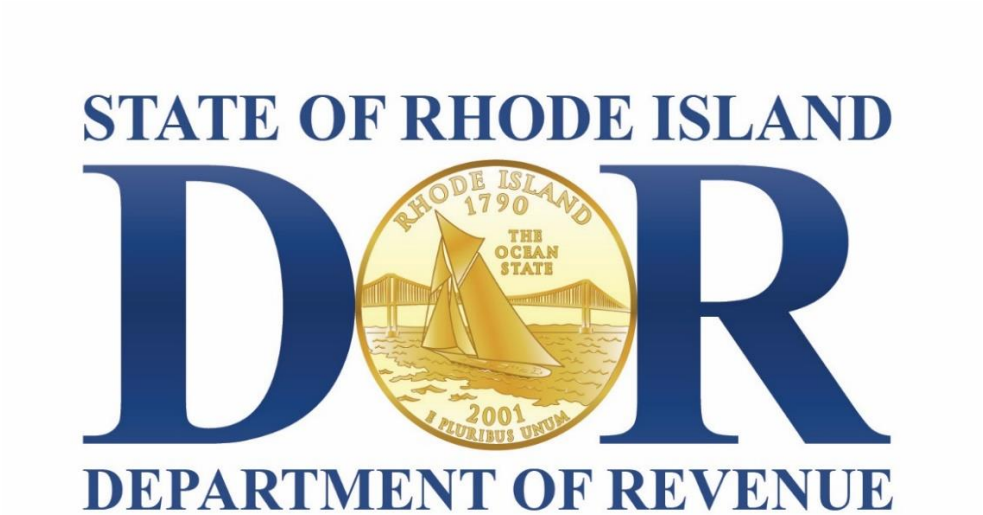
STATE OF RHODE ISLAND

Governor Daniel J. McKee



Economic Development Tax Incentives Evaluation Act:

Evaluation of

Research & Development Tax Incentive Programs

(including "New Research & Development Facilities Deduction", "Research & Development Property Credit" and "Research & Development Expense Credit")

(R.I. Gen. Laws §§ 44-32-1, 44-32-2, & 44-32-3)

Tax Years 2019 through 2021

Office of Revenue Analysis

August 16, 2024

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Foreword

The evaluation of the Research and Development Tax Incentives, *Tax Years 2019 through 2021* was prepared at the request of Matthew McCabe, Chief of the Rhode Island Department of Revenue, Office of Revenue Analysis in accordance with R.I. Gen. Laws § 44-48.2-4. Madiha Zaffou, Ph.D., Deputy Chief in the Office of Revenue Analysis was project leader for the production and writing of this report, under the guidance of Mr. McCabe. Ms. Zaffou was assisted by Anoushka Mohnot, Senior Economic & Policy Analyst in the Office of Revenue Analysis.

Much of the information needed to complete the analysis contained in this report was provided by the Rhode Island Department of Revenue, Division of Taxation, under the direction of Neena Sinha Savage, Esq., State Tax Administrator. The compilation of the data that was provided to the Office of Revenue Analysis was due to the tremendous efforts of Tracy Wunder, Data Analyst III in the Division of Taxation. Tracy was assisted in this task by Donna Dube, Assistant Tax Chief, Forms, Credits, and Incentives.

The Office of Revenue Analysis is appreciative of the efforts made by the Division of Taxation to provide us with the best information available at the time this report was written.

Executive Summary

This report is the third evaluation of the Research & Development Tax Incentives (R&D tax incentives) conducted by the Department of Revenue, Office of Revenue Analysis (ORA) in accordance with Rhode Island General Laws (R.I. Gen. Laws) Chapter 44-48.2.[1] The report provides an estimate of the economic and fiscal impacts of this tax incentive for tax years 2019 through 2021. ***ORA found that the R&D tax incentives break even if at least 27.7% of the jobs of the credit recipients are new jobs that exist because of this tax incentive.*** ORA relied primarily on data provided by the Department of Revenue, Division of Taxation (Taxation) to conduct the analysis. The following is a summary of this evaluation:

The Tax Incentive Provision:

R.I. Gen. Laws Chapter 44-32, entitled "Elective Deduction for Research and Development Facilities" establishes three tax incentive programs related to taxpayers engaged in research and development, as follows:

- The "Elective deduction against allocated entire net income," which establishes the program referred to in this report as the "New Research and Development Facilities Deduction." This section provides for a deduction against the tax imposed by R.I. Gen. Laws Chapter 44-11 (entitled "Business Corporation Tax") and Chapter 44-30 ("Personal Income Tax") for all expenditures paid or incurred for the construction, reconstruction, erection, or acquisition of any new tangible property that is depreciable, was acquired by purchase, is located in the state, and is used in the taxpayer's trade or business for purposes of research and development in the experimental or laboratory sense. This deduction is in lieu of depreciation or the Investment Tax Credit (R.I. Gen. Laws Chapter 44-31). The deduction is not refundable and has no provision for carryforward.
- The "Credit for research and development property acquired, constructed, or reconstructed after July 1, 1994," establishes the program referred to in this report as the "Research and Development Property Credit." Under this section, a taxpayer is allowed a credit against the tax imposed by R.I. Gen. Laws Chapters 44-11 (entitled "Business Corporation Tax") and 44-17 ("Taxation of Insurance Companies") for tangible personal property and other tangible property, including buildings and structural components of buildings that is acquired, constructed, or reconstructed, or erected after July 1, 1994. The amount of credit is equal to 10% of the cost or other basis of the property for federal income tax purposes. The credit allowed cannot reduce the tax due for corporations to less than the minimum tax as set in R.I. Gen. Laws § 44-11-2(e). Unused amounts of the credit earned in a taxable year may be carried forward for seven tax years.
- The "Credit for qualified research expenses," establishes the program referred to in this report as the "Research and Development Expense Credit." Under this section, a taxpayer is allowed a credit against the tax imposed by R.I. Gen. Laws Chapters 44-11 (entitled "Business Corporation Tax") and 44-17 ("Taxation of Insurance Companies") for the

[1] Previous evaluations of this program can be accessed at https://dor.ri.gov/revenue-analysis/reports

excess, if any, of the qualified research expenses for the taxable year over the base period research expenses, where qualified and base period research expenses are as defined in 26 U.S.C. § 41. The amount of credit is equal to 22.5% of expenses for the first $25,000 worth of credit taken (which equates to expenses up to $111,111) and 16.9% of expenses for any amount of applicable credit above $25,000 (which equates to expenses above $111,111). The credit allowed cannot reduce the tax due for any taxable year by more than 50% of the tax liability that would be payable and for corporations to no less than the minimum tax as set in R.I. Gen. Laws § 44-11-2(e). Unused amounts of the credit earned in a taxable year may be carried forward for seven tax years.

- As of January 1, 2011, the Research and Development Property Credit and Research and Development Expense Credit are no longer allowed against the Rhode Island personal income tax imposed by R.I. Gen. Laws Chapter 44-30.

The Main Goals and Objectives of the Tax Incentive:

Statutory and programmatic goals and the intent of the New Research and Development Facilities Deduction, Research and Development Property Credit, and Research and Development Expense Credit are not defined in the enabling statute.

The Report's Key Findings:

- Rhode Island's economy includes a relatively low level of R&D spending at 1.2% of GDP averaged across TY 2019 through 2021, much lower than neighboring states and lower than the national share of 2.5%.
- The average New R&D Facilities Deduction claimed in tax years 2019-2021 was $8,841 based on data provided by Taxation.
- According to Taxation, an average of 75 companies received the R&D tax credits (i.e., the R&D Property Credit and R&D Expense Credit) with an average tax savings amount of $4,520,669 over tax years 2019 through 2021.
- In an average year, 30.2% of R&D tax credits recipients were companies operating in manufacturing industries using 22.0% of the total R&D amounts. Conversely, 69.8% of R&D tax incentives recipients were companies operating in non-manufacturing industries, using 78.0% of the amount of R&D tax credits in tax years 2019 through 2021.
- On average, the value of the R&D tax incentives represents 82.1% of the total state tax incentives received by firms that utilize the R&D tax incentives. In an average tax year 2019-2021, for every $1.00 of R&D tax incentives claimed, the same taxpayers claim an additional $0.22 in other tax credits.
- Taxation reported an average of 22,822 employees working for R&D tax incentives beneficiary firms across different industries over tax years 2019 through 2021.
- Recipients of the R&D tax incentives paid their employees an average annual median wage that is higher than the annual median wage reported by the U.S. Bureau of Labor Statistics (BLS) in 2019-2021 for all occupations in Rhode Island.
- Under the assumption that R&D tax incentives are 100% responsible for taxpayer behavior, one dollar of investment in R&D tax incentives returned $3.76 in state revenues.

- ORA conducted a "break-even" analysis to estimate the minimum percentage of the net economic activity created by the tax incentive beneficiaries that would have to be new to the Rhode Island economy, and thus, would not exist without the tax incentive, for the tax benefit to "pay" for itself.
    - ORA estimated these minimum percentages as follows:
        i. With respect to Rhode Island net general revenues, the R&D tax incentives break even if at least 27.7% of the economic activity directly related to the provision of the tax incentive would not have occurred without the tax incentive.
        ii. With respect to Rhode Island employment, the R&D tax incentives break even if at least 1.6% of the economic activity directly related to the tax incentive's utilization would not have resulted except for the tax incentive.
        iii. With respect to Rhode Island Gross Domestic Product, the R&D tax incentives break even if at least 1.4% of the economic activity directly related to the availability of the tax incentive would not have occurred without the tax incentive being available.

Overall Assessment and Recommendations:

ORA recommends that the R&D tax incentives program be retained and modified as follows:

- Extend the carryforward period beyond seven years to ensure taxpayers with limited tax liability can still benefit.
- Consider repealing the two lesser used incentives, the New R&D Facilities Deduction and the R&D Property Credit.
- Add a sunset provision, a tax incentive best practice.
- Establish clear statutory goals and require entities to report more detail R&D expenditure data (currently only captured on federal forms) to aid in evaluation.

Part I: Introduction

Pursuant to Rhode Island General Laws § 44-48.2-4, titled *Rhode Island Economic Development Tax Incentives Evaluation Act of 2013,* the Chief of the Office of Revenue Analysis (ORA) is required to produce a report that contains analyses of economic development tax incentives as listed in R.I. Gen. Laws § 44-48.2-3(1). According to R.I. Gen. Laws § 44-48.2-4(1), the report "[s]hall be completed at least once between July 1, 2014, and June 30, 2017, and no less than once every three (3) years thereafter."

The additional analysis as required by R.I. Gen. Laws § 44-48.2-4(1) shall include, but not be limited to the following items as indicated in R.I. Gen. Laws § 44-48.2-5(a):

1) A baseline assessment of the tax incentive, including, if applicable, the number of aggregate jobs associated with the taxpayers receiving such tax incentive and the aggregate annual revenue that such taxpayers generate for the state through the direct taxes applied to them and through taxes applied to their employees;
2) The statutory and programmatic goals and intent of the tax incentive, if said goals and intentions are included in the incentive's enabling statute or legislation;
3) The number of taxpayers granted the tax incentive during the previous twelve-month (12) period;
4) The value of the tax incentive granted, and ultimately claimed, listed by the North American Industrial Classification System (NAICS) Code associated with the taxpayers receiving such benefit, if such NAICS Code is available;
5) An assessment and five-year (5) projection of the potential impact on the state's revenue stream from carry forwards allowed under such tax incentive;
6) An estimate of the economic impact of the tax incentive including, but not limited to:
    i. A cost-benefit comparison of the revenue forgone by allowing the tax incentive compared to tax revenue generated by the taxpayer receiving the credit, including direct taxes applied to them and taxes applied to their employees;
    ii. An estimate of the number of jobs that were the direct result of the incentive; and
    iii. A statement by the Chief Executive Officer of the Commerce Corporation, as to whether, in his or her judgment, the statutory and programmatic goals of the tax benefit are being met, with obstacles to such goals identified, if possible;[2]
7) The estimated cost to the state to administer the tax incentive if such information is available;
8) An estimate of the extent to which benefits of the tax incentive remained in state or flowed outside the state, if such information is available;
9) In the case of economic development tax incentives where measuring the economic impact is significantly limited due to data constraints, whether any changes in statute would facilitate data collection in a way that would allow for better analysis;

[2] Public Law 2023 Chapter 294 § 7 and Chapter 295 § 7 removed the requirement for a statement from the CEO of the Commerce Corporation. ORA intends to voluntarily include these statements in this round of analysis and exclude them going forward.

10) Whether the effectiveness of the tax incentive could be determined more definitively if the General Assembly were to clarify or modify the tax incentive's goals and intended purpose;
11) A recommendation as to whether the tax incentive should be continued, modified, or terminated; the basis for such recommendation; and the expected impact of such recommendation on the state's economy;
12) The methodology and assumptions used in carrying out the assessments, projections and analyses required pursuant to subdivisions (1) through (8) of this section.

The current report is one part of a series of reports for each one of the tax credits to be analyzed according to R.I. Gen. Laws § 44-48.2-3(1). This report concerns the credits contained within R.I. Gen. Laws Chapter 44-32 entitled "Elective Deduction for Research and Development Facilities" containing sections 44-32-1 ("Elective Deduction against Allocated Entire Net Income"), 44-32-2 ("Credit for Research and Development Property Acquired, Constructed, or Reconstructed after July 1, 1994"), and 44-32-3 ("Credit for Qualified Research Expenses"). This report measures the economic impact associated with these R&D tax incentives during tax years 2019 through 2021. This analysis is performed at the micro level using employment and wages information provided by Taxation. The report is divided into five parts. Part I provides a detailed description of the tax incentives and related statutory programmatic goals and intents. Part II provides background and benchmarking analysis related to these tax incentive programs. Part III presents a description of the data provided and used in the analysis by ORA. Part IV assesses the economic impact generated under these R&D related tax incentives using a breakeven cost-benefit analysis. Part V discusses relevant policy recommendations that could help in the decision process as to whether these programs should be continued, modified, or terminated.

1. Description of the Incentive

R.I. Gen. Laws Chapter 44-32, entitled "Elective Deduction for Research and Development Facilities" establishes three tax incentive programs related to taxpayers engaged in research and development.

