

Return on Investment Analysis

for Selected Louisiana Tax Incentive Programs

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LOUISIANA
DEPARTMENT of REVENUE

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METHODOLOGY

This report employs a Louisiana-specific version of the REMI Tax-PI model to perform an impact analysis of tax incentives. The Tax-PI model is calibrated by REMI with state revenue and expenditure data along with data on Louisiana's industrial composition. While employing a single-region 70-sector model, changes in the region do not have an endogenous effect on the rest of the nation. Furthermore, our model assumes that firm and industry growth is endogenous, induced within the state.

Readers should consider this study a "but for" analysis that simulates the potential economic and fiscal gains driven exclusively by the selected tax rebate programs on the Louisiana economy. Tax incentives, along with many other state and local characteristics induce firms to locate, expand, or retain jobs but the forecasted fiscal and economic impacts only capture the effects of the tax incentives the firms receive.

The analysis reflects structural simulations of the economic and fiscal effects of reductions in firm capital costs – through tax exemptions in corporate, franchise and fiduciary income taxes – along with tax exemptions in personal income taxes and sales taxes for the Louisiana economy under a balanced budget scenario. We employ administrative data from the Louisiana Department of Revenue for the fiscal years 2016 to 2021 on the actual total credits/rebates issued, the industries where rebates were concentrated in, and data on the type of rebates allotted (corporate, individual, and sales taxes). Additionally, we analyzed administrative data of companies receiving job credits or payroll tax rebates from the EZ and QJ programs to calibrate the distribution of industries receiving tax incentives. The latter was required due to the gaps in self-reported industry classification provided by tax incentive recipients.

For maximum specificity, we link tax exemption amounts to industries and to the tax exemption types provided by the LDR, to create a calibrated model that best captures the collective economic impacts of each tax incentive program. We then model the economic impact of different types of tax incentives across the industries covered by the selected programs to run a forecast that encompasses all of the potential gains from a selected tax incentive for the selected period. This allows us to report the broader economic return on investment as well as the fiscal return on investment using the personal income growth estimates and an income tax rate of 7.63 percent as employed in the Louisiana Legislative Auditor's Quality Jobs report.

We calculate the estimated economic return on investment from each program to the Louisiana economy through 2029 by calculating the net benefit of each program (the economic value added minus the total program costs), dividing that number by the total program cost, and multiplying times 100 as follows.

$$\text{Economic ROI} = \frac{(\text{Value Added} - \text{Total Cost})}{\text{Total Cost}} \times 100 \%$$

Economic ROI reflects the growth in GDP of the state by affecting the growth in consumption expenditures, private investment, government expenditure, and/or net exports after accounting for the costs of the incentives.

Similarly, the fiscal return on investment is revenue added minus the total program costs, dividing that number by the total program cost, and multiplying times 100.

$$\text{Fiscal ROI} = \frac{(\text{Tax Revenue} - \text{Total Cost})}{\text{Total Cost}} \times 100 \%$$

Return on Investment (ROI) is a measure of profitability of an investment widely used by businesses and governments. While ROI can be calculated using either a gross calculation method or a net calculation method, utilization of the net calculation method provides a more realistic measurement of return.

Consider the methods used below to calculate ROI using both approaches for fiscal return.

$$\text{Gross Fiscal ROI} = \frac{(\text{State tax revenue})}{(\text{Cost of incentive})} \times 100 \%$$

$$\text{Net Fiscal ROI} = \frac{(\text{State tax revenue} - \text{Cost of incentive})}{(\text{Cost of incentive})} \times 100 \%$$

As illustrated in the equations above, only the net approach deducts the cost of the incentives while calculating ROI. Deducting the cost of the incentive is important in determining whether Louisiana realized a gain or loss to state tax revenues by providing certain tax incentives.

It is worth noting that if the tax revenue generated by the incentive is higher than the cost, fiscal ROI is positive; however, if the tax revenue is lower than the cost, the fiscal ROI is negative. It is impossible to determine whether the state realized a gain or loss from the incentives if the cost of the incentive is not included in the calculation. The net calculation method will always result in a lower ROI than the gross calculation method because the cost of incentive is deducted from the state tax revenue gained from the incentive itself. Gross and net economic ROIs are also analogous to fiscal ROI with the only difference being that the economic ROI accounts for gross domestic product/value added instead of solely looking at the increase in state tax revenues from the incentive.

Tax incentives can have economic impacts beyond the jobs and income generated by the targeted industry/sector. Often it is not easy to decipher complex economic data to evaluate the benefits and costs of tax incentives aimed towards industries to locate, expand, or create jobs. A multiplier is a single number that summarizes the total economic benefits of government spending that stems from the change in the local economy. In other words, a multiplier summarizes the expected impact in the economy from a change in given economic activity. For example, increased investment by a chemical manufacturing facility receiving tax incentives can have ripple effects in the economy beyond the chemical manufacturing sector. Industries with high multipliers have strong backward linkages in their supply chain.

The source of such impacts can be broken down into different components: direct, indirect, or induced effects. Direct effects of tax incentives are the initial changes in economic activity in the targeted sector. Indirect effects result from the business-to-business purchases in the supply chain that stems from the direct effects. The induced effects result from the increased personal income caused by both direct and indirect effects. The multiplier effect of tax incentives in this study represents the summation of these three effects. Different types of multipliers are available to gauge the change in the employment or the economic activity in the local economy. Here, we focus on the economic multiplier often calculated as the ratio of total effects to the direct effect and expressed as a dollar-of-impact per dollar-of-change. Economic multipliers (multiplier effects) provide estimates of the additional value added in the economy because of the economic activity from the firms receiving tax incentives. For example, a multiplier effect of 2.5 means that the increase in every dollar of economic output results in an additional \$1.5 of indirect and induced economic activity in the local economy. In other words, every dollar of economic output in targeted industries, \$2.5 of activity is generated in the local economy i.e. the original dollar and the spillover effect of further \$1.5. This study calculates the economic multiplier defined as Type II multiplier by REMI as follows.

$$\text{Multiplier} = \frac{(\text{Direct} + \text{Indirect} + \text{Induced Effects})}{\text{Direct Effects}}$$

Readers should keep in mind the distinction between the ROI and multipliers reported in this study. Economic ROI explains the net growth in GDP the state experiences because of each dollar it spends in tax incentives whereas fiscal ROI explains the net amount the state receives as tax revenues for every dollar it spends in tax incentives. Economic multipliers, on the other hand explain the economic activity from the spillover effects of each dollar of economic activity generated by the targeted industries. REMI takes into account the multipliers of all major industry groups in the models used in the forecasts. Readers may also find it helpful to interpret the ROIs in percentages and multipliers as simple ratios.

We simulated the forecasts for tax revenue and state GDP for each tax incentives one at a time in REMI’s Tax-PI software. The estimated revenue and GDP given by the REMI software are forecasted based on the expenditures for particular tax incentives where all other factors remain unchanged. This allows us to interpret our estimates to be the direct effect of a given tax incentive thus allowing our estimates to be “but for” estimates. This methodology follows standard approaches of fiscal and economic impact analysis performed using state specific REMI Tax-PI software. It is true that future values of ROI depends on correctly calibrating the REMI software. However, the effectiveness of the incentives to generate tax revenue and grow state GDP are also equally important in determining whether the future values of ROI will be positive or negative.

EXECUTIVE SUMMARY

Act 87 of the 2018 Regular Session requires that the Louisiana Department of Revenue (LDR) “perform a comprehensive return on investment analysis for all tax incentives for which the revenue loss was one million dollars or more in the previous fiscal year.” This report serves as a comprehensive analysis of the return on investment of ten of Louisiana’s largest tax incentive programs.

This report details the economic and fiscal impact of the following tax incentives provided during the years 2016 to 2021:

1. Motion Picture Investor Tax Credit (Film)
2. Enterprise Zone Program (EZ)
3. Louisiana Quality Jobs Program (QJ)
4. Digital Interactive Media & Software Tax Credit (DM)
5. Rehabilitation of Historic Structures (RHS)
6. Industrial Tax Equalization Program (TE)
7. Retention and Modernization Credit (R&M)
8. Procurement Processing Company Rebate Program (PPC)
9. Research and Development Tax Credit (R&D)
10. Musical & Theatrical Productions Tax Credit (Live)

This report divides the tax incentives into two groups as Group 1 and Group 2, based on their cost. Group 1 includes the five incentives with the largest annual revenue loss, and Group 2 includes five other incentives with annual revenue loss which meet the reporting requirements of Act 87. Using the methodology detailed in this report, all ten tax incentives listed above had a negative fiscal ROI but a positive economic ROI.

INTRODUCTION

Act 87 of the 2018 Regular Session requires the Louisiana Department of Revenue (LDR) to “perform a comprehensive return on investment analysis for all tax incentives for which the revenue loss was one million dollars or more in the previous fiscal year.” This report provides a comprehensive analysis of the return on investment of ten selected Louisiana’s tax incentive programs. The report divides them into two groups as Group 1 and Group 2 of tax incentives based on the cost of exemptions with the five costliest incentives and five less costly incentives in each group.

The economic and fiscal impact of Group 1 of tax incentives include Louisiana Department of Economic Development’s (LED) Enterprise Zones, Louisiana Quality Jobs Program, Motion Picture Investor Tax Credit, and Digital Interactive Media & Software Tax Credit along with Department of Culture, Recreation, and Tourism’s (CRT) Rehabilitation of Historic Structures.

In Group 2 of the study, the report details the economic impact of tax incentives provided by the LED’s Research and Development Tax Credit, Industrial Tax Exemption Program, Retention and Modernization Tax Credit and Musical & Theatrical Production Tax Credit along with the LDR’s Procurement Processing Company Rebate Program.

Using administrative data from the Louisiana Department of Revenue from 2016 through 2021 on total tax credits/rebates (corporate income and franchise, individual income, and sales taxes), this report presents the fiscal and economic impacts of ten business incentive programs on the economy of the State of Louisiana. Additionally, the report also ranks the tax incentive programs from the highest to the lowest return on investment.

The report details the following:

1. General Overview of the selected Tax Incentives (summary of the structure of the tax incentives and major industries affected),
2. Return on Investment Analysis,
3. Summary of Results, and
4. Comparison of Results.

GENERAL OVERVIEW OF THE SELECTED TAX INCENTIVES

The design and administration of tax incentive programs substantially shape the potential economic and fiscal returns to the state by affecting the location, hiring, and investment decisions of the businesses. State governments aim to attract and increase business activities with economic development policies, including lower business tax rates and higher tax incentives. These incentives target both new and existing businesses with special tax credits/rebates along with other financial benefits or services. This section provides an overview of the following five tax incentive programs with an emphasis on the structure of the tax incentives and the major industries affected.

Group 1 Tax Incentives

Table 1 reviews the major industries affected by the Group One of the selected tax incentives and Figure 1 demonstrates the structure of the tax incentives.

Enterprise Zones

Enterprise zones are areas with high unemployment, low income, or a high percentage of residents receiving public assistance. The Enterprise Zone, or EZ program, is a jobs incentive program that provides Louisiana income and franchise tax credits to a new or existing business located in Louisiana that creates permanent net new full-time jobs, and hires at least 50% of those net new jobs from one of four targeted groups. The benefits provided include:

- ◆ A one-time \$3,500 or \$1,000 job tax credit for each net new job created; and
- ◆ Either a rebate of state sales and use taxes paid at the prevailing rate on qualifying materials, machinery, furniture, and/ or equipment purchased or a 1.5% refundable investment tax credit on the total capital investment, excluding tax exempted items. The state sales and use tax rebate or 1.5% rebate shall not exceed \$100,000 per net new job created under the contract.

The Louisiana Quality Jobs Program

The Louisiana Quality Jobs Program provides an incentive to encourage businesses to locate or expand existing operations in Louisiana and create quality jobs focusing on Louisiana Vision 2020 and seed clusters industries. These industries include, but are not limited to, biotechnology, biomedical, micro-manufacturing, software and internet, clean energy, food technology, and advanced materials. The participating business must create a minimum number of full-time jobs and provide a basic health benefit plan within 90 days of hire. The benefits provided include:

- ◆ A 4% or 6% payroll rebate for new direct jobs based on the hourly wage rate; and
- ◆ Either a rebate of state sales and use taxes paid at the prevailing rate on qualifying materials, machinery, furniture, and/ or equipment purchased or a 1.5% project facility expense rebate on the total capital investment, excluding tax exempted items.

Table 1: Group One of Selected Louisiana Tax Incentive Programs and Main Industries Impacted: Source: Louisiana Department of Revenue

Agency	Program	Main Industries Impacted	Effective	Sunset
Department of Economic Development	Enterprise Zones	NAICS 324, 325	9/11/1981	7/1/2026
Department of Culture, Recreation and Tourism	Rehabilitation of Historic Structures	NAICS 23	7/1/2002	1/1/2026
Department of Economic Development	Quality Jobs	NAICS 325	7/1/1995	7/1/2022
Department of Economic Development	Motion Picture Investor Tax Credit	NAICS 512	1/1/1993	7/1/2025
Department of Economic Development	Digital Interactive Media & Software Tax Credit	NAICS 511, 54	6/30/2005	N/A

Digital Interactive Media and Software Tax Credit Program

The Digital Interactive Media and Software Tax Credit is intended to encourage development of a strong capital base for the production of digital interactive media in order to achieve a more independent, self-supporting industry. The benefits provided include:

- ◆ Up to a 25 percent refundable tax credit for in-state labor; and
- ◆ Up to an 18 percent refundable credit for eligible production expenses.

The program has no annual cap and no minimum spending requirement. The tax credit is available for a refund of 100% of its value claimed on Louisiana state tax return OR certified applicants can receive 85% of the value earned as a rebate any time during the year.

Motion Picture Investor Tax Credit

The Motion Picture Investor Tax Credit is intended to encourage development in Louisiana of a strong capital base for motion picture production in order to achieve an independent, self-supporting industry. The benefits include:

- ◆ For state certified productions meeting certain criteria, a tax credit of up to 40% for qualified expenditures; and
- ◆ For Qualified Entertainment Companies (QEC) meeting certain criteria, the program provides a payroll tax credit of up to 20%.

Rehabilitation of Historic Structures

The Rehabilitation of Historic Structures tax credit program provides a non-refundable credit for the eligible cost and expenses incurred during the rehabilitation of a historic structure located in a downtown development or a cultural district. Eligible structures must be nonresidential real property or residential rental property. The benefits include:

- ◆ A credit equal to 25 percent of the eligible costs and expenses of the rehabilitation incurred prior to January 1, 2018; and
- ◆ A credit equal to 20 percent for eligible costs and expenses incurred on or after January 1, 2018.

No taxpayer or affiliate shall claim more than five million dollars of credit per year for any number of structures rehabilitated within a particular downtown development or a cultural district.

