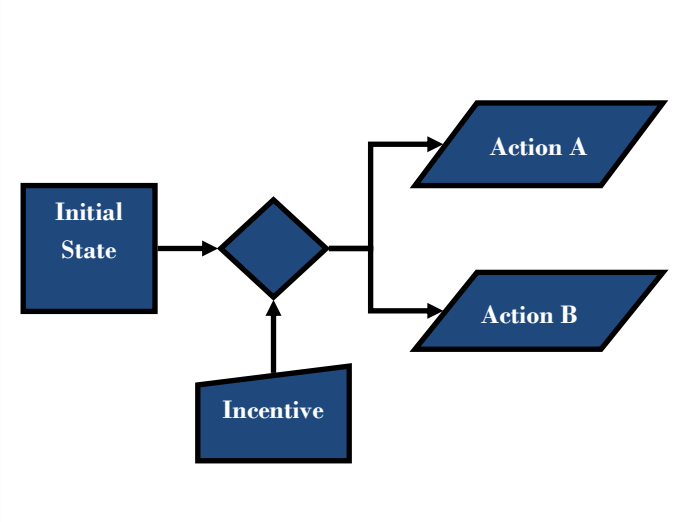
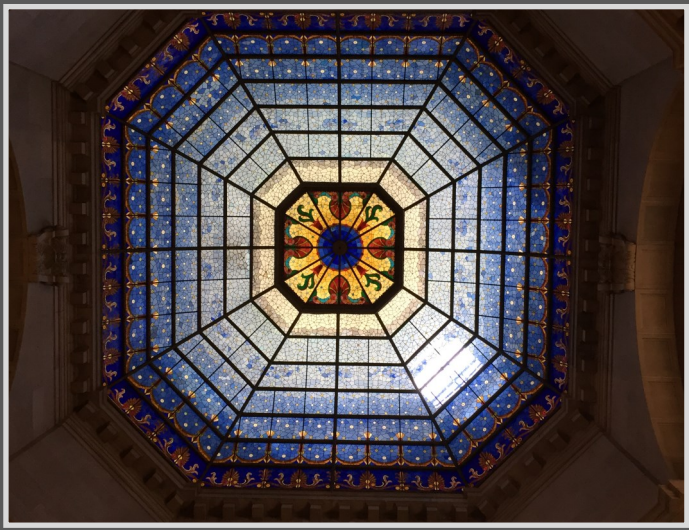
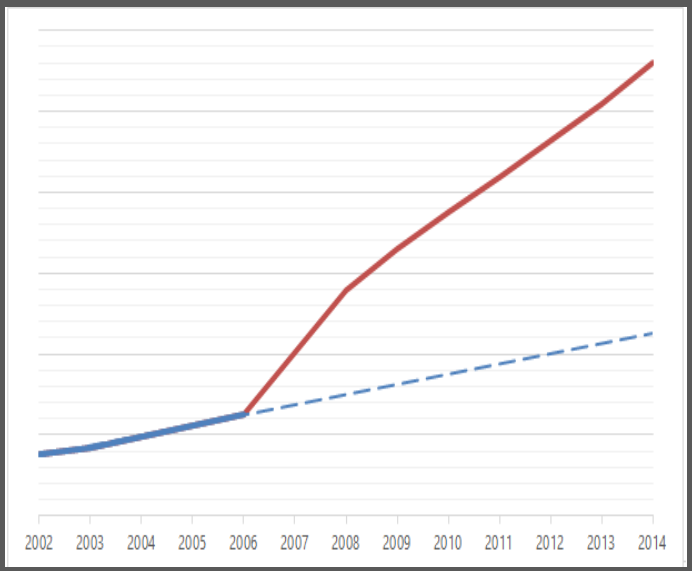




2015 Indiana Tax Incentive Evaluation

Office of Fiscal and Management Analysis
Indiana Legislative Services Agency



Office of Fiscal and Management Analysis

The Office of Fiscal and Management Analysis (OFMA) is a division of the Legislative Services Agency that performs fiscal, budgetary, and management analysis for the Indiana General Assembly.

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Preface

IC 2-5-3.2-1 establishes an annual review, analysis, and evaluation process for state and local tax incentives. The annual review will be conducted over a five-year cycle during which each state and local tax incentive will be reviewed at least one time. The annual tax incentive review is conducted by the Office of Fiscal and Management Analysis, Legislative Services Agency. The Office of Fiscal and Management Analysis must submit an annual report of the tax incentive review to the Legislative Council and the Interim Study Committee on Fiscal Policy. The five-year review cycle began in 2014. The prior year report can be found on the Indiana General Assembly's website at http://iga.in.gov/documents/0b08377d. Pursuant to IC 2-5-3.2-1, this report:

- Specifies the review schedule for 2015 to 2018.
- Reviews, analyzes, and evaluates the following tax incentives and incentive programs:
    - Earned income tax credit
    - Historic rehabilitation credit
    - Indiana colleges and universities contribution credit
    - Indiana 529 college savings account contribution credit
    - Individual development account credit
    - Neighborhood assistance credit
    - Residential historic rehabilitation credit
    - School scholarship contribution credit
    - 21st century scholarship credit
    - Low-income housing exemption
    - Low-income residence exemption
    - Rehabilitated property deduction
    - Rehabilitated residential property deduction
    - Tax increment financing
- Provides descriptive information and data relating to the tax incentives and incentive programs subject to review in 2015.
- Analyzes and evaluates the effectiveness and economic impacts of the tax incentives and incentive programs subject to review in 2015.

We would like to acknowledge the following agencies for their assistance in providing data that is presented and analyzed in this report:

- Department of State Revenue
- Commission for Higher Education
- Housing and Community Development Authority
- Indiana Education Savings Authority
- Department of Natural Resources
- Department of Local Government Finance
- Indiana Business Research Center

Executive Summary

The tax incentives we analyze this year cover a wide range of activities. They were established to influence how families save for college, renovation of older homes, charitable contributions, and the construction of low-income housing. Some incentives are directly linked to state programs like individual development accounts, 21st Century Scholarships, and 529 college savings plans. Other incentives like the earned income tax credit (EITC), neighborhood assistance tax credit, and tax increment financing (TIF) are programs unto themselves.

The EITC provides targeted income assistance to low-income families with or without children. Our analysis concludes that the EITC may be encouraging additional labor participation and employment, in particular by single mothers. It also suggests that the EITC provides enough assistance to increase some families' pretax income above the poverty line and substantially lowers some families' effective income tax rate.

Indiana has five tax credits designed to encourage charitable contributions to specific entities and programs. We review a significant body of published research examining the impact of tax incentives on charitable giving. While the research generates varying estimates of the magnitude of this impact, most of the studies suggest that the tax incentives in general increase charitable contributions by at least the revenue foregone due to the tax incentive. Our own research suggests that the response of people tax incentives for charitable giving is a combination of the discount on the cost of the contribution provided by the tax incentive and the underlying charitable cause. Our specific conclusions are as follows.

- *Neighborhood assistance tax credits* are used to leverage additional contributions and are highly sought after by nonprofit organizations.
- The *individual development account contribution credit* is claimed by less than 0.1% of all taxpayers and, thus, has been ineffective in attracting contributions. However, the contributions associated with the credit increase the individual development account program's annual funding by an average of 15%.
- The *Indiana college contribution credit* is likely more influential in attracting small donations, but the $200 per-taxpayer credit cap suggests that it is not a factor for taxpayers making large donations.
- The claims of the *school scholarship contribution credit* have increased by an average of 54% a year from 2011 to 2013. The cause and the associated savings provided by the credit have resonated with certain taxpayers.
- The *21st century scholarship contribution credit* has been ineffective in attracting contributions to the Support Fund. Our research suggests that people are either unaware of the program or misunderstand the tax incentive.

Our analysis suggests that the *529 college contribution tax credit* has been effective in encouraging families to use an Indiana 529 CollegeChoice savings plan when saving for college.

Four incentives created to encourage the rehabilitation of historic, old, or low-value property were also evaluated. These incentives lower the cost of qualifying projects through either an income tax credit or a property tax deduction.

- Even though *historic rehabilitation tax credits* will no longer be issued, our analysis found the parameters of the credit made it ineffective in encouraging commercial historic rehabilitation projects.
- The *residential historic rehabilitation credit* is beginning to be used at its maximum capacity by Indiana residents. However, it is unclear whether this incentive is encouraging people to rehabilitate their homes.
- The *rehabilitated property tax deduction* has been ineffective in encouraging eligible rehabilitation projects. Currently, over 1 million properties meet the age requirement for the deduction, but the deduction was only claimed for less than 1,900 properties from 2008 to 2015.. The deduction also fails to result in significant reductions in overall project costs.
- The *residential rehabilitation property tax deduction* is a property tax deduction for properties with improvements that have a low assessed value. This deduction has a minimal impact on overall project costs. The deduction also has been ineffective in encouraging eligible rehabilitation projects as it has been claimed for less than 1% of the eligible properties in the state.

Two property tax incentives were evaluated to determine whether they encourage the construction of additional low-income housing. Both the *low income housing exemption* and the *low income residence exemption* have a small number of taxpayers benefiting from the exemptions. The associated cost savings provided by the incentives are low and our research suggests that they have little to no impact on the amount of low-income housing in Indiana.

Tax increment financing (TIF) was established to help local governments address blighted areas and to spur economic development. The results of our econometric analysis are similar to the published research on the impact of TIF on property values and employment. Our econometric estimates suggest that property values in TIF areas are slightly higher and grow at a slightly higher rate than non-TIF properties. The econometric estimates also suggest that while employment in TIF businesses is slightly higher than non-TIF businesses, there is no difference in employment growth between TIF and non-TIF businesses. The econometric estimates also suggest that much of the property value and employment growth observed in TIF areas is attributable to other economic, demographic, and policy factors.

Introduction

A tax incentive is a provision of the tax code aimed at encouraging a taxpayer to conduct specified activities or undertake certain behavior by reducing the taxpayer's tax liability in relation to the targeted activity or behavior. Over the course of the last 30 to 40 years tax incentives have become a significant and growing part of local tax laws, state tax codes, and the federal Internal Revenue Code. At the forefront of this expansion in tax incentive use has been the growth in the number and scale of economic development tax incentives tied to business employment, wages, and investment. In contrast to direct spending programs, tax incentive programs direct public funding to certain purposes by foregoing tax revenue. Moreover, tax incentive programs are different than direct spending programs because tax incentives typically are not subject to the periodic scrutiny that direct spending programs are subject to through the normal budgetary process. During this 30-to-40 year period a robust literature has also developed examining these tax policies (Abravanel, Pindus, & Theodos, 2010). This literature comprises the following:

- Surveys of business leaders relating to the impact of state and local taxes on business location decisions.
- Econometric research examining the link between state and local tax levels and business locations, business investment, gross state product, and the like.
- Econometric research examining the effectiveness of specific tax incentives (such as investment tax credits) on capital investment, employment, and wages.
- Econometric and other research examining the effectiveness of incentive programs like enterprise zones, tax increment financing, and the like.

The 2012 report *Evidence Counts: Evaluating State Tax Incentives for Jobs and Growth* by the PEW Center for the States suggested that at the time only about one fourth of the states did intensive tax incentive analysis, while another one fourth of the states examined incentives to a lesser extent with mixed results. The report suggested that half the states essentially take little or no action to examine tax incentives. PEW (2015) suggests that "[s]tate leaders need better information to avoid unexpected budget challenges, identify effective incentives, and reform or end programs that are not meeting expectations."

Responding to these circumstances, a number of states have recently initiated tax incentive review processes to examine the usage, effectiveness, and economic impacts of tax incentives. PEW (2015) has been instrumental in helping to initiate and support these state efforts as a part of its Business Incentives Initiative. The purposes of this initiative include the identification of effective ways to assess tax incentive policies, the improvement of state data collection and reporting on tax incentives, and the development of best practices for states relating to data collection and reporting on tax incentives. PEW (2015) reports that 17 states and the District of Columbia have enacted laws since 2012 either establishing regular evaluation of tax incentives or making improvements to existing tax incentive evaluation processes. Indiana is one of these states.

Tax incentives have been examined in Indiana prior to the current program. Indiana initiated a review of state tax credits, including many incentives, under HEA 1072-2012. This act required the Commission on State Tax and Financing Policy to conduct a study of all income tax credits during the 2012 and 2013 legislative interims.

The Commission held two hearings during the 2012 interim and one hearing during the 2013 interim to receive tax credit reviews prepared by the Office of Fiscal and Management Analysis, Legislative Services Agency.

HEA 1020-2014 established the current tax incentive review process, which was modified by HEA 1142-2015. The first tax incentive review under the current program was published in 2014. The tax incentives reviewed in 2014 were: (1) the home insulation deduction, (2) the solar-powered roof vent/fan installation deduction, and (3) the Indiana Partnership long-term care insurance premiums deduction.

Tax Incentive Review Process

IC 2-5-3.2-1 establishes an annual review, analysis, and evaluation process for state and local tax incentives. Appendix 1 contains the text of IC 2-5-3.2-1. The tax incentive review is conducted by the Office of Fiscal and Management Analysis, Legislative Services Agency. The annual tax incentive review is to be conducted over a five-year cycle with each tax incentive being reviewed at least one time during that review cycle. The statute requires the Legislative Services Agency to develop and publish a multi-year review schedule specifying the year in which each tax incentive will be reviewed.

The five-year review cycle must be conducted twice. The first five-year review cycle began during the 2014 legislative interim and will be completed with the tax incentive review conducted during the 2018 interim.

The statute requires the Legislative Services Agency to submit a report containing the results of the annual tax incentive review to the Legislative Council and the Interim Study Committee on Fiscal Policy. The report must be submitted before October 1 each year. The statute requires the Committee to hold at least one public hearing between September 30 and November 1 at which the Legislative Services Agency presents its report and the Committee receives information concerning tax incentives. In addition, the Committee is required to submit to the Legislative Council its recommendations relating to the tax incentive review. The statute requires the General Assembly to use the Legislative Services Agency's report and the Committee's recommendations to determine whether a tax incentive (1) is successful; (2) is provided at a cost that can be accommodated by the state's biennial budget; and (3) should be continued, amended, or repealed.

Tax Provisions to be Included in the Tax Incentive Review

IC 2-5-3.2-1 defines a tax incentive as a benefit provided through a state or local tax that is intended to alter, reward, or subsidize a particular action or behavior by the tax incentive recipient, including a tax incentive providing a benefit intended to encourage economic development.

A tax incentive includes an exemption, deduction, credit, preferential rate, or other tax benefit that reduces a taxpayer's state or local tax liability or results in a tax refund. A tax incentive also includes a program where revenue is dedicated by a political subdivision to pay for improvements in an economic or sports development area, a community revitalization area, an enterprise zone, a tax increment financing district, or a similar area or district.

Tax Incentive Review Purposes and Approaches

IC 2-5-3.2-1 essentially specifies that the purpose of the annual tax incentive review is to (1) ensure tax incentives accomplish the purposes for which they were enacted; (2) include the cost of tax incentives in the biennial budgeting process; and (3) provide information needed by the General Assembly to make policy choices about the efficacy of tax incentives. IC 2-5-3.2-1 lists a variety of descriptive and analytical information that could accomplish these tax incentive review goals. This information is as follows:

- The attributes and policy goals of the tax incentive.
- The tax incentive's equity, simplicity, competitiveness, public purpose, adequacy, and conformance with the purposes of the legislation enacting the incentive.
- The activities the tax incentive is intended to promote and the effectiveness of the tax incentive in promoting those activities.
- The number of taxpayers applying for, qualifying for, or claiming the tax incentive, and the tax incentive amounts (in dollars) claimed by taxpayers.
- The tax incentive amounts (in dollars) claimed over time.
- The tax incentive amounts (in dollars) claimed by industry sector.
- The amount of income tax credits that could be carried forward for the ensuing five-year period.
- An estimate of the economic impact of the tax incentive, including a return on investment calculation, cost-benefit analysis, and direct employment impact estimate.
- The estimated state cost of administering the tax incentive.
- The methodology and assumptions of the tax incentive review, analysis, and evaluation.
- The estimated leakage of tax incentive benefits out of Indiana.
- Whether the tax incentive could be made more effective through legislative changes.
- Whether measuring the economic impact of the tax incentive is limited due to data constraints and whether legislative changes could facilitate data collection and improve the review, analysis, or evaluation.
- An estimate of the indirect economic activity stimulated by the tax incentive.

Tax Incentive Review Report

IC 2-5-3.2-1 requires the Legislative Services Agency to submit a report containing the results of the annual tax incentive review to the Legislative Council and the Interim Study Committee on Fiscal Policy. The report must be submitted before October 1 each year.

The report must include at least the following:

- A detailed description of the review, analysis, and evaluation for each tax incentive reviewed.
- Information to be used by the General Assembly to determine whether a reviewed tax incentive should be continued, modified, or terminated, the basis for the recommendation, and the expected impact of the recommendation on the state's economy.
- Information to be used by the General Assembly to better align a reviewed tax incentive with the original intent of the legislation that enacted the tax incentive

Tax Incentive Review Schedule

Table 1 specifies the tax incentives and incentive programs reviewed during the 2015 interim. The remaining schedule for 2016 to 2018 is specified in Table 2 at the end of this section. A total of 55 tax incentives and 6 incentive programs were scheduled for review from 2015 to 2018, and 3 incentives were evaluated in 2014. The tax incentives included on the review schedule are associated with the corporate income tax and individual income tax (27 tax incentives), the property tax (21 tax incentives), the sales tax (6 tax incentives), and other taxes (1 tax incentive). The 6 incentive programs are tax increment financing (TIF), enterprise zones (EZs), community revitalization enhancement districts (CREDs), professional sports development areas (PSDAs), certified technology parks (CTPs), and the motor sports development district. Appendix 2 contains a list of tax incentives and incentive programs on the review schedule, including descriptions.

Table 1: Tax Incentives and Incentive Programs Scheduled for Review in 2015

Tax	Tax Provision
Corporate Income Tax (C) / Individual Income Tax (I)	• Earned Income Tax Credit (I) • Historic Rehabilitation Credit (C)(I) • Indiana Colleges and Universities Contribution Credit (C)(I) • Indiana 529 College Savings Account Contribution Credit (I) • Individual Development Account Credit (C)(I) • Neighborhood Assistance Credit (C)(I) • Residential Historic Rehabilitation Credit (I) • School Scholarship Contribution Credit (C)(I) • 21st Century Scholars Program Credit (C)(I)
Property Tax	• Low-Income Housing Exemption • Low-Income Residence Exemption • Rehabilitated Property Deduction • Rehabilitated Residential Property Deduction
Other	• Tax Increment Financing

Table 2: Tax Incentives and Incentive Programs Scheduled for Review from 2016 through 2018

Tax	Tax Provision
2016	
Corporate Income Tax (C)/ Individual Income Tax (I)	• Community Revitalization Enhancement District Credit (C)(I) • Community Revitalization Enhancement District Local Credit (I) • Enterprise Zone Employment Expense Credit (C)(I) • Enterprise Zone Investment Cost Credit (C)(I) • Enterprise Zone Loan Interest Credit (C)(I) • Industrial Recovery Credit (C)(I)
Property Tax	• Enterprise Zone Investment Deduction • Enterprise Zone Obsolescence Deduction (Marion County)
Other	• Community Revitalization Enhancement Districts • Enterprise Zones
2017	
Corporate Income Tax (C)/ Individual Income Tax (I)	• Economic Development for a Growing Economy (EDGE) Credit (C)(I) • Headquarters Relocation Credit (C)(I) • Hoosier Business Investment Credit (C)(I) • Patent-Derived Income Deduction (C)(I) • Research Expense Credit (C)(I) • Special Rate for Income Derived Inside a Military Base (C) • Venture Capital Investment Credit (C)(I)
Property Tax	• Certified Technology Park Deduction • Economic Revitalization Area Personal Property Tax Abatement • Economic Revitalization Area Real Property Tax Abatement • Infrastructure Development Zone Deduction • Marine Opportunity District Deduction
Sales Tax	• Research and Development Property
Other	• Certified Technology Park • Professional Sports Development Areas

Tax	Tax Provision
2018	
Corporate Income Tax (C)/ Individual Income Tax (I)	• Adoption Tax Credit (Effective 2015) (I) • Alternative Fuel Vehicle Manufacturing Investment Credit (C)(I) • Coal Gasification Technology Investment Credit (C)(I) • Natural Gas-Powered Vehicles (C)(I)
Property Tax	• Aircraft Deduction • Brownfields Revitalization Zone Deduction • Coal Combustion Product Deduction • Deduction for Purchases of Investment Property by Manufacturers of Recycled Components • Geothermal Energy Heating or Cooling Device Deduction • Hydroelectric Power Device Deduction • Intrastate Aircraft Deduction • Resource Recovery/Coal or Oil Shale System Deduction • Solar-Energy Systems Deduction • Wind-Powered Devices Deduction
Sales Tax	• Aircraft Parts • Aviation Fuel • Cargo Trailers/RVs Sold to Certain Nonresidents • Certain Aircraft • Certain Racing Equipment
Other	• Motorsports Investment District • Promotional Free-Play Deduction

Earned Income Tax Credit (IC 6-3.1-21)

The Indiana earned income tax credit (EITC) was established to provide an additional refundable credit to taxpayers who claim the federal EITC.

The federal EITC was created as a temporary program in 1975 and made permanent in 1978. The credit was initially created to return a portion of the social security payroll tax paid by low-income taxpayers (Falk, 2014). Now, the federal EITC is the largest needs-tested federal antipoverty cash program. In fiscal year 2014, more than 27.7 million taxpayers received about $66.3 B in federal EITC (U.S. Office of Management and Budget, 2015). The program has three goals: encourage work, transfer income to qualifying low-income families, and reduce dependence on traditional welfare programs.

Earned Income Defined

Earned income is income from wages, salaries, tips, and other taxable employee pay. With the exception of nontaxable combat pay, nontaxable income is not earned income. Net earnings from self-employment, gross income received as a statutory employee, and paid strike benefits are also considered earned income. In addition, any taxable disability benefits received under an employer disability retirement plan are considered earned income until the taxpayer reaches the minimum age to receive a pension or annuity under the employer's retirement plan (Internal Revenue Service, 2015).

The following are not considered to be earned income:

- Interest and dividends
- Pensions and annuities
- Social security and railroad retirement benefits
- Alimony and child support
- Welfare benefits
- Workers' compensation benefits
- Unemployment compensation
- Nontaxable foster care payments
- Veterans' benefits
- Earnings while an inmate
- Workfare payments

The original Indiana EITC was enacted in 1999. This credit was computed by multiplying the state income tax rate (3.4%) by $12,000 minus the taxpayer's earned income. Consequently, the credit was not structured like the federal EITC. It provided the maximum credit to taxpayers with the lowest earned income, and then the credit declined as earned income rose to $12,000. To be eligible for the credit, families had to have at least one qualifying child. In 2003, the Indiana EITC was linked to the federal EITC. As a result, the Indiana EITC shared the eligibility criteria and award structure with the federal EITC, except the Indiana EITC equaled 6% of the federal EITC. The Indiana EITC was increased to 9% of the federal EITC beginning in tax year 2009. Indiana decoupled from the federal credit in 2011. The current Indiana EITC is computed based on the federal EITC as it existed before being amended by the federal *Tax Relief Unemployment Insurance Reauthorization and Job Creation Act of 2010*. However, a taxpayer must first receive a valid federal EITC before qualifying for the Indiana EITC.

To claim the federal EITC, the taxpayer must meet the following conditions:

- Have earned income with a federal adjusted gross income (AGI) below a statutorily specified level as determined by the filing status and number of qualifying dependents.
- Have investment income less than $3,350.
- Have no foreign income.

- Be a U.S. citizen or a resident alien.
- Have a valid social security number including for all qualifying children.
- Use a filing status other than married filing separately.

In order for a taxpayer to qualify for a higher credit because he or she has a child, the child must be a "qualified child" by meeting relationship, age, residency, and joint tax returns tests.

After the taxpayer receives a valid federal EITC, the taxpayer must also meet Indiana's dependent tests and income qualifications. Indiana requires two additional tests to determine if a child is a "qualified child" for purposes of receiving a higher credit. Once the number of qualifying children is established, the taxpayer must meet Indiana's income thresholds. The taxpayer's earned income, federal AGI, and modified federal AGI must be less than:

- $43,750 if the taxpayer has 2 or more qualifying children.
- $38,500 if the taxpayer has 1 qualifying child.
- $14,500 if the taxpayer has 0 qualifying children.

Table 3: Indiana Earned Income Tax Credit Parameters, 2014

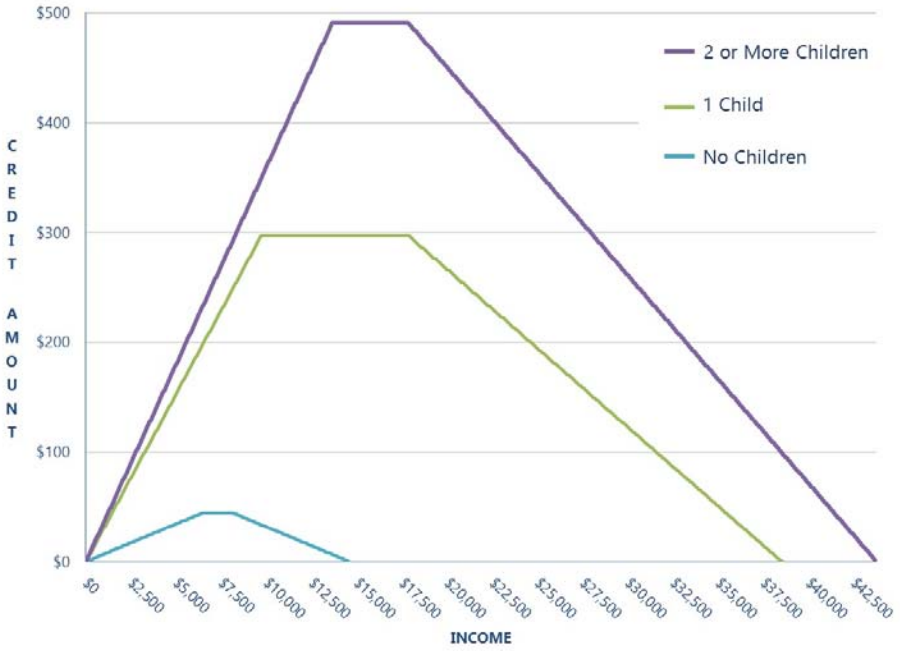
	Number of Qualifying Children		
	0	1	2 or more
Credit Rate	7.65%	34.00%	40.00%
Minimum Income for Max Credit	$6,480	$9,720	$13,650
Maximum Credit	$45	$297	$491
Income where Phaseout begins	$8,110	$17,830	$17,830
Phaseout Rate	7.65%	15.98%	21.06%
Phaseout Threshold	$14,500	$38,500	$43,750

Source: Indiana Department of State Revenue

The credit amount is based on a fixed percentage from the first dollar of earnings until the credit reaches a maximum. The percentage and maximum credit vary, depending on the number of qualifying children. The credit stays flat as earnings increase. Once the earnings reach a certain amount, the credit is gradually reduced with each additional dollar of income until the credit reaches zero. The maximum credits, award percentages, and income thresholds for 2014 are shown in Table 3.

Once the taxpayer computes their credit using their earned income, modified AGI, and the number of qualifying children, they must perform two additional steps. If the taxpayer has alternative minimum tax (AMT), they must subtract 9% of the AMT from their computed Indiana EITC. Lastly, the Indiana EITC cannot be greater than 9% of the current federal EITC. The family must claim the smaller of the two amounts. Figure 1 shows the tax year 2014 award schedules for the Indiana EITC.

Figure 1: Indiana Earned Income Tax Credit Parameters



Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Figure 2: Tax Year 2014 Federal EITC Award Schedule

Source: Raw data provided by Internal Revenue Service, data analysis by the Office of Fiscal and Management Analysis.

Figure 2 shows the 2014 federal EITC award schedule. The graph highlights two structural differences between the Indiana EITC and federal EITC. The federal EITC has a fourth credit rate that provides a larger credit amount to families with three or more children. The Indiana EITC does not have this credit rate. The federal EITC also has different income thresholds for married taxpayers. In 2014, the beginning and ending points of the phaseout region for the federal EITC are $5,430 greater for married taxpayers filing jointly.

Description of the Earned Income Tax Credit Claimants

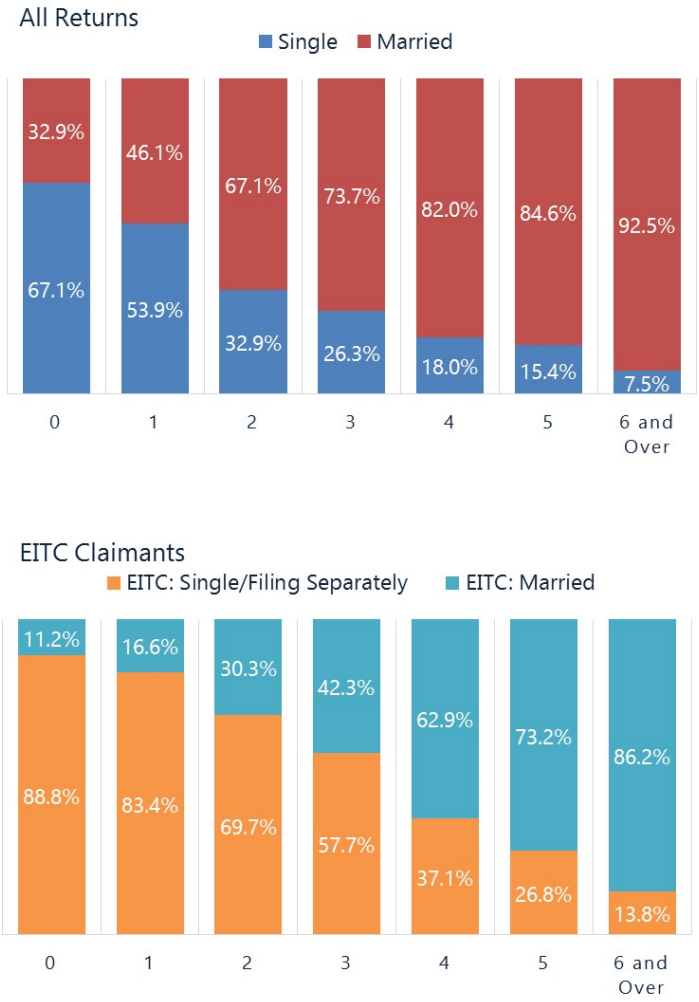
Indiana EITC claims have increased by an average of 2.6% per year from tax year 2004 to 2013 as shown in Table 4. The amount of EITC credits increased in 2009 because the Indiana EITC was increased from 6% of the federal EITC to 9% of the federal EITC. In addition, the federal *American Recovery and Relief Act of 2009* expanded the eligibility of the federal EITC. It established the credit rate for taxpayers with three or more children and increased the income thresholds for married taxpayers (Falk, 2014). The combination of Indiana and federal legislative changes and the Great Recession likely were responsible for the significant increase in EITC payments in 2008 and 2009. Indiana decoupled from the federal EITC in 2011 which likely explains the sudden decrease in EITC claimants and credits in 2011. Since 2011, the number of families claiming an EITC has increased 2.4% a year.

Table 4: Earned Income Tax Credit Claims for Years 2004-2013

Tax Year	Individual Income Tax					
	Filers Claiming Credits	% Change	Credits Claimed	% Change	Total Employment	% Change
2004	411,562		$44,229,424		2,848,873	
2005	427,859	4.0%	47,435,257	7.2%	2,873,795	0.87%
2006	440,508	3.0%	50,380,306	6.2%	2,892,419	0.65%
2007	467,383	6.1%	54,942,564	9.1%	2,905,725	0.46%
2008	480,544	2.8%	58,894,663	7.2%	2,872,442	-1.15%
2009	533,472	11.0%	103,427,037	75.6%	2,705,331	-5.82%
2010	531,713	-0.3%	103,851,706	0.4%	2,709,831	0.17%
2011	493,788	-7.1%	94,842,482	-8.7%	2,755,826	1.70%
2012	510,207	3.3%	98,452,917	3.8%	2,812,347	2.05%
2013	518,068	1.5%	102,842,317	4.5%	2,849,311	1.31%

Source: Raw data provided by Department of State Revenue and Bureau of Labor Statistics, data analysis by the Office of Fiscal and Management Analysis.

