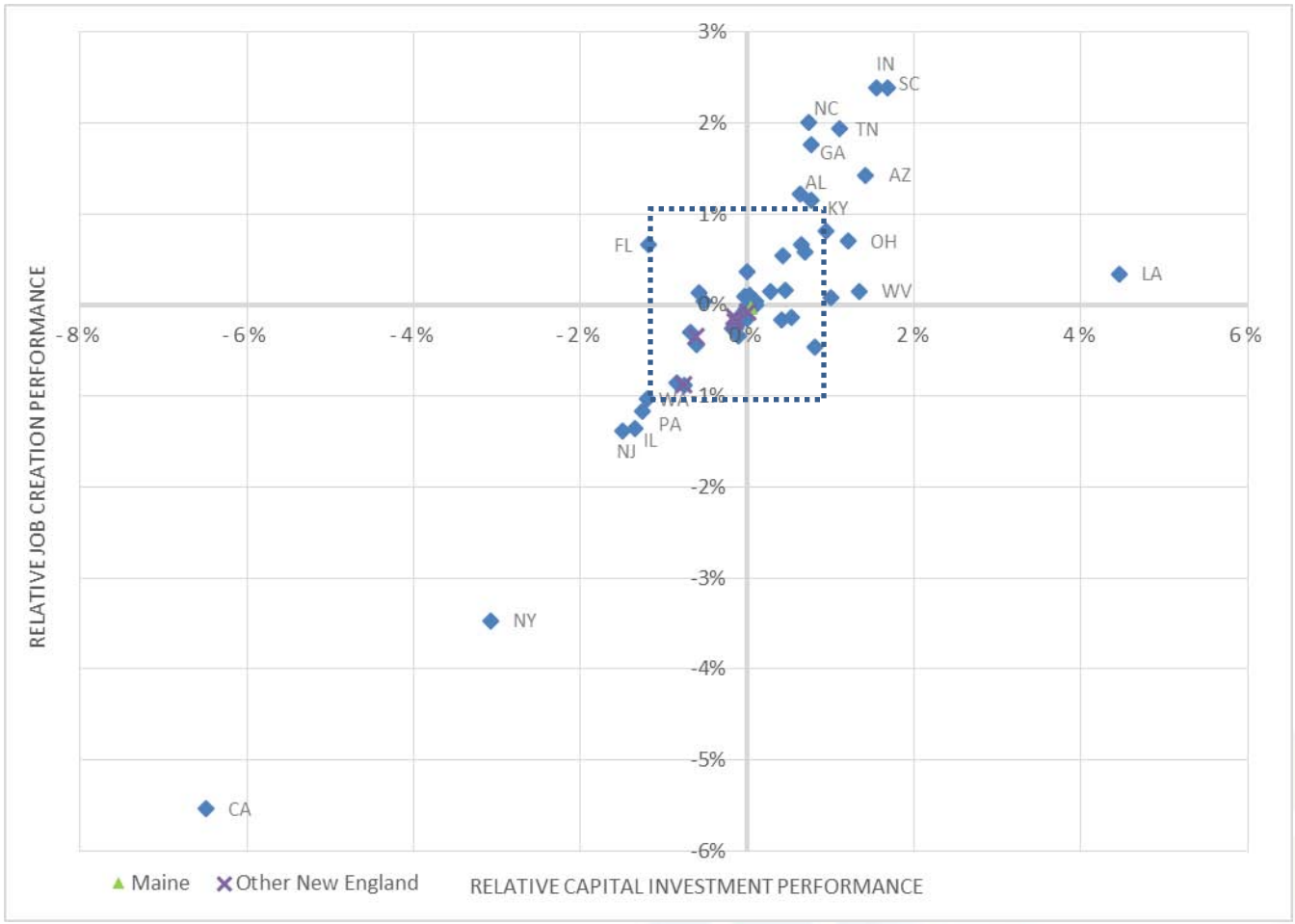
Source: fDiMarkets.com database

A same analysis has been undertaken for the benefits of state investment. The figure below plots the relative performance for capital investment and job creation. Ideally, the best position for states would be the top right corner as this part of the figure indicates a state has attracted disproportionately more capital as well as new jobs compared to its share of the national GDP. Vice versa, the bottom left corner indicates a state's investment performance is relatively smaller compared to its contribution to the national economy.

A number of states that attracted disproportionately more state investment also generated disproportionately more benefits from this state investment. South Carolina and Indiana score best, followed by Tennessee, North Carolina and Georgia and, to a lesser extent, Arizona, Alabama and Kentucky. These states all attracted one percent more capital investment and one percent more newly created jobs compared to their share of national GDP. Louisiana is a notable performer in terms of attracting capital investment (more than four percent than its contribution to the national economy).

On the other side, California, New York and, to a lesser extent, New Jersey, Illinois, Pennsylvania and Washington generated disproportionately fewer benefits from their state investment compared to their contribution to the national economy. Notable exception is Texas.

Relative State Investment Performance – Capital Investment and Job Creation (2007-2015)



Source: fDiMarkets.com database

Since the performance of a large number of states, including Maine and other New England states, is clustered between a difference of +1.0% and -1.0%, this section of the figure has been enlarged in the figure on the next page.

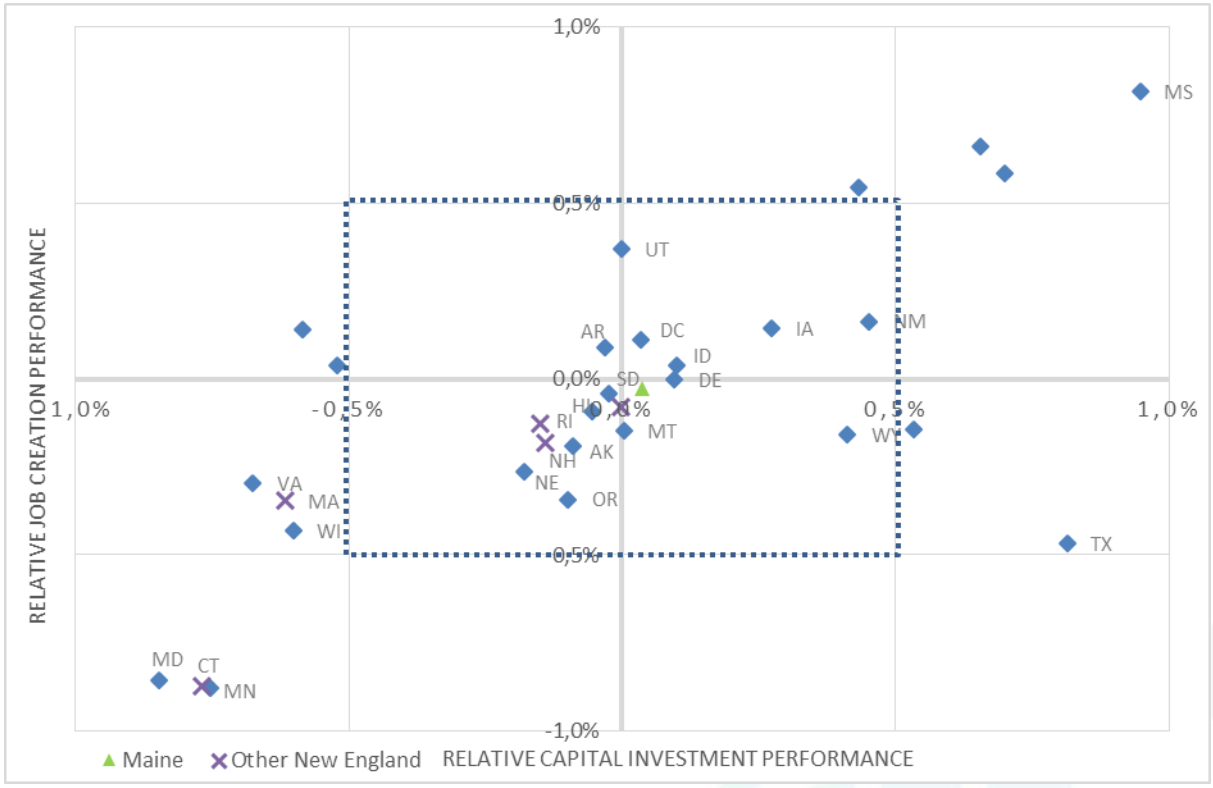
This section reveals the position of Texas, as one of the best performing large states. The state has attracted slightly more capital investment (positive percentage) but slightly fewer new jobs (negative

percentage) compared to its contribution to the US economy. New England states Connecticut and Massachusetts perform weakest with negative percentages for both indicators and perform similarly to Maryland and Minnesota and Virginia and Wisconsin, respectively.

Another concentration of states is visible in the section between +0.5% and -0.5%. This section includes states that more or less perform on par with their contribution to the national GDP. This cluster includes Maine, which attracted 0.04% more capital investment and -0.03% fewer new jobs compared to its share to the national economy. A group of 17 other states perform very similarly, ranging from Nebraska and Oregon to Utah, Iowa, New Mexico and Wyoming. This group also includes the remaining New England states of Vermont, New Hampshire and Rhode Island.

Given these differences are so small, it can be concluded Maine performs on par with its contribution to the US economy vis-à-vis its state investment performance.

Relative State Investment Performance of +1.0% to -1.0% – Capital Investment and Job Creation (2007-2015)



Source: fDiMarkets.com database

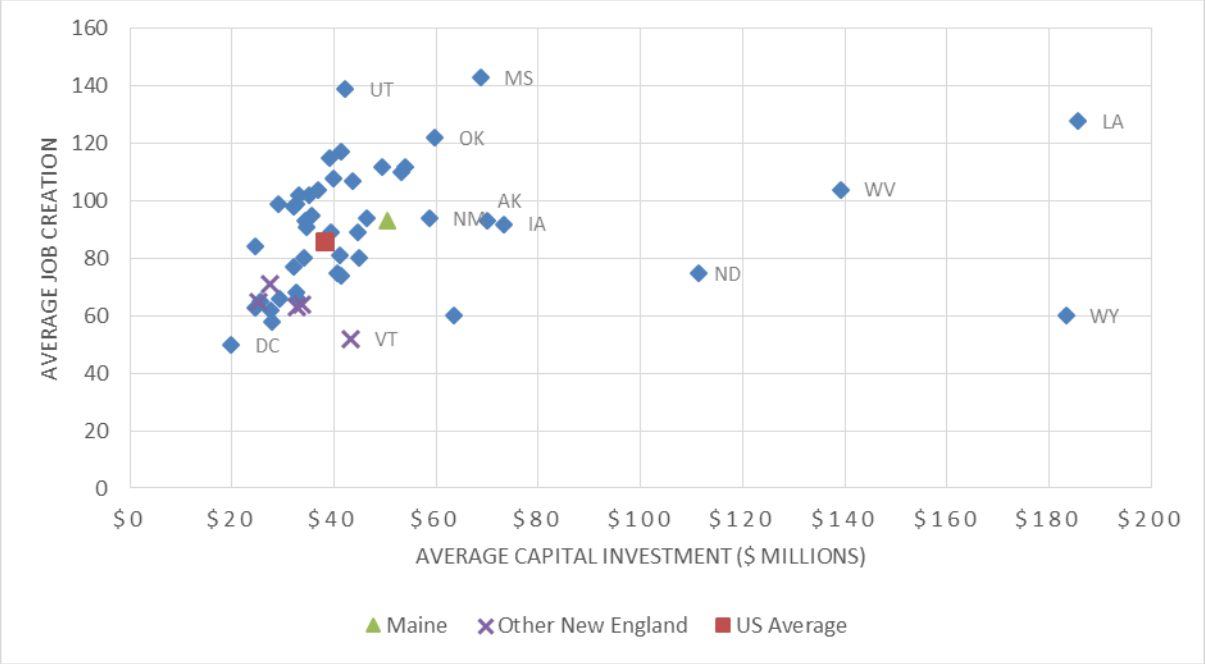
Apart from the relative state investment performance, analyzing investment project averages and comparing these across states reveals which states have performed well. The figure below provides an overview of the average project size in terms of capital volume and job creation. The same principle applies: states located in the top right corner perform relatively well (i.e. high average capital volumes and newly created jobs) while states in the bottom left corner have a relatively weak performance (i.e. low average capital volumes and newly created jobs).

An average investment project in the US equals a capital volume of $38.0 million and 86 newly created jobs. Positive outliers include Louisiana (average of $186.0 capital investment with 128 new jobs), Mississippi ($69.0 million with 143 jobs), Utah ($42.0 million with 139 jobs), Wyoming ($183.0 million with 60 jobs), West Virginia ($139 million with 104 jobs), North Dakota ($111.0 million and 75 new jobs) and Oklahoma ($60.0 million and 122 jobs). On the other side, Washington DC scores weakest, with an average investment project equals $20.0 million and creates 50 new jobs.

Maine outperforms the US and the rest of the New England states, with an average investment project capital volume of $50.0 million accompanied by 93 new jobs. The other New England states perform slightly better than Washington DC but have relatively low average investment project values.

The table below lists states that perform similar to Maine. These include some states that also performed similar in terms of their relative performances (e.g. Hawaii, New Mexico, Idaho, Delaware and Idaho) as well as Ohio and a number of western and central states (e.g. Nevada, Arizona, Kansas, Texas and Colorado).

Average State Investment Performance - Capital Investment and Job Creation (2007-2015)



Source: fDiMarkets.com database

Selected Average State Investment Performance - Capital Investment and Job Creation (2007-2015)

	Average Capital Investment per Investment Project	Average Job Creation per Investment Project
New Mexico	$58.6 million	94
Nevada	$53.8 million	112
Hawaii	$53.2 million	110
Maine	**$50.3 million**	**93**

	Average Capital Investment per Investment Project	Average Job Creation per Investment Project
Arizona	$49.9 million	112
Ohio	$46.5 million	94
Delaware	$44.9 million	80
Texas	$44.7 million	89
Kansas	$43.6 million	107
Idaho	$41.2 million	81
Colorado	$39.4 million	89
US Average	*$38.0 million*	*86*

Source: fDiMarkets.com database

Focusing on New England, the regional performance of state investment is summarized. The region has attracted a total of 1,713 investment projects, equaling nearly $50.0 billion and creating over 113,000 new jobs.

Massachusetts has attracted by far the largest number of investment projects (1,088 or 63.5%), followed by Connecticut (285 or 16.6%). New Hampshire, Maine and Rhode Island attracted more or less similar numbers of investment projects, representing 4.9% to 6.4% of the New England total. Vermont follows on a distance. The same patterns apply for capital investment and job creation.

Just as on a national level, comparing the shares of the states of the New England GDP to the shares of their state investment reveals the actual performance. Maine's GDP equaled $55.9 billion or 6.1% of the New England GDP. However, it attracted -0.5% fewer investment projects (difference between 6.1% and 5.6%). Promising is the fact that Maine generated disproportionately larger benefits. Maine attracted 3.6% more capital investment (difference between 9.7% and 6.1%) and 1.8% more new jobs (difference between 7.9% and 6.1%). Apart from Massachusetts, Maine outperforms all other New England states in terms of its relative state investment performance.

New England State Investment Performance (2007-2015)

State	Gross Domestic Product*		No. of Investment Projects		Total Capital Investment		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Connecticut	$239.9 bln.	26.3%	285	16.6%	$9.3 bln.	18.7%	18,058	15.9%
Maine	**$55.8 bln.**	**6.1%**	**96**	**5.6%**	**$4.8 bln.**	**9.7%**	**9,020**	**7.9%**
Massachusetts	$459.9 bln.	50.4%	1,088	63.5%	$27.5 bln.	55.1%	70,767	62.3%
New Hampshire	$71.6 bln.	7.9%	109	6.4%	$3.7 bln.	7.4%	7,048	6.2%
Rhode Island	$55.0 bln.	6.0%	82	4.8%	$2.3 bln.	4.5%	5,884	5.2%
Vermont	$29.6 bln.	3.2%	53	3.1%	$2.3 bln.	4.6%	2,792	2.5%
New England	*$911.8 bln.*	*100.0%*	*1,713*	*100.0%*	*$49.9 bln.*	*100.0%*	*113,569*	*100.0%*

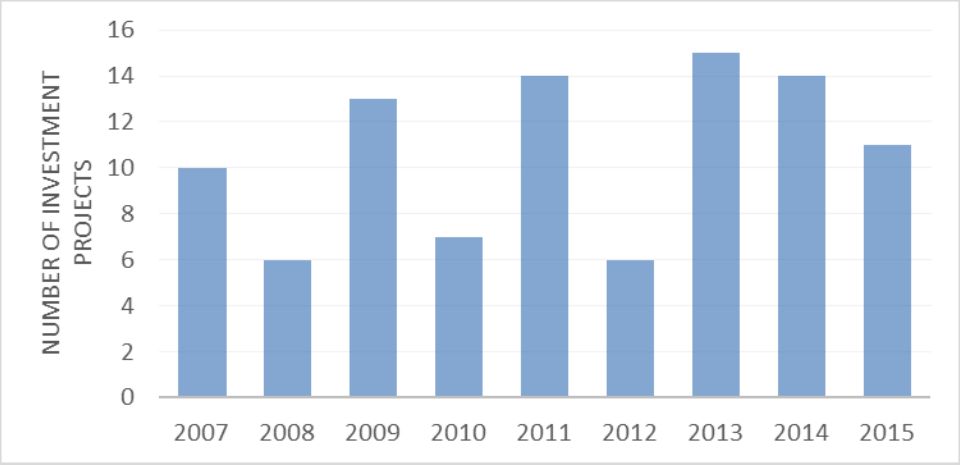
* Gross State Product in 2014; derived from Bureau of Economic Analysis

Source: fDiMarkets.com database

Specifically evaluating Maine investment trends as depicted below reveals 2013 was the most successful year for Maine in terms of new investment projects. In 2013, 15 new investment projects have been announced for Maine, closely followed by 14 new investment projects in 2011 and 2013 and 13 in 2009.

So far, the number of new investment projects in Maine for 2015 equals 11. The years 2008 and 2012 were the most modest years for Maine as only six new investment projects were announced, while only seven were announced in 2010.

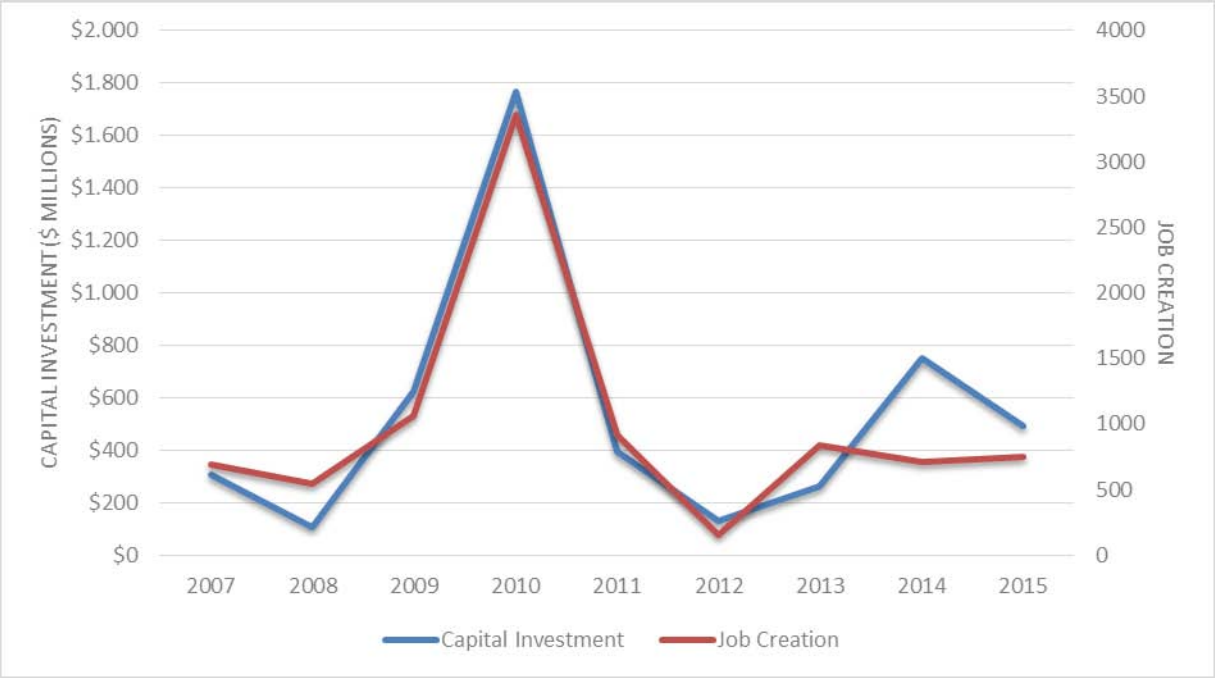
Maine State Investment Trends – Number of Investment Projects (2007-2015)



Source: fDiMarkets.com database

Despite the fact that 2010 was not a year in which the number of new investment projects peaked, both economic benefits peaked in this year, with capital investment adding up to nearly $1.8 billion while over 3,300 new jobs had been created. The low number of investment projects for 2010 implies very capital- and labor-intensive investment projects have been announced in this year. The figure below shows furthermore the annual capital volume and newly created jobs of investment projects run parallel, except in 2014, which recorded nearly $800 million of new capital investment with "only" 700 new jobs. It seems these numbers converge again in 2015, as the capital volume so far has decreased while the number of new jobs has gradually increased.

Maine State Investment Trends – Capital Investment and Job Creation (2007-2015)



Source: fDiMarkets.com database

Most investment projects that have been realized in Maine are in business services (15 or 15.6%), followed by communications (13 or 13.5%), financial services (12 or 12.5%) and software & IT services (11 or 11.5%). The table shows different numbers for the capital investment and jobs created in Maine as result of these investment projects. Combined, nine alternative & renewable energy projects and three transportation investment projects account for nearly $3.4 billion dollars (more than 70.0%). Clearly, this is related to the capital-intensive nature of these industries. Most jobs have been created by investment projects in transportation (3,119 or 34.6%), software & IT services (1,304 or 14.5%) and financial services (1,153 or 12.8%).

Maine State Investment Trends – Industry (2007-2015)

Industry	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Business Services	15	15.6%	$58.2	1.2%	688	7.6%
Communications	13	13.5%	$655.2	13.6%	850	9.4%
Financial Services	12	12.5%	$108.3	2.2%	1,153	12.8%
Software & IT Services	11	11.5%	$58.6	1.2%	1,304	14.5%
Alternative & Renewable Energy	9	9.4%	$1,929.7	40.0%	267	3.0%
Healthcare	5	5.2%	$32.2	0.7%	135	1.5%
Medical Devices	3	3.1%	$32.3	0.7%	133	1.5%
Consumer Products	3	3.1%	$22.4	0.5%	118	1.3%
Plastics	3	3.1%	$43.3	0.9%	257	2.8%
Transportation	3	3.1%	$1,462.6	30.3%	3,119	34.6%
Wood Products	3	3.1%	$56.4	1.2%	158	1.8%

Industry	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Industrial Machinery, Equipment & Tools	3	3.1%	$12.6	0.3%	53	0.6%
Aerospace	3	3.1%	$19.1	0.4%	169	1.9%
Electronic Components	2	2.1%	$44.9	0.9%	134	1.5%
Coal, Oil & Natural Gas	1	1.0%	$139.6	2.9%	130	1.4%
Business Machines & Equipment	1	1.0%	$11.7	0.2%	125	1.4%
Other Industries	6	6.3%	$138.7	2.9%	227	2.5%
Total	**96**	**100.0%**	**$4,825.8**	**100.0%**	**9,020**	**100.0%**

Source: fDiMarkets.com database

Comparing the industry-specific statistics of investment into the state of Maine with the national average annual growth rates per industry reveals whether Maine has actually attracted investment in the fastest growing industries. Several figures below show the GDP growth rates with Maine's relative number of state investment, total capital investment and total job creation, respectively.

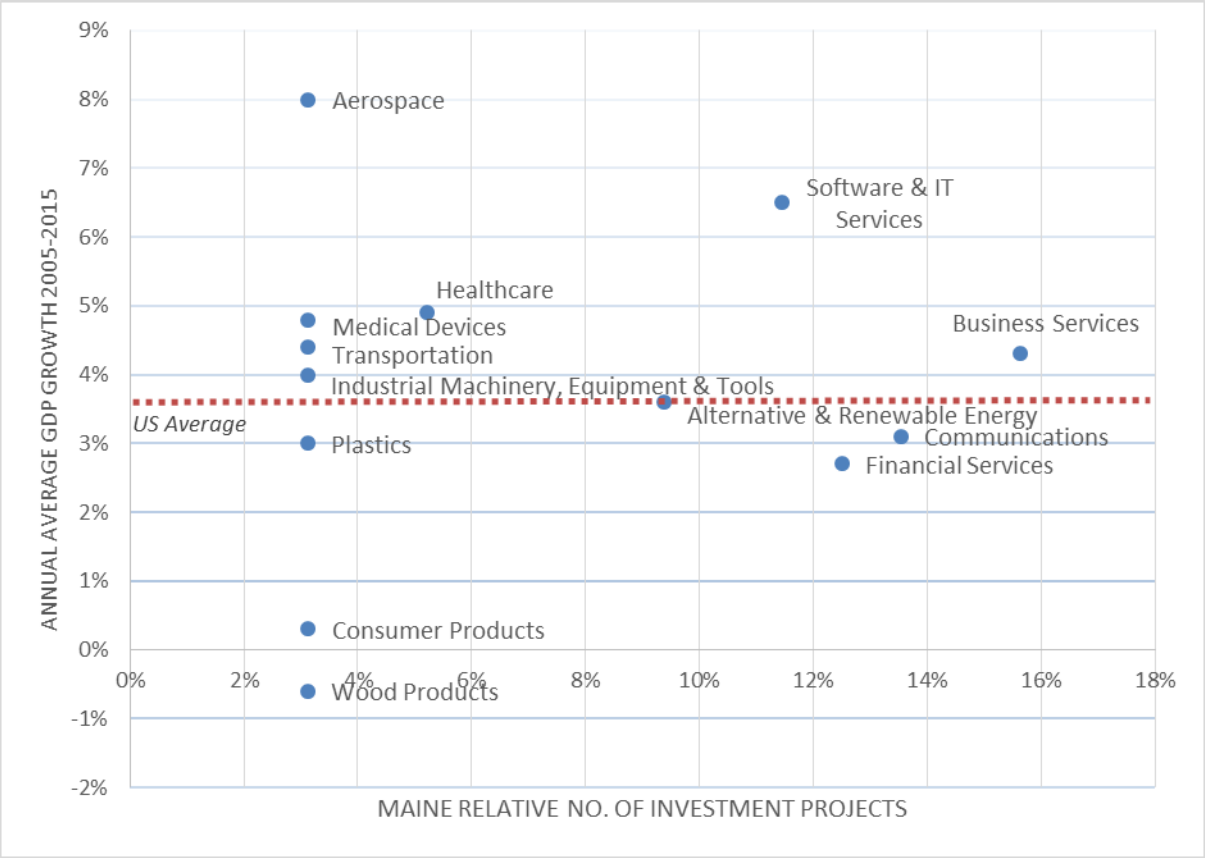
Aerospace is the fastest growing industry in which Maine has attracted investment. This industry has experienced an average national annual GDP growth of 8.0% compared to an average US growth rate of 3.6%. This implies any industry positioned above the red bar has enjoyed an above national average growth rate over the last ten years and would thus constitute a potential target industry for attracting investment. Vice versa, industries that have performed below US average or industries that have even contracted (indicated by a negative growth rate) are no strategic target industries. This seems to be the case for wood products, which has contracted with an average 2% over the last ten years.

In terms of number of investment projects that Maine has attracted, it appears a number of industries in which Maine has been successful are also industries that have grown below US average. This is the case for communications (13 projects or 13.5% of total Maine investment while the average national annual GDP growth rate was 3.1%), financial services (12 projects or 12.5% of total Maine investment with an average annual GDP growth rate of 2.7%) and alternative & renewable energy (9 projects or 9.4% of total Maine investment while the industry is on par with the average national annual GDP growth rate of 3.6%).

On the contrary, industries as healthcare, medical devices, transportation, industrial machinery, equipment & tools and, in particularly, aerospace are industries in which Maine has attracted only a marginal number of investment projects whereas these industries have seen significant annual GDP growth rates (8.0% for aerospace, 4.9% for healthcare and 4.8% for medical devices).

Industries which have experienced an above-average GDP growth over the last ten years and in which Maine has attracted a reasonable number of investment projects include software & IT services as well as business services.

Maine State Investment Trends – Relative Number of Investment Projects (2007-2015) and US Average Annual GDP Growth per Industry (2005-2015)

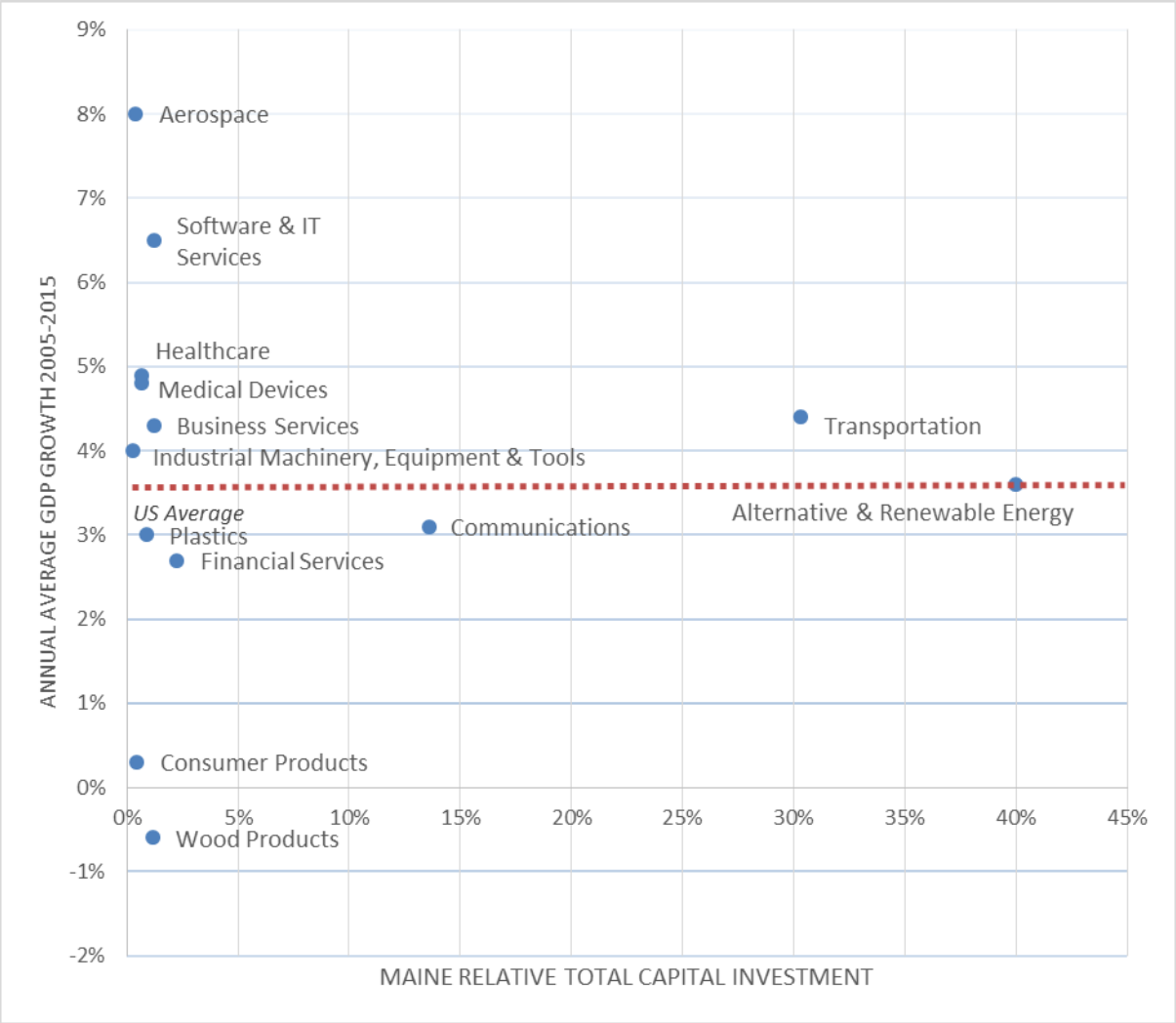


Source: fDiMarkets.com database and authors' calculations based on data derived from Bureau of Economic Analysis

When a similar analysis is conducted for the capital investment that has been attracted to Maine by the 96 investment projects – a total of $4.83 billion – it becomes clear that over 40% (or $1.93 billion) has been attracted by the alternative & renewable energy industry. This is despite the fact that this industry has experienced an annual GDP growth which is equal to the average annual national GDP growth (i.e. 3.6%). This is true for the communications industry to a lesser degree. Transportation enjoyed an above-average annual US GDP growth (i.e. 4.4%) and has also generated a considerable amount of capital investment (30.3% or $1.46 billion).

