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| PROPOSED MASSACHUSETTS TAX EXPENDITURES EVALUATION SUMMARY  |
| EVALUATION YEAR: 2020 |

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| **TAX EXPENDITURE TITLE** | Medical Device User Fee Credit |
| **TAX EXPENDITURE NUMBER** | 1.613 and 2.615 |
| **TAX EXPENDITURE CATEGORY** | Credit against tax *(personal income tax, corporate and business excise tax)*  |
| **TAX TYPE** | Personal income tax; Corporate and business excise |
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| **LEGAL REFERENCE** | M.G.L. c. 63, § 31L; c. 62, § 6½ |
| **YEAR ENACTED** | 2006 (St. 2006, c. 144-145) |
| **REPEAL/EXPIRATION DATE** | None |
| **ANNUAL REVENUE IMPACT** | Tax loss of $0.4 - $0.6 million annually from corporate excise filers and negligible from personal income tax filers during FY18-FY22 |
| **NUMBER OF TAXPAYERS**  | 4 claims in 2017 and 6 claims in 2016 |
| **AVERAGE TAXPAYER BENEFIT** | $34,000 (2017), $124,800 (2016) per claim. |

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| **Description of the Tax Expenditure:**The Medical Device Credit is equal to 100% of the user fees actually paid to the United States Food and Drug Administration (FDA) by a medical device company during the taxable year for which the tax is due for pre-market submissions to market new technologies or upgrades, changes, or enhancements to existing technologies, developed or manufactured in Massachusetts.  | **Is the purpose defined in the statute?**The statute does not explicitly state the purpose of this tax expenditure. The purpose of the credit is to reimburse medical companies for these expenses, with the additional incentive that the credit itself may be sold to another taxpayer. As a result, it can be inferred that the tax expenditure is designed to expand, develop, and facilitate medical device companies in Massachusetts. |
| **What are the policy goals of the expenditure?**The user fee structure imposed on medical device companies that seek approval by the FDA for medical devices has been decried as a hidden tax on innovation. As a result, the credit seeks to reimburse companies that incur such fees, thereby facilitating such companies to operate in Massachusetts. | **Are there other states with a similar Tax Expenditure?**No other states provide a credit for user fees borne by medical device companies. |

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| Conclusion/Recommendations: [To be Entered by TERC] |

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| Incentive Evaluation Results |

**INTRODUCTION**

Medical device companies subject to tax under either the personal income tax under M.G.L. c. 62 or a corporate excise under M.G.L. c. 63, and which develop or manufacture medical devices in Massachusetts can claim a transferable credit equal to 100% of the user fees paid by them when submitting certain medical device applications and supplements to the FDA. The credit may not be carried forward to subsequent tax years and is not refundable. However, unused portions of the credit may be transferred, and the transferee may carry over the credit, but must use it within 5 years.

This particular tax expenditure was enacted on July 8, 2006, making the incentive applicable from tax years beginning on or after January 1, 2006. St. 2006, c. 144, 145.

**POLICY GOAL**

The statute does not explicitly state the purpose of this tax expenditure. The purpose of the credit is to reimburse medical companies for these expenses, with the additional incentive that the credit itself may be sold to another taxpayer. As a result, it can be inferred that the tax expenditure is designed to expand, develop, and facilitate medical device development in Massachusetts.

**COSTS**

The credit has no cap and is transferable. The revenue loss (see Table 1) is estimated to be $0.4 - $0.6 million annually for corporate excise and a negligible amount for personal income tax during FY18-FY22.

**Table 1. Tax Revenue Loss Estimates for Medical Device User Fee Credit**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Fiscal Year  | 2018 | 2019 | 2020 | 2021 | 2022 |
|  Tax Expenditure Estimate ($Million)  | $0.4 | $0.6 | $0.6 | $0.5 | $0.5 |

Table 2 below shows the amount and count of available, claimed, and shared credit in the past several years. For purposes of Table 2, “Available Credit” refers to the maximum amount of the credit that a taxpayer can claim if the taxpayer has enough tax liability against which to apply the credit, and if there are no other limitations; “Claimed Credit” is the credit amount actually claimed by a taxpayer; and “Shared Credit” means the credit amount that a taxpayer filing in a combined group is able to share with other members of the group.

Corporate excise filers claimed the credit in 6 instances in 2016 and in 4 instances in 2017. In 2016, the average amount claimed was about $124,800 and in 2017 it was about $34,000.

**Table 2. Medical Device User-Fee Credit Claimed in 2016-2018**

|  |  |  |  |
| --- | --- | --- | --- |
|   | 2016 | 2017 | 2018 |
| Amount($000) | Count | Amount($000) | Count | Amount($000) | Count |
| Available Credit -A | $831 | 6 | $491 | 5 | $401 | \* |
|  Claimed Credit  | $749 | 6 | $136 | 4 | $401 | \* |
| Shared Credit | $0 | 0 | 0 | 0 | $0 | 0 |
| Claimed plus Shared Credit - B | $749 | 6 | $136 | 4 | $401 | \* |
| B/A | 90.1% | 100.0% | 27.7% | 80.0% | 100.0% | \* |
| Average Claimed or Shared Amount | $124.8 | NA | $34.0 | NA | \* | NA |

 Source: Massachusetts Department of Revenue.