R.I. Gen. Laws § 44-32-1, entitled "Elective deduction against allocated entire net income," establishes the program referred to in this report as the "New Research and Development Facilities Deduction." This section provides for a deduction for all expenditures paid or incurred for the construction, reconstruction, erection, or acquisition of any new tangible property that is depreciable under Chapter 26 of the United States Code (26 U.S.C.) § 167, was acquired by purchase as defined in 26 U.S.C. § 179(d), is located in the state, and is used in the taxpayer's trade or business for purposes of research and development in the experimental or laboratory sense. The deduction shall be allowed against the portion of its entire net income allocated to Rhode Island during the taxable year. The deduction can be taken against the business corporation tax imposed by R.I. Gen. Laws Chapter 44-11 and the personal income tax imposed by R.I. Gen. Laws Chapter 44-30 and is in lieu of depreciation or the Investment Tax Credit (R.I. Gen. Laws Chapter 44-31). The deduction is not refundable and has no provision for carryforward.

R.I. Gen. Laws § 44-32-2, entitled "Credit for research and development property acquired, constructed, or reconstructed after July 1, 1994," establishes the program referred to in this report

as the "Research and Development Property Credit." Under this section, a taxpayer is allowed a credit against the business corporation tax imposed under R.I. Gen. Laws Chapter 44-11 and the taxation of insurance companies imposed by R.I. Gen. Laws Chapter 44-17 for tangible personal property and other tangible property, including buildings and structural components of buildings that is acquired, constructed, or reconstructed, or erected after July 1, 1994. The property must be depreciable or a recovery property as determined under 26 U.S.C. § 167 and § 168, have a useful life of at least three years, have a situs in the state, and used principally for purposes of research and development in the experimental or laboratory sense. The amount of credit is equal to 10% of the cost or other basis of the property for federal income tax purposes. The credit allowed cannot reduce the tax due for corporations to less than the minimum tax as set in R.I. Gen. Laws § 44-11-2(e). Unused amounts of the credit earned in a taxable year may be carried forward to not more than seven succeeding tax years.

R.I. Gen. Laws § 44-32-3, entitled "Credit for qualified research expenses," establishes the program referred to in this report as the "Research and Development Expense Credit." Under this section, a taxpayer is allowed a credit against the business corporation tax imposed under R.I. Gen. Laws Chapter 44-11 and the taxation of insurance companies imposed by R.I. Gen. Laws Chapter 44-17 for the excess, if any, of the qualified research expenses for the taxable year over the base period research expenses, where qualified and base period research expenses are as defined in 26 U.S.C. § 41. The amount of credit is equal to 22.5% on expenditures up to $111,111 and 16.9% on expenditures over $111,111. The credit allowed cannot reduce the tax due for any taxable year by more than 50% of the tax liability that would be payable and for corporations to no less than the minimum tax as set in R.I. Gen. Laws § 44-11-2(e). Unused amounts of the credit earned in a taxable year may be carried forward to not more than seven succeeding tax years.

As of January 1, 2011, the Research and Development Property Credit and Research and Development Expense Credit are no longer allowed against the Rhode Island personal income tax imposed by R.I. Gen. Laws Chapter 44-30.

2. Statutory and Programmatic Goals and Intent of the Tax Incentive

This information is unavailable. Statutory and programmatic goals and the intent of the New Research and Development Facilities Deduction, Research and Development Property Credit, and Research and Development Expense Credit are not defined in the enabling statute.

Part II: Background and Benchmarking

This background and benchmarking section presents information useful for understanding how Rhode Island research and development (R&D) tax incentive programs function and the economic environment in which they operate. Because state-level research and development tax incentives, including those offered by Rhode Island, are constructed in terms of federal rules and definitions, this section first presents information on the federal research tax credit and deduction programs. Next, this section compares Rhode Island research and development tax incentives with similar programs offered by selected comparison states. Finally, this section highlights levels and trends of research and development activity occurring in Rhode Island, selected comparison states, and nationwide.

To the extent that the availability of research and development-related tax incentives influences a multi-state firm's decision to conduct business activity in Rhode Island *vs.* a competitive out-of-state location, it is important to consider the economic conditions and tax incentive features of the Rhode Island R&D tax incentives to that of other states. For this purpose, ORA selected four comparison states: Massachusetts and Connecticut, Rhode Island's two neighboring states, in addition to California and Delaware, two national leaders in R&D. ORA identified these leading states as those with a research and development tax incentive comparable to Rhode Islands and the highest concentration of R&D activity after ranking all fifty states by their ratios of average R&D spending to average state gross domestic product in 2019 through 2021.[3]

Part III of this report reveals that nearly one third of Rhode Island research and development incentive recipients were companies operating in manufacturing industries. For additional information concerning levels and trends of manufacturing industries economic activity in Rhode Island, selected comparison states, and nationwide, please refer to the "Part II: Benchmarking and Background" of the previously published *Tax Incentives Evaluation Act Report* on "Investment Tax Credits."[4]

1. Federal Research Credit and Deduction Programs

Federal law per 26 U.S.C. §§ 41 and 174 provides relief to taxpayers engaged in R&D by establishing a tax credit and deduction to reduce the tax liability of businesses based on their level of qualified research expenditures. The Federal Credit for Increasing Research Activities ("Federal Research Credit) created by 26 U.S.C. § 41 is analogous to Rhode Island's R&D Property and Expense Credit programs. The Federal Research and Experimental Expenditure Deduction ("Federal Research Deduction") created by 26 U.S.C. § 174 allows for the immediate expensing of certain property investments related to R&D that would otherwise be subject to depreciation. The Federal Research Deduction is analogous to the Rhode Island New R&D Facilities Deduction program.

[3] For 2019 through 2021, Washington ranked 1st for R&D spending as a share of total GDP at 6.7%. California had the second highest R&D spending to total GDP ratio at 6.0%. However, Washington's R&D tax credit was eliminated in 2015. Massachusetts ranked 3rd at 5.7%. Michigan and Oregon followed with 4.0% and 3.8%, respectively, but neither has a R&D tax credit. Delaware ranks 6th with a R&D spending to total GDP ratio of 3.5%.

[4] Available at : http://www.dor.ri.gov/Reports/

Qualified research expenditures may consist of in-house research expenses (*e.g.*, wages paid to employees engaged in R&D or purchases of equipment related to R&D) as well as purchased research services (*e.g.*, professional or technical services purchased from an outside firm, contractor, or research consortium). Most, but not all, qualified research expenses can be included in the credit calculation formula at 100%.

Twenty-six U.S.C. § 41(d) and Chapter 26 of the Code of Federal Regulations (26 C.F.R.) § 1.41-4 establish a four-part test to determine if an expense shall be considered a qualified research expenditure:[5]

"The Section 174 Test" The expense must be related to the elimination of uncertainty concerning the development or improvement of a product. The qualifying activity must represent a research cost in the experimental or laboratory sense.

"The Discovering Technological Information Test" The process of experimentation used to discover information must fundamentally rely on principles of the physical or biological sciences, engineering, or computer science. The issuance of a patent as the result of the research activity is sufficient by itself, but not necessary, to satisfy this test.

"The Business Component Test" The taxpayer must intend to apply the new information being discovered to develop a new or improved product, process, computer software, formula, or invention. Research must be intended to improve function, performance, reliability, or quality of a business component and is not qualified if it relates to style, taste, cosmetic factors, or seasonal design. It is not acceptable for a taxpayer to group all research into a single broad category without identifying the specific business component to which the research activity relates.

"The Process of Experimentation Test" Qualified research must reflect the three core elements of a process of experimentation including:

1) Identify an aspect of uncertainty related to a product or business component,
2) Identify one or more alternatives intended to eliminate that uncertainty, and
3) Identify a process of evaluating the alternatives.

Expenditures qualifying as deductions under 26 U.S.C. § 174. must satisfy only the "Section 174" test above. Expenditures qualifying for tax credits under 26 U.S.C. § 41 must satisfy all four tests.

The Rhode Island R&D Property and Expense Credit programs generally conform with these federal definitions. The only additional stipulation is that Rhode Island deduction or credit-eligible expenditures must have situs or take place in Rhode Island.

[5] Four-part test description is paraphrased and quoted from "Audit Techniques Guide: Credit for Increasing Research Activities (i.e., Research Credit) IRC § 41 – Qualified Research Activities" Internal Revenue Service, June 2005, Available: https://www.irs.gov/businesses/audit-techniques-guide-credit-for-increasing-research-activities-i-e-research-tax-credit-irc-41-qualified-research-activities

The Federal Research Credit amount is calculated based on the amount of qualified research expenditures utilizing one of the following two formulas at the election of the taxpayer:[6]

The Regular Research Credit (RRC). This credit calculation methodology awards a tax credit equal to 20% of a taxpayer's qualified research expenditures in excess of the base amount. The base amount is equal to the percentage of a firm's gross receipts devoted to research expenditures during a historical base period[7] multiplied by the average annual gross receipts of the most recent four years.

The Alternative Simplified Credit (ASC). This simplified credit calculation is offered as an alternative to the RRC. This formula awards a tax credit equal to 14% of current year qualified research expenditures above the base amount, where the base amount is equal to 50% of the average annual amount of qualified research expenditures of the previous three tax years. If the taxpayer had zero qualified research expenditures in any of the three previous years, then the taxpayer may claim credit for 6% of the total qualified research expenditures for the current year.

By granting credit for only those expenditures above some base level, both formulas are intended to reward taxpayers only for incremental research activity, rather than subsidize research activity that may have happened anyway. The Rhode Island R&D Expense Credit is calculated based on the federally defined base period amount and current year qualified research expenditures amount according to whichever credit calculation method was elected by the taxpayer when filing their federal return.

2. Comparison of State Research and Development Credits

The following table compares the Rhode Island Research and Development Expense Credit to the federal Research Credit.

[6] This report intends to only present a general overview of the Federal Research Credit calculation procedure. The RRC calculation involves a detailed consideration of taxpayer characteristics and filing choices. For full calculation please refer to IRS Form 6765 and accompanying instructions available at: https://www.irs.gov/pub/irs-pdf/f6765.pdf and https://www.irs.gov/pub/irs-pdf/i6765.pdf

[7] The historical base period is typically a four-year period early in the existence of the firm. The exact years and assumptions used in this determination vary based on the taxpayer characteristics but is not allowed to exceed 16 percent. A detailed discussion of this calculation is beyond the scope of this report.

Comparison of the RI R&D Expense Credit to the Federal Research Credit

	Federal	RI
Tax Credit Rate	Statutory rate of 20% or 14% depending on credit calculation method*	22.5% on expenditures up to $111,111 and 16.9% on expenditures over $111,111
Eligibility of Business Type	C-Corporation, S-Corp, Partnership, S-Partnership subject to corporate or personal income tax	C-Corporations subject to business corporation tax or insurance company gross premiums tax
Carryforward Period	20 Years	7 Years
Carryback Period	None	None
Refundability	Generally non-refundable; total of Federal Research Credit and other business tax credits capped at 25% of liability for certain taxpayers; limited refundability available to qualifying start-ups for which credit is allowed to offset payroll taxes	Non-refundable; capped at 50% of liability; shall not reduce tax below minimum tax

Source: https://www.irs.gov/businesses/audit-techniques-guide-credit-for-increasing-research-activities-i-e-research-tax-credit-irc-41-table-of-contents; and R.I. Gen. Law § 44-32-3, updated April 23, 2024

* According to 26 U.S.C. § 280C, taxpayers claiming both the Federal Research Deduction and Credit simultaneously shall reduce the credit claimed by the amount of their deduction or elect to utilize a reduced credit rate equal to the full credit rate reduced by the statutory corporate tax rate (*i.e.*, During tax years 2016 and 2017, the federal corporate income tax rate was 35%; therefore, the credit rates for taxpayers electing the reduced rate calculation were 13% or 9.1% for RRC and ASC, respectively. In 2018, the federal corporate tax rate was lowered to 21%; therefore, the credit rates for taxpayers electing the reduced rate calculation were 10.3% (i.e., 0.20*(1-0.21)) and 7.2% (i.e., 0.14*(1-0.21)) for RRC and ASC, respectively). A 2016 U.S. Treasury Office of Tax Analysis Report indicates that 90% of taxpayers claiming both the Federal Research Deduction and Credit elect to utilize the reduced rate.[8]

As shown in the table above, Rhode Island's R&D Expense Credit is distinguished from the Federal Research Credit by its tiered credit rate. The Rhode Island credit provides a higher credit rate of 22.5% for the first $111,111 of qualified research expenses and a reduced credit rate of 16.9% for amounts greater than $111,111. This feature provides greater marginal benefits for taxpayers with smaller amounts of R&D expenditures. The Rhode Island credit has a shorter carryforward period than the federal credit and no carryback period, like the federal credit. Both the federal and state credits are non-refundable, which limits the value of the credit to only those taxpayers who anticipate having a tax liability within the carryforward period.

R&D tax incentives are common across the United States. The *2024 State Business Tax Climate Index* published by the Tax Foundation indicates that 39 out of 50 states plus Washington D.C. offered some type of R&D credit or deduction against the state corporate income or gross receipts tax.[9] The following table provides a comparison of the basic features of Rhode Island's R&D Expense Credit with similar credits in the comparison states of California, Connecticut, Massachusetts, and Delaware:

[8] Available at: https://www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/RE-Credit.pdf
[9] *2024 State Business Tax Climate Index*, Tax Foundation. Refer to Table 9, Page 58. Available: https://taxfoundation.org/wp-content/uploads/2023/10/2024-State-Business-Tax-Climate-Index-1.pdf

Research & Development Tax Credits in Rhode Island and Selected Comparison States

	Rhode Island	Massachusetts	Connecticut	California	Delaware
Credit Name	R&D Expense Credit	R&D Tax Credit	Research & Experimental (Incremental) Expenditures Credit	California Research Credit	Credit for Research and Development Expenses
Statutory Reference	R.I. Gen. Laws § 44-32-3	Mass. Gen. Laws ch.63, § 38M	Conn. Gen. Stat. § 12-217j	CA R&TC 17052.12 and 23609	30 Del. Laws § 2070 - 2075
Credit Rate	22.5% on expenses up to $111,111 and 16.9% on expenses over $111,111	10% for qualified research expenses; 15% for basic research payments	20%	15% on qualified research expenses; 24% for basic research payments	10% of qualified in-state research expenditures; or 50% of apportioned share of the federal alternative simplified credit (ASC)
Qualifying R&D Expenses	All in-state qualified research expenses above the federal base amount	All in-state qualified research expenses above the federal base amount	All in-state qualified research expenses above the federal base amount	15% of the excess of current year research expenditures over a computed base amount.	All in-state qualified research expenses above the Delaware base amount
Refundability & Limitations	Non-refundable; credit cannot reduce tax liability by more than 50% or the minimum tax.	Non-refundable; credit cannot reduce liability below the minimum tax.	Limited refundability; qualified small businesses may receive a refund equal to 65% of credit amount up to $1,500,000.	Non-refundable, but may reduce regular tax below the CA "tentative minimum tax."	Refundable; no credit cap.
Carryforward	Up to 7 years	Up to 15 years	Up to 15 years	Unlimited	NA
Source	http://webserver.rilin.state.ri.us/Statutes/TITLE44/44-32/44-32-3.HTM	https://malegislature.gov/laws/generallaws/parti/titleix/chapter63/section38m	https://www.cga.ct.gov/current/pub/chap_208.htm#sec_12-217j	https://apps.leg.wa.gov/WAC/default.aspx?cite=458-20-24003	https://delcode.delaware.gov/title30/c020/sc08/index.html

Note: Credit characteristics reflects current policy as identified by ORA in April 2024. This table presents a single comparison credit program for each comparison state determined by ORA to be most like the Rhode Island R&D Expense Credit.