Figure 3: Tax Year 2012 Distribution of Returns by Number of Children and Filing Status

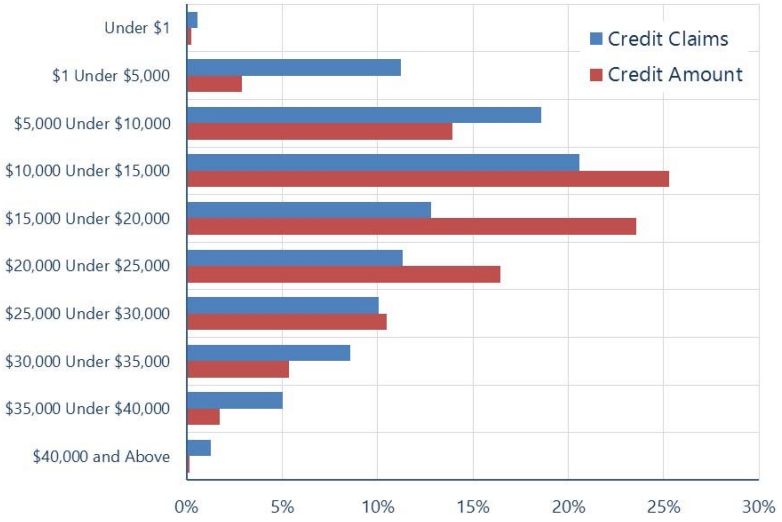


Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

The Indiana EITC is claimed primarily by single parents. In 2012, single households comprised 78% of the total EITC claims and account for 78% of the total credits. The distribution of EITC recipients with children is also different from the total population of tax filers. Of the households claiming the EITC, 70% had at least one qualifying child as opposed to 30% for all return filers with at least one qualifying child.

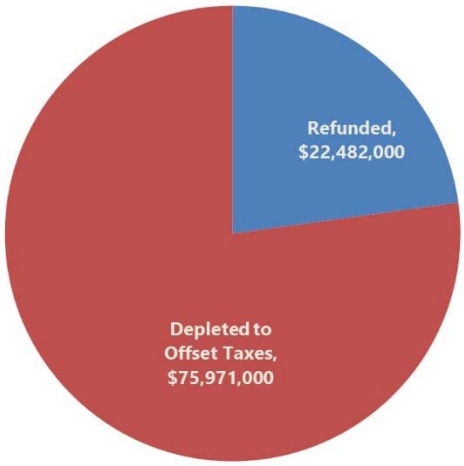
The EITC was designed to provide assistance to low-income families. The income distribution of EITC claimants for 2012 (Figure 4) shows that about 64% have a federal AGI of less than $20,000. About 45% of the EITC recipients have federal AGI that places them within either the phase-in or plateau regions of the credit, and 54% of the EITC recipients have federal AGI that places them within the phaseout region of the credit.

Figure 4: Income Distribution of Resident Earned Income Tax Claimants in Tax Year 2012



Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Figure 5: State and Local Taxes Offset by the Indiana Earned Income Tax Credit in 2012



The EITC is a refundable tax credit. As a result, a taxpayer claims the credit against their income tax liability and then receives a refund of any credit amount that exceeds their tax liability. For most taxpayers, the EITC completely offsets their combined state and local income tax liability. In tax year 2012, 77% of the EITC was used to offset state and local tax liabilities and 23% was refunded to taxpayers (Figure 5). Of the 510,207 claimants, about 476,300 received a refund. The EITC completely eliminated the total state and local tax liability for 31% of the EITC claimants. However, most taxpayers had other credits that also offset their tax liability. After accounting for the other credits, about 70,400 taxpayers would not have received a refund without the EITC.

Approximately 55% of families claiming an Indiana EITC received the credit fewer than three times, and 23% of the families received five or more credits. These results are based on identifying first-time tax filers in tax years 2003 through 2007 and analyzing their subsequent filings. Researchers found similar evidence when studying the federal EITC (Dowd & Horowitz, 2011).

Impact on Labor Participation

The EITC was established to be an antipoverty program, but it was also designed to encourage work. This is accomplished through the structure of the credit. Depending on the number of qualifying children, the family will earn between $0.08 and $0.40 in federal EITC per $1 of earned income. After the family receives the maximum credit, they will continue to receive the maximum EITC until their income reaches the phaseout threshold. The incentive to work is greatest at the phase-in and plateau income limits.

Instead of abruptly ending the EITC at a specific income level, the EITC is reduced as the family's income continues to increase. The federal EITC is reduced between $0.08 and $0.21 for each $1 above the income threshold. Eventually, the credit is completely phased out. The gradual reduction of the EITC is intended to minimize any disincentives from removing the credit.

Research suggests the federal EITC is effective in encouraging labor participation, especially for single mothers (Nichols & Rothstein, 2015). The studies have analyzed employment changes when federal EITC policy changes were enacted. The labor participation elasticity in response to changes in net income range from 0.36 to 1.16 depending on the study (Schmeiser, 2012). The average response is estimated to be about 0.70. Based on the average elasticity, a 10% increase in net income increases the labor participation of single mothers by 7%. A recent study by Hoynes and Patel (2015) found that $1,000 increase in federal EITC results in a 7.3 percentage point increase in employment of single mothers. They computed the extensive margin elasticity for single mothers to be 0.36. The extensive margin elasticity measures the response of people to work or participate in the labor force. In 2012, Indiana residents claimed $1,273.3 M in federal EITC and $98.5 M in Indiana EITC. The inclusion of the Indiana EITC increased the total credits provided to EITC recipients by 7.7%. The research reviewed above suggests that this type of increase in credits could potentially result in additional labor participation and employment that might not occur in the absence of the additional credits provided by the Indiana EITC.

Since the EITC is based on the family's income, the additional income from a second wage earner could result in a positive tax rate and a complete reduction in benefits (Eissa & Hoynes, 2011). This is referred to as the 'marriage penalty'. To minimize the disincentive placed on the secondary earners, the plateau region for the federal EITC is extended for married couples. Research suggests that the EITC does lead to small decreases in labor participation and hours worked by the secondary earner (Eissa & Hoynes, 2011). However, the estimated impact on married families is much less than the increased participation by single mothers (Nichols & Rothstein, 2015). For married couples, the Indiana EITC likely decreased labor for the secondary earners according to research. Evidence suggests the response by secondary earners is considerably less than the response by single mothers.

While research has found evidence of increased labor participation, little evidence has been found of people adjusting the number of hours worked. However, a recent study observed that reduction in hours worked is occurring, but largely by individuals with self-employment income who are in the phaseout region of the credit. The same study found evidence that suggests families in the phase-in region are more likely to adjust hours worked to maximize the credit (Chetty, Friedman, & Saez, 2013). Researchers believe that families find it hard to make labor decisions to maximize their EITC because they have little control over their hours or have difficulty predicting their end-of-year earnings (Nichols & Rothstein, 2015).

Impact on Poverty

The impact of the EITC on families in poverty can be measured by analyzing how the credit affects pretax income. If a household's pretax income is below the poverty threshold, then the family and every member of the family is considered to be in poverty. In tax year 2012, 488,096 full-year residents claimed the Indiana EITC (Table 5). About 57% had a federal AGI below the poverty line. However, after adding both the federal and Indiana EITC to their pretax income, about 24% of those families had annual income above the poverty line. The Indiana EITC is smaller than the federal EITC, so it has less of an impact; however, the Indiana EITC provided enough assistance to increase 2.2% of the families' annual pretax income above the poverty line.

Table 5: Poverty Statistics for Tax Year 2012 Resident EITC Claimants (Households)

Filing Status - Number of Children	Total Resident EITC Claimants	Total Below Poverty Line	Above Poverty Line After Adding Both State and Federal EITC	% Change	Above Poverty Line Attributed to Indiana EITC	% Change
Single						
No Children	129,677	92,840	7,205	7.8%	638	0.7%
1 Child	142,760	65,307	18,796	28.8%	1,562	2.4%
2 or More Children	110,649	66,920	25,981	38.8%	2,884	4.3%
Total	**383,086**	**225,067**	**51,982**	**23.1%**	**5,084**	**2.3%**
Married, Filing Jointly						
No Children	16,545	13,248	730	5.5%	59	0.5%
1 Child	27,411	10,002	2,650	26.5%	190	1.9%
2 or More Children	61,054	28,179	10,165	36.1%	617	2.2%
Total	**105,010**	**51,429**	**13,545**	**26.3%**	**866**	**1.7%**
Grand Total	**488,096**	**276,496**	**65,527**	**23.7%**	**5,950**	**2.2%**

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Researchers have also measured the impact of the EITC on household finances by analyzing marginal tax rates. They found that the federal EITC reduces the average tax

rates for all families and wage levels. In some cases, the federal EITC reduces the average tax rate to a negative value (Eissa & Hoynes, 2006). Indiana's EITC has a similar impact on a family's tax rate, but the magnitude of the change is much less. The median 2012 effective state tax rate for an Indiana taxpayer is 2.9%. EITC claimants have a median effective state tax rate of 2.3% before the credit. However, the credit reduces the median effective state tax rate to 0.09%. The credit resulted in a negative state tax rate for about 186,700 of the claimants.

Impact on Traditional Welfare Programs

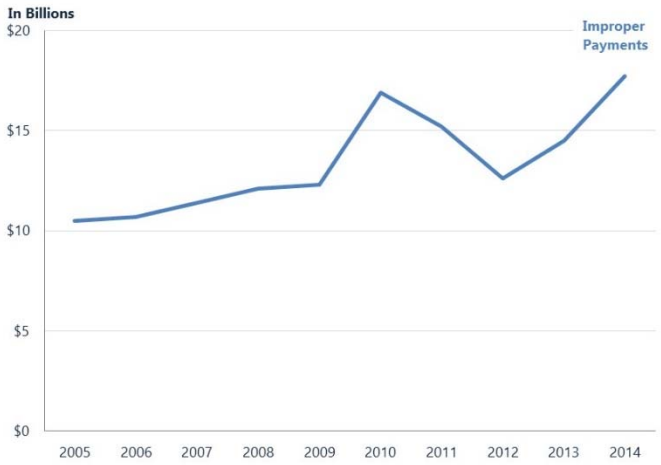
The EITC was designed to encourage work and self-sufficiency. It differs from traditional welfare programs in that the EITC is directly linked to work. If a family earns no income, then it is not eligible for the credit. Traditional welfare programs such as Supplemental Nutritional Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) program provide the greatest benefits to those without earnings. Encouraging families to earn income will reduce their reliance on other assistance programs. A study found that increases in the federal EITC are associated with a reduction in welfare participation among families with children (Grogger, 2003). An analysis of the interactions between the federal EITC, Indiana EITC, and other means-tested assistance programs was not conducted. The impact of the Indiana EITC is likely similar to the federal EITC albeit on a smaller scale.

However, the direct assistance provided by the Indiana EITC does directly interact with Indiana's TANF funding. The EITC fulfills a portion of Indiana's maintenance-of-effort requirement to receive federal funding for the Temporary Assistance for Needy Families (TANF) program. Over $30 M in EITC is annually allocated to meet the TANF requirements. The expenditures towards Indiana's textbook reimbursement program and student financial aid provided by the Commission for Higher Education also contribute the maintenance-of-effort requirements.

The Cost of Administering the EITC

The EITC is unlike other antipoverty programs because it is completely administered through the tax code. This allows the EITC to be administrated at a lower cost than traditional welfare programs. The federal EITC's administrative costs are estimated to be less than 1% of the total benefits provided to households (Eissa & Hoynes, 2011). Programs that are administered through a traditional caseworker model can have administrative expenses as high as 20% of the program outlays (Nichols & Rothstein, 2015). While a caseworker model does cost more to implement, it normally has a lower error rate (U.S. Office of Management and Budget, 2015).

Figure 6: Historical Improper Payments for Federal EITC, 2005 to 2014



Source: U.S. Office of Management and Budget

As required by the *Improper Payments Elimination and Recovery Act of 2010,* the U.S. Office of Management and Budget identified 13 programs as "high-error." Of the "high-error" programs, the federal EITC is second in terms of the total amount of improper payments issued and first in terms of the rate of improper payments. In FY 2014, about $17.7 B of the total $65.2 B in federal EITC provided to households was estimated to be improper payments. The improper payment rate was 27% (Figure 6) (U.S. Office of Management and Budget, 2015).

The improper payments are a combination of inadvertent errors and intentional fraud. The IRS classifies EITC errors as either authentication or verification errors. Authentication errors usually involve the inability to determine qualifying child eligibility through the residency and relationship tests. The IRS estimates that authentication errors account for 70% of the improper payments. The remaining 30% of improper payments are attributed to verification errors, which occur when families improperly report income which allows them to qualify for the EITC. The errors are attributed to the complexity of the eligibility criteria, high program turnover, increased program participation, and fraud. The errors are not just committed by taxpayers filing their own returns. Evidence uncovered by the IRS suggests that dishonest or inept tax preparers are contributing to the improper EITC claims. The IRS believes addressing preparer errors will considerably reduce the amount of improper payment because 57% of EITC claims were submitted on returns prepared with the assistance of a paid tax preparer (Treasury Inspector General for Tax Administration, 2014).

Since the Indiana EITC is based on the federal program, Indiana likely experiences the same issues in administering the credit. The improper payment error is likely similar to the federal credit, and the Indiana Department of State Revenue conducts similar compliance programs to reduce improper payments. However, the Indiana EITC adds additional complexity to the credit because it requires taxpayers to recalculate their award using different parameters. The added complexity of the Indiana credit has the potential to increase errors made when claiming the credit (Table 6).

Table 6: Pages of Instructions Provided to Taxpayers to Claim the EITC

Federal Document	Pages	Indiana Document	Pages	Total Pages
1040 Instructions	17	IT-1040 Instructions	12	29
IRS Publication 596	37	IDOR Publication EIC	17	54
Federal Total	**54**	**Indiana Total**	**29**	**83**

Source: Internal Revenue Service and Indiana Department of State Revenue

Charitable Giving Incentives

Charitable Contributions in the U.S. and Indiana

According to published reports, charitable organizations received $358 B in contributions in 2014 (Lilly Family School of Philanthropy, 2015). Donations by individuals accounted for 72%, or $258 B, of those contributions. The remaining was contributed by foundations (15%), bequests (8%), and corporations (5%). Religious organizations, educational organizations, human services, foundations, health, public benefits, arts, international affairs, and the environment are some of the major types of organizations and causes that receive charitable contributions.

The federal government and several state governments provide tax incentives to encourage charitable giving. The Statistics of Income (SOI) Bulletin published by the Internal Revenue Service provides an insight into the number of individuals that contribute to charitable purposes. The federal charitable deduction can only be claimed by individuals who itemize their deduction, so this data does not provide details on charitable contributions made by two thirds of U.S. taxpayers that don't itemize and take the standard deduction instead. An examination of 2012 SOI files reveals that 37.5 million U.S. taxpayers who itemized their returns donated $199 B. Giving USA publishes data and examines trends relating to charitable giving in the U.S. Giving USA reports that in 2012 individuals donated a total of $228 B to charities. Comparing this total with the total donations deducted by individual taxpayers who itemized their deductions reveals that the remaining $29 B (13%) of the charitable contributions by individuals in 2012 was made by taxpayers taking the standard deduction instead.

According to 2012 SOI data, about 613,000 Indiana taxpayers who itemized their deductions claimed $3 B in charitable deductions on their federal tax returns. Using the ratio above it is estimated that the total charitable contributions claimed by Indiana taxpayers was $3.5 B in 2012. Since individuals account for about 72% of the total contributions, it could be assumed that an estimated $1.3 B (28%) was contributed by foundations, bequests, and corporations. As a result, a total of $4.8 B is estimated to have been contributed in 2012 by Indiana donors.

Federal and Indiana Charitable Tax Incentives

The federal and state governments provide tax incentives to encourage charitable giving. The federal government provides a tax deduction for the contributions under which the value of the incentive depends on the taxpayer's level of income and whether the taxpayer itemizes that deduction on their federal tax return. A tax deduction reduces the amount of income subject to taxation. To compute the tax savings for a deduction, a taxpayer must multiply the deduction amount by the tax rate. For example, a $100 deductible contribution would result in a $35 reduction in tax liability for a taxpayer whose tax rate is 35%.

Indiana taxpayer's making charitable contributions on average pay 18% of their taxable income in federal income taxes. This means that the federal deduction reduces an Indiana donor's price of giving by 18%. This discount varies by taxpayer depending on their income and other tax variables.

Indiana provides five nonrefundable state tax credits for charitable donations to specific organizations and causes. These tax credits provide a credit to the donor equal to 50% of the eligible donation. A tax credit is a dollar-for-dollar reduction to the person's tax liability, so a 50% credit for a $100 donation reduces a person's tax liability by $50. However, some of these credits are capped for each taxpayer. For instance, the credit might be equal to 50% of an eligible contribution, but it is capped at $100 for each taxpayer. As a result, a taxpayer donating $200 would receive the same credit ($100) as a taxpayer donating $2,000. The taxpayer credit cap reduces the monetary benefit to the donor depending on the level of the donation. Some tax credits are also capped at the aggregate level so that the total credits allowed for all taxpayers annually can't exceed a specified dollar amount. The aggregate cap negates any monetary benefit to donors for donations above the aggregate cap. Based on the different aspects of Indiana's tax credits for certain charitable donations, these tax incentives could reduce the price of giving by up to 50%.

Price Elasticity of Charitable Contributions

The price elasticity of giving is defined as the percentage change in donations that results from a 1% change in the price of giving, all else being equal. This relationship is always expected to be negative, as a decrease in the price of giving should be associated with increased donations. If the elasticity exceeds 1 (expressed in absolute value henceforth), giving to that type of charity is considered elastic. Thus, a $1 discount or reduction in tax liability due to a tax incentive will encourage an additional donation greater than $1. An elasticity of less than 1, denotes that giving to the charity is inelastic. As a result, a $1 discount or reduction in tax liability due to a tax incentive will encourage an additional donation less than $1.

A charitable contribution tax incentive (or increase in the tax incentive) results in a loss of tax venue to the government. Steinberg (1990) states that for a tax incentive program to be *treasury efficient*, it has to be price elastic. A tax credit would be inefficient if the incremental contributions stimulated by the tax incentive are smaller relative to their cost. In other words, for the tax incentive to be fiscally efficient it would be essential that the increase in donations be equal or greater than the loss of revenue from the tax credit.

Researchers have investigated the price elasticity of charitable giving with the objective to determine whether an incentive for charitable contributions increases donations by at least the forgone tax revenues. Various statistical methods, surveys, and meta-analysis have been conducted to answer this primary question. Most studies have used econometric models that use federal tax return data and regress the amount of an individual's charitable contribution deduction on the individual's marginal tax rates. This method produces an

aggregate elasticity estimate for all charity types. Even though most recent studies have found the aggregate charitable giving to be price elastic, there is no consensus on the size of the measure. Auten, Siez, and Clotfelter (2002) advanced the understanding of price effects and provided a persistent price elasticity of giving in the range of 0.79 to 1.26. Wilhelm and Hungerman (2007) have concluded that the aggregate giving of itemizers is less sensitive to the price than those who switch between itemizing and claiming the standard deduction. They found the overall giving to be elastic. Bakija and Heim (2011) find an elasticity of charitable giving in response to persistent change in price that is in excess of 1, and they point out that the results remain significant for different income classes. This study did not find strong evidence of differences in persistent price elasticities across income levels. Yetman and Yetman (2012) find a charitable giving elasticity of 1.03, which is not significantly different from 1. Yet it is fair to say that the empirical elasticity estimates have been varied, and it is difficult to obtain one measure. A meta-analysis of 69 papers found price elasticities ranging from 0 to 7.07 (Peloza & Steel, 2005). In conclusion, that study suggests that a decrease in the cost of giving by $1 results in more than $1 being donated to charity through private philanthropy.

Some scholars have used survey data or data extracted from IRS tax filings by the IRC 501(c)(3) organizations. This method allows an examination of how price elasticities vary across different types of nonprofits. They have found significant differences in the response of donations to tax benefits. Yetman and Yetman (2005) found the price elasticity of giving varies depending on the type of nonprofit and the cause. The response ranges from insignificantly different from zero for 18 types of public charities, to 2 or larger for 7 types of nonprofits, including private foundations, arts and culture, private education, environmental protection, animal welfare, primary health care, and philanthropy charities.

Several researchers have raised the question whether the federal charitable deduction obviates the need for state incentives for charitable donations. States have tried to focus on special initiatives as compared to the federal deduction, which is a broad-based incentive for almost all charitable contributions. If effective, these state tax incentives could either increase the total contributions made by all state residents or shift existing contributions away from charities that do not qualify for an incentive.

Neighborhood Assistance Tax Credit (IC 6-3.1-9)

Tax Incentive Description

The Neighborhood Assistance Tax Credit was created to encourage taxpayers to contribute to neighborhood organizations for certain neighborhood-based programs and projects. The credit is equal to 50% of the contribution, as approved by the Department of State Revenue (DOR), and may be taken against individual AGI, corporate AGI, or financial institutions tax liability. A taxpayer may not receive a credit exceeding $25,000. The aggregate amount of credits that may be allowed is capped at $2.5 M per fiscal year. The credit was effective beginning in 1984 and has no expiration date.

Indiana Code Definitions

Indiana code defines an economically disadvantaged area as an enterprise zone or any other federally or locally designated area in Indiana. The designation is made based on indices of social and economic conditions, including median per capita income of the area in relation to that of the state or standard metropolitan statistical area in which the area is located.

An economically disadvantaged household is defined as a household with an annual income that is at or below 80% of the area median income or any other federally designated target population.

Taxpayers file an application with the DOR stating the amount of the contribution and the amount of credit claimed. The application must also include proof that the contribution has been approved by the Indiana Housing and Community Development Authority (IHCDA). Priority is given to contributions that directly benefit enterprise zones. After the DOR approves the credit, the taxpayer files proof that payment has been made to the nonprofit organization and that the contribution has been set aside for the approved program or purpose. The credit is nonrefundable. Unused credits may not be carried forward or carried back.

Program Description

The Neighborhood Assistance Program provides neighborhood organizations with tax credits they can use to attract contributions from individuals and corporations for certain neighborhood-based programs and projects. Eligible organizations are 501(c)(3) tax-exempt organizations engaged in community enrichment programs.

Funds raised from the tax credits must be used to support a new or existing eligible program that serves an economically disadvantaged area, economically disadvantaged households, or ex-offenders who have completed their criminal sentence or are serving a term of probation or parole. The eligible programs fall under any of the following categories:

- Community services – Any type of counseling, emergency assistance, medical care, recreational facilities, housing facilities, or economic development assistance.
- Crime prevention – Any activity which aids in the reduction of crime.
- Education – Any type of scholastic instruction or scholarship assistance that enables an individual to prepare for better life opportunities.

- Job training – Any type of instruction that enables an individual to acquire vocational skills so the individual can become employable or seek a higher grade of employment.
- Neighborhood assistance – Furnishing financial assistance, labor, materials, and technical advice to aid in the physical or economic improvement of an economically disadvantaged area; or furnishing technical advice to promote higher employment.

The IHCDA accepts applications once each fiscal year from neighborhood organizations. Organizations new to the program may apply for up to $15,000 in credits, and organizations currently participating in the program may apply for up to $40,000. Every neighborhood organization that passes the review process receives a credit allocation. The IHCDA determines the allocations using a formula that varies depending on the year. In general, an organization's allocation is based on the amount of credits it requests and the total credits requested by all neighborhood organizations.

Once a neighborhood organization is awarded a credit allocation, it offers the credits to donors in exchange for contributions to its program. Contributions may be made in the form of cash, check, credit card, liquidated stock, contributions designated through United Way, building materials, and property donations.

The organizations report the credit recipients and contributions to the IHCDA, which then reports the information to the DOR. The IHCDA requires the organizations to submit periodic reports on the use of funds raised by the credits as well as a project closeout report. To maximize the use of the credits, the IHCDA withdraws allocations from organizations that fail to distribute 60% of their allocation by January 1. The withdrawn credits are reallocated to other organizations that have exhausted their allocations. If an organization does not award 100% of its credit allocation when the closeout report is filed, it will not be eligible to apply for credits the following year. Most neighborhood organizations are able to use their credit allocation. Approximately 1.2% of the initial allocation was reallocated in 2013.

Tax Incentive Claims

Table 7 reports the claims history for the credit since 2004. Overall, the number of claims and the claim amount declined significantly in 2006. During the recession, the claim amounts decreased somewhat, while the number of filers claiming the credit slightly increased. This trend reversed in 2010, when the claims increased and the number of claimants decreased. In contrast to claims by individual taxpayers, claims by corporate taxpayers have been in long-run decline since 2004. The average annual claim amount is about $2.1 M, which is $0.4 M below the aggregate fiscal year limit.

Table 7: Filers Claiming Credit and Credits Claimed

Tax Year	Filers Claiming Credit			Credits Claimed		
	Individual	Corporate	Total	Individual	Corporate	Total
2004	3,969	38	4,007	$2,225,413	$86,964	$2,312,377
2005	3,895	41	3,936	2,287,740	42,956	2,330,696
2006	3,208	N/R	3,208	1,415,197	7,425	1,422,622
2007	3,488	6	3,494	2,230,461	9,650	2,240,111
2008	3,641	8	3,649	2,082,432	2,703	2,085,135
2009	3,649	19	3,668	1,891,303	14,976	1,906,279
2010	3,499	12	3,511	2,137,339	12,158	2,149,497
2011	2,956	9	2,965	2,181,963	11,586	2,193,549
2012	2,634	6	2,640	2,152,661	10,790	2,163,451
2013	2,417	N/R	2,417	2,088,379	2,600	2,090,979

NR = Five or fewer filers, filer count not reportable.
Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Table 8 reports the income distribution of individual taxpayers claiming the credit for tax year 2012. The income distribution suggests that the credit attracts primarily high-income taxpayers that donate significant amounts to eligible neighborhood assistance programs. The majority of the credit dollars (59%) were claimed by taxpayers with $200,000 or more in federal AGI. Another 24% was claimed by taxpayers in the $100,000 to $200,000 income range. While these income groups make up only 12% of all individual taxpayers, they comprise 65% of taxpayers claiming the credit and claim 83% of the credit dollars.

Based on claim amounts, neighborhood assistance programs received about $4.3 M in contributions that qualified for the credit during 2012 and have received about $57.1 M in

Table 8: Income Distribution of Neighborhood Assistance Credit Claims for Tax Year 2012

Federal Adjusted Gross Income	Total Number of Returns	Number of Credit Claims	Credit Amount	% of Total Number of Returns	% of Number of Credit Claims	% of Credit Amount
Under $1	32,528	*	$21,265	1.12%	0.00%	1.01%
$1 Under $25,000	1,181,959	85	15,122	40.64%	3.27%	0.72%
$25,000 Under $50,000	693,634	199	53,850	23.85%	7.66%	2.55%
$50,000 Under $75,000	403,638	274	102,115	13.88%	10.54%	4.84%
$75,000 Under $100,000	257,137	357	162,647	8.84%	13.74%	7.70%
$100,000 Under $150,000	212,016	561	307,170	7.29%	21.59%	14.55%
$150,000 Under $200,000	60,891	281	194,060	2.09%	10.81%	9.19%
$200,000 Under $500,000	52,942	552	610,006	1.82%	21.24%	28.89%
$500,000 or More	13,369	289	645,270	0.46%	11.12%	30.56%

**Includes forms IT-40 and IT-40EZ*
Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

qualified contributions since 2000. Research suggests that there is price elasticity of giving or making contributions to charity. Estimates of this elasticity generally range between -1.0 and -1.5, so a 50% reduction in the cost of making a charitable contribution, which is equal to the credit, would result in a 50% to 75% increase in contributions. This research suggests that the credit could potentially induce additional contributions that would not have otherwise occurred. However, the extent that the contributions are induced cannot be estimated with the available data.

From 2004 through 2013, the credit was claimed a total of 33,154 times by 13,052 households. The majority (52%) of credit claimants in 2013 claimed the credit more than once since 2004, and 1% of all recipients claimed the credit every year from 2004 to 2013. Table 9 shows that repeat claimants were responsible for 89% of all credit claims. The average single-year credit for this same period is $615. The average for repeat claimants is slightly higher at $674, and the average for taxpayers claiming the credit all ten years is $1,221. This information suggests that the largest donors either seek out the credit or are sought out by neighborhood organizations to use the credit as leverage to increase contributions.

Table 9: Neighborhood Assistance Credit Claimants 2004 through 2013

	All Claimants	Repeat Claimants	10-Year Claimants
Number of Claims	13,052	6,756	183
Percent of All Claims	100%	52%	1%
Total Credits Claimed	$20,382,811	$18,090,684	$2,234,628
Percent of All Credits	100%	89%	11%
Average Single-Year Credit	$615	$674	$1,221

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Tax Credit Awards

The credit provides tax-exempt organizations with a mechanism to attract more contributions to specific programs. In 1989, 39 entities were awarded a credit allocation. More organizations apply for credits every year. In FY 2015, the number of neighborhood organizations receiving credit allocations increased to 233. Figure 7 shows the change in the number of organizations applying for credit allocations since FY 2012 and how the increase in applicants has reduced the average allocation per organization.

Figure 7: NAP Recipients and Allocations

Source: Raw data provided by Indiana Housing and Community Development Authority, data analysis by the Office of Fiscal and Management Analysis.

The average credit allocation has decreased due to the increasing number of neighborhood organizations applying for allocations and the $2.5 M per fiscal year cap. Still, credit allocations are highly sought after by organizations because the program allows them to encourage contributions that provide the donor the tax benefit of a state income tax credit and federal income tax deduction. Table 10 summarizes the 2015 credit allocations by project type.

Table 10: FY 2015 Neighborhood Assistance Project Approvals and Allocations

Activity	Applicants	Amount Requested	Amount Awarded	Percent of Total Allocation
Community Service - Counseling and Advice	54	$1,775,500	$551,470	22.1%
Community Service - Economic Development Assistance	5	145,000	45,037	1.8%
Community Service - Emergency Assistance	30	971,061	301,612	12.1%
Community Service - Housing Facilities	46	1,495,000	464,347	18.6%
Community Service - Medical Care	26	791,000	245,685	9.8%
Community Service - Recreational Facilities	10	246,229	76,479	3.1%
Crime Prevention	6	157,500	48,920	2.0%
Education	46	1,400,500	434,995	17.4%
Job Training	10	330,000	102,498	4.1%
Neighborhood Assistance	29	736,750	228,835	9.2%
Total	**262**	**$8,048,540**	**$2,499,877**	**100.0%**

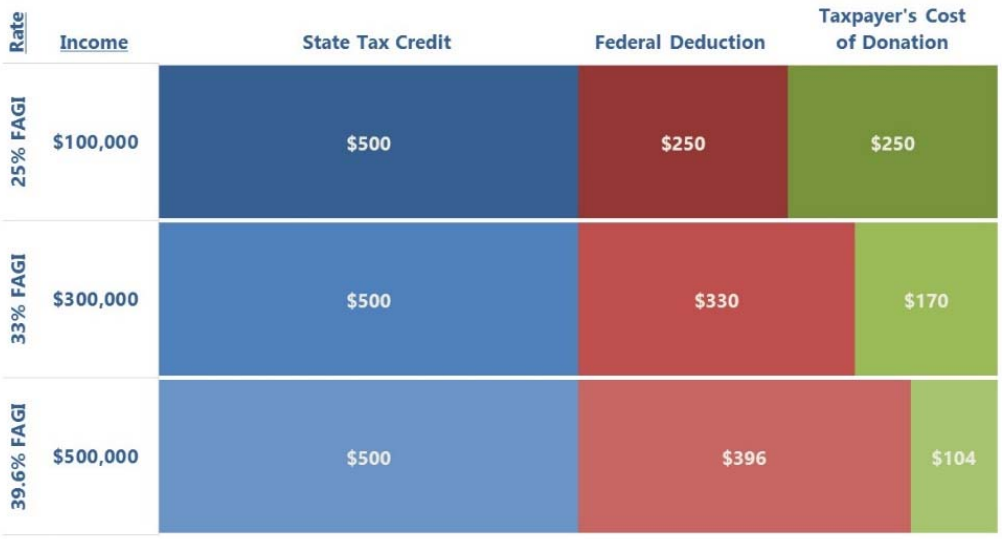
Source: Indiana Housing and Community Development Authority

Federal Deduction for Charitable Giving

The Indiana credit is targeted toward encouraging charitable giving. Many credit claimants may also claim a charitable deduction on their federal income tax returns for their credit-qualifying contribution. The federal charitable deduction is a dollar-for-dollar reduction in taxable income for qualifying contributions. To claim the charitable deduction, taxpayers must itemize deductions when filing their federal tax returns. A household that contributes $30,000 to a nonprofit with a Neighborhood Assistance Credit allocation could receive a $15,000 credit against their Indiana income tax liability and, assuming the taxpayer has a 35% federal marginal income tax rate, a reduction to their federal income tax of $10,500.

Figure 8 shows a $1,000 credit-eligible donation of three taxpayers paying different federal marginal income tax rates. It is assumed that all three hypothetical taxpayers itemize their federal deductions. This example illustrates that higher-income households receive a larger total tax incentive due to the higher federal marginal tax rate.