 Notes: 1. There were no claims from personal income tax filers for the above years.

 2. \* Information withheld to maintain confidentiality

 3. 2017 and 2018 data are preliminary and subject to change.

 4. “NA”, not applicable.

If there is no increase in state revenues, tax incentives result in fewer public funds available to the Commonwealth due to Massachusetts balanced budget requirements. As a result, it is important to keep in mind that the costs associated with providing this credit result in forgone benefits, or opportunity costs, for the Commonwealth, as these amounts could have been expended elsewhere by the Commonwealth in a manner that would have stimulated the Massachusetts economy.

Please also note that such forgone benefits include not only the impact on the businesses and their employees that would have directly benefitted from such expenditures (this is called “direct impact”), but also the indirect impact such expenditures would have had on the businesses that provide intermediate products and services to the directly impacted businesses (this is called “indirect impact”), as well as the indirect impact on the businesses benefiting from increased purchases of goods and services by employees working for the directly impacted businesses due to their increased wages and salaries(this is called “induced impact”). Thus, the total forgone benefits extend to the economy as a whole and ultimately exceed the initial forgone benefits. This phenomenon is called the “Multiplier Effect.”[[1]](#footnote-2)

To estimate the total forgone benefits due to reduced spending on other expenditure items, we used Tax-PI, a software tool renowned for its capabilities in evaluating the total fiscal and economic effects of tax policy changes. Tax-PI is built on over 30 years of experience in modeling the economic effects of tax policy changes, as further explained in “MODELS: TAX-PI” provided in the reference section at the end of this document. The popularity of the model has grown substantially since it was introduced. Note that while this tax incentive is provided for a specific purpose, the reduced spending is assumed to be made according to the current composition of the Commonwealth’s expenditure.

Our analysis is limited to the five years from 2018 through 2022, for which we prepared input data to run the model. Tables 3 and 4 report the model results. The figures for 2018 and 2019 are estimates of forgone benefits (opportunity costs) that the Massachusetts economy experienced and those for 2020, 2021 and 2022 are projections of forgone benefits that the Massachusetts economy will experience going forward. The effects are shown as negative as reduced spending has a negative impact on the Massachusetts economy. Tables 3 and 4 show that the reduced state government spending results in lost economic activities, with real state GDP declining by about $1 million and total employment declining by 9-11 jobs annually. Lost economic activities result in a further loss in state revenues,[[2]](#footnote-3) ranging from $20,000 to $47,000 annually. Note that the additional revenue impact reported does not include the estimated amount of the tax expenditure, which is direct revenue impact or direct cost of the tax expenditure program.

**Table 3. Additional Revenue Impact due to Decreased Government Spending\***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Fiscal Year | 2018 | 2019 | 2020 | 2021 | 2022 |
| Additional revenue impact ($000) | ($20) | ($42) | ($46) | ($48) | ($47) |

\*This table reports the lost tax revenues from the foregone economic activities due to the government spending reduced to finance the medical device user fee tax credit.

**Table 4. Selected Economic Impacts due to Decreased Government Spending\***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Calendar Year | 2018 | 2019 | 2020 | 2021 | 2022 |
| Impact on total employment | (11) | (11) | (10) | (10) | (9) |
| Impact on private non-farm employment | (6) | (6) | (6) | (5) | (5) |
| Impact on GDP ($000), real dollars (2012) | ($1,000) | ($1,000) | ($1,000) | ($1,000) | ($1,000) |
| Impact on personal income ($000) | ($1,000) | ($1,000) | ($1,000) | ($1,000) | ($1,000) |

\*This table reports the lost economic activities due to the government spending reduced to finance the medical device user fee tax credit.

There are always some administrative costs for each tax incentive program. However, the administrative costs of the credit must be relatively insignificant, because the Department of Revenue administers the credit as part of its overall mission, and there have only been a few claims annually.

**BENEFITS**

The direct beneficiaries of the credit are medical device companies. In 2017, most of the direct beneficiaries were large corporations with more than 500 employees.

Claiming the credit reduces business costs, which in turn encourages the directly affected businesses to invest, expand, lower product prices, hire additional workers, etc. Such decisions would increase demand for goods and services provided by other individuals and businesses in the economy, thereby generating a “Multiplier Effect” (see discussion in the previous section) from the initial benefits. As a result, the total benefits of the tax credit to the economy at large would exceed the initial or direct benefits. To quantify these benefits, we again employed Tax-PI. A summary of the impacts is reported in Tables 5 and 6 below. The figures for 2018 and 2019 are estimates of benefits that the Massachusetts economy experienced and those for 2020, 2021 and 2022 are projections of benefits that the Massachusetts economy will experience going forward due to the credit. Tables 5 and 6 show that the credit results in more economic activity, with real state GDP increasing by about $1 million and total employment increasing by 8-10 jobs annually. Increased economic activity results in more state revenues, ranging from $18,000 to $54,000 annually, which partially offset the expenditure on this tax incentive.