All four of the comparison states, Massachusetts, Connecticut, California, and Delaware, have tax credit programs that are like the Rhode Island R&D Expense Credit. These states award credit only for the in-state portion of incremental research expenditures as defined by 26 U.S.C. § 41. This generally means that taxpayers receive credit for only the portion of qualified research expenses that exceed the federal "base amount" as defined by either the RRC or ASC calculation methodology elected by the taxpayer when filing their federal corporate income taxes.[10] Additionally, Rhode Island's credit rate is generally comparable to these four comparison states. Rhode Island's tiered rate structure at 16.9% / 22.5% overlaps the 20% credit rate in Connecticut and the 15% / 24% rate structure in California. Rhode Island's rate is higher than the 10% / 15% rate structure offered by Massachusetts and the 10% rate offered by Delaware.

Three out of five states offered non-refundable tax credit. Connecticut was the only state that offered limited refundability to qualified small businesses and Delaware is the only state that has no expenditure cap and a fully refundable tax credit. The Rhode Island credit is not only nonrefundable, but the credit is capped at 50% of tax liability. Some evaluators perceive the lack of refundability of R&D tax credits as reducing their effectiveness. For example, a 2012 evaluation of the Washington State High Technology R&D Tax Credit conducted by the Washington State Joint Legislative Audit & Review Committee notes that 30% credit recipients utilized the full extent of the allowable credit.[11] Taxpayers having claimed the maximum credit amount allowed by their tax liability have a reduced marginal incentive to increase R&D expenditures. These taxpayers will receive zero additional tax savings in the current year even if they were to increase R&D expenses. Taxpayers may receive a future benefit if they anticipate being able to carryforward the credit and apply it to their liability in some future year.

A unique feature of the Rhode Island R&D Expense Credit is the tiered credit rate structure. The Rhode Island credit is structured such that a higher credit rate of 22.5% is applied to the first $111,111 of qualified research expenses. Firms may then claim a credit rate of 16.9% for expenses more than this amount. The tiered credit rate provides greater marginal incentive to smaller firms. However, further empirical analysis is necessary to evaluate the effectiveness of this provision in encouraging R&D spending among smaller-scale firms.

The table above only contains a single tax credit from each state determined by ORA to be most comparable to the Rhode Island R&D Expense Credit, which is the most heavily utilized of the three R&D tax incentives Rhode Island offers. For example, Connecticut offers at least two R&D Credit programs: an incremental credit for R&D expenses above the federally defined base amount with a credit rate of 20% per Conn. Gen. Stat. § 12-217j; and, a non-incremental credit for R&D expenses applied to *all* in-state R&D expenses per Conn. Gen. Stat. § 12-217n.

[10] These states generally make use of federal definitions and calculation methodologies, with certain adjustments and exceptions in each state. For example, the California credit calculation method supports the RRC, but not the ASC credit calculation methodology.

[11] State of Washington Joint Legislative Audit & Review Committee, *2012 Tax Preference Performance Reviews*, (Report 13-1), page 104. Available: http://leg.wa.gov/JLARC/AuditAndStudyReports/Documents/13-1.pdf

3. Research and Development Activity in Rhode Island, Comparison States, and Nationwide

ORA found that R&D activity is primarily driven by manufacturing industries. The following chart summarizes data from the National Science Foundation on R&D spending throughout the United States. Note that this table, and all that follow, depict *business* R&D which excludes certain research activities conducted by government and non-profit institutions such as hospitals or universities.

United States Funds Spent for Domestic Business R&D

(Spending in Millions of Dollars, Calendar Years 2019 – 2021)

	CY 2019	CY 2020	CY 2021	Average	Percent
Manufacturing Industries	$285,674	$308,445	$326,060	*$306,726*	56.3%
Non-Manufacturing Industries	$207,283	$229,174	$276,439	*$237,632*	43.7%
All U.S. Businesses	**$492,956**	**$537,619**	**$602,499**	***$544,358***	**100.0%**

Source: National Science Foundation, https://www.nsf.gov/statistics/industry/#tabs-1, accessed April 23, 2024

Notes: Manufacturing industries is comprised of NAICS Codes 31-33. Non-Manufacturing industries is comprised of NAICS Codes 21-23 and 42-81.

These national data show that manufacturing industries are responsible for a little more than half, or 56.3%, of R&D expenditures nationwide. The data also indicate that R&D spending was on an upward trend from calendar years 2019 through 2021. R&D spending increased from $493.96 billion to $602.50 billion during this time, an average annual growth rate of 10.6%.

The following chart provides further detail on the concentration of R&D activity within the manufacturing industries by presenting R&D expenditures as a percent of sales revenues. The data is presented from calendar years 2019 through 2021.

Domestic Business R&D as a Percent of Domestic Sales

(Spending in Millions of Dollars, Calendar Years 2019 – 2021)

	CY 2019	CY 2020	CY 2021	Average
Manufacturing Industries	5.0%	5.4%	5.0%	*5.1%*
Non-Manufacturing Industries	3.8%	4.1%	4.2%	*4.0%*
All U.S. Businesses	**4.4%**	**4.8%**	**4.6%**	***4.6%***

Source: National Science Foundation, https://www.nsf.gov/statistics/industry/#tabs-1, accessed April 23, 2024

Notes: Manufacturing industries is comprised of NAICS Codes 31-33. Non-Manufacturing industries is comprised of NAICS Codes 21-23 and 42-81.

These data indicate that manufacturing industries not only generate a majority of R&D expenditures when measured in absolute terms, but these industries spend more on R&D when measured in relative terms. An average United States manufacturer spends 5.1% of sales on R&D, while the average non-manufacturing firm spends 4.0%. This indicates that manufacturing firms spend a larger proportion of revenue on R&D compared with firms in other industries.

There is considerable variation among specialized manufacturing industries with respect to the concentration of R&D spending. The following table shows the ten specialized manufacturing industries nationwide with the most concentrated R&D spending determined by a ranking of industry R&D spending as a proportion of sales.

Domestic Business R&D as a Percent of Domestic Sales: Among Specialized Manufacturing Industries

(Spending in Millions of Dollars, Calendar Years 2019 – 2021)

Specialized Industry	NAICS Code/s	CY 2019	CY 2020	CY 2021	Average
Semiconductor and other electronic components	3344	17.0%	20.9%	20.4%	*19.4%*
Semiconductor machinery	333242	18.1%	17.9%	17.9%	*18.0%*
Pharmaceuticals and medicines	3254	16.3%	16.6%	16.1%	*16.3%*
Guided missile, space vehicle, and related parts	336414–15, 336419	17.2%	15.8%	14.4%	*15.8%*
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	11.2%	13.6%	18.7%	*14.5%*
Computer and electronic products	334	12.8%	13.1%	13.0%	*13.0%*
Communications equipment	3342	14.3%	11.8%	12.1%	*12.7%*
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	12.7%	12.2%	11.5%	*12.1%*
Other computer and electronic products	other 334	10.7%	9.8%	9.6%	*10.0%*
Navigational, measuring, electromedical, and control instruments	3345	9.6%	9.9%	8.7%	*9.4%*

Source: National Science Foundation, https://www.nsf.gov/statistics/industry/#tabs-1, accessed April 23, 2024

The table above indicates that the most specialized manufacturing industries devote between 9.4% and 19.4% of sales to R&D expenses on average.

R&D spending also varies considerably by state as shown in the following table, which depicts various measures of R&D spending in Rhode Island, comparison states, and nationwide.

Funds Spent for Domestic Business R&D in Rhode Island, Comparison States, and United States

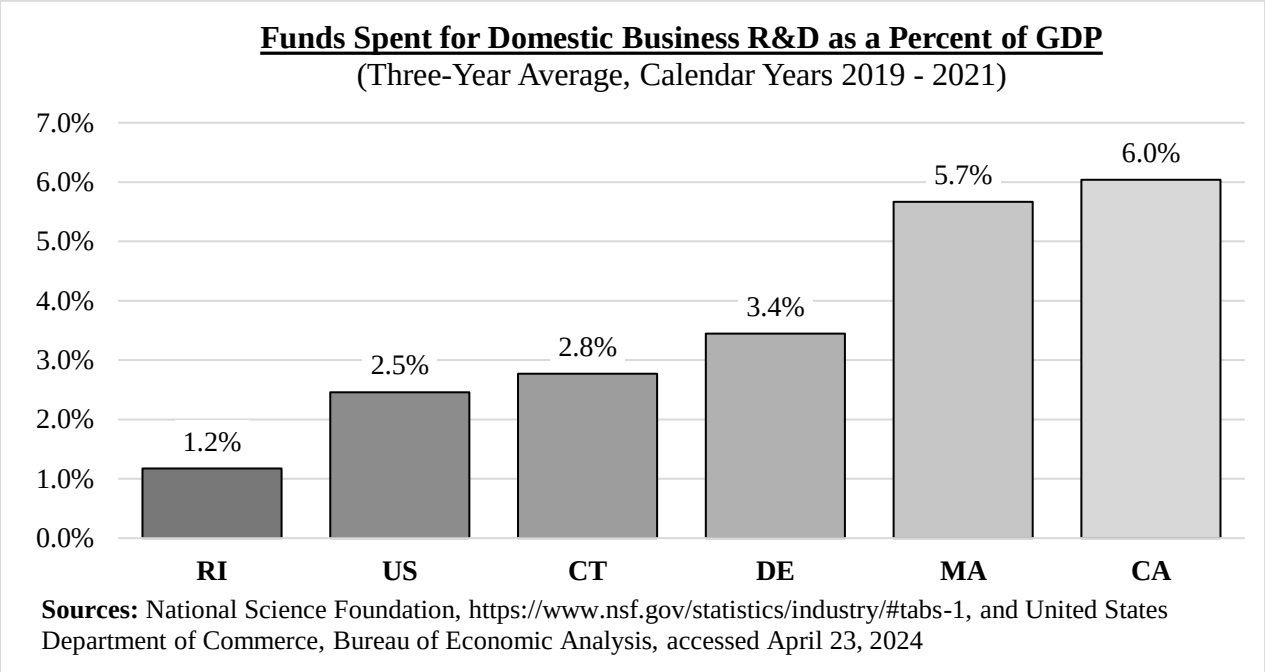
(Spending in Millions of Dollars, Calendar Years 2019 – 2021)

	CY 2019	CY 2020	CY 2021	3-Year Average GDP	Average R&D as a % of Average GDP
California	$171,961	$193,063	$211,615	$3,182,636	6.0%
Massachusetts	$30,843	$32,737	$39,749	$607,695	5.7%
Delaware	$2,156	$2,499	$3,592	$79,751	3.4%
Connecticut	$7,421	$7,902	$8,429	$285,725	2.8%
United States	**$492,956**	**$537,619**	**$602,499**	**$22,146,125**	**2.5%**
Rhode Island	*$715*	*$700*	*$837*	*$63,939*	*1.2%*

Sources: National Science Foundation, https://www.nsf.gov/statistics/industry/#tabs-1, and United States Department of Commerce, Bureau of Economic Analysis, accessed April 23, 2024

As shown in the table, all four comparison states had levels of R&D spending above the national average when scaled for the size of each state's economy. Rhode Island business R&D spending, at 1.2% as a proportion of GDP, was below the national average of 2.5%. Rhode Island R&D spending is also more volatile than comparison states and nationwide. Comparison states, apart from Delaware and Connecticut, showed a pattern of consistent year-over-year growth from CY 2019 to CY 2021. However, Rhode Island showed a 2.1% decline in R&D spending from CY 2019 to CY 2020 followed by a 19.6% rise in R&D spending in CY 2021.

The following bar graph summarizes the data in the previous table and provides a visual illustration of Rhode Island under-indexing comparison states and the national average with respect to R&D spending.



Sources: National Science Foundation, https://www.nsf.gov/statistics/industry/#tabs-1, and United States Department of Commerce, Bureau of Economic Analysis, accessed April 23, 2024

The bar graph depicts clustering of domestic business R&D spending in the top two states above 5.0% of GDP. It should be noted that while California ranked 2nd across all U.S. states in terms of concentration of R&D spending, neighboring Massachusetts is the 3rd state nationwide (with Washington at 1st in the rankings by a small margin). Delaware ranked 6th, outperforming Connecticut, which is ranked 9th among fifty states, both standing above the national average at 2.5%. Rhode Island ranked 29th, stands below the national average at 1.2%.

Part III: Report Data Description

The analysis of the R&D programs in this report required an analysis of micro-level taxpayer data. To gain sufficient access to data while respecting confidentiality concerns, ORA entered into Memoranda of Understanding (MOU) with the Rhode Island Department of Revenue, Division of Taxation (Taxation), Rhode Island Department of Labor and Training (DLT), and Rhode Island Commerce Corporation (CommerceRI). These MOUs sought to preserve the confidentiality of individually identifiable taxpayers consistent with the statutory mandates regarding secrecy and confidentiality of taxpayer information. In this context, ORA relied on data provided by credit recipients to Taxation for tax years 2019, 2020, and 2021, to the extent such information were provided, as required by R.I. Gen. Laws § 44-48.2-5(b). The data provided by Taxation to ORA consisted of the following:

- Incentive amounts, recipient firms, and employment information.
- Withholding tax payment records on file provided by Taxation in each tax year subject to the current analysis.
- Business tax payments on file provided by Taxation in each tax year subject to the current analysis.
- Cost of administration of the tax incentive.