Figure 8: Hypothetical $1,000 NAC Contribution



Effectiveness of the Tax Incentive

- The IHCDA's administrative policy maximizes the amount of total contributions to neighborhood assistance programs that are eligible for the credit.
- The majority of credit claimants have contributed more than once, and the largest donors give regularly to neighborhood assistance programs.
- The increasing number of organizations applying for credit allocations and the credit allocation process itself are reducing the amount of credits provided to each organization.

- Reducing the cost of charitable giving through the tax credit may increase the total amount of contributions to eligible neighborhood assistance programs.

Considering several factors, the Neighborhood Assistance Credit appears to be effectively encouraging contributions to neighborhood programs. First, the IHCDA ensures that all credit allocations are utilized by reallocating credits to organizations that sell all available credits. Also, claims data show that taxpayers who give to neighborhood assistance programs are likely to give more than once, and habitual donors tend to give a larger amount. Although the increasing number of organizations participating in the program and receiving credit allocations has caused a reduction in the amount allocated to each organization, the IHCDA's administrative policies and the popularity of the program have allowed more organizations to benefit from the credits. Finally, research suggests that tax incentives like the Neighborhood Assistance Credit encourage donations that are larger than they would have been otherwise.

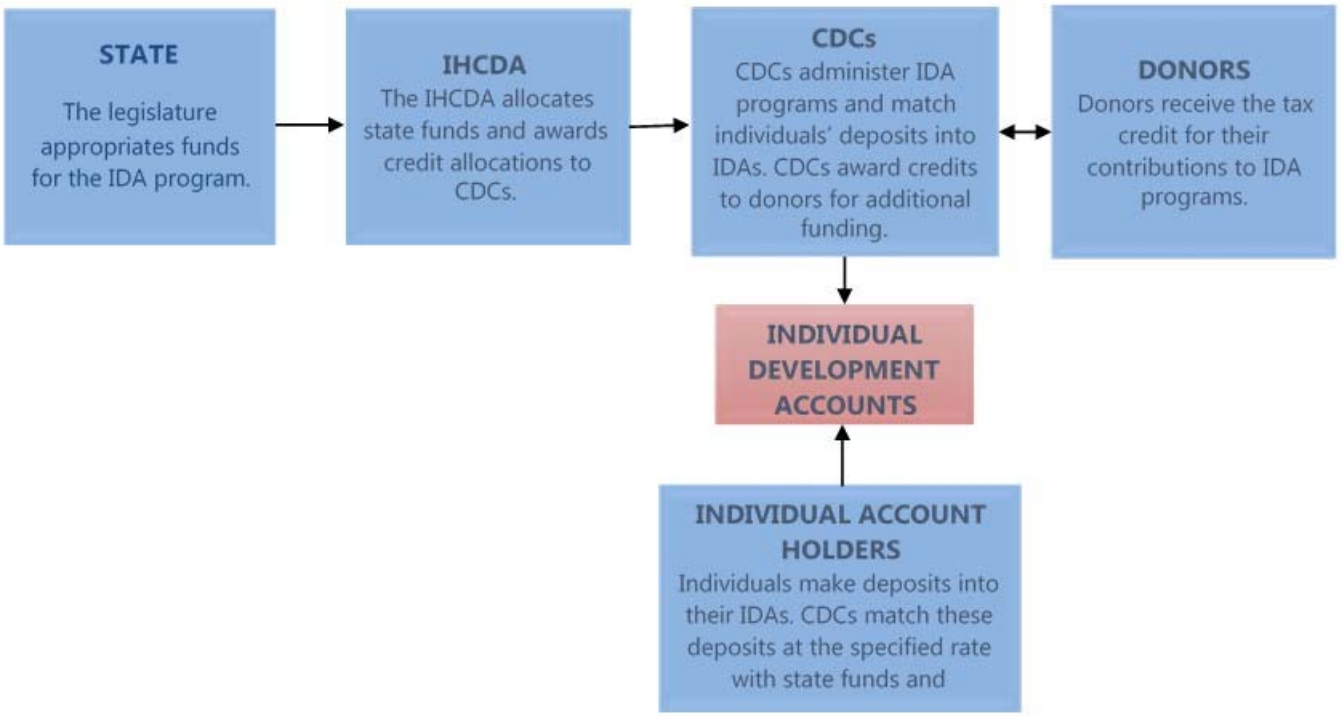
Individual Development Account Tax Credit (IC 6-3.1-18)

Incentive Description

The Individual Development Account (IDA) Tax Credit was created to encourage contributions to community development corporations (CDC) that participate in IDA programs. The credit is equal to 50% of a contribution to a participating CDC if the contribution is at least $100. A taxpayer may not receive a credit exceeding $25,000. The credit was effective beginning in 1997 and has no expiration date.

The credit may be taken against a taxpayer's Individual AGI, Corporate AGI, or Financial Institutions Tax liability. The total amount of IDA credits allowed is limited to $200,000 per fiscal year. When total approved credits reach the maximum, no additional applications may be approved in that fiscal year. If an approved taxpayer fails to file the required proof of payment, the amount previously set aside for that taxpayer may be allowed to a subsequent applicant that year. Unused credits may not be carried forward or carried back. The credit is nonrefundable.

Figure 9: Individual Development Accounts



The credits are allocated to requesting CDCs by the Indiana Housing and Community Development Authority (IHCDA) (See Figure 9). The CDCs are private, nonprofit corporations. The principal purpose of CDCs includes the provision of housing, community-based economic development projects, or social services that primarily benefit low-income individuals and communities. The CDCs use the credits allocated by the IHCDA to attract private donations. Taxpayers who donate money to CDCs to support the IDA program are awarded the credits by the CDCs. The CDCs report the qualifying taxpayers to the IHCDA, which reports the information to the Department of State Revenue (DOR). Qualified taxpayers claim the credit on their tax returns.

Program Description

The IDA program was established in 1997 with the purpose of assisting low-income people in building assets and becoming financially self-sufficient. An IDA is a special matched savings account used by qualifying individuals for any of the purposes listed below. Individuals' deposits into IDAs are matched by appropriations from the state and contributions from donors.

- Enrolling in an accredited postsecondary educational institution or a vocational school for the individual or a dependent.
- Attending an accredited or licensed training program that may lead to employment for the individual or a dependent.

- Purchasing a primary residence for the individual or a dependent or reducing the principal amount owed on a primary residence that the individual or dependent purchased with money from an IDA.
- Rehabilitating the individual's primary residence.
- Purchasing, starting up, or expanding a small business.

The most common types of purchases using IDA funds are home purchases (32%) and expenditures to reduce the principal owed on homes (35%). However, more IDA funds are spent on home rehabilitation (38%) and education expenses (28%) than any other type of purchase. The count and amount of each type of purchase from FY 2009 through FY 2013 are summarized in Table 11 below.

Table 11: Number of Asset Purchases and Total Funds – FY 2009 through FY 2013

Asset Type	Number of Purchases	Total Funds
Owner-Occupied Rehabilitation	438	$2,431,820
Education	287	1,789,688
Home Purchases	1,819	1,137,349
Business Start-Ups	128	677,682
Reducing Principal Payment on Home	1,984	334,280
Job Training	1,001	85,094
Total	**5,657**	**$6,455,912**

Source: Indiana Housing and Community Development Authority.

An individual may establish an IDA if he or she earns income and either (1) the earned income is less than 175% of the federal poverty level or (2) the individual receives Temporary Assistance for Needy Families. Currently, the IDA program is administered through 27 sponsoring nonprofit CDCs and partnerships with financial institutions. The IHCDA is authorized to establish 1,000 IDAs each fiscal year. The IHCDA must allocate state matching funds to an IDA on the first $400 annually deposited by the account holder for up to four years. The match rate is $3 of state funds for each $1 deposited by the individual account holder.

Based on information reported by the IHCDA, it appears that IDA participants maximize the matching funds available to them. Nearly all IDA participants, 93% on average, meet or exceed the $400 match cap, and average savings are over $400 each year (Table 12).

Table 12: IDA Participant Savings

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Participant Savings	$463,690	$456,174	$448,022	$455,559	$539,468
Accounts Matched	1,101	1,053	995	945	1,016
Average Savings	$421	$433	$451	$482	$531
Met or Exceeded Match Cap	95%	94%	93%	92%	92%

Source: Indiana Housing and Community Development Authority.

Money withdrawn from an IDA for any of the approved purposes listed above is exempt from state and local taxation. The IHCDA may authorize withdrawals for other purposes, but the IHCDA has chosen to only approve withdrawals for purchases explicitly enumerated in the statute. For IDAs opened after July 1, 2011, all funds must be used within 24 months of the IDA's last match opportunity. After 24 months, the IDA is closed and the funds revert to the program.

The CDCs are responsible for approving qualified individuals to establish an IDA and approving or denying individuals' requests to make withdrawals from their IDAs. The CDCs also provide or arrange for training in money management, budgeting, and related topics for each individual who establishes an IDA. Each year, every CDC is required to evaluate the IDAs it administers and submit a report to the IHCDA.

Tax Incentive Claims

Table 13 reports the claims history for the IDA credit since 2005. Both the number of taxpayers claiming the credit and the credits claimed are very small compared to total number of individual returns claiming tax credits and total credits claimed (i.e., 2.6 million returns claiming a total of $789 M in credits for tax year 2012). Total claims exceeded $100,000 in only two tax years. A total of 807 households have claimed the credit since 2005, and the average aggregate amount claimed since 2005 is about $81,300.

The aggregate claims are compared to the minimum contribution amount as a percentage of the state appropriation for the IDA program. It is assumed that contributions are at least twice the amount of credits claimed. On average, contributions from the credits have increased funds available to CDCs by about 14%. However, the percentage varies, partially due to changes in the appropriation during some fiscal years.

Appropriations

The annual appropriation for the IDA program was $1 M every fiscal year from FY 2006 through FY 2014 except for FY 2005, when the appropriation was $1.35 M, FY 2008 when the appropriation was $1.6 M, and FY 2009 when it was $1.8 M.

A review of the literature on tax incentives for charitable giving suggests the price elasticity of giving generally ranges between -1.0 and -1.5. In other words, a 10% decrease in the cost of making a donation would result in a 10% to 15% increase in donations. This research suggests that the credit could potentially induce additional contributions that would not have otherwise occurred. However, the extent that the contributions are induced cannot be estimated with the available data.

Table 13: Individual Development Account Contribution Credit Claim History

Tax Year	Filers Claiming Credits			Credits Claimed				Contributions as % of Appropriation
	Individual	Corporate	% Change	Individual	Corporate	Total	% Change	
2005	65	-		26,882	-	26,882		4.6%
2006	75	N/R	15.4%	35,027	40,500	75,527	181.0%	15.1%
2007	52	N/R	-30.7%	117,938	26,000	143,938	90.6%	22.1%
2008	98	N/R	88.5%	95,715	25,000	120,715	-16.1%	14.2%
2009	95	N/R	-3.1%	40,581	25,000	65,581	-45.7%	9.4%
2010	113	N/R	18.9%	63,165	20,000	83,165	26.8%	16.6%
2011	121	N/R	7.1%	63,790	20,000	83,790	0.8%	16.8%
2012	83	N/R	-31.4%	62,186	25,000	87,186	4.1%	17.4%
2013	113	N/R	36.1%	70,073	25,000	95,073	9.0%	19.0%

N/R= Five or fewer filers, filer count not reportable
Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Table 14 reports the income distribution of IDA credit claimants for tax year 2012. The majority of the tax returns claiming the credit (57%) were from taxpayers with federal AGI between $50,000 and $150,000. However, the bulk of the credit amount claimed (55%) was by taxpayers with federal AGI of $200,000 or more.

Table 14: Income Distribution of Individual Development Account Contribution Credit Claims for Tax Year 2012

Federal Adjusted Gross Income	Total Number of Returns	Number of Credit Claims	Credit Amount	% of Total Number of Returns	% of Number of Credit Claims	% of Credit Amount
Under $1	32,528	N/R	N/R	1.12%	N/R	N/R
$1 Under $25,000	1,181,959	N/R	$1,135	40.64%	6.02%	1.83%
$25,000 Under $50,000	693,634	8	1,503	23.85%	9.64%	2.42%
$50,000 Under $75,000	403,638	15	7,589	13.88%	18.07%	12.20%
$75,000 Under $100,000	257,137	16	5,763	8.84%	19.28%	9.27%
$100,000 Under $150,000	212,016	16	7,642	7.29%	19.28%	12.29%
$150,000 Under $200,000	60,891	9	4,525	2.09%	10.84%	7.28%
$200,000 Under $500,000	52,942	10	20,150	1.82%	12.05%	32.40%
$500,000 or More	13,369	N/R	13,879	0.46%	4.82%	22.32%

**Includes forms IT-40 and IT-40EZ*
Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Tax Credit Awards

The IDA program was appropriated $1.0 M each year from FY 2010 through FY 2015 and will receive an annual appropriation of $0.97 M in FY 2016 and FY 2017. Based on 2012 claim amounts, the IDA program received at least $174,372 in contributions that year, which was 17.4% of the total state appropriation. The money raised by the credits is

retained by the CDCs. The CDCs may use the funds to assist with IDA savings matches and to offset a portion of their administrative costs. Each CDC may use up to 20% of the first $100,000 in contributions generated by the IDA credit to pay for administrative expenses. The remaining contributions must be used towards matching IDA savings deposits. The IHCDA awarded $179,250 in IDA credit allocations to six CDCs in FY 2015. Table 15 lists these organizations and the credit allocations for each.

Table 15: FY 2015 IDA Credit Allocations

Agency	Counties Served	Amount Awarded
LaCasa of Goshen, Inc.	Elkhart, Kosciusko, St. Joseph	$50,000
The John H. Boner Community Center, Inc.	Marion	45,000
Indianapolis Neighborhood Housing Partnership	Marion	40,000
Community Action of Southern Indiana, Inc.	Clark, Floyd, Harrison	25,000
Northwest Indiana Community Action	Jasper, Lake, Newton, Porter	12,500
Pathstone	Delaware, Blackford, Madison, Henry, Randolph	6,750
	Total	**$179,250**

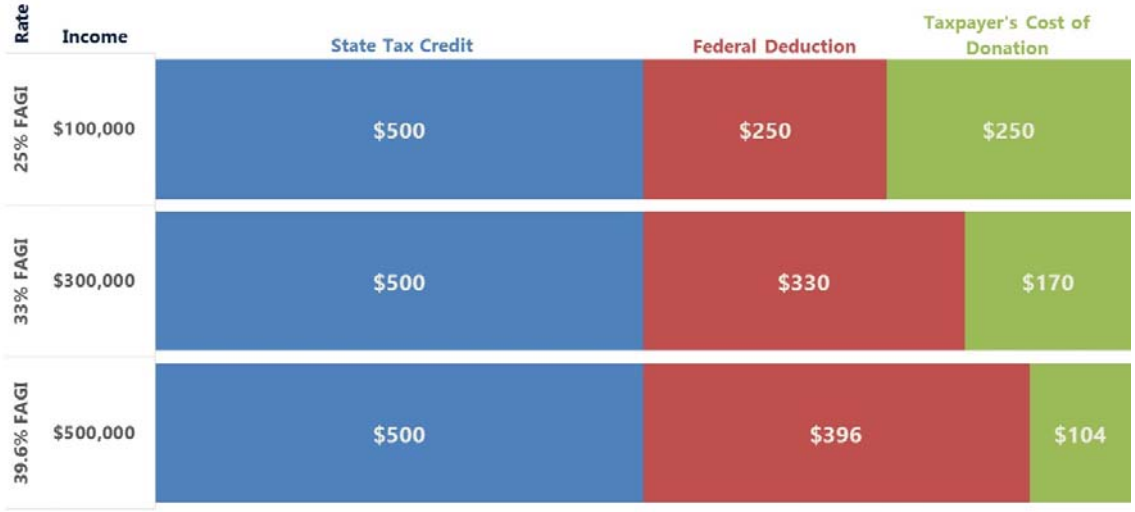
Source: Indiana Housing and Community Development Authority.

Federal Charitable Contribution Deduction

The IDA credit is targeted toward encouraging charitable giving. Many IDA credit claimants may also claim a charitable deduction on their federal income tax returns for their contribution to the IDA program. The federal charitable deduction is a dollar-for-dollar reduction in taxable income for qualifying contributions. To claim the charitable deduction, taxpayers must itemize deductions when filing their federal returns. A household that contributes $3,000 to an IDA program could receive a $1,500 credit on their Indiana Income Tax and, assuming the taxpayer pays a 35% marginal federal income tax rate, reduce their federal income tax by $1,050.

Figure 10 shows a $1,000 donation to an IDA program for three taxpayers paying different marginal federal income rates. It is assumed that all three hypothetical taxpayers itemize their federal deductions. The chart shows that higher-income households may deduct a larger percentage of their contributions due to the higher tax rate.

Figure 10: Hypothetical $1,000 IDA Contribution



Effectiveness of the Credit

Research suggests that tax incentives targeted toward charitable giving generally encourage additional contributions. However, this particular incentive does not appear to attract a large amount of donations to IDA programs as might be expected from a 50% tax credit. It is not clear why the credit usage is low, but several factors may be contributing to the overall success of the credit.

First, the complexity of the IDA program may be a hindrance to attracting potential donors. If donors do not easily see how their contributions would directly benefit low-income individuals, the tax credit may not be a significant influence in whether they contribute to an IDA program. Additionally, the low credit usage could be attributed to a lack of awareness of the IDA credit or the program itself.

The structure of the credit may also be limiting its effectiveness. The $200,000 annual cap limits the allocations to organizations. Although the IHCDA allocates the full amount most years, credit claims have never reached the limit, possibly because the credit is nonrefundable and cannot be carried forward. As the credit is currently structured, taxpayers may not receive a credit that exceeds their tax liability. If taxpayers could carry the credit forward, they would receive the full credit amount over several years if the credit amount exceeds their tax liability. Similarly, if taxpayers could receive a refund for the amount of the credit that exceeds their tax liability, the credit may encourage additional contributions.

College Contribution Tax Credit(IC 6-3-3-5)

The Indiana College Contribution Tax Credit ("college credit") may be claimed against an individual or corporate taxpayer's adjusted gross income (AGI) tax liability for charitable contributions to an eligible college or university or to a corporation or foundation organized and operated exclusively for the benefit of an eligible college or university.

The college credit equals 50% of the total amount contributed by a taxpayer during a taxable year. The maximum credit amount for an individual taxpayer is $100 on a single return and $200 on a joint return. The maximum credit amount for a corporate taxpayer is the lesser of either $1,000 or 10 % of the corporation's AGI tax liability.

The college credit is nonrefundable. Unused credits may not be carried forward or carried back. The taxpayer is required to enclose Schedule CC-40 along with the tax return. There is no annual limit on the aggregate amount of credits claimed in a year by taxpayers.

The college credit was first effective in 1964 and is the oldest Indiana income tax credit. The purpose of the college credit is to encourage contributions to both public and private Indiana colleges and universities. In tax year 2012, there were 60 Indiana higher education institutions to which credit-eligible contributions could be made.

Tax Incentive Claims

Individual income tax returns accounted for 99% of the college credits claimed between 2004 and 2013. About 3% of individual filers have claimed this credit, while less than 1% of corporate filers have claimed the credit over the same time period. The average credit claimed by individual filers in 2012 was $98, while the average claim by corporate taxpayers was $638. Table 16 shows the claims for tax year 2004 to 2013.

Table 16: Indiana College Contribution Credit Claim History

Tax Year	Filers Claiming Credits			Credits Claimed		
	Individual	Corporate	Total	Individual	Corporate	Total
2004	94,239	202	**94,441**	$8,855,575	$109,227	**$8,964,802**
2005	93,486	188	**93,674**	8,911,854	105,183	**9,017,037**
2006	90,691	169	**90,860**	8,441,519	96,681	**8,538,200**
2007	94,298	162	**94,460**	9,131,542	90,148	**9,221,690**
2008	89,911	122	**90,033**	8,712,686	70,595	**8,783,281**
2009	87,916	106	**88,022**	8,520,259	56,795	**8,577,054**
2010	87,398	130	**87,528**	8,566,133	71,167	**8,637,300**
2011	87,480	118	**87,598**	8,621,209	77,763	**8,698,972**
2012	86,659	105	**86,764**	8,502,343	67,019	**8,569,362**
2013	86,146	109	**86,255**	8,518,052	70,696	**8,588,748**

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

The number of taxpayers claiming the credit as well as the amount claimed has been somewhat declining but very stable over time. Albeit very small relative to total credits claimed, the amount claimed by corporate filers has fallen roughly 35% since 2004. The amount claimed by individuals has fallen as well, but by a smaller degree of about 8.7% since 2004.

In terms of the income distribution of the college credit, almost half of the taxpayers claiming the credit had federal AGI above $100,000. These taxpayers claimed 60% of the total credit amount claimed. However, a look at the income distribution in Table 17 reveals that the tax credit is claimed across all income brackets. Taxpayers with federal AGI less than $75,000 claimed 25% of the tax credit.

Table 17: Income Distribution of Indiana College Contribution Credit Claims for Tax Year 2012

Federal Adjusted Gross Income	Share of All Tax Returns	Share of Returns with Credit Claims	Share of Credit Amounts Claimed
Under $25,000	41.8%	6.6%	4.5%
$25,000 Under $50,000	23.9%	11.9%	8.7%
$50,000 Under $75,000	13.9%	14.8%	12.1%
$75,000 Under $100,000	8.8%	15.8%	14.5%
$100,000 Under $150,000	7.3%	22.3%	22.3%
$150,000 Under $200,000	2.1%	10.5%	12.2%
$200,000 Under $500,000	1.8%	13.4%	18.1%
$500,000 or More	0.5%	4.7%	7.5%

Includes forms IT-40 and IT-40EZ

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Tax Incentive Impact on Contributions

According to a data provided by the Commission for Higher Education (CHE), the average donation received by Indiana higher education institutions was $1,300 in FY 2012. The average individual credit in 2012 was $98, which would translate into a $196 donation. This is well below the average donation reported by the CHE, which shows that there are a substantial number of taxpayers that contribute significantly above the taxpayer cap. For those taxpayers the impact of the tax credit diminishes as the size of their donation increases.

About 22% of the corporate taxpayers and 38% of individual taxpayers donate up to the maximum credit cap. Taxpayers in higher income groups are more likely to claim the maximum credit since they have the economic capacity and may be more likely to donate

a larger amount. Table 18 shows the impact of the credit cap by income bracket for individual taxpayers in 2012.

Table 18: Share of Individual Claimants with Maximum Credit Claim

Federal Adjusted Gross Income	Number of Credit Claims	Number of Max Credit Claims	Share of Maximum Credit Claims
Under $25,000	5,586	1,750	31.3%
$25,000 Under $50,000	10,038	3,317	33.0%
$50,000 Under $75,000	12,502	4,265	34.1%
$75,000 Under $100,000	13,401	4,311	32.2%
$100,000 Under $150,000	18,889	6,133	32.5%
$150,000 Under $200,000	8,923	3,552	39.8%
$200,000 Under $500,000	11,329	5,931	52.4%
$500,000 or More	3,957	2,812	71.1%

Includes forms IT-40 and IT-40EZ

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

The donations that qualify for the college credit also qualify for the federal charitable deduction. The federal tax deduction reduces taxable income by the amount of the itemized charitable contribution. It reduces the tax liability depending on the income tax rate applied to that itemized amount. So a taxpayer with lower income tax rate benefits less than a taxpayer with a higher income tax rate. Table 19 shows the potential impact of federal and state tax benefits by the level of donations.

Table 19: Cost of College Contribution for Indiana Taxpayers

Low and Medium Income						
	Federal Incentive		State Incentive		Total	
Donation Amount	@ 15% Tax Rate	% Reduction	Up to $200	% Reduction	Reduction	% Reduction
$50	$8	15.0%	$25	50.0%	$33	65.0%
$100	15	15.0%	50	50.0%	65	65.0%
$200	30	15.0%	100	50.0%	130	65.0%
$500	75	15.0%	200	40.0%	275	55.0%
$1,000	150	15.0%	200	20.0%	350	35.0%

High Income						
	Federal Incentive		State Incentive		Total	
Donation Amount	@ 35% Tax Rate	% Reduction	Up to $200	% Reduction	Reduction	% Reduction
$10,000	$3,500	35.0%	$200	2.0%	$3,700	37.0%
$100,000	35,000	35.0%	200	0.2%	35,200	35.2%
$1,000,000	350,000	35.0%	200	0.0%	350,200	35.0%

Since most large donors are expected to be in a higher tax bracket, their tax savings from the federal deduction is expected to be greater as compared to the tax savings from the state tax credit. Survey research by Monks (2003) reports that the average donation by donors from the class of 1989 to their alma maters in 1999 was $434. However, the top donation according to the survey was $32,500, almost 75 times the average donation (Monks, 2003). The state credit would provide a discount of less than 1% for donations above $32,500. The state credit is unlikely to encourage donations at this level. However, the federal deduction could provide, depending on the income bracket, a 35% discount. The savings from the federal discount are not capped at a certain amount, so it provides a greater reduction to the price of giving for large donations.

The state tax credit appears to be designed to encourage smaller donations. Based on the average donation amount from Monk's research, a $434 donation would result in a $200 credit assuming the taxpayer is married. The state credit would provide a 46% discount to the cost of the donation. In addition, certain taxpayers may not be able to claim the charitable deduction on their federal taxes. The federal deduction is only available to taxpayers who itemize. The Indiana credit is available to all taxpayers, and the discount it provides is a function of the size of the donation and not the taxpayer's income. If the state credit reduces the total cost of the giving by 20% to 50%, it could encourage taxpayers to make a donation. In particular, the college credit could encourage small donations for which the credit cap is not a factor and, as a result, the credit reduces the cost of giving by the full 50% tax credit.

Research on Charitable Giving

The impact of tax incentives on patterns of charitable giving has been widely studied. Researchers have attempted to measure how responsive donors are to the cost of giving by attempting to measure the price elasticity of giving. Even though there is no consensus, most studies have found the price elasticity of giving to be around -1.0. A price elasticity of giving of -1.0 suggests that a discount of $1 on the price of the contribution will generate $1 in additional contributions (Peloza & Steel, 2005). This suggests that the credit may be encouraging additional donations at least equal to the amount of forgone tax revenue. However, studies have found that other factors also influence patterns of charitable giving.

Bekkers and Wiepking (2007) identified eight attributes that influence charitable giving: awareness of need, solicitation, price incentives, reputation, values, psychological rewards, efficiency, and altruism. They also identified certain attributes that may explain differences in charitable giving among individuals. High-income households donate larger amounts than low-income households. Marriage, employment, and age have also been found to have a positive relationship with giving. In addition, Bekkers and Wiepking cite research suggesting that individuals who were active in voluntary associations in their youth are more generous as adults.

It has been suggested that the college credit assists in establishing a pattern of giving that continues over time. An examination of Indiana University Foundation gifts conducted by the IU Foundation found that 44% of donations of $50,000 or more to the university occur 13 or more years after the initial donations. The same report states that 55% of individuals who made a gift of $50,000 or more started with a first-time gift of $500 or less (Tempel, 2014).

Figure 11: Taxpayer's Frequency of Claiming Credit - 2004 to 2013

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

An evaluation of ten years (2004 to 2013) of individual income tax return data indicates that about 20% of taxpayers claimed the college credit in all years. Figure 11 shows the frequency of credit claims between 2004 and 2013 for taxpayers who claimed the college credit in 2004.

Of the taxpayers who claimed the credit in all ten years, 56% claimed the maximum credit in 2004 and 65% claimed at the maximum credit in 2013. This suggests that people who habitually donate to institutions of higher education may increase their donations over time. However, this data is insufficient to determine how much above the credit cap the donors are contributing, so we are unable to confirm whether these long-term donors become large donors. Studies have determined that increases in individual or household income leads to increased donations provided by school alumni (Monks, 2003). Monks found that an increase in household income by $10,000 could result in a 9% increase in the level of donation.

Conclusion

Research suggests that reducing the price of giving may encourage people to give more to charities. This suggests that the college credit could be encouraging donations that would not have otherwise occurred. The credit is structured to provide a greater incentive to households who make donations less than $400. Because of the credit cap, the credit is less likely to attract large donations to Indiana institutions of higher education. However,

research suggests that donors are likely to continue making donations, and some may make large donations in the future. Unfortunately, available tax data is insufficient to reasonably evaluate that claim.

School Scholarship Tax Credit (IC 6-3.1-30.5)

The School Scholarship Tax Credit equals 50% of the total amount contributed by an eligible taxpayer to a qualified, nonprofit scholarship-granting organization (SGO). The tax credit became effective beginning in tax year 2010. The tax credit may be claimed against the Individual AGI Tax, Corporate AGI Tax, Financial Institutions Tax, or Insurance Premium Tax liability. Unused credits awarded after December 31, 2012, may be carried forward for up to nine taxable years (all credits awarded prior to that date had to be claimed in the year of the contribution).The credit is nonrefundable and may not be carried back. A taxpayer may not claim the credit for a contribution to an SGO that is used to provide a scholarship or other assistance to a child participating in the Early Education Grant Pilot Program.

There is no limit on the credit amount a taxpayer may claim. However, the total amount of credits that may be claimed in a state fiscal year cannot exceed $7.5 M in FY 2015, $8.5 M in FY 2016, and $9.5 M in FY 2017 and thereafter. (Previously, the credit cap was $2.5 M in FY 2010 and FY 2011, $5 M in FY 2012 and FY 2013, and $7.5 M in FY 2014.

Table 20 shows that the tax credit claims have increased significantly every year since adopted.

Table 20: School Scholarship Contribution Credit Claim History

	Tax Year	2010	2011	2012	2013
Filers Claiming Credits	Individual	106	559	922	1,936
	Corporate	2	4	4	1
	Total	108	563	926	1,937
	% Change		421.30%	64.50%	109.20%
Credits Claimed	Individual	$176,207	$1,430,645	$2,369,647	$3,439,952
	Corporate	6,875	17,000	27,237	2,500
	Total	183,082	1,447,645	2,396,884	3,442,452
	% Change		690.70%	65.60%	43.60%

** Excludes SC-40 and IT-40RNR*

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Background

The purpose of the credit is to increase charitable contributions to the Indiana qualified SGOs. An SGO is an entity that awards scholarships to eligible students with the purpose of expanding educational opportunities for low-income families. SGOs receive funding for scholarships from private, charitable donations. Currently, there are five SGOs in Indiana:

- Elkhart County Community Foundation (Elkhart)
- Institute for Quality Education (Indianapolis)
- Sagamore Institute Scholarships for Education Choice (Indianapolis)
- School Scholarship Granting Organization of Northeast Indiana, Inc. (Fort Wayne)
- The Lutheran Scholarship Granting Organization of Indiana, Inc. (Fort Wayne). Tuition Assistance Fund of Southwest Indiana closed after the 2012-2013 school year.

The SGOs must be exempt from federal taxation under Section 501(c)(3) of the Internal Revenue Code and be approved by the Department of Education (DOE). According to DOE reports, currently there are 320 participating schools in the state that enroll scholarship students. The program defines a participating school as a public or private school where students are required to pay tuition to attend and the institution voluntarily agrees to enroll the student. The school must be accredited by the Indiana State Board of Education or a state, national, or regional accreditation organization. The school must also administer the ISTEP+ or another nationally recognized test.

Families apply to an SGO for a scholarship. A student must be a member of a household with an annual income of not more than 200% of the amount required to qualify for the federal free or reduced-price lunch program. The scholarships could be up to full tuition. There is no minimum amount that an SGO must award to an eligible student. However, starting in FY 2014, an SGO award must be at least $500 in order for that student, or the student's sibling, to qualify later for a Choice Scholarship under the Previous SGO Award Pathway. For each contribution to an SGO, 90% must be used to provide scholarships to students who meet pre-enrollment and income qualifications. Indiana allows up to 10% of contributions to be used on nonscholarship-related administrative and communication costs.

There were 9,127 scholarships awarded in FY 2015 with an average scholarship award of $1,361 (Table 21). A study of the income distribution of Indiana taxpayers reveals that more than 3 out of 5 dependents live in households that meet the minimum income requirements. There may be an estimated 740,000 to 820,000 children that could qualify for a school scholarship based on household income.