Industries that have grown strong across the US over the last ten years in which Maine may have potential to tap into capital investment include aerospace, software & it services, healthcare and medical devices and business services.

Maine State Investment Trends – Relative Total Capital Investment (2007-2015) and US Average Annual GDP Growth per Industry (2005-2015)

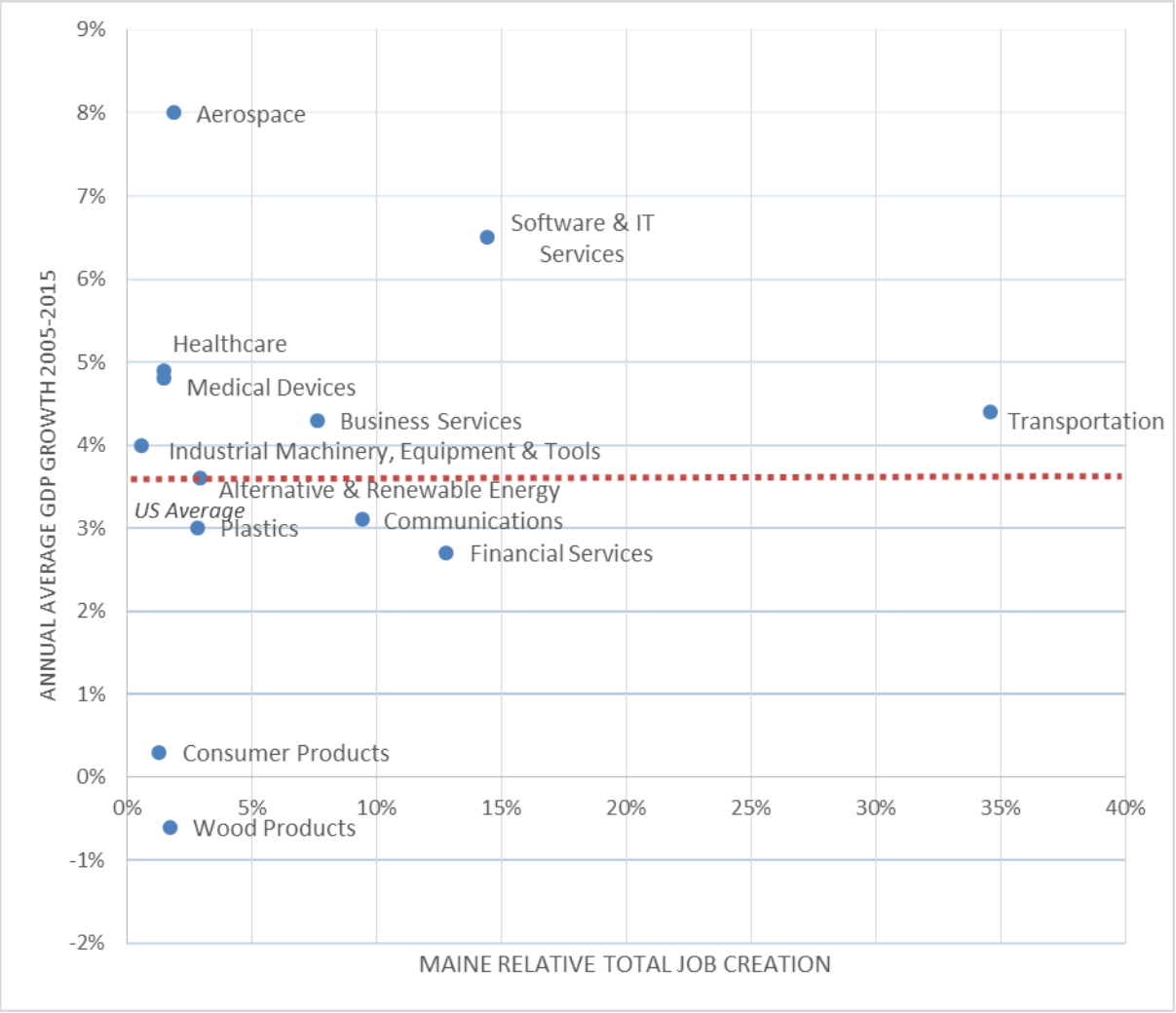


Source: fDiMarkets.com database and authors' calculations based on data derived from Bureau of Economic Analysis

Finally, when looking at the same comparison for total jobs created by the 96 attracted investment projects (i.e. 9,020), it seems transportation (now 3,119 or 34.6%) and software & IT services (now 1,304 or 14.5%) are growing industries from which Maine has already attracted a considerable number of new jobs. This is also the case for financial services (now 1,153 or 12.8%) and communications (now 850 or 9.4%).

Growing industries which offer potential to Maine to attract new jobs include aerospace (currently only 169 or 1.9%), healthcare (now only 135 or 1.5%), medical devices (now only 133 or 1.5%), industry machinery, equipment and tools (now only 53 or 0.6%) and, to a certain extent, business services (688 or 7.6%).

Maine State Investment Trends – Relative Total Job Creation (2007-2015) and US Average Annual GDP Growth per Industry (2005-2015)



Source: fDiMarkets.com database and authors' calculations based on data derived from Bureau of Economic Analysis

Similar to industry trends of Maine investment projects, the trends for business activities of Maine investment projects in the table show investment projects in a limited number business activities have generated the largest economic benefits. This is the case for logistics, distribution & transportation ($1.6 billion or 33.2% of the capital volume and 3,249 new jobs 36.0% of the total job creation) and electricity ($1.75 billion or 36.4% of the total capital investment). Other business activities that contribute relatively strongly to generating capital investment and new jobs include business services (686 new jobs or 7.6% of total job creation), manufacturing (1,038 new jobs or 11.5%), customer contact center (2,062 new jobs or 22.9%) and ICT & internet infrastructure (capital volume of $635 million or 13.2% of total capital investment).

Maine State Investment Trends – Business Activity (2007-2015)

Business Activity	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Business Services	26	27.1%	$162.1	3.4%	686	7.6%
Manufacturing	21	21.9%	$334.8	6.9%	1,038	11.5%
ICT & Internet Infrastructure	10	10.4%	$634.9	13.2%	561	6.2%
Customer Contact Center	10	10.4%	$52.9	1.1%	2,062	22.9%
Sales, Marketing & Support	8	8.3%	$200.1	4.1%	369	4.1%
Electricity	7	7.3%	$1,754.2	36.4%	199	2.2%
Logistics, Distribution & Transportation	4	4.2%	$1,602.2	33.2%	3,249	36.0%
Headquarters	3	3.1%	$15.4	0.3%	406	4.5%
Maintenance & Servicing	2	2.1%	$17.0	0.4%	159	1.8%
Education & Training	1	1.0%	$7.7	0.2%	84	0.9%
Shared Services Center	1	1.0%	$0.5	0.0%	17	0.2%
Technical Support Center	1	1.0%	$11.7	0.2%	125	1.4%
Design, Development & Testing	1	1.0%	$2.6	0.1%	10	0.1%
Recycling	1	1.0%	$29.7	0.6%	55	0.6%
Total	**96**	**100.0%**	**$4,825.8**	**100.0%**	**9,020**	**100.0%**

Source: fDiMarkets.com database

The table reveals that the large majority of state investment into Maine is US-sourced. More than 70 of the 96 investment projects (75%) are sourced from within the US as opposed to 8 (or 8.3%) from Canada, 5 (or 5.2%) from the UK and 10 (or 10.3%) from continental Europe, including Germany, Sweden, France, Iceland, Norway, Spain and Switzerland. In terms of benefits, Spain is strongly represented as a source country due to a $1.4 billion investment made by Bilbao-based Iberdrola. Investment from Canada generated disproportionately higher volumes of capital (9.6% against 8.3%) and new jobs (9.2% against 8.3%).

Maine State Investment Trends – Source Country (2007-2015)

Source Country	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
United States	72	75.0%	$2,730.6	56.6%	4,215	46.7%
Canada	8	8.3%	$4,62.2	9.6%	832	9.2%
UK	5	5.2%	$35.9	0.7%	329	3.6%
Germany	3	3.1%	$61.1	1.3%	344	3.8%
Sweden	2	2.1%	$32.0	0.7%	130	1.4%
Australia	1	1.0%	$29.7	0.6%	55	0.6%
France	1	1.0%	$3.5	0.1%	15	0.2%
Iceland	1	1.0%	$7.9	0.2%	30	0.3%

Source Country	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Norway	1	1.0%	$2.9	0.1%	30	0.3%
Spain	1	1.0%	$1,400.0	29.0%	3,000	33.3%
Switzerland	1	1.0%	$60.0	1.2%	40	0.4%
Total	**96**	**100.0%**	**$4,825.8**	**100.0%**	**9,020**	**100.0%**

Source: fDiMarkets.com database

Looking into the US, most state investment into Maine is sourced from Massachusetts (19 investment projects or 26.4% of the total number of investment projects), followed by New York (10 investment projects or 13.9%). Other New England states include Connecticut (4 or 5.6%) and New Hampshire (3 or 4.2%). Investment projects from Massachusetts represented the largest shares of capital investment ($1.12 billion or 41.2%) as well as newly created jobs (over 1,300 or 31.4%). Noteworthy in this context are also the investment projects from North Carolina, which created disproportionately large benefits. The six investment projects (or 8.3%) equaled $338 million (or 12.4%) and added more than 530 jobs (or 12.7%) to Maine's economy.

Maine State Investment Trends – Source State (2007-2015)

Source State	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Massachusetts	19	26.4%	$1,124.4	41.2%	1,322	31.4%
New York	10	13.9%	$317.3	11.6%	699	16.6%
North Carolina	6	8.3%	$338.2	12.4%	537	12.7%
Wisconsin	4	5.6%	$39.4	1.4%	184	4.4%
Connecticut	4	5.6%	$9.5	0.3%	360	8.5%
California	3	4.2%	$21.3	0.8%	47	1.1%
Texas	3	4.2%	$11.3	0.4%	37	0.9%
New Hampshire	3	4.2%	$250.8	9.2%	80	1.9%
Arizona	2	2.8%	$12.2	0.4%	319	7.6%
Georgia	2	2.8%	$26.4	1.0%	98	2.3%
Virginia	2	2.8%	$13.2	0.5%	62	1.5%
Ohio	2	2.8%	$20.6	0.8%	150	3.6%
Tennessee	2	2.8%	$15.1	0.6%	57	1.4%
Missouri	2	2.8%	$425.4	15.6%	58	1.4%
Other States	8	11.1%	$102.5	3.8%	205	4.9%
Total	**96**	**100.0%**	**$4,825.8**	**100.0%**	**9,020**	**100.0%**

Source: fDiMarkets.com database

The location has been fully revealed or established for 64 out of the 96 investment projects in Maine. Portland has attracted by far the largest share of state investment with 19 investment projects (nearly 20%). Auburn has attracted six investment projects (6.3%) that have generated over 900 new jobs (10.0%). Oakfield has attracted the largest share of capital investment: $525 million has been invested in Oakfield through two investment projects, only creating 66 new jobs (0.7%). Bangor has also secured a considerable share of the total capital investment ($155 million or 3.2%) while Belfast has attracted a

relatively large number of new jobs (550 or 6.1%). The table below provides an overview of destination cities that attracted two or more investment projects.

Maine State Investment Trends – Destination City (2007-2015)

Destination City	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Portland	19	19.8%	$160.8	3.3%	526	5.8%
Auburn	6	6.3%	$66.1	1.4%	905	10.0%
Scarborough	3	3.1%	$20.4	0.4%	228	2.5%
Bangor	3	3.1%	$154.8	3.2%	188	2.1%
Belfast	3	3.1%	$22.9	0.5%	550	6.1%
Biddeford	3	3.1%	$10.2	0.2%	64	0.7%
Augusta	2	2.1%	$79.9	1.7%	100	1.1%
Oakfield	2	2.1%	$524.5	10.9%	66	0.7%
Old Town	2	2.1%	$19.8	0.4%	108	1.2%
Saco	2	2.1%	$8.0	0.2%	36	0.4%
Fort Kent	2	2.1%	$5.8	0.1%	376	4.2%
Wilton	2	2.1%	$7.2	0.1%	250	2.8%
Lewiston	2	2.1%	$12.0	0.2%	350	3.9%
Other Cities	13	13.5%	$467.2	9.7%	950	10.5%
Not Specified	32	33.3%	$3,266.2	67.7%	4,323	47.9%
Total	**96**	**100.0%**	**$4,825.8**	**100.0%**	**9,020**	**100.0%**

Source: fDiMarkets.com database

Finally, the table below reveals the largest investors across the state of Maine. As indicated earlier, Spanish Iberdrola invested $1.4 billion in an energy project, creating over 3,000 new jobs. Other large capital investors include First Wind Holdings, Inc. (five investment projects adding up to nearly $900 million), SunEdison Inc. (one investment project adding up to $420 million), TransCanada (one investment project adding up to $340 million), FairPoint Communications (four investment projects adding up to $280 million) and Verizon Communications (four investment projects adding up to $280 million). Athena Health (three investment projects creating 584 new jobs), Toronto-Dominion Bank (three investment projects creating 576 new jobs), Synergy Solutions (one investment project creating 286 new jobs) and TxVia (one investment project creating 286 new jobs) are among the most labor-intensive investors.

Maine State Investment Trends – Above-average Investors (2007-2015)

Investor	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	**Rel.**	**Abs.**	**Rel.**	**Abs.**	**Rel.**
First Wind Holdings, Inc.	5	5.2%	$895.1	18.5%	129	1.4%
FairPoint Communications	4	4.2%	$280.4	5.8%	248	2.7%
Verizon Communications	4	4.2%	$280.4	5.8%	248	2.7%
Athenahealth	3	3.1%	$28.7	0.6%	584	6.5%

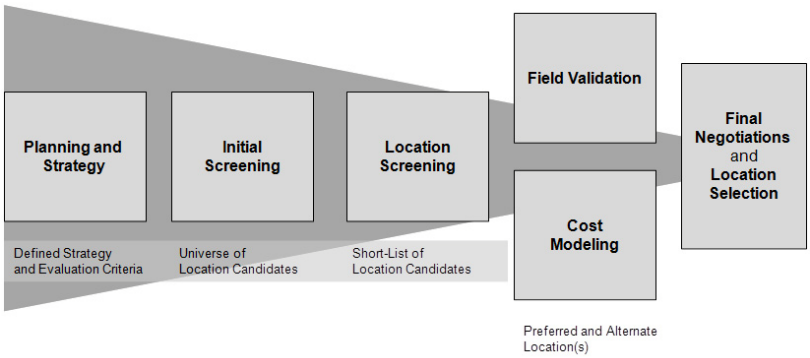
Investor	No. of Investment Projects		Total Capital Investment ($million)		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Toronto-Dominion Bank (TD)	3	3.1%	$34.0	0.7%	576	6.4%
Molnlycke Health Care	2	2.1%	$32.0	0.7%	130	1.4%
Deep Down	2	2.1%	$7.3	0.2%	34	0.4%
Mortgage Network	2	2.1%	$19.6	0.4%	76	0.8%
Barclays Bank	2	2.1%	$7.2	0.1%	250	2.8%
S.C. Johnson & Son	2	2.1%	$19.8	0.4%	108	1.2%
Synergy Solutions	1	1.0%	$4.4	0.1%	286	3.2%
Nestle	1	1.0%	$60.0	1.2%	40	0.4%
PlumChoice	1	1.0%	$11.7	0.2%	125	1.4%
Evonik Industries	1	1.0%	$41.9	0.9%	110	1.2%
Sun Life Financial	1	1.0%	$8.4	0.2%	100	1.1%
Old Dominion Freight Line	1	1.0%	$54.7	1.1%	89	1.0%
Global Contact Services (GCS)	1	1.0%	$3.1	0.1%	200	2.2%
Global Partners LP	1	1.0%	$139.6	2.9%	130	1.4%
Iberdrola	1	1.0%	$1,400.0	29.0%	3,000	33.3%
Rural Cellular Corporation (Unicel)	1	1.0%	$70.1	1.5%	62	0.7%
SunEdison Inc (MEMC Electronic Materials)	1	1.0%	$420.0	8.7%	38	0.4%
TransCanada	1	1.0%	$350.0	7.3%	13	0.1%
TxVia	1	1.0%	$4.4	0.1%	286	3.2%
Wagner Energy Solutions (Wagner Wind Energy)	1	1.0%	$244.6	5.1%	52	0.6%
Xerox	1	1.0%	$3.1	0.1%	200	2.2%
Lufthansa	1	1.0%	$13.2	0.3%	134	1.5%
Other Companies	51	53.1%	$392.1	8.1%	1,772	19.6%
Total	**96**	**100.0%**	**$4,825.8**	**100.0%**	**9,020**	**100.0%**

Source: fDiMarkets.com database

Appendix J – Benchmark 2 - Business Environment Competitiveness

A proper evaluation of Maine's incentive, credit, and other economic development tools must begin with an understanding of the State's natural advantages and disadvantages for attracting investment. Companies making expansion and relocation decisions typically go through a process similar to that which is shown on this page. This process begins with the company identifying their business opportunities, constraints and needs for the new facility, and then progresses through an evaluation of location options. This evaluation process continues to narrow the list of options until the company is prepared to negotiate with the last (and best-fit) handful of communities and sites remaining on the list.

Importantly, this process usually starts with a regional, national, or even international long list of location options. Metropolitan areas are usually the units of geography being evaluated at this point, not towns or sites. Once an appropriate MSA is selected, the process advances to selecting a town and a site.



In the site selection process, three or four locations usually emerge from the screening model as the clear leaders. Local economic development agencies in those locations are typically contacted at this point. This then gives them the opportunity to present incentives, specific communities and sites within the broader region. It is important to note that the economic development agencies and incentive programs are not considered until this step.

The Maine Competitive Analysis compares the Portland, Bangor, and Lewiston Auburn MSAs with 22 other MSAs with similar attributes likely to be considered when making a location decision.

Overall Findings

The overall findings from the Maine Competitive Analysis rank Portland MSA as performing moderately well at 11 overall in an unweighted ranking. In the same circumstance, Lewiston-Auburn MSA (referred to as Lewiston) ranks 25 and Bangor MSA ranks 23 out of the 25 candidates. The Tax Regime category is ranked by state rather than MSA. Before incentives, the State of Maine has a very negative Tax Regime ranking at 23 out of 25. This is important since site selectors are looking at the overall ranking at this point and may have no awareness of the incentive programs offered by the state. The location could be removed from the shortlist simply because of a poor ranking for tax regime.

Portland has favorable education rates that are much better than seen in the 2013 analysis. Portland also has favorable household statistics which include favorable renter to owner percentages, positive projected housing growth, and good median household and disposable income. Even with harsh New England winters, Portland ranks fairly well for climate and natural hazards.

Portland ranks slightly above average for Occupation Specific Salaries (meaning lower salary costs), Labor Force Availability, Transportation and Market Access, and Crime and Quality of Life. Portland struggles with retaining population and (specifically) working age population, as well as transportation and market access. Portland has difficulty with low or negative growth rates for working age population and labor force but also have a very low unemployment rate which indicates a potential workforce availability problem. Portland has average access to Population and Demographics and struggles with a higher cost of living and is overall a more expensive operating location.

Lewiston has a reasonably low crime rate paired with a good quality of life. Additionally, Lewiston has the lowest average salaries of all the candidates in the screening model (tied with Bangor). Lewiston is showing much more difficulty with labor force availability in 2015 than in 2013 with negative labor force

Below is a chart describing the advantages and disadvantages of each factor for the three Maine MSAs.

	Advantage	Disadvantage
Population and Demographics- Low positive overall population growth with negative working age growth		
Portland ME – Ranked 12		• Low projected population growth • Projected loss of working age population
Lewiston ME - Ranked 19		• Smallest MSA in population included in the screening model • Almost 0% projected population growth • Projected loss of working age population
Bangor ME- Ranked 17		• Second smallest MSA in population included in the screening model • Low projected population growth • Projected loss of working age population
Household Statistics – Portland does better, Lewiston and Bangor struggle		
Portland ME – Ranked 6	• Favorable ratio of owner to renter occupied housing units • Stable housing unit growth • Midline median home value, household income, and disposable income	• High vacant housing rate
Lewiston ME – Ranked 24	• Lowest vacant housing rate of the Maine MSAs • Housing unit growth is appropriate based on vacancy rates	• Higher percentage of renter occupied units • Low housing unit growth • Low median home value, household income and disposable income
Bangor ME – Ranked 21	• Favorable ratio of owner to renter occupied housing units	• Low median home value, household income and disposable income • Rapid housing unit growth given vacancy rate
Labor Force Availability – Portland fairs better but all three have relatively low 2015 unemployment rates		
Portland ME – Ranked 9	• Slow but steady labor force growth between 2010 and 2015 while some candidates experienced negative growth • Fairly low 2010 and 2015 unemployment rates • 2.6% drop in unemployment between 2010 and 2015	• Small labor force compared to other candidates
Lewiston ME – Ranked 14	• Comparatively low 2010 and 2015 unemployment rates • 3.7% drop in unemployment between 2010 and 2015	• Negative labor force growth between 2010 and 2015 • Smallest labor force of all candidates

	Advantage	Disadvantage
Bangor ME – Ranked 14	• Comparatively low 2010 and 2015 unemployment rates • 2.9% drop in unemployment between 2010 and 2015	• Negative labor force growth between 2010 and 2015 • Second smallest labor force of all the candidates
Industry Specific Employment – Generally low employment in areas where site selectors generally look		
Portland ME – NOT RANKED	• Strength: finance/insurance/real estate	• Weakness: Information industry
Lewiston ME - NOT RANKED	• Strength: retail trade	• Weakness: Services industries
Bangor ME – NOT RANKED		• Weakness: Manufacturing, wholesale trade, Information, finance/insurance/real estate and services industries
Occupation Specific Employment- Maine has overall strength in healthcare support functions		
Portland ME – NOT RANKED	• Strength: no specific strength when compared candidates	• Weakness: Production
Lewiston ME - NOT RANKED	• Strength: Healthcare and support, office and administration	• Weakness: Computer/mathematical
Bangor ME – NOT RANKED	• Strength: Healthcare support functions	• Weakness: Business/financial operation, production, computer/mathematical
Occupation Specific Salaries – Maine is overall very competitive for salaries		
Portland ME – Ranked 8	• Salaries in Portland are not the lowest but are still competitive	• Companies within the Portland area need to offer higher salaries to get and keep qualified employees
Lewiston ME – Ranked 1	• Overall lowest salaries of all the competitors	• This is great for companies but harder for employees • A site selector must match the lower salaries with a lower cost of living
Bangor ME – Ranked 3	• Overall lowest salaries of all the competitors	• This is great for companies but harder for employees • A site selector must match the lower salaries with a lower cost of living
Education- Portland ranks well while other areas of Maine struggle with education levels		
Portland ME – Ranked 5	• High percentage of people who graduated high school • Better than average higher education rates	
Lewiston ME – Ranked 25		• Lewiston struggles with education at all levels, including having a significant high school drop-out rate
Bangor ME – Ranked 22	• Above average percentage of people who graduated high	• Very low education rates beyond high school

	Advantage	Disadvantage
	school • Lower high school dropout rate	• Surprisingly low higher education rates given that Orono is home to University of Maine
Transportation and Market Access – All of Maine struggles with transportation and market access		
Portland ME – Ranked 10	• Households that can be access within a 4 hour drive have a high median household income • Very close to a medium sized airport • Stable household growth rate	• Lower (but not the lowest) population and household access within 4 hour drive • Long drive to nearest "Large" airport • Low access to interstates
Lewiston ME – Ranked 21	• Households that can be access within a 4 hour drive have a high median household income • Close to a medium sized airport • Stable household growth rate	• Low population and household access within 4 hour drive • Long drive to nearest "Large" airport • Low access to interstates
Bangor ME – Ranked 21	• Households that can be access within a 4 hour drive have a high median household income	• Lowest population and household access within 4 hours drive of all the candidates • Low access to interstates • Long drive to nearest "Large" airport • Very few direct flights out of a small airport
Tax Regime- Tax regime is examined at the state level and Maine struggles with this from a site selection perspective		
Portland ME – Ranked 23	• While sales tax is high, those that have state sales tax are similar or a little higher	• Ranks very poorly for state corporate tax climate score • High state corporate income tax though not the highest • Highest property tax as percent of income
Lewiston ME – Ranked 23		
Bangor ME – Ranked 23		
Climate and Natural Hazards – Maine as a state receives a significant amount of snow, but does not often suffer other natural hazards		
Portland ME – Ranked 6	• Low number of days with precipitation • Average rainfall indicates good crop/plant growing environment • Portland area and costal Maine have the least snowfall of anywhere in Maine • Few annual days with thunderstorms • Very slight risk of tornadoes	• The area still gets a significant amount of snow
Lewiston ME – Ranked 19	• Low number of days with precipitation • Average rainfall indicates good crop/plant growing environment • Area also receives similar snowfall to the Portland area	• The area still gets a significant amount of snow

	Advantage	Disadvantage
	• Higher thunderstorm risk than other Maine candidates but still low • Very slight risk of tornadoes	
Bangor ME – Ranked 19	• Lower days with precipitation • Average rainfall indicates good crop/plant growing environment • Few annual days with thunderstorms • Very slight risk of tornadoes	• Most snowfall of all the candidates
Crime and Quality of Life – Low crime rates and areas outside of Portland have appropriate cost of living		
Portland ME – Ranked 11	• Very low violent crime rate • Lowest property crime rates of the Maine candidates • Reasonable access to physicians and best of the Maine candidates	• Higher than US average cost of living index • Slightly longer commute time to work but still reasonable • Low rate of hospital beds compared to population
Lewiston ME – Ranked 25	• Very low violent crime rate • Slightly higher property crime rates than Portland • Lower than US average cost of living index and lowest of the Maine candidates • Short commute time to work • High rate of hospital beds compared to population	• Low access to physicians
Bangor ME – Ranked 23	• Lowest violent crime rate • Highest Maine property crime rate but still overall low • Lower than US average cost of living index • Short commute time to work • High rate of hospital beds compared to population	• Low access to physicians

Business Environment Competitiveness	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Population and Demographics	12	19	17	11	17	19	19	12	4	12	1	3	4	4	2	4	19	4	19	12	19	12	4	19	4
Household Statistics	6	24	21	1	6	14	14	3	2	13	6	14	6	14	24	6	21	14	14	20	6	5	12	23	3
Labor Force Availability	9	14	14	3	16	22	19	9	6	16	1	7	12	16	2	9	24	7	25	3	22	12	3	19	19
Industry-Specific Employment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupation-Specific Employment (per 1000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupation-Specific Salaries (Annual Mean 2010)	8	1	1	25	22	8	8	4	13	16	16	20	4	4	3	8	8	13	24	4	18	18	15	20	23
Education 2010	5	25	22	3	5	7	10	14	15	23	4	17	24	17	17	17	15	10	17	1	13	9	2	10	7
Transportation and Market Access	10	21	21	4	1	25	20	1	7	10	21	14	21	17	17	3	5	6	10	17	14	16	7	7	10
Tax Regime	23	23	23	19	8	8	21	21	2	15	2	2	5	8	8	16	6	6	8	8	1	8	17	17	19
Climate and Natural Hazards	6	19	19	6	6	22	16	2	6	6	2	2	24	16	25	19	16	13	6	13	15	22	6	2	1
Crime and Quality of Life	10	7	4	13	8	1	4	2	8	14	14	21	24	21	25	18	10	21	18	2	12	14	4	17	18
Overall Rank	11	25	23	9	7	19	21	6	4	17	1	5	18	16	14	10	20	8	24	3	15	13	2	22	12

Maine as Compared to US Peers

As part of the Maine Competitive Analysis, the Portland, Lewiston-Auburn, and Bangor MSAs were compared against Maine, New England, Northeast and US geographies where the data was available. This comparison was not ranked and scored. Please note that in most cases Bangor and Lewiston were very close so the resulting description focuses on them together in most cases.

Portland has the highest population and working age population growth between all Maine MSAs, the State, New England and Northeast regions. Only US growth rates exceed Portland rates. Lewiston and Bangor have the lowest employment rates of all geographies.

Portland had the lowest rate of dropouts at less than a 9th grade and high school levels or all MSAs and regions considered. Bangor fared somewhat better than Lewiston but both similar to or well below the average region percentages for 9th grade and high school dropout rates. Portland had the best high school graduation rate through Bachelor's degree but was not the highest for Doctorate as compared to geographies outside of Maine. Bangor and Lewiston do not have as favorable rates and are for the most part at or below the education levels for the greater region.

Portland overall has the lowest unemployment rates followed in general by Bangor and then Lewiston for the Maine Candidates. State and regional unemployment levels are similar but slightly increasing as the geography grows. US unemployment levels are considerably higher than those found in Maine.

In general, the Maine MSAs have a much better crime and quality of life statistics than the US average. Maine MSAs do have somewhat more rainfall and a lot more snow than is average across the US. Average commute time in Maine is lower than the US average. State and Regional numbers were not available for these statistics.

Salaries are on average higher in Maine than the US average. Portland demands the highest salaries in general followed by either Lewiston or Bangor depending on the field. Portland pays more than the state average while Lewiston and Bangor pay less than the state average. Regional comparisons are not available for these statistics.

Portland has more favorable owner to renter ratio than the other Maine MSAs, the regional candidates as well as the US Average. Bangor comes in just behind Portland for these statistics and also fares better than the regional and US statistics. Lewiston does not do as well as either Portland or Bangor and only comes in ahead of Northeast and US averages. However, Lewiston has the lowest percent vacant housing units of all Maine and regional geographies. Bangor does the second best and comes in behind regional geographies. Portland comes in with the highest percent vacant units just behind the Maine overall average. Portland has the highest median home value, household income, and disposable income and comes in ahead of state and US averages but not the regional geographies. Bangor has slightly higher home values than Lewiston but lower household income and disposable income. Both locations come in behind state, regional and US averages.