**Table 5. Additional Revenue Impact of Medical Device User-Fee Tax Credit**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Fiscal Year | 2018 | 2019 | 2020 | 2021 | 2022 |
| Additional revenue impact ($000) | $18 | $41 | $48 | $52 | $54 |

**Table 6. Selected Economic Impacts of Medical Device User-Fee Tax Credit**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Calendar Year | 2018 | 2019 | 2020 | 2021 | 2022 |
| Impact on total employment | 8 | 9 | 10 | 9 | 9 |
| Impact on private non-farm employment | 8 | 9 | 9 | 9 | 8 |
| Impact on GDP ($000), real dollars (2012) | $1,000 | $1,000 | $1,000 | $1,000 | $1,000 |
| Impact on personal income ($000) | $1,000 | $1,000 | $1,000 | $1,000 | $1,000 |

The burden of a tax does not necessarily fall on those responsible for remitting the tax. It is known through economic theories that corporate taxes change the allocation of capital between corporations and non-corporate businesses and among states because capital would flee from states of higher corporate taxes if all other considerable factors are not significantly different.

R.A. Felix, in *Do State Corporate Income Taxes Reduce Wages?* (2009) finds that labor bears a significant burden from the state corporate tax in the form of lower wages. Her study further suggests that a one-percentage-point increase in the marginal state corporate tax rate reduces wages by 0.14 to 0.36%, that labor’s burden from the state corporate tax has trended upward over time due to increased global competition and increased competition among states to attract businesses, and that state corporate taxes reduce the wages of highly educated workers more than that of less-educated workers. Even though the exact amount of the impact on wages may vary among researchers, the logic of the effect is broadly shared. Hence, the findings imply that the credit, which reduces corporate taxes, may have benefited workers who were employed by the corporations directly affected by the credit in the form of higher wages. However, this particular tax incentive is not significant enough to draw a definitive conclusion.

**EVALUATION: COMPARING COSTS AND BENEFITS**

Tables 7 and 8 below depict the net additional tax revenue impact of the credit by examining whether the credit’s costs are outweighed by its benefits by comparing the data present in Tables 3, 4, 5, and 6. The results indicate that the benefits of the tax credit are partially offset by the tax credit’s costs and that the credit has a negligible net impact overall on economic activity in Massachusetts in terms of real state GDP and personal income. There are also very small impacts on employment and additional state revenues.

**Table 7. Net Additional Revenue Impact of** **Medical Device User-Fee Credit \***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Fiscal Year | 2018 | 2019 | 2020 | 2021 | 2022 |
| Net additional revenue impact ($000) | ($2) | ($1) | $2 | $4 | $7 |

\* assuming the state government spending is reduced by the same amount as the medical device user fee tax credit to balance budget.

**Table 8. Selected Net Economic Impacts of Medical Device User-Fee Tax Credit\***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Calendar Year | 2018 | 2019 | 2020 | 2021 | 2022 |
| Impact on total employment | (3) | (2) | - | (1) | - |
| Impact on private non-farm employment | 2 | 3 | 3 | 4 | 3 |
| Impact on GDP ($000), real dollars (2012) | - | - | - | - | - |
| Impact on personal income ($000) | - | - | - | - | - |

\* assuming the state government spending is reduced by the same amount as the medical device user fee tax credit to balance budget.

There are other costs and benefits that are hard to quantify because of data and time limitations. Ihlanfeldt and Sjoquist (2001) summarizes some of these costs and benefits as follows:

*Loss of competitiveness.* Providing tax credits to select firms may diminish the competitiveness for similar firms that do not receive tax credits

*Compliance costs.* Costs to the firm may be substantial.

*Improved business climate.* Tax incentives make the business climate in the state more attractive and may lead a business to locate in one state over another.

*Synergistic or clustering effects.* Tax incentive may attract a firm in an industry new to the state, which draws additional firms in the industry into that state.

Considering the limited size and scope of this credit, we don’t think that these other costs and benefits would be significant.

**Similar Tax Expenditures Offered by Other States**

Neighboring states do not provide a credit for user fees paid to the FDA with respect to medical devices.

**IS THE INCENTIVE AS DESIGNED ACCOMPLISHING ITS PURPOSE?**

[FOR TERC TO COMPLETE]

# References

Felix, R. A. (2009, Second Quarter). *Do State Corporate Income Taxes Reduce Wages?,* Economic Review, FEDERAL RESERVE BANK OF KANSAS CITY.

Keith R. Ihlanfeldt, David L. Sjoquist. (2001, August). Conducting an Analysis of Georgia’s Economic Development Tax Incentive Program. *ECONOMIC DEVELOPMENT QUARTERLY, 15*(3), 217-228.

*MODELS: TAX-PI*. (n.d.). Retrieved from Regional Economic Models, Inc.: https://www.remi.com/model/tax-pi/

1. Slide 4 of the following link provides a good illustration of “Multiplier Effect”: <https://www.ilw.com/seminars/JohnNeillCitation.pdf> [↑](#footnote-ref-2)
2. Including both tax and non-tax revenues. [↑](#footnote-ref-3)