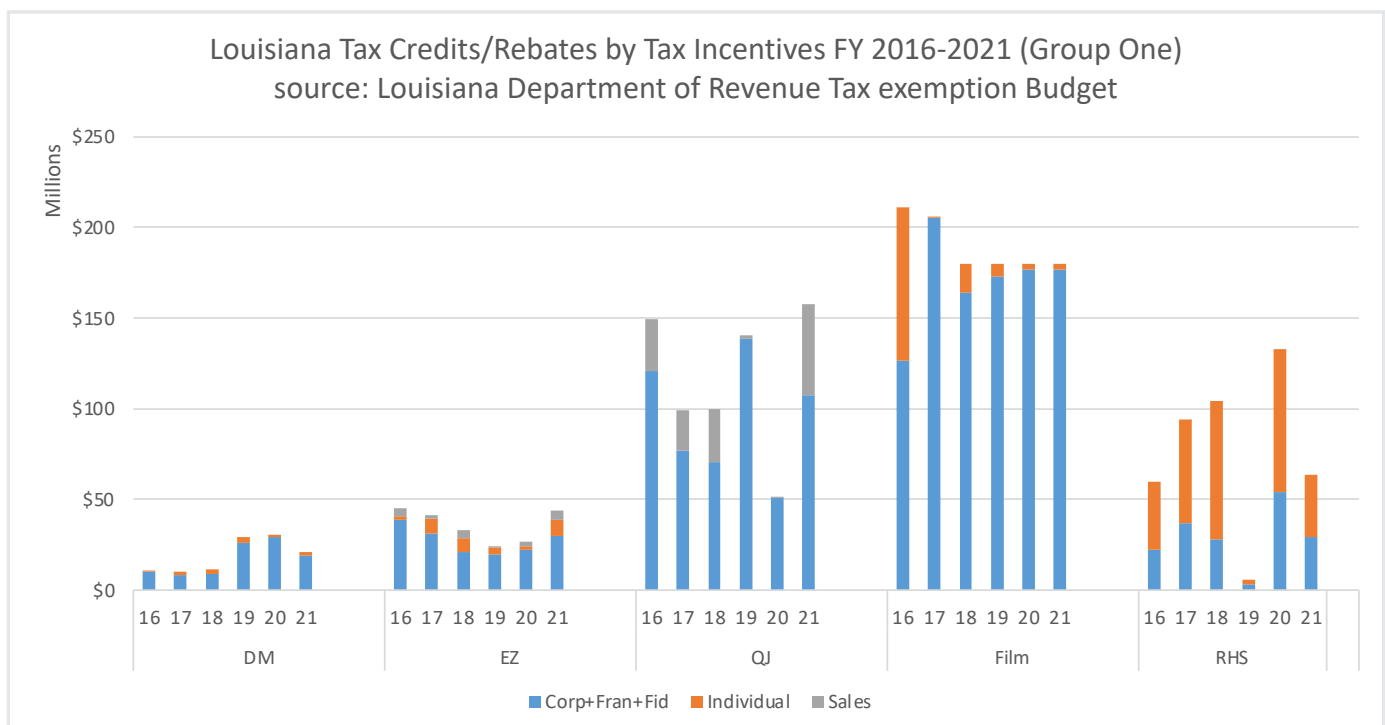


FIGURE 1: GROUP 1 LOUISIANA TAX INCENTIVES (FISCAL YEAR 2016 – 2021)

Group 2 Tax Incentives

Table 2 reviews the major industries affected by the Group 2 of selected tax incentives and Figure 2 demonstrates the structure of the tax incentives.

Research and Development Tax Credit

The Research and Development tax credit is intended to encourage new and continuing efforts to conduct research and development activities within this state. The program is open to companies who have incurred research and development expenditures in Louisiana and who meet certain requirements. Louisiana has three different types of research and development applicants who earn credits at different rates and have different filing requirements: 1) businesses who increase in Louisiana Research and Development (50+ employees), 2) businesses who receive a Small Business Innovation Research Grant (SBIR/STTR) from the federal government, and 3) businesses who employ less than 50 employees, including affiliates.

The following types of businesses that do not have a pending or issued United States patent directly related to the qualified research expenditures for which a credit is being claimed pursuant to La. R.S. 47:6015 are ineligible to apply for or receive benefits unless specifically invited by the LED to do so: 1) a professional services firm, or 2) businesses primarily engaged in custom manufacturing and custom fabricating.

Program benefits include:

- ◆ Up to a 30% tax credit on qualified research expenditures incurred in Louisiana.

Table 2: Group Two of Selected Louisiana Tax Rebate Programs and Main Industries Impacted: Source: Louisiana Department of Revenue FY2019

Agency	Program	Largest Industries Impacted	Effective	Sunset
Department of Economic Development	Research & Development	NAICS 55	12/31/2002 income 12/31/2003 franchise	12/31/2025
Department of Economic Development	Retention & Modernization	NAICS 325	8/15/2009	N/A
Department of Revenue	Procurement Processing Company	NAICS 561	7/1/1995	7/1/2022
Department of Economic Development	Industrial Tax Equalization Program	NAICS 42	9/3/1989	N/A
Department of Economic Development	Music & Theatrical Production	NAICS 512	7/19/2007	7/1/2025

Industrial Tax Equalization Program

The Industrial Tax Equalization Program is intended to encourage the establishment and retention of manufacturing establishments, headquarters, or warehousing and distribution establishments in Louisiana by providing a procedure whereby the total state and local taxes imposed upon these establishments may be reduced, after all other tax incentives for specific sites are applied, to the levels imposed by other competing states.

The Board of Commerce and Industry may enter into a tax equalization contract only if each of the following requirements are met by the manufacturing establishment, headquarters, or warehousing and distribution establishment:

- ◆ The establishment must either be located in another state or be located in Louisiana and contemplating locating in another state that has equivalent or comparable advantages as the area in Louisiana in which the establishment is or seeks to be located.
- ◆ The state in which the establishment is located or is contemplating locating must have a total state, parish, and local tax structure that offers a greater tax advantage to the establishment than does the taxing structure of Louisiana.
- ◆ The applicant for tax equalization may be any form of business entity.
- ◆ The sites under consideration in Louisiana and the competing state must be valid and viable for the proposed operations.

- ◆ The secretary of the Department of Economic Development must make a recommendation to the governor to extend an invitation to apply for tax equalization.
- ◆ The applicant must receive an invitation to apply from the governor.

Retention and Modernization Credit

The Retention and Modernization credit is intended to provide an inducement for businesses to remain in the state and not relocate outside the state and to modernize their existing operations in Louisiana. The program is discretionary and businesses must be invited by the Secretary of LED to participate in the program. The credit is a non-refundable income and franchise tax credit with a ten-year carryforward period. Program benefits include:

- ◆ A credit at the rate of up to five percent of the amount of qualified expenditures incurred by the employer for modernization with the credit divided in equal portions for five years.

Musical & Theatrical Productions Tax Credit

The purpose of the tax credit is to establish and promote Louisiana as one of the primary places in the United States in which live performances, from creation to presentation, are present and thriving. For state certified productions meeting certain criteria, the program provides a tax credit for qualified production expenditures with additional tax credits available for payroll. The program has an annual cap for \$10 million each year with 50% of that reserved for productions by non-profit organizations. Program benefits currently include:

- ◆ a credit equal to 18% of the base investment; and
- ◆ a credit equal to 7% of payroll expended on Louisiana residents.

Procurement Processing Company Rebate Program

The Procurement Processing Company Rebate Program is intended to recruit to Louisiana, purchasing companies that generate sales of items subject to states sales and use taxes. The secretary of LED is authorized to enter into contracts with procurement processing companies and these contracts provide a rebate to these procurement processing companies which are derived from a portion of the state sales and use taxes collected on new taxable sales by the purchasing company which is managed by the procurement processing company under contract with LED. The initial term of the contract cannot exceed twenty years and can be renewed for up to an additional twenty years. Program benefits include:

- ◆ a rebate of the contractually agreed upon percentage of state sales tax on new taxable sales by the purchasing company.

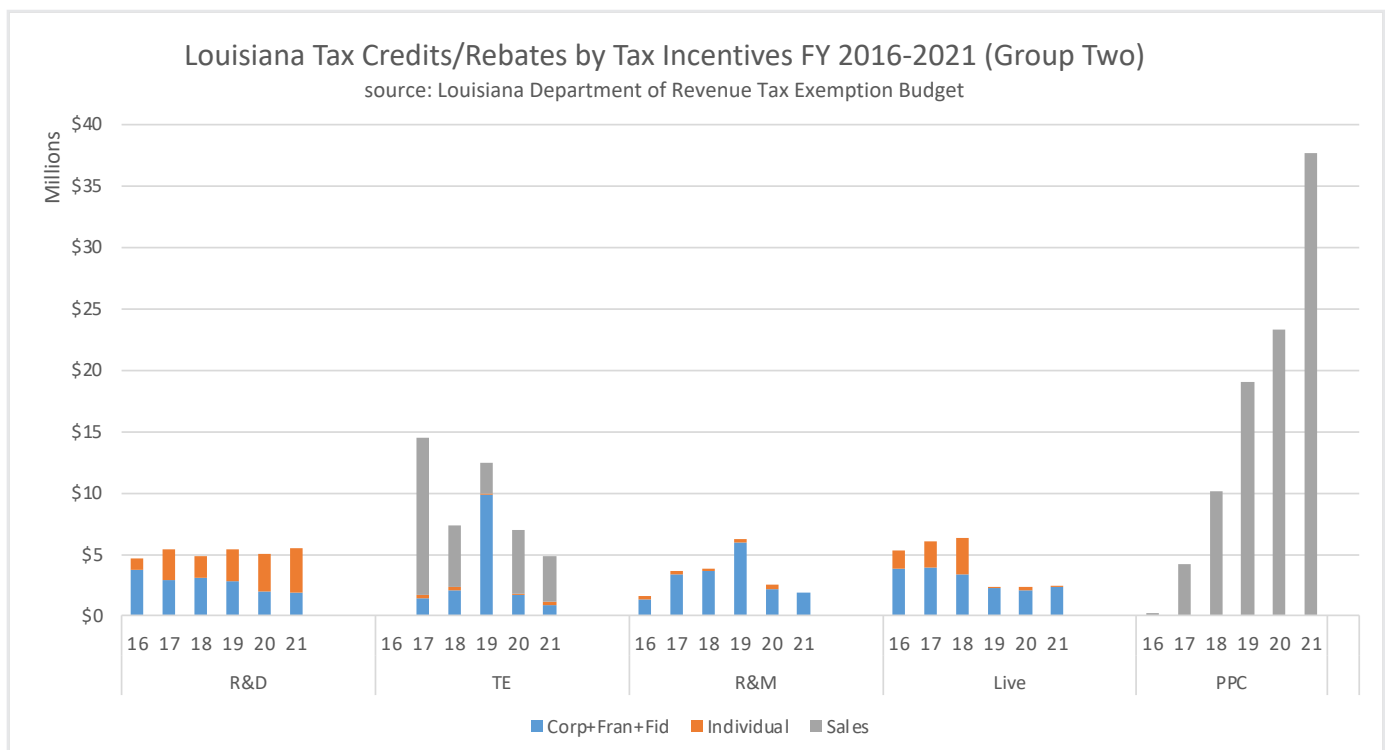


FIGURE 2: GROUP TWO LOUISIANA TAX INCENTIVES (2016 – 2021)

Fiscal Years **2016-2019**



FINDINGS

FY 2016-2019

The findings for Group 1 are as follows:

- ◆ Louisiana's economy gains an annual average \$684.9 million in state gross domestic product from the tax incentives issued under the five selected programs.
- ◆ Louisiana's fiscal budget has an average annual deficit of \$419.6 million from the tax incentives issued under the five selected programs. Of the \$451.4 million annual average in total incentives issued, state revenue recoups an annual average of \$31.8 million.
- ◆ The economic return on investment (the net economic benefit for the Louisiana economy observed in state gross domestic product) for the five programs ranked from highest to lowest are:
 1. Digital Interactive Media & Software Tax Credit (119.24%)
 2. Rehabilitation of Historic Structures (68.75 %)
 3. Louisiana Quality Jobs Program (51.50 %)
 4. Enterprise Zones (47.85 %)
 5. Motion Picture Investor Tax Credit (39.88 %)

This means that the state economy-measured by state gross domestic product-grows by 1.19 dollars for every dollar spent on the Digital Interactive Media & Software Tax Credit after accounting for the program costs. Conversely, the Louisiana economy expands by 39.88 cents for every dollar spent on the Motion Picture Investor Tax Credit program.

- ◆ The fiscal return on investment (the net fiscal benefit for the Louisiana state budget observed in state gross tax revenues) for the five programs ranked from highest to lowest are:
 1. Digital Interactive Media & Software Tax Credit (-87.69 %)
 2. Rehabilitation of Historic Structures (-90.50 %)
 3. Quality Jobs (-92.25 %)
 4. Enterprise Zone (-92.70 %)
 5. Motion Picture Investor Tax Credit (-94.90 %)

This means that state tax revenue shrinks by 87.69 cents to 94.90 cents for each dollar spent in the selected tax incentive programs.

- ◆ Digital Interactive Media & Software Tax Credit
 - Average annual total incentives: \$15.3 million.
 - Average annual estimated gross domestic product, value added, from total incentives: \$33.5 million.
 - Average annual net economic impact: \$18.2 million.
 - Average annual estimated state revenue from total incentives: \$1.9 million.
 - Average annual estimated tax revenue loss: \$13.4 million.
 - The economic multiplier is 1.72.
 - Mainly impacted: Publishing Industries except Internet (NAICS 511) and Professional, Scientific, and Technical Services (NAICS 54)

◆ Rehabilitation of Historic Structures

- Average annual total incentives: \$83.8 million.
- Average annual estimated gross domestic product, value added, from total incentives: \$141.5 million.
- Average annual net economic impact: +\$57.6 million.
- Average annual estimated state revenue from total incentives: \$7.9 million.
- Average annual estimated tax revenue loss: \$75.8 million.
- The economic multiplier is 1.94.
- Mainly affected the Construction industry (NAICS 23).

◆ Louisiana Quality Jobs Program

- Average annual total incentives: \$122.2 million.
- Average annual estimated gross domestic product, value added, from total incentive: \$185.2 million.
- Average annual net economic impact: \$62.9 million.
- Average annual estimated state revenue from total incentives: \$9.5 million.
- Average annual estimated tax revenue loss: \$112.7 million.
- The economic multiplier is 2.20.
- Mainly affected Chemical Manufacturing (NAICS 325).

◆ Enterprise Zones

- Average annual total incentives: \$35.8 million.
- Average annual estimated gross domestic product, value added, from total incentives: \$52.9 million.
- Average annual net economic impact: \$17.1 million.
- Average annual estimated state revenue from total rebates: \$2.6 million.
- Average annual estimated tax revenue loss: \$33.1 million.
- The economic multiplier is 2.28.
- Mainly affected Chemical Manufacturing (NAICS 325).

◆ Motion Picture Investor Tax Credit Program

- Average annual total incentives: \$194.3 million.
- Average annual estimated gross domestic product, value added, from total incentives: \$271.7 million.
- Average annual net economic impact: \$77.4 million.
- Average annual estimated state revenue from total incentives: \$9.9 million.
- Average annual estimated tax revenue loss: \$184.3 million.
- The economic multiplier is 1.63.
- Mainly affected the Motion Picture and Sound Recording industry (NAICS 512).

The findings for Group 2 are as follows:

- ◆ Louisiana's economy gains an average annual \$5.3 million in gross domestic product from the tax incentives issued under the Group 2's five selected programs. This figure includes personal income gains, increases in production and consumer spending, and tax revenues.
- ◆ Louisiana's fiscal budget has an average annual deficit of \$ 31.8 million from the tax incentives issued under the five selected programs. Of the \$ 34.2 million annual average in total incentives issued, state revenue recoups an annual average of \$ 2.4 million.
- ◆ The economic return on investment (the net economic benefit for the Louisiana economy observed in state gross domestic product) for the five programs ranked from highest to lowest are:
 1. Musical & Theatrical Productions Tax Credit (38.37%)
 2. Retention and Modernization Credit (25.71%)
 3. Procurement Processing Company Rebate Program (17.97%)
 4. Research and Development Tax Credit (14.14%)
 5. Industrial Tax Equalization Program (1.45%)

This means that the state economy as measured by the state gross domestic product grows by 38.37 cents for every dollar spent on Musical & Theatrical Productions program after accounting for the program costs.