ORA did not independently verify the accuracy of the data provided and made minimal corrections to the data to be able to execute specific calculations for the report. The data included in this report are unaudited and reported as compiled.

ORA utilized several data sources in this report that did not differentiate between the New R&D Facilities Deduction, R&D Property Credit, and R&D Expense Credit as they are frequently consolidated into the same line item for reporting purposes. When sources were able to distinguish credit usage between the three R&D tax incentives programs, ORA observed that the R&D Expense Credit represented virtually all the credit usage when measured in terms of dollars of usage. Specifically, for the time of tax years 2019 through 2021, the R&D Expense credit represented 97.2%, or $13.2 million out of $13.6 million, of total R&D tax incentive usage. Furthermore, differentiating between the three incentives would require reporting certain data in groups consisting of only a few taxpayers, which would potentially compromise taxpayer confidentiality. For these reasons, some tables in this section aggregates usage of all three programs and refers to them collectively as “R&D tax incentives.”

1. Number of Taxpayers Granted Tax Credit

The breakdown of the three R&D tax incentives programs by tax year is provided in the following table:

R&D Tax Incentive Amounts
(Tax Years 2019 – 2021)

	TY 2019	TY 2020	TY 2021	3-Year Total	3-Year Average
New R&D Facilities Deduction	$5,725	$9,800	$10,998	$26,523	*$8,841*
R&D Property Credit	$178,988	$156,705	$23,959	$359,652	*$119,884*
R&D Expense Credit	$4,911,029	$3,698,654	$4,592,672	$13,202,355	*$4,400,785*
Total	**$5,095,742**	**$3,865,159**	**$4,627,629**	**$13,588,530**	***$4,529,510***

Source: Taxation & 2019 – 2021 Taxation Statistics of Income (SOI) Reports available on https://tax.ri.gov/guidance/reports/statistics-income
Note: The dollar amounts displayed in the table are unaudited and are subject to change. This data is accurate as of 5/13/2024 and differ from what was reported on the tax expenditure report that ORA published on 01/12/2024 due to adjustments, amendments and late returns.

According to Taxation, an average of 75 companies received the R&D tax credits (i.e., R&D Property Credit and R&D Expense Credit) over tax years 2019 through 2021 with an average value of $4.52 million. The following table provides a breakdown of the number of R&D tax credits recipients and the corresponding tax credit amounts received by tax year and tax type:

R&D Tax Credits by Tax Type
(Millions of Dollars, Tax Years 2019 – 2021)

	TY 2019	TY 2020	TY 2021	3-Year Total	3-Year Average
Business Corporation Tax					
Credit Amount	$3.87	$3.23	$3.92	**$11.02**	*$3.67*
Number of Recipients *	76	66	70	**212**	*71*
Insurance Premiums Tax					
Credit Amount	$1.22	$0.62	$0.69	**$2.54**	*$0.85*
Number of Recipients *	<10	<10	<10	**ND**	*<10*
Total					
Credit Amount	**$5.09**	**$3.86**	**$4.62**	**$13.56**	***$4.52***
Number of Recipients *	**ND**	**ND**	**ND**	**ND**	***75***

Source: Taxation

Note: ND indicates the number of recipients is not disclosed by Taxation due to taxpayer confidentiality.
* Number of recipients do not include an undisclosed number less than 10 of recipients who received the R&D Property tax incentive

2. Value of Tax Incentive Granted by NAICS Code

ORA obtained data from the Taxation regarding R&D tax credit amounts (i.e., R&D Property Credit and R&D Expense Credit) received by firms for tax years 2019 through 2021 broken down by their North American Industry Classification System (NAICS) code for modeling purposes.

ORA used the NAICS industries to accurately simulate direct shocks to the Rhode Island economy with the REMI model.[12] ORA found that some of the industries were represented by only one or two R&D tax credit recipients. In this context, ORA is unable to disclose R&D tax credit amounts received by NAICS code as it may violate taxpayer confidentiality. ORA broke down the R&D tax credit amounts received in tax year 2019 through 2021 into manufacturing and non-manufacturing sectors. The following table depicts the amount of the R&D tax credits received by firms in those two industry groups during tax year 2019 through 2021:

R&D Tax Credits & Recipients by NAICS

(Tax Years 2019 – 2021)

	3-Year Average
Manufacturing Industries	
Count of Recipients	23
Percent of Total	*30.2%*
Credit Amount	$994,998
Percent of Total	*22.0%*
Non-Manufacturing Industries	
Count of Recipients	52
Percent of Total	*69.8%*
Credit Amount	$3,525,671
Percent of Total	*78.0%*
Total	
Count of Recipients	**75**
Credit Amount	**$4,520,669**

Source: Taxation

Note: This table includes credit amounts for the R&D Property Credit and R&D Expense Credit. Usage of the New R&D Facilities Deduction is not reflected in this table.

3. Cost of Administration

ORA surveyed Taxation to ascertain the cost for the administration of the R&D tax incentives. The table below provides information on the direct cost incurred by Taxation during tax years 2019 through 2021 to administer these tax incentives.

R&D Tax Incentives Cost of Administration

(Tax Years 2019 – 2021)

Cost-Incurring Entity	TY 2019	TY 2020	TY 2021	3-Year Total	3-Year Average
Division of Taxation	$4,729	$3,414	$4,436	**$12,579**	***$4,193***

Source: Taxation

[12] Refer to "'Breakeven' Cost-Benefit Analysis" section below for more information regarding the REMI Tax-PI model utilized in this analysis.

4. Number of Aggregate Jobs and Direct Taxes Paid by Recipient's Employees

Taxation provided ORA with data on personal income taxes (PIT) paid by employees of the R&D tax credit-recipient firms for tax years 2019 through 2021. The following table describes the breakdown of this information by taxpayer's residency status.

R&D Tax Credits
PIT by Recipient Firms' Employees
(Tax Years 2019 – 2021)

	TY 2019	TY 2020	TY 2021	3-Year Average
RI Residents				
Count of Taxpayers	19,410	17,025	15,484	*17,306*
Taxes Paid *	$41,522,712	$36,675,037	$40,956,682	*$39,718,144*
Avg Taxes Paid	$2,139	$2,154	$2,645	*$2,313*
Non-Residents				
Count of Taxpayers	6,176	5,445	4,926	*5,516*
Taxes Paid *	$16,554,047	$16,245,084	$17,804,292	*$16,867,808*
Avg Taxes Paid	$2,680	$2,983	$3,614	*$3,093*
Total				
Count of Taxpayers	**25,586**	**22,470**	**20,410**	***22,822***
Taxes Paid *	**$58,076,759**	**$52,920,121**	**$58,760,974**	***$56,585,951***
Avg Taxes Paid	**$2,270**	**$2,355**	**$2,879**	***$2,501***

Source: Taxation

Notes:

* Taxes paid are estimated by Taxation using Fed AGI minus "Property Tax Credit" minus "RI Earned Income Credit" minus "Lead Paint Credit" if applicable. It should be noted that when Fed AGI is higher than wages derived from the tax incentive, the taxes paid are apportioned using the ratio of those wages to the total reported Fed AGI.

For tax years 2019 through 2021, an average of 17,306 Rhode Island resident employees of R&D tax credits recipient firms paid an average of $39.7 million in PIT, or $2,313 per person. PIT paid by Rhode Island resident employees represent 70.2% of average total PIT paid by R&D tax credits recipient employees in 2019 through 2021. The 5,516 non-Rhode Island resident employees of R&D tax credits recipient firms paid an average of $16.9 million in PIT over tax year 2019 through 2021, which is an average of $3,093 in PIT per person. This represents 29.8% of average total PIT paid by R&D tax credits recipient employees in 2019 through 2021.

5. Direct Taxes Paid by Recipients

Taxation provided ORA with data on taxes paid by the R&D tax credit-recipient firms in tax years 2019 through 2021. The following table describes the breakdown of this information by firms' location of domicile.

R&D Tax Credits
Taxes Paid by Recipient Firms by Location of Domicile
(Tax Years 2019 – 2021)

	TY 2019	TY 2020	TY 2021	3-Year Average
RI Firms				
Percent of Taxpayers	39%	43%	42%	*41%*
Taxes Paid	$3,625,035	$2,059,226	$2,663,208	*$2,782,490*
Out-of-State Firms				
Percent of Taxpayers	61%	57%	58%	*59%*
Taxes Paid	$8,087,857	$6,788,034	$11,226,737	*$8,700,876*
Total				
Percent of Taxpayers	**100%**	**100%**	**100%**	***100%***
Taxes Paid	**$11,712,892**	**$8,847,260**	**$13,889,945**	***$11,483,366***

Source: Taxation

In addition, ORA used the Personal Income Tax (PIT) model simulation to retrieve taxes paid by individuals that received the New R&D Facilities Deduction in tax years 2019-2021:

New R&D Facilities Deduction
Personal Income Taxes Paid by Recipients
(Tax Years 2019 – 2021)

	TY 2019	TY 2020	TY 2021	3-Year Average
RI Residents				
Percent of Taxpayers	100%	67%	100%	*89%*
Taxes Paid	$3,953	$3,010	$33,949	*$13,637*
Non-Residents				
Percent of Taxpayers	0%	33%	0%	*11%*
Taxes Paid	$0	$5,312	$0	*$1,771*
Total				
Percent of Taxpayers	**100%**	**100%**	**100%**	***100%***
Taxes Paid	**$3,953**	**$8,322**	**$33,949**	***$15,408***

Source: ORA PIT model simulation using data provided by Taxation.

6. Measuring the Extent to which Benefits Remained in the State

R.I. Gen. Laws § 44-48.2-5(a)(8) requires that this analysis report on the extent to which benefits associated with the tax incentive remained in the state, if such information is available. In consideration of this requirement, ORA has presented tables on taxes paid by recipient firms by location of domicile and their employees by resident *vs.* non-resident status.

The amount of R&D tax incentives earned by a firm is tied to its research and development spending, including expenditures on buildings, equipment, and supplies, as well as computer hardware, and software. While the destination of these purchases must be within Rhode Island, ORA has no data available to confirm the extent to which these research expenses resulted from

purchases from Rhode Island vendors or out-of-state vendors. These purchases are modeled as "Production Cost" in the "breakeven" cost-benefit analysis in this report, which allows the REMI Tax-PI economic modeling software to allocate spending consumption by Rhode Island firms between in-state *vs*. out-of-state vendors according to standard assumptions, calibrated based on historical data describing the regional and national economy.

7. Additional Data Analysis

Using tax credit data provided by Taxation, ORA identified firms receiving multiple incentive programs in addition to the R&D tax credits in tax years 2019 through 2021. The following table describes R&D tax credits recipients that received additional Rhode Island tax incentives:

Additional Tax Incentives Received by R&D Recipients

(Average, Tax Years 2019 – 2021)

Tax Incentive	**R&D Amount**
R&D Tax Credit – All Firms	$4,520,669
R&D – Firms Claiming R&D and Additional Credit/s	$1,143,629
Other Tax Incentive	**Other Incentives Amount**
Historic Structures Tax Credit (HSTC)	$213,333
Investment Tax Credit (ITC)	$9,909
Jobs Training Tax Credit (JTTC)	$759,495
Total Other Incentives	**$982,738**

Source: Taxation

This table indicates that, in addition to the R&D tax credits, some R&D tax credit firms received other Rhode Island business tax credits. These other tax credits include the Historic Structures Tax Credit (R.I. Gen. Laws § 44-33.2-3), Investment Tax Credit (R.I. Gen. Laws Chapter 44-31-1), and the Jobs Training Tax Credit (R.I. Gen. Laws § 42-64.6-4). The number of taxpayers claiming each additional credit cannot be reported due to taxpayer confidentiality constraints. However, based on the data presented in the table above, ORA determined that for every $1.00 of R&D tax credits claimed, the same taxpayers claim an additional $0.22 in other tax credits. On average R&D tax credits represent approximately 82.1% of the total value of tax incentives claimed by the taxpayer.

ORA analyzed data provided by Taxation on employment and wages paid to the employees of the R&D tax credit recipients.

Employees of R&D Recipient Firms:
Wages of R&D Recipient Employees
(Tax Years 2019 – 2021)

	Tax Year	Number of Employees	Sum of Wages	Median Wage	Median Wage as % of BLS Median Wage
Manufacturing Industries	2019	5,507	$404,740,912	$72,508	160.6%
	2020	3,916	$298,208,715	$77,027	163.6%
	2021	3,081	$166,207,589	$63,673	133.3%
Non-Manufacturing Industries	2019	20,079	$1,363,234,077	$76,548	161.3%
	2020	18,554	$1,299,010,089	$83,312	171.2%
	2021	17,329	$1,489,885,868	$84,370	162.8%

Source: Taxation and Bureau of Labor Statistics (BLS).

According to BLS, the average hourly median wage for all occupations in manufacturing sector in Rhode Island was $21.70, $22.63, and $22.96 in tax years 2019, 2020, and 2021 respectively. These hourly figures are the equivalent of an annual figures of $45,136 in 2019, $47,070 in 2020, and $47,757 in 2021. Similarly, the equivalent annual figures for the non-manufacturing sector in Rhode Island were $47,466 in 2019, $48,651 in 2020, and $51,813 in 2021.

Part IV: Evaluation of the Economic Impact of the Tax Incentives

This section of the report addresses two major objectives defined in R.I. Gen. Laws § 44-48.2-5: first, to provide a projection of the potential impact of the R&D tax incentives on state revenues from projected future use and carryforward; and second, to produce a breakeven cost-benefit analysis that can determine the net impact on state revenues resulting from the R&D tax incentives.

1. Assessment and Five-Year Projection of Revenue

ORA assumes that the issuance of the R&D tax incentives under current law will follow historical issuance patterns. Therefore, ORA assumed a three-year moving average in the total amount of the tax incentives that would be assigned in future calendar years. Revenue projections are divided between the New R&D Facilities Deduction, R&D Property Credit, and R&D Expense Credit according to the three-year historical average from 2019 through 2021. For the R&D tax credits (i.e., R&D Property Credit and R&D Expense Credit), ORA retrieved historical credit usage from Taxation testimony at the May 2024 Revenue Estimating Conference (REC). However, for the New R&D Facilities Deduction, ORA used the PIT simulation model to calculate the Rhode Island tax liability for each taxpayer under tax years 2019 – 2021 with and without the deduction amount for the same tax years. The results for both calculations were summed across all taxpayers. Revenue forgone from providing the New R&D Facilities Deduction is then determined by taking the difference between the two tax liability calculations. The following table provides the distribution of the anticipated revenue amount from issuing the R&D tax incentives in each tax year:

R&D Tax Incentives: Revenue Projections

(Millions of Dollars)

	Tax Year	R&D Property Credit	R&D Expense Credit	New R&D Facilities Deduction*	Total R&D Tax Incentive Usage
Actual	2019	$0.16	$4.38	$0.000	$4.54
	2020	$0.16	$3.91	$0.001	$4.07
	2021	$0.02	$4.36	$0.001	$4.38
	2022	$0.27	$5.30	$0.001	$5.57
Projected	2023	$0.15	$4.52	$0.001	$4.67
	2024	$0.15	$4.73	$0.001	$4.88
	2025	$0.19	$4.85	$0.001	$5.04
	2026	$0.16	$4.70	$0.001	$4.86
	2027	$0.17	$4.76	$0.001	$4.93

Source: ORA calculations based on Taxation testimony at the May 2024 Revenue Estimating Conference and using the PIT simulation model.