Table 21: SGO Contributions, Scholars, and Tax Credits Claimed

Contributions to SGOs

	Number of Contributions	Amount of Contributions	Average Contribution
FY 2012	994	$4,449,320	$4,476
FY 2013	1,803	6,546,526	3,631
FY 2014	4,136	16,125,956	3,899
FY 2015	4,507	16,195,681	3,593

Scholarships Granted by SGOs

	Number of Scholarships	Amount of Scholarships	Average Scholarship
FY 2012	2,890	$2,542,324	$880
FY 2013	4,638	4,718,426	1,017
FY 2014	11,067	11,770,024	1,064
FY 2015	9,127	12,421,386	1,361

Tax Credit Claimed for Contributions

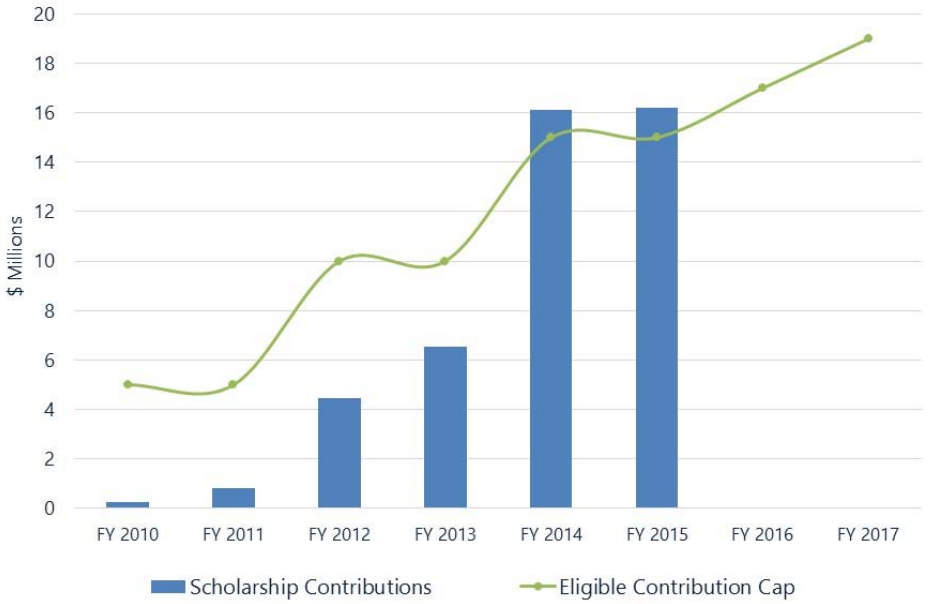
	Tax Credit Cap	Tax Credit Awarded	Average Credit Per Student
FY 2012	$5,000,000	$2,053,966	$711
FY 2013	5,000,000	2,808,879	606
FY 2014	7,500,000	7,282,795	658
FY 2015	7,500,000	7,500,000	822

Source: Raw data provided by Department of State Revenue and Department of Education, data analysis by the Office of Fiscal and Management Analysis.

Characteristics of the Indiana Tax Credit Program

Contributions to the Indiana Scholarship program have grown from $0.2 M in FY 2010 to $16 M in FY 2015. The number of donors has increased from a few hundred to above 4,500 in FY 2015. The growth is possibly a result of higher awareness about the program and the tax credit. The aggregate cap on the credit has increased from $2.5 M in FY 2010 to $9.5 M in FY 2017 and thereafter. After a successful campaign by school foundations, FY 2015 was the first-year that the tax credit reached the cap. Figure 12 shows that over a five year period the actual scholarship contributions have reached the eligible contribution cap (the maximum aggregate contribution for which credits could be claimed). The amount of contributions above the fiscal year contribution cap is not eligible for the tax credit.

Figure 12: Eligible Contribution Cap and Scholarship Contribution



Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Table 22 shows that more than 80% of the contributions came from households that had incomes of more than $200,000. Based on the income distribution table, it could be concluded that the income distribution of the tax credit claimants is skewed towards high-income groups. A 2012 report by the Iowa Department of Revenue states that some high-income taxpayers may be participating in the program as a tax strategy due to the state and federal tax benefits, but there are a higher number of households that do not benefit significantly on their taxes but continue to contribute based on their beliefs (Gullickson, 2012).

Table 22: Share of Tax Credit Claims by Income Groups - Tax Year 2012

Federal AGI Bracket	Share of Number of All Tax Returns	Share of Number of Credit Claims	Share of Amount of Credit Claims
Under $25,000	41.8%	3.0%	1.9%
$25,000 Under $50,000	23.9%	6.2%	0.7%
$50,000 Under $75,000	13.9%	8.8%	1.6%
$75,000 Under $100,000	8.8%	9.6%	2.3%
$100,000 Under $150,000	7.3%	19.0%	5.9%
$150,000 Under $200,000	2.1%	11.1%	4.2%
$200,000 Under $500,000	1.8%	20.9%	16.9%
$500,000 or More	0.5%	21.4%	66.5%

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

The credit is more enticing to individuals with higher incomes because they receive a greater monetary benefit for contributions to an SGO. Firstly, the taxpayers at higher income levels have the financial means to contribute to charitable organizations. Secondly, taxpayers with higher incomes are more likely to have an income tax liability to be offset by a nonrefundable tax credit. They also have higher federal tax rates leading to more benefit from the charitable contribution deduction. If a married couple with a federal marginal income tax rate of 35% gave $1,000 to an SGO, the couple would receive a $350 reduction in federal income tax, whereas the tax reduction would only be $150 for a couple in a 15% income tax bracket. Table 23 illustrates the cost for contribution to different income groups in Indiana. The federal incentives are based on an average effective rate for that group. The actual savings based on a marginal rate would likely be higher.

Table 23: Cost of Contributing $1,000 to an Indiana SGO

Federal AGI Bracket	Taxpayer's SGO Contributions	Federal Incentive*	State Incentive	Final Cost of Contribution
Under $1	$1,000	$0	$0	$1,000
$1 Under $25,000	1,000	94	150	756
$25,000 Under $50,000	1,000	104	392	504
$50,000 Under $75,000	1,000	122	472	406
$75,000 Under $100,000	1,000	130	495	375
$100,000 Under $150,000	1,000	150	498	352
$150,000 Under $200,000	1,000	182	499	319
$200,000 Under $500,000	1,000	238	499	263
$500,000 or More	1,000	275	500	225

**The federal incentive was computed based on the average effective tax rate for the income group.*
Source: Raw data provided by Internal Revenue Service, data analysis by the Office of Fiscal and Management Analysis.

The table above shows that the federal and state tax benefit derived by donors in the relatively higher-income group reduces the price of donating to the SGOs. The evidence in the studies on price elasticity of giving suggests that, regardless of income level, donors' decisions about how much to donate to a private education charity is significantly influenced by tax incentives. The results imply an elasticity of such charitable giving in response to a change in price that is in excess of -1.0 and up to -1.5. This would mean that a $500 in tax credit generates an additional scholarship donation of $500 to $750. This suggests that the School Scholarship Tax Credit is potentially a driving force in the decisions of the donors to contribute to this program.

An examination of the individual income tax database from 2011, 2012, and 2013 reveals that 31% of taxpayers claimed the credit in all three years, and their 2013 contributions were 50% above their 2011 contributions. Since the tax credit cap was not reached in these two years, it could be concluded that the tax credit was available for all donors in each year. It is concluded that the growth in the contribution was not a result of the additional tax credit available to the taxpayer. The growth could be associated with the increase of

taxpayer's income or familiarity with the scholarship program. The data further shows that the average federal AGI of these taxpayers remained flat from 2011 to 2013. This suggests that income was not a factor in the growth in contributions. These taxpayers either shifted their contributions from other charities to the scholarship program or increased their overall charitable contribution. Based on the fact that the increase in contribution to the scholarship program by these taxpayers was not driven by income growth or availability of the new tax credit, it is concluded that a donor's familiarity with a charitable program could result in higher donations to the program.

The procedure of awarding Choice Scholarships provides another incentive for taxpayers to contribute to SGOs. Students who receive a scholarship from an SGO are eligible to receive the Choice Scholarship the following year, provided the student still meets the income qualification. A donor can designate a specific school or group of schools for their donation. For example, a donor could give $1,000 to an SGO to provide one kindergartener a scholarship to the school of the donor's choice. That student is then eligible to receive up to $36,000 in state tuition assistance over the next eight years through the Choice Scholarship program.

A 2008 study by the Florida Office of Program Analysis & Government Accountability estimated that taxpayers saved $1.49 in state education funding for every dollar lost in state tax revenues due to the tax credit on scholarship contributions. Florida has a larger cap on the amount of credit, leading to an average funding of $3,500 in scholarships from the program (Forster & D'Andrea, 2009). This is larger than the current average scholarship of about $1,300 per student in Indiana. The number of students from low-income families that would be incentivized to change their choice of school from their assigned school to a Choice school is likely to be lower at this level of support.

Studies have also examined how tax credits affect donations to public charities related to private education. The results of these studies reach no empirical consensus, with the estimates ranging from an inelastic value of -0.08 to a highly elastic value of -2.2 (Yetman & Yetman, 2012). A majority of the studies have concluded that the charitable giving elasticity for such nonprofits is larger than -1.0

Conclusion

The five-year experience with the Indiana scholarship program shows that there are various factors contributing to the growth of the scholarship program. Aggressive awareness campaigns by the schools and SGOs, the type of charitable cause, and federal and state tax incentives are significant factors in the growth of this program. The tax credit likely results in donors reallocating donations from other charities to the SGOs. Some of the reallocated donations could be a loss to the existing school foundations.

In the absence of information on the number of scholarship recipients who would have otherwise attended an assigned school district, it is difficult to project any cost savings to the state from reduction in state school funding. Any savings to the state would be reduced

to the extent that this program is a pathway to the Choice Scholarship Program, which is also funded by the state.

21st Century Scholars Program Tax Credit (IC 6-3-3-5.1)

The 21st Century Scholars Program Tax Credit may be claimed against a taxpayer's Adjusted Gross Income Tax liability. The tax credit was effective beginning in tax year 1990. The credit equals 50% of the contributions made by a taxpayer to the 21st Century Scholars' Program Support Fund to provide reimbursements to 21st Century scholarship recipients to offset educational support costs incurred by the scholarship recipient. The maximum credit for an individual taxpayer is $100 for a single filer or $200 for a joint filer. For corporate taxpayers, the maximum credit is the lesser of either $1,000 or 10% of the corporation's AGI tax liability. The credit has no annual cap and is nonrefundable. Unused credits may not be carried forward or carried back.

Tables 24 and 25 show the historical use of the tax credit and the income distribution of credit usage in 2012, which has been very low. Since 2004 no corporate taxpayers have claimed the credit. Fewer than 250 individual taxpayers have claimed the credit in any year, and in the majority of years fewer than 200 individual taxpayers claimed the credit. The vast majority of returns claiming the credit were from taxpayers with federal AGI less than $75,000.

Table 24: 21st Century Scholarship Contribution Credit Claim History

	Filers Claiming Credits				Credits Claimed			
Tax Year	Individual	Corporate	Total	% Change	Individual	Corporate	Total	% Change
2004	174	-	174		$17,803	-	$17,803	
2005	119	-	119	-31.6%	13,255	-	13,255	-25.5%
2006	122	-	122	2.5%	13,123	-	13,123	-1.0%
2007	136	-	136	11.5%	14,048	-	14,048	7.0%
2008	214	-	214	57.4%	17,289	-	17,289	23.1%
2009	180	-	180	-15.9%	15,967	-	15,967	-7.6%
2010	200	-	200	11.1%	19,643	-	19,643	23.0%
2011	208	-	208	4.0%	23,269	-	23,269	18.5%
2012	195	-	195	-6.3%	21,293	-	21,293	-8.5%
2013	245	-	245	25.6%	25,507	-	25,507	19.4%

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Table 25: Income Distribution of 21st Century Scholarship Contribution Credit Claims for Tax Year 2012

Federal Adjusted Gross Income	% of Total Number of Returns	% of Number of Credit Claims	% of Credit Amount
Under $1	1.1%	0.0%	0.00%
$1 Under $25,000	40.6%	23.2%	19.56%
$25,000 Under $50,000	23.9%	17.7%	13.20%
$50,000 Under $75,000	13.9%	8.5%	8.41%
$75,000 Under $100,000	8.8%	15.9%	12.99%
$100,000 Under $150,000	7.3%	7.9%	7.70%
$150,000 Under $200,000	2.1%	3.0%	2.79%
$200,000 Under $500,000	1.8%	7.9%	10.70%
$500,000 or More	0.5%	15.9%	24.66%

Includes IT-40 and IT-40EZ
Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Program Background

The 21st Century Scholars Program is designed to support and encourage middle-school youth from lower-income families to enter college through early intervention strategies and grants. The program provides qualifying students with up to four years of undergraduate tuition at a participating Indiana institution of higher education. To qualify for the program, the student must meet the income eligibility requirements for the federal free or reduced-price lunch program. Figure 13 provides income guidelines by household size.

Figure 13: 21st Century Scholars Program, Income Guidelines (2015 – 2016)

Increase the income threshold by $7,695 for each additional child above 6.
Source: Commission for Higher Education.

Indiana students in the 7th and 8th grade whose families meet the above income eligibility guidelines can apply to become a 21st Century Scholar. The application must be received by June 30 of the student's 8th grade year. When students enroll as 21st Century Scholars, they pledge to:

(1) Graduate from high school with at least a Core 40 diploma.
(2) Achieve at least a 2.5 cumulative high school grade-point average (GPA).

(3) Complete the Scholar Success Program.
(4) Not use illegal drugs, or commit a crime or delinquent act, or consume alcohol before reaching the legal drinking age.
(5) Apply for college admission and financial aid on time as a high school senior.
(6) Complete 30 credit hours each year in college to stay on track toward earning the degree on time.

During middle school and high school, enrollees participate in the Scholar Success Program that helps them plan, prepare, and pay for college. Once in college, enrollees receive financial and counseling support to further their career goals. According to the latest published reports, 36% of the eligible students enroll in the program. Table 26 shows the enrollment by 8th grade students for the 2011 to 2014 period.

Table 26: 8th Grade Student Enrollment for 2011 to 2014 Period

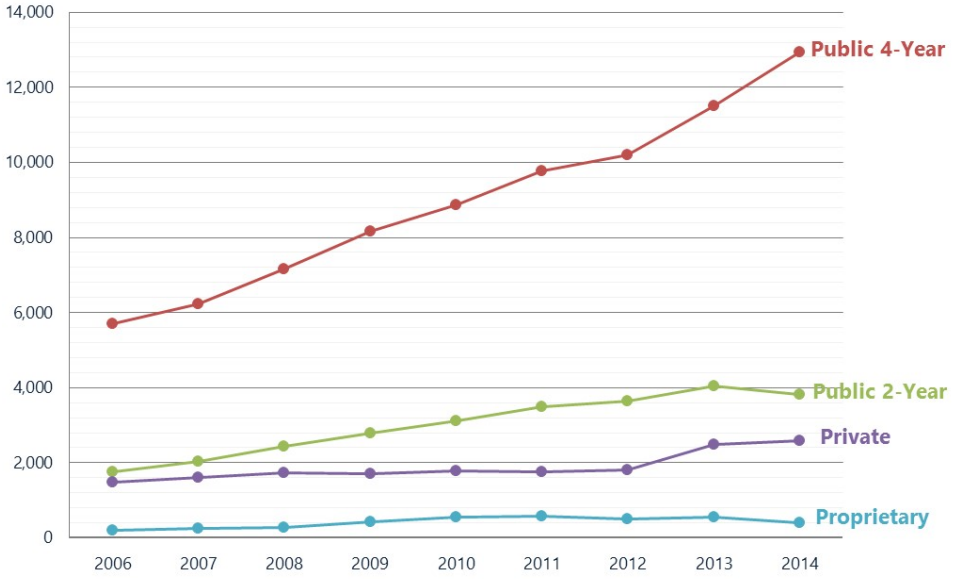
Fall 8th Grade Year Scholar Cohort	2011 2016	2012 2017	2013 2018	2014 2019
Free Lunch Population	30,458	30,869	32,429	33,564
Reduced-Price Population	7,242	6,941	7,249	7,422
No. of Eligible Students	37,700	37,810	39,678	40,986
Number of Enrolled Scholars	24,050	20,426	15,823	16,874
% of Eligible Students Enrolled	64%	54%	40%	41%

Enrollment – 21st Century Scholars Program

Seventy-eight percent of 21st Century enrollees enter college directly after high school. This is higher than all Indiana high school students (66%) and all Indiana low-income high school students (53%). Thirty-three percent of enrollees complete college. The college completion rate for 21st Century scholars is below all Indiana high school students (42%), but above all Indiana low-income students (22%). Fifteen percent of enrollees complete college on time.

The 21st Century scholarship has been used by students at 105 higher education institutions (CHE, 2015). These public universities, private universities, and proprietary colleges offer 2-year and 4-year programs. In 2014, 65.5% of scholars were enrolled in 4-year programs at public universities; 19.3% were enrolled in 2-year programs at public universities; 13.2% were enrolled in private universities; and 2% were enrolled in proprietary institutions. Figure 14 below shows the type of program and institutions where the recipients of the scholarships were enrolled.

Figure 14: School Type for Scholarship Recipient



Source: Commission for Higher Education.

The Tax Credit Impact

The contributions to the Support Fund have been minimal compared to the unmet nontuition financial needs of the scholars. It has received less than $6,200 in each of the last 8 years (Table 27). In the 25 years of its existence, the Support Fund has received $106,000 in donations. The money in the Support Fund has not been used since its inception.

Relative Size of the Donation

Based on the college cost estimated using the federal FAFSA formula, the average nontuition expenses for a college student are between $10,000 and $15,000 annually. Students have to either pay the additional expenses out of pocket or seek additional funding from federal grants, student loans, school foundation support, or other scholarships. Based on about 19,500 scholarship recipients that are currently in higher education institutions and an average of $12,500 in annual unmet nontuition expenses, it is estimated that approximately $243.8 M annually is required to completely fund the nontuition expenses of scholarship recipients.

Table 27: 21st Century Tuition Scholarship, Estimated Non-Tuition Expenses and Donations

Fiscal Year	21st Century Tuition Scholarship Expenditure (Appropriated)	Number of Scholars	Average Tuition Support for Scholars	Estimated Nontuition Cost Per Student	Total Nontuition Cost for all Scholars	Private Contributions to the Support Fund
2008	$55,611,071	10,001	$5,561	$11,204	$112,053,178	$6,050
2009	65,487,852	11,496	5,697	11,361	130,607,314	6,000
2010	71,254,695	13,010	5,477	11,473	149,262,883	5,950
2011	79,845,145	14,229	5,611	11,701	166,488,711	5,170
2012	89,967,422	15,479	5,812	12,045	186,441,059	6,150
2013	96,656,389	16,033	6,029	12,246	196,342,891	6,200
2014	118,785,013	18,497	6,422	12,437	230,039,668	5,700
2015	131,401,846	19,505	6,737	12,500	243,812,500	5,388

Source: State Auditor's Data, Commission for Higher Education, data analysis by the Office of Fiscal and Management Analysis.

Several institutions have launched programs designed to meet the unmet financial need of eligible scholars. Indiana University, Bloomington, launched the 21st Century Scholarship Covenant Program in 2007. Purdue University has ScholarsCorp Support Program and Purdue Promise Program. Federal assistance through the Pell Grant, Federal Supplemental Educational Opportunity Grant (FSEOG), and Federal Work Study programs can be used to cover a portion of the nontuition cost. Like the 21st Century Scholarship Program, most of these federal student aid programs are designed for students with exceptional financial need, and they do not have to be repaid. A Pell Grant provides up to $5,730 in assistance for qualified students. About 86% of scholars were eligible for a Pell Grant. FSEOG provides up to $4,000 in financial aid based on availability of funds at the school. The federal work-study program provides jobs for students on and off campus where the students are paid at least the federal minimum wage. AmeriCorps operates the ScholarCorps program to assist the students. Federal subsidized and unsubsidized loans are also available for the scholars to cover the nontuition costs.

The portion of the nontuition needs that are met by the various sources outlined above is unknown. Based on financial assistance data published by state and federal agencies it is assumed that a substantial portion of the need is covered by federal student aid and loans. Since the 21st Century scholarship recipient meets the means test for most of these federal and institutional aid programs, it is likely that the share of cost covered for these students is higher than average. Out-of-pocket family contribution has to cover the remaining unmet need of the scholars.

The tax credit was established to encourage donations to the 21st Century Scholars Program Support Fund that would help bridge the funding gap for the nontuition expenses of the 21st Century scholars. It is clear from the historical usage of the tax credit and donations to the Support Fund that the tax credit has been ineffective in generating

sizable donations. The data shows that the donations received annually would not be sufficient to fund the total nontuition cost of 1 out of the 19,500 scholars currently attending college in Indiana.

Impact of Taxpayer Cap

The tax credit is capped at $100 for a single filer or $200 for a joint filer. Donations to the fund above the cap level do not provide any state tax incentive to the taxpayer. This may result in larger donors allocating their charitable contributions to charities that provide them with a state tax credit.

Impact of Administration

There is no known study on the impact of tax incentives for contributions received by a government agency that administers a charitable program. However, studies on how taxes affect donations given to nonprofit organizations suggest that the impact of tax incentives varies across different types of nonprofit organizations. Based on the available research, it is not possible to conclude whether the type of entity administering the program has any impact on the level of donations. It's worth noting, however, that the Indiana college contribution tax credit, which is designed to increase donations to Indiana higher education institutions, has a similar taxpayer credit cap. In stark contrast to the poor performance of the 21st Century Scholars credit, the college credit is claimed by more than 80,000 taxpayers annually with the credits claimed totaling about $8.5 M annually.

Impact from Level of Awareness

The low number of credit claims may also be due to the lack of awareness about the 21st Century Scholars Program and the tax credit associated with the donation to the Support Fund. The 21st Century Scholarship Program website does not have a method to receive donations, nor does it indicate that it accepts donations for the Support Fund. There is no information about the tax credit on the website. The Commission for Higher Education indicated that they do solicit donations from program alumni. The program is in the process of launching a 21st Century Scholars Alumni Network. One goal of the network would be to generate contributions to the Support Fund. The program alumni would be likely candidates to make donations because of their awareness of the program and its benefits. An estimated 65,000 students attended college with support of the 21st Century Scholarship Program.

Donations and Tax Credit

Finally, based on the level of donations to the fund and tax credit claims, it is concluded that some taxpayers are claiming the credit without contributing to the fund. This could be attributed to a lack of understanding about the eligibility conditions for the tax credit. A Department of State Revenue audit would be necessary to determine the validity of a taxpayer's credit claims.

Conclusion

The tax credit was enacted to encourage contributions to the 21st Century Support Fund. The Support Fund received minimal contributions over the last 25 years. The annual contributions would not be sufficient to fund the assistance needed by even 1 out of the 19,500 scholars currently in the program. Consequently, it is concluded that the tax credit is not effective in achieving its purpose.

Potentially, the reasons for the ineffectiveness of the credit are the low per taxpayer credit cap, lack of awareness of the Support Fund and the credit, and the administrative structure and design of the credit. However, based on the low level of interest in the Support Fund and the credit over the last 25 years, the planned alumni network promotion and general awareness campaigns may not be able to make a significant impact on donations to the Support Fund. Yet, these programs could potentially result in a marginal increase in the amount of donations.

Indiana 529 College Savings Account Earning Exemption (IC 6-3-2-19)
Indiana 529 College Savings Account Contribution Credit (IC 6-3-3-12)

Indiana's 529 CollegeChoice Savings Plan has two tax incentives associated with the program. The first is a tax exemption for the earnings and account distributions used to pay qualified higher education expenses (IC 6-3-2-19). The other incentive is a tax credit for contributions made to Indiana's sponsored 529 plans (IC 6-3-2-19). Together, the incentives are intended to encourage saving for college expenses using Indiana's 529 CollegeChoice plans.

Program Background

In 1996, the federal government established qualified tuition plans allowing states and higher education institutions to provide investment plans to encourage families to save money for college expenses. These plans are commonly referred to as 529 plans after Section 529 of the Internal Revenue Code. Families deposit after-tax income in 529 plan accounts, and the investment earnings on the money in the accounts are tax-exempt. Withdrawals from the accounts are also tax-exempt if the money is used to pay qualified education expenses. In addition, 529 plans provide federal gift and estate tax benefits for qualifying contributions. The accounts are available to any U.S. citizen or resident alien at least 18 years of age. When establishing an account, the account holder must designate a beneficiary who will use the money to pay their higher education expenses. The beneficiary can be the account holder, but in most cases it is a child, grandchild, or younger relative (Levine, 2008).

529 savings plans fall into two categories: prepaid tuition plans or savings plans. Prepaid tuition plans allow account holders to prepay all or some of the costs of an in-state college education. Eleven states are currently offering a prepaid tuition plan, and the majority of these plans are only available to state residents (Saving for College, LLC, 2015). Indiana has not offered this program. On the other hand, savings plans are similar to 401K or IRA retirement accounts. The account holder makes contributions to specific investment options, and the performance of the account is based on the market. Forty-nine states, including Indiana, offer a 529 savings plan, and most state plans are open to nonresidents (Saving for College, LLC, 2015).

States contract with financial services firms to create and manage their 529 plans. Because each state can establish their own 529 plan, there are many investment options for families. Most states provide both age-based and static portfolios. In an age-based portfolio, assets are allocated to riskier mutual funds comprised of stocks when the beneficiary is young, and as the beneficiary ages, the assets are shifted into more stable funds comprised of money market accounts or bonds. Static portfolios have a specific asset allocation that remains constant as the beneficiary gets older. With the diversity of available plans, there

are also a variety of fees imposed on the account holders. The annual management fees range from 0.07% to 2.67% depending on the plan (Saving for College, LLC, 2015).

In addition to the variety of investment options and fees among the plans, 34 states provide either a tax credit or a deduction to their resident taxpayers for contributions to a 529 plan. Twenty-eight states only provide the incentive for contributions to plans administered by that state. Six states provide residents with deductions for contributions to any 529 plan. Seven states with 529 plans have no income tax. There is no federal tax deduction for contributions to a 529 plan (Saving for College, LLC, 2015).

Indiana Education Savings Plans

Indiana CollegeChoice 529 education savings plans are governed by the Indiana Education Savings Authority (IESA), which was authorized by legislation enacted in 1996. The IESA offers three 529 savings plans. The annual asset fees range from 0.27% to 2.26% depending on the plan. Out-of-state residents are charged an additional $20 annual maintenance fee per account unless the beneficiary's account balance is above $25,000. The total contributions are limited to $298,770 for one beneficiary.

Qualified withdrawals from an Indiana CollegeChoice 529 Plan for higher education expenses are state and federally tax-exempt. Eligible expenses include tuition, mandatory fees, costs of books, supplies and required equipment, certain room and board costs during any academic period the beneficiary is enrolled at least halftime, and certain expenses for special needs students.

Both Indiana and the federal government impose penalties on withdrawals for unqualified expenses. Federal law imposes a 10% penalty on earnings for unqualified distributions, and the earnings portion is subject to tax as ordinary income. In addition, the account must remain open for at least one year to avoid recapture of the tax credit on distributions used to pay qualified education expenses.

Indiana 529 College Savings Account Earning Exemption

Both Indiana and federal law provide an income tax exemption for earnings and qualified withdrawals from a 529 plan. The exemption is the primary federal tax incentive to encourage families to save more money for college expenses. The federal exemption applies to all 529 plans regardless of the state sponsor. This encourages competition among the states because families receive the same federal tax benefit regardless of the 529 plan. Indiana conforms to the federal tax exemption on account earnings, so account earnings are also exempt from Indiana adjusted gross income.

The interaction between tax incentives and personal savings has been widely studied. Early research found that tax incentives that reduce the cost of savings may encourage additional levels of savings, but more often it results in families shifting existing assets into a tax-advantaged financial instrument (Attanasio, Banks, & Wakefield, 2004). Another

study found that families that have a history or preference to save are more likely to respond to a tax incentive for savings. The tax exemption would more likely encourage the 'active' savers to save additional dollars into a tax-preferred account (Chetty R. , Friedman, Leth-Petersen, Nielsen, & Olsen, 2014). Research suggests that families with high incomes are more responsive to this type of tax exemption (Rutledge, Yanyuan Wu, & Vitagliano, 2014).

The tax exemption for account earnings is likely one factor that contributed to the growth of the national 529 market, and it may help explain the demographics of 529 account holders. A Government Accountablility Office (2012) study found that families with 529 accounts generally have more wealth and education than those without 529 accounts. The median income of families with 529 plans was about three times the median income of families without 529 accounts. A report by the U.S. Department of the Treasury (2009) also found that 529 account balances were skewed towards higher-income families. The report also indicated that the savings rate and the likelihood of a child attending college generally increases as household income increases.

Indiana 529 College Savings Account Contribution Credit

The Indiana 529 College Savings Account Contribution Credit ("529 credit") may be claimed by an individual taxpayer who makes a contribution to an Indiana CollegeChoice 529 Education Savings Plan account. The 529 credit equals 20% of the taxpayer's annual contributions to a 529 savings plan account, up to a maximum credit amount of $1,000 annually. The 529 credit is nonrefundable, and unused credits may not be carried forward or carried back. In the event of a nonqualified withdrawal, the taxpayer must repay the credit in the year the nonqualified withdrawal is made. Table 28 provides a claims history for the 529 credit. Since the incipience of the 529 credit, the number of filers claiming the credit has increased by 134% and the amount of credits claimed has grown by over 100%.

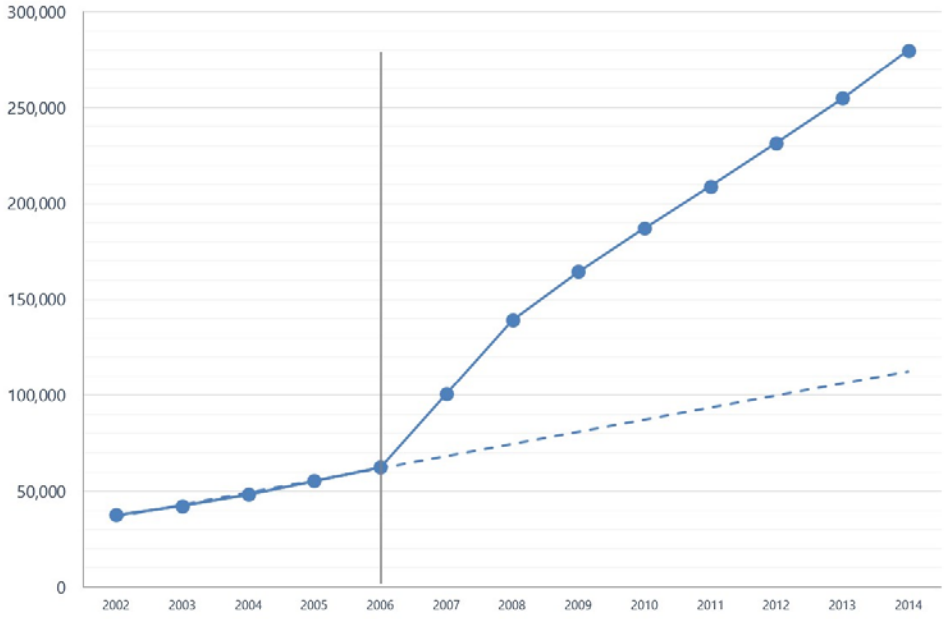
Table 28: 529 Credit Claims 2006-2013

	Individual Income Tax					
Tax Year	Filers Claiming Credits	% Change	Credits Claimed	% Change	529 Account Contributions	% Change
2006	0		0		$82,060,159	
2007	33,853		$26,024,050		274,631,991	234.7%
2008	40,677	20.2%	28,634,616	10.0%	206,231,624	-24.9%
2009	48,229	18.6%	33,318,076	16.4%	308,056,266	49.4%
2010	55,183	14.4%	37,163,814	11.5%	343,266,981	11.4%
2011	63,361	14.8%	42,446,404	14.2%	379,818,120	10.6%
2012	71,128	12.3%	47,974,074	13.0%	421,214,780	10.9%
2013	79,367	11.6%	53,606,975	11.7%	468,951,625	11.3%

Source: Raw data provided by Department of State Revenue and Indiana Education Savings Authority, data analysis by the Office of Fiscal and Management Analysis.

Figure 15 shows the impact of the 529 credit on the number of 529 accounts. In 2006, the year before the credit was enacted, there were a total of 62,667 open accounts. Of those accounts, only 27% were held by Indiana residents. In 2006, the Indiana CollegeChoice plan received $82 M in contributions. The program's total assets were $505 M. As a comparison, It took ten years to grow the program to this level with only the tax exemption in effect (IESA, personal communication, 2015).

Figure 15: Number of Accounts



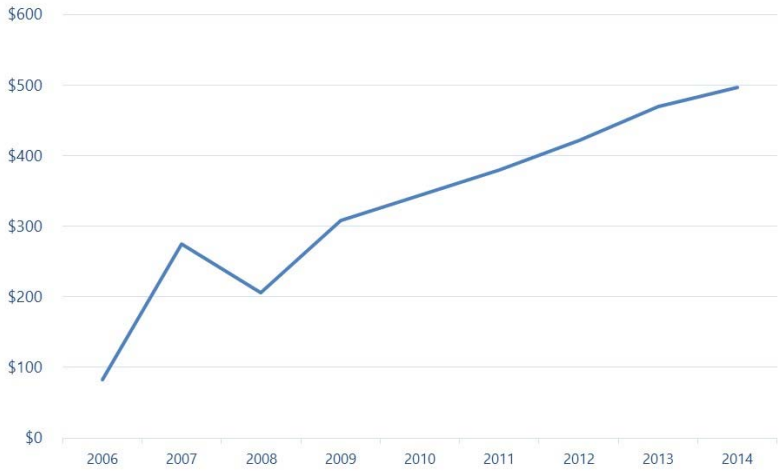
Source: Raw data provided by Indiana Education Savings Authority, data analysis by the Office of Fiscal and Management Analysis.