Population and Demographics	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
Total Population 2010	514,098	107,702	153,923	4,552,402	870,716	1,079,671	2,356,285	549,475	1,208,101	1,235,708	1,130,490	2,217,012	802,484
Total Population 2015	526,628	109,336	156,378	4,665,265	886,338	1,083,124	2,358,496	564,979	1,261,374	1,260,980	1,241,532	2,366,607	839,274
Projected Population 2020	542,225	111,176	159,498	4,825,949	902,658	1,089,342	2,367,411	581,573	1,327,513	1,297,396	1,371,032	2,558,420	878,255
% Population Growth 2015-2020	3.0%	1.7%	2.0%	3.4%	1.8%	0.6%	0.4%	2.9%	5.2%	2.9%	10.4%	8.1%	4.6%
Total Population 15-65 2010	349,660	72,430	106,949	3,150,660	597,029	729,298	1,564,385	370,439	831,095	832,113	779,292	1,501,735	551,815
Total Population 15-65 2015	351,913	72,205	106,772	3,177,527	597,953	722,778	1,542,105	372,471	851,177	835,794	846,341	1,583,521	568,841
Projected Population 15-65 2020	350,730	71,322	105,243	3,235,986	592,793	706,880	1,491,919	370,978	873,265	837,118	921,941	1,682,395	580,189
% Population 15-65 Growth 2015-2020	-0.3%	-1.2%	-1.4%	1.8%	-0.9%	-2.2%	-3.3%	-0.4%	2.6%	0.2%	8.9%	6.2%	2.0%
Subrank	**12**	**19**	**17**	**11**	**17**	**19**	**19**	**12**	**4**	**12**	**1**	**3**	**4**

Population and Demographics	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
Total Population 2010	1,345,596	2,134,411	1,887,877	2,077,240	1,901,974	4,296,250	344,791	2,787,701	2,009,342	605,435	1,555,908	2,226,009
Total Population 2015	1,405,966	2,284,795	1,967,168	2,059,818	1,983,754	4,261,580	353,972	2,798,304	2,063,363	625,701	1,557,333	2,318,549
Projected Population 2020	1,479,840	2,475,315	2,067,875	2,053,002	2,082,105	4,278,482	366,255	2,823,128	2,131,190	654,220	1,572,751	2,433,900
% Population Growth 2015-2020	5.3%	8.3%	5.1%	-0.3%	5.0%	0.4%	3.5%	0.9%	3.3%	4.6%	1.0%	5.0%
Total Population 15-65 2010	917,360	1,462,231	1,267,695	1,370,798	1,305,216	2,883,255	250,540	1,871,431	1,339,150	426,068	1,044,331	1,534,847
Total Population 15-65 2015	942,323	1,551,996	1,308,102	1,343,558	1,343,038	2,828,726	253,290	1,854,730	1,355,717	433,433	1,033,612	1,569,352
Projected Population 15-65 2020	966,261	1,650,005	1,346,224	1,302,364	1,379,917	2,765,489	256,228	1,822,386	1,368,123	442,592	1,018,817	1,605,767
% Population 15-65 Growth 2015-2020	2.5%	6.3%	2.9%	-3.1%	2.7%	-2.2%	1.2%	-1.7%	0.9%	2.1%	-1.4%	2.3%
Subrank	**4**	**2**	**4**	**19**	**4**	**19**	**12**	**19**	**12**	**4**	**19**	**4**

Household Statistics	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
Total Owner Occupied Housing Units 2015	68.63%	63.18%	66.71%	61.63%	63.51%	66.11%	67.37%	66.74%	64.79%	64.71%	64.18%	65.32%	64.65%
Total Renter Occupied Housing Units 2015	31.37%	36.82%	33.29%	38.37%	36.49%	33.89%	32.63%	33.26%	35.21%	35.29%	35.82%	34.68%	35.35%
Total Vacant Housing Units 2015	19.00%	9.71%	15.58%	6.56%	10.16%	8.50%	9.39%	7.81%	7.71%	8.22%	7.40%	9.40%	9.48%
% Housing Unit Growth 2015-2020	3.32%	1.92%	2.71%	3.42%	2.41%	1.33%	0.99%	3.31%	5.51%	2.84%	10.39%	7.71%	5.06%
Median Home Value 2015	$245,899	$159,930	$163,238	$396,915	$210,991	$175,683	$209,024	$233,599	$264,980	$209,823	$269,806	$241,633	$222,782
Median Household Income 2015	$55,667	$42,923	$40,861	$75,060	$61,361	$53,599	$52,061	$56,915	$56,867	$51,239	$60,746	$53,106	$52,845
Median Disposable Income 2015	$45,403	$35,792	$34,265	$56,370	$48,621	$42,044	$41,547	$46,147	$46,657	$41,240	$47,662	$41,619	$43,777
Subrank	**6**	**24**	**21**	**1**	**6**	**14**	**14**	**3**	**2**	**13**	**6**	**14**	**6**

Household Statistics	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
Total Owner Occupied Housing Units 2015	62.94%	59.00%	66.37%	64.42%	60.46%	69.66%	59.52%	69.54%	65.47%	60.60%	59.66%	59.44%
Total Renter Occupied Housing Units 2015	37.06%	41.00%	33.63%	35.58%	39.54%	30.34%	40.48%	30.46%	34.53%	39.40%	40.34%	40.56%
Total Vacant Housing Units 2015	12.45%	15.51%	10.65%	10.98%	8.49%	11.81%	6.94%	10.02%	9.42%	6.38%	7.97%	6.12%
% Housing Unit Growth 2015-2020	5.27%	7.49%	4.59%	0.41%	4.79%	0.84%	2.95%	1.41%	3.15%	4.80%	1.40%	5.10%
Median Home Value 2015	$222,751	$222,207	$206,363	$187,441	$210,505	$185,014	$245,093	$224,956	$214,556	$258,401	$230,320	$364,664
Median Household Income 2015	$52,099	$49,509	$51,452	$50,124	$54,421	$52,839	$57,302	$54,317	$56,678	$59,103	$52,957	$59,764
Median Disposable Income 2015	$43,566	$41,344	$41,867	$41,119	$45,222	$42,718	$46,915	$43,604	$46,998	$46,998	$41,795	$48,586
Subrank	**14**	**24**	**6**	**21**	**14**	**14**	**20**	**6**	**5**	**12**	**23**	**3**

Labor Force Availability	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
%Growth in Labor Force 2010-2015	0.89%	-0.92%	-0.28%	4.44%	-2.90%	-3.88%	0.70%	-0.07%	3.94%	0.35%	8.91%	6.81%	8.86%
Unemployment Rate 2010	6.8%	8.6%	7.8%	7.6%	7.3%	8.1%	8.0%	7.5%	8.0%	9.9%	8.6%	11.7%	7.8%
Unemployment Rate 2015	4.20%	4.90%	4.90%	4.40%	4.73%	5.50%	5.40%	4.50%	5.10%	4.90%	4.70%	5.50%	5.80%
Change in Unemployment Rate 2010 to 2015	-2.6%	-3.7%	-2.9%	-3.2%	-2.6%	-2.6%	-2.6%	-3.0%	-2.9%	-5.0%	-3.9%	-6.2%	-2.0%
Subrank	**9**	**14**	**14**	**3**	**16**	**22**	**19**	**9**	**6**	**16**	**1**	**7**	**12**

Labor Force Availability	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
%Growth in Labor Force 2010-2015	1.75%	6.41%	4.89%	-0.21%	2.61%	-3.62%	2.66%	-1.35%	2.75%	3.99%	-0.01%	-0.30%
Unemployment Rate 2010	10.7%	11.1%	9.6%	8.4%	9.0%	13.9%	8.1%	9.6%	8.7%	6.4%	8.9%	1.2%
Unemployment Rate 2015	5.50%	5.20%	5.10%	6.00%	4.30%	6.30%	3.80%	5.70%	5.50%	3.70%	5.40%	5.40%
Change in Unemployment Rate 2010 to 2015	-5.2%	-5.9%	-4.5%	-2.4%	-4.7%	-7.6%	-4.3%	-3.9%	-3.2%	-2.7%	-3.5%	4.2%
Subrank	**16**	**2**	**9**	**24**	**7**	**25**	**3**	**22**	**12**	**3**	**19**	**19**

Industry-Specific Employment[10]	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
Manufacturing as a % of Total Employment	9.73%	11.74%	6.72%	8.94%	6.55%	13.74%	10.22%	8.59%	7.63%	13.56%	9.76%	12.13%	9.40%
Wholesale Trade as a % of Total Employment	2.15%	2.38%	1.96%	2.15%	2.14%	2.02%	2.56%	2.79%	2.56%	2.73%	2.65%	3.03%	2.53%
Retail Trade as a % of Total Employment	12.85%	15.05%	13.92%	10.30%	11.18%	3.15%	3.14%	9.47%	6.92%	3.61%	5.65%	2.70%	6.37%
Information as a % of Total Employment	2.01%	2.19%	1.64%	2.33%	2%	2.11%	1.71%	1.37%	1.50%	1.55%	2.54%	2.05%	1.56%
Finance/Insurance/Real Estate as a % of Total Employment	6.03%	5.10%	3.14%	6.47%	5.31%	3.30%	5.40%	6.98%	7.63%	5.48%	4.81%	7.85%	4.18%
Services Industries as a % of Total Employment	29.70%	25.78%	27.10%	37.15%	38.47%	29.74%	28.01%	34.48%	33.98%	25.94%	36.21%	28.44%	30.29%

Industry-Specific Employment	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
Manufacturing as a % of Total Employment	5.70%	4.64%	13.10%	14.88%	9.53%	18.26%	11.33%	11.20%	9.70%	10.61%	17.01%	12.76%
Wholesale Trade as a % of Total Employment	2.84%	2.37%	2.85%	2.86%	2.81%	2.17%	1.42%	2.53%	3.05%	2.14%	2.75%	3.20%
Retail Trade as a % of Total Employment	5.25%	3.42%	4.64%	3.79%	4.95%	3.40%	2.60%	3.67%	4.32%	5.22%	3.04%	3.28%
Information as a % of Total Employment	1.67%	2.22%	1.75%	1.76%	2.19%	1.66%	1.95%	2%	2.93%	2.35%	1.84%	1.97%
Finance/Insurance/Real Estate as a % of Total Employment	8.71%	4.42%	4.91%	5.82%	7.91%	4.59%	2.92%	5.93%	6.58%	6.90%	6.33%	4.60%
Services Industries as a % of Total Employment	30.88%	30.72%	27.65%	27.54%	32.58%	26.29%	39.16%	29.89%	32.08%	36.55%	27.55%	27.66%

[10] The Industry Specific Employment factor was not ranked in the screening model

Occupation-Specific Employment (per 1000)[11]	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
Business/Financial Operations	51.21	36.79	27.80	66.50	58.16	43.17	51.11	66.44	70.52	42.72	61.12	64.79	37.43
Computer/Mathematical	27.65	12.27	13.67	48.97	34.00	31.55	28.44	34.63	33.65	22.23	52.21	38.03	16.15
Healthcare Support Functions	30.99	38.49	41.98	29.33	30.51	30.16	32.90	27.33	23.93	27.57	26.83	25.01	29.59
Office/Administrative	160.01	172.20	162.08	147.19	178.66	170.35	167.00	188.23	168.35	156.27	156.93	161.23	147.40
Production	46.14	74.63	32.71	44.32	36.60	71.86	57.70	45.45	46.35	102.06	38.84	63.25	59.77
Transportation/Material Moving	61.70	33.15.	56.80	46.13	52.15	50.27	61.67	97.28	62.63	100.86	51.98	78.26	66.89

Occupation-Specific Employment (per 1000)	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
Business/Financial Operations	65.98	50.36	54.37	49.26	62.16	52.21	47.99	54.47	61.24	65.39	54.09	53.64
Computer/Mathematical	25.89	27.74	30.28	27.22	39.56	32.70	38.69	32.68	37.47	54.54	29.75	35.35
Healthcare Support Functions	28.16	20.81	25.74	39.02	34.49	34.00	41.30	28.30	24.71	25.56	27.86	23.47
Office/Administrative	191.39	171.85	149.91	159.67	178.27	150.79	148.94	163.38	179.29	160.64	155.47	155.56
Production	42.19	31.23	73.74	88.97	58.90	95.16	52.12	58.01	57.61	64.78	100.17	65.23
Transportation/Material Moving	77.83	59.84	94.86	62.56	76.70	76.93	34.87	59.10	67.10	53.51	67.96	65.49

[11] The Occupation Specific Employment factor was not ranked in the screening model

Occupation-Specific Salaries (Annual Mean)	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
Business/Financial Operations	$65,330	$56,120	$57,020	$83,200	$67,100	$68,910	$66,210	$63,910	$71,790	$61,430	$69,780	$76,100	$58,420
Computer/Mathematical	$71,430	$58,990	$60,170	$96,150	$74,680	$71,080	$71,070	$71,950	$81,160	$66,710	$83,180	$84,460	$62,110
Healthcare Support Functions	$29,360	$28,060	$27,860	$33,800	$28,570	$27,950	$28,170	$28,470	$27,830	$28,970	$27,570	$25,790	$23,350
Office/Administrative	$35,320	$31,540	$31,860	$42,200	$37,430	$35,290	$34,350	$35,400	$35,250	$34,140	$34,410	$35,620	$31,720
Production	$34,630	$33,150	$32,280	$39,870	$41,420	$35,510	$38,150	$34,460	$37,450	$35,600	$32,280	$35,110	$50,590
Transportation/Material Moving	$34,060	$33,250	$34,530	$36,830	$35,060	$31,600	$34,130	$34,430	$32,560	$37,610	$30,730	$35,200	$34,610
Subrank	**8**	**1**	**1**	**25**	**22**	**8**	**8**	**4**	**13**	**16**	**16**	**20**	**4**

Occupation-Specific Salaries (Annual Mean)	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
Business/Financial Operations	$66,190	$64,980	$66,870	$65,920	$67,150	$70,310	$67,660	$69,430	$69,040	$63,500	$66,090	$68,240
Computer/Mathematical	$73,960	$73,770	$74,120	$72,080	$78,790	$81,750	$71,060	$79,170	$77,340	$71,050	$77,020	$81,250
Healthcare Support Functions	$28,350	$28,510	$28,260	$26,310	$26,350	$27,650	$20,320	$26,870	$28,660	$31,270	$28,840	$34,480
Office/Administrative	$33,430	$31,740	$35,030	$35,140	$35,190	$36,440	$35,170	$35,680	$35,650	$36,160	$36,320	$37,710
Production	$34,470	$31,580	$33,260	$35,930	$35,880	$41,670	$36,350	$37,540	$38,020	$34,810	$37,540	$37,300
Transportation/Material Moving	$33,850	$31,930	$33,950	$33,590	$30,580	$42,930	$34,770	$33,670	$34,160	$33,320	$31,620	$35,430
Subrank	**4**	**3**	**8**	**8**	**13**	**24**	**4**	**18**	**18**	**15**	**20**	**23**

Education	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
Population less than High School Diploma	6.08%	10.56%	8.07%	8.56%	7.84%	9.88%	7.53%	9.50%	11.73%	11.61%	9.26%	12.43%	13.09%
Population at least High School Graduate	89.01%	81.00%	85.90%	88.77%	88.21%	85.58%	88.55%	86.52%	84.04%	82.54%	87.70%	83.50%	82.45%
Population (at least) Some College as	65.91%	51.11%	56.45%	67.21%	64.79%	62.95%	57.55%	55.33%	62.33%	58.59%	71.91%	63.07%	55.54%
Population (at least) Associates Degree	46.25%	29.83%	35.62%	52.14%	47.47%	45.74%	41.35%	38.96%	41.35%	35.93%	52.84%	41.00%	33.24%
Population (at least) Bachelors Degree	36.14%	19.21%	24.24%	44.93%	35.49%	33.69%	31.72%	30.99%	34.32%	27.85%	44.15%	32.38%	28.00%
Population Graduate/Professional School Degree as	13.10%	6.47%	8.90%	20.34%	15.99%	14.73%	12.19%	12.05%	12.71%	10.98%	15.61%	10.46%	9.28%
Subrank	5	25	22	3	5	7	10	14	15	23	4	17	24

Education	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
Population less than High School Diploma	10.18%	11.52%	11.08%	10.44%	9.23%	11.02%	5.42%	8.89%	8.53%	5.35%	9.57%	8.92%
Population at least High School Graduate	85.40%	84.37%	84.55%	86.11%	87.24%	85.37%	92.29%	86.75%	87.67%	92.17%	87.20%	87.04%
Population (at least) Some College as	62.34%	60.68%	60.50%	59.92%	62.24%	62.14%	79.61%	63.93%	65.56%	72.26%	63.65%	69.48%
Population (at least) Associates Degree	39.32%	39.89%	39.46%	38.12%	42.31%	38.35%	60.20%	41.01%	42.31%	53.22%	42.46%	44.66%
Population (at least) Bachelors Degree	29.29%	29.37%	31.48%	30.02%	34.74%	29.72%	53.21%	32.07%	34.55%	43.17%	33.94%	36.22%
Population Graduate/Professional School Degree as	9.20%	9.50%	10.91%	11.63%	12.30%	11.86%	27.69%	12.34%	12.58%	17.23%	11.54%	13.40%
Subrank	17	17	17	15	10	17	1	13	9	2	10	7

Transportation and Market Access	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
Population within 4 Hours Drive Time	11,920,513	10,384,326	4,228,324	19,921,918	41,279,443	7,502,658	17,277,706	43,869,490	20,974,716	18,949,248	16,419,414	18,719,086	7,533,320
Households within 4 Hours Drive Time	4,885,603	4,249,914	1,756,214	7,945,478	16,145,935	3,178,394	7,241,867	16,879,863	8,284,551	7,710,634	6,608,364	7,498,126	2,974,232
Median Household Income w/in 4 Hours	$62,686	$62,081	$60,374	$61,048	$63,453	$50,767	$49,701	$65,560	$60,612	$47,539	$48,009	$45,854	$43,474
Household Growth Rate w/in 4 Hours	3.24%	3.21%	3.00%	3.13%	3.28%	2.09%	2.53%	3.15%	2.86%	2.73%	2.55%	2.93%	2.89%
Miles to Major Airport	5	35	3	3	10	7	20	12	10	7	15	8	9
Airport Type	Medium	Medium	Small	Large	Medium	Medium	Large	Small	Medium	Large	Medium	Large	Medium
Interstate Highways	1	1	1	2	2	1	2	3	2	3	2	2	2
Subrank	**10**	**21**	**21**	**4**	**1**	**25**	**20**	**1**	**7**	**10**	**21**	**14**	**21**

Transportation and Market Access	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
Population within 4 Hours Drive Time	13,636,226	18,606,978	28,457,529	23,567,862	27,127,584	20,170,136	22,062,188	11,879,493	11,065,323	18,248,426	17,750,985	8,628,463
Households within 4 Hours Drive Time	5,530,175	7,468,995	11,321,378	9,774,897	11,171,189	8,193,120	8,975,678	4,903,604	4,501,504	7,209,708	6,979,815	3,448,710
Median Household Income w/in 4 Hours	$44,763	$46,895	$51,465	$49,619	$49,415	$49,758	$49,489	$46,381	$50,614	$55,662	$55,162	$58,724
Household Growth Rate w/in 4 Hours	3.23%	2.94%	2.59%	2.66%	2.69%	2.75%	2.78%	2.79%	2.64%	2.96%	2.91%	3.28%
Miles to Major Airport	15	13	14	14	8	23	27	15	20	7	8	13
Airport Type	Medium	Large	Large	Large	Large	Large	Large	Large	Large	Medium	Large	Large
Interstate Highways	2	1	4	4	2	3	1	4	4	3	2	2
Subrank	**17**	**17**	**3**	**5**	**6**	**10**	**17**	**14**	**16**	**7**	**7**	**10**

Tax Regime	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
State Corporate Tax Climate Score	45	45	45	37	20	20	46	46	6	29	25	25	23
State Corporate Income Tax -Highest Bracket	8.93%	8.93%	8.93%	8.00%	7.10%	7.10%	9.99%	9.99%	6.00%	8.00%	6.00%	6.00%	8.00%
State Sales Tax (Average)	5.50%	5.50%	5.50%	6.25%	4.00%	4.00%	6.00%	6.00%	5.30%	6.00%	4.75%	4.75%	4.00%
Property Tax as a % of Income	4.72%	4.72%	4.72%	3.78%	4.57%	4.57%	3.09%	3.09%	2.99%	2.03%	2.50%	2.50%	2.01%
Subrank	**23**	**23**	**23**	**19**	**8**	**8**	**21**	**21**	**2**	**15**	**2**	**2**	**5**

Tax Regime	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
State Corporate Tax Climate Score	14	14	22	26	26	10	10	4	4	33	33	36
State Corporate Income Tax -Highest Bracket	5.50%	5.50%	7.00%	0.00%	0.00%	6.00%	6.00%	6.25%	7.00%	7.90%	7.90%	7.60%
State Sales Tax (Average)	6.00%	6.00%	7.00%	5.75%	5.75%	6.00%	6.00%	4.23%	6.15%	5.00%	5.00%	None
Property Tax as a % of Income	3.45%	3.45%	2.72%	3.01%	3.01%	3.79%	3.79%	2.58%	3.34%	4.36%	4.36%	3.49%
Subrank	**8**	**8**	**16**	**6**	**6**	**8**	**8**	**1**	**8**	**17**	**17**	**19**

Climate and Natural Hazards	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
# Days of Precipitation per year	127	129	135	128	135	182	152	125	113	124	112	111	108
Annual Precipitation (in inches)	41	45.1	43	43	33	31.3	36	36	43	43	43	43	54.1
Annual Snowfall (in inches)	74	71	95	42	71	88.4	45	35	14	17	7	6	1.8
Annual Days with Thunderstorms	18	30	18	19	28	29	36	33	37	45	46	42	70
Tornado Risk	0	0	0	10	6	1	14	13	21	17	13	14	31
Subrank	6	19	19	6	6	22	16	2	6	6	2	2	24

Climate and Natural Hazards	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
# Days of Precipitation per year	116	116	122	156	136	133	133	108	102	117	122	152
Annual Precipitation (in inches)	54	51	39	35	37	32	32	36	37	30	29	38
Annual Snowfall (in inches)	0	0	21	52	28	39	39	18	20	39	45	7
Annual Days with Thunderstorms	64	81	45	36	42	33	33	45	53	40	36	7
Tornado Risk	14	42	33	14	19	23	31	44	49	24	19	3
Subrank	16	25	19	16	13	6	13	15	22	6	2	1

Crime and Quality of Life	Portland, ME MSA	Auburn-Lewiston, ME MSA	Bangor, ME MSA	Boston-Cambridge-Quincy, MA-NH MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Kansas City, MO-KS MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Rock Hill, NC-SC MSA	Baton Rouge, LA MSA
Violent Crime	145.9	144.2	91.2	354.5	266.6	283.6	292.8	299.6	243.8	425.3	219.3	404.4	509.1
Property Crime	2,270.0	2,720.8	2,826.2	1,890.3	2,300.8	2,411.7	1,856.5	2,137.0	2,395.7	3,475.0	2,283.3	2,981.0	3,800.3
Cost of Living Index	109.5	93.1	98.6	134.2	109.2	87.1	85.4	87.6	99.1	85.2	98.1	93.7	94.4
Mean Commute Time to Work	24.3	23.3	20.8	28.8	22.2	20.7	25.9	22	24.6	24.1	24.9	25.4	25.8
Physicians Per 10000 people	333.1	231.8	290.5	548.9	306	320.3	335.5	346.5	287.9	276.1	186.7	209.6	181.9
# of Hospital Beds	298.4	474.6	471.8	599.9	367.7	478.8	529.7	459.4	514.1	435.8	269.1	268.6	479.7
Subrank	**10**	**7**	**4**	**13**	**8**	**1**	**4**	**2**	**8**	**14**	**14**	**21**	**24**

Crime and Quality of Life	Jacksonville, FLMSA	Orlando-Kissimmee-Sanford, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Warren-Livonia, MI MSA	Ann Arbor MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison WI	Milwaukee WI MSA	Portland-Vancouver-Hillsboro, OR-WA MSA
Violent Crime	495.7	540.1	599.5	393.5	441.5	569.6	305.5	431.7	468.5	217.1	587.1	250.9
Property Crime	3,228.8	3,420.1	3,672.5	3,437.7	4,826.4	2,579.1	2,097.7	2,670.2	3,254.4	2,262.6	3,064.2	2,991.4
Cost of Living Index	96.1	105.3	81.5	89.5	90.6	91.4	104	87.6	87.7	99.7	101.5	110.6
Mean Commute Time to Work	24.8	26.3	24	24.5	22.7	26.1	22.6	24.8	22.5	21.4	22.2	24.9
Physicians Per 10000 people	257.3	193.7	326	362.2	280.7	225.1	809.3	284.9	263.3	421.6	323.6	267.3
# of Hospital Beds	353.5	272.2	357	469.2	310.1	434.4	479	466.8	400.8	364	365.8	189.3
Subrank	**21**	**25**	**18**	**10**	**21**	**18**	**2**	**12**	**14**	**4**	**17**	**18**

Maine Competitive Analysis – Industry/Sector Analysis

The analysis in the section is based on a standard site selection or evaluation model designed to show how likely a company would be to select Portland, Bangor or the Lewiston Auburn areas. This model has been further modified to develop insights to show how likely a company in a particular industry or function would be to select Portland, Bangor, or the Lewiston Auburn area.

The following 7 industries or sectors are defined as current areas of focus for Maine incentive programs:

- Biotechnology,
- Composites & Advanced Materials,
- Environmental Technologies,
- Forest Products & Agriculture,
- Information Technology,
- Marine Technology & Aquaculture, and
- Precision Manufacturing.

Methodology

For each of the industry sectors, the team assigned a series of drivers particularly valued by a company in that industry. These drivers were chosen based on our proprietary incentives database tool and our experience as site selection consultants for the private sector. The team assigned a series of factors to measure each driver. Factors were limited to statistics that are available for the entire US by state or MSA.

It is important to note that this analysis by industry/sector does not take into account incentive programs in place which might help make up for drawbacks identified in this analysis. Incentive programs normally come into the site selection process further into the process when the candidates have been narrowed to less than four.

Overall Findings

Portland ranks 7th for Marine Technology & Aquaculture and 10th for Forest Products & Agriculture (primarily for the agriculture component). For all other industries, Portland ranks 21st or 22nd against the competitors. Lewiston Auburn ranks 23rd for Forest Products & Agriculture and 24th or 25th for all industries. Bangor ranks 2nd for Forest Products & Agriculture (primarily for the forest products component) and 23rd for Composites & Advanced Materials. Bangor ranks between 24th and 25th for all other industries.

Industry/Sector Comparison	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Biotechnology Score	22	25	24	1	2	7	6	3	11	21	12	14	23	10	9	16	8	5	15	4	19	17	18	20	13
Composites & Advanced Materials	21	25	23	4	1	22	16	3	11	17	14	18	24	15	20	10	5	9	6	2	12	7	13	19	8
Environmental Technologies	22	25	24	3	7	13	4	6	14	19	12	16	23	15	18	2	1	5	9	10	11	8	17	21	20
Forest Products & Agriculture	10	23	2	4	12	20	7	5	17	18	21	24	25	16	19	3	13	8	15	11	9	14	1	22	6
Information Technology	21	25	24	8	16	23	19	15	9	14	4	10	20	6	7	12	18	3	17	1	13	2	11	22	5
Marine Technology & Aquaculture	7	24	25	6	5	4	23	15	9	22	16	19	20	1	2	21	8	12	13	10	17	18	11	14	3
Precision Manufacturing	22	25	24	18	10	20	15	11	12	4	21	9	19	17	23	5	2	13	1	7	3	6	14	16	8

Biotechnology

Maine is not a natural fit for biotechnology companies because of lack of talent and lack of reputation in the field. The Greater Boston area is fairly close to southern Maine, has better access to talent, and the 495 area has similar costs of living and quality of life to the Portland area. Companies would rather select a location closer to the biotech hub in Cambridge/Waltham than situate the company 2 hours north in Southern Maine.

The Portland MSA ranked slightly better than Lewiston and Bangor for Biotech, but all locations ranked poorly against the competitors. If this industry was expanded to biotech and life sciences, Maine would have a starting point for this industry sector based on some of the company interviews conducted in the Interviews section and Appendix D. With a starting base, it would be much easier for the state to grow the industry.

Biotechnology	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Ability to recruit Talent to Region	14	21	20	4	17	15	12	13	2	22	7	19	25	23	24	16	9	11	7	1	9	6	5	18	3
Access to Funding/Investment Partners	17	17	17	1	1	1	1	1	6	17	9	9	17	7	7	17	9	9	9	9	15	17	17	17	15
Domestic Market Growth Potential	21	21	21	2	2	2	7	7	21	15	15	15	7	2	2	21	7	7	7	7	15	7	15	15	1
Global Access	6	25	23	1	13	16	7	24	22	5	19	2	13	13	16	10	3	9	11	11	18	20	20	7	4
Industry Cluster/Critical Mass	14	20	19	3	9	21	14	14	4	14	2	10	11	4	1	11	21	4	25	4	21	4	14	21	13
Proximity to Markets or Customers	16	19	21	9	1	25	16	1	4	15	16	11	21	10	11	3	6	5	6	6	21	24	11	11	19
Skilled Workforce Availability	4	22	22	3	9	17	11	14	11	16	6	21	25	13	19	14	19	4	24	1	18	7	2	7	9
Universities or Researchers	23	23	23	8	3	3	1	1	11	21	12	12	18	14	14	5	6	6	9	9	16	16	19	19	21
RANK	**22**	**25**	**24**	**1**	**2**	**7**	**6**	**3**	**11**	**21**	**12**	**14**	**23**	**10**	**9**	**16**	**8**	**5**	**15**	**4**	**19**	**17**	**18**	**20**	**13**

Composites & Advanced Materials

Composites and Advanced Materials is both a subset of and a partnering activity to precision manufacturing. Maine in general does not competitively rank well for composites and advanced materials. Portland does have some companies focusing on the more high tech part of this industry while Bangor focuses on the lower tech parts of this industry. The Lewiston area does not appear to be a good match primarily because of location and a lack of skilled workforce availability.

Certain composite manufacturers are experiencing difficulties from outside influences that the State is unlikely to influence. However, the state may be able to support these industries with networking, employee retraining, and equipment upgrade opportunities. For example, the specific plastic used to make canoes and kayaks is still patented but the manufacturer had decided not to produce any more plastic because it is not profitable enough. Canoe and Kayak manufacturers are scrambling to source their boats out of fiberglass at a similar volume and cost.

Composites and Advanced Materials	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Ability to recruit Talent to Region	16	15	13	18	22	19	10	9	1	21	10	13	25	23	24	12	5	8	2	2	6	6	17	20	4
Domestic Market Growth Potential	21	21	21	2	2	2	7	7	21	15	15	15	7	2	2	21	7	7	7	7	15	7	15	15	1
Infrastructure and Logistics	18	24	21	4	12	23	8	9	15	6	16	18	22	14	18	5	2	17	6	24	3	1	13	10	11
Proximity to Markets or Customers	16	19	21	9	1	25	16	1	4	15	16	11	21	10	11	3	6	4	6	6	21	24	11	11	19
Regulations or Business Climate	23	23	23	18	14	14	21	21	4	12	4	4	11	7	7	10	14	14	2	2	1	9	19	19	13
Skilled Workforce Availability	3	21	17	4	10	11	12	13	14	15	6	22	25	18	22	15	20	5	24	1	19	9	2	8	6
RANK	**21**	**25**	**23**	**4**	**1**	**22**	**16**	**3**	**11**	**17**	**14**	**18**	**24**	**15**	**20**	**10**	**5**	**9**	**6**	**2**	**12**	**7**	**13**	**19**	**8**

Environmental Technologies

Maine as a state does not have a particularly competitive ranking for Environmental Technologies. Many businesses that work with R&D and implementation for green technologies are struggling both in the economy and in the state. High energy costs help drive the need for environmental technologies, but ironically make such products more costly to produce. Bangor and Lewiston do not rank well for any of the factors that drive environmental technologies. Only Portland has one positive ranking category with skilled workforce availability comparing well for this industry as compared to the competitors.

Environmental Technologies	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Infrastructure and Logistics	19	25	22	4	12	23	8	10	18	7	17	12	21	12	19	6	1	12	4	24	2	2	9	12	11
Regulations or Business Climate	23	23	23	18	14	14	21	21	4	12	4	4	11	4	4	10	14	14	2	2	1	9	19	19	13
Skilled Workforce Availability	3	22	19	4	10	15	11	14	11	17	6	23	25	13	18	15	21	5	24	1	19	9	2	7	7
Universities or Researchers	23	23	23	8	3	3	1	1	11	21	12	12	18	14	14	5	6	6	9	9	16	16	19	19	21
RANK	**22**	**25**	**24**	**3**	**7**	**13**	**4**	**6**	**14**	**19**	**12**	**16**	**23**	**15**	**18**	**2**	**1**	**5**	**9**	**10**	**11**	**8**	**17**	**21**	**20**

Forest Products & Agriculture

Maine as a whole should do much better for forest products and agriculture. The state has access to a tremendous amount of unharvested land that could supply paper mills and other value added industries. However, extracting this resource is expensive and the supporting industries that add value are struggling. Cheaper energy costs and or access to natural gas would help and possibly save the forestry products industry. For example, paper mills that now have access to natural gas went from almost closing their doors to operating successfully and even expanding operations over the course of well under 10 years.

Not surprisingly, Bangor ranks the best out of the Maine candidates and very highly overall for forest products and agriculture industries. Interestingly, the Portland MSA also ranks highly for this industry but for the agricultural part rather than the forestry side. For example, the

Sanford area has a surprising number of indoor and outdoor farms. Lewiston scores second to last for this industry with poor access to forestry land and very little farming.

The agriculture component is actually missing a large farming industry outside the Presque Isle area by the Amish for two reasons. Presque Isle is not considered an MSA (thought they may have the population mass to become a NECTA). More importantly, it is unclear and unlikely that the Amish are included in the census. While not all our sources are census based, several are census based or are separate sources also based on census statistics. If the area became a NECTA, statistics would be collected differently and by more sources.