- ◆ The fiscal return on investment (the net fiscal benefit for the Louisiana state budget observed in state gross tax revenues) for the five programs ranked from highest to lowest are:
 1. Musical & Theatrical Productions Tax Credit (-91.65%)
 2. Research and Development Tax Credit (-92%)
 3. Procurement Processing Company Rebate Program (-92.77%)
 4. Retention and Modernization Credit (-93.55%)
 5. Industrial Tax Equalization Program (-93.71%)

This means that the state budget as measured by the tax revenues declines by 91.65 cents to 93.71 cents for every dollar spend on tax incentives in the selected programs.

- ◆ Musical & Theatrical Productions Tax Credit
 - Average annual total incentives: \$4.9 million.
 - Average annual estimated gross domestic product, value added, from total incentives: \$ 6.8 million.
 - Average annual net economic impact: +\$1.9 million.
 - Average annual estimated state revenue from total incentives: \$411 thousand.
 - Average annual estimated tax revenue loss: \$4.5 million.
 - The economic multiplier is 1.77.
 - Largest industry impacted is the Motion Picture and Sound Recording (NAICS 512).
- ◆ Research and Development Tax Credit
 - Average annual total incentives: \$5.09 million.
 - Average annual estimated gross domestic product, value added, from total incentive: \$5.8 million.
 - Average annual net economic impact: +\$720.8 thousand.
 - Average annual estimated state revenue from total incentives: \$407.5 thousand.
 - Average annual estimated tax revenue loss: \$4.7 million.
 - The economic multiplier is 1.88.
 - Largest industry impacted is the Management of Companies and Enterprises (NAICS 55).

- ◆ Procurement Processing Company Rebate Program
 - Average annual total incentives: \$8.9 million.
 - Average annual estimated gross domestic product, value added, from total incentives: \$10.5 million.
 - Average annual net economic impact: +\$1.6 million.
 - Average annual estimated state revenue from total incentives: \$646.3 thousand.
 - Average annual estimated tax revenue loss: \$8.3 million.
 - The economic multiplier is 2.13.
 - Largest industry impacted is the Professional, Scientific, and Technical Services (NAICS 561).
- ◆ Retention and Modernization Credit
 - Average annual total incentives: \$3.8 million.
 - Average annual estimated gross domestic product, value added, from total incentives: \$ 4.8 million.
 - Average annual net economic impact: +\$987.5 thousand.
 - Average annual estimated state revenue from total incentives: \$ 247.5 thousand.
 - Average annual estimated tax revenue loss: \$3.6 million.
 - The economic multiplier is 2.40.
 - Largest industry impacted is the Chemical Manufacturing (NAICS 325).
- ◆ Industrial Tax Equalization Program
 - Average annual total incentives: \$11.4 million.
 - Average annual estimated gross domestic product, value added, from total incentives: \$11.6 million.
 - Average annual net economic impact: +\$165.5 thousand.
 - Average annual estimated state revenue from total incentives: \$720 thousand.
 - Average annual estimated tax revenue loss: \$10.7 million.
 - The economic multiplier is 1.81.
 - Largest industries impacted are the Wholesale Trade (NAICS 42) and the Telecommunications (NAICS 517) where Telecommunications received the highest sales tax rebates.
- ◆ The return on investment analysis in this report used historical administrative data from the Louisiana Department of Revenue and the REMI Tax-PI forecasting software calibrated for the State of Louisiana.
- ◆ Analysis assumes that the tax incentives drive the industry growth and that the gains from growth remained mainly in Louisiana.

Summary of Group 1 Tax Incentives						
	RHS	DM	EZ	QJ	Film	Total
Average annual tax incentives	\$83.8 M	\$ 15.3 M	\$35.8 M	\$122.2 M	\$194.3 M	\$451.4 M
Average annual GDP/value added	\$141.5 M	\$33.5 M	\$52.9 M	\$185.2 M	\$271.7 M	\$684.9 M
Average annual net economic impact	\$57.6 M	\$18.2 M	\$17.1 M	\$62.9 M	\$77.4 M	\$233.4 M
Average annual state revenue	\$7.9 M	\$1.9 M	\$2.6 M	\$9.5 M	\$9.9 M	\$31.8 M
Average annual tax revenue loss	\$75.8 M	\$13.4 M	\$33.1 M	\$112.7 M	\$184.3 M	\$419.6 M
Fiscal ROI	-90.50%	-87.69%	-92.70%	-92.25%	-94.90%	
Economic ROI	68.75%	119.24%	47.85%	51.50%	39.88%	

Notes: RHS – Rehabilitation of Historic Structures, DM – Digital Interactive Media & Software Tax Credit, EZ – Enterprise Zones, QJ – Louisiana Quality Jobs Program, Film – Motion Picture Investor Tax Credit

Summary of Group 2 Tax Incentives						
	R & D	TE	R & M	Live	PPC	Total
Average annual tax incentives	\$5.09 M	\$11.4 M	\$3.8 M	\$4.9 M	\$8.9 M	\$34.2 M
Average annual GDP/value added	\$5.8 M	\$11.6 M	\$4.8 M	\$6.8 M	\$10.5 M	\$39.6 M
Average annual net economic impact	\$720.8 K	\$165.5 K	\$987.5 M	\$1.9 M	\$1.6 M	\$5.3 M
Average annual state revenue	\$407.5 K	\$720 K	\$247.5 K	\$411 K	\$646.3 K	\$2.4 M
Average annual tax revenue loss	\$4.7 M	\$10.7 M	\$3.6 M	\$4.5 M	\$8.3 M	\$31.8 M
Fiscal ROI	-92.00%	-93.71%	-93.55%	-91.65%	-92.77%	
Economic ROI	14.14%	1.45%	25.71%	38.37%	17.97%	

Notes: R & D – Research & Development Tax Credit, TE – Industrial Tax Equalization Program, R & M – Retention & Modernization Credit, Live – Musical & Theatrical Productions Tax Credit, and PPC- Procurement Processing Company Rebate Program.

RETURN ON INVESTMENT OF SELECTED TAX INCENTIVE PROGRAMS

FY 2016-2019

Using administrative data from the Louisiana Department of Revenue from 2016 through 2019 on total tax credits/rebates (corporate income and franchise, individual income, and sales taxes), this report presents the fiscal and economic impacts of ten business incentive programs on the economy of the state of Louisiana. This study used REMI Tax-PI forecasting software calibrated for the state of Louisiana using the data from 2016 to 2019. The Industrial Tax Equalization Program employed data from 2017 to 2019 due to insufficient data. This section reports the summary of economic and fiscal impacts of the business incentive programs from two approaches. First, based on the available data, it summarizes the forecasts over the next ten years (2020 through 2029) on the average annual expected dollar amounts of gross domestic product (GDP)/value-added, net economic impact, and state tax revenue for the state of Louisiana as a result of the business incentives programs under study. Second, it presents the calculated economic return on investment (Economic ROI) and fiscal return on investment (Fiscal ROI) to those programs based on the forecasts obtained from the REMI Tax-PI software. It is worth noting that this study is a “but for” analysis where the interpretation of the results elucidates the potential fiscal and economic gain/loss in the Louisiana economy exclusively resulting from the specific tax incentives program. In addition to that, this study also employs an assumption of a balanced budget to government spending where a reduction in state revenues leads to a proportional decline in state expenditures.

Group 1 Tax Incentives

The annual average cost of Group 1 tax incentives to the state of Louisiana is \$451.4 million but the state recoups only \$31.8 million in tax revenues that results in an average annual revenue loss of \$ 419.6 million. The annual average estimated GDP gain from tax incentives is \$684.9 million that results in a net economic impact of \$233.4 million. The state does not recover the tax incentives issued to individuals and businesses over the next ten years but the selected incentives have a positive impact in the GDP meaning more economic activities with decreased consumption, capital investment, or job growth. Figure 3 shows the average annual expected economic and fiscal impacts of selected tax incentive programs from 2020 to 2029.

The results show that all these tax incentives have a positive economic effect on the state economy. The average annual net economic impact of the tax credits/rebates issued to individuals and businesses ranges from \$17.1 million for Enterprise Zones (EZ) to \$77.4 million for the Motion Picture Investor Tax Credit (Film). The average annual net economic impact of other programs is \$18.2 million for Digital Interactive Media & Software Credit (DM), \$57.6 million for the Rehabilitation of Historic Structures (RHS) and \$62.9 million for Quality Jobs (QJ). Here, the net economic effect implies the value added/gain in GDP in Louisiana’s economy after accounting for the cost of incentives. The value added by each program, on the other hand, is the gross output of an industry/sector less its intermediate

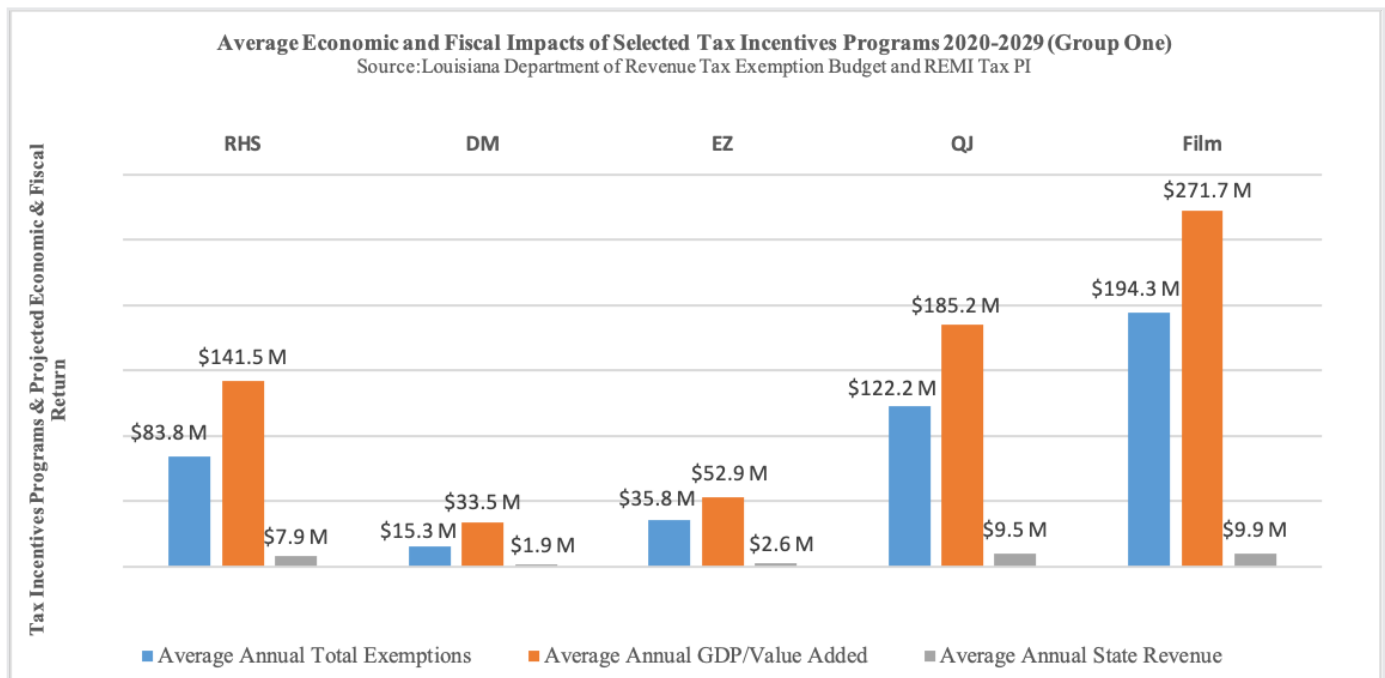


FIGURE 3: ECONOMIC AND FISCAL IMPACTS OF GROUP 1 TAX INCENTIVES

inputs, thus one can understand it as the contribution of an industry or sector to the gross domestic product (GDP). The contribution of these programs to the Louisiana GDP ranges from \$33.5 million for DM to \$271.7 million for film. It is worth noting that Film has the highest average annual value-added of \$271.7 million and exerts the highest economic impact with the highest incentive costs (i.e. \$194.3 million).

Contrary to the economic impact from tax credits/rebates issued under most of the programs, the fiscal impact for all the programs is negative. In other words, the estimated state tax revenue for all the programs is less than the amount issued to individuals and businesses through tax exemptions. The average annual revenue loss ranges from \$13.4 million for DM to \$184.3 million for Film. The estimated revenue loss per year for other programs is \$33.1 million for EZ, \$75.8 million for RHS, and \$112.7 million for QJ. Although the average tax revenue collected by the state is the highest for the Film tax credit program, the net revenue loss is also the highest among the selected programs because of its high tax credit amount.

A widely used economic calculation in both the private sector and government for the effectiveness of investment is Return on Investment (ROI). ROI is a calculation of the expected gains/benefits from a program versus the costs of implementing the program, i.e. ratio of net benefits divided by its total costs. This study calculates two types of ROI: economic ROI and fiscal ROI. The net benefit of tax incentives in economic ROI is the economic value-added/GDP less the total program costs whereas in fiscal ROI it is the state tax revenue less the total program costs. In this report, we express ROI in percentages by multiplying the ratio by 100 for ease of interpretation. Figure 4 shows the economic and fiscal ROI for the first group of tax incentives.

All the tax incentive programs have a positive economic return on investment that ranges from 39.88 % for Film to 119.24% for DM. The positive economic ROI values mean that the Louisiana economy – as measured by the state GDP – grows by 39.88 cents and 1.20 cents for every dollar spent on the Film and DM after accounting for their program costs. Similarly, the economic ROI for EZ is 47.85 %, QJ is 61.50 %, and RHS is 68.24 %.

The fiscal return on investment of all the five tax incentives is negative suggesting that tax revenue declines for every dollar spent on these tax incentive programs. The fiscal ROI for the programs ranked from highest to the lowest are: DM (-87.69 %), RHS (-90.50 %), QJ (-92.25 %), EZ (-92.70 %), and Film (-94.90 %). It means that the state budget, as measured by the state tax revenues declines by 87.69 cents to 94.90 cents for every dollar spent in tax incentives. In other words, the state recoups only between 5.10 cents to 12.31 cents in revenue for every dollar spent in these five programs.