As of June 30, 2015, the Indiana CollegeChoice program had a total of 286,324 accounts. Indiana residents held 86% of those accounts. That is a 356% increase in the total number of accounts and a 1353% increase in accounts opened by Indiana families. The growth in the number of accounts coincides with the implementation of the 529 credit in 2007. The growth of the 529 credit displayed in the table above and the growth of Indiana 529 CollegeChoice accounts displayed in the graph below suggest that the tax exemption for 529 account earnings was not nearly as effective as the 529 credit has been in encouraging Indiana families to open an Indiana-sponsored 529 account.

As the number of accounts has increased, so have the other attributes of Indiana's 529 program. The total assets have grown from $505 M in 2006 to $3.14 B as of June 30, 2015. The total 529 contributions in 2006 were $82.1 M. In 2007, the total contributions were $274.6 M, increasing by 235% in one year. The increased contributions were likely a combination of new savings and reallocations of existing portfolios. Research suggests that this usually occurs with tax-advantaged savings instruments (Chetty, et al., 2014).

However, the total annual contributions have increased each year with the exception of 2008 (Figure 16) . This suggests that families are continuing to invest in Indiana's 529 plan.

Figure 16: Annual 529 Contributions ($ in millions)



Of the households that first claimed the 529 credit in 2007, 83% have claimed it in multiple years, and 32% claimed the 529 credit seven years in a row. This pattern of continued savings is not unique to the families in the 2007 cohort. Eighty percent of all families claiming a 529 credit claimed it for more than one year.

As contributions have increased, so have account balances. The average account balance in 2006 was $2,000. The average account balance has increased between 437% and 471%, depending on the type of account. The average advisor account contains a balance of $10,838, while the average balance of a direct account is $11,520.

Table 29 summarizes the income distribution of 529 credit claimants over time. The income distribution of 529 credit claimants is consistent with the Government Accountablility Office's findings (reported in the previous section) relating to the income distribution of families with 529 accounts nationally, with claims and credits claimed increasing with income.

Table 29: Income Distribution of Resident 529 Contribution Credit Claims for Tax Years Between 2007 and 2012

Federal AGI Tier	% of All Returns	% of 529 Claimants	% of 529 Credit Claimed	% of those Claiming the Maximum Credit
Under $1	1.13%	0.03%	0.03%	0.02%
$1 Under $25,000	42.06%	2.08%	0.77%	0.02%
$25,000 Under $50,000	24.17%	6.14%	4.26%	2.12%
$50,000 Under $75,000	14.38%	12.06%	9.38%	8.20%
$75,000 Under $100,000	8.57%	17.38%	14.59%	13.05%
$100,000 Under $150,000	6.24%	27.50%	27.10%	26.07%
$150,000 Under $200,000	1.65%	13.12%	15.13%	16.06%
$200,000 Under $500,000	1.47%	16.95%	22.13%	26.09%
$500,000 or More	0.33%	4.72%	6.61%	8.38%

**Includes IT-40 and IT-40PNR*
Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Hypothetical Investment Scenario

The 529 credit is likely successful in inducing families to choose to invest with Indiana's sponsored 529 plan. The credit reduces the cost of saving with Indiana's program while still providing the same tax exemption on earnings offered by all 529 plans. To illustrate the impact of the 529 credit, a hypothetical investment scenario was developed to compare the estimated return on an investment with 529 plans offered by different states.

Table 30: Investment Scenario Parameters*

	Alaska	Ohio	New York	Pennsylvania	Indiana
2015 Morningstar Analyst Rating	Gold	Silver	Bronze	Neutral	**Bronze**
Investment Plan	Age-Based	Age-Based – Aggressive	Age-Based – Aggressive	Age-Based – Aggressive	**Age-Based – Aggressive**
Average Annual Total Return	8.46%	7.10%	7.55%	5.78%	**6.52%**
Total Asset Based Expense Ratio	0.82%	0.23%	0.16%	0.38%	**0.55%**
Administrative Fee	$10	$0	$0	$18	**$20****

**The hypothetical scenarios are intended for educational purposes only and should not be considered investment advice.*
***Administrative fee is waived for Indiana residents*

The parameters for each scenario are based on data published from each state's 529 plan disclosure statement (Table 30). The states were chosen based on their 2015 Morningstar ratings. Morningstar, Inc. analyzes and rates each 529 college savings plan. The plans receive a rating of either gold, silver, bronze, neutral, or negative. One plan was selected from each level of Morningstar's Analyst rating for 2015 except 'negative' (Acheson, Holt, Pavlenko, Rupp, West, & Yang, 2015). The fees and returns for the age-based portfolios were computed based on the weighted average of the performance of the allocations assuming an account was opened upon the beneficiary's birth. The age-based portfolios

were chosen for the comparison because they represent a complete investment strategy for a child. The states do offer static portfolios, but there was no single portfolio among the states with the same asset allocation. The simulation assumes an Indiana resident opens a 529 account at birth with a $1,000 initial deposit and deposits $100 each month until the child becomes 18 years old. The simulation results are in the table below.

Table 31: Simulation Results without 529 Credit*

	Alaska	Ohio	New York	Pennsylvania	Indiana
Total Contributions	$22,500	$22,500	$22,500	$22,500	**$22,500**
Gains	$30,230	$24,089	$26,653	$17,359	**$20,680**
Expenses and Fees	($3,329)	($834)	($604)	($1,539)	**($1,862)**
Total Return	$49,401	$45,755	$48,549	$38,320	**$41,318**
Returns on Investment (ROI)	1.20	1.03	1.16	0.70	**0.84**

**The hypothetical scenarios are intended for educational purposes only and should not be considered investment advice.*

Table 31 shows that Indiana's plan has one of the lower ROIs compared to the other plans. Indiana's CollegeChoice 529 plan has lower return, and its total fees place it in the middle of the other plans. However, these estimates do not reflect the tax savings provided by the 529 credit.

The 529 credit reduces a family's tax liability by $0.20 for every $1.00 deposited into a 529 account on the first $5,000 contributed each year. If a family contributed $5,000 to a 529 account, they would receive the maximum credit of $1,000. However, the 529 credit is only available if they contribute to an Indiana-sponsored 529 account. Table 32 contains an analysis of the hypothetical investments taking into account the tax savings from the tax credit.

Table 32: Simulation Results with 529 Credit*

	Alaska	Ohio	New York	Pennsylvania	Indiana
Total Contributions	$22,500	$22,500	$22,500	$22,500	**$22,500**
State Tax Savings	$0	$0	$0	$0	**($4,500)**
Total Cost of Contributions	$22,500	$22,500	$22,500	$22,500	**$18,000**
Gains	$30,230	$24,089	$26,653	$17,359	**$20,680**
Expenses and Fees	($3,329)	($834)	($604)	($1,539)	**($1,862)**
Total Return	$49,401	$45,755	$48,549	$38,320	**$41,318**
Returns on Investment (ROI)	1.20	1.03	1.16	0.70	**1.30**

**The hypothetical scenarios are intended for educational purposes only and should not be considered investment advice.*

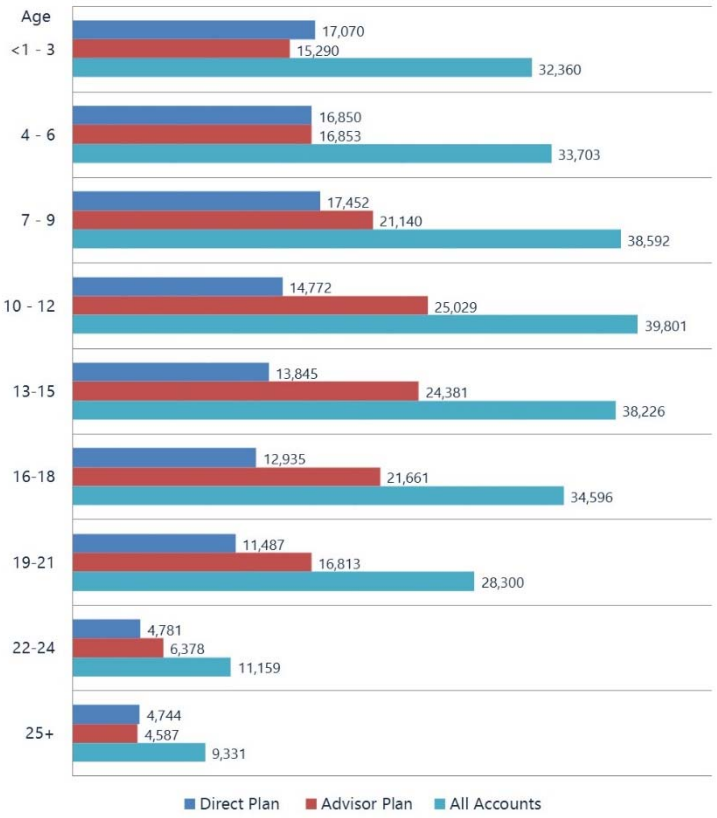
The credit effectively reduces the total cost of the contributions, offsets fees, and increases the ROI for the Indiana plan. This is why families are advised to investigate whether their home state offers any tax incentives for contributions to their state's 529 plan before investing in other plans (U.S. Securities and Exchange Commission, 2015). Research on the 529 investment market indicates that the savings from the federal tax exemption on earnings alone more than offset the higher fees associated with 529 plans. In addition, state tax incentives can further reduce the cost of participating in a program. Indiana's plan has been consistently awarded a 'bronze' rating from Morningstar, Inc. Morningstar's 2014 report found Indiana to have one of the most generous tax benefits for contributions

(Spica, Pavlenko Lutton, & West, 2014). The 529 credit has helped the plan receive the 'bronze' rating despite its performance benchmark lagging similarly rated plans (Acheson, et al., 2015).

Possible Misuse of 529 Plans

The data suggests that the credit has been successful in enticing families to open an Indiana 529 account. However, there is a concern that families are not using the 529 plans to save for college, but are instead using the accounts as a pass through to receive a tax benefit for paying current college expenses. While this behavior is likely occurring, it does not appear to be widespread. This conclusion was reached by analyzing the age of the account beneficiaries and amount of account withdrawals (Figure 17).

Figure 17: Distribution of 529 Account Beneficiaries by Age and Plan Type



Source: Raw data provided by Indiana Education Savings Authority, data analysis by the Office of Fiscal and Management Analysis.

The age of account beneficiaries can help determine how families are using their 529 account. If a large number of people are using a 529 account only as a pass through, then the majority of beneficiaries should be college age. The median age of a beneficiary for new accounts opened since 2013 is 8 years, while the average age is 9. The median age of all beneficiaries, depending on the type of account, ranges between 11 and 13. Nearly 67% of all beneficiaries are under the age of 16. This suggests that most families are using the 529 accounts to save for future college costs.

The amount of withdrawals can also provide insight on how the people are using the plan. (See Table 33) The withdrawals have increased each year along with contributions. This trend is to be expected. As the program matures more beneficiaries should be using their assets to pay for higher education expenses. However, the ratio of withdrawals to total plan assets has remained constant around 9% between 2009 and 2014. If the majority of account holders were using a 529 account as a pass through for current college expenses, the withdrawal to asset ratio would likely be increasing at a faster rate.

Table 33: Indiana CollegeChoice Contributions and Withdrawals

Year	Assets	Contributions	Withdrawals	Contributions as a % of Assets	Withdrawals as a % of Assets
2006	$505,287,309	$82,060,159	$30,089,822	16%	6%
2007	750,108,716	274,631,990	46,881,148	37%	6%
2008	702,533,750	206,231,624	58,383,928	29%	8%
2009	1,095,651,779	308,056,266	94,630,874	28%	9%
2010	1,439,867,531	343,266,981	122,276,892	24%	8%
2011	1,646,641,304	379,818,120	168,688,333	23%	10%
2012	2,055,346,792	421,314,780	185,984,452	20%	9%
2013	2,600,368,443	468,951,625	221,347,276	18%	9%
2014	2,973,068,147	496,907,661	267,534,519	17%	9%

Source: Indiana Education Savings Authority,

The tax incentives associated with 529 plans have influenced how the market has developed. Research suggests that the tax preferences of 529 plans are directly responsible for higher fees compared to traditional mutual funds (Bogan, 2014). However, even with the higher fees, 529 accounts are considered a better product to save for future college expenses (Acheson, et al., 2015). The federal tax exemption makes all 529 plans an attractive option for families to save for college, and it provides an equal standing within the market. However, the state tax benefits offered for contributions to qualifying plans can significantly affect a family's return. Indiana's credit has been consistently recognized as one of the more generous tax benefits offered by the states (Acheson, et al., 2015). Our analysis suggests that the 529 contribution tax credit is effective in enticing families to invest in an Indiana 529 CollegeChoice plan rather than a plan offered by another state.

Property Rehabilitation Incentives

Indiana provides four tax incentives to encourage the rehabilitation of historic, aged, or low-value properties. These tax incentives lower the cost of qualifying projects and attempt to leverage private redevelopment.

The historic rehabilitation tax credit and residential historic rehabilitation tax credit provide income tax credits for the rehabilitation of historic properties. There are about 1,850 sites and structures listed on the register of Indiana historic sites and historic structures. Whether they are on the register or not, historic buildings are a link to the past that provide stability to the community.

The rehabilitated property deduction and the rehabilitated residential property deduction reduce the cost of qualifying projects by providing a property tax deduction for improvements made to the property. The rehabilitated property deduction was created to encourage improvements to properties that are at least 50 years old. In 2015, over 1 million properties meet the age requirement. The rehabilitated residential property deduction was established to encourage the renovation of properties with improvements that have a low assessed value.

Historic Rehabilitation Tax Credit (IC 6-3.1-16)

The Historic Rehabilitation Tax Credit was established to encourage the rehabilitation and preservation of historic properties that are at least 50 years old and are income-producing. The tax credit was first effective in 1994. The credit is equal to 20% of the qualified rehabilitation expenditures approved by the Office of Community and Rural Affairs (OCRA) up to $100,000. The $100,000 per project credit cap is not specified in statute but has been imposed through administrative rules. (See Table 34)

The credit has an annual aggregate limit of $450,000 per state fiscal year. The credit may be claimed against an individual or corporate taxpayer's Adjusted Gross Income (AGI) tax liability. The credit is nonrefundable, but unused credits may be carried forward for up to 15 years. Unused credits may not be carried back.

The queue of taxpayers waiting to claim the credit began in the second year after the credit was created due to the annual aggregate credit cap. In 1997, the overall cap was increased from $450,000 to $750,000 a year to ease the backlog, but in 1999 the annual limit was returned to $450,000. The backlog has grown since. By the end of 1999, credits were approved out to 2004. By 2015, credits were being assigned to 2025. There are about $4.1 M in certified credits to be claimed against future tax liabilities.

When the credit was enacted, it was administered by the Division of Historic Preservation and Archeology within the Department of Natural Resources (DNR). Effective January 1, 2015, the OCRA began administering the credit, with assistance from the DNR. The

taxpayer must submit a proposed rehabilitation plan for approval by the OCRA. The taxpayer is required to submit a copy of the certificate from the OCRA verifying the amount of eligible credit for the taxable year.

A taxpayer must meet all of the following conditions to qualify for the credit:

- The historic property must be at least 50 years old and located in Indiana.
- The historic property is listed on the register of Indiana historic sites and historic structures.
- The preservation and rehabilitation plan is approved by the OCRA.
- The work is completed within five years according to the submitted plan.
- The historic property is actively used in a trade, business, or some other income-producing function.
- The qualified rehabilitation expenditures exceed $10,000.

The tax credit may be recaptured if the rehabilitated property is transferred less than five years after the completion of the preservation work or if additional modifications are made to the property within five years of the initial work that do not meet the standards of the OCRA.

The tax credit will expire in 2016. Starting FY 2017, the tax credit is replaced by the Historic Preservation Grant Program. The OCRA will provide a grant to a person who undertakes a qualifying historic rehabilitation project. The maximum allowable grant for a project equals 20% of the qualifying rehabilitation expenses approved by the OCRA. The annual cap on the grant that the OCRA can award to a person is set based on the amount appropriated by the General Assembly for the fiscal year. A total of $1.25 M is appropriated for the grant program in FY 2017.

Table 34: Historic Rehabilitation Tax Credit Claims

	Individual Income Tax		Corporate AGI Tax		Total	
Tax Year	Claims	Credit Amount	Claims	Credit Amount	Claims	Credit Amount
2005	72	$355,372	0	0	72	$355,372
2006	50	117,026	0	0	50	117,026
2007	57	217,783	0	0	57	217,783
2008	48	153,611	0	0	48	153,611
2009	39	99,285	0	0	39	99,285
2010	30	93,533	0	0	30	93,533
2011	39	165,954	0	0	39	165,954
2012	24	99,411	0	0	24	99,411
2013	40	216,561	N/R	4,939	40	221,500

Source: Raw data provided by Department of State Revenue, data analysis by Office of Fiscal and Management Analysis

Since the tax credit is not transferrable or refundable, the amount that a taxpayer may claim is limited to the tax liability of a taxpayer who receives certification to claim the

credit. Individual taxpayers claim almost all of the tax credits certified under this program. These are likely noncorporate business entities (LLCs, sole proprietorships) that perform rehabilitation work for profitable purposes. However, a long-term examination of the tax credit claims suggests that the carry forward provision may be insufficient to allow some taxpayers to exhaust credit amounts they are entitled to claim.

Federal Tax Credit for Rehabilitation of a Commercial Historic Property

The National Park Service administers a federal tax credit for the rehabilitation of a commercial historic property. The federal tax credit is equal to 20% of the qualified rehabilitation expenditures. The federal tax credit is not capped. Almost all projects receiving the Indiana credit receive the 20% federal tax credit. Due to the long wait in receiving the Indiana credit, the federal credit is a more commonly used tax incentive for historic rehabilitation projects.

The Park Service works with state agencies to implement the federal program. The OCRA is the state authorizing agency of the federal credit, and the OCRA ensures the project complies with the Secretary of the Interior's standards for rehabilitation. Both the federal and Indiana credits share similar requirements for a qualifying project. The primary distinction between the two credits is the required minimum rehabilitation expenditure. The state credit requires project expenditures to exceed $10,000, while the federal credit requires expenditures to exceed the greater of $5,000 or the adjusted basis of the building.

Recipients of the federal rehabilitation credit often use other federal incentives, including Housing and Urban Development programs, the New Market Tax Credit Program, the Brownfields Economic Development Initiative Grant, and U.S. Department of Agriculture rural development loan programs, and the low-income housing tax credit.

Analysis of Indiana's Historic Rehabilitation Tax Credit

Since 1994, the historic rehabilitation tax credit was used for projects in 50 of the 92 counties in the state. The mean rehabilitation cost for these projects is $2.8 M; however, the median cost of these projects is $540,000. Forty-seven percent of the projects had total investments less than $500,000. Since the tax credit is capped at $100,000 for a single project, 47% of the projects were eligible for the full 20% in tax credit. However, the waiting period to receive the credit may reduce the incentive from the tax credit. Data shows that the smaller applicants apply at a higher rate for the credit.

Table 35 shows the credit application data for the latest available 10 years. The number of projects certified for the Indiana credit is less than for the federal credit because of (1) the difference in eligibility requirements and (2) the reduced interest by taxpayers in the Indiana credit due to the long delay in receiving the credit and the lower average credit as a result of the aggregate annual credit cap.

Table 35:Historic Rehabilitation Tax Credit - Projects Receiving Credits

Fiscal Year	All Rehab Projects	Number of Federal Credits	Number of Indiana Credits	Number of Units Rehabbed or Created	Number of Low/Moderate Income units Created	Claim Queue
2005	12	12	7	195	176	2017
2006	11	11	8	106	87	2020
2007	16	16	9	136	101	2021
2008	7	7	N/R	143	35	2021
2009	10	10	N/R	77	0	2023
2010	15	15	N/R	105	0	2023
2011	N/R	N/R	N/R	82	N/R	2023
2012	13	13	N/R	457	129	2024
2013	11	11	6	118	60	2025
2014	9	8	N/R	59	43	2025
Total	**104**	**103**	**52**	**1,478**	**631**	

Source: Raw data provided by Department of Natural Resources, data analysis by Office of Fiscal and Management Analysis

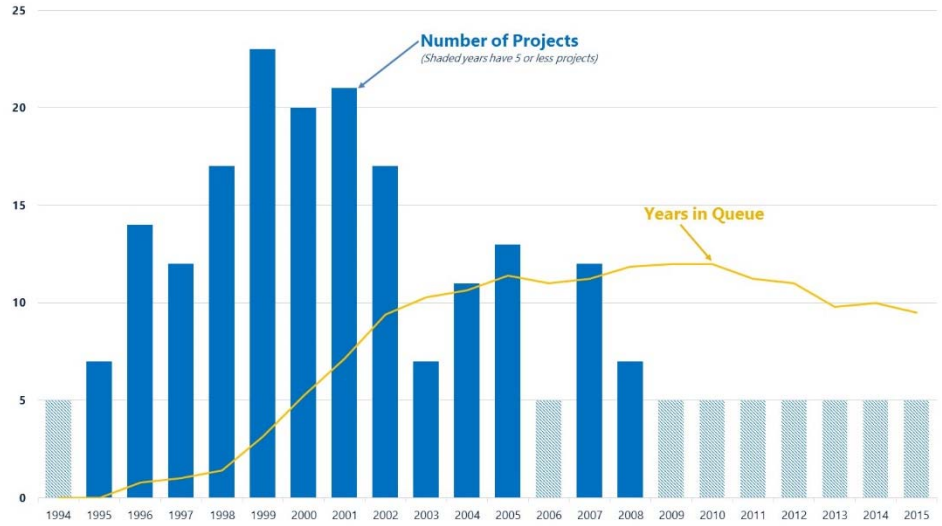
The Indiana tax credit has an annual aggregate cap of $450,000 for commercial projects. The demand for the tax credit has exceeded the cap in most years. OCRA does not certify any credit once the limit is reached. Each certified applicant is placed in a queue. The queue is currently backed up at least 10 years until 2025. It means that a credit certified in 2015 could not be claimed until 2025.

The Indiana tax credit also has a project cap of $100,000. Even though this is instrumental in spreading the impact of the tax credit, it makes the tax benefit inadequate to provide an incentive for rehabilitation of large commercial buildings.

The queue created by the annual aggregate cap causes a delay in receiving the tax benefit of up to 10 years. This time lag could reduce the interest in the credit. In many cases the taxpayer fails to claim the credit as a result of a lack of record keeping on a small rehabilitation cost. The net present value of the tax credit is also smaller in 10 years' time. Using a discount rate of 5% to 10%, the value of $100,000 in 2015 would be equivalent to $38,500 to $61,000 in 2025.

Figure 18 shows the impact of the queue on the number of certified projects. As a result of the queue, the number of applicants has declined in recent year.

Figure 18: Number of Certified Projects and Number of Years in Queue for Claim by Fiscal Year



Source: Raw data provided by Department of Natural Resources, data analysis by Office of Fiscal and Management Analysis

The Indiana credit on average has reduced the cost of rehabilitation by less than 1% in the 2005 to 2014 period. During the same period the federal credit has reduced the cost of a project by 17% on average. Approximately $546 M was spent on rehabilitation projects that availed either the federal or state tax credit or both. Approximately $89 M was certified for the investors to lower their federal tax liability. Approximately $4 M in credits was certified for the investors to reduce their Indiana tax liability. However, the Indiana credits during this time were delayed by at least 10 years leading to minimal benefit to the taxpayer due to the long waiting period. Table 36 shows the impact of the federal and state credits relative to the expenditure.

Table 36: Historic Rehabilitation Tax Credit - Size of Project and Credits Received

Fiscal Year	Total Rehabilitation Cost	Qualified Rehabilitation Expenditure	Federal Credit Awards	Indiana Credit Awards	Federal and State Credits as a Share of Total Cost	Indiana Credits as a Share of Total Cost
2005	$41,714,582	$29,525,252	$5,905,050	$318,661	14.9%	0.8%
2006	24,467,123	21,781,732	4,349,331	532,065	20.0%	2.2%
2007	195,432,167	144,683,295	28,936,659	736,960	15.2%	0.4%
2008	132,525,489	113,114,293	22,622,859	500,000	17.4%	0.4%
2009	20,426,243	18,603,439	3,720,688	265,839	19.5%	1.3%
2010	23,133,595	19,503,115	3,900,623	253,386	18.0%	1.1%
2011	4,686,274	4,221,772	844,354	100,000	20.2%	2.1%
2012	74,118,225	65,090,756	13,018,151	300,000	18.0%	0.4%
2013	24,207,385	21,854,886	4,370,977	470,561	20.0%	1.9%
2014	5,441,350	4,855,276	971,055	104,452	19.8%	1.9%
Grand Total	**$546,152,433**	**$443,233,816**	**$88,639,748**	**$3,581,924**	**16.9%**	**0.7%**

Source: Raw data provided by Department of Natural Resources, data analysis by Office of Fiscal and Management Analysis

The Indiana tax credit is not transferable or refundable. This makes the Indiana tax credit's value limited to the extent that the taxpayer receiving the credit has sufficient liability to offset the credit. Transferability and refundability will not eliminate the limitations caused by the cap. The carryover provision offsets some of the pitfalls of the cap and the absence of transferability and refund. However, the observed tax credit claim data reveal that the carryover has not been able to maximize the taxpayer benefits.

Indiana only allows adjusted gross income to be offset by the tax credits. This means that taxpayers with noncorporate business tax liability like the utility receipts tax, financial institutions tax, insurance premium tax cannot avail the tax credit. This may allow a small percentage of investors to avail themselves of the credit.

Research on the Impact of Historic Rehabilitation and Historic Rehabilitation Tax Credits

Studies related to the historic rehabilitation tax incentive have leaned towards measuring the economic consequences of the historic rehabilitation project it supports. Most of these studies do not examine the impact of the tax incentive in driving investment on a project. In assigning the impact of the rehabilitation project to the economic impact of the tax incentive, it is assumed that the rehabilitation projects occurred as a result of the tax incentive. That could be true with the federal credit and most states with similar tax credit because the tax benefit could reduce the cost of construction by more than 20% in most of those states. However, the aggregate cap on the Indiana tax credit does not allow it to

be a factor in most historic rehabilitation projects. Among the studies discussed below, Iowa examined scenarios to account for the economic impact from the tax credit.

Rutgers University (2014) has published several studies estimating the impact of the federal tax credit by analyzing the economic consequences of the supported projects. According to their most recent report, the federal credit supported approximately $4.8 B in historic rehabilitation investment in FFY 2014. Rutgers estimates that this investment created about 77,762 jobs, increased personal income by $3.4 B, and increased GDP by $4.6 B. The sectors most affected by the credit include construction, services, manufacturing, and retail trade. It reports that in FFY 2014, the federal credit supported $30.3 M of historic rehabilitation investment in Indiana $30.3 M. This resulted in 531 jobs, $29 M in GDP, $21 M in personal income, and $57.8 M in output.

Several recent studies at the state level have estimated the impact of state tax incentives on personal income, jobs, and GDP. Once again, the common assumption across the studies was that the rehabilitation projects would not have occurred if the historic preservation tax credits were not awarded. With that caveat, most of these studies have agreed that the benefit of historic preservation outweigh the tax expenditure. The number of jobs for every $1 M of rehabilitation expenditure has been estimated from a low of 8 jobs in Virginia to 21 jobs in Pennsylvania (Accordino & Fasulo, 2014) (Econsult Corporation, 2011). Thirteen studies on various state programs reveal that on an average 16 jobs were created for every $1 M expenditure on rehabilitation projects.

A study by the Iowa Department of Revenue (2014) examined two different scenarios relative to the state's historic preservation tax credit. The first estimate was based on the assumption that if there were no tax credit awards, zero rehabilitation expenditures would have been made. This scenario showed a gain of 21 jobs for every $1 M in rehabilitation projects. The second estimate assumed that in the absence of the tax credit, no rehabilitation expenditures would have been made on the historic projects, but new construction at the expenditure levels would have occurred. That estimate revealed a gain of 5 jobs per $1 M in rehabilitation expenditure (Jin, 2014).

Rypkema (1991) argued that new construction is not necessarily less expensive or more profitable when compared to rehabilitation. He uses pro forma calculations to conclude that if the new construction requires razing an existing building, the cost savings from rehabilitation could range from 3% to 16%.

Conclusion

In answering the question whether the Indiana tax credit is a trigger for the historical building rehabilitation projects, it was determined not to be the case. The chief factors contributing to the ineffectiveness of the credit are the aggregate cap and the taxpayer cap on the credit. The inability to transfer the credit or get a refund for the credit limits the use of the tax credit for the taxpayer with low or no income tax liability.

Research suggests that a reasonably designed tax credit could generate enough investment on historical rehabilitation projects to offset the tax expenditure on the program. The Indiana tax rate is more than sufficient to provide an incentive to a historical rehabilitation project. However, an annual cap on the historical rehabilitation credit has led to its unavailability for most investors. This reduces the impact of the tax credit on almost all the projects' return on investment. Even though the absence of transferability and refund provide a check on the revenue impact, they also limit the use of the credit.

Recently, the number of applicants for the Indiana credit has been decreasing at a greater rate than federal applicants. Historic rehabilitation projects are still being conducted in Indiana, but taxpayers are relying more on the federal credit to reduce overall rehabilitation project costs. With the federal credit, the taxpayers can recoup some development costs within a year, while the Indiana credit requires waiting for 10 years for any savings. Additionally, the project cap reduces the benefit for large projects.

The recent legislation expiring the tax credit and replacing it with a grant will provide flexibility to the General Assembly as it relates to the maximum exposure related to encouraging the historical rehabilitation investment in Indiana. Depending on the new project cap guidelines set by OCRA, the taxpayers may be able to immediately get the full 20% benefit up to the appropriation for the year.

Residential Historic Rehabilitation Credit (IC 6-3.1-22)

Tax Incentive Description

The Residential Historic Rehabilitation Tax Credit was established to encourage the rehabilitation or preservation of historic properties that are at least 50 years old and are the primary residences of the taxpayers claiming the credit. The tax credit was effective beginning January 1, 2002, and has no expiration date.

The credit equals 20% of the qualified project cost, as approved by the Office of Community and Rural Affairs (OCRA). A taxpayer may claim the credit against the individual's AGI tax liability in the year in which the taxpayer completes the preservation or rehabilitation project. The aggregate amount of credits that may be approved is capped at $250,000 per fiscal year.

To qualify for the credit, a taxpayer must meet all of the following conditions:

- The property is located in Indiana, is at least 50 years old, and is owned by the taxpayer.
- The property is listed on the Indiana Register of Historic Sites and Structures.
- The OCRA approves the preservation or rehabilitation plan, and the work that is the subject of the credit substantially complies with the plan.

- The work must be completed within two years from the time construction begins. However, if the project is planned for completion in phases, it may be completed within five years.
- The historic property is the taxpayer's primary residence.
- Qualified preservation or rehabilitation expenditures exceed $10,000.

Qualified expenditures include expenditures for preservation or rehabilitation of a structure that enables the structure to be principally used and occupied by the taxpayer as the taxpayer's residence. Qualified expenditures do not include costs incurred to acquire a property or an interest in a property, pay taxes due on a property, enlarge an existing structure, pay realtor's fees, pay paving and landscaping costs, or pay sales and marketing costs.

The credit may be recaptured if the property is transferred within five years of completion of the certified preservation or rehabilitation work or if additional modifications that do not meet the OCRA's standards are made to the property within five years.

Unused amounts of the credit may be carried forward for up to 15 years. The credit is nonrefundable and may not be carried back. To file a claim for this credit, the taxpayer is required to submit a copy of the certificate from the OCRA verifying the amount of eligible credit for the taxable year.

When the credit was enacted, it was administered by the Division of Historic Preservation and Archeology within the Department of Natural Resources (DNR). The OCRA now administers the credit, with assistance from the DNR. This change was effective January 1, 2015.

Tax Incentive Claims

Table 37 reports the claims history for the credit since 2004 and compares it with the amount of qualified rehabilitation costs approved by the DNR. In general, the number and amount of claims has increased over time. Claim amounts increased significantly in 2007 and 2008. In 2009, the amount of credits declined, but has steadily increased since then. Qualified rehabilitation costs have historically fluctuated from year to year. The patterns in credit claims and project costs may differ because taxpayers can carry forward unused credits.