Notes:

***** It should be noted that these numbers are not the deduction amounts, they represent the revenue forgone from providing the New R&D Facilities Deduction.

Projections are constructed as a three-year moving average of R&D tax credits usage by tax year. Most recent three years of historical data included in moving average are tax years 2020 through 2022.

2. "Breakeven" Cost-Benefit Analysis

- *Introduction to "Breakeven" Cost-Benefit Analysis Methodology*

Pursuant to R.I. Gen. Laws § 44-48.2-5(6), ORA conducted a "breakeven" cost-benefit analysis to measure the fiscal impacts on the state economy resulting from the R&D program under a variety of assumptions. To provide additional insight, ORA also produced breakeven analyses with respect to Rhode Island employment and Rhode Island gross domestic product (GDP).

To execute these cost-benefit analyses, ORA utilized Regional Economic Models, Incorporated's (REMI) 70-sector model of the Rhode Island economy via the REMI Tax-PI software platform to produce estimates of the total economic effects of the tax credits issued in tax years 2019 through 2021.[13] The dynamic capabilities of the REMI Tax-PI model allows one to estimate the impacts of exogenous shocks to the state's economy, including changes to public policy, shifts in consumer behavior and demand, and developments in industry. The REMI Tax-PI operationalizes these insights by augmenting REMI's base economic and demographic model, PI+, with a module that allows the user to enter a state's customized budget, to run fiscal and economic forecasts. Specifically, for each budget item, one can choose an "Indicator," which is the economic or demographic driver of that budget item (e.g., personal income for personal income tax revenue, or age 5-18 population for K-12 education spending), and a "Policy Variable," which is the economic

[13] Detailed documentation on the REMI Tax-PI v3.0.0 model employed in this analysis is available at: http://www.remi.com/resources/documentation

or demographic change associated with a change to the structure of that budget item (e.g., a change in consumer prices for a change in the sales tax).

The analysis is based on self-reported firm-level data on employment and wages provided by Taxation and publicly available historical data on the regional and national economies. Direct benefits are input into the REMI model as policy variables simulating changes in personal taxes, production cost, and industry sales. ORA assigned the three-year average R&D amount of $4,529,510 as the cost of the incentive.

The "breakeven" approach developed for this report allows a reader to assume that the R&D incentives leveraged various levels of economic activity required of recipient firms to receive a tax incentive. This assumption means that some varying portion of the economic activity required of recipient firms to receive a tax incentive would not have occurred in the absence of the tax incentive. Under this assumption, firms made some portion of their long-term production decisions based on the availability of an incentive over time, and removal of that tax benefit in a particular year would undo all such decisions.

- *Modeling Costs*

ORA assumes that the tax incentive is funded by an equivalent reduction in state government spending – that is, when the state government forgoes revenue by allowing a tax rate reduction, there are fewer funds available for other spending priorities. ORA modeled these adjustments based on a comprehensive historical analysis of Rhode Island general fund expenditures for fiscal years 2019 through 2021. ORA compiled all state general fund expenditures and assumed that the level of these expenditures could be adjusted to maintain a balanced general fund budget. The breakdown of general fund expenditures by category is shown in the following table:

Rhode Island General Fund Expenditures by NAICS

(Average FY 2019-2021)

Industry Description	NAICS Code	Percent of Total
Ambulatory Healthcare Services	621	36.6%
Educational Services	61	30.3%
State Wages, Salary, and other Compensation	n/a (Entered as "state/local govt. compensation" and "employment")	24.3%
Local Government Spending	n/a (Entered as "state/local govt. spending"	3.5%
Social Assistance	624	2.0%
Administrative and Support Services	561	1.8%
Professional, Scientific, and Technical Services	54	1.8%
Repair and Maintenance	811	1.3%
Wholesale Trade	42	1.0%
Remaining Industries		2.3%
	Total:	**100.0%**

Source: ORA analysis of Rhode Island general fund expenditure data.

- *Modeling Benefits*

The lack of statutory purpose in the enabling statute of the R&D tax incentive programs complicates the modeling of benefits. A cost-benefit analysis would yield significantly different results depending on the extent to which the incentive is assumed to have influenced firms' location decisions. Possessing virtually no data on how the credit was used by recipient firms, ORA is unable to make any empirical statement regarding the efficacy of the tax credit in increasing the amount of research activity in Rhode Island, influencing firms' business location decisions, or the extent to which any incentivized research activity had spillover effects for the Rhode Island economy. Instead, ORA had to construct various assumptions to model the fiscal and economic impacts from the R&D tax incentives.

The cost-benefit methodology employed by this report assumes that the availability of the R&D incentives impacted some portion of recipient firms' decisions to locate not only their research activity but some portion of their general business operations in Rhode Island. In this way, the methodology assumes that the R&D tax incentives provided a marginal production cost savings that tipped the balance in favor of locating a business in Rhode Island *vs*. some competitive out-of-state location.

For purposes of modeling the economic impact of the R&D tax incentives, ORA examined the three components of the R&D tax incentives: the New R&D Facilities Deduction, the R&D Property credit, and the R&D Expense credit. ORA modeled the $8,841 three-year average of New R&D Facilities Deduction as a decrease in personal income taxes. The usage of the R&D Property credit might have generated an investment activity because of the acquisition, construction of reconstruction of the eligible property. However, in the absence of data on the cost of such investments, ORA combined the R&D Property credit with the R&D Expense credit, yielding a three-year average of credit usage equal to $4,520,669. ORA determined this to be appropriate considering that the R&D Expense Credit represented 97.2% of R&D tax credits usage from the period of calendar year 2019 through 2021.

ORA modeled the benefits of the R&D Property credit and the R&D Expense credit as a reduction in production costs equal to credit usage and an increase in industry sales. ORA estimated the ratio of R&D tax credits to research expenses and firm sales based on the following assumptions:

For calendar years 2019 through 2021, Taxation indicated an average of $4,520,669 in R&D tax credits usage by 75 recipients per year. This implies an average annual tax credit amount of $60,276 per recipient (i.e., $4,520,669 ÷ 75). Applying the two-tiered R&D Expense Credit rate of 22.5% for the first $111,111 of expenses and 16.9% on any excess reveals that the average credit supported $319,842 in credit eligible research expenses at an effective credit rate of 18.8% (*i.e.*, $25,000 ÷ 22.5% + ($60,276 - $25,000) ÷ 16.9% = $319,842; $60,276 ÷ $319,842 = 18.8%). A step-by-step calculation of these figures is provided in Appendix B.

To estimate the ratio of credit-eligible research expenses to total qualified research expenses, ORA assumed that all R&D credit-recipient firms had stable research spending (*i.e.*, 0% average annual growth) and calculated their Federal Research Credit according to the Alternative Simplified Credit (ASC) calculation methodology. Under the ASC methodology, firms can claim credit for research expenses exceeding 50% of their average annual research expense of the past three years. Under these assumptions, a taxpayer could claim credit for 50% of their current year qualified research spending. ORA therefore assumed an average R&D tax credits recipient conducted $639,685 in total qualified research expenses (*i.e.*, $319,842 ÷ 50%).

National Science Foundation data indicates that an average United States firm devotes 4.6% of sales to research activities.[14] Therefore, ORA assumes that an average R&D tax credits recipient has average annual sales of $13,906,191 (*i.e.*, $639,685 ÷ 4.6%).

[14] National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D, and Innovation Survey, 2021. Available: https://ncses.nsf.gov/pubs/nsf21312#data-tables

In summary, a typical recipient of R&D tax credits received $60,276 in tax credits, in relation to $639,685 of total research activity, and $13,906,191 of industry sales. Simplifying these calculations results in the assumption that $1.00 of R&D tax credits is associated with $5.31 in total research expenses and $230.71 in industry sales (*i.e.*, $60,276 ÷ $319,842; $13,906,191 ÷ $60,276). In an average year, representative of the three-year period of calendar years 2019 through 2021, taxpayers claimed a total of $4,520,669 in R&D tax credits which ORA assumed to be generated in relation to $47,976,359 (i.e., ($319,842 * 75) ÷ 50%) of total qualifying research expenses and $1,042,964,326 (*i.e.*, $13,906,191 * 75) in industry sales.

Prior to entering policy impacts into the REMI model, ORA discounted the impact of the R&D tax credits on industry sales by 50% to account for the fact that a portion of a firm's gross sales originated from customers outside the state of Rhode Island and/or may have cannibalized sales that would otherwise have been made by other Rhode Island firms. This assumption is consistent with the approach taken by ORA on previous Tax Incentive Evaluation Act reports, for example the Investment Tax Credit (ITC), and allows for comparability of evaluation results between incentives.[15] Multiplying the $1,042,964,326 in industry sales referenced above by 50% yields $521,482,163 in industry sales assumed to be attributable to R&D credits after accounting for the portion of sales originated from customers within the state or supplanted from Rhode Island competitors.

In summary, for purposes of modeling the economic impact of the R&D tax incentives, ORA employed the following inputs: the New R&D Facilities Deduction component was modeled as a $8,841 decrease in personal income taxes. The benefits of the R&D Property credit and the R&D Expense credit components were modeled as a $4,520,669 reduction in production costs and a $521,482,163 increase in industry sales. Industry sales and production cost impacts were distributed across industries in proportion with the industries of the actual R&D Expense Credit recipients in tax year 2019 through 2021.

It should be noted that this modeling approach is different from the one employed in analyzing the ITC program, because the structure of these two tax incentives is different. For ITC, the eligibility criteria, and therefore the credit amount, vary based on the industry in which the credit recipient operates, with a more generous credit percentage granted to the high-performance manufacturing companies. Therefore, since ITC favors manufacturing companies over the non-manufacturing ones, its analysis included different benefit assumptions for manufacturing and non-manufacturing firms.[16] In the ITC analysis, only manufacturing firm tax incentives are assumed to spur additional industry sales. For the R&D tax credits, the eligibility criteria do not depend on the industry of the credits recipient, so there is no difference between manufacturing and non-manufacturing companies when calculating the R&D amounts that could be claimed. This analysis of R&D tax credits assumes all credits (to both manufacturing and non-manufacturing firms) have the benefit of new industry sales.

[15] This is consistent with RI Gen. Laws § 44-31-1(b)(3)(v)(B)(I), which requires qualified taxpayers under the ITC program to have half of their sales to out-of-state customers or the federal government.
[16] See the ITC evaluation report for more details: https://dor.ri.gov/revenue-analysis/reports

There are other reasons to assume a more direct connection between R&D spending and new sales. Part II, section 1 of this analysis described the federal definitions of R&D expenditures, to which Rhode Island conforms. These definitions point to the idea that R&D is supposed to lead to information that directly improves existing products or develops new products. This is a narrower definition of eligible spending than the ITC program, which includes most tangible, depreciable personal property (with some exceptions). In addition, Part II, section 3 notes that while most R&D spending is at manufacturing firms, non-manufacturing firms make up a significant share (over 40%) of this spending and R&D spending as a share of sales at non-manufacturing firms is only one percentage point lower than manufacturing firms.

For these reasons, ORA chose to assume all R&D credit activity incentivized industry sales (while discounting this by half in account for out-of-state sales or the cannibalization of existing sales). This more generous assumption does have a significant impact on the results of the cost-benefit analysis.

- *The "Breakeven" Approach*

A fundamental challenge in evaluating economic development incentives is determining the extent to which an incentive stimulated or attracted new economic activity rather than subsidized economic activity that would have been largely present even in the absence of the incentive. On one hand, the availability of a tax incentive might have a decisive influence on a firm's production decision. In this case it might be appropriate for an evaluator to attribute all the firm's economic activity to the incentive. On the other hand, an incentive program may simply reward or subsidize behavior that likely would have occurred anyway. In this case the tax incentive might have an impact on a firm's marginal productivity, but it would be inappropriate to attribute the full economic activity of the firm solely to the availability of the tax incentive. Real world conditions often make it difficult or impossible for an evaluator to assess where on this continuum the impact of any given tax incentive falls.

In the case of R&D tax incentive programs, the determination of the extent to which research activity would have taken place in the absence of the incentives is further complicated by a lack of statutory clarity. For example, a common feature of an economic development tax incentive is a "but for" provision, whereby recipients attest that they would not have engaged in the underlying activity if the incentive were not available, possibly with some amount of due diligence taking place to confirm this attestation during the application process. While it should be made clear that a "but for" provision does not represent sufficient evidence by itself that the incentive-related activity is net new to the state, its presence at least signals the intent of lawmakers that the incentive ought to be awarded to projects that might not otherwise have been undertaken.

However, the only provision of the R&D tax incentives that encourages its use against incremental research activities is the federal RRC or ASC methodology to determine the portion of qualified research expenses eligible to be counted in the credit calculation. These calculation methodologies do not consider whether the taxpayer business had considered competitive out-of-state alternative locations. Considering the availability of R&D incentives across states, it is possible that some portion of R&D spending would not have located in Rhode Island but for the availability of the Rhode Island incentive. However, it would overstate the economic benefits of the Rhode Island

R&D tax incentive programs to assume that all research activity would not have occurred but for the availability of the incentives. Furthermore, to assume that R&D tax incentives influenced firms' location decisions would require the assumption that the incentive was sufficient to overcome the significant cost of relocating capital-intensive research activities and relocating or rehiring specialized research personnel across state lines.

In this context, ORA conducted a breakeven analysis. This analysis allows for the evaluation of an incentive program's performance under a wide range of assumptions regarding the level of economic activity that would have taken place if the program had not been available. Furthermore, the breakeven analysis specifies the proportion of economic activity associated with the incentive program recipient that one must assume to have been attributable to the incentive program in order for the total benefits to equal its total costs, where benefits and costs are measured as the impact on state general revenues (*i.e.*, the condition that must be satisfied for the incentive program to "pay for itself").