Forest Products and Agricultural	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Access to Agricultural \Research Institutions	8	8	2	2	8	8	2	2	8	8	8	8	8	8	8	2	8	2	8	8	8	8	1	8	8
Access to Culinary Programs	13	17	17	4	13	17	4	17	8	17	10	9	17	4	2	10	13	17	2	16	7	10	17	17	1
Infrastructure and Logistics	15	25	21	4	10	23	6	9	16	7	18	20	14	13	22	5	1	19	8	24	2	3	11	17	12
Natural Resources	6	5	1	24	14	4	21	9	13	14	16	21	16	16	8	10	21	12	24	7	10	16	2	16	3
Proximity to Markets or Customers	16	19	22	9	1	25	16	1	4	15	16	11	22	10	11	3	6	5	6	6	21	24	11	11	19
Regulations or Business Climate	23	23	23	18	14	14	21	21	4	12	4	4	11	4	4	10	14	14	2	2	1	9	19	19	13
Skilled Workforce Availability	3	15	8	5	13	17	10	11	18	15	11	23	25	19	22	14	21	4	24	2	20	8	1	6	7
RANK	**10**	**23**	**2**	**4**	**12**	**20**	**7**	**5**	**17**	**18**	**21**	**24**	**25**	**16**	**19**	**3**	**13**	**8**	**15**	**11**	**9**	**14**	**1**	**22**	**6**

Information Technology

Maine is not a natural choice for Information Technology companies. The cost of electricity is very high and access to reliable broadband is difficult in many areas of the state. More broadly speaking, most of New England is not a natural match for a large Information Technology company. Maine does not produce enough students for IT careers and Portland is the only location reliably able to attract these workers into the state. The access to natural gas in southern Maine reduces heating costs enough to make it more attractive to an Information Technology company, but the computers, servers and equipment still run on electricity.

Information Technology	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Ability to recruit Talent to Region	17	14	12	15	22	19	9	9	1	21	12	17	25	23	24	11	4	8	3	1	5	6	15	20	6
Domestic Market Growth Potential	21	21	21	2	2	2	7	7	21	15	15	15	7	2	2	21	7	7	7	7	15	7	15	15	1
ICT infrastructure	19	19	19	24	24	22	22	15	15	1	5	1	5	1	5	5	15	13	5	5	1	5	13	15	5
Industry Cluster/Critical Mass	16	20	19	3	9	21	14	16	4	16	2	10	11	4	1	11	21	4	25	7	21	7	14	21	13
Skilled Workforce Availability	4	23	22	3	8	17	13	14	11	18	6	20	25	12	16	15	20	4	24	1	18	7	2	9	10
RANK	**21**	**25**	**24**	**8**	**16**	**23**	**19**	**15**	**9**	**14**	**4**	**10**	**20**	**6**	**7**	**12**	**18**	**3**	**17**	**1**	**13**	**2**	**11**	**22**	**5**

Marine Technology & Aquaculture

Portland has the best access to marine technology and aquaculture among the three Maine MSAs simply due to its proximity to the ocean. Portland itself is not the best place for aquaculture activities, but is a great location for research and marine technology development. Due to low cost of land and great access to natural resources, Bangor MSA, Hancock County, and Washington County are great locations for marine based aquaculture.

Marine Technology and Aquaculture	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Access to Fresh and Salt Water Environment	2	13	23	6	10	3	20	20	4	23	13	13	10	1	4	23	7	13	13	13	19	20	10	7	7
Domestic Market Growth Potential	21	21	21	2	2	2	7	7	21	15	15	15	7	2	2	21	7	7	7	7	15	7	15	15	1
Infrastructure and Logistics	19	25	22	4	11	24	8	9	17	7	12	12	21	15	19	5	1	17	6	23	2	2	10	16	14
Lower Costs	8	1	1	25	23	10	8	6	10	6	10	17	4	4	3	10	10	16	24	21	17	17	10	17	22
Natural Resources	6	5	1	24	13	4	21	9	13	13	16	21	16	16	8	10	21	12	24	7	11	16	2	16	3
Proximity to Markets or Customers	16	19	21	9	1	25	16	1	4	15	16	11	21	10	11	3	6	5	6	6	21	24	11	11	19
Regulations or Business Climate	23	23	23	18	14	14	21	21	4	12	4	4	11	4	4	10	14	14	2	2	1	9	19	19	13
Skilled Workforce Availability	3	14	13	5	9	14	12	10	19	14	11	23	25	18	22	14	20	4	24	2	20	8	1	6	7
RANK	**7**	**24**	**25**	**6**	**5**	**4**	**23**	**15**	**9**	**22**	**16**	**19**	**20**	**1**	**2**	**21**	**8**	**12**	**13**	**10**	**17**	**18**	**11**	**14**	**3**

Precision Manufacturing

While Lewiston and Bangor don't rank particularly high for manufacturing, there is a historical precedence set in these areas for the manufacturing and precision manufacturing fields. Many manufacturing companies in more traditional manufacturing fields are transitioning to using CNC machines to help alleviate the pressures on employees and add accuracy to key points in the manufacturing process. Most companies have struggled but managed to find enough employees to efficiently run the business. However, many companies are looking at a mass retirement of up to 50% of their workforce over the next 5 to 10 years.

Precision Manufacturing	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Infrastructure and Logistics	15	25	22	5	10	23	4	9	16	8	18	21	18	13	20	6	1	16	7	24	2	3	14	12	11
Proximity to Markets or Customers	16	19	21	9	1	25	16	1	4	15	16	11	21	10	11	3	6	5	6	6	21	24	11	11	19
Regulations or Business Climate	23	23	23	18	14	14	21	21	4	12	4	4	11	4	4	10	14	14	2	2	1	9	19	19	13
Skilled Workforce Availability	6	11	14	22	20	6	10	14	20	1	24	11	18	23	25	14	3	13	2	6	14	19	3	6	3
RANK	**22**	**25**	**24**	**18**	**10**	**20**	**15**	**11**	**12**	**4**	**21**	**9**	**19**	**17**	**23**	**5**	**2**	**13**	**1**	**7**	**3**	**6**	**14**	**16**	**8**

Appendix K – Benchmark 3 – Incentive Award Productivity

Similar to the State Investment benchmark, this Incentive Productivity Benchmark evaluates a number of indicators that capture the extent to which US states have awarded incentives (i.e. Indicator 1 and Indicator 2) and the economic benefits generated as a result of these awarded incentives (i.e. Indicator 3 and Indicator 4):

- **Indicator 1:** Number of awarded incentives to attract investment to a particular location;
- **Indicator 2:** Value of awarded incentives or the money authorities and communities in this location spent on the awarded incentives;
- **Indicator 3:** Capital volume attracted to this location as a result of the awarded incentives; and
- **Indicator 4:** New jobs created in this location as a result of the awarded incentives.

This Incentive Productivity Benchmark has been developed from incentives data obtained from the IncentivesMonitor.com database (originally launched in 2010 as ICAIncentives.com, developed jointly by ICA and WAVTEQ). The database registers all types of incentives offered to companies to establish new operations or to expand an existing operation. A requirement to be registered is that the investment project must create new employment or retain existing jobs and involve a certain amount of capital investment. Incentives that have been granted to universities or colleges, companies upgrading technology and equipment without job creation or physical expansion, environmental improvement and projects for restructuring, recovery or rescue have not been included in the database. Over 20,000 corporate, media and EDO sources in multiple languages are screened on a daily basis to identify and administer relevant incentive deals in the database.

The IncentivesMonitor.com database has registered a total of 13,383 incentive awards throughout the US between 2010 and 2015. Authorities across the US spent $90.8 billion on incentives, which in turn attracted over $429 billion worth of capital investment. The companies to which the 13,383 incentives have been awarded created nearly 1.63 million new jobs through these projects.

Out of the 13,383 incentives, 928 (or 7%) have been awarded in the six states that comprise New England, equaling a total budget spent on incentives of $2.8 billion. Incentives granted in Maine represent a small portion of the New England incentive distribution since only 28 of the 928 incentives (or 3.0%) have been awarded to businesses located in Maine. Together, the 28 awarded incentives represent a value of $160.0 million.

In terms of benefits, the incentivized investment projects have created over 46,000 new jobs throughout New England, of which just under 1,600 jobs have been allocated in Maine. This employment creation has been accompanied by a total capital investment of $10.3 billion in New England and $420.0 million in Maine.

Comparing the average values of awarded incentives demonstrates a national average incentive value of $6.8 million. Governments and authorities across New England and Maine have granted considerably lower average incentive packages of $3.1 million and $5.8 million, respectively. The average benefits

these granted incentives have generated are considerably smaller in New England and Maine. An average US awarded incentive attracted $42.2 million of capital investment combined with 122 new jobs. For New England, these numbers equal $15.6 million and 50 new jobs, respectively. Incentives awarded in Maine generated benefits that are ranked between the US and New England averages with an average capital investment of $20.2 million and 57 newly created jobs.

Headline Figures for the US, New England and Maine (2010-2015)

	U.S.	New England	Maine
No. of Awarded Incentives	13,383	928	28
Total Value of Awarded Incentives	$90.8 billion	$2.8 billion	$0.16 billion
Average Value of Awarded Incentive	$6.8 million	$3.1 million	$5.8 million
Total Capital Investment	$429.2 billion	$10.3 billion	$0.42 billion
Average Capital Volume per Awarded Incentive	$42.4 million	$15.6 million	$20.2 million
Total Job Creation	1,627,108	46,769	1,594
Average Job Creation per Awarded Incentive	122	50	57

Source: IncentivesMonitor.com database

On a national level, Kentucky has awarded nearly 1,000 incentives (or 7.4% of all US incentives) from 2010 to 2015. Kentucky ranks first across the US, closely followed by Ohio with 968 incentives (or 7.2%). Indiana (823 or 6.1%), New York (737 or 5.5%) and Michigan (688 or 5.1%) complement the top-5 of incentive awarding states. Despite its fifth rank in terms of absolute number of granted incentives, Michigan alone spent $14.6 billion on incentives, representing 16.0% of the total US budget spent on incentives. The state did not translate this budget into proportionate economic benefits as Michigan "only" attracted 4.2% of the total capital investment ($18.8 billion) and 6.1% (98,595) of the total newly created jobs. For instance, Ohio, which spent a considerably smaller amount of money on its incentives ($2.4 billion), generated over a 100,000 new jobs or 6.3% vis-à-vis just 2.7% of the total budget spent on incentives. This large value of incentives in Michigan can be attributed to large incentive deals closed between Michigan and some automotive manufacturers located in this state.

The bottommost states in this ranking have awarded fewer than ten incentive packages over the last five years and include Wyoming (nine incentives), North Dakota (seven incentives), Washington DC (two incentives) and Hawaii (only one incentive). The budget spent on incentives and benefits generated across these states are more or less in line with their national shares of number of awarded incentives (ranging between 0.05% and 0.2%).

Together with New Hampshire and Rhode Island, Maine is among the states that have awarded the least incentives. Their economic performance is very similar as their shares of capital investment and job creation exactly match the shares of number and value of awarded incentives, which all represent 0.1% to 0.2% of the national total. Exceptions are Arkansas, that attracted a disproportionate share of capital investment ($1.76 billion or 0.4%) and new jobs (6,097 or 0.4%) with an incentives budget of just $225.5 million (or 0.2%). Idaho and Washington allocated disproportionate large budgets for their incentives, with $2.07 billion (or 2.3%) and $8.77 billion (or 9.7%), respectively, while they only awarded 0.2% of the total number of awarded incentives. Washington awarded a $8.7 billion incentive package to Boeing

(generating 8,500 new jobs and a capital investment equaling $10.0 billion) while Idaho granted a $2.0 billion loan to a French natural resources company (generating a $3.3 billion capital investment, thereby creating 1,000 new jobs).

Absolute State Incentive Productivity (2010-2015)

Rank	State	No. of Awarded Incentives		Total Value of Awarded Incentives ($million)		Total Capital Investment ($million)		Total Job Creation	
		Abs.	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
1.	Kentucky	986	7.4%	$1,763.8	1.9%	$14,280.4	3.3%	66,272	4.1%
2.	Ohio	968	7.2%	$2,438.9	2.7%	$14,514.2	3.4%	102,901	6.3%
3.	Indiana	823	6.1%	$1,387.2	1.5%	$17,475.0	4.1%	92,371	5.7%
4.	New York	737	5.5%	$2,380.3	2.6%	$18,790.7	4.4%	71,526	4.4%
5.	Michigan	688	5.1%	$14,558.2	16.0 %	$18,110.6	4.2%	98,595	6.1%
42.	Arkansas	30	0.2%	$225.5	0.2%	$1,764.5	0.4%	6,097	0.4%
43.	Idaho	30	0.2%	$2,070.6	2.3%	$4,289.8	1.0%	3,678	0.2%
44.	**Maine**	**28**	**0.2%**	**$162.7**	**0.2%**	**$424.3**	**0.1%**	**1,594**	**0.1%**
45.	Washington	27	0.2%	$8,767.2	9.7%	$10,285.0	2.4%	10,390	0.6%
46.	Rhode Island	22	0.2%	$88.5	0.1%	$115.7	0.0%	2,077	0.1%
47.	New Hampshire	15	0.1%	$141.6	0.2%	$284.3	0.1%	255	0.0%
48.	Wyoming	9	0.1%	$36.9	0.0%	$252.1	0.1%	424	0.0%
49.	North Dakota	7	0.1%	$15.8	0.0%	$24.0	0.0%	721	0.0%
50.	Washington DC	2	0.0%	$38.6	0.0%	$41.25	0.0%	700	0.0%
51.	Hawaii	1	0.0%	$117.0	0.1%	$0.0	0.0%	200	0.0%

Source: IncentivesMonitor.com database

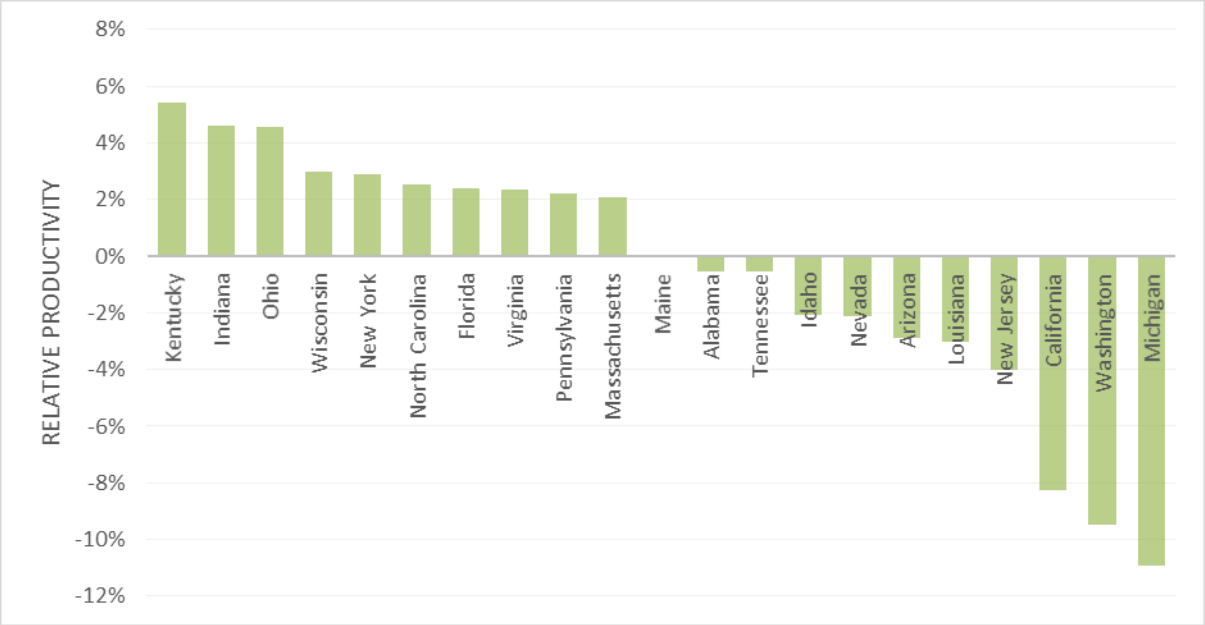
Expressing the total number of awarded incentives compared to the total value of awarded incentives reveals the states that spent disproportionately more or less on incentive packages. The differentials between these percentages are visualized in the figure below. Maine spent $162.7 million (0.2% of the total amount spent on incentives) on its 28 registered incentive awards (0.2% of the total number of incentives) and is therefore on par (i.e. a differential of 0%).

A number of states that ranked high regarding the absolute number of incentives they awarded also rank high in terms of their relative performance. Such states include Kentucky, Indiana, Ohio and New York. This indicates that even though these states have granted a huge quantity of incentives, they have not necessarily spent an equal amount of money on these incentives. Other East Coast states such as North Carolina, Florida, Virginia, Pennsylvania, Massachusetts as well as Wisconsin complement this top-10 ranking.

As already mentioned, Michigan, Washington and Idaho have spent disproportionately larger amounts on their incentives compared to their share of the total number of granted incentives. Not surprisingly, they feature among the bottommost rankings. California, New Jersey, Louisiana, Arizona, Nevada,

Tennessee and Alabama complete this lower edge of the ranking as they all represent significantly larger shares of the total budget that has been spent on incentives as compared to the total number of granted incentives.

Relative State Incentive Productivity – Number of Awarded Incentives against Value of Awarded Incentives (2010-2015)



Source: IncentivesMonitor.com database

Plotting the total job creation and attracted capital investment allows an evaluation of which state has performed best in terms generating economic benefits as a result of the awarded incentives. The figure below demonstrates that ideally, a state combining both a considerable number of newly created jobs as well as a large amount of capital investment would be located in the top-right corner.

What becomes clear is the fact that Louisiana is an absolute outlier regarding the capital investment the state has attracted as a result of its incentive practices. It has attracted over $92.0 billion of capital investment from 2010 to 2015 despite the fact it did not feature in the top-5 of states that awarded the largest number of incentives. Ohio, closely followed by Michigan, Indiana, California, Tennessee and North Carolina, seems to be the best performer in terms of generating new employment opportunities. It appears no state has actually a position in the top-right corner though this may be slightly skewed due to the strong performance of Louisiana. Leaving out Louisiana would show California, Michigan and Ohio to be most located in the top-right corner and thus most successfully performed regarding job creation and capital investment as a result of the provision of incentives.

On the other side, a considerable number of states – including Maine – are located in the bottom-left corner, indicating they have performed relatively weakly with regards to generating economic benefits by means of awarding incentives. The same is true for all other New England states except for Massachusetts, where companies that received incentives created just over 23,000 new jobs.

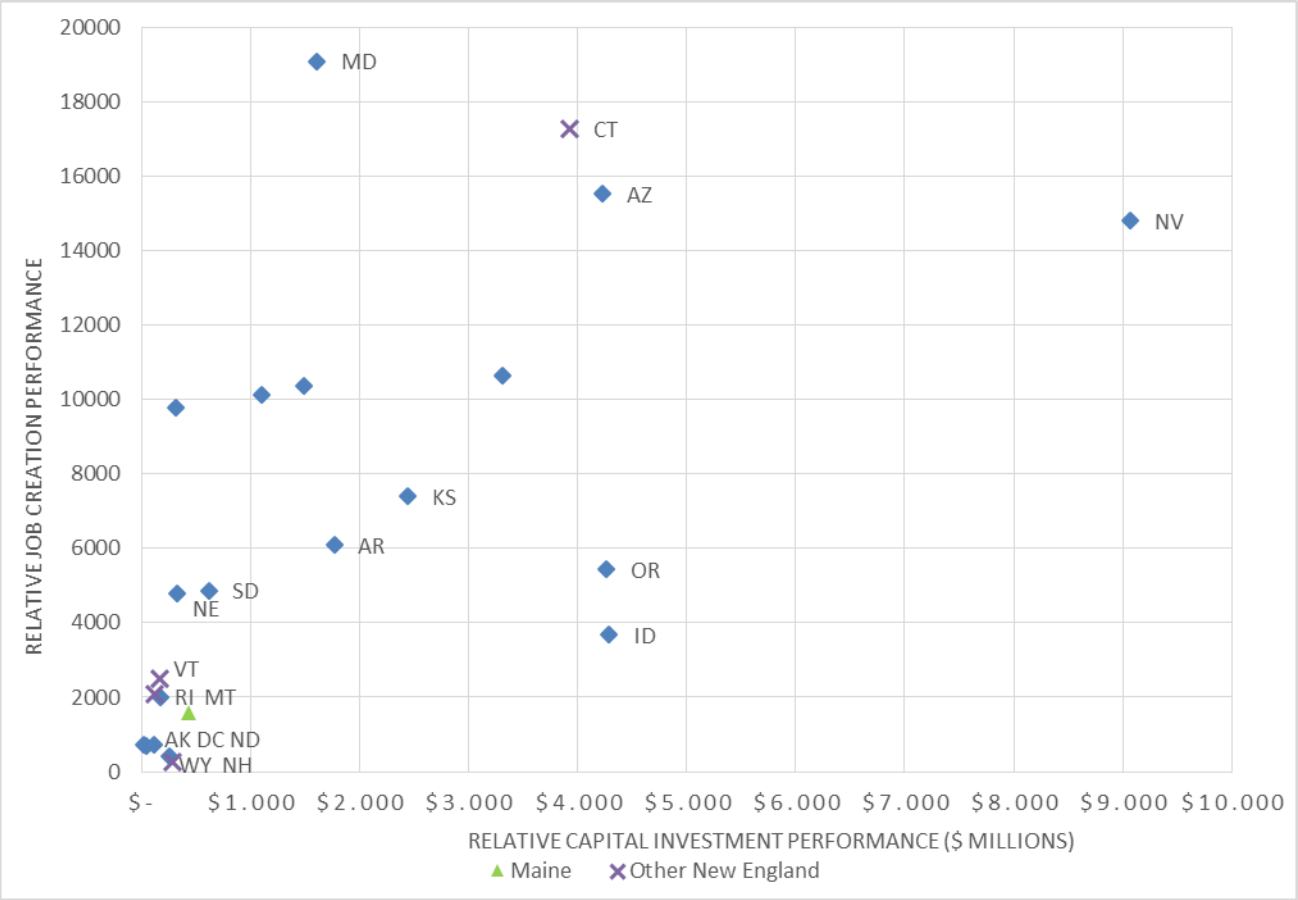
Relative Incentive Productivity – Capital Investment and Job Creation (2010-2015)

Source: IncentivesMonitor.com database

To take a closer look at the states that have performed relatively modest, the figure below has been confined to the section of states that attracted a maximum of 20,000 new jobs in combination with a maximum of $10.0 billion of capital investment.

Maine ranks among the states that have performed very modestly, both for attracting new capital as well as for new job opportunities. Together with its New England peers New Hampshire, Rhode Island and Vermont along with Alaska, Montana, North Dakota, Washington DC and Wyoming, Maine is located in the very bottom-left corner of the graph, indicating its moderate success. This should however be put into perspective as these states have generally spent a small budget on a limited number of incentives.

Relative Incentive Productivity – Capital Investment of max. $10 billion and Job Creation of max. 20,000 (2010-2015)



Source: IncentivesMonitor.com database

The following indicators can be calculated and analyzed to normalize for the budget spent on incentives:

- **Incentive per Job Created**, which is the result of dividing the total value of awarded incentives by the total number of newly created jobs per state. This indicator provides a value of what states have "paid" by incentives for one newly created job.
- **Return on Investment**, which is the result of dividing the total volume of capital investment by the total value of awarded incentives. This indicator provides a value of what the return on one dollar of incentive is. For instance, a Return of Investment of $3 means that every dollar a state spent on incentive generated a capital investment with a value multiplied by three.

Plotting these two indictors provides an overview of how states actually performed incentives-wise as these two indicators compensate for the size of the budget that has been spent on awarded incentives. In this graph, states would ideally be located in the bottom-right corner as this indicates a relatively low value of incentive per job but a high return on investment.

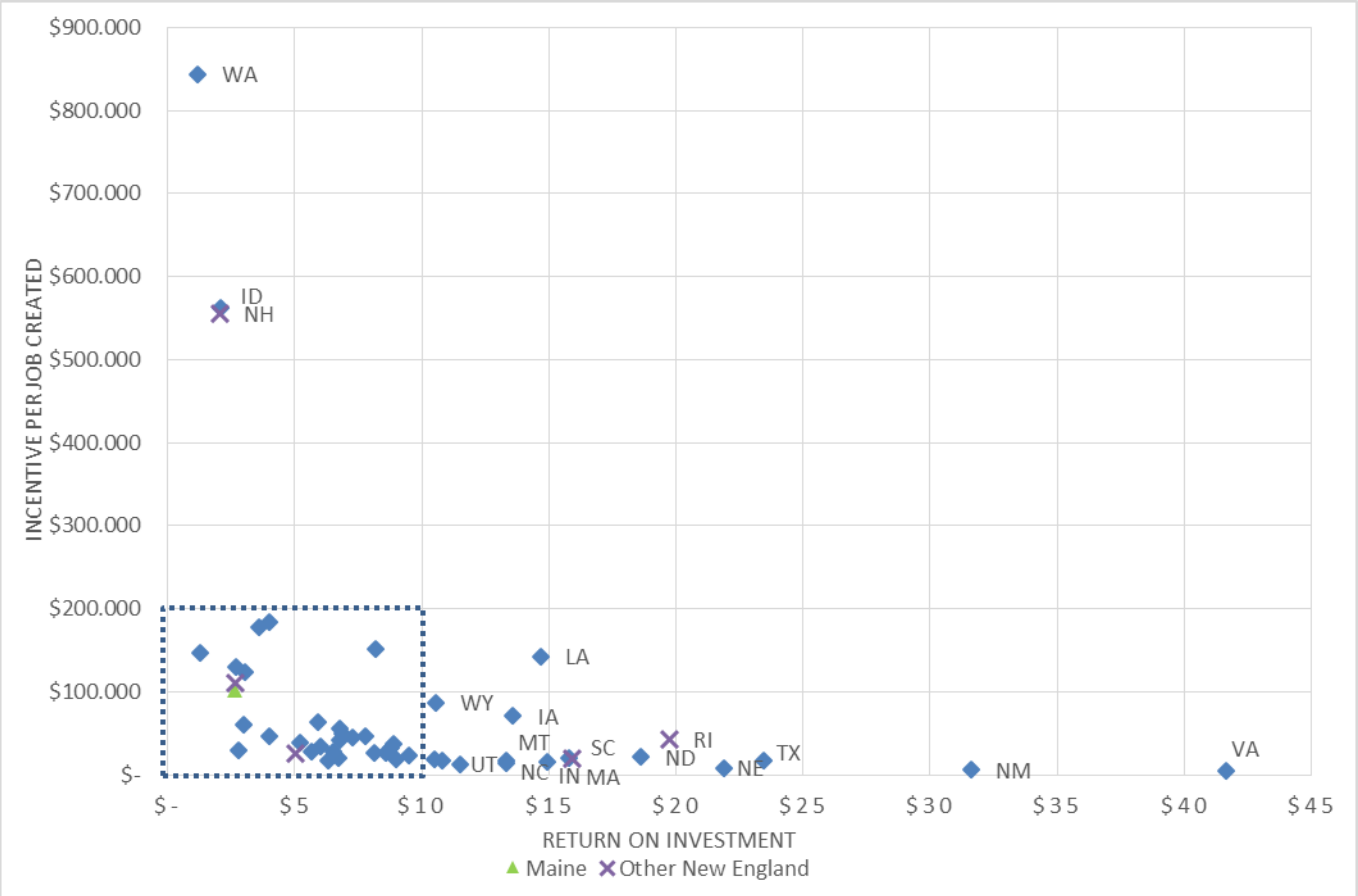
From this perspective, not Louisiana, Ohio or California performed best but Virginia. For every dollar Virginia spent on incentives, it attracted $45 of capital investment. In addition, Virginia spent just over

$5,000 per newly created job. Virginia is followed – on a distance – by New Mexico, Texas, and Nebraska. These states all combined relatively low values of incentives per job (below $20,000) with relatively high returns on their investment (above $20 per $1 of granted incentive).

On the other side of the spectrum, Washington spent over $840,000 per newly created job in combination with a return on investment just on par (i.e. $1 per $1 of granted incentive). This can again be related to the large incentive package the state awarded to Boeing. The same, though to a lesser extent, is true for Idaho, which also awarded a large incentive package to one particular beneficiary.

Notably is New Hampshire's modest performance, with a relatively high value per newly created job (over $555,000) while Rhode Island and Massachusetts have achieved relatively strong high returns on their incentive investment with relatively low incentive values per newly created job. Maine is located in a cluster in the bottom-left corner, indicating a relatively low incentive value per newly created job. However, due to the extreme values of Washington, Idaho and New Hampshire, this graph is slightly skewed.

Relative Incentive Productivity – Incentive per Job Created and Return on Investment (2010-2015)

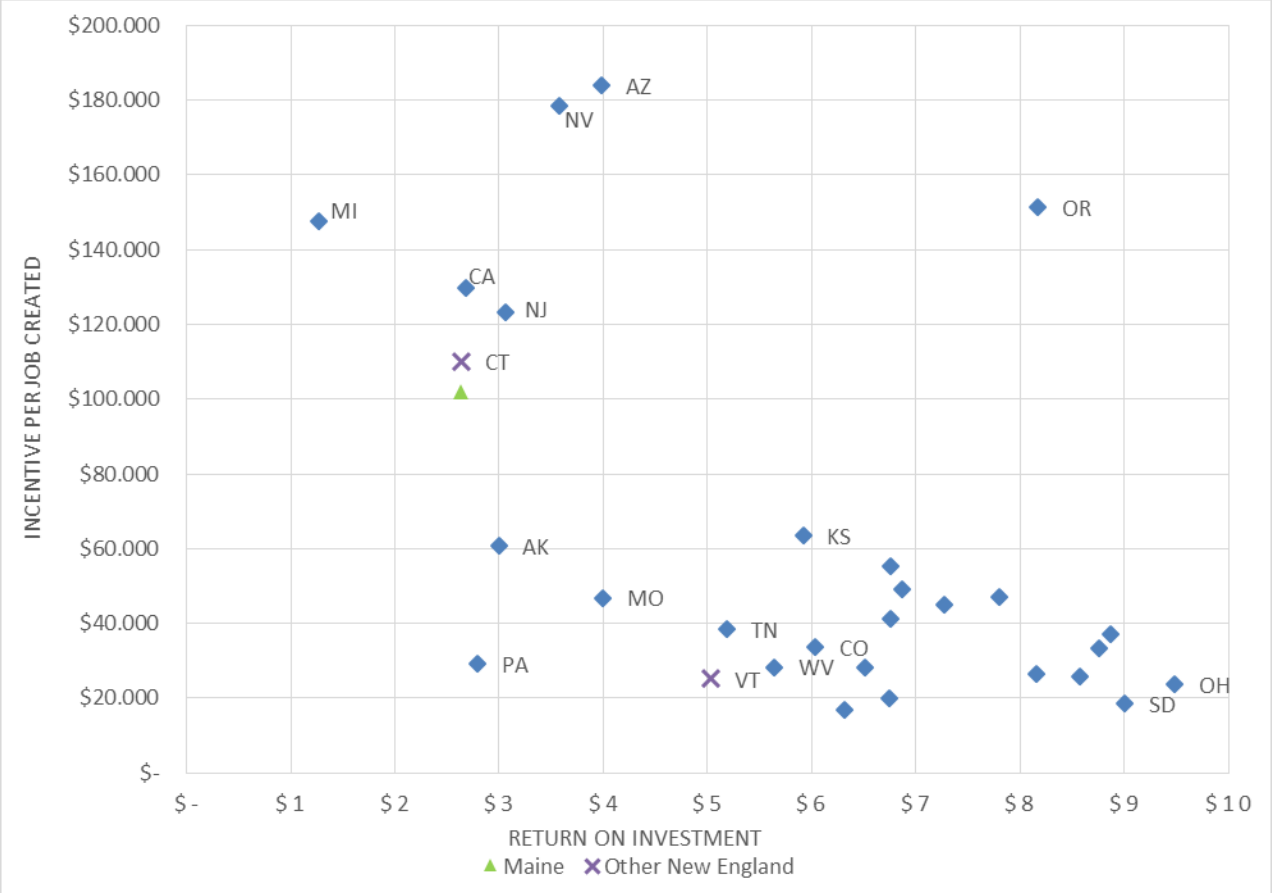


Source: IncentivesMonitor.com database

Therefore, the bracketed area of the chart with ranges from an incentive per job created of up to $200,000 combined with a maximum return on investment of $10 has been enlarged in the figure

below. This view frames Maine's performance into better perspective as it becomes clear that Maine has one of the lowest returns on investment ($2.6 for every $1 of awarded incentive) with a relatively high incentive value per newly created job ($102,108). To this extent, it performs very similar to Connecticut, California and New Jersey though these states have attracted considerable larger numbers of new jobs as well as amounts of capital investment.