An average of 112 taxpayers claimed the credit annually between 2005 and 2013, and the average amount of claims was about $172,610 each year. Over $1.5 M was claimed during this period. Tax year 2012 was the only year in which the aggregate credit amounts reached the annual limit. In 2013, claims nearly reached the limit.

Table 37: Residential Historic Rehabilitation Credit Claim History

Tax Year	Individual Income Tax					
	Filers Claiming Credits	% Change	Credits Claimed	% Change	Average Credit Claimed	Qualified Rehabilitation Costs
2004	0		$0		0	$768,136
2005	51		99,407		1,949	466,908
2006	48	-5.9%	68,817	-30.8%	1,434	1,275,677
2007	58	20.8%	125,503	82.4%	2,164	347,157
2008	133	129.3%	232,793	85.5%	1,750	921,758
2009	97	-27.1%	159,410	-31.5%	1,643	803,599
2010	97	0.0%	167,469	5.1%	1,726	1,689,968
2011	158	62.9%	200,407	19.7%	1,268	1,414,697
2012	203	28.5%	250,000	24.7%	1,232	703,403
2013	159	-21.7%	248,837	-0.5%	1,565	764,127

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

In tax year 2012, over half (53%) of the credit amount was claimed by taxpayers with $100,000 or more in federal AGI (Table 38). This income group represents only 16% of all taxpayers claiming the credit and 12% of all Indiana AGI taxpayers.

Table 38: Income Distribution of Residential Historic Rehabilitation Credit Claims for Tax Year 2012

Federal Adjusted Gross Income	Total Number of Returns	Number of Credit Claims	Credit Amount	% of Total Number of Returns	% of Number of Credit Claims	% of Credit Amount
Under $1	32,528	0	$0	1.12%	0.00%	0.00%
$1 Under $25,000	1,181,959	68	22,042	40.64%	34.52%	9.04%
$25,000 Under $50,000	693,634	48	29,064	23.85%	24.37%	11.92%
$50,000 Under $75,000	403,638	25	31,347	13.88%	12.69%	12.86%
$75,000 Under $100,000	257,137	22	32,719	8.84%	11.17%	13.42%
$100,000 Under $150,000	212,016	17	35,679	7.29%	8.63%	14.64%
$150,000 Under $200,000	60,891	8	16,056	2.09%	4.06%	6.59%
$200,000 Under $500,000	52,942	7	55,490	1.82%	3.55%	22.76%
$500,000 or More	13,369	N/R	21,364	0.46%	0.00%	8.76%

Includes IT-40 and IT-40EZ
Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Tax Credit Awards

Tables 39a and 39b show the counties in which the largest number of approved projects occurred, as well as the counties in which the greatest amount of credits were awarded. Between 2002 and 2015, the DNR certified a total of 203 projects in 34 counties, with a

total qualifying investment of $11.2 M. The average cost per project is $55,147, and the average credit per project is $11,029.

Table 39a: Top Ten Counties by Number of Projects Certified Between 2002 and 2015

County	Number of Projects	Qualified Rehabilitation Costs	Tax Credit Amount
Marion	72	$4,739,344	$947,869
Allen	17	664,520	132,904
Floyd	15	369,047	73,809
Jefferson	11	453,319	90,664
Elkhart	9	195,211	39,042
Montgomery	9	711,594	142,319
Clinton	7	131,900	26,380
St. Joseph	7	139,978	27,996
Tippecanoe	6	506,466	101,293
Wayne	6	235,844	47,169

Table 39b: Top Ten Counties by Tax Credit Amount (Projects Certified Between 2002 and 2015)

County	Number of Projects	Qualified Rehabilitation Costs	Tax Credit Amount
Marion	72	$4,739,344	$947,869
Montgomery	9	711,594	142,319
Allen	17	664,520	132,904
Bartholomew	N/R	585,867	117,173
Wabash	N/R	550,579	110,116
Tippecanoe	6	506,466	101,293
Jefferson	11	453,319	90,664
Floyd	15	369,047	73,809
Johnson	N/R	250,047	50,009
Cass	N/R	240,777	48,155

N/R = Five or fewer filers, count not reportable.

Source: Raw data provided by Department of Natural Resources, data analysis by the Office of Fiscal and Management Analysis.

Less than 3% of claimants had a single-year tax liability greater than the average project award. Therefore, almost all claimants must carry forward unused credits in order to claim the entire award amount. The average annual tax liability of credit recipients was $2,526 in tax years 2005 through 2013. For 39% of the claims, the credit eliminated the taxpayer's state tax liability. Considering the mean credit per project and the mean tax liability, the average recipient could claim the credit for five years before claiming the entire award. Of the 691 taxpayers claiming the credit from 2005 to 2013, 23% claimed the credit in multiple years. (See Table 40)

Table 40: Residential Historic Rehabilitation Credit's Impact on State Tax Liability

Tax Year	Tax Liability Before Credits	Total Credit Claims	Reduction in Tax Liability
2005	$123,582	$99,407	80.4%
2006	110,654	68,817	62.2%
2007	207,669	125,503	60.4%
2008	353,081	232,793	65.9%
2009	330,435	159,410	48.2%
2010	253,289	167,469	66.1%
2011	340,510	200,407	58.9%
2012	422,360	250,000	59.2%
2013	399,506	249,686	62.5%

Source: Raw data provided by Department of State Revenue, data analysis by the Office of Fiscal and Management Analysis.

Effectiveness of the Tax Incentive

The following sections discuss different approaches for analyzing the effectiveness of the Residential Historic Rehabilitation Tax Credit. Evidence from credit claims data, property tax data, and research does not point to a clear conclusion regarding the effectiveness of the credit in encouraging the rehabilitation of historic homes. However, the following points provide some insight.

- Credit usage is low.
- The average credit granted per project is over four times greater than the average state tax liability of a credit recipient.
- Researchers have found that historic designation and preservation often have a positive effect on property values.
- Property values of credit recipients in Indiana do not always increase or grow faster than comparable properties after completion of historic preservation work.
- Surveys of historic rehabilitation credit recipients in other states indicate that state tax credits are important in property owners' decisions to undertake historic rehabilitation projects.

Impact of Historic Rehabilitation on Property Values

Researchers have found that historic designation and preservation activities have a positive effect on property values. A study by Cyrenne, Fenton, & Warbanski (2006) examined characteristics that affect property values of historic and nonhistoric buildings. Controlling for other factors that impact property value growth, the research suggested that historic designation was associated with higher assessed values (AV) for some buildings. In addition, the study suggested that renovation of historic buildings was a factor in the change in AV of those buildings. However, the impact was not as great as might be expected. The researchers estimated that every $1 of expenditures on rehabilitation leads to an increase in AV of approximately $0.33.

A study by Leichenko, Coulson, & Listokin (2001) examined the effects of historic designation and rehabilitation on property values in several Texas cities. The researchers estimated housing prices in historic districts and comparable neighborhoods not designated as historic districts. The study's findings suggest that in general, historic preservation is associated with higher property values. In the study's sample, historic designation was associated with an increase in AV of 5% to 20%.

Based on these findings, it was hypothesized that measuring the change in property value following a rehabilitation project would be one way to quantify the benefit a recipient receives from his or her investment. Unlike the Historic Rehabilitation Tax Credit for income-producing properties, the benefits of historic rehabilitation to a taxpayer claiming the residential credit could be mostly nonmonetary. For example, a person claiming the tax credit is prohibited from selling the house for five years after completion of the rehabilitation work, so he or she does not receive an immediate monetary benefit like a

commercial recipient would in the form of rental income. A taxpayer might undertake a residential historic rehabilitation project to increase the utility or enjoyment of his or her home or to simply preserve the historic quality of the building.

To measure the impact of the credit, we examined a sample of properties that was approved for the credit in 2009. The analysis compared AV before and after completion of historic rehabilitation work. For the sample of 15 properties, the average qualified rehabilitation cost was $39,156 and the mean tax credit award was $7,831. The change in AV (in 2009 dollars) from 2009 to 2015 was calculated. In the sample, the average homestead's AV decreased by 1.5% during this period. Only six properties in the sample experienced an increase in AV during this period, and nine properties experienced a decrease in AV. Of the properties experiencing an increase in AV after the historic rehabilitation work, four experienced an increase in AV that was greater than the net cost of the historic rehabilitation.

Due to the mixed results of this analysis, we further examined the credit recipients' property values. A sample of 15 homesteads certified for the credit between 2005 and 2009 was compared to other nearby residential properties. Of these properties, 7 experienced either growth in AV that was less than the neighborhood average or a decrease in AV that was greater than the neighborhood average. The average change in AV for historic properties was 4.8%, while the average change in AV for other residential properties in the same neighborhoods was 9.6%.

Unlike the studies by Cyrenne et al. and Leichenko et al., the analysis we performed did not control for other factors that may be influencing AV in addition to historic rehabilitation. However, the analysis presented here suggests that receiving the credit does not always have an impact on property values.

Credit Recipient Feedback

Surveys of historic rehabilitation tax credit recipients in other states suggest that the credits have an impact on individuals' decisions to do historic rehabilitation work. A study of Maryland's historic rehabilitation tax credit found that 62.4% of residential applicants would not have attempted historic rehabilitation if the tax credit was not available (Cronyn & Paull, 2009).

In addition, a survey of all property owners and developers who received Virginia's historic rehabilitation tax credit found that nearly all respondents thought the tax credit was "very important" (82%) or "somewhat important" (13%) in their decision to complete the project. The majority (54%) of respondents reported that they would not have rehabilitated their historic property if they had not been approved for the tax credit. What's more, 31% would have done less rehabilitation work without the credit. The surveys indicate that state tax credits, especially for residential projects, may encourage rehabilitation of historic buildings that would not have otherwise been done (Accordino & Fasulo, 2014).

Conclusion

Although the usage of the credit is relatively low, the credit has a potentially significant impact on the individual taxpayers claiming it. The average credit granted per project is over four times greater than the average state tax liability of a credit recipient. In other states, survey responses suggest that state tax credits are significant factors in taxpayers' decisions to complete historic rehabilitation work. In addition, the research by Cyrenne et al. and Leichenko et al. suggests that historic rehabilitation increases AV. Results of the AV analysis we performed are mixed regarding the potential for the credit to encourage rehabilitation of historic residences because of a positive impact on property values. The credit does not appear to reduce the cost of a project enough to cause a homeowner to have a positive return on investment in terms of property value. Therefore, it appears that increased property value may not be the driving force behind a taxpayer's decision to complete a rehabilitation project in his or her home.

Rehabilitated Property Deduction (I.C. 6-1.1-12-22)

Effectiveness of Tax Incentive

The rehabilitated property deduction likely has little to no impact on the volume of rehabilitation projects taking place in Indiana. This conclusion is based on:

- The expected cost savings and impact on return on investment from the deduction.
- The number of claims for the deduction.

Background

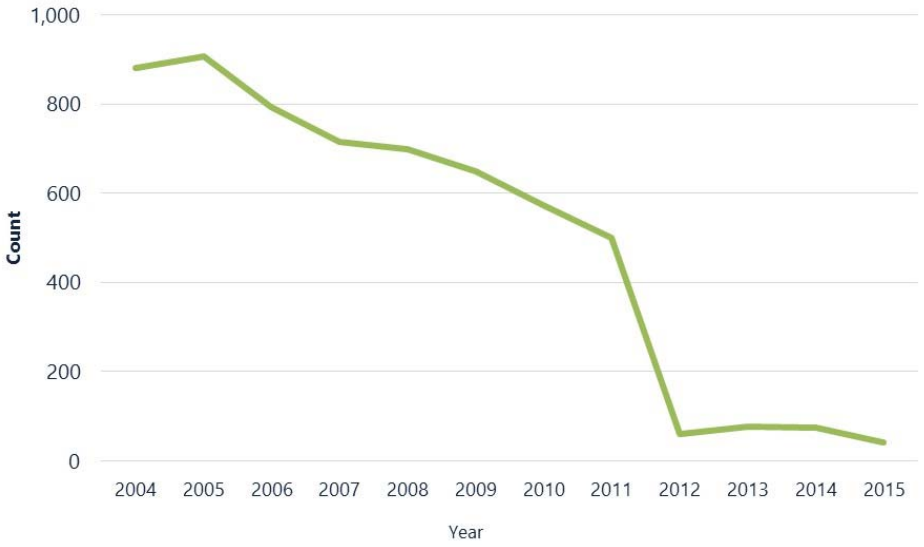
The Rehabilitated Property Deduction was established as an incentive to repair, replace, or improve structures over 50 years old. In order to receive the deduction, the owner must have paid at least $10,000 for the rehabilitation of the structure and the structure must be at least 50 years old

The owner is entitled to a property tax deduction equal to 50% of the increase in assessed value resulting from the rehabilitation of a building or structure, thus lowering the property tax amount for that property. The deduction is available annually for a five-year period following the application for the deduction. Beginning July 1, 2015, a county, city, or town may allow the deduction for up to seven years for property that was determined to be abandoned or vacant. For a single-family dwelling unit, the maximum deduction for a particular year is $124,800. For any other type of property, it is $300,000. In order to receive the deduction, the taxpayer must file a form with the county auditor.

Tax Incentive Claims

Figure 19 shows the claim count of rehabilitated property deductions from 2008 to 2015. There appeared to be many more instances of companies buying a large number of properties for the purpose of rehabilitating them in earlier years of the data set than in the later years. Since these companies would buy many properties at a time, a decrease in the number of these companies that might specialize in home rehabilitations might explain some of the decrease observed in the claim count over time.

Figure 19: Rehabilitated Property Deduction Claim Count



Source: Office of Fiscal and Management Analysis Property Tax Database

Data suggest from 2008 to 2015 there were a total of 1,020 properties that received the rehabilitated property deduction in at least one year. These deductions totaled over $162 million in assessed value. The deductions resulted in approximately $5.2 million in tax savings, not taking into account circuit breakers. Table 41 shows some basic statistics regarding the claims for the rehabilitated property deductions.

Table 41: Rehabilitated Property Deductions

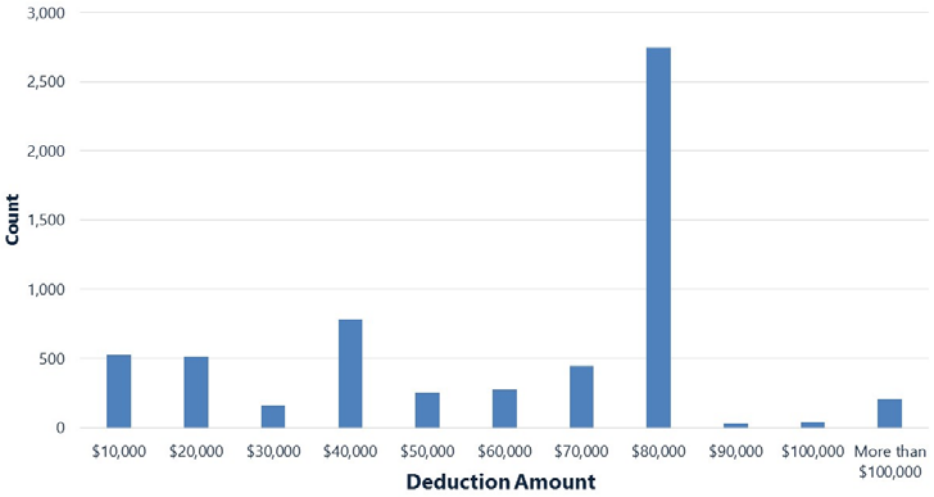
Mean Property Tax Savings Per Rehabilitation	$5,052
Mean Number of Years A Parcel Receives a Deduction	2.62
Mean Deduction Amount	$60,682
Median Deduction Amount	$74,880
Minimum Deduction Amount	$20
Maximum Deduction Amount	$295,920

Source: Office of Fiscal and Management Analysis Property Tax Database

Circuit breaker impacts were not calculated in the average property tax savings. This means the actual mean amount saved on property tax bills is likely lower than the value above.

The average property tax savings per rehabilitation project is $5,052 with the average deduction totaling $60,682. While the deduction may be taken for up to 5 years, the mean length is actually less than half that at about 2.6 years. Overall, the deduction amounts exhibit significant variation as indicated, in part, by the spread in the minimum and maximum deduction values. To look at this on a more detailed level, Figure 20 illustrates the distribution of the exemption amounts.

Figure 20: Rehabilitated Property Deduction Amounts



Source: Office of Fiscal and Management Analysis Property Tax Database

By far the most frequent deduction amount was between $70,000 and $80,000. Many of the deductions in this value range were given to a large number of parcels owned by one company from 2008 to 2010 in St. Joseph County. Without the deductions from St. Joseph County, the deduction amounts vary more. The main driver of the data variability is the size of the property, which can vary from one family dwelling unit, to plausibly hundreds of dwelling units in an apartment, to an industrial facility.

An examination of the property use codes revealed what property types, such as single-family homes, apartment buildings, or industrial facilities received the deduction. The initial property use code on record for the property was used to determine the property type. Some of these codes changed over time, but the majority of them stayed the same. This analysis showed that over 80% of the properties were one or two family homes, just 1.4% were apartment buildings, and 6% were industrial buildings.

Evaluating the Tax Incentive Based on Cost Savings and Return on Investment

One way to determine the effectiveness of this deduction is to examine how it would impact taxpayers in various scenarios. Two hypothetical scenarios were used to determine if the deduction actually incentivizes action.

Scenario 1

The first scenario is that of a homeowner who wants to remodel a part of his home. Approximately 37% of the properties that first received the deduction in 2014 were owner-occupied homes, so this scenario fits over a third of the properties that received the rehabilitated property deduction. It is assumed the owner has no intention of selling the home in the near future. In this scenario, we assume that for every dollar invested in a remodel, less than $0.70 is gained in assessed value. This value is calculated using information from the 2015 Cost vs. Value Report (2015), an annual report by REALTOR Magazine and the National Association of REALTORS. The report showed the nationwide average of the value gained from remodeling per dollar of remodeling cost for every year since 2003. The average of these yearly values was $0.695.

The tax rate for this scenario is set at $2.19 per $100 of assessed value, which was the average rate for homesteads in 2014. The home before the remodel was assumed to have an assessed value of $80,000. The homeowner spends $28,777 on the project. After the project, the assessed value is assumed to have increased by $20,000 to reach $100,000. Over five years, this increase in assessed value will cause the property taxes on the home to increase by just under $440 a year, or $2,190 over the five-year time period. The deduction saves the taxpayer half this amount, approximately $1,095 over the five-year time period. The percent of the total cost saved by the deduction is calculated below in Table 42.

Table 42: Rehab Property Scenario 1: Homeowner Remodels Their Home

	Without Deduction	With Deduction
Estimated Project Cost	$28,777	$28,777
Plus Property Tax Increase over 5 Years	$2,190	$2,190
Total Cost	$30,967	$30,967
Property Tax Reduced by Deduction over 5 Years	($0)	($1,095)
% of Total Cost Reduced by Deduction	0	3.54%

The cost reduction of 3.5% is relatively small, particularly when one considers that the savings are spread equally over a five-year period. This does not make it any easier in the present for the homeowner to finance the project, but rather reduces the future increase in property taxes. The homeowner spends more money on completing the project ($28,777) than the assessed value increases ($20,000). This means if the home is ever sold, the project would not recoup the costs of the project. The property tax savings in the future are unlikely to persuade a homeowner in this scenario to do a project he would not have done otherwise.

Scenario 2

The second scenario (Table 43) is that of a property investor who buys a dilapidated two-family home in need of a major overhaul. Since the investor is buying a home in greater need of improvement, he will receive a different return than the homeowner who is doing a basic remodel. According to RealtyTrac (2015), the costs incurred from flipping a home

are on average 20% to 33% of the value of the home after the repair and remodel. We use the midpoint, 26.5%, to estimate the assessed value of the home after the repair and remodel. For this scenario, the seller expects to own the house for one year before finally being able to sell it for a profit a year later. Note that most "home flippers", or people who buy dilapidated homes, fix them up, and sell them for a profit, do so in a much faster manner. Since 2000, the average nationwide time between purchase and sale of a flipped home has been less than 200 days (RealtyTrac, 2015). If the flip of the home were to occur on this timeframe, the investor would not need this deduction because they would not pay property taxes.

The property tax rate is the same as in the previous example, $2.19 per $100 of assessed value. In this scenario, the two-family home is purchased at assessed value, $70,000. The investor puts in a little over $31,800 worth of work into the home, but the home increases in value by $50,000, bringing the total assessed value up to $120,000. This increase in assessed value increases the property tax bill by $1,095. The deduction lowers this cost by half. In the table below, the Return on Investment (ROI) is calculated without the deduction and with the deduction. The ROI is ratio of the net gain from investment to the cost of investment.

Table 43: Rehab Property Scenario 2: Investor Purchases a Home

	Without Deduction	With Deduction
Assessed Value After Rehab	$120,000	$120,000
Purchase Price	($70,000)	($70,000)
Estimated Project Cost	($31,800)	($31,800)
Property Tax Increase Caused by Increase in Assessed Value Over 1 Year	($1,095)	($1,095)
% of Total Cost Reduced by Deduction	0	3.54%
Property Tax Reduced by Deduction over 1 Year	$0	$547.50
Total Rehab Profit	$17,105	$17,653
Total ROI over 1 Year	0.166	0.172

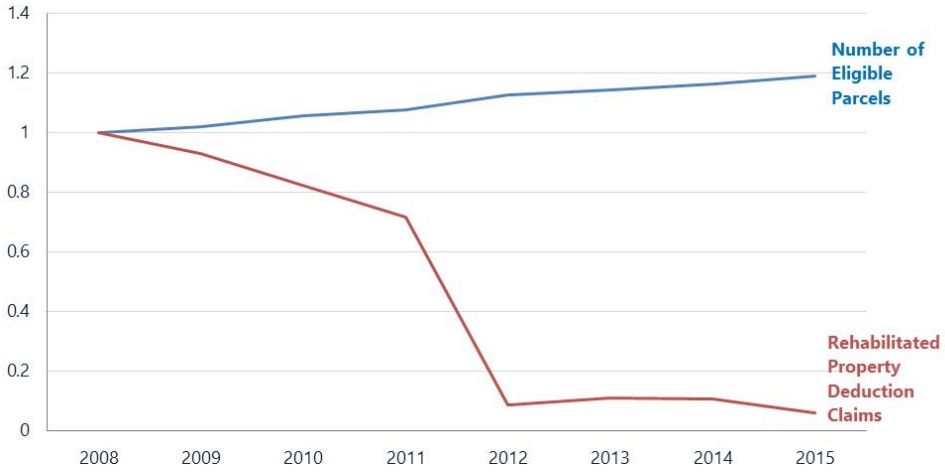
In this case, the ROI only increased by a miniscule amount, and would not have an impact on the investor's decision to do the home rehabilitation. Other scenarios run with slightly different parameters but with the investor holding onto the property for one year show that the ROI is not changed much with the deduction. However, there was one scenario in which the investor held onto the property for five years (and would certainly be renting out the property for those five years) that appeared to make the difference in ROI with and without the deduction larger. For instance, when keeping all the parameters the same as above except changing the number of years from one to five, the ROI without the deduction changed to 0.10, while the ROI with the deduction changed to 0.14. Under the right set of circumstances, there could be a big enough difference to possibly encourage the investor to do a project they might not have done without the deduction.

Overall, there appears to be only one very narrow scenario in which the deduction could possibly act as an incentive. It involves a property investor flipping a home, keeping it for multiple years while renting it out, and then selling it later for a profit. Furthermore, in order for the deduction to actually encourage the investor, the ROI without the deduction must be low enough to make the investor decide not to do the project in the first place. Otherwise, the deduction is just saving the investor money on a project they were going to do regardless. The data suggest that in the vast majority of cases, the deduction is either going to save owner-occupied households money on a project they were doing for nonmonetary reasons, or save investors money on a project they would have done even without the deduction.

Evaluating the Tax Incentive Based on the Number of Properties Receiving the Exemption

From 2008 to 2015, data suggest there were a total of 1,020 properties that received at least one residential rehabilitation deduction. The property tax data also shows that in 2015 there were 1,086,982 properties that could have qualified for the deduction based on age if the owners had chosen to complete a renovation. This means less than 1% of the properties that are eligible for the rehabilitated residential property deduction this year have actually received the deduction since 2008. Clearly, the deduction is not incentivizing many property owners to do rehabilitation projects.

Figure 21: Growth in Deductions and Eligible Parcels Since 2008



Source: Office of Fiscal and Management Analysis Property Tax Database

Another way to see if the incentive is effective is to see if the growth in the number of rehabilitations taking place from year to year is keeping pace with the growth in the number of properties that are 50 years old, and thus eligible for the deduction. Figure 21 shows the growth of both the number of parcels that have buildings that are 50 or more years old and the growth in the number of deduction claims each year. The 2008 value is the base year for both values and is equal to 1 for each. Any value greater than 1 represents

growth over the base year, while a value smaller than 1 is a reduction. While the number of eligible parcels has steadily increased, the number of claims each year has decreased dramatically. Even as more opportunities to use the deduction rise, it is used less frequently.

Conclusion

The property tax savings produced by the rehabilitated property deduction is unlikely to make a homeowner do a remodeling project he would not have done without the deduction. Even in the case of a property investor flipping a home, the analysis showed the deduction would rarely push the investor to do a rehabilitation project he would not do otherwise. Furthermore, less than 1% of the properties that were qualified for the deduction based on age had received the deduction in any year since 2008. As more properties have become eligible for the deduction, there has been a decrease in the number of claims. All of this shows that the rehabilitated property deduction likely does not encourage property rehabilitation.

Rehabilitated Residential Property Deduction (I.C. 6-1.1-12-18)

Effectiveness of Tax Incentive

The rehabilitated residential property deduction likely has little to no impact on the volume of residential rehabilitation projects taking place in Indiana. This conclusion is based on:

- The expected cost savings and return on investment
- The number of claims for the deduction

Background

The rehabilitated residential property deduction was created to encourage the replacement, improvement, or repair of inexpensive or dilapidated residential property. The deduction only applies to property in which the assessed value of the improvements prior to the rehabilitation is:

- Less than or equal to $37,440 for a single-family dwelling.
- Less than or equal to $49,920 for a two-family dwelling.
- Less than or equal to $18,720 per dwelling unit for a dwelling with more than two family units.

The deduction reduces the net assessed value of the property, thus lowering the property taxes, and is available annually for five years after the application for the deduction. Beginning July 1, 2015, a county, city, or town may by ordinance allow the deduction for up to 15 years for property that was determined to be abandoned or vacant. The deduction amount is equal to the lesser of:

- The total increase in assessed value resulting from the rehabilitation; or

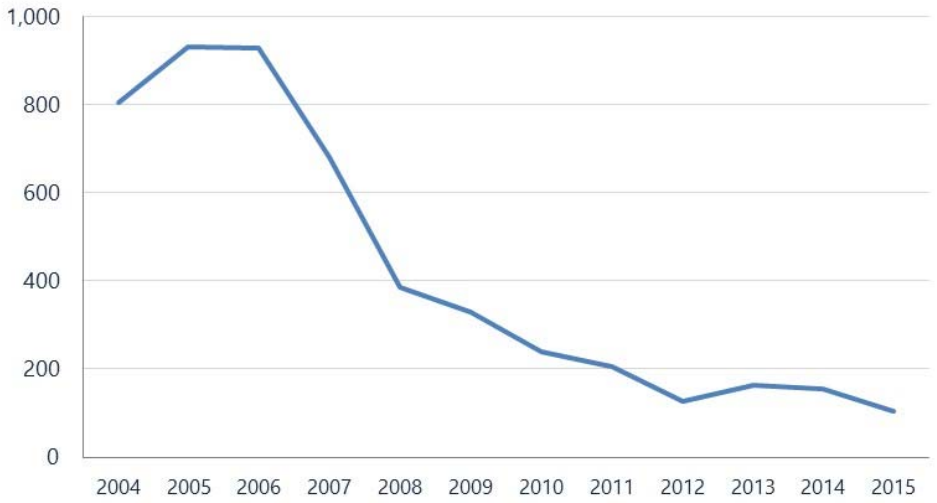
- $18,720 per rehabilitated dwelling unit

In order to receive the deduction, the owner must submit a form to his or her county auditor, who then approves the deduction if the requirements are met.

Tax Incentive Claims

Figure 22 shows the claim count of rehabilitated residential property deductions from 2008 to 2015. There appeared to be more companies buying properties for the purpose of rehabilitating them in earlier years of the data set than in the later years. Since these companies would buy many properties at a time, a decrease in the number of companies specializing in home rehabilitations might explain some of the decrease observed in the claim count over time.

Figure 22: Rehabilitated Residential Property Deduction Claim Count



Source: Office of Fiscal and Management Analysis Property Tax Database

Data suggest from 2008 to 2015 752 properties received the rehabilitated residential property deduction in at least one year. These deductions totaled over $65 million in assessed value. By getting the deduction, taxpayers saved approximately $1.5 million on their property taxes over this time period, not taking into account circuit breakers. Table 44 shows some basic statistics regarding the claims for the rehabilitated residential property deduction.

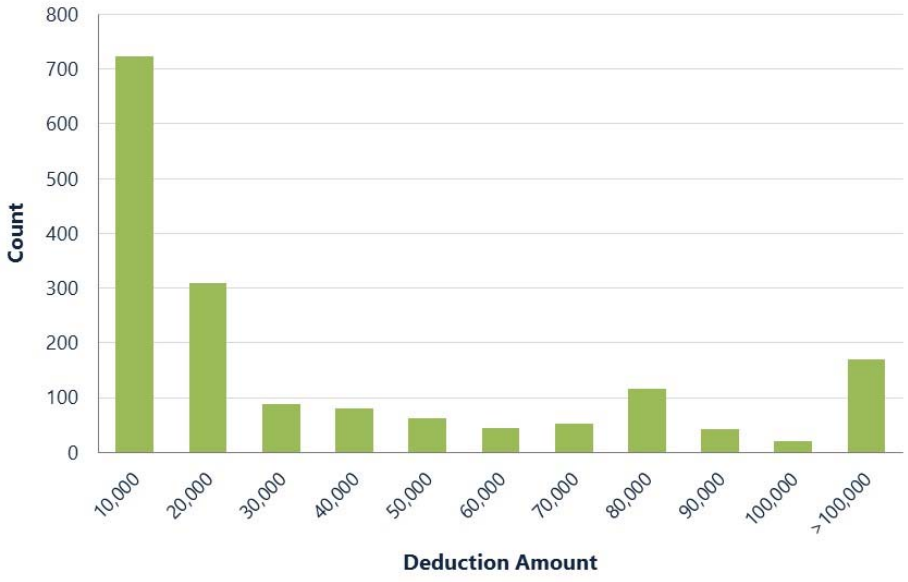
Table 44: Rehabilitated Property Deductions

Mean Property Tax Savings Per Rehabilitation	$1,978
Mean Number of Years A Parcel Receives a Deduction	2.27
Mean Deduction Amount	$38,135
Median Deduction Amount	$13,275
Minimum Deduction Amount	$20
Maximum Deduction Amount	$2,340,000

Source: Office of Fiscal and Management Analysis Property Tax Database

The average property tax savings per rehabilitation project was $1,978 with the average deduction totaling $38,135. While the deduction may be taken for up to 5 years, the mean length was actually less than half that at about 2.3 years. Overall, the deduction amounts exhibited significant variation as indicated, in part, by the spread in the minimum and maximum deduction values. In addition, the mean deduction is almost three times the median indicating that there are a number of relatively high value deductions, presumably from multi-family rehabilitations. To look at this on a more detailed level, Figure 23 illustrates the distribution of the exemption amounts.

Figure 23: Distribution of Rehabilitated Residential Property Deduction Amount



Source: Office of Fiscal and Management Analysis Property Tax Database

The vast majority of the deductions were for less than $20,000, but there are some much higher deduction values that increase the average deduction amount and to a lesser extent the median deduction amount. There are a couple reasons for all the variability in the data. The first is that there were many properties that received a deduction that was greater than the $18,720 per dwelling unit maximum. The second reason is that the size of the property can vary from one family dwelling unit to plausibly hundreds of dwelling units in an apartment.

Evaluating the Tax Incentive Based on Cost Savings and Return on Investment

One way to consider the effectiveness of this deduction is to examine how it would impact taxpayers in various scenarios. Two hypothetical scenarios were used to address the question of whether if the deduction actually encourages rehabilitation projects.

Scenario 1

The first scenario is that of a homeowner who wants to remodel a part of his home. This seems to be a likely scenario based on the properties currently taking the deduction. Two-thirds of the properties that first received the deduction in 2015 were owner-occupied homes. It is assumed the owner has no intention of selling the home in the near future. In this scenario, we assume that for every dollar invested in a remodel, less than $0.70 is gained in assessed value. This value is calculated using information from the 2015 Cost vs. Value Report (2015), an annual report by REALTOR Magazine and the National Association of REALTORS. The report showed the nationwide average of the value gained from remodeling per dollar of remodeling cost for every year since 2003. The average of these yearly values was $0.695.