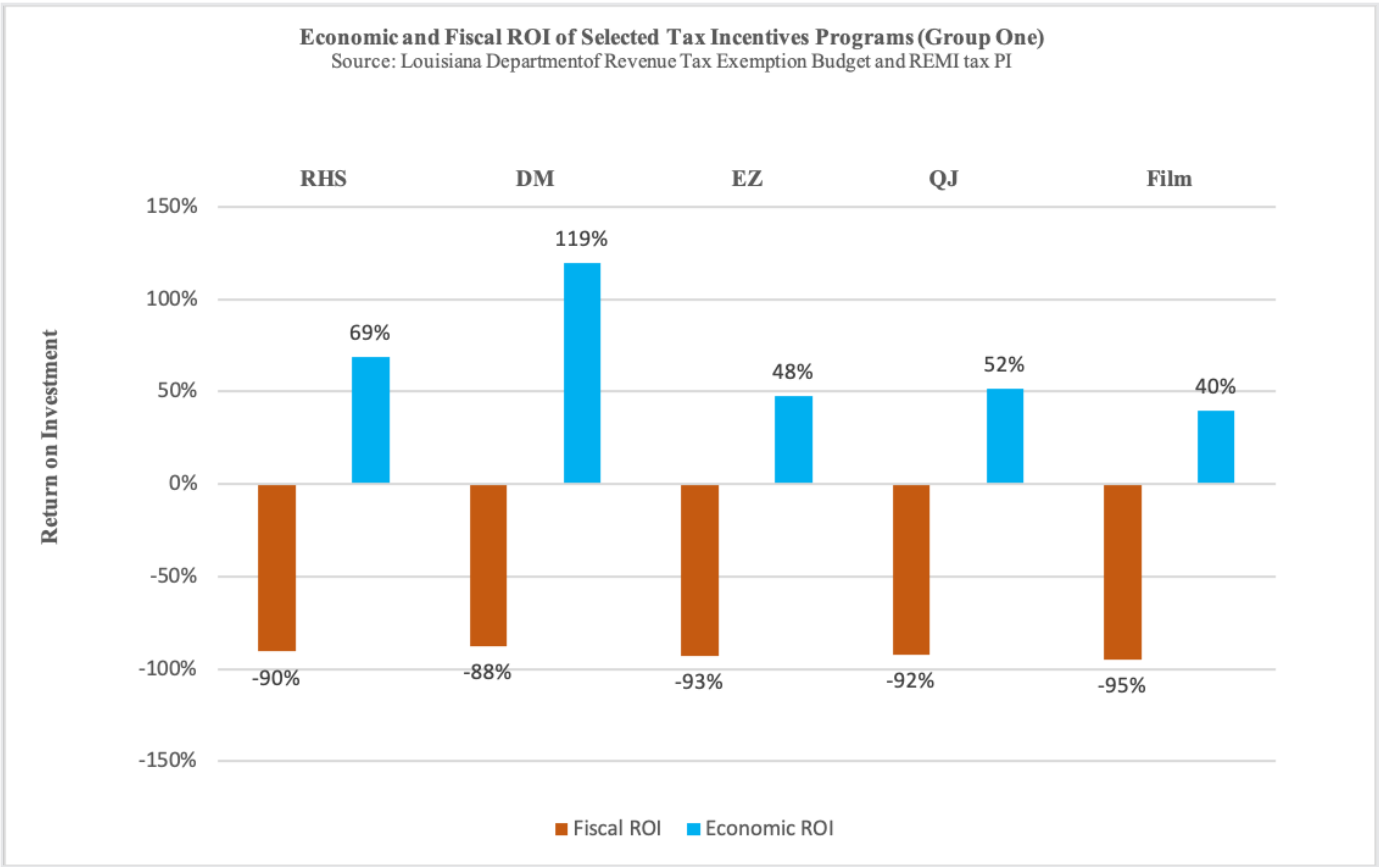


FIGURE 4: ECONOMIC AND FISCAL ROI OF GROUP 1 TAX INCENTIVE PROGRAMS FY 2016 - 2019

Enterprise Zones

Enterprise Zones (EZ) are areas with high unemployment, low income, or a high percentage of residents receiving public assistance. EZ programs provide a one-time nonrefundable tax credit for each net new job created that can be used against income and corporation franchise tax with a ten-year carryforward period and a capital investment benefit of either a state sales and use tax rebate or a 1.5% refundable investment tax credit. Between fiscal years 2016 and 2019, industries in Louisiana received an annual average of \$18.2 million in investment credits, \$3.4 million in individual income tax credits, \$1.8 million in corporate income and franchise tax credits, and \$0.2 million in sales tax rebates. EZs provided most of the tax incentives to Chemical Manufacturing Industry at 55.9% (NAICS 325), modest allocations to Real Estate Services at 11.2% (NAICS 531, and Accommodations (NAICS 721) with 5%. During the period between 2016 and 2019, the Chemical Manufacturing Industry received an annual average of 29.6% of the program's tax incentives, the Hospitals Industry (NAICS 622) received 11.4%, Real Estate Services received 7.5%, Petroleum and Coal Products Manufacturing (NAICS 324) received 6.7%, and Accommodations received 6.4%.

Louisiana Quality Jobs Program

The Louisiana Quality Jobs (QJ) Program is an incentive to encourage business location and expansion in Louisiana to increase quality jobs. It provides a 4% or 6% payroll rebate for all new jobs and a capital investment benefit of either a state sales & use tax rebate or a 1.5% in project facility expense rebate. The average annual tax exemption received by businesses under the Quality Jobs Program was \$85.5 million in project facilities expense rebates, \$53.2 million in job credits, and \$1.8 million in sales tax rebates. The QJ program allocated the highest incentives to Chemical Manufacturing at 31.9%, considerably smaller allocations to Performing Arts and Spectator Sports (NAICS 711) at 6.9%, and Merchant Wholesalers of Nondurable Goods (NAICS 424) with 6.8%. Between 2016 and 2019, Quality Jobs provided Chemical Manufacturing with an average of 18.6% of tax incentives compared to 8.8% to Performing Arts and Spectator Sports, 6.1% to Primary Metal Manufacturing (NAICS 331), 5.4% to Professional, Scientific, and Technical Services (NAICS 541), and 5.3% to Petroleum and Coal Products Manufacturing and Transportation Equipment Manufacturing (NAICS 336).

Digital Interactive Media & Software Tax Credit Program

The purpose of the Digital Interactive Media & Software (DM) Tax Credit Program is to encourage development of a strong capital base to achieve a more independent and self-sufficient digital interactive media industry in Louisiana. A refundable tax credit can be used against individual income and corporation income tax. Upon final certification, the company may elect a one-time rebate of the credit at eighty-five percent of the face value of the credits. Businesses received an annual average of \$15.3 million of tax incentives under DM tax credit program with almost two third of the incentives accounted for corporate income tax. The Digital Interactive Media & Software Tax Credit program primarily targets information sector, specifically Publishing Industries but excluding Internet (NAICS 511) and Professional, Scientific, and Technical Services (NAICS 54).

Motion Picture Investor Tax Credit

The Motion Picture Investor (Film) Tax Credit aims to achieve an independent and self-supporting motion picture production industry with a strong capital base where a non-refundable income tax credit can be transferred back to the state of Louisiana for ninety cents on the dollar. The average annual tax credit received by companies under the Motion Picture Investor Tax Credit Program was \$194.3 million between 2016 and 2019, with an overwhelming majority of tax credits allocated to the corporate income and franchise tax at \$172.6 million per annum, and the remaining amount to the individual income tax credit. The Motion Picture Investor Tax Credit Program is concentrated in the Motion Picture and Sound Recording Industry (NAICS 512).

Rehabilitation of Historic Structures

Under the Rehabilitation of Historic Structures (RHS), a non-refundable credit is allowed for the eligible cost and expenses incurred during the rehabilitation of a historic structure located in a downtown development or cultural district. The credit reimbursed a total of \$83.8 million per year in tax incentives: \$42.5 million in individual income tax, \$17.4 million in corporate income tax, \$15.6 million in corporate franchise tax, and \$1.8 million in fiduciary income tax. With a narrower focus in design and purpose, the Rehabilitation of Historic Structures program affects the construction industry (NAICS 23) the most.

Group 2 Tax Incentives

The annual average cost of tax incentives to the state of Louisiana under the selected five programs is \$34.2 million but the state recoups only \$2.4 million in tax revenues that results in an average annual revenue loss of \$31.8 million. The annual average estimated GDP gain from business incentives is \$39.6 million that results in a net economic impact of \$5.3 million. Although the state does not recover the tax incentives issued to individuals and businesses over the next ten years, the growth in the GDP has a positive economic impact on the Louisiana economy that translates into more economic activities like increased consumption, capital investment, and job growth. Figure 5 shows the average annual expected economic and fiscal impacts of selected tax incentive programs from 2020 to 2029.

The results show that all five programs have a positive economic effect on the state economy. The average annual net economic impact of the tax credits/rebates issued to individuals and businesses for the selected programs ranges from \$165.5 thousand for the Industrial Tax Equalization Program (TE) to \$1.9 million for the Musical and Theatrical Production Tax Credit. The average annual net economic impact of other programs is \$720.8 thousand for Research & Development Tax Credit (R & D), \$987.5 thousand for Retention & Modernization Tax Credit, and \$1.6 million for Procurement Processing Companies (PPC). Here, the net economic effect implies the value added/gain in GDP in Louisiana's economy after accounting for the cost of incentives. The value added by each program, on the other hand, is the gross output of an industry/sector less its intermediate inputs, thus one can understand it as the contribution of an industry or sector to the gross domestic product (GDP). The contribution of these programs to the Louisiana GDP ranges from \$5.8 million for R & D to \$11.6 million for TE. It is worth noting that the TE has the highest average annual value-added of \$11.6 million but exerts the lowest economic impact among the selected programs because of its high incentive costs (i.e. \$11.4 million).

Although the economic impact from tax credits/rebates issued under the selected five programs is positive, the fiscal impact for all the programs is negative. In other words, the estimated state tax revenue for all the programs is less than the amount issued to individuals and businesses through tax exemptions and credits. The average annual revenue loss ranges from \$3.6 million for Retention and Modernization Tax Credit to \$10.7 million for TE. The estimated revenue loss per year for other programs is \$4.7 million for R & D, \$4.5 million for Musical & Theatrical Production Tax Credit, and \$8.3 million for PPC. Similar to the economic impact of TE, although the average tax revenue collected by the state is the highest for TE, the net revenue loss is also the highest among the selected programs because of its high tax exemption amount.

All the five tax incentive programs have a positive economic return on investment that ranges from 1.45 % for TE to 38.37 % for Musical and Theatrical Productions Tax Credit. It means that the Louisiana economy – as measured by the state GDP – grows by 1.45 cents and 38.37 cents for every dollar spent on the above mentioned programs after accounting for their program costs. Similarly, the economic ROI of R & D is 14.14 %, Retention & Modernization is 25.71 %, and PPC is 17.97 %.

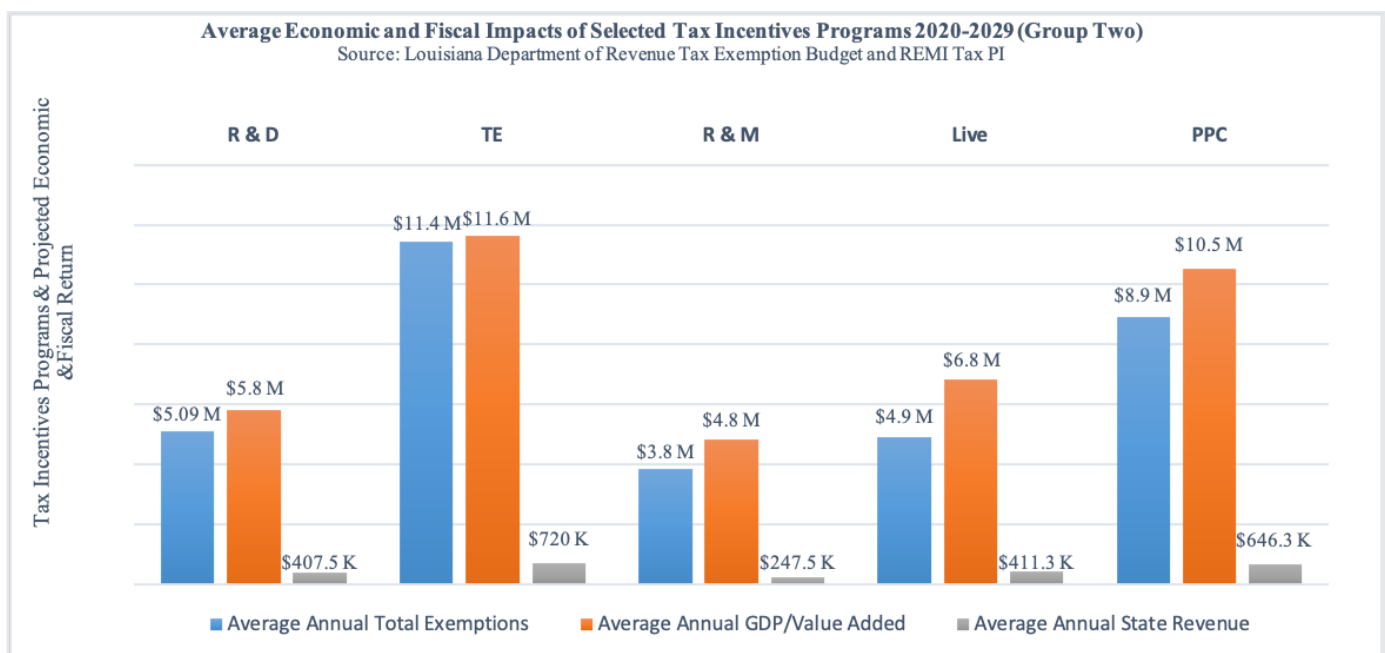


FIGURE 5: ECONOMIC AND FISCAL IMPACTS OF GROUP 2 SELECTED TAX INCENTIVES

In contrast, the fiscal return on investment of all the five tax incentives is negative suggesting that tax revenue declines for every dollar spent on these tax incentive programs. The fiscal ROI for the programs ranked from highest to the lowest are: Musical and Theatrical Production Tax Credit (-91.65 %), R & D (-92.0 %), PPC (-92.77 %), Retention and Modernization (-93.55 %), and TE (-93.71 %). It means that the state budget, as measured by the state tax revenues declines by 91.65 cents to 92.77 cents for every dollar spent in tax incentives. In other words, the state recoups only between 6.29 cents to 8.35 cents in revenue for every dollar spent in these five programs.

Research and Development Tax Credit

The Research and Development (R & D) tax credit is a tax incentive program administered by LED to encourage new and continuing efforts to conduct research and development activities within the state of Louisiana. It provides up to a 30% tax credit on qualified expenditures in research incurred in the state. Between fiscal years 2016 through 2019, industries in Louisiana received \$5.09 million in annual average tax credits under this tax incentive program with corporate income and franchise tax credits accounting for \$3.13 million per year and individual income tax credits for \$1.93 million per year. During this period, this program allocated most of the tax credits to Management of Companies and Enterprises (NAICS 55) with 48.2%, Chemical Manufacturing (NAICS 325) with 17.04%, Professional, Scientific, and Technical Services (NAICS 54) with 8.8 %, Machinery Manufacturing 6.25% (NAICS 333), and Paper Manufacturing (NAICS 322) with 6.0 % of the total tax credits.

Industrial Tax Equalization Program

Industrial Tax Equalization Program (TE) is an LED administered tax incentive program to encourage the establishment and retention of manufacturing, warehousing and distributional establishments, or headquarters. It provides a procedure whereby the state and local taxes imposed on the businesses are lowered to the levels imposed by other competing states. From 2017 to 2019, the average annual tax credits and rebates received by industries under TE was \$11.45 million: corporate income and franchise tax credits of \$4.48 million, individual income tax credits of \$159.9 thousand, and sales tax rebates of \$6.8 million. TE provided 41.2 % of the tax credits and rebates to Wholesale Trade (NAICS 42), and companies involved in the Management of Companies and Enterprises (NAICS 55), Monetary Authorities (NAICS 421, 522), and Telecommunications (NAICS 517) received 34.6 %, 22.6 %, and 1.6 % respectively.