Relative Incentive Productivity – Incentive per Job Created of max. $200,000 and Return on Investment of max. $10 (2010-2015)



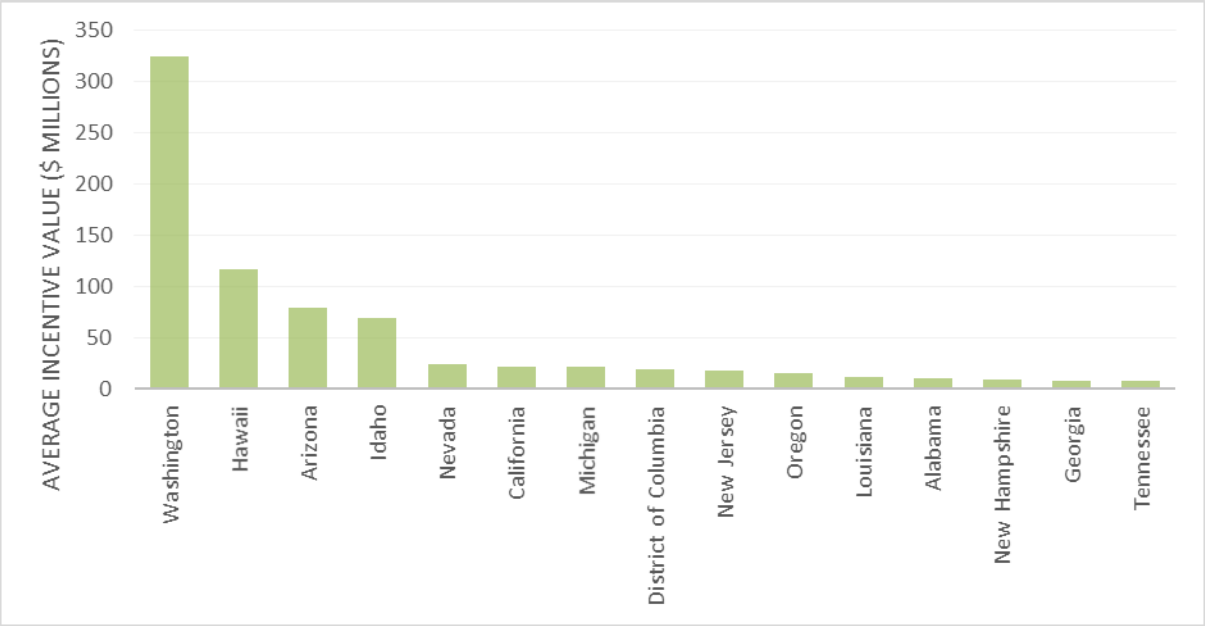
Source: IncentivesMonitor.com database

Finally, comparing the average values of awarded incentives helps further put incentive productivity into perspective. Across the US, the average awarded incentive per project equals $6.8 million. The figure below ranks the top-15 states with the highest average incentive value, while the following figure ranks the top-15 states with the lowest average incentive value. Not surprisingly, given their large incentive packages and relatively modest absolute number of awarded incentives, Washington (average $325.0 million) and Idaho (average $69.0 million) rank among the states that on average awarded the largest incentive packages. Other states that have awarded a limited number of incentives include Hawaii (average $117.0 million), Washington DC ($19.3 million) and New Hampshire ($9.4 million). Arizona, Nevada, California, Michigan, New Jersey, Oregon, Louisiana and Alabama are all states that granted a considerable number of incentives (at least 35) with an above-average incentive value of at least $10.0

million. After Alabama (average $10.6 million), the average incentive value more or less resembles the US national average of $6.8 million.

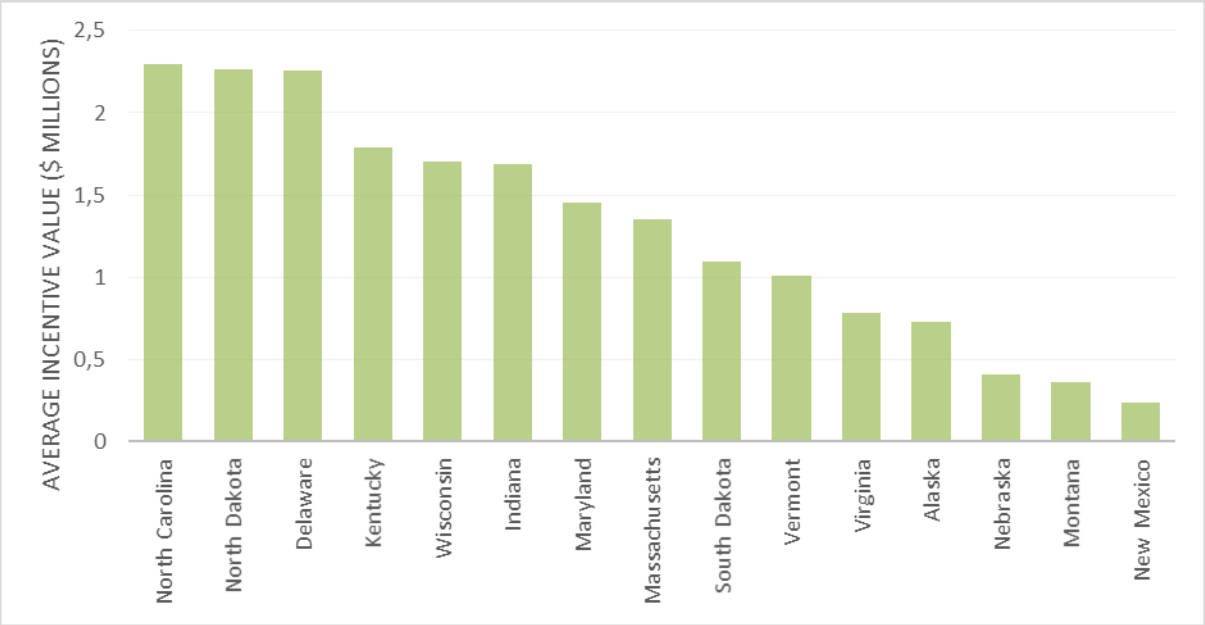
On the other hand, states that granted incentives with relatively low *values* also include a number of states that awarded a relatively large *number* of incentives. Examples include New Mexico (251 incentives with an average value of $235,000), Montana (99 incentives with an average value of $361,000), Nebraska (101 incentives with an average value of $408,000) and, particularly, Virginia, Massachusetts, Indiana, Wisconsin, Kentucky and North Carolina, which each awarded at least 350 incentives with an average value ranging just between $750,000 and $2.3 million, which is considerably below the US average of $6.8 million.

Average Incentive Productivity – Incentive Value Top-15 (2010-2015)



Source: IncentivesMonitor.com database

Average Incentive Productivity – Incentive Value Bottom-15 (2010-2015)



Source: IncentivesMonitor.com database

Maine is ranked 21st out of the 50 states and Washington DC, with an average incentive value of $5.8 million. The table indicates Missouri, Mississippi, South Carolina and Utah awarded incentives with an average value similar to Maine's average incentive value of $5.8 million.

Selected Average State Incentive Productivity – Incentive Value (2010-2015)

	Average Value per Awarded Incentive
Tennessee	$8.0 million
Kansas	$8.0 million
Colorado	$7.5 million
Arkansas	$7.5 million
US Average	$6.8 million
Missouri	$5.9 million
Maine	$5.8 million
Mississippi	$5.2 million
South Carolina	$5.1 million
Utah	$4.9 million
Oklahoma	$4.6 million
Illinois	$4.6 million
Texas	$4.4 million
Connecticut	$4.2 million
Wyoming	$4.1 million
Rhode Island	$4.0 million

Source: IncentivesMonitor.com database

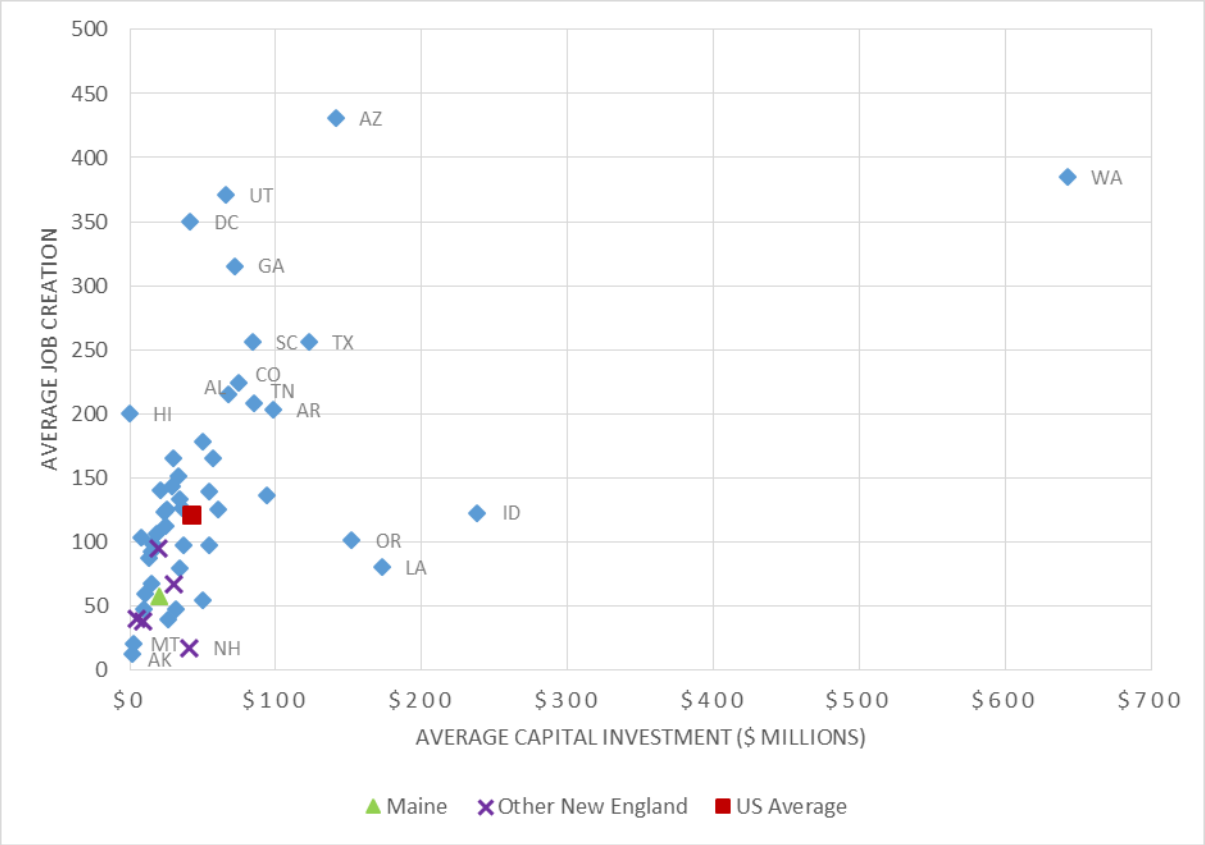
In addition to comparing the average incentive values, it is worthwhile to examine the average economic benefits that have been created per awarded incentive. An average incentive granted to a beneficiary

across the US resulted in a capital investment of $42.5 million and 122 new jobs. Again, states would typically be located in the top-right corner when their incentives result in favorable economic benefits (i.e. high average capital investment and large average job creation).

Washington, which its substantial incentive package awarded to Boeing, comes close, with an average capital investment of $643.0 million and 385 new jobs. The same, though to a much lesser extent, applies to Idaho, with averages of $238.3 million of capital investment and 127 new jobs, while incentives awarded in Louisiana and Oregon seem to be relatively capital-intensive (average of $172.6 million and $152.2 million, respectively).

Arizona, with over 430 new jobs, ranks number one in terms of average number of new jobs per granted incentive, followed by Utah (371 new jobs), Washington DC (350 new jobs), Georgia (315 new jobs), Texas and South Carolina (both 256 new jobs). All New England states, including Maine, score below US average of $42.5 million worth of capital investment and 122 new jobs.

Average Incentive Productivity - Capital Investment and Job Creation (2010-2015)



Source: IncentivesMonitor.com database

Maine's average capital investment and job creation per awarded incentive were $20.2 million and 57, respectively. What stands out is that Massachusetts outperforms Maine with an average capital investment of $30.5 million accompanied by 67 new jobs per granted incentive while Maine, in turn, outperforms Connecticut and Vermont. Incentives awarded across New Mexico and Kentucky

generated the average economic benefits most similar to Maine's average capital investment and job creation per awarded incentive. However, these average economic benefits are below the US average of $42.5 million of capital investment and 122 new jobs per awarded incentive.

Selected Average State Incentive Productivity - Capital Investment and Job Creation (2010-2015)

	Average Capital Investment per Awarded Incentive	Average Job Creation per Awarded Incentive
Iowa	$50.1 million	54
US Average	*$42.5 million*	*122*
Minnesota	$34.5 million	79
Wyoming	$31.5 million	47
Massachusetts	$30.5 million	67
New Mexico	$26.1 million	39
Maine	**$20.2 million**	**57**
Kentucky	$15.0 million	67
Maryland	$13.2 million	87
South Dakota	$10.0 million	59
Nebraska	$9.7 million	47
Connecticut	$9.5 million	38
Vermont	$5.1 million	40

Source: IncentivesMonitor.com database

The incentive productivity of the New England states is summarized in the table below. In total, the five states have awarded 928 incentives that collectively represent a value of $2.83 billion. These incentives contributed to the New England economy by attracting investment worth $10.25 billion and nearly 47,000 new jobs.

Despite Massachusetts' economic dominance, Connecticut represents the largest share of number and value of awarded incentives, 49.0% and 67.3%, respectively. The state granted 455 incentives worth $1.9 billion while Massachusetts awarded hundred incentives fewer (346 or 37.3%), just worth a quarter of the total value of Connecticut's incentives ($468.4 million or 16.6%).

It appears however that incentives awarded in Massachusetts have been far more effective than incentives granted in Connecticut. Comparing the economic benefits reveals that Massachusetts incentives generated $5.33 billion worth of capital investment (52.0%) against $3.93 in Connecticut (38.3%) while Massachusetts incentive beneficiaries created 23,092 new jobs (49.4%) against 17,260 new jobs (36.9%) created by Connecticut recipients.

Maine's incentive productivity can be grouped together with that of New Hampshire, Rhode Island and Vermont (thought Vermont awarded as many incentives as Maine, New Hampshire and Rhode Island together). Maine outperforms the other three states in terms of total volume of capital investment (4.1% against 2.8%, 1.1% and 1.7%) though Maine only created relatively more new jobs than New Hampshire (3.4% against 0.5%). It should be noted Maine spent more money on incentives than the other states (5.8% against 5.0%, 3.1% and 2.2%).

New England Incentive Productivity (2007-2015)

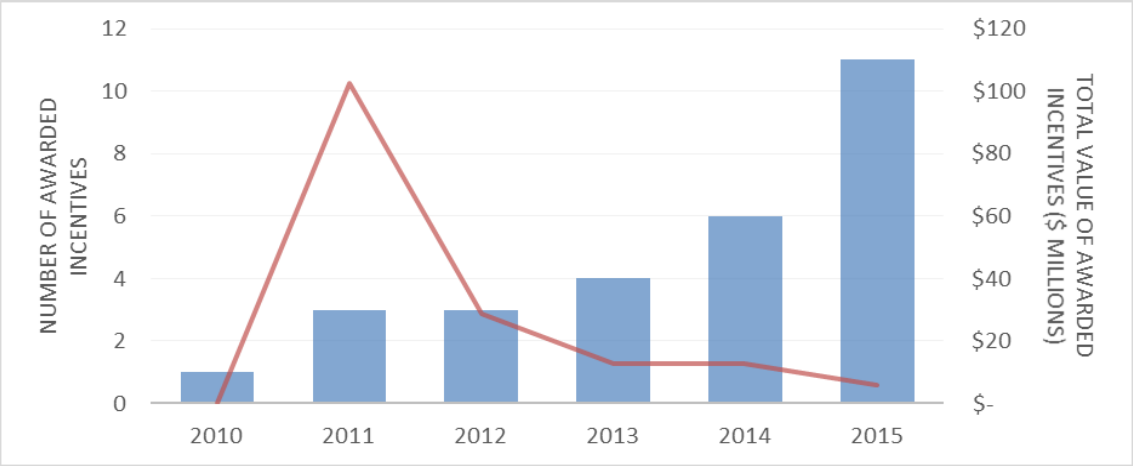
State	Gross State Product		No. of Awarded Incentives		Total Value of Awarded Incentives		Total Capital Investment		Total Job Creation	
	Abs.	Rel.	Abs	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
CT	$239.9 bln.	26.3%	455	49.0%	$1,903.0 mln.	67.3%	$3,924.6 mln.	38.3%	17,269	36.9%
ME	**$55.8 bln.**	**6.1%**	**28**	**3.0%**	**$162.8 mln.**	**5.8%**	**$424.3 mln.**	**4.1%**	**1,594**	**3.4%**
MA	$459.9 bln.	50.4%	346	37.3%	$468.4 mln.	16.6%	$5,331.2 mln.	52.0%	23,092	49.4%
NH	$71.6 bln.	7.9%	15	1.6%	$141.6 mln.	5.0%	$284.3 mln.	2.8%	255	0.5%
RI	$55.0 bln.	6.0%	22	2.4%	$88.5 mln.	3.1%	$115.7 mln.	1.1%	2,077	4.4%
VT	$29.6 bln.	3.2%	62	6.7%	$62.4 mln.	2.2%	$169.1 mln.	1.7%	2,482	5.3%
New England	*$911.8 bln.*	*100.0%*	*928*	*100.0%*	*$2,826.6 mln.*	*100.0%*	*$10.25 bln.*	*100.0%*	*46,769*	*100.0%*

Gross State Product in 2014; derived from Bureau of Economic Analysis

Source: IncentivesMonitor.com database

The vast majority of the 28 incentives that have been captured for Maine have been awarded in 2015 as the database registered 11 incentives in Maine against only one in 2010, as depicted in the figure below. The number of incentives has gradually increased from 2010 to 2015. The trend for the total value of the 28 awarded incentives shows a different pattern with a peak in 2011 ($102.6 million) and a gradual decline of the total value of awarded incentives towards 2015 ($5.8 million). This implies the average value of an incentive awarded in Maine has decreased over the last five years. The reason for the peak in 2011 is a $102.0 million incentive package granted to an investment in the renewable energy sector.

Maine Incentive Productivity Trends – Number and Total Value of Awarded Incentives (2010-2015)

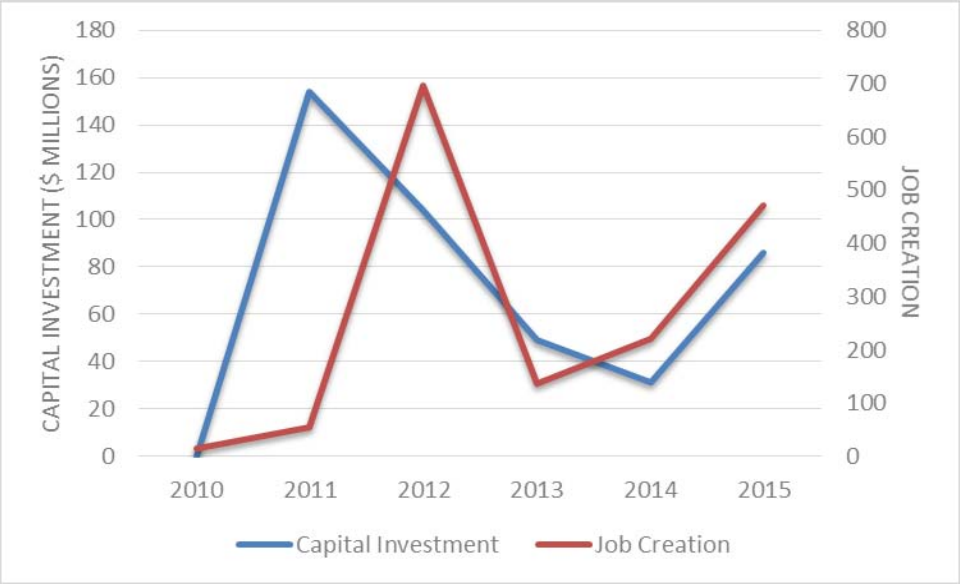


Source: IncentivesMonitor.com database

The investment in the renewable energy sector is also noticeable in the figure below, which plots both the total capital investment and total job creation for Maine as a result of the 28 granted incentives. The similarity between the trends in capital investment on the one hand and job creation on the other hand is striking. Coming from low values in 2010, 2011 has proven to be a favorable year in terms of capital investment (partly due to the large renewable energy investment) while 2012 has peaked in

terms of number of newly created jobs (due to an investment in the aerospace industry creating 600 new jobs). From 2013 onwards, both indicators run parallel with a gradual increasing trend in 2015.

Maine Incentive Productivity Trends – Capital Investment and Job Creation (2010-2015)



Source: IncentivesMonitor.com database

The table below provides an overview of which industries Maine has awarded incentives to. The food and drink industry has been a priority target with eight incentives (or 28.6%) out of the 28, equaling a total value of $2.2 million (or 1.4%). This industry is followed by the aerospace, defense and marine industry with five incentives (or 17.9%), equaling a total value of $33.7 million (or 20.7%), and life sciences, equaling a total value of $4.8 million (or 3.0%). The five incentives granted to aerospace, defense and marine industry beneficiaries have translated this into disproportionately large economic benefits, representing 32.3% of the total capital investment ($137.1 million) and 49.6% of the total newly created jobs (790 new jobs). The five incentives awarded to companies in the life sciences have created a disproportionate number of new jobs (450 or 28.2%). The investment project in the renewable energy sector is clearly visible, which accounts for over 40% of the total capital investment and 70% of the total value of awarded incentives.

Maine Incentive Productivity Trends – Industry (2010-2015)

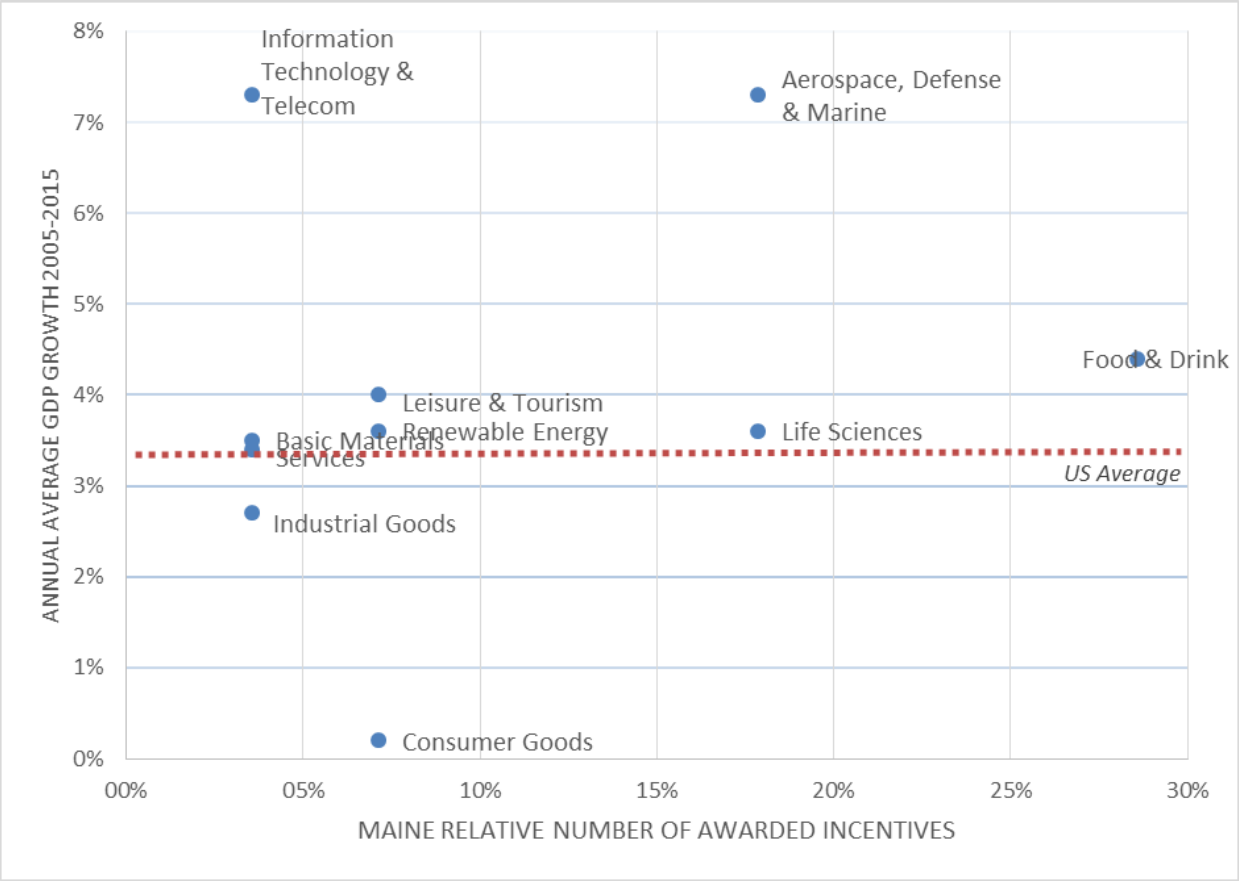
Industry	No. of Awarded Incentives		Total Value of Awarded Incentives		Total Capital Investment		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Food & Drink	8	28.6%	$2.2 mln.	1.4%	$5.0 mln.	1.2%	96	6.0%
Aerospace, Defense & Marine	5	17.9%	$33.7 mln.	20.7%	$137.1 mln.	32.3%	790	49.6%
Life Sciences	5	17.9%	$4.8 mln.	3.0%	$85.0 mln.	20.0%	450	28.2%
Renewable Energy	2	7.1%	$114.0 mln.	70.0%	$183.3 mln.	43.2%	208	13.0%
Leisure & Tourism	2	7.1%	$7.2 mln.	4.4%	$12.3 mln.	2.9%	22	1.4%
Consumer Goods	2	7.1%	$0.2 mln.	0.1%	$0.2 mln.	0.0%	8	0.5%
Basic Materials	1	3.6%	$0.2 mln.	0.1%	$0.8 mln.	0.2%	8	0.5%
Industrial Goods	1	3.6%	$0.1 mln.	0.1%	$0.2 mln.	0.1%	4	0.3%
Information Technology & Telecom	1	3.6%	$0.2 mln.	0.1%	$0.5 mln.	0.1%	5	0.3%
Services	1	3.6%	$0.1 mln.	0.1%	$0.0 mln.	0.0%	3	0.2%
Total	**28**	**100.0%**	**$162.8 mln.**	**100.0%**	**$424.3 mln.**	**100.0%**	**1,594**	**100.0%**

Source: IncentivesMonitor.com database

Comparing the strongest growing US industries with the allocation of Maine incentives enables to indicate potential opportunities for awarding incentives and targeting. The figure below plots the annual average GDP growth of a number of industries in the US against the number of incentives that have been awarded. Maine has awarded most of its incentives to the food and drink industry. This industry has experience an annual GDP growth of 4.4%, which is above the US average of 3.4%.

However, industries that have grown at a much faster pace but to which Maine has awarded a limited number of incentives include aerospace, defense and marine (7.3% annual growth; 17.9% of total number of awarded incentives) and, in particular, information, technology and telecom (7.3% annual growth; 3.5% of total number of awarded incentives). The focus on awarding incentives to companies in industries with a modest growth rate (e.g. industrial goods and consumer goods) seems to be limited in Maine.

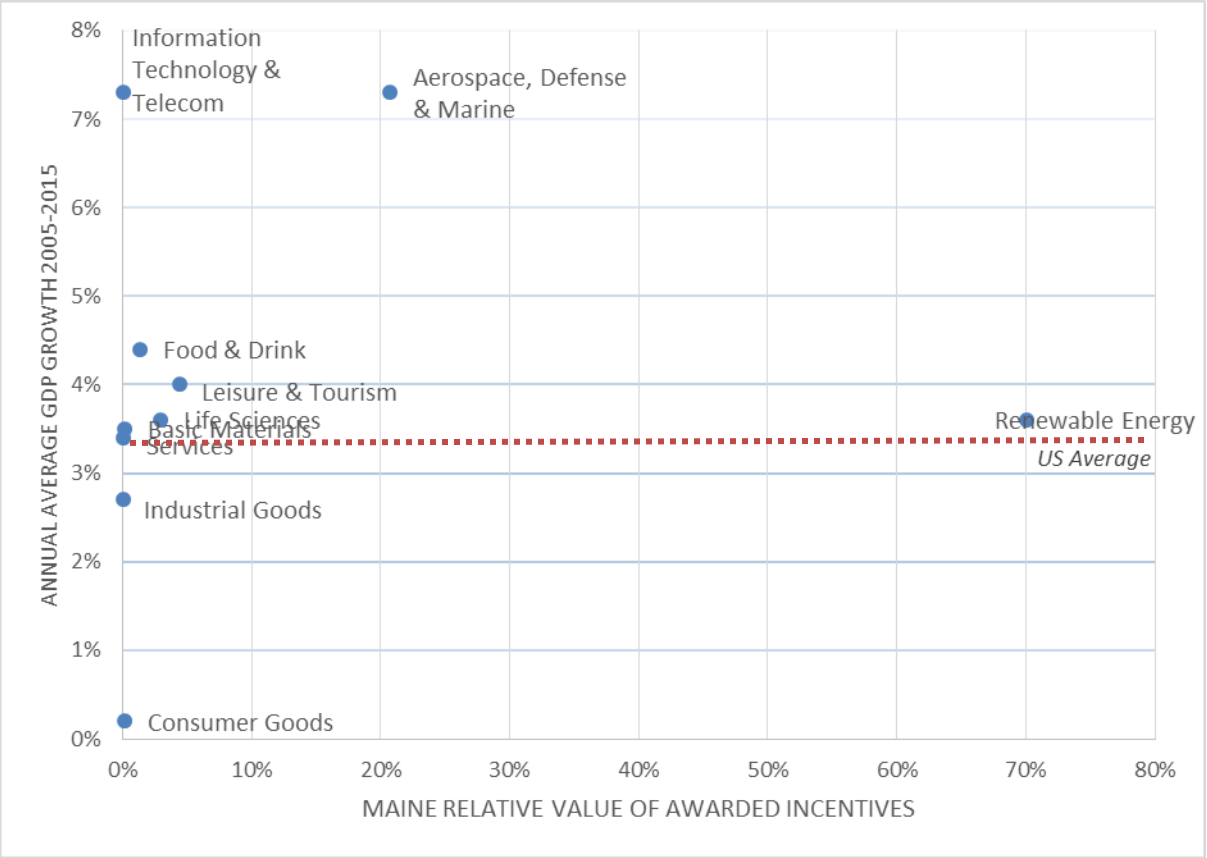
Maine Incentive Productivity Trends – Relative Number of Awarded Incentives (2010-2015) and US Average Annual GDP Growth per Industry (2005-2015)



Source: IncentivesMonitor.com database and authors' calculations based on data derived from Bureau of Economic Analysis

The figure below shows the annual average GDP growth per industry vis-à-vis the actual value of the awarded incentives. Clearly, 70% of the total value of incentives in Maine has been allocated to the renewable energy industry despite the fact that this industry is growing slightly above US average of 3.4%. The aerospace, defense and marine industry rank second with just over 20% of the total budget spent on incentives allocated for recipients in this industry. Again, the information, technology and telecom industry, with an annual average GDP growth rate of 7.3%, offers considerable opportunities for a larger incentives budget since only 0.1% of the total value of incentives in Maine has been allocated to beneficiaries in this industry.