For this scenario the tax rate is assumed to be at $2.19 per $100 of assessed value, which was the average rate for homesteads in 2014. The home before the remodel has an assessed value of $35,000. The homeowner spends $21,583 on the project. After the project, the assessed value has increased by $15,000 to reach $50,000. Over five years, this increase in assessed value will cause the property taxes on the home to increase by $328.50 a year, or $1,643 over the five-year period. The deduction saves the taxpayer this same amount, keeping the tax bill the same as it would have been had the remodel not been completed. This is shown in Table 45.

Table 45: Rehab Property Scenario 1: Homeowner Remodels Their Home

	Without Deduction	With Deduction
Estimated Project Cost	$21,583	$21,583
Plus Property Tax Increase over 5 Years	$1,643	$1,643
Total Cost	$23,225	$23,225
Property Tax Reduced by Deduction over 5 Years	($0)	($1,643)
% of Total Cost Reduced by Deduction	0	7.07%

Rehab Property Scenario 1: Homeowner Remodels their Home

The cost reduction of 7% is somewhat small, particularly when one considers that the savings are spread equally over a five-year period. This does not make it any easier in the present for the homeowner to finance the project, but rather reduces the future increase in property taxes. The homeowner spends more money on completing the project ($21,583) than the assessed value increases ($15,000). This means if the home is ever sold, the project likely would not recoup 100% of the costs of the project. The property tax savings in the future are unlikely to persuade a homeowner in this scenario to do a project he would not have done otherwise.

Scenario 2

The second scenario is that of a property investor who buys a dilapidated two-family home in need of a major overhaul. Since the investor is buying a home in greater need of improvement, he will receive a different return than the homeowner who is doing a basic remodel. According to RealtyTrac (2015), the costs incurred flipping a home are on average 20% to 33% of the value of the home after the repair and remodel. We use the midpoint, 26.5%, to estimate the assessed value of the home after the repair and remodel. For this scenario, the seller expects to own the house for one year before finally being able to sell it for a profit a year later. Note that most "home flippers", or people who buy dilapidated homes, fix them up, and sell them for a profit, do so in a much faster manner. Since 2000, the average nationwide time between purchase and sale of a flipped home has been less than 200 days (RealtyTrac, 2015). If the flip of the home were to occur on this timeframe, the investor would not need this deduction because they would not pay property taxes.

The property tax rate is the same as in the previous example, $2.19 per $100 of assessed value. In this case, it is assumed the two-family home is purchased at assessed value, $45,000. The investor puts in a little over $25,000 worth of work into the home, but the home increases in value by $50,000, bringing the total assessed value up to $95,000. This increase in assessed value increases the property tax bill by $1,473. The deduction removes the increase in assessed value. In Table 46, the Return on Investment (ROI) is calculated without the deduction and with the deduction. The ROI is the ratio of the net gain from the investment to the cost of the investment.

Table 46: Rehab Property Scenario 2: Investor Purchases a Home

	Without Deduction	With Deduction
Assessed Value After Rehab	$95,000	$95,000
Purchase Price	($45,000)	($45,000)
Estimated Project Cost	($25,175)	($25,175)
Property Tax Increase Caused by Increase in Assessed Value Over 1 Year	($1,473)	($1,473)
% of Total Cost Reduced by Deduction	0	3.54%
Property Tax Reduced by Deduction over 1 Year	$0	$1,473
Total Rehab Profit	$23,352	$24,825
Total ROI over 1 year	0.33	0.35

Rehab Property Scenario 2: Investor Purchases a Home

In this case, the ROI only increased a little, and would probably not have an impact on the investor's decision to do the home rehabilitation unless the project is on the edge of financial feasibility. Other scenarios that were run with slightly different parameters but continue to have the investor hold onto the property for one year show that the ROI is not changed much with the deduction. However, there was one scenario in which the investor held onto the property for five years (and would certainly be renting out the property for those five years) that appeared to make the difference in ROI with and without the

deduction much larger. For instance, when keeping all the parameters the same as above except changing the number of years from one to five the ROI without the deduction changed to 0.26 while the ROI with the deduction remained at 0.35. This is certainly a big enough difference to possibly encourage the investor to do a project they might not have done otherwise.

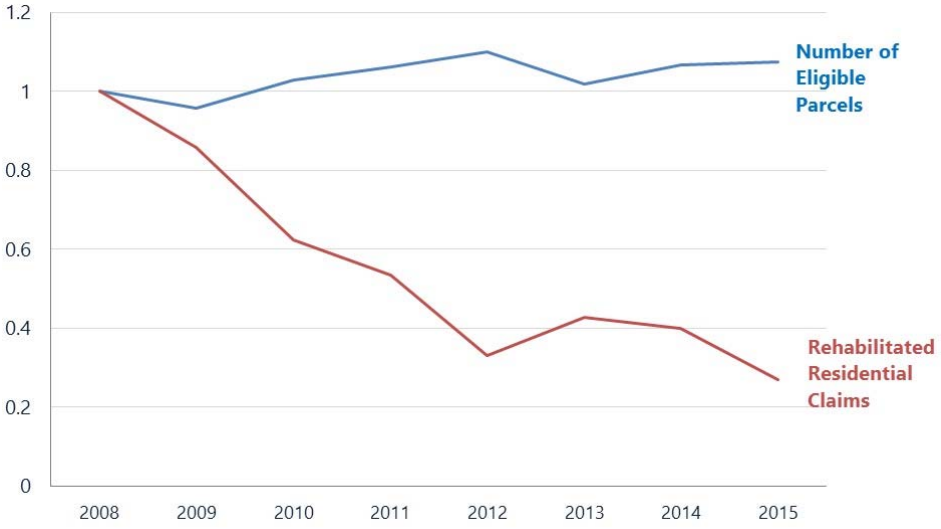
Overall, there appears to be only one very narrow scenario in which it was likely the deduction could act as an incentive. It involved a property investor flipping a home, keeping it for multiple years while renting it out, and then selling it later for a profit. Furthermore, in order for the deduction to actually encourage the investor to do a project, the ROI without the deduction must be low enough to make the investor decide not to do the project in the first place. Otherwise, the deduction is just saving the investor money on a project they were going to do regardless. Data suggest that, for the most part, the deduction is either going to save owner-occupied households money on a project they were doing for nonmonetary reasons, or save investors money on a project they would have done even without the deduction.

Evaluating the Tax Incentive Based on the Number of Properties Receiving the Exemption

From 2008 through 2015, the data suggest there were a total of 752 properties that received a rehabilitated residential property deduction. The property tax data also indicates that in 2015 there were 286,795 properties that could have qualified for the deduction based on the assessed value of the improvements if the owners had chosen to complete a renovation. This means that less than 1% of the properties that are eligible for the rehabilitated residential property deduction this year have actually received the deduction since 2004. Clearly, the deduction is not encouraging many residential property owners, whose properties are otherwise qualified for the deduction, to do rehabilitation projects.

Another way to see if the incentive is effective is to see if the growth in the number of rehabilitations taking place from year to year is keeping pace with the growth in the number of properties that have improvement assessed values that are low enough to make them eligible for the deduction. Figure 24 shows the growth of both the number of parcels that have improvement assessed values that make them eligible for the deduction and the growth in the number of deduction claims each year. The 2008 value is the base year for both values and is equal to 1 for each. Any value greater than 1 represents growth over the base year, while a value smaller than 1 is a reduction. While the number of eligible parcels has remained around the same level, the number of claims each year has decreased dramatically.

Figure 24: Growth in Deduction and Eligible Parcels Since 2008



Source: Office of Fiscal and Management Analysis Property Tax Database

Conclusion

The property tax savings produced by the rehabilitated residential property deduction is unlikely to convince a homeowner do a remodeling project he would not have done without the deduction unless the property is on the edge of financial feasibility. Even in the case of a property investor flipping a home, the analysis showed the deduction would seem to rarely be large enough push the investor to undertake a rehabilitation project he would not do otherwise. Furthermore, less than 1% of the properties that were qualified for the deduction based on the assessed value of the improvements had received the deduction in any year since 2008. While the number of eligible properties has remained level, there has been a dramatic decrease in the number of claims. All of this shows that the rehabilitated residential property deduction likely does not encourage residential property rehabilitation.

Low-Income Dwelling Incentives

The following section discusses two property tax incentives meant to encourage the construction of low-income dwellings. The first is the low income housing exemption. It exempts low income housing that meets certain requirements from property taxes. The second incentive is the low income residence exemption. It exempts property while it is owned by a nonprofit from property taxes if the nonprofit donates or sells the home in a charitable manner. Both incentives interact with numerous federal programs with similar

missions. The analysis shows that neither exemption is likely increasing the volume of low income dwellings being built in the state.

Low-Income Housing Exemption (I.C. 6-1.1-10-16.7)

Tax Incentive Effectiveness

The low-income housing exemption likely has little or no impact on the volume of low-income housing being developed in Indiana. This conclusion is based on:

- The relatively small portion of the total project costs covered by the exemption.
- The requirement that the owner of the property make payments in lieu of taxes.
- The length of the exemption observed in the data.
- The limits of federal funding for the low-income housing tax credit.
- The behavior of the lenders and developers.

Background

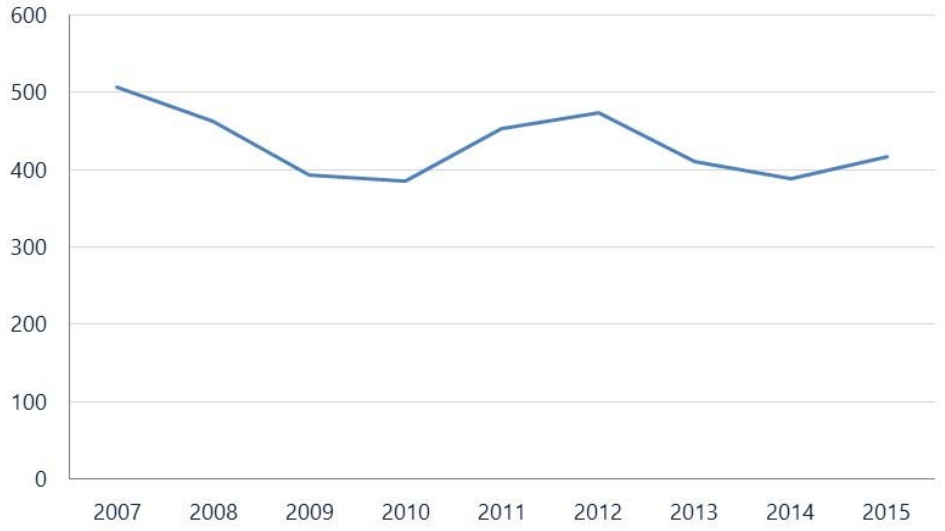
The low-income housing exemption's purpose is to encourage the provision of housing to low-income individuals by exempting the housing from property taxation. In order to receive the exemption, each of the following requirements must be met:

- The improvements on the real property are constructed, rehabilitated, or acquired for the purpose of providing housing to income-eligible persons under the federal low-income housing tax credit program under 26 U.S.C. 42.
- The real property is subject to an extended use agreement under 26 U.S.C. 42 as administered by the Indiana Housing and Community Development Authority (IHCDA).
- The owner of the property has entered into an agreement to make payments in lieu of taxes under IC 36-1-8-14.2 (for municipalities), IC 36-2-6-22 (for counties), or IC 36-3-2-11 (for Marion County).

Tax Incentive Claims

Figure 25 shows the number of low-income housing exemption claims from 2007 through 2015. The annual claim count has varied from just over 500 to just under 400.

Figure 25: Low-Income Housing Exemption Claim Count



Source: Office of Fiscal and Management Analysis Property Tax Database

Data suggest that from 2007 through 2015 there were a total of 934 parcels that received the exemption in at least one year during that time period. These exemptions totaled $1.4 billion in assessed value and resulted in approximately $35.4 million in tax savings to the lender. The tax savings does not take into account property tax circuit breakers or payments in lieu of taxes, both of which would lower the amount saved. Table 47 shows tax savings and exemption amounts for the low-income housing exemption.

Table 47. Rehabilitated Property Deductions

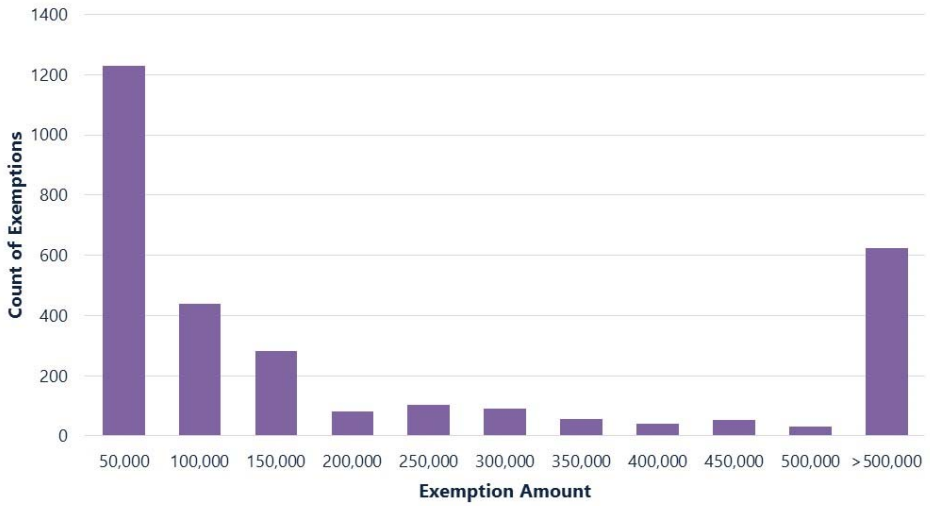
Mean Property Tax Savings Per Low-Income Housing Project	$40,970
Mean Number of Years A Parcel Receives an Exemption	4.51
Mean Exemption Amount	$361,224
Median Exemption Amount	$56,300
Minimum Exemption Amount	$100
Maximum Exemption Amount	$17,881,100

Source: Office of Fiscal and Management Analysis Property Tax Database

There are some properties that have received the exemption for many more years than the mean of 4.5 years and could continue to get the exemption for years to come. Therefore, there may be an underestimation in the average length of the low-income housing exemption.

The large differences among the mean, median, minimum, and maximum exemptions indicate the data are spread very far apart. To look at this on a more detailed level, Figure 26 illustrates the distribution of the exemption amounts.

Figure 26: Distribution of Low-Income Housing Exemption Amounts



Source: Office of Fiscal and Management Analysis Property Tax Database

This chart shows that the vast majority of exemptions are less than $150,000. There is also a significant share of exemptions greater than $500,000, and relatively few that are between $150,000 and $500,000. The variation in the exemption values is caused in large part by differences in the developments of the properties taking the exemption. Some of the lower values are just vacant land that has been purchased for low-income housing purposes but not yet improved. Some of the higher values are large low-income housing developments. The exemptions in the middle include smaller housing projects and projects that are in the process of being built, so they do not have an assessed value as high as a completed housing development.

Evaluation of Tax Incentive Based on Property Tax Savings as a Share of Total Cost

Examining how much is saved through a tax incentive relative to the costs associated with the project can offer insight into the effectiveness of an incentive. IHCDA provided information on the projects that were awarded low-income housing tax credit dollar. Included in this information was the development cost of each project, which averaged just over $8.5 million. This cost was compared to the average yearly property tax savings of all the properties with a use code that indicated it was an apartment. The average property tax savings per property was just over $113,000. Assuming the apartments receiving the low-income housing exemption in OFMA's property tax database are similar to the projects receiving the federal credit from 2013 through 2015, the property tax savings were only about 1.33% of the development costs.

Evaluating the Tax Incentive Based on the Presence of PILOTs

One of the requirements to receive this exemption is that the owner of the property must enter into an agreement to make Payment in Lieu of Taxes (PILOT). The governing body sets the PILOT amount. In Marion County, this is set at a value less than what the taxes would normally be for that property as a way to lower the property taxes on a project. In all other counties, statute states that the PILOT amount must be equal to the amount of property taxes that would have been levied if the property had not received the low income housing exemption. Even if the PILOT amount is significantly lower than what property taxes would be had the property not received the low-income housing exemption, it still takes away some of the tax savings. If the PILOT is equal to what property taxes would be even without the exemption, then this exemption would not encourage the development of low-income housing.

Evaluating the Tax Incentive Based on Length of Exemption

Another variable to consider when analyzing the savings provided by the exemption is the number of years a property receives the exemption. The data suggest properties only receive the exemption for 4.5 years on average. However, there is no statutory limit on the number of years a property can receive the exemption. Properties can receive the federal low-income housing tax credit for 30 years (Khaddurri, Climaco, Burnett, Gould, & Elving, 2012). If the exemption lasted that long, it could amount to a much larger total tax savings that could conceivably contribute to the incentive.

Evaluating the Tax Incentive Based on Limits of Federal Funding

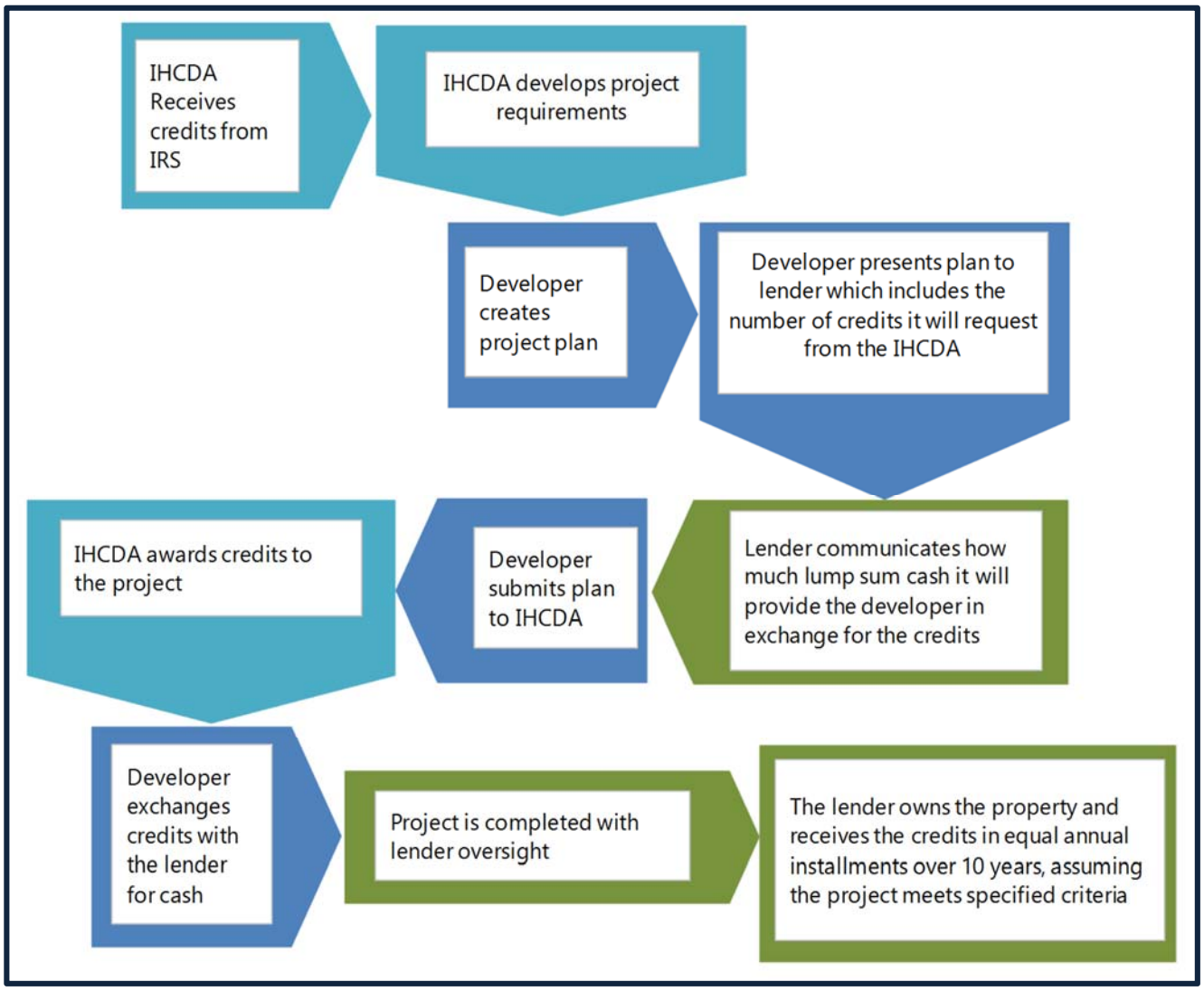
One of the requirements to receive the low-income housing exemption is to receive the federal low-income housing tax credit. The credit, also referred to as the rental housing tax credit program, is an affordable rental housing program in which the IRS issues tax credits to state governments for the purpose of building low-income housing. In Indiana, the IHCDA receives the credit allocation from the IRS, which is worth roughly $15 million a year (Z. Rice, personal communication, August 31, 2015). This rather low level of funding from the federal credit can help fund only a limited number of housing projects regardless of the magnitude of the impact of the exemption and probably helps to explain the low utilization of the low-income housing exemption.

Evaluating the Tax Incentive Based on Lender and Developer Behavior

Before evaluating the impact of the low-income housing exemption on the behavior of the lender and developer, an understanding of the process by which a low-income housing development is awarded federal credits is needed. The flowchart below (Figure 27) illustrates this process (Rice, Sipe, & Rakowski, personal communication, August 6, 2015).

As illustrated in the flowchart, the developer exchanges credits for a lump sum of cash that will allow the developer to complete the project. Since the lender owns the property, the lender will be the beneficiary of the low-income housing exemption.

Figure 27: Decision Process



It is unknown whether the lender passes on some of the savings gained through the exemption to the developer in the form of more money per tax credit dollar. Assuming the lender passes on some of the savings to the developer, this might not necessarily lead to more low-income housing. The developer could use the increase in funding to increase profit margin or perhaps build nicer amenities for the housing. There are only two scenarios in which the low-income housing exemption is an incentive:

- The developer uses the extra capital to build low-income housing with more units than would have been built absent the exemption.
- The developer asks for fewer credits from the IHCDA, thus allowing the IHCDA to fund more projects.

While its effect as an incentive may not be large, it could still be a valuable tool for developers and lenders to use to bridge the gap between the cost of a project and the capital for the project. If a lender and a developer go to the appropriate local government and ask for and receive a low-income housing exemption, then this could allow the lender to offer the developer more money, since the lender knows it will be saving money over time by not paying property taxes. Therefore, projects on the edge of financial feasibility could become possible with the exemption.

Evaluation of Tax Incentive Based on its Contribution Compared to the Federal Credit

There are numerous Federal programs that, at least in part, help create low-income housing. These programs include, but are not limited to, HOME, Section 8 Housing Choice Voucher Program, Section 8 Project Based Rental Assistance, and the low-income housing tax credit. Here, the focus is exclusively on comparing the funding from the low-income housing tax credit to the money saved through the low-income housing exemption. The IHCDA receives approximately $15 million a year from the IRS for low-income housing projects. On average, data suggest the low-income housing exemption saves low-income housing properties just under $4 million a year. While smaller than federal credit, this is still a relatively substantial amount of funding.

Conclusion

The low-income housing exemption accounts for just 1.33% of the total project cost. The exemption also forces the owner of the property to pay PILOTs, which further reduce or eliminate the already small cost savings. However, while the data shows that the average number of years a property receives the exemption is only 4.5, it could theoretically be much longer. This could make the cost savings increase substantially in Marion County. The small annual low-income housing tax credit allocation and the small contribution of the exemption to project costs suggests that the exemption cannot have much impact on the volume of low-income housing in Indiana. Since the exemption is tied to projects funded in part by the federal credit, it is limited by the amount of credits the IRS allocates to the IHCDA. Furthermore, it is unclear if the savings from the exemption would actually go to producing more low-income housing, as it might be used to increase profits or to build nicer amenities for the housing projects.

Low-Income Residence Exemption (I.C. 6-1.1-10-16 (i))

Effectiveness of Tax Incentive

The low-income residence exemption likely has little or no impact on the volume of low-income housing being developed in Indiana. This conclusion is based on:

- There is only a low volume of claims.
- The incentive provides a small amount of property tax savings.
- Many projects take less than a year and therefore are not impacted by this exemption.
- The HOME program has potentially been the driver of nonprofits building low-income homes.

Background

The purpose of the low-income residence exemption is to encourage certain nonprofit organizations to build or renovate homes and give or sell these homes to low-income individuals in a charitable manner. The exemption applies to land or land plus the structure on that land if it meets the following criteria:

- The land is acquired for the purpose of building, renovating, or improving a single-family residence that is to be given away or sold in a charitable manner by a nonprofit organization to low-income individuals who will use the property as a family residence and will not have an exemption for the land.
- The land does not exceed three acres.
- The land is not used for profit while exempt from taxes.
- The owner demonstrates substantial progress and active pursuit towards finishing the renovation, construction, or improvements four years after the acquisition of the property and every year after the initial four-year period.

If the property is not transferred to a low-income individual within eight years, or is transferred to an individual who does not use the property as a residence within one year of the transfer, the nonprofit receiving the exemption must pay back the foregone property taxes plus interest on the property taxes at a 10% rate per year.

Tax Incentive Claims

Figure 28 below shows the number of low-income residence exemption claims from 2008 to 2015. The claim count has had a precipitous decline since 2008. Officials with the Indiana Housing and Community Development Authority (IHCDA) stated that they believed fewer organizations were building homes for low-income families during and after the recession. The data support this hypothesis. In 2008, there were 14 different organizations that had

received the low-income residence exemption on at least one property. In 2015, there were only 5 organizations receiving the exemption.

Additionally, the IHCDA reports that the HOME Investments Partnerships Program (HOME) has had a large decrease in its funding (Rice, Sipe, & Rakowski, personal communication, August 6, 2015). HOME is a federal program that gives states and localities grants for "building, buying or rehabilitating affordable housing for rent or homeownership" (U.S. Department of Housing and Urban Development, n.d.). HOME requires any jurisdiction receiving HOME funds to allocate at least 15% of the funds to community housing development organizations, which are nonprofits that develop low-income housing in their communities. If HOME funding has decreased, it also lowered the amount of funding going to the nonprofits. Consequently, this may have driven down the claim activity observed for the low-income residence exemption.

Figure 28: Low-Income Residence Exemption Claim Count

Source: Office of Fiscal and Management Analysis Property Tax Database

Data suggest from 2008 to 2015 that there were a total of 121 properties receiving 305 exemptions. These exemptions totaled over $3.8 million in assessed value and resulted in $98,524 in tax savings to nonprofit organizations, not taking into account circuit breakers. Table 48 shows tax savings and exemption amounts for the low-income residence exemption.

Table 48: Rehabilitated Property Deductions

Mean Property Tax Savings Per Low-Income Residence	$814
Mean Number of Years A Parcel Receives an Exemption	2.52
Mean Exemption Amount	$12,743
Median Exemption Amount	$5,000
Minimum Exemption Amount	$300
Maximum Exemption Amount	$108,900

Source: Office of Fiscal and Management Analysis Property Tax Database

The average property tax savings per low-income residence was $814, not counting circuit breaker impacts that would likely bring down this value. On average, the low-income residences took 2.5 years to finish. The mean exemption amount is more than double the median exemption amount because there are some very large exemption values relative to most of the exemption values. Both the median and mean exemption seem low for exempting property that includes a home. Very small exemption amounts, such as the $300 seen in the minimum, are vacant land that a nonprofit owns but has not developed. Some of the higher amounts, such as the $108,900 maximum are perhaps for larger homes. The difference between the minimum and maximum is very large, showing there is a wide dispersion of exemption values. This dispersion is caused in large part by differences in the types of properties receiving the exemption.

Evaluating Effectiveness Based on the Number of Claims and Property Tax Savings

In the past eight years, the data suggest that there have only been 121 properties in Indiana that have received this exemption. Since some of these properties were vacant land that was never developed, even fewer homes have actually been built than this figure implies. If the exemption was an incentive to increase the number of nonprofits building homes for low-income families, it has not performed particularly well in this measure. The average property tax savings is very likely too low to encourage development of additional low-income housing. As mentioned previously, the $814 average property tax savings is likely overestimated due to circuit breaker impacts. But when one considers the cost of rehabilitating or constructing a new home, this would likely only be a very small percentage of the total rehabilitation or construction costs.

Evaluating Effectiveness Based on Time it takes Homes to be Built or Rehabilitated

Many project homes will be rehabilitated or built in less than a year. Therefore, the nonprofit organization developing the property would not pay property taxes on the property anyway and would not be impacted by this exemption.

Evaluating Effectiveness by Comparing the Funding from HOME to the Exemption

From 2008 through 2015, the total savings provided by the low-income residence exemption to nonprofits was less than $12,500 per year. In 2015, HOME is budgeted to give Indiana (both the state government and local jurisdictions) nearly $17.5 million (U.S. Department of Housing and Urban Development, n.d.). Even if only the minimum 15% is given to community housing development organizations, this would mean more than $2.6 million will be provided to the nonprofits through the HOME program. Consequently, the HOME program funding potentially is the driver of nonprofits creating affordable housing in lieu of the very small subsidy provided by the low-income residence exemption.

Conclusion

In the past 8 years, only 121 properties have received the low-income residence exemption. When these properties have received the exemption, it is likely making up only a small portion of the total costs. Furthermore, any projects that are done in less than a year will not be impacted by the exemption. Lastly, the HOME program is much larger than the savings generated by the low-income residence exemption and may be the driver of nonprofits building affordable housing. When all of this is considered, it seems the low-income residence exemption does not significantly impact the volume of low-income homes built by nonprofits

Tax Increment Financing (IC 36-7-14 and IC 36-7-15.1)

Impact

After controlling for various characteristics that influence TIF adoption in the first place, we find:

- The average parcel in a TIF area may display gross assessed value (GAV) of approximately $4,500 higher than the average parcel in a similarly situated non-TIF area.
- While GAV of both TIF and non-TIF parcels tends to grow over time, GAV of the average parcel in a TIF area may grow by 0.03% more than its non-TIF counterpart.
- The average business establishment in a TIF area may add 0.7 jobs more than the average non-TIF business establishment.
- TIF does not have a statistically significant impact on employment growth over time.

Background

The first tax increment financing (TIF) area in Indiana was initiated in 1967 according to data provided by local units. TIF is authorized in the Indiana Code for the following purposes: economic development districts (IC 6-1.1-39); airport development zones (IC 8-22-3.5); redevelopment commissions (IC 36-7-14); redevelopment authorities (IC 36-7-14.5); redevelopment of areas in Marion County (IC 36-7-15.1); reuse of federal military bases (IC 36-7-30); development of multicounty federal military bases (IC 36-7-30.5); and certified technology parks (IC 36-7-32). In general, these statutes provide for a local authorizing body (i.e., a redevelopment authority or redevelopment commission) to create an *allocation area* (herein called a TIF area).

TIF areas are designated with the intent of spurring economic improvement characterized primarily by growth in assessed value (AV) of real property and in employment within the TIF area. The tax revenue generated from the base AV of the TIF area (the AV in the area before being designated as a TIF area) continues to be distributed to the local units overlapping the TIF area. However, the tax revenue generated in the TIF area on the AV exceeding the base AV, called the tax increment, is used to construct infrastructure and other improvements and fund some economic development programming. TIF proceeds may be used only for projects within the TIF area or projects outside the TIF area that serve the TIF area. When a TIF area expires, any incremental AV is then added back to the base AV and the tax increment is distributed to the local units overlapping the TIF area.

A TIF area may be established within a blighted area to promote redevelopment. Blight may be characterized by cessation of economic growth and deterioration of improvements and buildings. A redevelopment commission must show that such blight cannot be corrected by regulatory processes in its resolution for establishing an allocation area. Additionally, a TIF area may be established to promote economic development and to

create or retain jobs. A redevelopment commission must show that its proposed redevelopment plan will promote employment opportunities, attract new businesses, or retain or expand an existing business.

TIF proceeds may be used to pay the principal and interest on bond issues; reimburse the city, town or county for its expenditures on local public or infrastructure improvements (e.g., sewer, street or bridge repair, park or sidewalk improvements, traffic control); or directly pay public and private entities for expenses incurred in training employees. TIF proceeds may not be used for the operating expenses of a redevelopment commission, which is in charge of distributing the proceeds. While TIF areas may be created to capture the assessed value ensuing from anticipated private investment in an area, they are more often created to support specific projects.