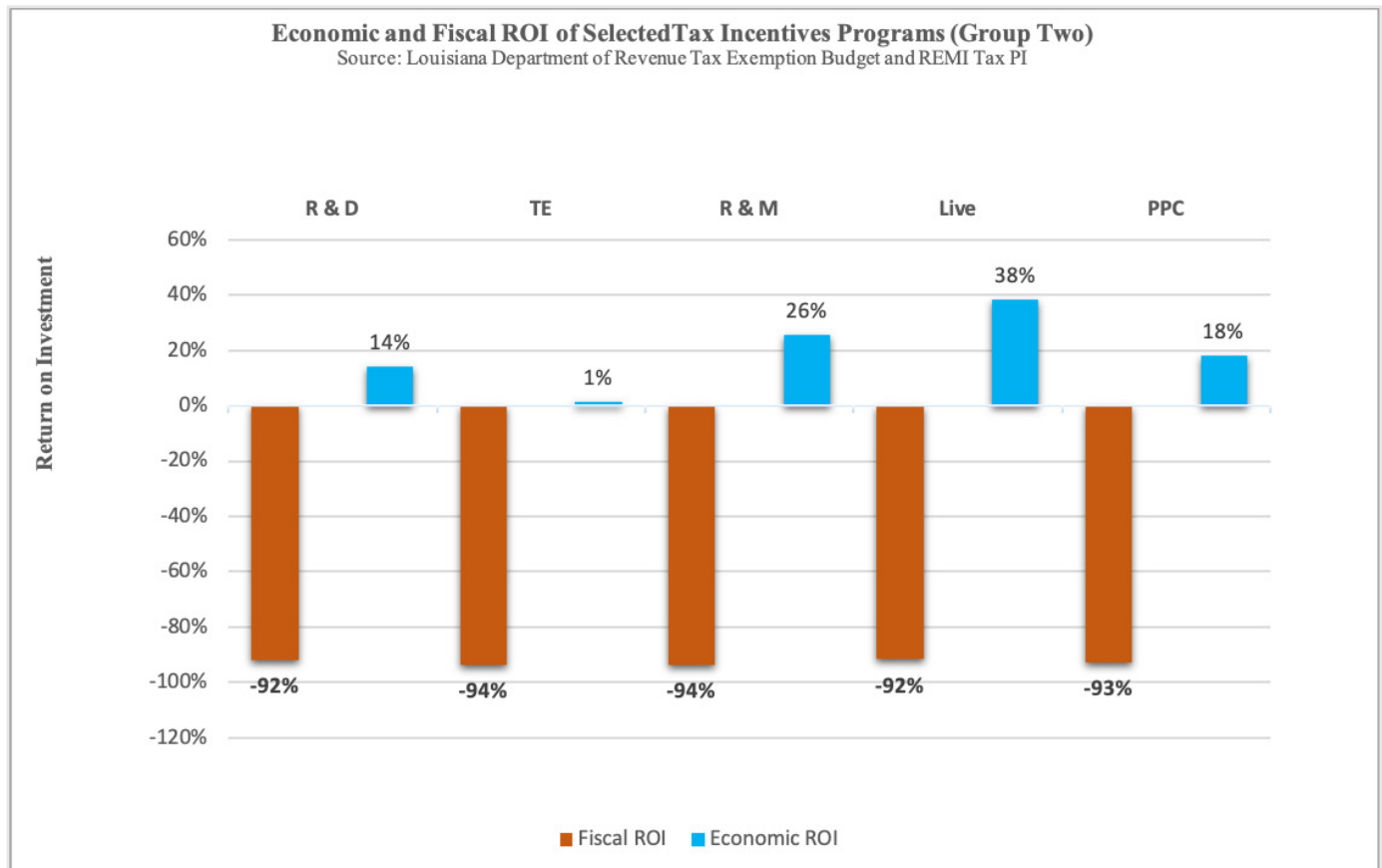


FIGURE 6. ECONOMIC AND FISCAL ROI OF GROUP 1 TAX INCENTIVE PROGRAMS FY 2016 - 2019

Retention and Modernization Tax Credit

The Retention and Modernization Tax Credit aims to entice businesses to remain in Louisiana and modernize their existing operations within the state. The credit is granted at a rate of up to 5 % of the qualified expenditures incurred for modernization. This credit is divided into equal portions for five years and can be claimed against individual income tax, corporate income tax, or corporate franchise taxes. The average annual tax credit received by companies under Retention and Modernization Tax Credit was \$3.84 million between 2016 and 2019. The average corporate income and franchise tax exemption was \$3.5 million, and individual income tax exemption was \$262.5 thousand per annum. Chemical Manufacturing (NAICS 325) received the largest share of exemption under this program with 35.9 % of the total tax credits. Other crucial industries benefiting from the Retention and Modernization Credit were Management of Companies and Enterprises (NAICS 55), Paper Manufacturing (NAICS 322), Other Transportation Equipment Manufacturing (NAICS 3364-3369), and Petroleum and Coal Products Manufacturing (NAICS 324) with average exemptions of 16.9 %, 13.5 %, 11.7 %, and 10.1 % respectively.

Musical & Theatrical Productions Tax Credit

The Musical and Theatrical Productions Tax Credit aims to establish and promote Louisiana as a primary place of creation to presentation of live performances in the US. Fifty percent of the tax credits are reserved for productions by nonprofit organizations, and the total amount granted by LED cannot exceed \$10 million. Industries covered by the Musical & Theatrical Productions Tax Credit received \$4.9 million/year on average between 2016 and 2019 with corporate income tax credits of \$3.36 million and individual income tax credits of \$1.65 million. Companies involved in Motion Picture and Sound Recording (NAICS 512) received 34.5 %, Beverage and Tobacco Manufacturing (NAICS 312) received 25.8 %, Performing Arts, Spectator Sports, Related Industries (NAICS 71) received 20.75 %, and Truck Transportation (NAICS 484) receiving 16.2 % of the total tax credits.

Procurement Processing Company Rebate Program

The Procurement Processing Company (PPC) Rebate Program is a tax incentive program that grants sales and use tax rebates to PPCs under the provisions of their contract with LDR. The program reimbursed a total of \$33.5 million in sales tax rebates between 2016 and 2019 to companies primarily involved in Professional, Scientific, and Technical Services (NAICS 54), and Administrative and Support Services (NAICS 561). Although the average amount of rebate received by these companies during this period was \$8.4 million, the data shows that the rebate amount consistently increased with \$10.1 million in 2018, and \$19.02 million in 2019.

Economic Multipliers of Tax Incentives

Table 3 reports the economic multipliers of the selected tax incentives. These multipliers summarize the total economic impact that can be expected from the change in a given economic activity of the incented firms. R & M has the highest multiplier of 2.40. This means that each \$1 of economic activity generated by firms affected by this tax incentive results in \$1.40 of additional indirect and induced economic activity. Film, on the other hand, has the lowest multiplier effect where the economic multiplier is 1.63 suggesting that only \$0.63 of economic activity from ripple effects can be expected from \$1 of economic activity of the affected firms.

Higher economic multipliers mean that the incented firm purchased more from local suppliers. This further result in more economic activity and employment not just for firms receiving tax incentives but also along the supply chain.

Table 3 Economic multipliers of tax incentives	
Program	Multiplier
R & M	2.40
EZ	2.28
QJ	2.20
PPC	2.13
RHS	1.94
R & D	1.88
TE	1.81
Live	1.77
DM	1.72
Film	1.63

SUMMARY OF RESULTS

FY 2016-2019

This analysis employed a balanced budget assumption to government spending where a reduction in state revenues will lead to a proportional decline in state expenditures to quantify the economic and fiscal impacts generated by the selected tax incentive programs by calculating average annual expected GDP and state revenue, economic ROI, and fiscal ROI.

For Group 1 tax incentives, the economic gains of the RHS and DM program are greater than other programs analyzed because increased employee compensation is the main driver of value added and that compensation leads to gains in consumer spending that drive economic demand across numerous industries in Louisiana. It is worth noting that while the QJ and EZ programs both disproportionately allocate incentives to Chemical Manufacturing, the economic return for the two programs are not identical because the remaining incentives are allocated to a different set of industries beyond Chemical Manufacturing. Furthermore, R & M, EZ, and QJ have higher multiplier effects suggesting tax incentives targeting job growth in local communities might have a higher ripple effect in the local supply chain.

Although the state is not able to recover the cost of these incentives over the next ten years in tax revenues, they have a positive impact in the state economy with increased economic activities.

The tax incentives ranked from the highest to the lowest economic ROI as follows:

1. Digital Interactive Media & Software Tax Credit (119.24%)
2. Rehabilitation of Historic Structures (68.75%)
3. Louisiana Quality Jobs Program (51.50 %)
4. Enterprise Zones (47.85 %)
5. Motion Picture Investor Tax Credit (39.88 %)
6. Musical & Theatrical Productions Tax Credit (38.37%)
7. Retention and Modernization Credit (25.71%)
8. Procurement Processing Company Rebate Program (17.97%)
9. Research and Development Tax Credit (14.14%)
10. Industrial Tax Equalization Program (1.45%).

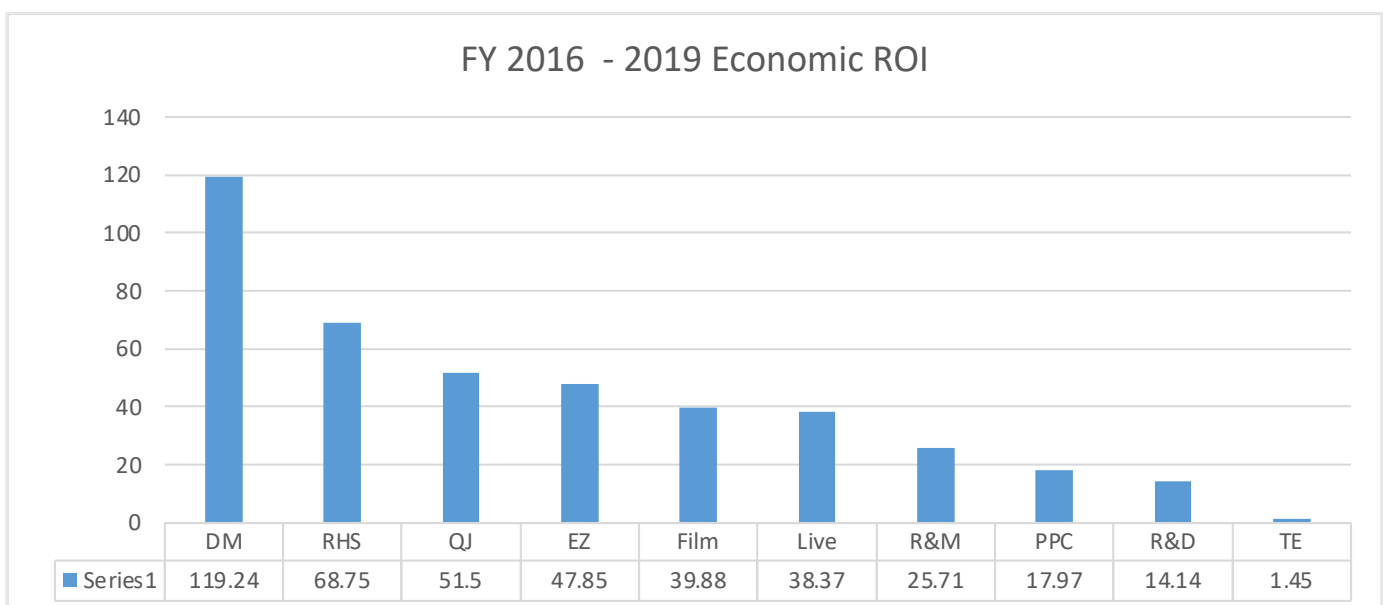


FIGURE 7 ECONOMIC ROI FISCAL YEARS 2016 - 2019

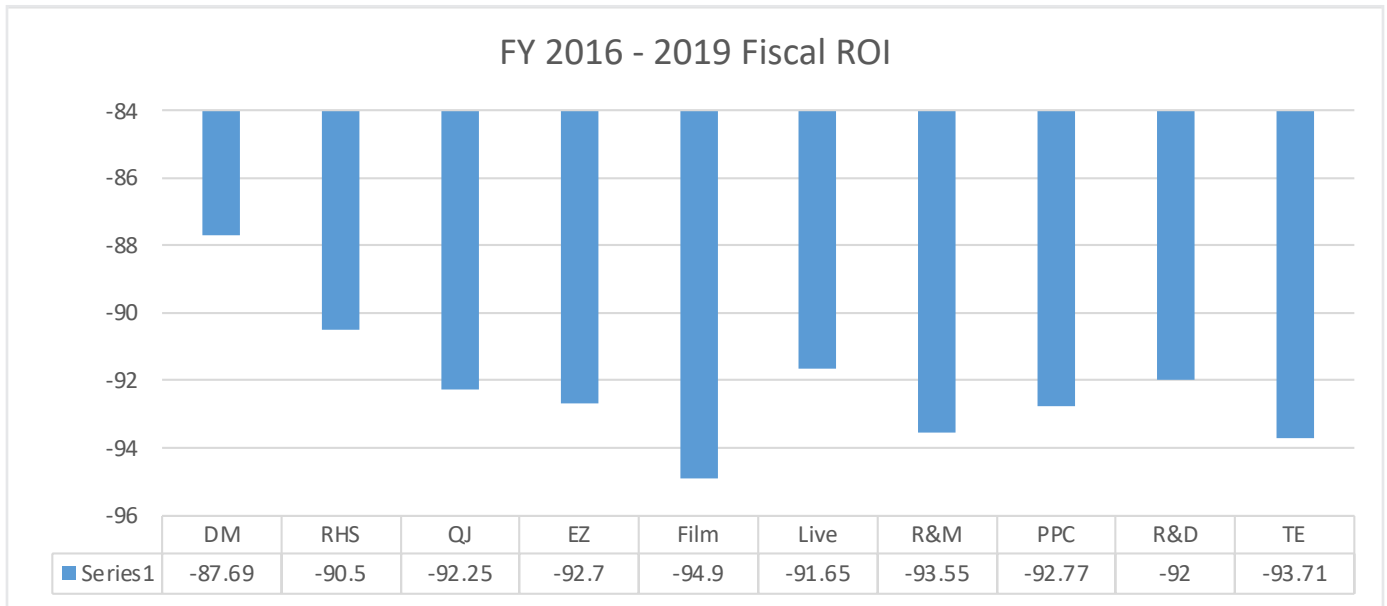


FIGURE 8 FISCAL ROI FOR FISCAL YEARS 2016 - 2019

The tax incentives ranked from the highest to the lowest fiscal ROI are as follows:

1. Digital Interactive Media & Software Tax Credit (-87.69%)
2. Rehabilitation of Historic Structures (-90.50%)
3. Musical & Theatrical Productions Tax Credit (-91.65%)
4. Research and Development Tax Credit (-92%)
5. Quality Jobs (-92.25%)
6. Enterprise Zone (-92.70%)
7. Procurement Processing Company Rebate Program (-92.77%)
8. Retention and Modernization Credit (-93.55%)
9. Industrial Tax Equalization Program (-93.71%)
10. Motion Picture Investor Tax Credit (-94.90%)

Fiscal Years **2020-2021**



FINDINGS

FY 2020-2021

The findings for Group 1 are as follows:

- ◆ The economic return on investment (the net economic benefit for the Louisiana economy observed in state gross domestic product) for the five programs ranked from highest to lowest are:

1. Digital Interactive Media & Software Tax Credit (72.42%)
2. Motion Picture Investor Tax Credit (40.67%)
3. Louisiana Quality Jobs Program (25.67%)
4. Enterprise Zones (23.46%)
5. Rehabilitation of Historic Structures (2.02%)

This means that the state economy-measured by state gross domestic product-grows by 72.46 cents for every dollar spent on the Digital Interactive Media & Software Tax Credit programs after accounting for the program costs. Conversely, the Louisiana economy contracts by 2.02 cents for every dollar spent on the Rehabilitation of Historic Structures.