The breakeven percentage should be interpreted as follows: if the reader believes the assumption to be plausible, that at least the amount of economic activity implied by the breakeven percentage can be attributed to the availability of the tax incentive, then one can infer that the incentive has a net positive impact on state general revenues. In the opposite case, if the reader believes that the amount of economic activity attributable to the tax incentive was less than the level implied by the breakeven percentage, then one can infer that the incentive had a net negative impact on state general revenues. Holding other factors equal, a lower breakeven percentage is more desirable than a higher breakeven percentage if the goal of an incentive program is to cost the state as little revenue as possible.

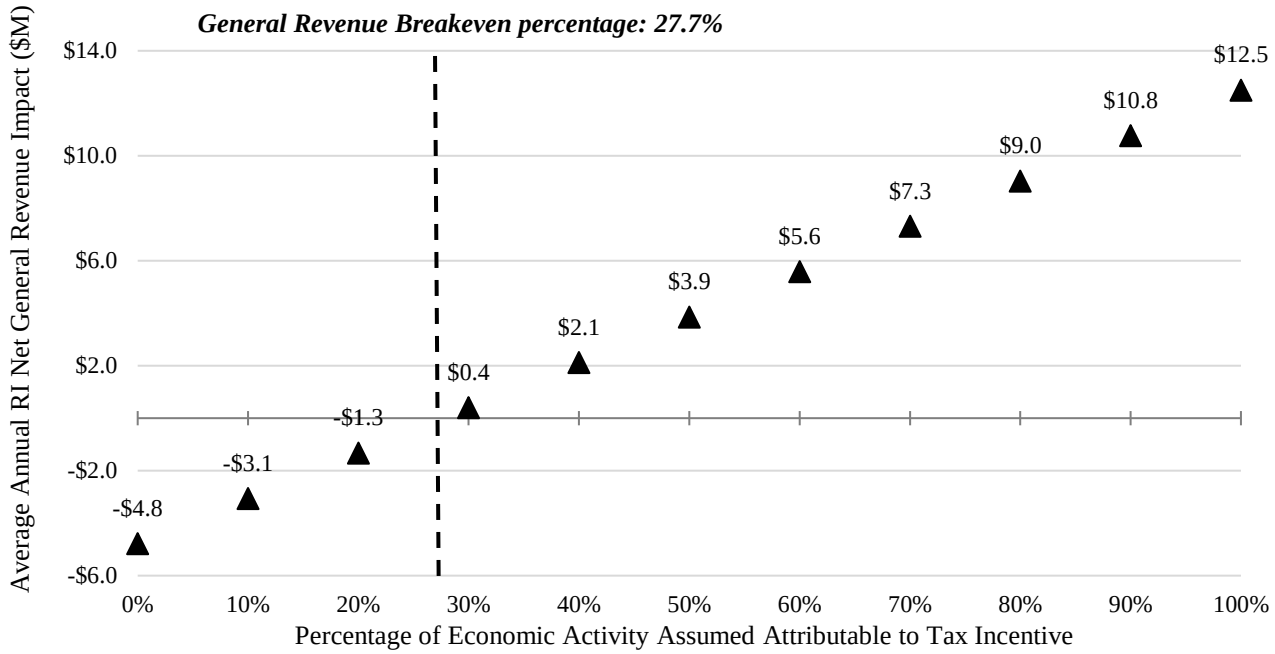
A tax incentive program fails to breakeven, under any counterfactual assumption, when the breakeven percentage is greater than 100%. This implies that even if 100% of the economic activity associated with the incentive recipient was assumed to have taken place strictly because of the incentive's availability, a net negative impact on state general revenues would have resulted. Because breakeven percentages above 100% do not have a meaningful interpretation, under this outcome ORA simply publishes that the incentive program fails to break even.

As a summary of the calculations of the cost and benefits sections above, the "breakeven" cost-benefit analysis models 100% of R&D tax incentive costs as a $4,529,510 reduction in state government spending, where this amount is equal to the average R&D tax incentives usage for tax years 2019 through 2021. This cost is distributed across industries in proportion with historical discretionary state general fund expenditures for calendar year 2021 as compiled by ORA. Benefits are modeled at 100% as an increase in industry sales of $521,482,163 as well as a reduction in industry production costs in the amount of $4,520,669 and a reduction in personal taxes of $8,841. Industry sales and production cost impacts were distributed across industries in proportion with the industries of the actual R&D Expense Credit recipients in tax year 2019 through 2021. The amount of benefits were scaled according to the assumed percentages listed in the state general revenues, state gross domestic product, and employment breakeven results charts below, but the costs are always held fixed at 100%.

It should be noted that the estimated results below cannot solely be attributed to the availability of the R&D tax incentives. As indicated in the "Additional Data Analysis" section, the value of the R&D tax incentives represents 82.1% of the total state tax incentives received by firms that utilize the R&D tax incentives in tax years 2019 through 2021. Therefore, the impact of the additional state tax incentives utilized by R&D tax incentive recipient firms is also contained in these results.

- *The Breakeven Analysis for State General Revenues*

The following chart provides results of the breakeven analysis with respect to Rhode Island general revenues.



Notes: Label accompanying each ▲ marker refers to net general revenue impact resulting from a cost-benefit analysis assuming the associated percentage of benefits that are attributable to the tax incentive. Net general revenue impact is equal to the revenue impact resulting from the direct, indirect, and induced effects of the R&D tax incentive program in addition to the direct cost in foregone revenue to the State.

Source: ORA calculations utilizing the REMI Tax-PI model of the Rhode Island economy.

The chart above shows the estimated new general revenue that results for different scenarios regarding how much economic activity was caused by the R&D tax incentives. These results indicate that, under a best-case scenario, ORA estimated a net revenue gain of $12.5 million. Under the worst-case scenario, the estimated net revenue impact is a loss of $4.8 million. These revenue estimates reflect an assumption that Rhode Island forgoes revenues and state government spending to provide the tax incentives to eligible companies.

The break-even point, where revenue losses from foregone state government spending are offset by revenue gains due to the tax incentives, is when approximately 27.7% of economic activity generated by firms receiving the R&D tax incentives is caused by the availability of the tax incentives. In other words, the revenue breakeven percentage of 27.7% implies that the R&D tax incentives have a net positive impact on Rhode Island net general revenues if at least 27.7% of the economic activity associated with the R&D tax incentive-recipient firms would not have occurred but for the availability of the tax incentive. In addition, a breakeven percent of 27.7% implies that one must assume that at least $144.5 million of industry sales would not have taken place but for the availability of the tax credit. Only if a reader considers it to be plausible that at least this level of economic activity can be attributed to the credit is it appropriate to consider that the R&D tax incentives "pays for itself" in terms of state general revenues.

The following table provides more detailed information regarding the state general revenue impact resulting from the economic activity associated with R&D tax incentive recipient firms strictly due to the availability of the R&D tax incentives. In other words, the table shows the detailed general revenue impact under the "best case" assumption that 100% of the economic activity associated with the R&D tax incentives was "caused" by the tax incentives:

R&D Tax Incentives:
Detailed Net Revenue Impacts
(Average RI General Net Revenue Impact, Calendar Years 2019-2021)

Item Description	Amount
Forgone Revenue Due to Incentives	**$(4,529,510)**
Total General Revenue Generated by Incentives	**$17,027,296**
General Revenue Generated by Incentives by Component	
Personal Income Tax	$ 5,785,988
General Business Taxes	$ 3,054,961
Sales and Use Taxes	$ 6,494,855
Other Taxes	$ 239,702
Total Departmental Receipts	$ 772,085
Other Sources	$ 679,704
Net Change in General Revenue, After Paying for Incentives	**$12,497,786**
New Revenues Generated for Every Dollar of Incentives	**$ 3.76**

Source: ORA calculations based on historical Rhode Island revenue amounts and REMI Tax-PI simulations.
Note: This table shows the detailed revenue impact under the best-case scenario where 100% of the economic activity associated with R&D-recipients is assumed to be "caused" by the availability of the incentive.

The table above provides the REMI Tax-PI model of the Rhode Island economy simulation results after removing the $4.5 million cost of the R&D tax incentives from state government spending to account for the forgone revenue that the state incurs due to the issuance of the R&D tax incentives, and simultaneously adding industry sales amounts and reducing production costs and personal income tax (the policy variables used to account for economic activity) resulting due to the availability of the R&D tax incentives.

These results indicate that, if 100% of the economic activity associated with the R&D tax incentives was "caused" by the tax credit, then the R&D tax incentives generated a total $17.0 million of state general revenues. The generated total general revenue of $17.0 million does not account for the $4.5 million cost of the tax incentive itself. To take into consideration the cost of the tax incentive, ORA subtracted the $4.5 million average cost of the R&D tax incentives in tax years 2019-2021 from the $17.0 million generated revenues. This is equal to an average annual *net* gain of $12.5 million in *net* general revenue. Expressed another way, for every one dollar of R&D tax incentives claimed by recipient firms the state generates $3.76 of new revenue under this scenario.

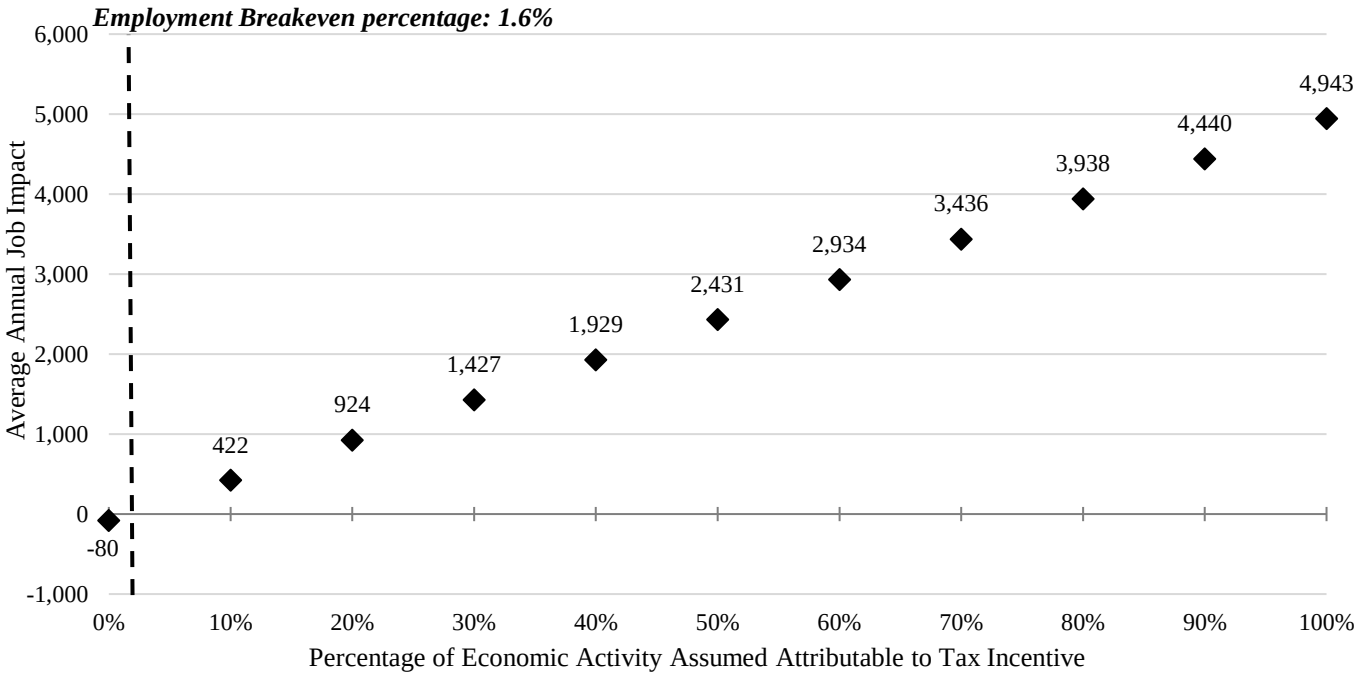
This payback ratio shows that new revenues generated from the R&D tax incentives related to research activity exceed the total costs of the R&D tax incentives and add a new net positive revenue amount to the state under the assumption that all the research activity associated with the R&D tax incentives recipient firms would not exist in Rhode Island if not for the availability of the tax incentive. Additional detailed revenue results from different percentage of assumed benefits attributable to the R&D tax incentives are provided in Appendix A.

- *The Breakeven Analysis for Rhode Island Total Employment*

The breakeven framework can also be extended to employment. In this context, the breakeven percentage can be interpreted as the percentage of economic activity associated with R&D-recipient firms assumed to be attributable to the availability of the tax incentive necessary for the increase in employment resulting from new economic activity to outweigh the employment losses resulting in the reduction in government spending necessary to fund the incentive.

The following chart shows the results of a breakeven analysis with respect to employment.

R&D Tax Incentives:
Total Employment Breakeven Analysis
(Average Annual Jobs Impact, TY 2019-2021)



Notes: Label accompanying each ◆ marker refers to net job impact resulting from a cost-benefit analysis assuming the associated percentage of benefits that are attributable to the tax incentive. Employment is equal to the employment impact resulting from the direct, indirect, and induced effects of the R&D tax incentive program in addition to the direct employment loss by the State.

Source: ORA calculations utilizing the REMI Tax-PI model of the Rhode Island economy.

ORA tested a variety of assumptions regarding the level of economic activity taking place in Rhode Island due to the R&D tax incentives. The chart above shows the estimated new employment results for different scenarios on how much economic activity was caused by the R&D tax incentives. These results indicate that, under a best-case scenario, ORA estimated a net gain of 4,943 economy-wide jobs. Under the worst-case scenario, the estimated net loss is 80 jobs across the state economy. These job estimates reflect an assumption that Rhode Island forgoes state government spending and employment to provide the tax credit to eligible companies.