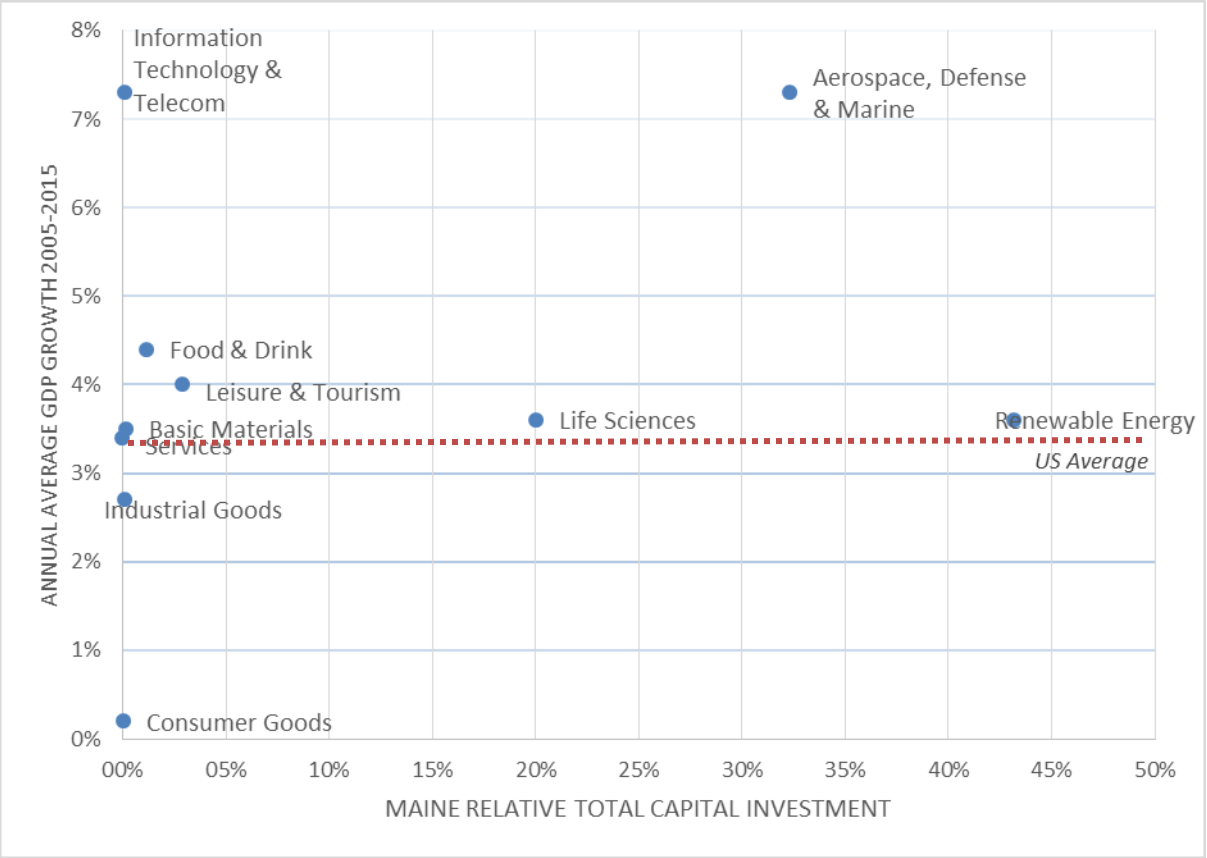
Maine Incentive Productivity Trends – Relative Value of Awarded Incentives (2010-2015) and US Average Annual GDP Growth per Industry (2005-2015)



Source: IncentivesMonitor.com database and authors' calculations based on data derived from Bureau of Economic Analysis

Comparing the shares of the total generated capital investment (as a result of the awarded incentives with the average annual GDP growth per industry) reveals which industry has (more) potential to attract capital investment from by means of incentives. The figure below points to the fact that incentive beneficiaries within the renewable energy industry and the life sciences accounted for 43.2% and 20.0% of the total attracted capital investment while these industries have experienced slightly above-average growth rates (i.e. 3.4%). Faster growing sectors such as the information, technology and telecom industry and, to a lesser extent, aerospace, defense and marine industry (from which the state has already realized 32% of total US capital investment), food and drink industry and leisure and tourism industry (despite lower annual average GDP growth rates), may prove to be target as the potential of these growing industries with regards to attracting capital have not been fully realized.

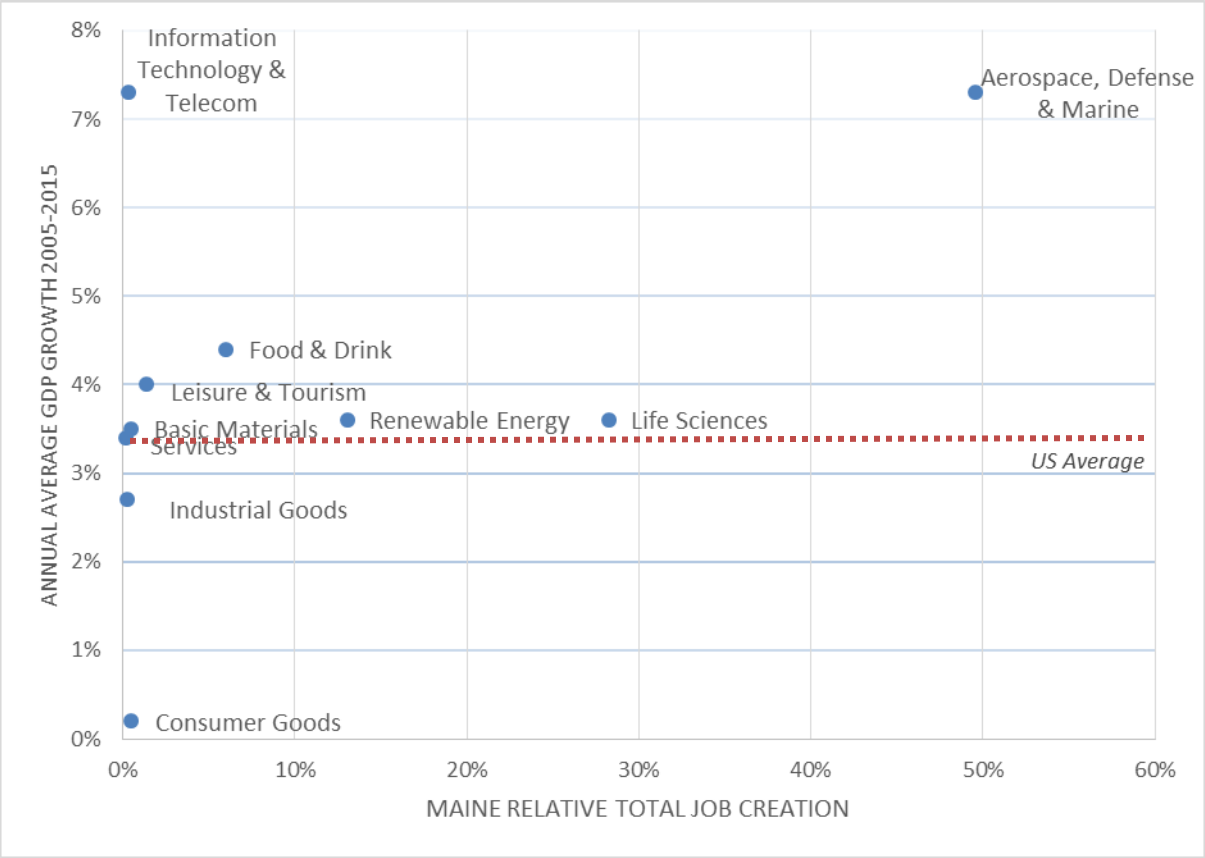
Maine Incentive Productivity Trends – Relative Total Capital Investment (2007-2015) and US Average Annual GDP Growth per Industry (2005-2015)



Source: IncentivesMonitor.com database and authors' calculations based on data derived from Bureau of Economic Analysis

The figure below underlines the relatively weak targeting of the information, technology and telecom industry of Maine's incentive programs. The incentives in Maine that have been awarded to beneficiaries in this industry have only accounted for 0.3% of the total job creation as a result of the provision of incentives while this industry is one of the fastest growing industries. It seems Maine's incentives have realized their job creation potential with regards to the aerospace, defense and marine industry as this industry – next to the information, technology and telecom industry – is the fastest growing industry. Here, companies in the aerospace, defense and marine industry that received incentives in Maine accounted for nearly half of the total job creation of all Maine incentive recipients.

Maine Incentive Productivity Trends – Relative Total Job Creation (2007-2015) and US Average Annual GDP Growth per Industry (2005-2015)



Source: IncentivesMonitor.com database and authors' calculations based on data derived from Bureau of Economic Analysis

With regards to the business activities Maine's incentives have targeted, it is clear the manufacturing sector represents the strongest targeted business activity with 16 incentives (57.1%), representing $34.4 million (or 21.1%). This sector is however not the largest in terms of value that has been allocated to incentives as the electricity and extraction sector (i.e. the renewable energy investment) represents the largest share of the budget ($114.0 million or 70.0%).

Business activities that have generated disproportionate economic benefits include the manufacturing sector ($111.9 million of capital investment or 26.4% and 878 new jobs or 55.1% against 21.1% of the total budget spent on incentives), construction and infrastructure ($44.3 million of capital investment or 10.4% against 6.6% of the total budget spent on incentives) and, particularly, headquarters ($79.0 million of capital investment or 18.6% and 390 new jobs or 24.5% against 1.4% of the total budget spent on incentives).

Maine State Incentive Productivity Trends – Business Activity (2010-2015)

Business Activity	No. of Awarded Incentives		Total Value of Awarded Incentives		Total Capital Investment		Total Job Creation	
	Abs	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Manufacturing	16	57.1%	$34.4 mln.	21.1%	$111.9 mln.	26.4%	878	55.1%
Construction & Infrastructure	3	10.7%	$10.8 mln.	6.6%	$44.3 mln.	10.4%	20	1.3%
Business Services	3	10.7%	$0.6 mln.	0.3%	$0.5 mln.	0.1%	24	1.5%
Electricity & Extraction	2	7.1%	$114.0 mln.	70.0%	$183.3 mln.	43.2%	208	13.0%
Headquarters	2	7.1%	$2.3 mln.	1.4%	$79.0 mln.	18.6%	390	24.5%
Research, Design & Development	1	3.6%	$0.6 mln.	0.4%	$5.0 mln.	1.2%	70	4.4%
Warehousing & Distribution	1	3.6%	$0.1 mln.	0.1%	$0.3 mln.	0.1%	4	0.3%
Total	28	100.0%	$162.8 mln.	100.0%	$424.3 mln.	100.0%	1,594	100.0%

Source: IncentivesMonitor.com database

The vast majority of incentives have been awarded to domestic investors. Apart from one Canadian recipient, the table below confirms Maine's overreliance upon targeting inter-state investment.

Maine Incentive Productivity Trends –Source Country (2010-2015)

Source Country	No. of Awarded Incentives		Total Value of Awarded Incentives		Total Capital Investment		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Canada	1	3.6%	$1.4 mln.	0.9%	$0.1 mln.	0.0%	50	3.1%
USA	27	96.4%	$161.4 mln.	99.1%	$424.2 mln.	100.0%	1,544	96.9%
Total	28	100.0%	$162.8 mln.	100.0%	$424.3 mln.	100.0%	1,594	100.0%

Source: IncentivesMonitor.com database

The table below provides the geographical distribution of the 28 incentives that have been awarded across Maine. Apart from Brunswick, Gardiner, Madawaska and Presque Isle, no other community awarded more than one incentive. Clearly, the largest incentive package ($102.0 million or 62.7%) has been awarded in Roxbury, generating $153.0 million (or 36.1%) of capital investment but only eight new jobs. This can be attributed to the capital-intensive nature of the investment project, which is in the renewable energy industry. Other communities in which incentive packages exceeding $1 million have been awarded include Brunswick ($28.1 million or 17.3%), Presque Isle ($2.2 million or 1.4%), Bath ($3.7 million or 2.3%), Eastport ($1.4 million or 0.9%) and Lewiston ($7.0 million or 4.3%). Largest economic benefits have been realized in Brunswick ($101.4 million of capital investment and 615 new jobs), Bangor (70 new jobs), Bath ($32.0 million of capital investment), East Boothbay (70 new jobs) and Lewiston ($12.3 million of capital investment).

Maine Incentive Productivity Trends – Destination City (2010-2015)

Source Country	No. of Awarded Incentives		Total Value of Awarded Incentives		Total Capital Investment		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Brunswick	2	7.1%	$28.1 mln.	17.3%	$101.4 mln.	23.9%	615	38.6%
Gardiner	2	7.1%	$0.8 mln.	0.5%	$2.2 mln.	0.5%	28	1.8%
Madawaska	2	7.1%	$0.3 mln.	0.2%	$0.0 mln.	0.0%	10	0.6%
Presque Isle	2	7.1%	$2.2 mln.	1.4%	$6.0 mln.	1.4%	46	2.9%
Alexander	1	3.6%	$0.1 mln.	0.1%	$0.0 mln.	0.0%	7	0.4%
Bangor	1	3.6%	$0.6 mln.	0.4%	$5.0 mln.	1.2%	70	4.4%
Bath	1	3.6%	$3.7 mln.	2.3%	$32.0 mln.	7.5%	0	0.0%
Caribou	1	3.6%	$0.2 mln.	0.1%	$0.5 mln.	0.1%	5	0.3%
Cumberland	1	3.6%	$0.5 mln.	0.3%	$4.0 mln.	0.9%	25	1.6%
East Boothbay	1	3.6%	$0.3 mln.	0.2%	$0.0 mln.	0.0%	70	4.4%
Eastport	1	3.6%	$1.4 mln.	0.9%	$0.1 mln.	0.0%	50	3.1%
Fort Kent	1	3.6%	$0.1 mln.	0.1%	$0.2 mln.	0.0%	4	0.3%
Frenchville	1	3.6%	$0.1 mln.	0.1%	$0.3 mln.	0.1%	4	0.3%
Lewiston	1	3.6%	$7.0 mln.	4.3%	$12.3 mln.	2.9%	17	1.1%
New Canada	1	3.6%	$0.1 mln.	0.1%	$0.0 mln.	0.0%	3	0.2%
Portland	1	3.6%	$0.3 mln.	0.2%	$0.0 mln.	0.0%	14	0.9%
Rockport	1	3.6%	$0.3 mln.	0.2%	$0.0 mln.	0.0%	0	0.0%
Roxbury	1	3.6%	$102.0 mln.	62.7%	$153.0 mln.	36.1%	8	0.5%
Sanford	1	3.6%	$0.2 mln.	0.1%	$0.8 mln.	0.2%	8	0.5%
Shirley	1	3.6%	$0.1 mln.	0.0%	$0.2 mln.	0.0%	3	0.2%
St Agatha	1	3.6%	$0.1 mln.	0.0%	$0.1 mln.	0.0%	2	0.1%
Van Buren	1	3.6%	$0.5 mln.	0.3%	$1.0 mln.	0.2%	40	2.5%
Not Specified	2	7.1%	$13.8 mln.	8.5%	$105.3 mln.	24.8%	565	35.4%
Total	**28**	**100.0%**	**$162.8 mln.**	**100.0%**	**$424.3 mln.**	**100.0%**	**1,594**	**100.0%**

Source: IncentivesMonitor.com database

Finally, the table below reveals the largest incentive recipients within the state of Maine. Record Hill Wind is a company which invested in a renewable energy project worth $153.0 million and which has been granted an incentive package of $102.0 million (62.7%) consisting of a loan and a tax credit. Kestral Aircraft Company invested in an aerospace project, which was originally projected to create 600 new jobs (or 37.6%). The company received $27.8 million worth of incentives (17.0%). Another energy investment made by Athens Energy has been awarded an incentive of $12.0 million (7.4%), which created an additional 200 jobs (12.5%). Other capital-intensive investors include Bath Iron Works ($32.0 million or 7.5%) and Jackson Laboratory ($75.0 million or 17.7%) while the latter also contributed significantly to employment creation in Maine (365 new jobs or 22.9%). These companies have received incentives equaling $3.7 million and $1.8 million, respectively.

Maine Incentive Productivity Trends – Top-10 Incentive Recipients and Investors (2010-2015)

Investor	No. of Awarded Incentives		Total Value of Awarded Incentives		Total Capital Investment		Total Job Creation	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Record Hill Wind	1	3.6%	$102.0 mln.	62.7%	$153.0 mln.	36.1%	8	0.5%
Kestrel Aircraft Company	1	3.6%	$27.8 mln.	17.0%	$100.0 mln.	23.6%	600	37.6%
Athens Energy	1	3.6%	$12.0 mln.	7.4%	$30.3 mln.	7.1%	200	12.5%
Lincoln Street Hoteliers	1	3.6%	$7.0 mln.	4.3%	$12.3 mln.	2.9%	17	1.1%
Bath Iron Works	1	3.6%	$3.7 mln.	2.3%	$32.0 mln.	7.5%	0	0.0%
The Jackson Laboratory	1	3.6%	$1.8 mln.	1.1%	$75.0 mln.	17.7%	365	22.9%
C&L Aerospace	1	3.6%	$0.6 mln.	0.4%	$5.0 mln.	1.2%	70	4.4%
Hodgdon Shipbuilding	1	3.6%	$0.3 mln.	0.2%	$0.0 mln.	0.0%	70	4.4%
Acme-Monaco	1	3.6%	$1.6 mln.	1.0%	$3.0 mln.	0.7%	23	1.4%
Millennium Marine	1	3.6%	$1.4 mln.	0.9%	$0.1 mln.	0.0%	50	3.1%
Others	18	64.3%	$4.7 mln.	2.9%	$13.7 mln.	3.2%	191	12.0%
Total	28	100.0%	$162.8 mln.	100.0%	$424.3 mln.	100.0%	1,594	100.0%

Source: IncentivesMonitor.com database

Appendix L – Benchmark 4 - Transparency in Incentives

As has already become evident from the Incentive Productivity Benchmark, great variety exists among US states regarding the public provision of information on awarded incentives. States differ with respect to the degree of information they disclose on granted incentives, beneficiaries, amounts and the contribution of incentive programs to economic development while other states disclose partial or no information at all. In order to shine more light on the transparency of incentive programs across US states, ICA developed the Incentive Transparency Index in 2013.

The objective of the Incentive Transparency Index is twofold. On the one hand, it functions as an instrument for incentive professionals, authorities and policy-makers across the US to better evaluate the costs and benefits of their incentive programs and benchmark the performance of their incentive regimes against peer states.

On the other hand, the Incentive Transparency Index has the power to inform potential investors about potential incentive opportunities in their sector and business activity for a specific state or part of the US.

As such, the Incentive Transparency Index itself contributes to more transparency on US incentive practices. Full disclosure of incentive information among all US states could also mitigate or reduce the process of a "race to the bottom", in which different jurisdictions fiercely compete with each other on the amount of incentives rather than the quality of their incentive package and potential economic multiplier effects for their communities.

Methodology

To produce the Incentive Transparency Index, the IncentivesMonitor.com data, which has also been used for the Incentive Productivity Benchmark, has been analyzed. The process to construct the Incentive Transparency Index consists of four steps:

- Step 1 – Calculate values for each indicator;
- Step 2 – Convert each indicator value into state rankings;
- Step 3 – Calculate total scores; and
- Step 4 – Producing final Index.

Calculate values for each indicator

For each state, the values for three indicators have been collected and calculated. The three indicators include:

- Indicator 1: Number of Awarded Incentives;
- Indicator 2: Total Value of Capital Investment (attracted as a result of the awarded incentives); and
- Indicator 3: Total Number of Newly Created Jobs (created as a result of the awarded incentives).

Example

For Maine, this would lead to the following values:

Number of Awarded Incentives	Total Value of Capital Investment	Total Number of Newly Created Jobs
28	$424.0 mln.	1,594

Convert each indicator value into state rankings

The value of each indicator will be converted into a national ranking, where the state with the highest value ranks first (No. 1) while the state with the lowest value ranks last (No. 50). The assumption is that when a state is transparent in disclosing information on its awarded incentives, it would rank more or less similar for all three indicators. The ranking of the number of awarded incentives (i.e. Indicator 1) forms the baseline of the Index, which is then measured and verified against the ranking of the two other indicators (i.e. Indicator 2 and Indicator 3). When the discrepancy between the rankings of the three indicators is considerable, a state is most likely inconsistent in publically disclosing information on its incentives and thus not transparent.

Example

For Maine, the scores will be converted which results in the following rankings:

Number of Awarded Incentives		Total Value of Capital Investment		Total Number of Newly Created Jobs	
Value	Rank	Value	Rank	Value	Rank
28	44	$424.0 mln.	40	1,594	45

Calculate total scores

The third step involves calculating the total scores for rankings of the three indicators. This yields the final score per state.

Example

For Maine, this would yield the following score:

$$\frac{(44 + 40 + 45)}{3} = \mathbf{43.0}$$

Producing final Index

The final step includes ranking the total scores and clustering these total scores. This results in the final Incentive Transparency Index. States are ranked by averaging the ranks of the three indicators.

- Green: scores from 1.0 up to and including 16.9. Includes states with high incentives transparency that frequently disclose information on awarded incentives.
- Amber: scores from 17.0 up to and including 33.9. Includes states with moderate or average incentives transparency that disclose information on awarded incentives from time to time.

- **Red**: scores from 34.0 up to and including 50.0. Includes states with very little or absent incentives transparency that randomly disclose information on awarded incentives.

Example

Maine's score of 43.0 puts the state on rank 44 out of 50 and would place it in the red cluster.

The same procedure has been repeated for 2014 and 2015 for the version of the Incentive Transparency Index. As more awarded incentives have been included in the 2014 and 2015 editions of the Incentive Transparency Index, both the critical mass as well as the geographical scope of the Index has widened (i.e. a number of states only provided a small number of incentives in 2013 but increased the number of incentives in 2015), contributing to the soundness of the Incentive Transparency Index.

The results for 2015 are summarized in the table below. Maine, with an overall score of 43, ranks 44th out of the 50 states, exactly between Vermont (rank 43) and Alaska (rank 45). Other New England states Rhode Island and New Hampshire score more or less similar (rank 46 and 47, respectively) while Connecticut (rank 24) and Massachusetts (rank 19) have performed considerably better.

Incentive Transparency Index 2015

Rank	State	Score	Rank	State	Score	Rank	State	Score
1	Indiana	4.0	17	Iowa	18.0	35	Oregon	35.7
1	Michigan	4.0	18	South Carolina	18.3	37	Delaware	36.0
1	Ohio	4.0	19	Massachusetts	21.7	37	Kansas	36.0
4	New York	5.7	20	Mississippi	22.0	38	Idaho	37.3
5	California	6.0	21	Alabama	22.7	40	Nebraska	37.7
7	Kentucky	7.0	22	Illinois	23.3	40	South Dakota	37.7
7	Louisiana	7.7	24	Connecticut	23.7	41	Arkansas	38.0
8	Tennessee	8.7	24	Utah	23.7	42	Montana	40.7
9	North Carolina	9.0	25	Colorado	24.3	43	Vermont	42.0
10	Texas	10.7	27	Nevada	25.7	44	Maine	43.0
11	Florida	11.3	27	Oklahoma	25.7	45	Alaska	44.0
12	Pennsylvania	11.7	28	Georgia	27.7	46	Rhode Island	45.3
13	Missouri	13.0	29	Maryland	28.0	47	New Hampshire	46.3
14	Virginia	14.0	30	Minnesota	30.0	48	Wyoming	46.7
15	Wisconsin	14.7	31	Washington	31.0	49	North Dakota	48.3
16	New Jersey	15.3	32	New Mexico	32.3	50	Hawaii	50.0
			34	Arizona	33.3			
			34	West Virginia	33.3			

Source: IncentivesMonitor.com and Investment Consulting Associates (ICA)

Comparing the results of 2013 and 2015 provides an indication of whether states improved the transparency of their incentive programs. These results are shown in the table below. Ohio, which ranked first in 2013 and 2015, remained stable but has been joined by Indiana and Michigan. California's strong improvement over the last two years is noteworthy as it jumped 18 ranks, from rank 23 in 2013 to rank 5 in 2015. This can be attributed to more disclosure on number of incentives that have been granted and the newly created jobs, where California moved up 24 and 25 ranks,

respectively. In the top cluster, New York and Missouri also improved their transparency with three and four ranks, respectively. Similar to California, Washington improved its overall ranking with twelve ranks, mainly related to a strong increase on its transparency on capital investment (25 ranks up). North Carolina, Iowa, Utah, Colorado, Georgia, Kansas, South Dakota and Alaska lost ground.

Looking specifically at Maine, it becomes clear Maine has only slightly improved its ranking over the last two years, as Maine went up from the 45th to the 44th rank. Maine went up two ranks with regards to information it disclosed on the number of incentives it has awarded (from rank 46 in 2013 to rank 44 in 2015) but lost two ranks on transparency regarding capital investment (from rank 43 in 2013 to rank 45 in 2015) while it stayed similar for newly created jobs (rank 40 in both years).

Incentive Transparency Index Comparison 2013-2015

2013			2015			2013-2015
Rank	State	Score	Rank	State	Score	Change
1	Ohio	3.0	1	Indiana	4.0	+2
2	Michigan	3.3	1	Michigan	4.0	+1
3	Indiana	3.7	1	Ohio	4.0	0
4	Kentucky	5.7	4	New York	5.7	+3
5	North Carolina	6.3	5	California	6.0	+18
6	Louisiana	7.0	7	Kentucky	7.0	-3
7	New York	8.0	7	Louisiana	7.7	-1
8	Texas	9.3	8	Tennessee	8.7	+1
9	Tennessee	9.7	9	North Carolina	9.0	-4
10	Florida	10.3	10	Texas	10.7	-2
11	Pennsylvania	11.0	11	Florida	11.3	-1
12	Iowa	16.0	12	Pennsylvania	11.7	-1
14	New Jersey	16.3	13	Missouri	13.0	+4
14	Virginia	16.3	14	Virginia	14.0	0
15	South Carolina	17.0	15	Wisconsin	14.7	+1
16	Wisconsin	17.3	16	New Jersey	15.3	-2
17	Missouri	17.7	17	Iowa	18.0	-5
18	Massachusetts	18.0	18	South Carolina	18.3	-3
19	Utah	18.7	19	Massachusetts	21.7	-1
20	Colorado	19.3	20	Mississippi	22.0	+5
21	Alabama	21.3	21	Alabama	22.7	0
23	California	22.0	22	Illinois	23.3	+2
23	Georgia	22.0	24	Connecticut	23.7	+3
24	Illinois	22.3	24	Utah	23.7	-5
25	Mississippi	22.7	25	Colorado	24.3	-5
27	Connecticut	24.7	27	Nevada	25.7	+5
27	Oklahoma	24.7	27	Oklahoma	25.7	0
29	Kansas	29.7	28	Georgia	27.7	-5
29	Maryland	29.7	29	Maryland	28.0	0
30	Minnesota	30.0	30	Minnesota	30.0	0
31	Arizona	30.7	31	Washington	31.0	+12
32	Nevada	32.0	32	New Mexico	32.3	+2
33	Oregon	32.7	34	Arizona	33.3	-3
34	New Mexico	34.0	34	West Virginia	33.3	+3
35	Delaware	34.7	35	Oregon	35.7	-2
36	South Dakota	35.0	37	Delaware	36.0	-2
37	West Virginia	35.7	37	Kansas	36.0	-8
38	Arkansas	38.3	38	Idaho	37.3	+2

2013			2015			2013-2015
Rank	State	Score	Rank	State	Score	Change
39	Alaska	39.0	40	Nebraska	37.7	+4
40	Idaho	39.7	40	South Dakota	37.7	-4
41	Vermont	39.7	41	Arkansas	38.0	-3
43	Rhode Island	41.3	42	Montana	40.7	+5
43	Washington	41.3	43	Vermont	42.0	-2
44	Nebraska	41.7	44	Maine	43.0	+1
45	Maine	43.0	45	Alaska	44.0	-6
46	New Hampshire	44.7	46	Rhode Island	45.3	-3
47	Montana	45.3	47	New Hampshire	46.3	-1
48	Wyoming	46.3	48	Wyoming	46.7	0
49	North Dakota	47.3	49	North Dakota	48.3	0
50	Hawaii	49.7	50	Hawaii	50.0	0

Source: IncentivesMonitor.com and Investment Consulting Associates (ICA)

Appendix M – Benchmark 5 – Competitive States Programs

Economic Development Programs

From the latest version of the Incentive Transparency Index, it appears Maine ranks among the bottommost states in terms of transparency of its incentive programs. Remarkable is the modest performance of a number of New England states since Maine, with a 44th rank, ranks similar to its New England peers Vermont (43rd), Rhode Island (46th) and New Hampshire (47th). This calls for a further investigation into the distinctive incentive programs and the characteristic features these competing states offer. The selection of Vermont, Rhode Island and New Hampshire for the competitive state incentive programs benchmark is furthermore justified given their modest economic size and structure, which is similar to that of Maine and the comparable economic position of these four states within New England. Also, as can be concluded from the Incentive Productivity Benchmark, Maine's incentive productivity can be grouped together with that of New Hampshire, Rhode Island and Vermont.

This competitive state incentive programs benchmark is structured as follows. The first section introduces the incentive regimes across the three competitive benchmark states after which the state incentive programs are evaluated in-depth. Per state, key incentive programs are briefly described while minor incentive programs are summarized. This is followed by a comparison of a number of selected competitive incentive programs. To safeguard consistency, a customized template has been designed to compare these selected competitive incentive programs across state borders. This template consists of multiple questions which have been categorized according to three components: Structure and Targets, Eligibility and Benefits and Performance and Evaluation. The incentive programs that have been benchmarked by means of this template have been selected based on their uniqueness and competitiveness in combination with the fiscal and financial impact for potential recipients. A total of five of competitive incentive programs have been selected to be benchmarked:

- New Hampshire's Economic Revitalization Zone (ERZ) Tax Credit;
- New Hampshire's Research and Development Tax Credit;
- Rhode Island's Innovation Tax Credit;
- Rhode Island's Qualified Jobs Incentive Tax Credit; and
- Vermont's Employment Growth Incentive (VEGI).

The most prominent incentive programs New Hampshire, Rhode Island and Vermont offer have been summarized in the table below. The incentive programs have been grouped according to the type of incentive. A broad distinction can be made between direct financial or fiscal incentives (e.g. tax credits and cash grant) as opposed to indirect incentives (e.g. technical incentives). Direct incentives can be further grouped into investment incentives, land and infrastructure incentives, training and employment incentives and incentives related to R&D. Indirect incentives can be split into regulatory and administrative incentives on the one hand and technical incentives on the other hand.

What becomes evident from is that the focus of the incentive programs of New Hampshire, Rhode Island and Vermont seems to revolve around encouraging training and employment and, to a lesser

extent, investment and R&D (particularly Rhode Island). Only Vermont offers a program specifically designed at land and infrastructure incentives.

Overview of key incentive programs of New Hampshire, Rhode Island and Vermont

	Type of Incentive	New Hampshire	Rhode Island	Vermont
Direct Fiscal and Financial Incentives	**Investment Incentives** Provision of financing options primarily aimed to offset capital expenditures required for start-up, upgrade and/or stabilization of operation(s)	Economic Revitalization Zone Tax Credit New Hampshire Business Finance Authority Loans and Guarantees	Rebuild Rhode Island Tax Credit I-195 Redevelopment Fund Tax Increment Financing Non-Manufacturing Investment Tax Credit Manufacturing Investment Tax Credit High Performance Manufacturing Investment Tax Credit Innovation Tax Credit	Brownfield Redevelopment Grants
	Land and Infrastructure Incentives Reduced rates and/or direct provision of land, public utilities or transportation granted for specific investments			Economic Development Incentive Program (EDIP)
	Training and Employment Incentives Subsidized training programs and education subsidies to reduce investors' training costs to develop workforce skills	Coos County Job Tax Credit New Hampshire Job Training Fund	Qualified Jobs Incentive Tax Credit Anchor Institution Tax Credit Real Jobs Rhode Island Wavemaker Fellowship Job Training Tax Credit	Employment Growth Incentive (VEGI) Vermont Training Program Workforce Employment Training Fund (WETF)
	R&D Incentives Grants, credits and lending instruments to support investments in R&D and innovation	New Hampshire R&D Tax Credit	R&D Expense Credit Innovation Vouchers Industry Cluster Grants Innovation Networking Matching Grants Innovate Rhode Island Small Business Fund	Vermont R&D Tax Credit

	Type of Incentive	New Hampshire	Rhode Island	Vermont
Indirect Incentives	**Regulatory and Administrative Incentives** Grating exceptions from rules and regulations in combination with streamlined and simplified administrative procedures			
	Technical Incentives Investment facilitation services, information provision and aftercare to ensure a "soft landing" of the investment project or further expansion	New Hampshire Procurement Technical Assistance Program (NH PTAP) New Hampshire Manufacturing Extension Partnership (MEP)	Small Business Assistance Program	Vermont Procurement Technical Assistance Center (VT PTAC) Vermont Global Trade Partnership (VGTP)

Source: Investment Consulting Associates (ICA)

Furthermore, no competitive state offers any incentives specifically focused at reducing the regulatory and/or administrative burden. Offering such incentives – complementary to highlighting its existing incentive regime - may put Maine at a competitive advantage vis-à-vis its peer states. It should be noted Foreign Trade Zones (FTZs), which usually ease the regulatory burden for companies, are located in each of the three peer states: Portsmouth, New Hampshire, Providence, Rhode Island and Burlington, Brattleboro and St. Johnsbury, Vermont.