- ◆ The fiscal return on investment (the net fiscal benefit for the Louisiana state budget observed in state gross tax revenues) for the five programs ranked from highest to lowest are:

1. Digital Interactive Media & Software Tax Credit (-90.88%)
2. Rehabilitation of Historic Structures (-92.49%)
3. Motion Picture Investor Tax Credit (-93.03%)
4. Quality Jobs (-93.65%)
5. Enterprise Zone (-94.28%)

This means that state tax revenue shinks by 90.88 cents to 94.28 cents for each dollar spent in the selected tax incentive programs.

- ◆ Digital Interactive Media & Software Tax Credit

- Average annual total incentives: \$24.3 million.
- Average annual estimated gross domestic product, value-added, from total incentives: \$41.9 million.
- Average annual net economic impact: \$17.6 million.
- Average annual estimated state revenue from total incentives: \$2.2 million.
- Average annual estimated tax revenue loss: \$22.1 million.
- The economic multiplier is 1.71.
- Mainly affected Professional, Scientific, and technical services (NAICS 54) and the Information sector (NAICS 51).

- ◆ Rehabilitation of Historic Structures

- Average annual total incentives: \$127.7 million.
- Average annual estimated gross domestic product, value-added, from total incentives: \$130.5 million.
- Average annual net economic impact: +\$2.5 million.
- Average annual estimated state revenue from total incentives: \$9.6 million.
- Average annual estimated tax revenue loss: \$118.3 million.
- The economic multiplier is 1.74.
- Mainly affected Transportation (NAICS 23), Retail Trade (NAICS 44), and Real estate (NAICS 531).

◆ Louisiana Quality Jobs Program

- Average annual total incentives: \$105.5 million.
- Average annual estimated gross domestic product, value-added, from total incentive: \$131.3 million.
- Average annual net economic impact: \$26.8 million.
- Average annual estimated state revenue from total incentives: \$6.6 million.
- Average annual estimated tax revenue loss: \$97.9 million.
- The economic multiplier is 1.99.
- Mainly affected Chemical Manufacturing (NAICS 325).

◆ Enterprise Zones

- Average annual total incentives: \$35.3 million.
- Average annual estimated gross domestic product, value-added, from total incentives: \$43.5 million.
- Average annual net economic impact: \$8.2 million.
- Average annual estimated state revenue from total rebates: \$2.0 million.
- Average annual estimated tax revenue loss: \$33.2 million.
- The economic multiplier is 2.09.
- Mainly affected Petroleum and Coal Manufacturing (NAICS 324).

◆ Motion Picture Investor Tax Credit Program

- Average annual total incentives: \$180.0 million.
- Average annual estimated gross domestic product, value-added, from total incentives: \$253.2 million.
- Average annual net economic impact: +\$73.2 million.
- Average annual estimated state revenue from total incentives: \$12.5 million.
- Average annual estimated tax revenue loss: \$167.4 million.
- The economic multiplier is 1.64.
- Mainly affected the Motion Picture and Sound Recording industry (NAICS 512).

Summary of Group 1 of tax incentives (FY 2020 and 2021)						
	RHS	DM	EZ	QJ	Film	Total
Average annual tax incentives	\$127.9 M	\$24.3 M	\$35.3 M	\$105.5 M	\$180.0 M	\$472.0 M
Average annual GDP/value added	\$130.5 M	\$41.9 M	\$43.5 M	\$131.3 M	\$253.2 M	\$600.6 M
Average annual net economic impact	\$2.5 M	\$17.6 M	\$8.2 M	\$26.8 M	\$73.2 M	\$128.5 M
Average annual state revenue	\$9.6 M	\$2.2 M	\$2.0 M	\$6.6 M	\$12.5 M	\$33.0 M
Average annual tax revenue loss	\$118.3 M	\$22.1 M	\$33.2 M	\$97.9 M	\$167.4 M	\$439.0 M
Fiscal ROI	-92.49%	-90.88%	-94.28%	-93.65%	-93.03%	
Economic ROI	2.02%	72.42%	23.46%	25.67%	40.67%	

Notes: RHS – Rehabilitation of Historic Structures, DM – Digital Interactive Media & Software Tax Credit, EZ – Enterprise Zones, QJ – Louisiana Quality Jobs Program, Film – Motion Picture Investor Tax Credit

The findings for Group 2 are as follows:

- ◆ The economic return on investment (the net economic benefit for the Louisiana economy observed in state gross domestic product) for the five programs ranked from highest to lowest are:
 1. Retention and Modernization Credit (397%)
 2. Musical & Theatrical Productions Tax Credit (105.56 %)
 3. Procurement Processing Company Rebate Program (8.42%)
 4. Industrial Tax Equalization Program (1.58%)
 5. Research and Development Tax Credit (-26.67%).

This means that the state economy as measured by the state gross domestic product grows by \$3.97 for every dollar spent on Retention and Modernization and by 8.42 cents for every dollar spend on Procurement Processing Company Rebate Program after accounting for the program costs.

- ◆ The fiscal return on investment (the net fiscal benefit for the Louisiana state budget observed in state gross tax revenues) for the five programs ranked from highest to lowest are:
 1. Retention and Modernization Credit (-73.73%).
 2. Musical & Theatrical Productions Tax Credit (-84.88%)
 3. Procurement Processing Company Rebate Program (-93.32%)
 4. Industrial Tax Equalization Program (-93.86%)
 5. Research and Development Tax Credit (-95.50%)

This means that state tax revenue shrinks by 73.73 cents to 95.50 cents for every dollar spent on tax incentives in the selected programs.

- ◆ Musical & Theatrical Productions Tax Credit
 - Average annual total incentives: \$2.4 million.
 - Average annual estimated gross domestic product, value-added, from total incentive: \$4.9 million.
 - Average annual net economic impact: \$2.5 million.
 - Average annual estimated state revenue from total incentives: \$360.2 thousand.
 - Average annual estimated tax revenue loss: \$2.0 million.
 - The economic multiplier is 1.6.
 - Mainly affected Performing Arts (NAICS 711).
- ◆ Research and Development Tax Credit
 - Average annual total incentives: \$5.3 million.
 - Average annual estimated gross domestic product, value-added, from total incentive: \$3.9 million.
 - Average annual net economic impact: -\$1.4 million.
 - Average annual estimated state revenue from total incentives: \$238.5 thousand.
 - Average annual estimated tax revenue loss: \$5.0 million.
 - The economic multiplier is 1.86.
 - Mainly impacted Chemical Manufacturing (NAICS 325), Paper Manufacturing (NAICS 322), and Management of Companies and Enterprises (NAICS 55)
- ◆ Procurement Processing Company Rebate Program
 - Average annual total incentives: \$30.4 million.
 - Average annual estimated gross domestic product, value-added, from total incentives: \$33.0 million.
 - Average annual net economic impact: +\$2.5 million.
 - Average annual estimated state revenue from total incentives: \$2.0 million.
 - Average annual estimated tax revenue loss: \$28.4 million.
 - The economic multiplier is 1.98.
 - Mainly impacted Professional, Scientific, and Technical Services (NAICS 561)

- ◆ **Retention and Modernization Credit**
 - Average annual total incentives: \$2.2 million.
 - Average annual estimated gross domestic product, value-added, from total incentives: \$ 11.0 million.
 - Average annual net economic impact: +\$8.8 million.
 - Average annual estimated state revenue from total incentives: \$ 582.1 thousand.
 - Average annual estimated tax revenue loss: \$5.6 million.
 - The economic multiplier is 1.8.
 - The largest industry impacted is Chemical Manufacturing (NAICS 325)
- ◆ **Industrial Tax Equalization Program**
 - Average annual total incentives: \$5.9 million.
 - Average annual estimated gross domestic product, value-added, from total incentives: \$6.0 million.
 - Average annual net economic impact: +\$94.4 thousand.
 - Average annual estimated state revenue from total incentives: \$366.2 thousand.
 - Average annual estimated tax revenue loss: \$6.6 million.
 - The economic multiplier is 1.93.
 - The largest industry impacted is Telecommunications (NAICS 517) and Wholesale Trade (NAICS 42).
- ◆ The return on investment analysis in this report used historical administrative data from the Louisiana Department of Revenue and the REMI Tax-PI forecasting software calibrated for the State of Louisiana.
- ◆ Analysis assumes that the tax incentives drive the industry growth and that the gains from growth remained mostly in Louisiana.

Summary of Group 2 tax incentives (FY 2020 and 2021)						
	R & D	TE	R & M	Live	PPC	Total
Average annual tax incentives	\$5.3 M	\$5.9 M	\$2.2 M	\$2.4 M	\$30.4 M	\$46.3 M
Average annual GDP/value added	\$3.9 M	\$6.0 M	\$11.0 M	\$4.9 M	\$33.0 M	\$58.9 M
Average annual net economic impact	-\$1.4 M	\$94.4 K	\$8.8 M	\$2.5 M	\$2.5 M	\$12.5 M
Average annual state revenue	\$238.5 K	\$366.2 K	\$582.1 K	\$360.2 K	\$2.0 M	\$3.6 M
Average annual tax revenue loss	\$5.0 M	\$6.6 M	\$5.6 M	\$2.0 M	\$28.4 M	\$42.7 M
Fiscal ROI	-95.50%	-93.86%	-73.73%	-84.88%	-93.32%	
Economic ROI	-26.67%	1.58%	397.00%	105.56%	8.42%	

Notes: R & D – Research & Development Tax Credit, TE – Industrial Tax Equalization Program, R & M – Retention & Modernization Credit, Live – Musical & Theatrical Productions Tax Credit, and PPC- Procurement Processing Company Rebate Program

RETURN ON INVESTMENT OF SELECTED TAX INCENTIVE PROGRAMS

FY 2020-2021

Using administrative data from the Louisiana Department of Revenue for the Fiscal years 2020 and 2021, this section summarizes the cost of incentives, major industries impacted, and the economic and fiscal effect of incentive programs in Louisiana. We report the analysis for the most recent data of the selected tax incentives into two groups for ease of comparison with the results from the analysis from 2020 to 2021. It is worth noting that the two groups of tax incentive programs in 2020 to 2021 were divided into two groups based on the cost of the programs where Group 1 consists of the top five most costly programs and Group 2 consists of the bottom five costly programs among the ten incentive programs analyzed.

Group 1 Tax Incentives

Group 1 Tax Incentives includes Enterprise Zone, Rehabilitation of Historic Structures, Louisiana Quality Jobs Program, Digital Interactive Media & Software Tax Credit Program, and Motion Picture Investor Tax Credit. The average annual tax incentives received by businesses under the selected five tax incentives programs during FY 2020-21 was \$472.0 million whereas the state received only \$33.0 million in tax revenue resulting in an average annual tax revenue loss of \$439.0 million. Louisiana's economy gained an annual average of \$600.6 million in state gross domestic product from the tax incentives issued in these two years resulting in the average annual net economic impact of \$128.5. Table 1 reviews the major industries affected by the Group 1 of the selected tax incentives and Figure 1 demonstrates the structure of the tax incentives. Figure A1 shows the economic and fiscal impact of tax incentive programs for FY 2020-21 and Figure A2 reports their respective Fiscal and Economic Return on Investments (ROI) based on the forecasts from FY 2021 through 2030.