The employment breakeven point, where job losses from foregone state government spending are offset by job gains due to the tax incentive, is when about 1.6% of economic activity generated by R&D recipient firms is caused by the tax incentive. In other words, the employment breakeven percentage of approximately 1.6% implies that the R&D tax incentives have a net positive impact on Rhode Island total employment if at least 1.6% of the economic activity associated with the R&D tax incentive recipient firms would not have occurred but for the availability of the tax

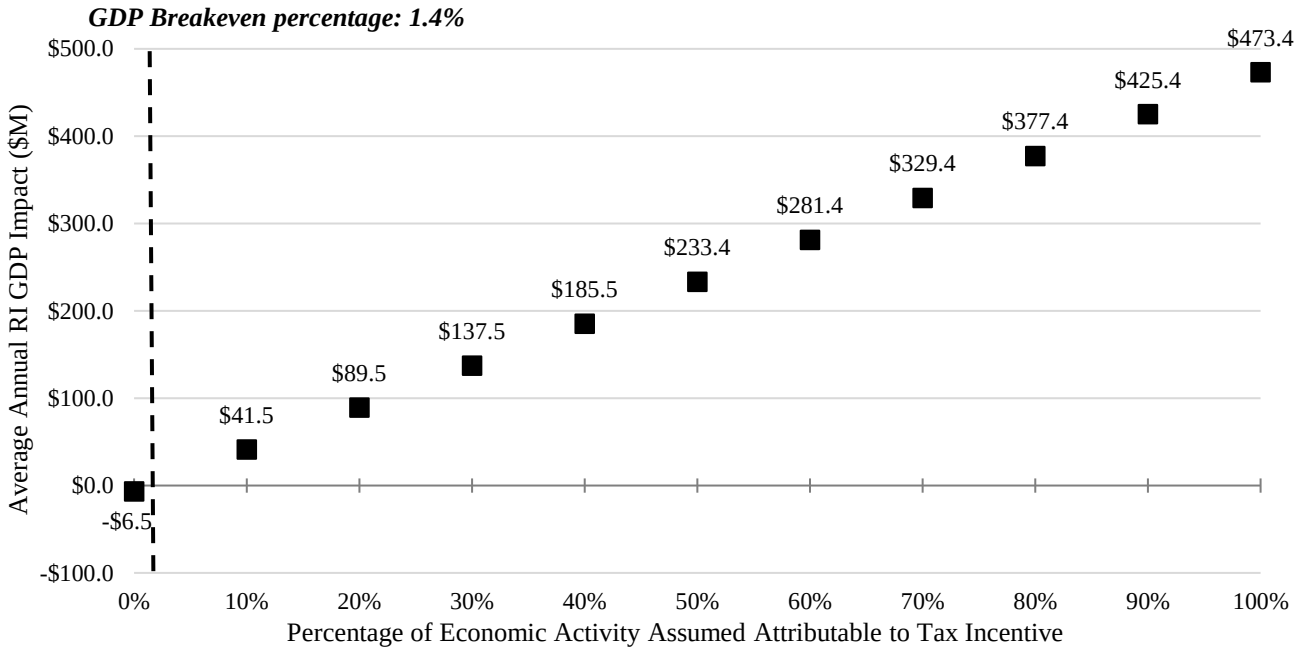
incentives. Additional employment results from different percentage of assumed benefits attributable to the R&D tax incentives are provided in Appendix A.

- *The Breakeven Analysis for Rhode Island Gross Domestic Product*

The breakeven framework can also be extended to Rhode Island Gross Domestic Product (GDP). In this context, the breakeven percentage can be interpreted as the percentage of economic activity associated with R&D-recipient firms assumed to be attributable to the availability of the R&D tax incentives necessary for the increase in GDP resulting from new economic activity to outweigh the GDP losses resulting in the reduction in government spending necessary to fund the incentives.

The following chart shows the results of a breakeven analysis with respect to RI GDP.

R&D Tax Incentives:
Rhode Island Gross Domestic Product Breakeven Analysis
(Average RI GDP Impact, TY 2019-2021)



Notes: Label accompanying each ■ marker refers to net RI GDP impact resulting from a cost-benefit analysis assuming the associated percentage of benefits that are attributable to the tax incentive. RI GDP is equal to the GDP impact resulting from the direct, indirect, and induced effects of the R&D tax incentive program in addition to the direct GDP loss to the State.

Source: ORA calculations utilizing the REMI Tax-PI model of the Rhode Island economy.

The chart above shows the estimated Rhode Island GDP results for different scenarios regarding how much economic activity was caused by the R&D tax incentives. These results indicate that, under a best-case scenario, ORA estimated a net gain of $473.4 million of GDP in the state. Under the worst-case scenario, the estimated net loss is $6.5 million of GDP across the state economy. These GDP estimates reflect an assumption that Rhode Island forgoes state government spending to provide the tax incentives to eligible companies.

The break-even point, where GDP losses from forgone state government spending are offset by GDP gains due to the economic activity generated by the research activity associated with the R&D tax incentives, is when approximately 1.4% of economic activity generated by firms receiving R&D tax incentive benefits is caused by the tax incentives. In other words, the Rhode Island GDP breakeven percentage of approximately 1.4% implies that the R&D tax incentives have a net positive impact on Rhode Island GDP as long as at least 1.4% of the economic activity associated with the R&D tax incentive recipient companies would not have occurred but for the availability of the tax incentive.

Part V: Discussion and Recommendations

1. Statement by the CEO of the Commerce Corporation

The Secretary of Commerce, who serves as Chief Executive Officer of the Rhode Island Commerce Corporation pursuant to R.I. Gen. Laws § 42-64-1.1(b), provided the following statement:

Statement from the CEO of the Commerce Corporation:

Cultivating Rhode Island's innovation ecosystem by incentivizing research and development (R&D) remains a priority for CommerceRI. As demonstrated by the breakeven analysis included in ORA's report, the existing incentives return significant benefits to the state while also growing the economy and creating jobs. However, it is also clear that these incentives are not doing enough to stimulate new R&D in the state, with the report showing that Rhode Island's economy includes a relatively low level of R&D spending when compared to neighboring states and the national share. Given that the statutes of these tax credits have not been updated in the 21st century, improvements should be considered.

Due to the relatively low state tax liability of many tax credit recipients, CommerceRI agrees with ORA's recommendation to extend the carryforward for the R&D tax credits beyond seven years, potentially aligning the state's programs with similar programs in Massachusetts and Connecticut that offer a 15-year carryforward. Further, consideration of changes to the New R&D Facilities Deduction and R&D Property Tax Credit programs due to significant underutilization are deserved in order to make these programs most useful to those entities that may benefit from them. Improvements to the state's R&D incentives will help to increase Rhode Island's regional competitiveness and generate economic growth through investments in our innovation ecosystem.

2. ORA Recommendations

Finding #1: Under the assumption that incentives are 100% responsible for taxpayer behavior, one dollar of investment in R&D tax incentives returned $3.76 in state revenues.

The following observations regarding incentive recipients may guide policymakers in evaluating current program performance and designing modifications to further improve its cost-effectiveness:

- Rhode Island has significantly lower R&D spending as a share of GDP, averaging 1.2% in the period covered by this report compared to 2.5% nationally.
- R&D tax incentive recipients paid relatively little in state taxes.
- The non-refundability and credit cap provisions of the R&D credits may impact many credit users.

Related Recommendations:

- Considering extending the carryforward for the R&D Property Credit and R&D Expense Credit beyond seven years.

Discussion Supporting Finding #1:

This analysis found, if R&D tax incentives are 100% responsible for firms' location decisions, that every dollar invested in R&D tax incentives returned $3.76 in state general revenue. However, the value of the R&D tax incentives represents 82.1% of the total state tax incentives received by firms that utilize the R&D tax incentives. Therefore, the impact of the additional state tax incentives utilized by R&D tax incentive recipient firms is also contained in these results, and the R&D tax incentives cannot be considered 100% responsible for firms' location decision.

ORA assumes that a justification for the R&D Property and Expense Credits is that a high state tax burden is an impediment to firms interested in conducting research activity in the state; however, recipients of the R&D Property and Expense Credits do not pay significant state taxes relative to the amount of credit received. In tax year 2019 through 2021, an average of 75 users of the R&D Property and Expense Credits received an average of $4.52 million in R&D Property and Expense Credits and $0.98 million in additional business tax incentives. The average Rhode Island taxable income for the 75 R&D Property and Expense Credit recipients was $4.6 million and average taxes paid by each R&D Property and Expense Credit recipient was about $152,921.[17] The tax years 2019 through 2021 effective tax rate paid by these firms, calculated as tax liability as a percent of apportioned Rhode Island taxable income, was approximately 3.0% (for comparison, the statutory business corporation tax rate 7% in tax year 2019-2021). Considering

[17] ORA was able to obtain data on taxable income and taxes due for business corporation and insurance companies that were R&D tax incentive recipients. It is possible that some recipients face significant commercial real estate or tangible personal property taxes paid to municipalities related to their capital-intensive research activities, but ORA does not have a reliable method of obtaining this information. While Rhode Island's high property tax burden may be an impediment to firm's conducting R&D, and the R&D tax incentives may serve to offset a portion of this tax burden, the R&D incentives have no statutory purpose to indicate this. Further information regarding property tax burdens in Rhode Island and comparison states can be found in the previously published *Tax Incentives Evaluation Act Report* covering "Investment Tax Credits."

the modest tax burden of most R&D Property and Expense Credit recipients, it is likely that some recipients trigger the credit caps and non-refundability provisions of the credit programs.

The tax liability cap and non-refundability provisions of R&D Property and Expense Credits may have limited the amount of credit claimed by taxpayers. The R&D Property Credit is non-refundable and cannot reduce a taxpayer's liability below the statutory minimum tax. The R&D Expense Credit is non-refundable and cannot reduce a taxpayer's liability below the greater of 50% of the pre-credit tax liability or the statutory minimum tax.

It is also important to note that the R&D Expense Credit provides no marginal incentive to increase research activities for entities impacted by the non-refundability or tax liability cap provisions. An increase in current year research expenditures will result in no additional current year tax benefits – aside from the possibility of carrying credits forward to a future year. Firms that consistently conduct a level of research activities that are sufficiently high relative to their state tax liability may find themselves in this situation year after year. In this way, the marginal value of the R&D Expense Credit diminishes as firm size increases. The larger the amount of research activities conducted by a firm relative to its state tax liability, the more likely it is that the R&D credit is rewarding firms for activity that would have taken place anyway without the credit.

Given the limits on the ability of firms to claim to R&D tax credits, policymakers should consider extending the carryforward timeline. Both Massachusetts and Connecticut offer 15-year carryforward periods, in contrast to Rhode Island's seven-year carryforward. A more generous carryforward may be a tool as Rhode Island begins to focus on building the life sciences sector (especially given the large upfront costs needed to develop products in that industry). Other alternatives include offering more refundability for the credits or allowing the R&D Expense Credit to reduce tax liability by more than 50%. Given that R&D credits available far outstripped credits claimed (due to a lack of tax liability against which to claim the credit), either of these options would have significant fiscal impact on the state and should be approached cautiously.

Finding #2: ORA found limited usage of the New R&D Facilities Deduction, and only slightly more usage for the R&D Property Tax Credit:

- Over the period tax years 2019-2021, the average amount of New R&D Facilities Deduction claimed was $8,841 and the average amount of R&D Property Tax Credit claimed was $119,884.

Related Recommendations:

- Consider repeal of R.I. Gen. Laws § 44-32-1 due to underutilization and incorporation of R.I. Gen. Laws § 44-32-2 into the Investment Tax Credit programs.

Discussion Supporting Finding #2:

It may be economically worthwhile to encourage firms to invest in research-related property and facilities in Rhode Island. Such investments have a lasting impact on the economy and anchor a firm to the state. However, the New R&D Facilities Deduction and the R&D Property Tax Credit had minimal usage over the past several years. This may be because firms that would be eligible for these R&D tax incentives are making use of other tax incentives instead. This assumption is

supported by the fact that an average user of R&D tax incentives receives additional state tax incentive programs.

ORA assumes that low utilization of the New R&D Facilities Deduction and R&D Property Tax Credit is due the program's interaction with other tax credit programs – for example, the Rhode Island Investment Tax Credit (ITC) programs offered pursuant to R.I. Gen. Laws Chapter 44-31. Per R.I. Gen. Laws § 44-32-1(a), taxpayers utilizing the New R&D Facilities Deduction do so "in lieu of depreciation or [the] investment tax credit." Low utilization levels may indicate that taxpayers may find the Investment Tax Credit more valuable than the New R&D Facilities Deduction and elect to use the ITC in place of the R&D deduction.

Furthermore, per R.I. Gen. Laws §§ 44-32-2(h) and 44-32-2(i), taxpayers claiming the R&D Property Tax Credit shall not be allowed to also take the ITC in relation to the same property expenses, and these taxpayers must apply the Investment Tax Credit prior to the R&D Property Tax Credit when calculating their tax liability. Some taxpayers may find the ITC more valuable than the R&D Property Tax Credit, and others may have exhausted their credit cap prior to the application of the R&D Property Tax Credit in their tax liability calculation.

Finding #3: The statutory goals of the New Research and Development Facilities Deduction, Research and Development Property Credit, and Research and Development Expense Credit are not defined in R.I. Gen. Laws § 44-32-1, § 44-32-2, or § 44-32-3. Therefore, it is difficult to measure performance against statutory objectives.

Related Recommendations:

- Policymakers should determine goals and objectives of the R&D tax incentive programs in order to provide guidance to evaluators.

Discussion Supporting Finding #3:

R.I. Gen. Laws § 44-48.2-5(a)(10) requires the Office of Revenue Analysis to offer recommendations "as to whether the effectiveness of the tax incentive could be determined more definitively if the general assembly were to clarify or modify the tax incentive's goals and intended purpose." Discussion related to the goals and purposes of the R&D tax incentives are as follows:

The success of a tax incentive program is usually related to the extent to which its goals and objectives were achieved. In this context, the lack of statutory goals makes it very difficult to evaluate the R&D tax incentive programs given that desired outcomes are not defined under the program's governing statute.

The impact of the R&D tax incentive programs is affected by whether the incentives represent only a marginal cost savings to the firm or if the incentives attracted research activity from other states or facilitated projects that would not have otherwise been possible. However, there is little or no data to track the extent to which R&D tax incentives attracted research activity from other states. Considering that this distinction has a potentially determinative impact on the cost-effectiveness of the program, ORA recommends that lawmakers construct a statutory purpose that

emphasizes the goals such as targeting research with locally impactful spillover effects, building industry clusters, and attracting research projects from competitive out-of-state locations.

Taxpayer confidentiality, restrictions related to federal taxpayer information, and insufficient data collection mechanisms pose major obstacles to evaluators of these R&D tax incentives. Policymakers should determine what enhanced data collection, reporting, disclosure rules might be put in place to facilitate measurement of tax incentive program performance relative to statutory goals and objectives.