New Hampshire

New Hampshire offers four main incentive programs:

Economic Revitalization Zone (ERZ) Tax Credit: designed to encourage investment in infrastructure and job creation in designated areas of a municipality by providing a tax credit with a maximum amount of $200,000 to offset capital investment expenditures against the business profits and enterprise taxes. In fact, this incentive program is a combination of the investment incentive type and the training and employment incentive type as it requires capital investment in combination with job creation. The figure below shows an example of the allocation of ERZs in Nashua, NH.

Coos County Job Creation Tax Credit: a direct fiscal incentive of either $750 or $1,000 per qualified employee hired granted to companies hiring new, full-time employees in Coos County that pay wages 150 percent higher than the minimum wage.

New Hampshire Job Training Fund: a cash grant of up to $100,000 on a 50:50 ratio to support customized training of a company's labor force.

New Hampshire Research and Development Tax Credit: a direct fiscal incentive which allows companies to deduct R&D expenses against business profits and enterprise taxes.

Seven ERZs of Nashua, NH

Source: Nashua Dares, 2015

In addition, the New Hampshire Business Finance Authority provides loans and guarantees to support small businesses with (access to) capital and funding. Finally, the state offers technical assistance programs aimed at providing companies with support on (sub-) contracting opportunities with Department of Defense, other federal agencies and state and local governments (NH-PTAP) and establishing partnerships between small- and medium-sized manufacturing companies (MEP).

The Economic Revitalization Zone Tax Credit and the New Hampshire Research and Development Tax Credit have been selected for further investigation because of the state-wide coverage of the two programs (rather than the Coos County Job Creation Tax Credit), the type of incentive (tax credit rather than the New Hampshire Job Training Fund's cash grant) and the specific R&D target of the New Hampshire Research and Development Tax Credit.

Competitive State Incentive Benchmark Template – Economic Revitalization Zone (ERZ) Tax Credit (NH)

State and Incentive Program	New Hampshire - Economic Revitalization Zone (ERZ) Tax Credit
Structure and Targets	
Is the program traceable (i.e. transparent)?	Yes. The Incentive Program is listed on the website of the New Hampshire Division of Economic Development.
Is the Incentive Program guided by a dedicated Law or Statue?	Chapter 162-N Economic Revitalization Zone Tax Credits.
In which year has the Incentive Program been	Last revised in 2007. The incentive program will be in place indefinitely until the State law governing ERZs is repealed, amended or revised.

State and Incentive Program	New Hampshire - Economic Revitalization Zone (ERZ) Tax Credit
established and/or updated?	
Which institution or organization is responsible for implementing the Incentive Program?	The Division of Economic Development of New Hampshire's Department of Resources and Economic Development.
Is the Incentive Program location-bound?	Yes, businesses must be physically located in an approved ERZ across the state to be eligible to receive funding. An ERZ is a location which: 1) Meets certain demographic criteria (i.e. population decrease over the last 20 years, 51% households with household income less than 80% of the state's median household income, 20% of households with a median income below poverty level); or 2) Is a Brownfield site (i.e. unused or underutilized industrial park, or vacant land, or structures previously used for industrial, commercial, or retail purposes but currently not so used)? As of January 2012, 105 ERZs have been approved across 43 communities.
Does the Incentive Program target specific sector(s), and if so, what are they?	Both commercial and industrial businesses are eligible.
What is the policy objective of the Incentive Program?	The program has been created to stimulate economic redevelopment, expand the commercial and industrial base, create new jobs, reduce sprawl and increase tax revenues within New Hampshire by encouraging economic revitalization in designated areas.
Eligibility and Benefits	
Does the Incentive Program make any notion of specific eligibility criteria and if so, which are the most frequently mentioned ones?	Yes. A company qualified to benefit from this Incentive Program must: 1) Make a certain amount of capital investment in a plant and/or equipment in one calendar year; 2) Create new full- or part-time jobs in the same calendar year; and 3) Must be located in an approved ERZ.
What is the application procedure?	Business applicants need to fill out the Tax Credit Certification Form which needs to be completed before February 10th of the year following the applicant's tax year. There is no application fee. The commissioner of resources and economic development and the applicant enter into a written ERZ Tax Credit Agreement.
What are the available benefits?	A tax credit, which may be used against the business profits and enterprise taxes, based on a percent of the salary for each new job created and the lesser of: 1) Either a percent of the actual cost incurred for the project; or 2) A maximum credit for each new job created in the fiscal year. The amount of the tax credit is determined as follows: 1) 4 percent of the salary for each new job created in the fiscal year with a wage less than or equal to 1.75 times the then current state minimum wage; 2) 5 percent of the salary for each new job created in the fiscal year with a wage greater than 1.75 times the then current state minimum wage and less than or equal to 2.5 times the then current state minimum wage; 3) 6 percent of the salary for each new job created in the fiscal year with a wage greater than 2.5 times the then current state minimum wage; 4) 4 percent of the lesser of the following: a. The actual cost incurred in the fiscal year of creating a new facility or renovating an existing facility, and expenditures for machinery, equipment, or other materials, except inventory; or

State and Incentive Program	New Hampshire - Economic Revitalization Zone (ERZ) Tax Credit
	b. $20,000 for each new job created in the fiscal year. A total budget of $825,000 has been allocated for ERZ tax credits across New Hampshire per fiscal year. If that amount is exceeded by all qualified applicants, then each applicant's tax credit amount will be pro-rated.
Are the benefits capped?	Yes. The total amount of the credit is $200,000 over five years, capped at $40,000 per year.
What is the duration of the benefits?	The tax credit can be carried for up to five years.
Performance and Evaluation	
Does the Incentive Program have M&E systems and procedures in place?	Not explicitly mentioned.
Does the Incentive Program have clawback systems and procedures in place?	Not explicitly mentioned.

Source: Investment Consulting Associates (ICA), based on New Hampshire Economic Department

Competitive State Incentive Benchmark Template – Research and Development (R&D) Tax Credit (NH)

State and Incentive Program	New Hampshire - Research and Development (R&D) Tax Credit
Structure and Targets	
Is the program traceable (i.e. transparent)?	Yes. The Incentive Program is listed on the website of the New Hampshire Department of Revenue Administration.
Is the Incentive Program guided by a dedicated Law or Statue?	Chapter 162-P Research And Development Tax Credit Program and Chapter 77-A:5 Credits.
In which year has the Incentive Program been established and/or updated?	Last revised in 2013 through Senate Bill 1. This revision increased the award to $2,000,000, effective on May 20th, 2013, and repealed the prospective repeal date of the credit (which had been set at July 1st, 2015).
Which institution or organization is responsible for implementing the Incentive Program?	New Hampshire Department of Revenue Administration.
Is the Incentive Program location-bound?	No.
Does the Incentive Program target specific sector(s), and if so, what are they?	Apart from companies undertaking research and development, no clear sector approach has been taken.
What is the policy objective of the Incentive Program?	Supporting businesses with undertaking research and development.
Eligibility and Benefits	
Does the Incentive Program make any notion of specific eligibility criteria and if so, which are the most frequently mentioned ones?	Yes. The tax credit is for expenditures made or incurred during the fiscal year for "qualified manufacturing research and development". Expenditures related to "qualified manufacturing research and development" are defined as wages paid or incurred to an employee of the business organization. Such wages: 1) Shall be treated as wages for qualified research expenses under section 41(b) of the United States Internal Revenue Code; 2) Are paid or incurred because of services undertaken for the purpose of discovering information which constitutes qualified research and development of a new or improved manufacturing process or business

State and Incentive Program	New Hampshire - Research and Development (R&D) Tax Credit
	component of the business organization; and 3) Qualify and are reported as a credit by the business organization under section 41 of the United States Internal Revenue Code.
What is the application procedure?	Applicants need to fill out the Research and Development Tax Credit Application Form DP-165. Applications for the first fiscal year of the credit shall be filed with the Department of Revenue Administration on or before June 30 following the tax year during which the research and development occurred. The Department will send acknowledgement letters to all applicants by July 31. Applicants will be notified of tax credit amounts granted to them by September 30.
What are the available benefits?	A tax credit to cover expenditures of research and development. The credit is first applied against the business profits tax. Any remainder may be applied against the business enterprise tax. The tax credit is calculated at 10% of the business organization's qualified manufacturing research and development expenditures for the taxable year. A total budget of $2,000,000 has been allocated for R&D tax credits across New Hampshire per fiscal year. In the event that the aggregate amount of tax credits applied for, in any given fiscal year, exceeds $2,000,000, all credits for that year shall be reduced proportionately.
Are the benefits capped?	Yes. The amount of the credit shall be the lesser of 10% of the business organization's qualified manufacturing research and development expenditures for the taxable year over the base amount or $50,000.
What is the duration of the benefits?	Unused portions of the credit may be carried forward for up to five years.
Performance and Evaluation	
Does the Incentive Program have M&E systems and procedures in place?	Not explicitly mentioned.
Does the Incentive Program have clawback systems and procedures in place?	Not explicitly mentioned.

Source: Investment Consulting Associates (ICA), based on New Hampshire Economic Department

Rhode Island

Out of the three peer states, Rhode Island offers the largest number of incentive programs. It offers a wide range of tax credits to support investment, training and employment and R&D but also provides grants to encourage innovation partnerships and foster innovative clusters. Some of the major incentive programs include:

Rebuild Rhode Island: a redeemable tax credit covering up to 20% of the investment costs in case funding for a real estate investment project happens to be insufficient. Eligibility criteria include a minimum investment of $5,000,000 as well as a certain square footage. An exemption from sales tax on construction materials, furnishings and equipment may apply as well.

Tax Increment Financing: provides capital to eligible investment projects, which must demonstrate the need for financing, by rebating new state tax revenue generated. Reimbursements may not exceed 30% of the total investment expenditures or 75% of the incremental revenue generated.

Innovation Tax Credit: capped at $100,000, a tax credit of up to 50% on qualified capital investment may be provided to encourage investment in high-growth and high-wage innovation sectors. The tax credit may be carried forward for three years. This Innovation Tax Credit will be repealed on December 31st, 2016.

Qualified Jobs Incentive Tax Credit: annual redeemable tax credits, which can equal up to $7,500 per job per year, for up to ten years to support companies expanding their workforce in Rhode Island. The minimum number of new jobs required to qualify varies per industry and company size but can be as few as ten jobs. The first 500 jobs approved under the program will receive the maximum tax credit available, which equals the lesser of $7,500 per job or the W-2 withholding of the jobs created.

Anchor Institution Tax Credit: a tax credit will be offered to Rhode Island companies that played a substantial role in pulling a key supplier, service provider or customer company into Rhode Island, creating at least ten new jobs.

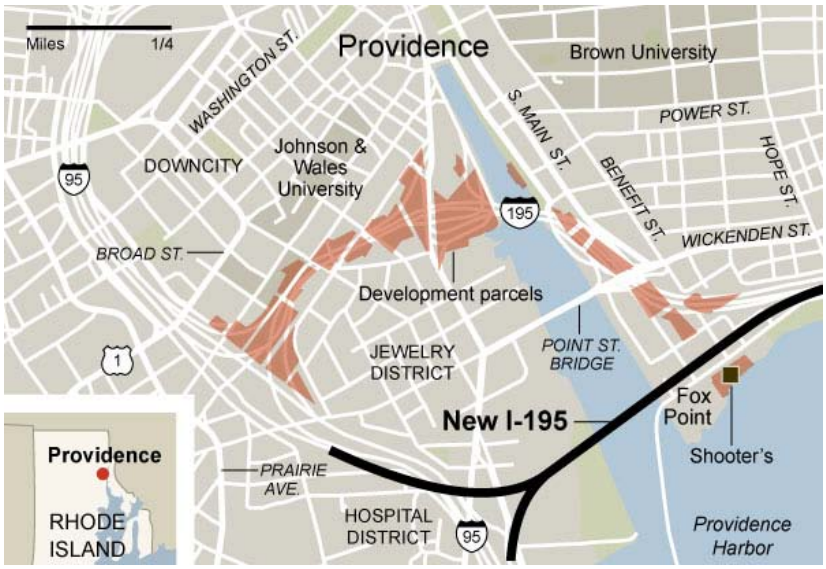
Job Training Tax Credit: a tax credit equaling up to 50% of eligible training expenditures for new or existing employees, which can be claimed against the corporate income tax. After the training, employees must earn 150% of the state's minimum wage. The tax credit is capped at $5,000 per employee over a period of three years.

R&D Expense Credit: a tax credit of 22.5% for increases in qualified research expenses. Unused credits may be carried forward for up to seven years.

Industry Cluster Grants: grants from $75,000 up to $250,000 to fund planning and organization of innovative industry clusters and grants from $100,000 up to $500,000 to implement programs that strengthen the capacities of the cluster (e.g. R&D, workforce development marketing, and transfer of technologies).

A special incentive program relates to funding redevelopment around the newly constructed I-195. Due to reconfiguration of the I-195 corridor, a number of vacant parcels adjacent to Providence's downtown with significant development opportunities have become available. Investments that locate in this area and have the potential to catalyze (economic) development may be eligible for funding from the $25-million I-195 Redevelopment Fund. The figure below demonstrates the location of the I-195 redevelopment parcels in the direct vicinity of downtown Providence.

Location of I-195 redevelopment parcels



Source: Rhode Island Economic Development Corporation

Investment tax credits are offered to both manufacturing and non-manufacturing companies. The latter can benefit from a 10% investment tax credit on owned or leased tangible personal property and other tangible property (placed in service on or after January 1, 1998) through the Non-Manufacturing Investment Tax Credit. The former group of companies may be eligible for the Manufacturing Investment Tax Credit, which comprises a 4% tax credit against the Rhode Island corporate income tax on buildings and structural components, as well as machinery and equipment, which are owned or leased and are principally used in the production process. Tax liability is capped at a certain minimum for both Investment Tax Credits as well as the principle that unused credits may be carried forward for up to seven years. In addition, high-performance manufacturers are allowed a 10% investment tax credit against their corporate income tax on the cost of qualified lease amounts for tangible personal property or other tangible property as well as buildings and structural components, which must be owned, leased to own or leased for at least 20 years.

Apart from the Industry Cluster Grants, smaller grant programs that fund R&D assistance, partnerships and co-operation include the Innovation Vouchers (grants of up to $50,000 to fund R&D assistance from a Rhode Island university, research center or medical center), Innovation Networking Matching Grants (co-investment grants starting at $50,000 for small business development in technical assistance, access to capital or space on flexible terms) and the Innovative Rhode Island Small Businesses Fund (grants of up to $3,000 offsetting the costs associated with SBIR/STTR Phase I applications and matching grants of up to $45,000 to encourage SBIR/STTR Phase I recipients to apply for more substantial SBIR/STTR Phase II awards).

Smaller incentive programs offered to support talent and skills development include the Real Jobs Rhode Island program (grants awarded to employers and other stakeholders within a sector that partner to plan and implement tailor-made and sector-specific training programs) and the Wavemaker

Fellowship program (defraying student loan payments for up to four years for Rhode Island graduates who pursue careers in technology, engineering, design and other key sectors).

Finally, Rhode Island offers technical assistance in combination with access to capital for small businesses through its Small Business Assistance Program. This incentive program offers loans of $25,000 or more at a below-market interest rate as well as microloans under $25,000.

The Innovation Tax Credit and Qualified Jobs Incentive Tax Credit have been selected as the Rhode Island incentive programs to be included in the competitive state incentive programs benchmark. Despite the fact that the former will be repealed by the end of 2016, it has an explicit focus on investment in innovative industries while the latter has been specifically designed to encourage job creation within Rhode Island as it provides tax credits on a job-by-job basis.

Competitive State Incentive Benchmark Template – Innovation Tax Credit (RI)

State and Incentive Program	Rhode Island - Innovation Tax Credit
Structure and Targets	
Is the program traceable (i.e. transparent)?	Yes. The Incentive Program is listed on the website of the Rhode Island Commerce Corporation.
Is the Incentive Program guided by a dedicated Law or Statue?	Chapter 44-63 of Title 44 of the Rhode Island 2015 General Laws.
In which year has the Incentive Program been established and/or updated?	Last revised in 2015.
Which institution or organization is responsible for implementing the Incentive Program?	The Rhode Island Commerce Corporation and the Rhode Island Division of Taxation.
Is the Incentive Program location-bound?	No.
Does the Incentive Program target specific sector(s), and if so, what are they?	Companies that produce services or manufacture goods which are capable of exporting or importing across the state's boundaries in the following innovating industries: 1) Biotechnology and life sciences; 2) Communication and information technology; 3) Financial services; 4) Marine and defense manufacturing; 5) Professional, technical and educational services; and 6) Industrial and consumer product manufacturing and design.
What is the policy objective of the Incentive Program?	Encourage investment in high-growth, high-wage innovation industries as well as attract and retain successful serial entrepreneurs to Rhode Island to catalyze economic growth in innovation industries. After all, entrepreneurship and a stronger platform for new company creation are essential to creating an innovative economy.
Eligibility and Benefits	
Does the Incentive Program make any notion of specific eligibility criteria and if so, which are the most	Yes. A company eligible for this Incentive Program is defined as a "qualified innovative company", which is defined as any business entity formed or registered to conduct business under the laws of the state of Rhode Island, that generated annual gross revenues of less than $1,000,000 in the prior

State and Incentive Program	Rhode Island - Innovation Tax Credit
frequently mentioned ones?	two calendar years and produces traded goods or services in one of the six innovating industries.
What is the application procedure?	Companies must apply for the credit prior to making the investment. This application is subject to an analysis and review of the impact of the proposed investment by the Commerce Corporation staff. Once the application is approved, the company has up to 12 months to invest and provide proof of the investment to the Commerce Corporation Board. Upon completion of this process, the Commerce Corporation will certify the company's eligibility for the tax credit with the Division of Taxation.
What are the available benefits?	A tax credit of up to 50% of any investment made in the company, which may be applied against the state tax liability.
Are the benefits capped?	Yes. The amount of the credit is capped at a limit of $100,000. The Commerce Corporation is authorized to approve no more than $1,000,000 in tax credits in any two calendar years period.
What is the duration of the benefits?	The remaining value of the tax credit may be carried forward for up to three years. In addition, the Commerce Corporation shall not approve any new applications for the Innovation Tax Credit after December 31, 2016.
Performance and Evaluation	
Does the Incentive Program have M&E systems and procedures in place?	By August 15th of each year the recipient shall report the source and amount of any bonds, grants, loans, loan guarantees, matching funds or tax credits received from any state governmental entity, state agency or public agency received during the previous fiscal year. This annual report shall be sent to the Division of Taxation. The Commerce Corporation shall monitor the performance of every recipient through the duration of any approved tax credit and for two years after the recipient no longer receives the tax credit. Such monitoring includes annual reports which will be transmitted to the Division of Taxation and publically disclosed. The annual reports on the impact analysis should include: 1) Actual versus projected impact for all considered factors; and 2) Verification of all commitments made in consideration of the tax credit.
Does the Incentive Program have clawback systems and procedures in place?	Not explicitly mentioned.

Source: Investment Consulting Associates (ICA), based on Rhode Island Commerce Corporation

Competitive State Incentive Benchmark Template – Qualified Jobs Incentive Tax Credit (RI)

State and Incentive Program	Rhode Island - Qualified Jobs Incentive Tax Credit
Structure and Targets	
Is the program traceable (i.e. transparent)?	Yes. The Incentive Program is listed on the website of the Rhode Island Commerce Corporation.
Is the Incentive Program guided by a dedicated Law or Statue?	Chapter 48.3 of Title 44 of the Rhode Island General Laws, the Rhode Island Qualified Jobs Incentive Act of 2015.
In which year has the Incentive Program been established and/or updated?	Last revised in 2015.
Which institution or organization is responsible for implementing the Incentive Program?	The Rhode Island Commerce Corporation and the Rhode Island Division of Taxation.

State and Incentive Program	Rhode Island - Qualified Jobs Incentive Tax Credit
Is the Incentive Program location-bound?	The Incentive Program covers the whole of Rhode Island though tax credit rate may be increased due allocating the newly created jobs in (one of) the following locations: 1) A "Hope Community" (Central Falls, Pawtucket, Providence, West Warwick and Woonsocket); 2) Within one-half mile of T.F. Green Airport, Quonset Business Park or a passenger rail station; 3) Within a public-transit or freight-transit oriented development area; and/or 4) Within the I-195 Redevelopment District.
Does the Incentive Program target specific sector(s), and if so, what are they?	Companies in both target as well as non-target industries may qualify for this Incentive Program. The eligibility criteria for companies in target industries are less stringent. These target industries include: 1) Biomedical Innovation; 2) Cyber and Data Analytics; 3) Maritime; 4) Design, Materials, and Manufacturing; 5) Technology; 6) Defense; 7) Corporate Management Offices and Back Office Operations; 8) Transport, Distribution, and Logistics; and 9) Tourism and Arts.
What is the policy objective of the Incentive Program?	Companies in Rhode Island have found it difficult to make investments that would stimulate economic activity and create new jobs. This situation has contributed to an unemployment rate in Rhode Island that is higher than neighboring states and among the highest in the US. Consequently, a need exists to promote the creation of new jobs, attract new business and industry, and stimulate growth in businesses that are prepared to make meaningful investment and foster job creation in Rhode Island.
Eligibility and Benefits	
Does the Incentive Program make any notion of specific eligibility criteria and if so, which are the most frequently mentioned ones?	Yes. Eligibility for the tax credit is related to the minimum number of new full-time jobs and depends on the industry in which the applicant is active: 1) A business in a target industry that employs not more than 100 full-time employees in Rhode Island on the date of application must create at least 10 new full-time jobs; 2) A business in a target industry that employs more than 100 full-time employees in Rhode Island on the date of application must create the lesser of not less than 10% of the business's existing number of full-time employees in Rhode Island or at least 100 new full-time jobs; 3) A business that is not in a target industry that employs not more than 200 full-time employees in Rhode Island on the date of application must create at least 20 new full-time jobs; or 4) A business that is not in a target industry that employs more than 200 full-time employees in Rhode Island on the date of application must create the lesser of not less than 10% of the business's existing number of full-time employees in Rhode Island or at least 100 new full-time jobs. An Applicant shall not be eligible for the tax credit in case of relocation within Rhode Island or if federal procurement is a cause of substantially all of the hours to be worked by the new full-time jobs identified in the application, unless the Applicant can show that it could reasonably and efficiently locate the new full-time jobs outside of Rhode Island.

State and Incentive Program	Rhode Island - Qualified Jobs Incentive Tax Credit
What is the application procedure?	Applicants need to fill out and submit the Rhode Island Qualified Jobs Incentive Tax Credit Application together with a $1,000 application fee. Each application shall be reviewed by the Rhode Island Commerce Corporation. The Corporation will then determine whether to recommend to the Board to approve a tax credit and its amount. The Corporation, in consultation with the Tax Division, will verify that the amount of tax credits granted for any year will not exceed the reasonable W-2 withholding received by Rhode Island in that year for each new full-time job created. Upon approval of the tax credit, the Corporation and the applicant will enter into an Incentive Agreement prior to the issuance of any tax credit.
What are the available benefits?	The benefit of this Incentive Program consists of a tax credit with a maximum value of $7,500 per job, which will be awarded on an annual basis for each year of the eligibility period and can be applied against the corporate income tax. For an applicant who has been granted a tax credit prior to the approval of tax credits for a cumulative total of 500 new full-time jobs, the annual amount of the tax credit will equal $7,500. Otherwise, the annual base amount of the tax credit for each new full-time job shall be $2,500 and may be increased by the amount indicated, up to an additional $5,000, if any of the following criteria are met: 1) For a business with new full-time jobs with a median salary in excess of 110% of the existing median hourly wage as reported by the United States Bureau of Labor; Statistics for the State: +$300 per year for each 10% by which the median salary levels exceeds the existing median hourly wage; 2) For a full-time job in a target industry: +$5,000; 3) Located within a “Hope Community”: +$1,000; 4) For a full-time job that is created by virtue of an out-of-state business relocating a business unit or units to Rhode Island: +$5,000; 5) Creation a significant number of new full-time jobs (at least 50) prior to the receipt of any tax credits: +$3,000 (50-100 new jobs) up to +$5,000 (more than 250 jobs); 6) Creation of 25 or more new full-time jobs at a location where the applicant has made a capital investment of $5,000,000 or more: +$1,000 for each $5,000,000 in capital investment; 7) Located within one-half mile of T.F. Green Airport, Quonset Business Park or a passenger rail station: +$4,000; 8) Located within transit oriented development area: +$1,000; 9) Located within the I-195 Redevelopment District: +$5,000; 10) For new full-time jobs that align with the academic mission of a college or university in Rhode Island: +$2,500; and 11) For new full-time jobs created in Scientific R&D or Industrial Design: +$5,000.
Are the benefits capped?	Yes. The lesser of $7,500 per newly created job or the W-2 withholding of the jobs created.
What is the duration of the benefits?	The tax credit may be extended for a term of not more than ten years. If the amount of the tax credit allowed exceeds the applicant’s total tax liability for the year in which the credit is allowed, the amount of such tax credits that exceeds the applicant’s tax liability may be carried forward and applied against the taxes imposed for the succeeding four years, or until the full credit is used, whichever occurs first. No credits shall be authorized to be reserved after December 31, 2018.

State and Incentive Program	Rhode Island - Qualified Jobs Incentive Tax Credit
Performance and Evaluation	
Does the Incentive Program have M&E systems and procedures in place?	An applicant shall submit documentation indicating that it has met the requirements specified in the Incentive Agreement for initial certification of its tax credit amount within three years following the date of approval of its application by the Corporation's Board. By August 1st of each year, each applicant shall report to the Commerce Corporation and the Division of Taxation the number of total jobs created, the applicable NAICS code of each job created, the annual salary of each job created and the address of each new employee.
Does the Incentive Program have clawback systems and procedures in place?	The tax credit amount for any tax period for which documentation of an applicant's credit amount remains uncertified as of a date one year after the closing date of that period shall be forfeited, although tax credits for the remainder of the years of the eligibility period shall remain available to the applicant. Forfeiture of a year's credit shall not extend the eligibility period.

Source: Investment Consulting Associates (ICA), based on the Rhode Island Commerce Corporation

Vermont

Vermont offers a couple of direct cash incentives in combination with tax credits, specialized training programs and reduced utility rates.

Brownfield Redevelopment Grants: loans of up to $250,000 with attractive rates and terms for assessment, characterization and cleanup of contaminated brownfield sites.

Economic Development Incentive Program (EDIP): new or expanding industries located in the Central Vermont Public Service territory may qualify for reduced electrical rates. Rate credits apply for customers who meet certain EDIP availability, applicability and eligibility criteria.

Vermont Employment Growth Incentive (VEGI): a performance-based cash incentive for prospective job and payroll creation and capital investment that is beyond organic growth and which occurs because of the incentive. The exact amount of the incentive, which is paid out in cash installments over five years, is determined based on the revenue return generated to the state of Vermont by prospective qualifying job and payroll creation and capital investment. Because of its significance, this incentive program has been selected for further evaluation.

Vermont Training Program: individually designed programs for new and existing businesses, which may include on-the-job, classroom, skill upgrade or other specialized training. The exact type of training are mutually agreed upon between the State and employer.

Workforce Employment Training Fund (WETF): administered by the Vermont Department of Labor, this program provides matching training grants to offset the cost of workforce training for Vermont employers who are unemployed, under-employed, or at risk of becoming unemployed.

Vermont R&D Tax Credit: complementary to the federal R&D tax credit, the Vermont R&D tax credit equals up to 27% of the federal R&D tax credit allowed in the taxable year. Eligibility criteria are similar to those of the federal R&D tax credit which are defined under section 41 of the United States Internal Revenue Code. Contrary to New Hampshire, where the tax credit may be carried forward up to 5 years

if the credit cannot be applied in the year earned, the taxpayer in Vermont can carry forward the credit for up to 10 years.

In addition, similar to New Hampshire's PTAP, which supports companies with contracting and subcontracting opportunities with the Department of Defense, other federal agencies and state and local governments, Vermont established the Procurement Technical Assistance Center (VT PTAC). It has been designed to support businesses to understand the requirements of government contracting to exploit federal, state, and community contract opportunities. The Vermont Global Trade Partnership (VGTP) functions as center for international business assistance through its international trade-related educational seminars, trade show participation, technical assistance, and one-on-one consulting services.