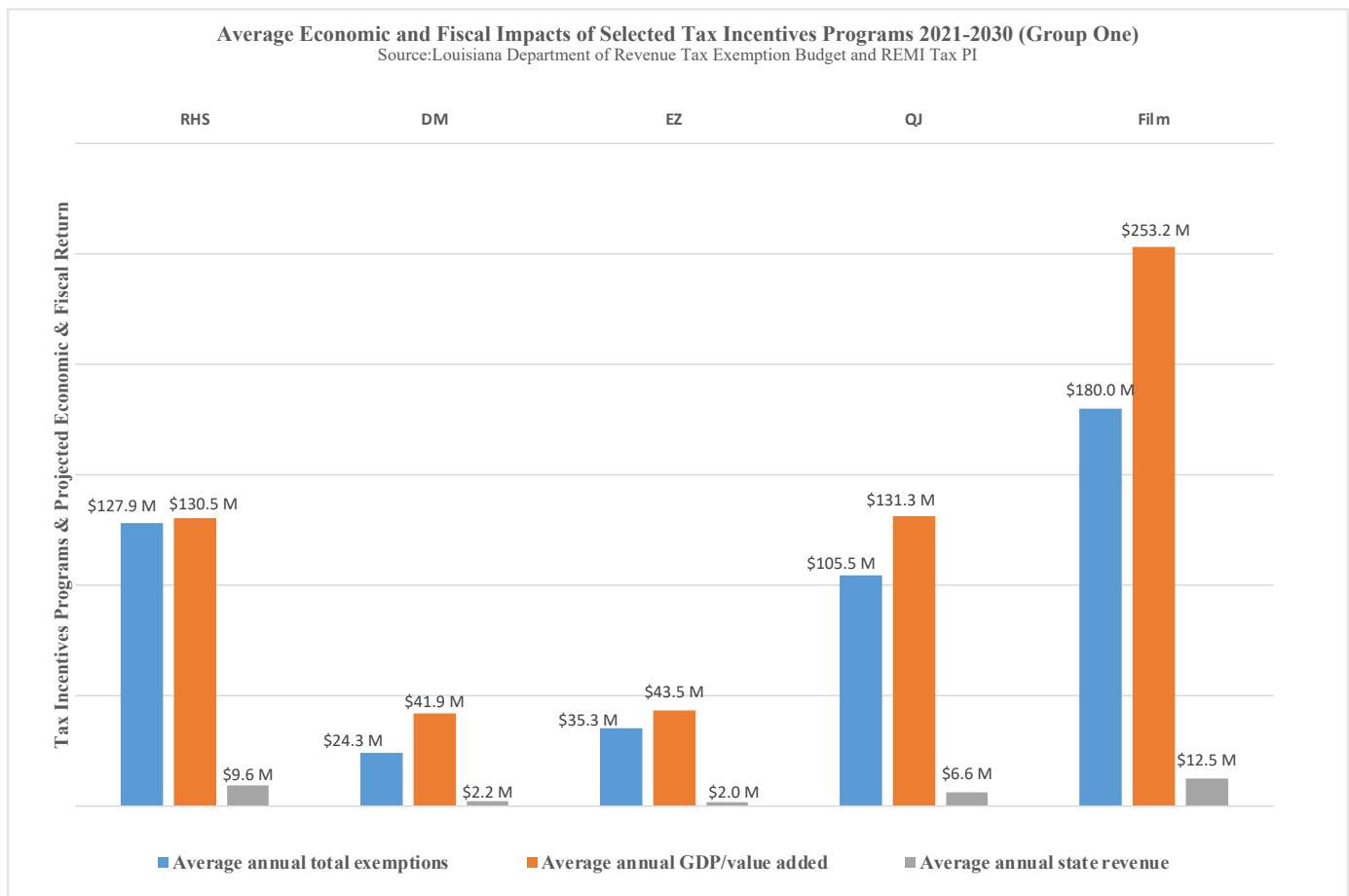


FIGURE A1: ECONOMIC AND FISCAL IMPACTS OF GROUP 1 TAX INCENTIVES FOR FY 2020 - 2021

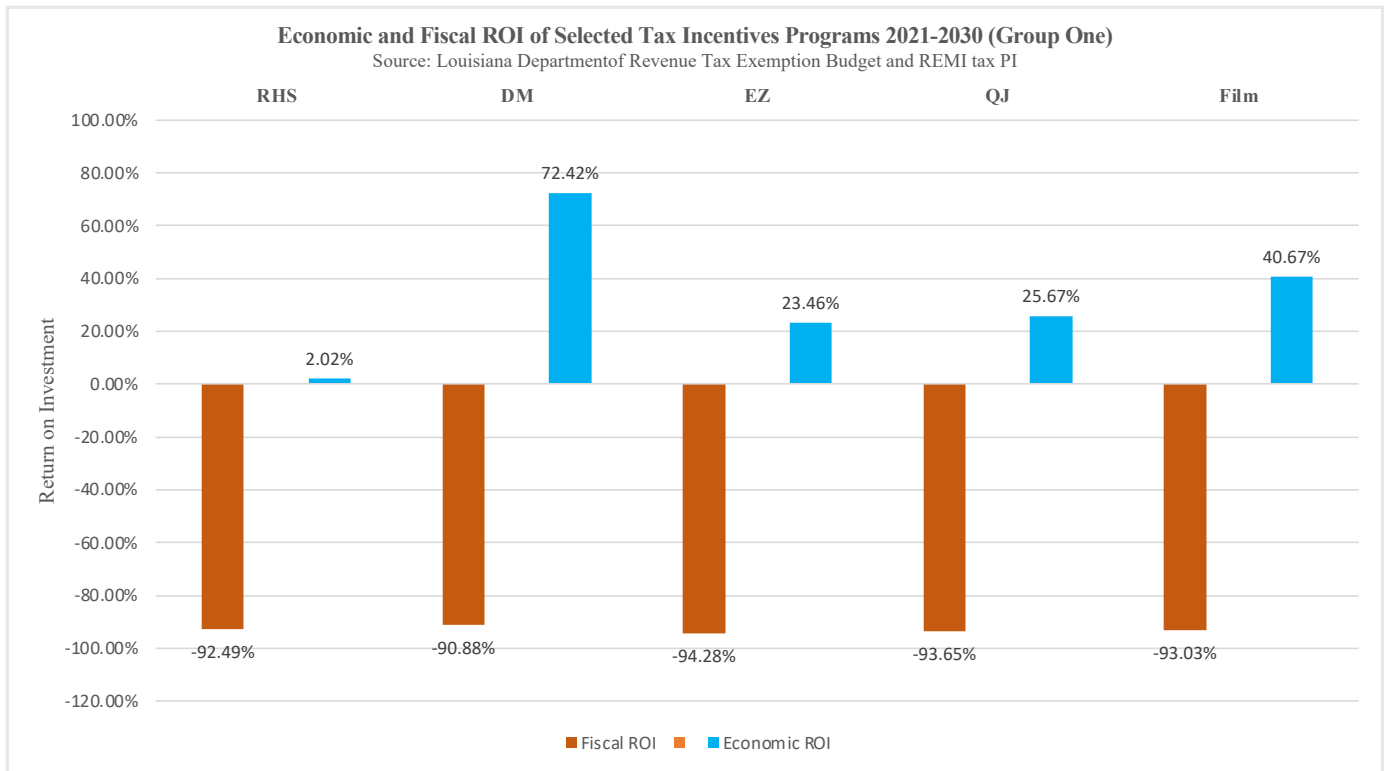


FIGURE A2: ECONOMIC AND FISCAL ROI OF GROUP 1 TAX INCENTIVE PROGRAMS FY 2020 - 2021

Rehabilitation of Historic Structures

The average annual tax incentive received by businesses under Rehabilitation of Historic Structures was \$127.7 million between 2020 and 2021. The average annual value added from the incentives is \$130.5 million with an average annual net economic impact of \$2.5 million. The average annual estimated state revenue from this incentive program is \$9.6 million with an estimated revenue loss of \$118.3 million. The industries most impacted by this incentive are Transportation (NAICS 23), Retail Trade (NAICS 44), and Real Estate (NAICS 531). The fiscal return on investment of Rehabilitation of Historic structures for FY 2020-21 is -92.49 % whereas the economic return on investment is 2.02 %.

Digital Interactive Media & Software Tax Credit

For FY 2020 and 2021, the average annual tax incentive for Digital Interactive Media & Software Tax Credit was \$24.3 million. The estimated annual value-added created by the incentive program is \$41.9 million with a net economic impact of \$17.6 million. The estimated annual state tax revenue from the incentive is \$2.2 million where the expected annual revenue loss is \$22.1 million. The industries that receive the largest amount of credits are Professional, Scientific, and Technical Services (NAICS 54), and the Information Sector (NAICS 51). The fiscal return on investment for this tax incentive program is -90.88 % and the economic return on investment is 23.46 %.

Quality Jobs

Businesses received \$105.5 million of average annual incentives from the Quality Jobs program in 2020 and 2021. The estimated gross domestic product in Louisiana because of this incentive is \$131.3 million with an average annual economic impact of \$26.8 million. The average annual estimated state revenue from the incentives is \$6.6 million with an estimated revenue loss of \$97.9 million. Chemical Manufacturing (NAICS 325) was the industry most impacted by Quality Jobs. Based on the incentives data from FY 2020 and 2021, the fiscal return on investment of the Quality Jobs program is -93.65 % whereas the economic return on investment is 25.67 %.

Enterprise Zone

Enterprise Zone provided \$35.3 million per year in tax incentives to businesses in FY 2020 and 2021. The effect of this incentive on the annual gross domestic product is \$43.5 million which means the net economic impact of the enterprise zone is \$8.2 million. Based on the tax incentives for the two years under study, Enterprise zones generate \$2.0 million in annual tax revenue resulting in an average annual revenue loss of \$33.2 million. The largest sector receiving incentives under Enterprise Zones in FY 2020 and 2021 were Petroleum and Coal Manufacturing (NAICS 324). The fiscal return on investment of Enterprise zones is -94.28 % and economic return on investment is 23.46 %.

Motion Picture Investment Tax Credit Program

Businesses received \$180.0 million per year of tax incentives under the Motion Picture Investor Tax Credit Program in 2020-21. This investment is expected to result in \$253.2 million in increased annual gross domestic product of Louisiana with an average annual net economic impact of \$73.2 million. Meanwhile, the state expects the tax revenue per year due to this program to be \$12.5 million with \$167.4 million of average annual loss of tax revenue. This incentive program primarily affected the Motion Picture and Sound Recording Industry (NAICS 512). The fiscal return on investment for Motion Picture Tax Credit Program is -93.03 % whereas the economic return on investment is 40.67 %.

Group 2 of Tax Incentives

Group 2 of Tax Incentives includes Research & Development Tax Credit, Industrial Tax Equalization Program, Retention & Modernization Credit, Musical & Theatrical Production Tax Credit, and Procurement Processing Company Rebate Program. The average annual tax incentives received by businesses under the selected five tax incentive programs during FY 2020-21 was \$46.3 million where the state received only \$3.6 million in tax revenue resulting in an average annual tax revenue loss of \$42.7 million. Louisiana's economy gains an annual average of \$58.9 million in state gross domestic product from the tax incentives issued in these two years resulting in an average annual net economic impact of \$12.5 million. Table 2 reviews the major industries affected by the Group 2 of selected tax incentives and Figure 2 demonstrates the structure of the tax incentives. Figure A3 shows the economic and fiscal impact of tax incentive programs for FY 2020-21 and Figure A4 reports their respective Fiscal and Economic Return on Investments (ROI) based on the forecasts from FY 2021 through 2030.

Research & Development Tax Credit

The average annual tax incentive received by businesses under Research & Development Tax Credit was \$5.3 million between 2020 and 2021. The average annual value added from the incentives is \$3.9 million with an average annual net economic impact of -\$1.4 million. This is the only program under our study with a negative economic impact. The average annual estimated state revenue from this incentive program is \$238.5 thousand with an estimated revenue loss of \$5.0 million. The industries most impacted by this incentive are Chemical Manufacturing (NAICS 325), Paper Manufacturing (NAICS 322), and Management of Companies and Enterprises (NAICS 55). The fiscal return on investment of this incentive program for FY 2020-21 is -95.50 % whereas the economic return on investment is -26.67 %.

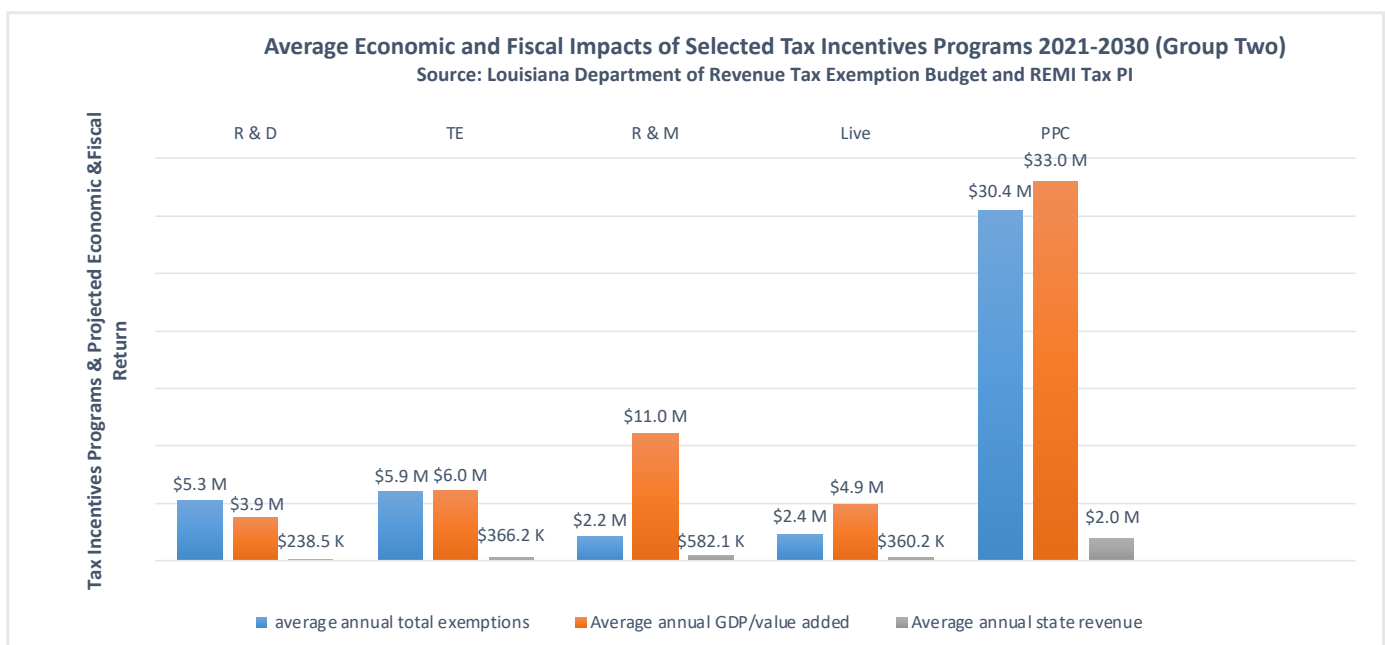


FIGURE A3: ECONOMIC AND FISCAL IMPACTS OF GROUP 2 TAX INCENTIVES FOR FY 2020-21

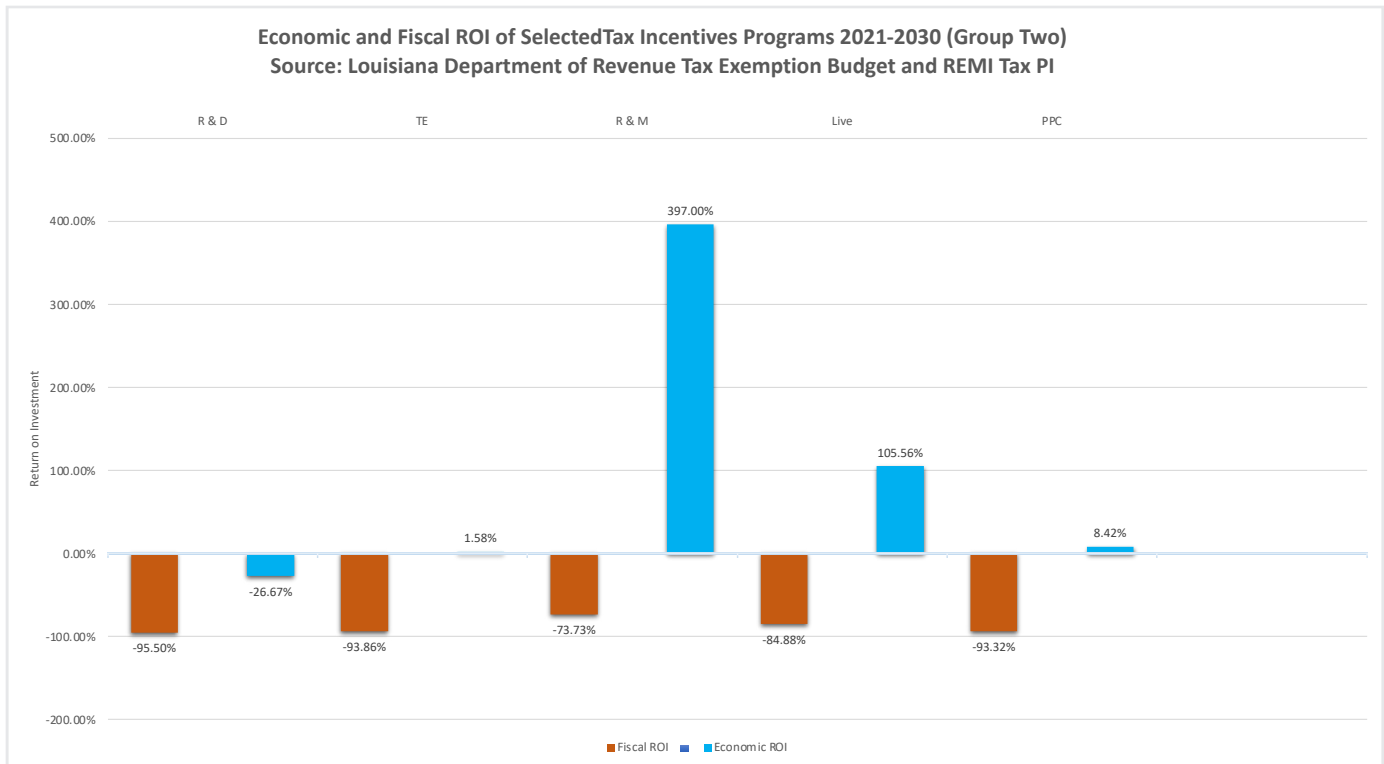


FIGURE A4. ECONOMIC AND FISCAL ROI OF GROUP 2 TAX INCENTIVE PROGRAMS FY 2020 - 2021

Industrial Tax Equalization Program

For FY 2020 and 2021, the average annual tax incentive for Industrial Tax Equalization Program was \$5.9 million. The estimated annual value-added created by the incentive program is \$6.0 million with a net economic impact of \$94.4 thousand. The estimated annual state tax revenue from the incentive is \$366.2 thousand where the expected annual revenue loss is \$6.6 million. The industries that receive the largest amount of credits are Telecommunications (NAICS 517) and Wholesale Trade (NAICS 42). The fiscal return on investment for this tax incentive program is -93.86 % and the economic return on investment is 1.58 %.