Finding #4: A best practice of tax incentive design is the inclusion of a sunset provision. Neither the New R&D Facilities Deduction, R&D Property Credit, nor the R&D Expense Credit contain sunset provisions.

Related Recommendations:

- Add sunset provisions to the R&D tax incentive programs.

Discussion Supporting Finding #4:

An important feature of a sunset is that it provides legislators with a regular opportunity to reconsider the continued relevance of the tax incentive program and revise program features as needed. For example, the 2015 Rhode Island corporate tax reform had a major impact on the local business tax landscape. This reform presumably had an impact on the effectiveness and necessity of tax incentive programs such as the R&D tax incentive programs, but no legislative changes were made to the R&D tax incentives in response to this change. A sunset provision would help to ensure that such reconsiderations and revisions occurred at regular intervals.

Finding #5: While adequate from a standpoint of confirming taxpayer compliance with eligibility requirements, current reporting requirements are inadequate for economic analysis. The fact that Rhode Island R&D tax incentives conform with the definitions and formulas utilized to calculate the Federal Research Credit is a double-edged sword – creating administrative efficiencies and data access challenges.

Related Recommendations:

- Consider legislative changes to enhance data reporting and revise disclosure rules for R&D tax incentive recipients similar to those required by recipients of credits covered by Taxation's annual *Tax Credit & Incentive Report*.
- Maintain conformance with Federal Research Credit definitions and calculation procedures while expanding the data collected on Rhode Island tax forms.
- To produce more rigorous analysis than what is contained in this report would require modifications to Rhode Island tax forms and/or establishing new data collection mechanisms.

Discussion Supporting Finding #5:

R.I. Gen. Laws § 44-48.2-5(a)(9) requires the Office of Revenue Analysis to offer recommendations "[i]n the case of economic development tax incentives where measuring the economic impact is significantly limited due to data constraints, whether any changes in statute would facilitate data collection in a way that would allow for better analysis." Discussion related to this topic is as follows:

Tying the state research credit to federal definitions and forms minimizes administrative burden for taxpayers and administrators. Taxpayers do not need to maintain duplicative records, other than monitoring which qualifying research expenditures occur in Rhode Island. Rhode Island tax administrators benefit from compliance instigated by enforcement of the Federal Research Credit. Because Rhode Island R&D tax incentives are calculated based on amounts claimed on the taxpayer's federal return, a taxpayer attempting to fraudulently claim a state credit would have to duplicate their fraud at the federal level – magnifying the incentive for taxpayers to comply with the law by reporting research expenditures faithfully.

However, this connection to the Federal Research Credit also creates data access and evaluation issues. While Rhode Island lawmakers and administrators have some independence in setting rules for granting evaluators access to Rhode Island taxpayer information in appropriately anonymized or aggregated form, Rhode Island lawmakers and administrators have minimal independence in granting access to federal taxpayer information.

Rhode Island forms currently lack the specificity necessary for economic analysis. For example, lines 1 through 8 of IRS Form 6765 require the taxpayer to provide some detail on the types of qualified research expenditures undertaken by the taxpayer (*e.g.*, basic research payments to qualified organizations, wages, supplies, rental, or lease costs of computers, *etc.*).[18] However, Rhode Island Form 7695E asks taxpayers simply for the portion of the aggregate amount that takes place in Rhode Island, with no breakdown of expenses by type.[19] A marginal improvement to Rhode Island's form would be to adopt some of the elements of Minnesota's Form 2021 RD, utilized for the administration of the Minnesota Credit for Increasing Research Activities.[20] This form requires taxpayers to list Minnesota qualified research expenditures according to the same categories as on the federal form. By including these data on a *state* tax form rather than the federal form only, state tax officials may have greater knowledge of the composition of state research expenditures and greater flexibility in sharing aggregated taxpayer information with evaluators and the public.

Examples of more stringent improvements to data collection from R&D tax incentive recipients would be to create entirely new data collection mechanism. For example, the State of Washington requires recipients of nearly all its state tax incentives to file an Annual Tax Performance Report.[21] Incentive recipients must comply with the reporting requirement as a condition of receiving a state

[18] https://www.irs.gov/pub/irs-pdf/f6765.pdf
[19] See Appendix C.
[20] Minnesota Form 2021 RD available at: https://www.revenue.state.mn.us/sites/default/files/2021-10/rd_21.pdf
[21] Washington State Annual Tax Performance Report, RCW 82.32.534. See: https://app.leg.wa.gov/rcw/default.aspx?cite=82.32.534

tax credit. The report includes information regarding the impact of tax incentive awards on business activities such as employment and investment. While Washington statutorily compels compliance with reporting requirements, other states such as Minnesota collect evaluation data through voluntary surveys and interviews with tax incentive recipient taxpayers.[22] ORA currently lacks the practical capacity to administer a rigorous evaluation survey. Further investigation is necessary as to whether ORA and/or Taxation possesses the legal authority to contact taxpayers directly for purposes of compelling a response to a mandatory survey or requesting response to a voluntary evaluation survey.

Public reporting of R&D tax incentive usage, including revealing the identity and amount of tax incentive usage by recipient, would increase transparency and facilitate improvements to program evaluation. For example, Taxation's annual *Tax Credit & Incentive Report* provides a framework for this type of reporting – but is limited by statute to only certain incentives, of which the R&D tax incentives are not included.[23] Recipients of tax incentives covered by the *Tax Credit & Incentive Report* are required to file an annual report with Taxation listing the amount of tax incentive utilized and also containing certain data necessary for confirming compliance with tax incentive eligibility requirements. These taxpayers claim tax benefits with the understanding that their identifying information and amount of credit usage will be disclosed publicly. To minimize the administrative burden, such reporting could only be required for taxpayers claiming more than some minimum threshold (*e.g.*, basic disclosure might only apply to taxpayers claiming more than $5,000 of R&D tax incentives; requirement to file more detailed annual report might apply to taxpayers claiming more than $10,000).

3. ORA Conclusion and Overall Recommendation

R.I. Gen. Laws § 44-48.2-5(a) (11) requires the Office of Revenue analysis to make a recommendation "as to whether the tax incentive should be continued, modified, or terminated." The Office of Revenue Analysis recommends that the R&D tax incentives be retained but modified according to the recommendations described in the previous section.

[22] The 2017 evaluation of the Minnesota Research Credit conducted by the Program Evaluation Division of the State of Minnesota Office of the Legislative Auditor is available at:
http://www.ncsl.org/Portals/1/Documents/fiscal/evaluation_database/MN_Research_Tax_Credit_2017_Evaluation_Report.pdf

[23] Credits covered by the *Tax Credit & Incentive Report* include Rhode Island Commerce Corporation Project Status (R.I. Gen. Laws § 42-64-10), Incentives for Innovation and Growth (R.I. Gen. Laws Chapter 44-63), Jobs Development Act (R.I. Gen. Laws Chapter 42-64.5), Distressed Areas Economic Revitalization Act – Enterprise Zones (R.I. Gen. Laws Chapter 42-64.3), Motion Picture Production Tax Credit (R.I. Gen. Laws Chapter 44-31.2), and Historic Preservation Tax Credits 2013 (R.I. Gen. Laws Chapter 44-33.6).
Further information regarding reporting requirements applicable to these tax credit recipients is contained in Rhode Island Division of Taxation Notice 2016-03 available at:
http://www.tax.ri.gov/Tax%20Website/TAX/notice/Notice%202016-03%20--%20Tax%20credits%20and%20incentives.pdf

Appendices

Appendix A: Additional Breakeven Scenarios

The following table presents a sensitivity analysis of the R&D tax incentives. ORA ran different economic scenarios across which the input parameters are being varied accordingly to provide the reader with additional possible breakeven analysis outcomes.

R&D Tax Incentives
Detailed Economic & Revenue Impacts TY 2019 through 2021

	Policy Variable Percentage Assumed										
	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
	Economic & Revenue Impacts Calculated										
Total Employment	**4,943**	**4,440**	**3,938**	**3,436**	**2,934**	**2,431**	**1,929**	**1,427**	**924**	**422**	**-80**
Private Non-Farm Employment	4,788	4,305	3,823	3,340	2,858	2,375	1,893	1,410	928	445	-37
Govt Employment	155	135	115	96	76	56	36	16	-3	-23	-43
Total GDP ($000)	**$473,387**	**$425,399**	**$377,411**	**$329,421**	**$281,433**	**$233,443**	**$185,452**	**$137,461**	**$89,468**	**$41,477**	**($6,503)**
Generated Revenues by Component ($000)											
Personal Income Tax	$5,786	$5,198	$4,610	$4,022	$3,434	$2,846	$2,258	$1,670	$1,082	$494	($93)
General Business Taxes	$3,055	$2,747	$2,438	$2,130	$1,822	$1,513	$1,205	$897	$588	$280	($28)
Sales and Use Taxes	$6,495	$5,835	$5,175	$4,516	$3,856	$3,196	$2,536	$1,877	$1,217	$558	($102)
Other Taxes	$240	$215	$191	$167	$142	$118	$94	$69	$45	$20	($4)
Total Departmental Receipts	$772	$693	$615	$536	$457	$378	$300	$221	$142	$63	($16)
Other Sources	$680	$610	$541	$472	$403	$333	$264	$194	$125	$55	($14)
Cost of Incentive ($000)	**($4,530)**	**($4,530)**	**($4,530)**	**($4,530)**	**($4,530)**	**($4,530)**	**($4,530)**	**($4,530)**	**($4,530)**	**($4,530)**	**($4,530)**
Total Net Revenues ($000)	**$12,498**	**$10,769**	**$9,041**	**$7,312**	**$5,584**	**$3,856**	**$2,127**	**$398**	**($1,331)**	**($3,059)**	**($4,786)**

Source: ORA calculations based on historical Rhode Island revenue amounts and REMI Tax-PI simulations.

Note: The total net revenues represent the difference between the sum of generated revenues and the cost of the tax incentive.

Appendix B: Benefits Calculation

The following table presents the calculation of the benefits modeled:

Variable	Amount	Description
3-Year Average Credit	$4,520,669	A
3-Year Average Count	75	B
Credit per Recipient	$60,276	C = A/B
First $25,000 @ 22.5%	$111,111	D
Remaining @ 16.9%	$208,731	E
Average of Eligible Expenses	$319,842	F = D+E
Effective R&D Credit Rate	18.8%	G = C/F
Total Credit Eligible Expenses	$23,988,179	H = A/G
Total Qualified Research Expenses	$47,976,359	H*2
Expense Credit %	97.2%	J
R&D% of Sales	4.6%	K
Total Qualified R&D Expenses	$1,042,964,326	L = ((F*2)/K)*B
Industry Sales	$521,482,163	M = L/2
Production Cost	**($4,520,669)**	-A
Personal Taxes	**($8,841)**	O
Industry Sales	**$521,482,163**	M

Appendix C: Rhode Island Form 7695E

State of Rhode Island Division of Taxation

Form RI-7695E

Research & Development Expense Credit

15131699990101

Name	Federal employer identification number	For the period ending:

Complete address(es) of Rhode Island location(s) where Research & Development Expenses were Incurred

1	Federal Qualified Research Expenses from Federal Form 6765, line 9 or line 28	1	
2	Federal Base Amount from Federal Form 6765, line 12 or 14, or line 30	2	
3	Federal Excess Expenses. Subtract line 2 from line 1	3	
4	Amount of Federal Excess Expenses from line 3 incurred in Rhode Island	4	
5	CREDIT - (22.5% on expenditures up to $111,111.00 and 16.9% on expenditures over $111,111.00	5	
6	Unused R&D Expense Credit from preceding year(s). Attach a schedule with amounts and year of origination	6	
7	Total R&D Expense Credit Available. Add lines 5 and 6	7	
8	Tax amount from Form RI-1120C, line 11 or Form T-71, line 7	8	
9	MAXIMUM R&D Expense Credit. Multiply line 8 by 50%. Enter here and on the applicable line on Schedule B-CR	9	
10	Credit carryover. Subtract line 9 from line 7	10	

INSTRUCTIONS

GENERAL

The credit is available to corporations for qualified research expenses. The credit is of the excess (if any) of the qualifying research expenses in the taxable year over the base period expenses from 7/1/1994 through 12/31/1997; for periods 1/1/1998 and therefore the rate shall be 22.5% for expenditures up to $111,111.00 and 16.9% for the remaining expenditures over the $111,111.00.

DEFINITIONS AND CALCULATION OF THE CREDIT

The terms **"qualified research expenses"** and **"base period research expenses"** shall have the same meaning as defined in section 41 of the Internal Revenue Code, provided however, that such expenses shall have been incurred in this state after July 1, 1994. The credit is based on the amount of the taxpayer's Federal excess and is calculated by first determining what of the taxpayer's Federal excess were incurred in Rhode Island after July 1, 1994 and then multiplying that amount by the appropriate rate to yield the Rhode Island credit.

EXAMPLE:

Taxpayer A has completed and claimed its Federal Credit and has qualified research expenses for its Federal Credit of $100,000. A's Federal base amount is $75,000. All expenses were incurred in Rhode Island and were incurred evenly throughout 2023. A has a calendar year end.

Taxpayer A's 2022 Rhode Island R & D Expense Credit is calculated as:	
Federal Qualified Research Expenses	$100,000
Federal Base Amount	75,000
Federal Excess Expense	25,000
Amount of Federal Excess Expenses in Rhode Island	25,000
Amount of Expenses in Rhode Island after January 1, 1998	25,000
Credit @ 22.5%	**$ 5,625**

MINIMUM TAX AND CARRYOVER

In the case of corporations, the credit allowed shall not reduce the tax due to less than the minimum fixed by section 44-11-2(e); however, if the amount of credit allowable reduces the tax to the minimum fixed by section 44-11-2(e), any amount of credit not used may be carried over a maximum of seven (7) years.

USING THE CREDIT

Enter the amount from line 9 above on the "RI-7695E - Research & Development Facilities Expense Credit" line of Schedule B-CR, Business Entity Credit Schedule.

Attach Schedule B-CR and Form RI-7695E to your return.

ORDER OF CREDITS

For purposes of determining the order in which carry-overs shall be taken into consideration, the credit allowed by section 44-32-2 (credit for research and development property) shall be used before the credit described in this regulation.

CONSOLIDATED RETURNS

The credit allowed against the tax of the corporation included in a consolidated return that qualifies for the credit and not against the tax of other corporations that may join in the filing of a consolidated return.

R.I. Gen. Laws § 44-32-3