Competitive State Incentive Benchmark Template – Vermont Employment Growth Incentive (VEGI) (VT)

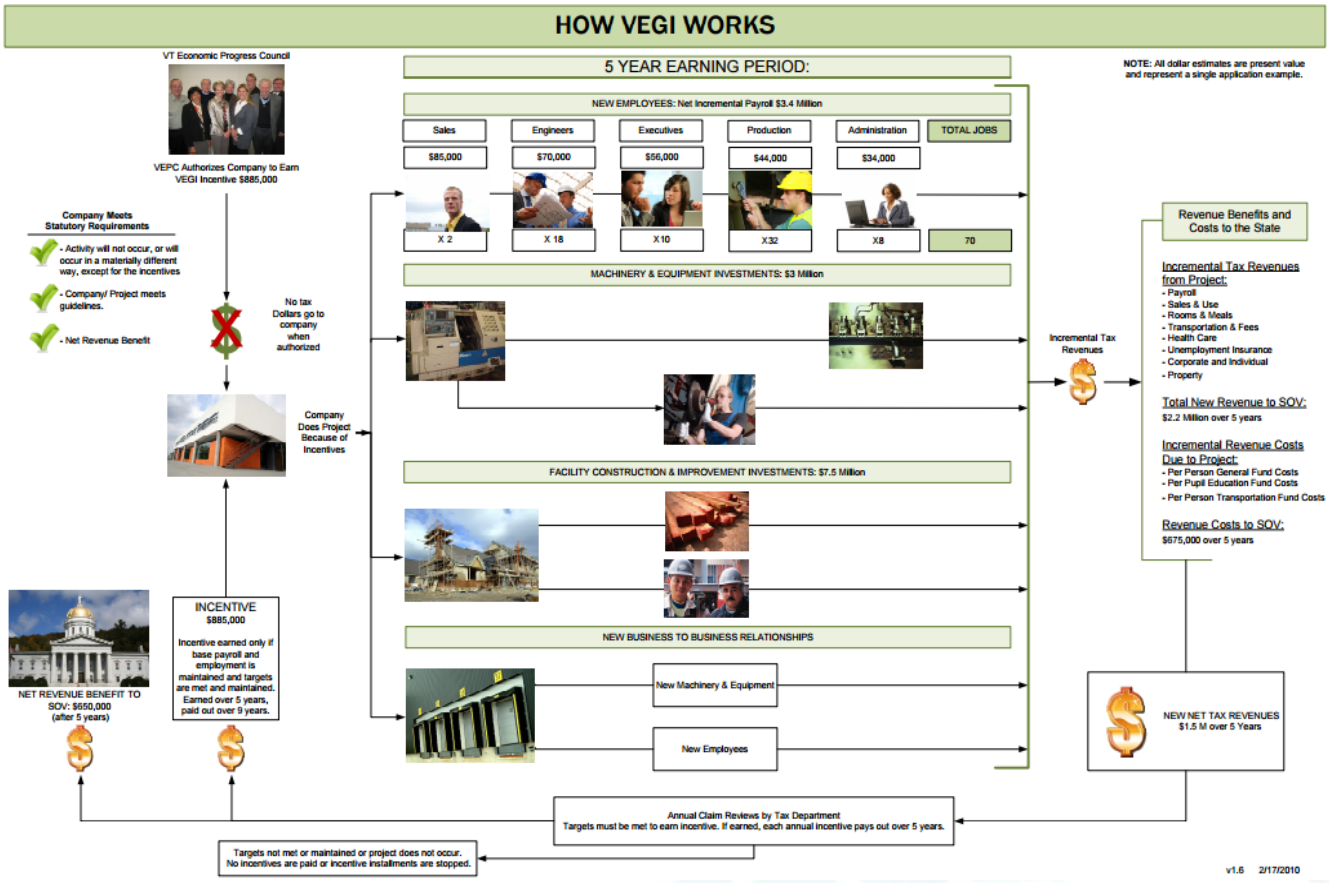
State and Incentive Program	Vermont - Vermont Employment Growth Incentive (VEGI)
Structure and Targets	
Is the program traceable (i.e. transparent)?	Yes, very transparent. The Incentive Program is listed on the website of the Vermont Agency of Commerce and Community Development, which also features material on the application procedures, program facts, figures and data, the economic progress council and helpful links.
Is the Incentive Program guided by a dedicated Law or Statue?	Chapter 151: § 5930b. Vermont employment growth incentive.
In which year has the Incentive Program been established and/or updated?	Annotated to include in 2015 Legislative Session. The VEGI Enhancement for Environmental Technology Companies has been added in 2008.
Which institution or organization is responsible for implementing the Incentive Program?	The Vermont Economic Progress Council (VEPC).
Is the Incentive Program location-bound?	Not directly although the exact amount of the incentive is, amongst other indicators, based on the wage thresholds of qualifying jobs, which differs across Vermont Labor Market Areas (LMAs).
Does the Incentive Program target specific sector(s), and if so, what are they?	The VEGI Enhancement for Environmental Technology Companies, implemented to support job creation in Vermont's "Green Economy", specifically targets companies engaged in research, development, design, engineering or manufacturing of certain environmental technologies or certain environmental services (e.g. waste management, natural resource protection and management, energy efficiency and clean energy). Companies active in these sectors may be eligible for an increased level of VEGI incentives resulting in enhanced incentives that average up to 40% higher than the normal VEGI incentive amount.
What is the policy objective of the Incentive Program?	To encourage prospective economic activity in Vermont that is beyond an applicant's organic or background growth and that would not occur, would not occur in Vermont, or would occur in a significantly different and less desirable manner, except for the incentive provided.
Eligibility and Benefits	
Does the Incentive Program make any notion of specific eligibility criteria and if so,	There are no restrictions on the type or size of company that can apply or the number of jobs that must be created. However, this Incentive Program is performance-based. This implies the incentive can only be awarded if the

State and Incentive Program	Vermont - Vermont Employment Growth Incentive (VEGI)
which are the most frequently mentioned ones?	following conditions, which are approved and stated in the Final Application, are met: 1) Base full-time payroll is maintained or increased (i.e. pay-roll level of all full-time employees plus the New Qualifying Payroll to be added each year for subsequent years); 2) The New Qualifying Payroll performance requirement (i.e. aggregate annualized payroll of the New Qualifying Employees hired during the target year); and 3) Either the New Qualifying Employment (i.e. number of new qualified Employees) or the New Qualifying Capital Investment (i.e. level of qualifying capital Investments) performance requirement. A "Qualifying Job" is defined as new, full-time, permanent jobs located within Vermont for Vermont employees who will receive at least three employer-supported benefits (e.g. health care, dental care, paid vacation, paid holidays, other paid time off, retirement benefits) and who earn above the VEGI wage threshold. The VEGI Wage Threshold that applies to a project is 160% or 140% of the Vermont Minimum Wage for the year in which the project commences, depending on the LMA in which the project will occur.
What is the application procedure?	Authorization for the incentives occurs through application to the VEPC, which must determine if the company and project meet statutory approval requirements. During the application process, the VEPC Board must determine: 1) If the economic activity would not occur or would occur in a significantly different and significantly less desirable manner without the incentive; 2) If the economic activity will generate more incremental tax revenue for the state than is foregone through the incentive (cost-benefit modeling); and 3) If the company and economic activity meet a set of "quality control" program guidelines. Applicants must first file a Pre-Application to get an incentive estimate. Then, formal approval of the incentives by the VEPC Board can occur in two phases: Initial and Final. The Council may approve an Initial Application if the But For and Program Guidelines are met, and approve an incentive amount based on initial data from the company. If an application is given Initial Approval, the applicant must subsequently file a Final Application before the end of the calendar year to receive authorization of the incentives. The Final Application sets the annual performance measures that must be met to earn the incentive.
What are the available benefits?	The VEGI program is performance-based and calculated on a case-by-case basis. No incentive is paid when the incentives are approved (i.e. up-front).
Are the benefits capped?	For any calendar year, the total amount of incentives the VEPC is authorized to approve may not exceed $10,000,000.
What is the duration of the benefits?	The minimum number of years that can be covered by one application is one year while the maximum is five years. However, because the incentive earned in a given year is paid out over five years, the total period over which incentive installments can be paid to the company can be up to nine years.
Performance and Evaluation	
Does the Incentive Program have M&E systems and	Yes. Once authorized, applicants become claimants and use the same secure online system that is used for applications to file an annual incentive

State and Incentive Program	Vermont - Vermont Employment Growth Incentive (VEGI)
procedures in place?	claim which is examined by the Vermont Department of Taxes to ensure that annual performance requirements are met. The reporting consists of a claim form, an employee benefits form, and four MS Excel workbooks which must be completed and uploaded to show detailed employment, payroll and capital investment data supporting the claim.
Does the Incentive Program have clawback systems and procedures in place?	Yes. For Year 1 through Year 3, the company has a grace period of 24 months from the annual Performance Requirement deadline to meet the Performance Requirements and still earn the incentive. For Year 4, the grace period is 12 months. Year 5 has no grace period. If by the end of any grace period the Performance Requirements are not met, the incentive for the target year can never be earned and any remaining incentives are terminated.

Source: Investment Consulting Associates (ICA), based on Vermont Agency of Commerce & Community Development

Summary of how VEGI works



Source: Vermont Agency of Commerce & Community Development

Research and Development Assessment

Goals of Maine's Research and Development Programs

The State of Maine established its current R&D program in 2007. It seeks to encourage companies to create jobs and innovation throughout the State. As part of its wider program of economic development assistance, the R&D program focuses on technical advancement within existing and operating companies. The individual programs are the following:

- The Research Expense Tax Credit;
- The Research and Development Super Credit; and
- The High-Technology Investment Tax Credit.

These are all based on the Federal Credit for Increasing Research Activities of the Internal Revenue Code Section 41; qualifying for the Federal R&D Tax Credit is a pre-requisite. All are credits against State taxes.

Sales tax exemptions and loans for R&D activity are not examined here. Neither are venture capital programs. Sale tax exemption programs and loans are similar between states and are rarely differentiating incentives. Venture capital programs tend to nurture new ideas and businesses from within a state and not an attraction mechanism since young companies are rarely mobile and often have little financial substance.

Research Expense Tax Credit

This is a tax credit for qualified research expenses, including in-house and contracts, seeking to uncover technological information that can be used in developing new businesses or improving existing ones. Key components include:

- Based on excess of three-year base period;
- Credit limited to 5.0% of excess of qualified research plus 7.5% of basic research payment under IRC § 41(e)(1)(A);
- Limited to 100% of the first $25,000 in tax liability, plus 75% in excess of $25,000;
- May not reduce the tax due to less than zero; and
- Carry-forward period is up to 15 years.

The Research and Development Super Credit

This credit is in addition to the Research Expense Tax Credit for larger increases over the base year period. Key components include:

- Applies to qualified research that exceeds the average Maine research expense for the three taxable years immediately preceding June 12, 1997, increased by 50%;
- Limited to tax years beginning before January 1, 2014;
- Credit is limited to 50% of the tax otherwise due after all other credits are taken;
- The credit cannot reduce the tax liability below amount due on the previous year after credits taken; and

- No carry-back, but can be carried forward up to ten years but in no event may the credit in any single year exceed 25% of the taxpayer's tax due after the allowance of any other credits.

High-Technology Investment Tax Credit

This credit is based on the adjusted basis of eligible high-tech equipment purchased or leased by the business engaged primarily in high year activities. "High-technology activity" refers to the design, creation and production of computer software, computer equipment, supporting communications components and other accessories that are directly associated with computer software and computer equipment and the provision of internet access services and advanced telecommunications services. This includes:

- Purchasers and lessors of eligible equipment may qualify for this credit;
- "Eligible equipment" is defined as all computer equipment, electronics components and accessories, communications equipment and computer software placed into service in Maine and used primarily in high-technology activity (certain transmission conditions apply);
- The credit cannot reduce the tax liability below amount due on the previous year after credits taken;
- No carry-back, but can be carried forward up to five years; and
- Except for the credit allowed with respect to the carry-over of unused credit amounts, the tax credit does not apply to tax years beginning on or after January 1, 2016.

The State also has full or partial sales tax exemption programs for machinery and equipment related to manufacturing, R&D, custom computer programming, fuel and electricity and biotechnology.

Maine Technology Institute

In 1999 the state established the Maine Technology Institute (MTI) to encourage the growth of technology companies that create high-quality jobs. Funded by the Department Economic and Community Development (DECD), MTI is a private, non-profit organization and offers assistance in the form of early-stage capital, loans and grants, as well as commercialization assistance. The center, based at the Brunswick Landing Campus, focuses its effort on seven technology sectors leveraging off strengths in knowledge and skill sets within the State:

1. Biotechnology – genetics, genomics, diagnostic products;
2. Composites and Advanced Materials –boat building, industrial and renewable energy;
3. Environment Technologies – services and engineering;
4. Forest Products & Agriculture – variations on tradition product lines, biofuels, bioplastics, specialty and locally-produced foods and beverages;
5. Information Technology – geospatial technologies, new media, bioinformatics and application to other clusters;
6. Marine Technology and Aquaculture – sustaining and preserving fisheries; and
7. Precision Manufacturing – metal products and electronics, network development, training and certification in aviation manufacturing, and bio manufacturing.

These seven technology sectors represent a mix of mature as well as emerging industries. Though the focus of the center is on new technology and the companies that are being created to develop them, the State actively pursues to develop clusters in these seven technology sectors to contribute to sustainable economic growth and competitiveness. Maine does so by nurturing and strengthening cluster development across these seven sectors, which includes (financial, fiscal and technical) support to encourage expansion of research and development, expansion the workforce, creation of new firms and the development to networks and alliances for financing and product development.

Through its range of financial instruments and products (i.e. funds, grants and loans), MTI supports entrepreneurs and companies with accelerating their progress to the market, leverage additional private and public investment, and ultimately, support their success while expanding their economic impact in Maine. MTI's core activities revolve around three critical stages in the business life cycle, being funding, growing and connecting.

Fund

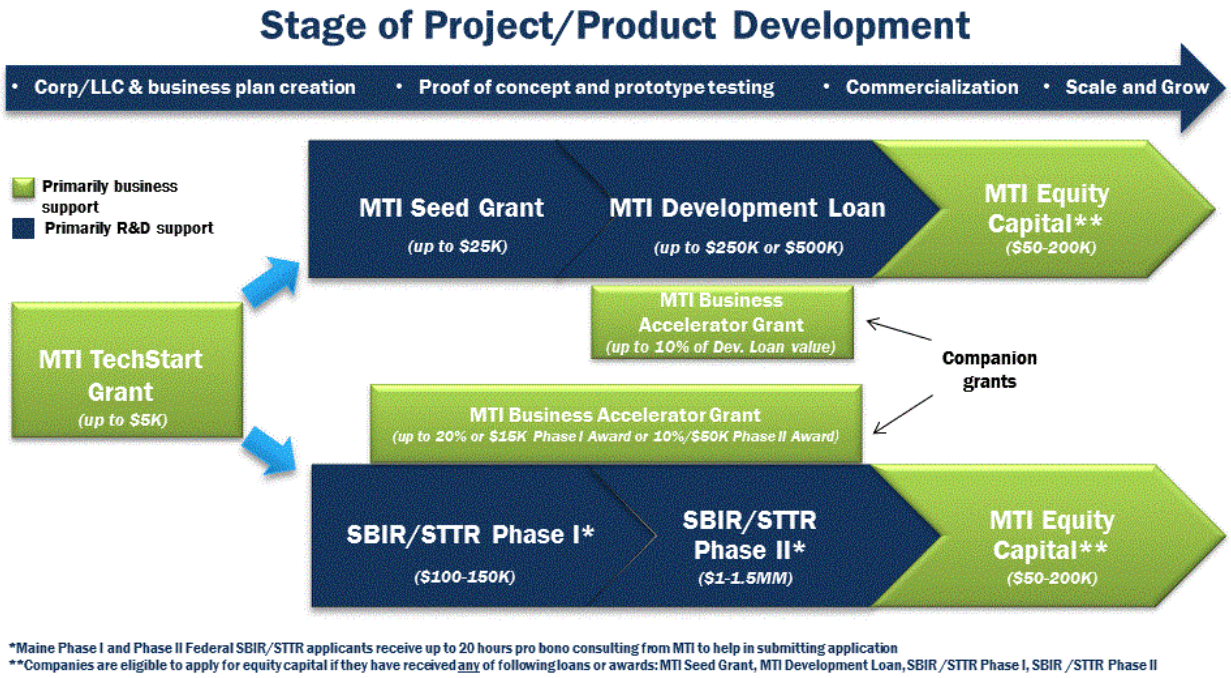
Within MTI, the Business Ventures Group administers funds geared towards investment in innovative companies and research institutions that are developing products and process that have commercial potential.

One of the key activities of the Business Ventures Group is the management of the Business Innovation Program, which supports technology-based Maine businesses along their development cycle of bringing new products to market while simultaneously accelerating their capacity for profitability and growth.

The Business Innovation Program first and foremost provides its recipients with greater access to coaching and capital for growing businesses. With regards to the seven technology sectors, the Business Innovation Program looks to support companies in Maine's traditional industries such as precision manufacturing, forestry and agriculture as well as emerging industries such as biotechnology and information technology. This includes:

- TechStart Grant;
- Seed Grant;
- Development Loan;
- Business Accelerator Grant;
- Equity Capital; and
- Technical Assistance to help secure the next stages of funding through traditional means, angel investors or other sources in the R&D stages (e.g. national Small Business Innovation Research (SBIR) program and Phase 0 KickStarter).

Components of MTI's Business Innovation Program



Source: Maine Technology Institute (2016)

Besides the Business Innovation Program, MTI also administers the Cluster Initiative Program, Renewable Energy Technology Fund and the State's bond fund, Maine Asset Technology Fund. In the past, MTI also managed the Marine Research Fund and Biotechnology Research Fund (both closed).

Grow

Moving beyond the funding phase of innovative and promising companies, MTI also supports companies in their expansion phase. Working with a team of experienced business executives, active investors and resource organizations across the state, MTI offers and links entrepreneurs to assistance to help them create profitable enterprises, raise follow-on capital and grow meaningful jobs in Maine. To support the growth of businesses, MTI supports promising and expanding companies with preparing proposals for funding applications, accommodating award and performance measures and developing collaboration networks to guarantee growth of the business after MTI-support has phased out.

In order to support companies with their expansion ambitions, MTI organizes GROW workshops and webinars where GROW advisors mentor, train and provide counseling opportunities. Other MTI support events include annual events, panels, MTI and Maine Angels Network Mentoring and the SBIR Technical Assistance Program. Finally, the Maine Accelerates Growth Initiative ("MxG") - a new consortium to support the increased growth in Maine's innovation, startup and creative technology community - has been established as a successor of the successful Blackstone Accelerates Growth ("BxG").

Connect

Even though some program supporting the funding and growing phases of innovative and promising companies support the creation of networks, a number of initiatives have been developed that focus

exclusively on connecting mentors and partner organizations. A consortium consisting of technology trade associations, leading business executives, active investors, resource organizations across the state, and MTI offers and links entrepreneurs to assistance to help them create profitable enterprises, raise follow-on capital and grow meaningful jobs in Maine.

To successfully connect entrepreneurs and companies with other organizations, MTI has forged partnerships with a number of other economic development organizations, educational institutions and fund managers across the state, including Maine Department of Economic and Community Development (DECD), Maine International Trade Center (MITC), Maine Venture Fund (MVF), Maine's Public Universities/University of Maine System, Maine Procurement Technical Assistance Center (PTAC), Maine Center for Entrepreneurial Development (MCED), Maine Small Business Development Centers (SBDC) and Maine Manufacturing Extension Partnership (MEP).

Competitive State Programs

From the latest version of the Incentive Transparency Index (Benchmark 4 of the Economic Development Assessment section), it appears Maine ranks among the bottommost states in terms of transparency of its incentive programs. Remarkable is the modest performance of a number of New England states since Maine, with a 44th rank, ranks similar to its New England peers Vermont (43rd), Rhode Island (46th) and New Hampshire (47th). This calls for a further investigation into the distinctive incentive programs and the characteristic features these competing states offer. The selection of Vermont, Rhode Island and New Hampshire for the competitive state incentive programs benchmark is furthermore justified given their modest economic size and structure, which is similar to that of Maine and the comparable economic position of these four states within New England. Also, as can be concluded from the Incentive Productivity Benchmark (Benchmark 3 of the Economic Development Assessment section), Maine's incentive productivity can be grouped together with that of New Hampshire, Rhode Island and Vermont.

This competitive state incentive programs benchmark is structured as follows. The first section introduces the incentive regimes across the three competitive benchmark states after which the focus exclusively shifts to R&D incentive programs. Per state, one key R&D incentive programs has been selected and evaluated in-depth.

To safeguard consistency, a customized template has been designed to compare these selected competitive incentive programs across state borders. This template consists of multiple questions which have been categorized according to three components: Structure and Targets, Eligibility and Benefits and Performance and Evaluation. The R&D incentive programs that have been benchmarked by means of this template have been selected based on their uniqueness and competitiveness in combination with the fiscal and financial impact for potential recipients. A total of three of competitive R&D incentive programs have been selected to be benchmarked:

- New Hampshire's Research and Development Tax Credit;
- Rhode Island's Research and Development Expense Credit; and
- Vermont's Research and Development Tax Credit.

The most prominent incentive programs New Hampshire, Rhode Island and Vermont offer have been summarized in the table below. The incentive programs have been grouped according to the type of incentive. A broad distinction can be made between direct financial or fiscal incentives (e.g. tax credits and cash grant) as opposed to indirect incentives (e.g. technical incentives). Direct incentives can be further grouped into investment incentives, land and infrastructure incentives, training and employment incentives and incentives related to R&D. Indirect incentives can be split into regulatory and administrative incentives on the one hand and technical incentives on the other hand. For this section, the focus will solely be on the R&D incentives as marked in green in the table below.

Overview of key incentive programs of New Hampshire, Rhode Island and Vermont

	Type of Incentive	New Hampshire	Rhode Island	Vermont
Direct Fiscal and Financial Incentives	**Investment Incentives** Provision of financing options primarily aimed to offset capital expenditures required for start-up, upgrade and/or stabilization of operation(s)	Economic Revitalization Zone Tax Credit New Hampshire Business Finance Authority Loans and Guarantees	Rebuild Rhode Island Tax Credit I-195 Redevelopment Fund Tax Increment Financing Non-Manufacturing Investment Tax Credit Manufacturing Investment Tax Credit High Performance Manufacturing Investment Tax Credit Innovation Tax Credit	Brownfield Redevelopment Grants
	Land and Infrastructure Incentives Reduced rates and/or direct provision of land, public utilities or transportation granted for specific investments			Economic Development Incentive Program (EDIP)
	Training and Employment Incentives Subsidized training programs and education subsidies to reduce investors' training costs to develop workforce skills	Coos County Job Tax Credit New Hampshire Job Training Fund	Qualified Jobs Incentive Tax Credit Anchor Institution Tax Credit Real Jobs Rhode Island Wavemaker Fellowship Job Training Tax Credit	Employment Growth Incentive (VEGI) Vermont Training Program Workforce Employment Training Fund (WETF)
	R&D Incentives Grants, credits and lending instruments to support investments in R&D and innovation	New Hampshire R&D Tax Credit	R&D Expense Credit R&D Property Credit Elective Deduction for	Vermont R&D Tax Credit

	Type of Incentive	New Hampshire	Rhode Island	Vermont
Indirect Incentives			R&D Facilities R&D Sales Tax Exemptions Innovation Vouchers Industry Cluster Grants Innovation Networking Matching Grants Innovate Rhode Island Small Business Fund	
	Regulatory and Administrative Incentives Grating exceptions from rules and regulations in combination with streamlined and simplified administrative procedures			
	Technical Incentives Investment facilitation services, information provision and aftercare to ensure a "soft landing" of the investment project or further expansion	New Hampshire Procurement Technical Assistance Program (NH PTAP) New Hampshire Manufacturing Extension Partnership (MEP)	Small Business Assistance Program	Vermont Procurement Technical Assistance Center (VT PTAC) Vermont Global Trade Partnership (VGTP)

Source: Investment Consulting Associates (ICA)

New Hampshire

The only exclusive R&D incentive program offered within New Hampshire is the New Hampshire Research and Development Tax Credit. This incentive consists of a direct fiscal incentive which allows companies to deduct R&D expenses against business profits and enterprise taxes.

Competitive State Incentive Benchmark Template – Research and Development (R&D) Tax Credit (NH)

State and Incentive Program	New Hampshire - Research and Development (R&D) Tax Credit
Structure and Targets	
Is the program traceable (i.e. transparent)?	Yes. The Incentive Program is listed on the website of the New Hampshire Department of Revenue Administration.
Is the Incentive Program guided by a dedicated Law or Statue?	Chapter 162-P Research And Development Tax Credit Program and Chapter 77-A:5 Credits.
In which year has the Incentive Program been established and/or updated?	Last revised in 2013 through Senate Bill 1. This revision increased the award to $2,000,000, effective on May 20th, 2013, and repealed the prospective repeal date of the credit (which had been set at July 1st, 2015).
Which institution or organization is responsible for implementing the Incentive Program?	New Hampshire Department of Revenue Administration.

State and Incentive Program	New Hampshire - Research and Development (R&D) Tax Credit
Is the Incentive Program location-bound?	No.
Does the Incentive Program target specific sector(s), and if so, what are they?	Apart from companies undertaking research and development, no clear sector approach has been taken.
What is the policy objective of the Incentive Program?	Supporting businesses with undertaking research and development.
Eligibility and Benefits	
Does the Incentive Program make any notion of specific eligibility criteria and if so, which are the most frequently mentioned ones?	Yes. The tax credit is for expenditures made or incurred during the fiscal year for "qualified manufacturing research and development". Expenditures related to "qualified manufacturing research and development" are defined as wages paid or incurred to an employee of the business organization. Such wages: 1) Shall be treated as wages for qualified research expenses under section 41(b) of the United States Internal Revenue Code; 2) Are paid or incurred because of services undertaken for the purpose of discovering information which constitutes qualified research and development of a new or improved manufacturing process or business component of the business organization; and 3) Qualify and are reported as a credit by the business organization under section 41 of the United States Internal Revenue Code.
What is the application procedure?	Applicants need to fill out the Research and Development Tax Credit Application Form DP-165. Applications for the first fiscal year of the credit shall be filed with the Department of Revenue Administration on or before June 30 following the tax year during which the research and development occurred. The Department will send acknowledgement letters to all applicants by July 31. Applicants will be notified of tax credit amounts granted to them by September 30.
What are the available benefits?	A tax credit to cover expenditures of research and development. The credit is first applied against the business profits tax. Any remainder may be applied against the business enterprise tax. The tax credit is calculated at 10% of the business organization's qualified manufacturing research and development expenditures for the taxable year. A total budget of $2,000,000 has been allocated for R&D tax credits across New Hampshire per fiscal year. In the event that the aggregate amount of tax credits applied for, in any given fiscal year, exceeds $2,000,000, all credits for that year shall be reduced proportionately.
Are the benefits capped?	Yes. The amount of the credit shall be the lesser of 10% of the business organization's qualified manufacturing research and development expenditures for the taxable year over the base amount or $50,000.
What is the duration of the benefits?	Unused portions of the credit may be carried forward for up to five years.
Performance and Evaluation	
Does the Incentive Program have M&E systems and procedures in place?	Not explicitly mentioned.
Does the Incentive Program have clawback systems and procedures in place?	Not explicitly mentioned.

Source: Investment Consulting Associates (ICA), based on New Hampshire Economic Department

Rhode Island

Out of the three peer states, Rhode Island offers the largest number of R&D incentive programs. Rhode Island offers a number of tax credits, deductions and exemptions directly related to the costs of conducting research and development:

R&D Expense Credit: a tax credit of 22.5% for increases in qualified research expenses. Unused credits may be carried forward for up to seven years.

R&D Property Credit: a tax credit of 10.0% for expenditures paid or incurred for the construction, reconstruction or acquisition of any property that is principally used or to be used for R&D in the experimental or laboratory sense. The property must be owned, depreciable and have a useful life of three years or more. Similar to the R&D Expense Credit, unused credit may be carried forward for up to seven years.

Elective Deduction for R&D Facilities: Instead of depreciation or the investment tax credit, a taxpayer is allowed a one-year write-off for expenditures paid or incurred during the taxable year for the construction, reconstruction or acquisition of all qualifying depreciable tangible property, including buildings, which is used or to be used for the purpose of R&D in the experimental or laboratory sense. The deduction is allowed under the corporate income tax.

R&D Sales Tax Exemption: exemption of Rhode Island Sales and Use Tax that normally would have been applied for the sales or use of scientific equipment, computers, software and related items to a qualifying firm to be used predominantly for research and development purposes.

Apart from these R&D incentive programs, Rhode Island offers multiple grant programs that fund R&D assistance, partnerships and co-operation. The main R&D grant program is the Industry Cluster Grants, which consist of grants from $75,000 up to $250,000 to fund planning and organization of innovative industry clusters and grants from $100,000 up to $500,000 to implement programs that strengthen the capacities of the cluster (e.g. R&D, workforce development marketing, transfer of technologies).

Other R&D grant programs include the Innovation Vouchers (grants of up to $50,000 to fund R&D assistance from a Rhode Island university, research center or medical center), Innovation Networking Matching Grants (co-investment grants starting at $50,000 for small business development in technical assistance, access to capital or space on flexible terms) and the Innovative Rhode Island Small Businesses Fund (grants of up to $3,000 offsetting the costs associated with SBIR/STTR Phase I applications and matching grants of up to $45,000 to encourage SBIR/STTR Phase I recipients to apply for more substantial SBIR/STTR Phase II awards).

Competitive State Incentive Benchmark Template – Research and Development (R&D) Expense Credit (RI)

State and Incentive Program	Rhode Island - Research and Development (R&D) Expense Credit
Structure and Targets	
Is the program traceable (i.e. transparent)?	Yes. The Incentive Program is listed on the website of the Rhode Island Commerce Corporation.
Is the Incentive Program guided by a dedicated Law or	Regulation CR 03-07 Research and Development Expenses Credit and Rhode Island General Laws § 44-32-3 Credit for Qualified Research Expenses.

State and Incentive Program	Rhode Island - Research and Development (R&D) Expense Credit
Statue?	
In which year has the Incentive Program been established and/or updated?	This regulation has been effective as of January 1, 2003 and amends and supersedes regulation CR 96-07 promulgated January 1, 1996.
Which institution or organization is responsible for implementing the Incentive Program?	Division of Taxation of the Rhode Island Department of Revenue.
Is the Incentive Program location-bound?	No.
Does the Incentive Program target specific sector(s), and if so, what are they?	Apart from companies that carry out research, no specific sectors are targeted.
What is the policy objective of the Incentive Program?	Not specifically mentioned but generally support companies with conducting R&D.
Eligibility and Benefits	
Does the Incentive Program make any notion of specific eligibility criteria and if so, which are the most frequently mentioned ones?	The credit is available to corporations, sole proprietors, or passed through from partnerships, joint ventures or subchapter S corporations for qualified research expenses. The qualified research expenses are equal to the qualified research expenses of the Federal R&D Tax Credit defined in section 41 of the Internal Revenue Code, provided, however, that such expenses shall have been incurred in Rhode Island after July 1, 1994.
What is the application procedure?	Filling out Form RI-7695E in addition to Federal Form 6765 - Credit For Increasing Research Activities and Form RI-1120C.
What are the available benefits?	In addition to the Federal R&D Tax Credit, this program provides a 5% credit of the excess (if any) of the qualifying research expenses in the taxable year over the base period research expenses. The qualifying research expenses must have been incurred in Rhode Island after July 1, 1994. For periods January 1, 1998 and thereafter, the credit is 22.5% for qualified research expenses up to $111,111 and 16.9% for the remaining expenses over $111,111.
Are the benefits capped?	The tax credit rate is reduced from 22.5% to 16.9% if the remaining qualified research expenses exceed $111,111 (for the period from January 1, 1998 onwards). In addition, the R&D Property Credit and Investment Tax Credit shall be used before this credit. The credit is limited to one-half the tax otherwise payable after all other credits available to the taxpayer have been used.
What is the duration of the benefits?	Unused credits may be carried forward for up to seven years.
Performance and Evaluation	
Does the Incentive Program have M&E systems and procedures in place?	Not explicitly mentioned.
Does the Incentive Program have clawback systems and procedures in place?	Not explicitly mentioned.

Source: Investment Consulting Associates (ICA), based on Rhode Island Commerce Corporation

Vermont

Similar to New Hampshire, Vermont offers only one incentive program that is exclusively geared towards encouraging R&D. The Vermont R&D Tax Credit is complementary to the Federal R&D Tax Credit and may equal up to 27.0% of the Federal R&D Tax Credit allowed in the taxable year. Eligibility criteria are similar to those of the Federal R&D Tax Credit which are defined under section 41 of the United States Internal Revenue Code. Contrary to New Hampshire, where the tax credit may be carried forward up to 5 years if the credit cannot be applied in the year earned, the taxpayer in Vermont can carry forward the credit for up to 10 years.

Competitive State Incentive Benchmark Template – Research and Development (R&D) Tax Credit (VT)

State and Incentive Program	Vermont - Research and Development (R&D) Tax Credit
Structure and Targets	
Is the program traceable (i.e. transparent)?	Limited information is available on the website of the Department of Taxes and the Vermont Agency of Commerce & Community Development.
Is the Incentive Program guided by a dedicated Law or Statue?	The tax credit has been enacted by Vermont's General Assembly but no dedicated Law or Statue is explicitly mentioned.
In which year has the Incentive Program been established and/or updated?	The tax credit was enacted by the Vermont General Assembly in 2009 and is effective for tax years 2011 onwards.
Which institution or organization is responsible for implementing the Incentive Program?	Department of Taxes.
Is the Incentive Program location-bound?	No.
Does the Incentive Program target specific sector(s), and if so, what are they?	Apart from companies that carry out research, no specific sectors are targeted.
What is the policy objective of the Incentive Program?	First and foremost, the credit is expected to spur innovation and economic growth by promoting investment in R&D jobs. In addition, due of the previous recession, Vermont expects future federal government R&D tax credits to run on the low side.
Eligibility and Benefits	
Does the Incentive Program make any notion of specific eligibility criteria and if so, which are the most frequently mentioned ones?	Vermont companies that make eligible R&D expenditures in Vermont can claim this tax credit. Eligible R&D investments are the same as those defined by the Federal R&D Tax Credit under Section 41(a) of the IRS Code but must have been made within Vermont. This credit can be applied against personal income tax or business or corporate income tax.
What is the application procedure?	Not explicitly mentioned.
What are the available benefits?	A tax credit equal to 30.0% of the Federal R&D Tax Credit allowed in the taxable year. However, it seems the tax credit rate has recently been reduced to 27.0% of the Federal R&D Tax Credit.
Are the benefits capped?	No.
What is the duration of the benefits?	Unused credits may be carried forward for up to ten years.
Performance and Evaluation	

State and Incentive Program	Vermont - Research and Development (R&D) Tax Credit
Does the Incentive Program have M&E systems and procedures in place?	Not explicitly mentioned. However, the Department of Taxes publishes an annual overview of companies that have filed a claim for this tax credit.
Does the Incentive Program have clawback systems and procedures in place?	Not explicitly mentioned.

Source: Investment Consulting Associates (ICA), based on Vermont Agency of Commerce & Community Development