Retention & Modernization Credit

Businesses received \$2.2 million of average annual incentives from Retention & Modernization Credit in 2020 and 2021. The estimated gross domestic product in Louisiana because of this incentive is \$11.0 million with an average annual economic impact of \$8.8 million. The average annual estimated state revenue from the incentives is \$582.1 thousand with an estimated revenue loss of \$5.6 million. Chemical Manufacturing (NAICS 325) is the mainly affected industry by this program. Based on the incentives data from FY 2020 and 2021, the fiscal return on investment of the Quality Jobs program is -73.73 % whereas the economic return on investment is 397.00 %. The economic return of 397.00 % means for every dollar spent in Retention & Modernization Credit, the Louisiana economy adds \$3.97 each year after accounting for the cost of the incentive program.

Musical & Theatrical Productions Tax Credit

The Musical & Theatrical Productions Tax Credit Program provided \$2.4 million per year in tax incentives to businesses in FY 2020 and 2021. The effect of this incentive on the annual gross domestic product is \$4.9 million which means the net economic impact of this incentive program is \$2.5 million. Based on the tax incentives for the two years under study, Musical & Theatrical Productions Tax Credit generates \$360.2 thousand in annual tax revenue resulting in an average annual revenue loss of \$2.0 million. The largest sector receiving incentives under this program in FY 2020 and 2021 is Performing Arts (NAICS 711). The fiscal return on investment of Musical & Theatrical Production Tax Credits is -84.88 % and economic return on investment is 105.56 %.

Procurement Processing Company Rebate Program

Businesses received \$30.4 million per year of tax incentives under the Procurement Processing Company Rebate Program in 2020-21. This investment expects to result in \$33.0 million in increased annual gross domestic product of Louisiana with an average annual net economic impact of \$2.5 million. Meanwhile, the state expects the tax revenue per year due to this program to be \$582.1 thousand with \$5.6 million of average annual loss of tax revenue. This incentive program primarily affected Professional, Scientific, and Technical Services (NAICS 561). The fiscal return on investment for this program is -93.32 % whereas the economic return on investment is 8.42 %.

Economic Multipliers of Tax Incentives for FY 2020-21

Table A3 reports the economic multipliers of the selected tax incentive programs for FY 2020-21 that measure the total economic impact from the change in a given economic activity of the incented firms. For FY 2020-21 the highest multiplier is for Enterprise Zones with 2.09 and the lowest economic multiplier is for Motion Picture Investment Tax Credit Program with 1.60. Compared to the economic multipliers for FY 2016-19, there is a slight decrease in the values for FY 2020-21 for all the tax incentive programs except for Industrial Tax Equalization Program and Motion Picture Investment Tax Credit Program. However, the magnitude of the increase in the economic multipliers is quite small. For Industrial Tax Equalization Program, the economic multiplier increased from 1.81 to 1.93 whereas, for Motion Picture Investment Tax Credit Program, it increased from 1.63 to 1.64. Although a slight decrease in the economic multipliers of other selected incentive programs is observed, the decrease in the economic multiplier for Retention and Modernization Credit is relatively large. It had the highest multiplier effect in the Louisiana economy among the selected programs in FY 2016-19 with a value of 2.40 but in FY 2020-21, the value is only 1.80 suggesting that the industries receiving Retention and Modernization Credit were most impacted by the disruption of the supply chain during the COVID-19 pandemic.

TableA3: Economic Multipliers of Tax Incentives FY 2020-21	
Program	Multiplier
EZ	2.09
QJ	1.99
PPC	1.98
TE	1.93
R & D	1.86
R & M	1.8
RHS	1.74
DM	1.71
Film	1.64
Live	1.6

The multiplier effects reflect the additional economic activities from the ripple effects along the local supply chain because of tax incentives and these multipliers are assumed stable if there is no change in the economy. However, it is plausible to attribute the discrepancies in the values for economic multipliers for FY 2016-19 and FY 2020-21 to the economic disruption created by the pandemic.

SUMMARY OF RESULTS

FY 2020-2021

Similar to FY 2016-2019, the analysis for FY 2020-2021 employed a balanced budget assumption to government spending where a reduction in state revenues will lead to a proportional decline in state expenditures to quantify the economic and fiscal impacts generated by the selected tax incentive programs by calculating average annual expected GDP and state revenue, economic ROI, and fiscal ROI.

The tax incentives ranked from the highest to the lowest economic ROI based on forecasts using tax incentive data for FY 2020-2021 are as follows:

1. Retention and Modernization Credit (397.00 %)
2. Musical & Theatrical Productions Tax Credit (105.56 %)
3. Digital Interactive Media & Software Tax Credit (72.42%)
4. Motion Picture Investor Tax Credit (40.67%)
5. Louisiana Quality Jobs Program (25.67%)
6. Enterprise Zones (23.46%)
7. Procurement Processing Company Rebate Program (1.58%)
8. Rehabilitation of Historic Structures (2.02%)
9. Industrial Tax Equalization Program (1.58%)
10. Research and Development Tax Credit (-26.67%)

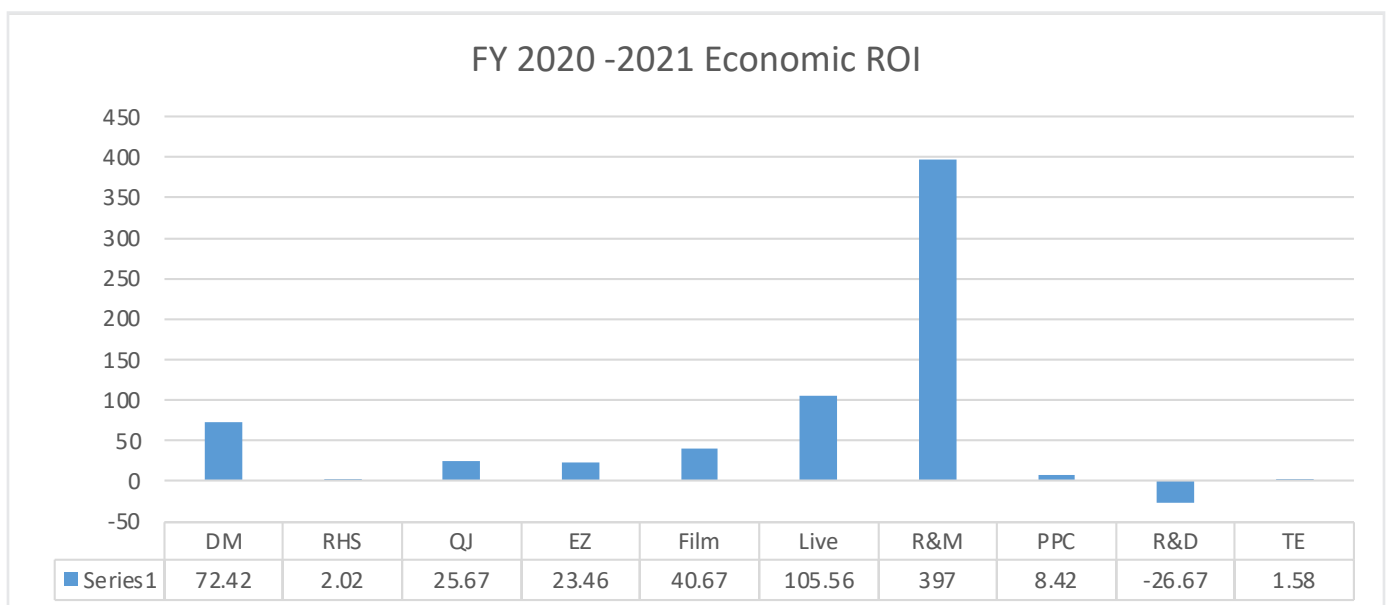


FIGURE 9 ECONOMIC ROI FOR FISCAL YEARS 2020 - 2021

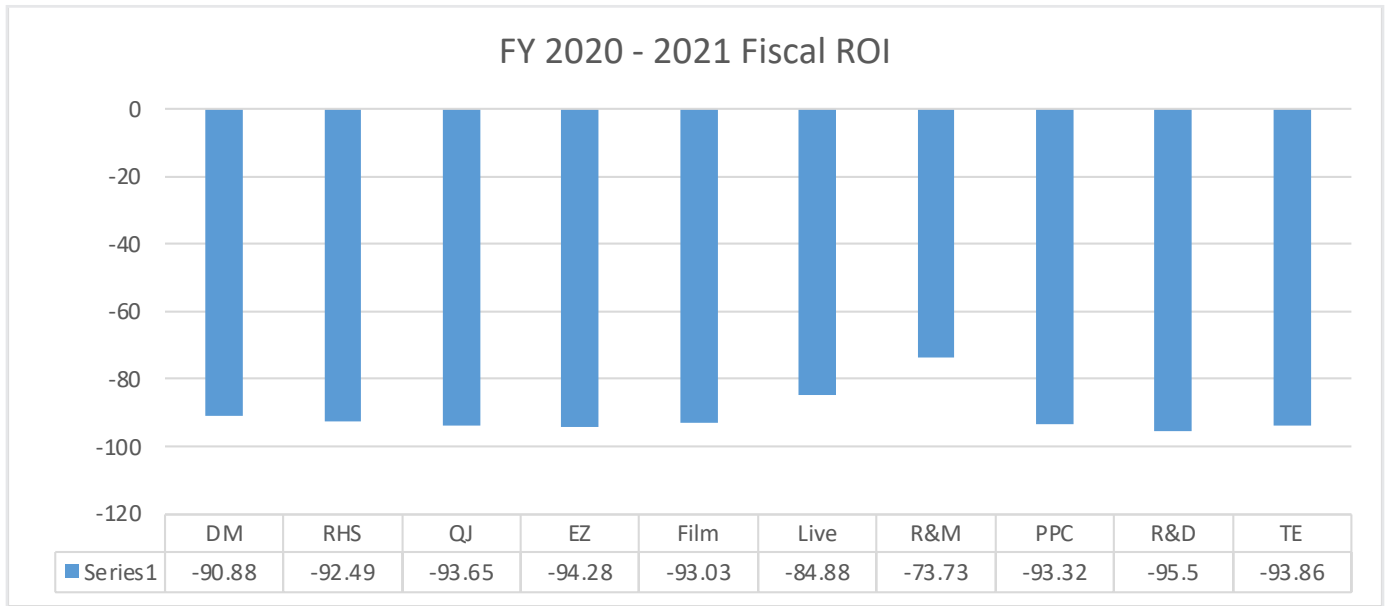


FIGURE 10 FISCAL ROI FOR FISCAL YEARS 2020 -2021

The tax incentives ranked from the highest to the lowest fiscal ROI based on forecasts using tax incentive data for FY 2020 - 2021 areas follows

1. Retention and Modernization Credit (-73.73%)
2. Musical & Theatrical Productions Tax Credit (-84.88%)
3. Digital Interactive Media & Software Tax Credit (-90.88%)
4. Rehabilitation of Historic Structures (-92.49%)
5. Motion Picture Investor Tax Credit (-93.03%)
6. Procurement Processing Company Rebate Program (-93.32%)
7. Quality Jobs (-93.65%)
8. Industrial Tax Equalization Program (-93.86%)
9. Enterprise Zone (-94.28%)
10. Research and Development Tax Credit (-95.50%)

COMPARISON OF THE RESULTS

This section compares the fiscal and economic impact of tax incentives for FY 2016-19 with FY 2020-21. Although the fiscal return on investment for the selected incentives programs are more or less similar for both time-windows, the economic ROI values are different. Even if the economic ROI values change significantly, we can see positive economic impact for most of the programs.

The average annual tax incentives received by businesses for Group 1 incentives was roughly the same between FY 2016-19 and FY 2020-21 with a total annual tax incentive of \$451.4 million and \$472.0 million respectively. For FY 2016-19, the average annual GDP was \$684.9 million but for FY 2020-21, it is \$600.6 million. The comparison results among these two-time windows show a substantive decrease in economic ROI for most of the selected five tax incentives for group 1 but the values are still positive. One interesting finding is that the economic ROI of the Motion Picture Investor Tax Credit has been almost stable with 40.67 % for FY 2016-19 and 39.88 % for FY 2020-21. The results from the most recent data suggest that every dollar spent in the motion picture as incentive results in 39.88 cents as increased GDP per year in Louisiana. Similarly, the average annual state tax for Group 1 incentives also has not changed much with \$31.8 million for FY 2016-2019 and \$33.00 million for FY 2020-21. Furthermore, this means the average annual tax revenue loss is also quite stable with \$419.6 million and \$439.0 million respectively. The fiscal ROI for Group 1 Tax incentives also does not change significantly.

The average annual Group 2 incentives received by businesses has slightly increased from FY 2016-19 to FY 2020-21 with a total of annual tax incentive of \$34.2 million and \$46.3 million respectively. For FY 2016-19, the average annual GDP was \$39.6 million but for FY 2020-21, it is \$58.9 million. The comparison results among these two-time windows show a substantive change in economic ROI for some of the selected five tax incentives for group 2. The economic ROI of the Research & Development Tax Credit has decreased from 14.14 % to -26.67 % whereas the economic ROI for Retention & Modernization Credit has increased from 25.71 % to 397.00 %. We can also observe a substantive increase in economic ROI of Musical & Theatrical Productions Tax Credits from 38.37% to 105.56. The average annual state tax for Group 2 incentives also has slightly increased from \$2.4 million for FY 2016-2019 to \$3.6 million for FY 2020-21. The average annual tax revenue loss has increased from \$31.8 million to \$42.7 million primarily due to an increase in the cost of tax incentives. The fiscal ROI for Group 2 Tax incentives also does not change significantly.

One of the reasons why the more recent economic ROI values significantly differ from the results for FY 2016-2019 might be attributed to the effect of COVID-19 in the economy of Louisiana. For the recent analysis, we used the latest version of REMI Software, Tax-PI v2.5, specifically designed to analyze the Louisiana economy and to also account for the change in the state economy because of the COVID-19 pandemic. Another explanation for this change in the economic ROI might be the change in the state's cost for incentives provided to the participating businesses. For example, the average annual tax incentives of Rehabilitation of Historic Structures has increased by \$44.1 million dollars in FY 2020-21 compared to FY 2016-19 and the net economic impact has decreased by more than \$55 million likely due to the impact of COVID-19 in this sector. Furthermore, even if the annual cost of incentives are similar for incentive programs, there are differences in the proportion of credits and rebates received by different industries, which might also have contributed to the differences in the values of return on investment. The results for this two time periods allows us to compare the fiscal and economic effect of tax incentive programs before and during the initial years of the COVID-19 pandemic and provides preliminary assessment of the effect of the COVID-19 pandemic on state tax revenue and the GDP of Louisiana.