Descriptive Statistics Based on TIF Management 2013

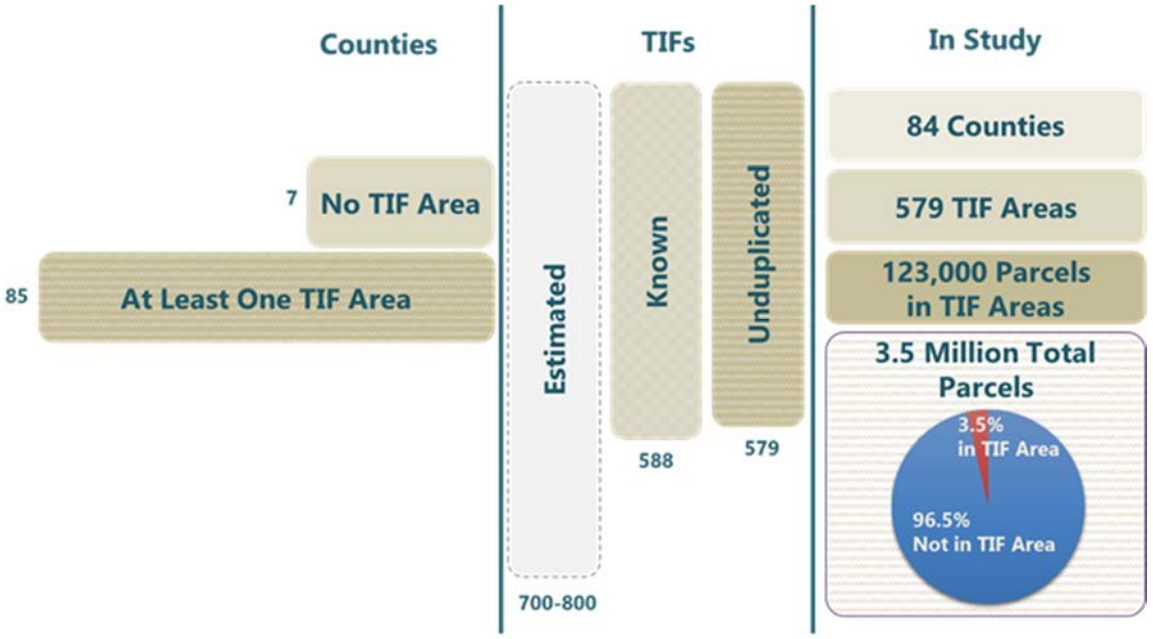
TIF

Parcel-level data on TIF areas in Indiana is provided by TIF Management, a database managed by the Department of Local Government Finance (DLGF). The DLGF began collecting this data in 2012 in compliance with IC 36-7-14-13(e). This statute requires an individual associated with a redevelopment commission (typically the county auditor or clerk-treasurer) to submit the following information: revenues received, expenses paid, fund balances, amount and maturity date for all outstanding obligations, amount paid on outstanding obligations, and a list of all the parcels included in each TIF area. The DLGF recommends using data beginning 2013, as it may be more reliable than the first year due to changes in the application design of and submitters' increased familiarity with TIF Management.

The total number of TIF areas in Indiana may be 700 to 800, although we do not know the exact number due to data discrepancies. There are 85 Indiana counties with at least one TIF area (the following counties currently do not have any: Brown, Fayette, Harrison, Ohio, Pulaski, Switzerland, and Union). Of the 85 counties, 84 have reported some or all of their TIF data (Owen County has not yet reported any parcel-level data to TIF Management).

Approximately 125,000 of the 3.5 million total real parcels in the 84 counties that reported data are located in 588 TIF areas as identified by a majority of the redevelopment commissions. Several local units reported the same parcel number for multiple TIF areas, which is infeasible. A parcel may not appear in more than one TIF area. After dropping duplicate parcel numbers, we analyzed approximately 123,000 parcels in 579 TIF areas, ensuring that a parcel appears in only one TIF area. This should not pose any analytical problems since TIF I.D. numbers are used for identification purposes only. Individual parcel characteristics are thereby unaffected. The following graphic (Figure 29) summarizes the data.

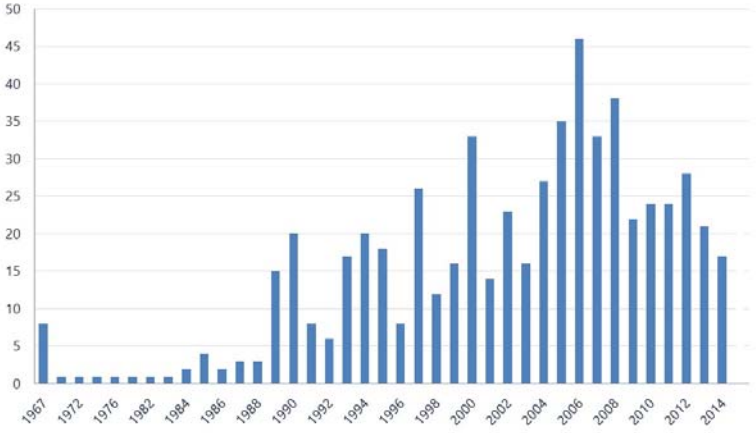
Figure 29: Areas Included in the Study



TIF initiation dates are not currently required by TIF Management. Although the DLGF surveyed this data in 2014, nearly half of the TIF areas did not respond. The Legislative Services Agency (LSA) worked with DLGF to obtain a contact list for all of the TIF areas. As a result, LSA collected data on initiation dates from an additional 80% of the TIF areas that were originally reported to TIF Management. Still, we are missing data from TIF areas that have not yet reported some or any of their parcel-level data.

Figure 30 shows TIF areas initiated by year. The earliest TIF areas were initiated in 1967 by the Gary Redevelopment Commission. Years 2006 and 2008 were most popular for TIF initiation, with 46 and 38 initiations, respectively. TIF areas may have some correlation with U.S. recessions, particularly those of mid-1990, early 2000, and late 2007. The figure indicates that TIF initiation by and large burgeoned immediately before and waned during the onset of those recessions.

Figure 30: TIF Areas by Initiation Year



Gross Assessed Values

Table 49 shows the change in property gross assessed values (GAV) from 2004 to 2013 for TIF and non-TIF parcels. The largest percentage change in GAV for non-TIF and TIF parcels

occurred during 2006 to 2007, the period immediately preceding the Great Recession. The periods from 2008 to 2009 and 2009 to 2010 showed year-over-year declines in GAV for non-TIF parcels but growth for TIF parcels. During the period from 2012 to 2013, non-TIF parcels declined in GAV by approximately 2%, on average, while TIF parcels increased by 1%.

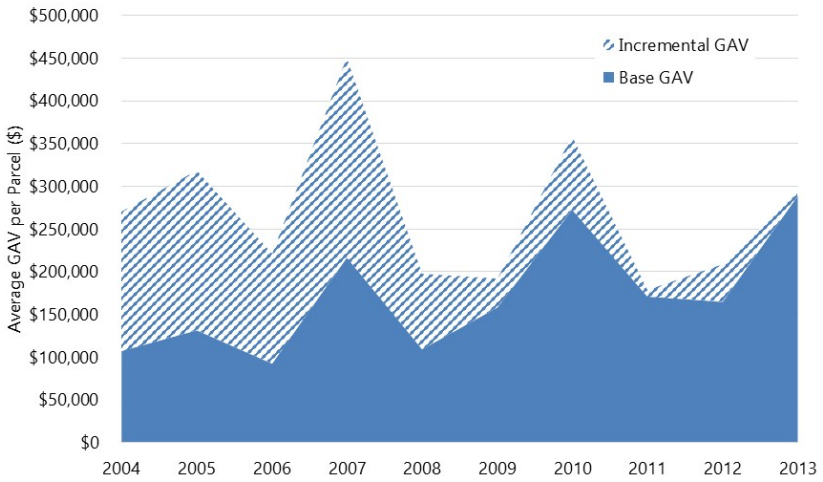
Table 49. Average GAV per Parcel by Year[1]

Year[2]	Non-TIF Areas		TIF Areas	
	Average GAV	Annual Change	Average GAV	Annual Change
2004	$95,632	-	$177,727	-
2005	$95,654	0.02%	$191,632	7.8%
2006	$95,871	0.2%	$195,855	2.2%
2007	$111,703	16.5%	$259,456	32.5%
2008	$112,958	1.1%	$275,172	6.1%
2009	$112,551	-0.4%	$296,630	7.8%
2010	$112,421	-0.1%	$306,698	3.4%
2011	$111,430	-0.9%	$299,369	-2.4%
2012	$111,203	-0.2%	$293,132	-2.1%
2013	$108,813	-2.1%	$289,880	-1.1%

[1]LSA has access to property tax data beginning 2004.
[1]Counties that have not provided parcel-level information to TIF Management were dropped for this analysis.

Figure 31 examines only TIF parcels. Specifically, it shows base and incremental GAV for all real parcels that adopted TIF in a given year from 2004 to 2013. As expected, TIF parcels initiated during 2004 to 2007 have grown more in assessed value than more recently initiated TIFs. The relatively small incremental GAV for TIF parcels initiated in 2011 reflects the reporting of GAV equal to $0 by 85% of those parcels by 2013, when TIF Management was most recently updated. We are unsure whether that could be a reporting error or a majority of the TIF parcels have not grown at all yet. The small incremental GAV for parcels in TIF areas designated in 2013 is attributed to the short timespan between initiation and reporting.

Figure 31: Base and Incremental GAV by Year of TIF Initiation, 2004-2013



Source: Raw data provided by TIF Management, Department of Local Government Finance (DLGF), data analysis by Office of Fiscal and Management Analysis.

While Figure 31 shows the upward progression of GAV since the initiation of a TIF area, Figure 32 shows the average annual change in GAV immediately before initiation and the average annual change in GAV since initiation. We use pay year 2004 to mark the base year of GAV since LSA's property tax database dates back to 2004. Notice how all cohorts, except for 2006, display positive growth prior to initiation. While the earlier cohorts show significantly higher growth after initiation compared to before, more recent cohorts show growth that is not as robust. Particularly for years 2011 to 2013, this could be due to the short timespan between initiation and 2013. As we consider future pay years, TIF areas initiated during 2011 to 2013 may continue to grow.

Figure 32: Average Annual Change in GAV Before and After TIF Initiation

Average Annual Change (2004 to Year Before Initiation)	TIF Initition Year	Average Annual Change (Year After Initiation to 2014)
-2.92%	2006	7.91%
3.67%	2007	7.24%
11.99%	2008	4.53%
4.87%	2009	1.07%
11.76%	2010	3.40%
3.78%	2011	2.79%
8.00%	2012	1.86%

Gross Assessed Values by Land Use

Table 50 shows TIF parcels by property type. The majority of TIF parcels are identified as residential properties, followed by commercial properties. Properties classified as mobile homes and gas or oil are excluded from this analysis because they are unlikely to be included in a TIF area.

Average GAV in 2013 is higher for all property types except residential and agricultural. This could be due to the lower likelihood of TIF areas containing those property types. In contrast, GAV for commercial properties in TIF areas are approximately 2.1 times higher than their non-TIF counterparts, while GAV for exempt and industrial properties are 1.3 and 2.3 times higher, respectively.

Table 50. TIF and non-TIF Parcels by Property Type, 2013

Property type	Non-TIF Parcels		TIF Parcels	
	% Parcels	GAV	% Parcels	GAV
Residential (includes multi- and single-family)	74.6%	$100,841	49.9%	$76,429
Commercial (includes retail)	4.2%	313,706	26.0%	647,150
Exempt	5.1%	88,664	13.4%	111,011
Industrial	0.8%	429,290	6.5%	1,006,810
Agricultural	14.5%	83,822	3.1%	69,236
Other	0.9%	37,130	1.1%	125,107

Employment

While gross assessed values provide some indication of economic growth, an examination of employment may be more appropriate as tax increment financing is often also intended to stimulate job creation. Table 51 presents the monthly average number of jobs per year for TIF and non-TIF firms.

Establishments within TIF areas employed more people on a monthly average than establishments outside of TIF areas over the period 2004 to 2013. The annual employment measures are based on monthly average employment figures. TIF and non-TIF establishments felt the effects of the Great Recession from 2007 to 2009 and reduced their employment accordingly. However, TIF establishments suffered less than their counterparts by about 1% to 6%, on average. Both types currently show growth, although the 2012 to 2013 growth in employment for non-TIF establishments exceeds that of TIF establishments.

Table 51. Monthly Average Jobs per Establishment and Annual Change in Jobs per Establishment by Year

Year	Non-TIF Establishments		TIF Establishments	
	Jobs Per Establishment	Annual Change	Jobs Per Establishment	Annual Change
2004	17.8		23.7	
2005	17.1	-3.6%	23.4	-1.2%
2006	16.5	-3.7%	23.0	-1.9%
2007	15.7	-4.9%	23.2	0.9%
2008	14.6	-6.9%	22.0	-5.2%
2009	13.3	-9.2%	20.2	-8.1%
2010	13.9	4.6%	20.8	2.9%
2011	14.1	1.8%	21.1	1.2%
2012	14.5	2.6%	21.8	3.5%
2013	14.7	1.7%	22.1	1.3%

Table 52 shows the distribution of the monthly average number of jobs per establishment in TIF and non-TIF areas by industry. We examine the distribution of TIF and non-TIF establishments across nine industries. Trade/transportation and information/finance industries are most prevalent among TIF and non-TIF areas. However, the manufacturing industry boasts the highest monthly average number of jobs per establishment in TIF and non-TIF areas, and the educational services/healthcare industry holds the second highest number in TIF areas followed by trade/transportation. The average establishment in a TIF area contains more (or the same number of) jobs than the average establishment in a non-TIF area for every industry except for public administration. In particular, the average jobs per establishment is significantly higher for TIF manufacturing establishments than non-TIF manufacturing establishments.

Table 52. Monthly Average Jobs per Establishment by Industry, 2013

NAICS Code	Industry	Non-TIF Establishments		TIF Establishments	
		% of Establishments	Jobs per Establishment	% of Establishments	Jobs per Establishment
11	Agriculture	1.0%	10.3	0.3%	19.1
21-23	Mining, Utilities, Construction	12.7%	11.2	4.9%	17.0
31-33	Manufacturing	4.4%	34.0	5.9%	62.6
42, 44-45	Wholesale/Retail Trade, Transportation, Warehousing	24.9%	13.3	27.2%	20.8
51-56	Information, Finance, Real Estate, Management, Administrative Support	30.1%	11.4	28.5%	16.7
61-62	Educational Services, Healthcare	9.6%	24.5	9.2%	24.4
71-72	Entertainment, Food Services	9.3%	16.8	16.7%	20.5
81	Other Services	7.9%	10.3	7.3%	11.5
92	Public Administration	0.1%	33.2	0.1%	16.5

Effectiveness of Tax Incentive

Local units adopt TIF to promote redevelopment or spur economic development. Even if TIF adoption does not lead to new economic development as intended, the real estate market may capitalize potential future investment into transaction sales prices of properties both within and near TIF areas. This suggests that while TIF adoption may not lead to economic development immediately, it may positively impact properties both within and near the TIF area, indirectly leading to economic development. There may even be a negative relationship between TIF adoption and economic development, suggesting areas that adopt TIF grow more slowly than their counterparts. In that case, overlapping taxing jurisdictions in Indiana, along with the TIF area itself, would receive less revenue as a result of annual base neutralizations (calculated to prevent annual increases in the tax base due to trending and general property reassessments).

While TIF may be described by these basic tenets, prior research finds inconclusive results. In an attempt to bridge the gap among previous studies, we conduct our own economic analysis and find the impact of TIF is specific to the observed economic development outcome. The table below shows the effect of TIF on GAV and employment given the probability that a parcel will be designated under TIF. That is, we first estimate the probability of TIF adoption and then estimate the effect of TIF on economic development outcomes given that probability for each parcel. The values below refer to the difference between the average TIF parcel and its comparable non-TIF parcel. Comparable non-TIF parcels are identified using various fiscal, economic, structural and Census control variables.

The results are summarized as follows.

Outcome Measure	Average Effect of TIF per parcel or establishment
Gross Assessed Values, 2013	$4,500*
Change in Gross Assessed Values, 2004 – 2013	0.03%*
Employment, 2013	0.7 jobs*
Change in Employment, 2004 – 2013	0.5%

** Impacts are statistically significant.*

After controlling for various characteristics that influence TIF adoption in the first place, we find the average parcel in a TIF area may display GAV of approximately $4,500 higher than the average parcel in a similarly situated non-TIF area. While the GAV of both TIF and non-TIF parcels tends to grow over time, GAV of the average parcel in a TIF area may grow by 0.03% more than its non-TIF counterpart. As for employment, the results suggest that the average establishment in a TIF area may add 0.7 jobs more than the average non-TIF establishment. These three impacts are statistically significant. Finally, TIF does not have a statistically significant impact on employment growth over time.

While the summary statistics presented in Tables 44 to 47 and Figure 32 suggest much higher growth in GAV and employment in TIF areas, they do not control for the socioeconomic, demographic, and policy characteristics that typically influence growth in assessed values and in employment. As such, the summary statistics attribute any differences in economic growth between TIF and non-TIF areas solely to the presence of TIF. In contrast, our econometric analysis controls for the impact of those characteristics on growth differences between TIF and non-TIF areas and isolates the specific impact of TIF on those differences. Consequently, the econometric estimates of the growth rate differences are much lower, which has an important bearing on the "but for" question, which refers to whether economic development would not have occurred "but for" the adoption of TIF. Our econometric estimates suggest that most of the differences between TIF and non-TIF areas in GAV levels, GAV growth, and employment growth are not attributable to the TIF program.

The following sections provide additional background and details of this analysis. First, we evaluate the effectiveness of TIF using scholarly research published in peer-reviewed journals. Then, we analyze the impact of TIF on economic development outcomes using parcel-level TIF and non-TIF data and econometric modeling.

Evaluation of Incentive Based on Research of TIFs

The relationship between TIF adoption and economic development has often been modeled on the premise of the "but for" question. That is, while proponents of TIF claim that economic development would not have occurred "but for" the adoption of TIF, opponents argue the TIF area would have grown anyway. As such, the latter viewpoint questions whether the observed growth would have occurred even in the absence of TIF. The "but for" question is especially relevant for local governments. If economic

development would have occurred without the establishment of TIF and a local government adopts TIF, any growth in property values is not available to the local government establishing the TIF or other local governments that also receive taxes on property located in the TIF.

Much of the literature relevant to TIF relies on the "but for" question. Lester (2014) finds that TIF assignment throughout the city of Chicago fails the "but for" question, as TIF implementation had not resulted in any positive net employment benefits for Chicago's residents. Byrne (2006) discusses the low levels of density within a blighted area of a municipality, where natural growth in property values is likely regardless of the adoption of TIF. In his study, he examines the spatial size of TIF areas and finds that TIF adoption positively influences property value growth. Although he finds that TIF areas grow about 29% greater than their municipalities, he notes the large variation in success across the districts. Specifically, he shows that TIF adoption is most successful in visibly blighted areas where state officials recognize the need for economic improvement.

As TIF areas are generally established by local policymakers with specific goals in mind, there exists an inherent selection bias. Smith (2009) employs a treatment-effects model to test for selection bias and finds that commercial properties located within TIF areas experience higher rates of appreciation than comparable properties in non-TIF areas. Similarly, Carroll (2008) finds that properties located within an active TIF area in Milwaukee, Wisconsin, tend to grow more than properties not exposed to TIF policy at any time over a period of 20 years. However, Dye and Merriman (2000) find that municipalities that adopt TIF may grow more slowly than otherwise if TIF redistributes growth toward blighted areas. Weber et al. (2007) specifically find that single-family homes near industrial TIF areas tend to experience a decrease in the rate of appreciation.

In order to treat selection bias, sound econometric methodology recommends the estimation of TIF adoption prior to the estimation of economic development outcomes. Man (1999) states that controlling for economic development incentives other than TIF helps explain a locality's decision to adopt TIF (Greenbaum and Landers (2014) echo this point in their review of the empirical literature on TIF). She studies Indiana cities and finds that growing cities are not more likely to adopt TIF. Rather, cities tend to compete with each other, providing an impetus for TIF adoption. Similarly, Byrne (2006) finds that TIF adoption among municipalities in the metropolitan Chicago area is the result of competition among neighboring municipalities for private development. Moreover, Warner and Zheng (2013) find that governments that rely more heavily on tax incentives to firms face more competition than governments that rely on other types of incentives. In fact, Warner and Zheng cite the International City County Management Association's (ICMA) report stating that nearly 72% of municipalities surveyed from 2004 to 2009 faced competition from nearby local governments, and nearly 63% faced competition from other local governments within the state.

Our econometric analysis follows Man's (1999) model specification for TIF adoption. The implementation of a policy measure by a taxing jurisdiction often depends on its

neighbors' economic activities. Man controls for this dependence through a binary variable indicating whether a city in the neighboring counties adopted TIF prior to the subject city's decision to adopt TIF. Hicks et al. (2015) make an improvement over Man's simple approach to neighborhood spillovers through their use of a spatial weights matrix allowing for spatial dependence across Indiana counties. However, counties are too large for assessing the impact of TIF on economic development. Instead, parcel-level data is best suited. As such, we make two improvements on prior research: (1) we account for spatial dependence between TIF and non-TIF parcels and (2) we use parcel-level data.

Economic Impact of Tax Incentive

We employ econometric models to estimate the statistical relationship between the presence of TIF and (1) GAV; and (2) employment. We aim to determine whether these economic development outcomes are systematically different between TIF and non-TIF areas. We investigate this by statistically comparing TIF properties and TIF establishments and their similarly situated non-TIF counterparts.

Selection Bias

There exists an inherent selection bias resulting from policymakers' decisions to designate certain areas as TIF areas. There are two primary relationships to consider: (1) adoption of TIF to improve blighted areas through growth in GAV; and (2) adoption of TIF as a result of GAV growth (the same could be said about employment as a measure of economic development). Therefore, we have the following causal relationship to examine:

TIF adoption ⇨ Assessed value growth

Assessed value growth ⇨ TIF adoption

In other words, the causal relationship between TIF adoption and assessed values tends to run both ways, which may lead to estimation bias and invalid estimates if not addressed. Another source of bias relates to the fact that assessed valuation outcomes are essentially "missing" when municipalities do not adopt TIF.

We use the propensity score matching technique to control for selection bias (see Appendix 1 for details). The goal is to essentially equalize TIF and non-TIF areas such that the only observable difference between both types of areas is their TIF designation. We accomplish this in two stages. First, we estimate the probability of TIF adoption. Second, we estimate the effect of TIF on GAV and on employment given the likelihood of TIF adoption.

Estimated Economic Impact

Tables 53 and 54 provide treatment and control effects at the average of each economic development outcome, respectively (see Appendix 1 for estimation results). The treatment

effect refers to the effect of TIF parcels on the outcome, measured by GAV and employment. The control effect refers to the effect of non-TIF parcels on the outcome. The difference between the two effects tells us how much TIF actually contributes to a change in GAV or in employment.

As noted in the relevant literature, the effect of TIF must be interpreted with caution due to the "but for" question. While the average GAV per TIF parcel was $181,000 greater than that of the non-TIF parcel in 2013 (see Table 49), we cannot say that is solely due to the presence of TIF. In other words, we cannot infer that growth would not have happened "but for" TIF. Since we do not know in all cases whether prior economic growth influences the adoption of TIF or TIF adoption spurs economic development, we must control for characteristic differences between TIF and non-TIF areas.

The results suggest that the average TIF parcel tends to experience GAV growth of approximately $4,500 more than non-TIF parcels that exhibit very similar characteristics. This amounts to approximately 4% of the average GAV per parcel (TIF and non-TIF) of $115,000. Clearly, the impact of TIF is much smaller than the descriptive statistics in Tables 48 and 49 and Figure 32 show. This is because we control for fiscal, economic, structural, and Census characteristics.

When analyzing the change in GAV over time, we examine only cohorts that adopted TIF between 1967 (the first year of initiation) and 2004. Adding other cohorts (such as those that adopted TIF more recently) may confound the effect of TIF over time especially since they may not have had much time to grow. The results suggest that over the ten-year period prior to which parcels were designated in a TIF area, both TIF and their control non-TIF parcels experienced growth. However, TIF parcels grew by only 0.03% more than their counterparts. This difference is economically small and suggests that while TIF parcels exhibit higher growth, they tend to grow only marginally over time compared to non-TIF parcels.

Table 53. Average Treatment and Control Effects of TIF on Gross Assessed Values

Outcome Measure	Average Effect on Treatment (TIF = 1)	Average Effect on Control (TIF = 0)	Difference	Est. (T-stat)
GAV, 2013	$12,608	$8,126	$4,482	0.042* (1.750)
Change in GAV from 2004 to 2013	25.50%	25.47%	0.03%	0.064*** (4.910)

[1] **** p < 0.001 ** p < 0.05 * p < 0.1 for test on significantly different from zero.*

[2] *Estimates are calculated using logged dependent variables.*

As properties tend to experience naturally occurring growth in assessed values over time, it is important to examine the effect of TIF on other measures of economic development. As TIF is often intended to stimulate job creation, an examination of employment as an economic development outcome may be more appropriate.

The "but for" question is still valid, as growing establishments may induce the adoption of TIF and TIF adoption may lead to job creation. Recall from Table 46 that the average TIF establishment had 7.4 more employees than the average non-TIF establishment. After controlling for characteristics that influence TIF adoption, we find the average TIF establishment tends to create 0.7 more jobs than its non-TIF counterpart. This amounts to approximately 4.7% of the average number of jobs per establishment (TIF and non-TIF) of 15.5.

Additionally, the results suggest that over the ten-year period prior to which establishments were designated in a TIF area, the average TIF establishment created 0.5% more jobs than the average non-TIF establishment. However, this result is statistically insignificant and suggests that TIF fails to have any meaningful impact on employment.

Table 54. Average Treatment and Control Effects of TIF on Employment

Outcome Measure	Average Effect on Treatment (TIF = 1)	Average Effect on Control (TIF = 0)	Difference	Est. (T-stat)
Employment, 2013	3.069 jobs	2.348 jobs	0.721 jobs	0.120** (3.01)
Change in Employment from 2004 to 2013	0.4%	-0.1%	0.5%	0.050 (1.440)

[1] **** p < 0.001 ** p < 0.05 * p < 0.1 for test on significantly different from zero.*
[2] *Estimates are calculated using logged dependent variables.*

The results of our analysis are similar to the recent research reviewed previously on the impact of TIF on assessed values and employment. We find that property values are higher in TIF areas than in other similarly situated non-TIF areas. However, our findings suggest the presence of TIF does not have a meaningful impact on employment growth.

Appendix 1: TIF Model Results

Propensity Score Matching Technique

We use the propensity score matching technique (Rosenbaum and Rubin, 1983) to eliminate the selection biases that occur in the designation of TIF areas. Rosenbaum and Rubin describe a propensity score as the conditional probability of assignment to a treatment (e.g., TIF adoption) given a vector of observed covariates (e.g., variables that explain the variation in TIF adoption). The propensity score is used to group treated (e.g., municipalities that have adopted TIF) and control units (e.g., municipalities that have not adopted TIF) in order to compare them directly. The first stage of the technique requires the estimation of TIF adoption in order to identify what attributes lead to parcels being included in a TIF area in the first place. The second stage then estimates the effect of TIF on economic development based on the likelihood of TIF adoption.

Based on Man (1999), we identify fiscal, economic, structural, and Census variables used to determine the likelihood of TIF adoption. Additionally, one should consider the existence of spatial dependence across local taxing districts. Spatial interactions are often thought to exist among local governments. Local governments affect each other in their public spending decisions such that one local government has a spillover effect on its neighbor. There are several ways to tackle this issue. One approach is to build a spatial weight matrix based on a shapefile, preferably at the lowest level of spatial aggregation, the parcel. While the Indiana Geological Survey provides this data, we cannot analyze the database of more than 3.6 million records at a reasonable speed or with accuracy. Therefore, we control for distance between each parcel and the center of the geographically closest TIF area. This strategy allows for any spatial spillovers from TIF to non-TIF parcels.

Table A1.1 presents descriptive statistics for the unmatched sample. Upon matching the treatment observations with control observations, the variables *change in GAV 2004 – 2013*, *effective tax rate*, and *parcel-TIF distance* display small but noticeable differences across TIF and non-TIF parcels, indicating those variables were not matched perfectly by the propensity score method (as such, readers should exercise caution when interpreting estimation results). All other variables, in general, display the same, if not very close, values.

Table A1.1 Descriptive Statistics for Matched Sample of Treated and Control Observations

		TIF = 0 (Unmatched)		TIF = 1	
Variable	**Source**	**Mean**	**Std. Err.**	**Mean**	**Std. Err.**
Employment, 2004	LSA unemployment payroll database (establishment)	19.599	66.334	25.532	66.451
Employment, 2013		13.970	78.032	25.507	83.334
GAV, 2004 ($1,000s)	LSA property tax database (parcel)	95.057	313.308	174.586	1149.398
GAV, 2013 ($1,000s)		108.813	431.429	289.88	1780.808
Change in GAV, 2004-2013		4.850	81.458	4.050	118.282
Change in effective tax rate, 2004-2013		-0.103	1.080	0.109	3.309
Change in income, 2004-2013		0.150	0.098	0.116	0.095
Change in population, 2004-2013		0.125	0.534	0.061	0.280
Unemployment rate		0.095	0.034	0.110	0.043

		TIF = 0 (Unmatched)		TIF = 1	
Variable	Source	Mean	Std. Err.	Mean	Std. Err.
Population density		727.288	942.310	1253.571	1238.307
Same house prior year		0.856	0.055	0.833	0.062
Agricultural property		0.145	0.352	0.031	0.174
Exempt property		0.051	0.220	0.134	0.341
Industrial property		0.008	0.090	0.065	0.246
Residential property		0.746	0.435	0.499	0.500
Commercial property		0.042	0.200	0.260	0.439
EZ		3.24E-05	0.006	3.01E-04	0.017
Abatement		0.001	0.023	0.006	0.077
Land (sq. ft.) (1,000s)		10200	62000	3581.522	29800
Parcel-TIF distance	Indiana Business Research Center shapefile (parcel)	4.086	3.969	2.030	2.700
Nonwhite		0.129	0.157	0.223	0.240
65+		0.135	0.027	0.133	0.026
Bachelor's+		0.146	0.072	0.155	0.076
Rate of employment in agriculture		0.019	0.023	0.010	0.013
Rate of employment in construction		0.062	0.020	0.054	0.018
Rate of employment in manufacturing		0.196	0.077	0.178	0.071
Rate of employment in retail	U.S. Census Bureau (school district)	0.113	0.019	0.116	0.016
Rate of employment in services		0.225	0.048	0.242	0.059

Note. The effective tax rate is calculated as net tax/gross assessed value*100. Under current law, if a property tax bill equals less than $5, the tax bill is increased to $5 by adding a statement processing fee. For small gross assessed values, the calculated effective tax rate approaches above-average values which are nonsensical. Therefore, we replaced the 2013 effective tax rate with the 2013 state average effective tax rate for real properties of 2.42 for parcels with a net tax of $5. Similarly, we replaced the 2004 effective tax rate with the 2004 state average of 1.86.

Logit Estimation Results

Table A1.2 presents the logit estimation results of the first stage of the propensity score technique. The dependent variable represents TIF adoption (=1 if parcel is located in a TIF area, =0 otherwise). As discussed above, a TIF area may be established to promote redevelopment or spur economic development <cr>.

The variable c*hange in GAV* provides an indication of the type of TIF designation, redevelopment or new economic development. The results suggest that a 100% increase in GAV growth from 2004 to 2013 increases the likelihood of TIF adoption by 0.1 percentage points, on the scale of 0 to 1. This indicates that local units may adopt TIF to capture prior growth.

Similarly, we examine *change in income* to assess blight as a prerequisite for TIF adoption. The results suggest that a 100% increase in income growth increases the likelihood of TIF adoption by 0.001. This suggests that rising income may induce TIF adoption, which is counterintuitive to the general idea of initiating TIF to promote

redevelopment. As with GAV growth, local units may adopt TIF to capture prior growth as witnessed by rising levels of income.

Lastly, we emphasize the effect of land use on TIF adoption. Generally, industrial and commercial properties are more likely to be located in TIF areas than are other property types. As such, the results suggest that *industrial properties* exhibit a 0.065-unit higher likelihood of TIF adoption, and *commercial properties* exhibit a 0.042-unit higher likelihood than their counterparts. Contrastingly, *agricultural* and *residential properties* tend to exhibit a lower likelihood of TIF adoption when controlling for all other factors that are likely to impact TIF adoption.

Table A1.2 Logit Estimation Results of Treatment (1st Stage of Propensity Score)

	Estimate	z-value	Marginal Effect	z-value
Fiscal characteristics				
Log(change in GAV, 2004-2013)	0.081***	39.890	0.001***	39.680
Log(change in effective tax rate, 2004-2013)	0.059***	18.820	0.001***	18.790
Log(change in income, 2004-2013)	0.073***	18.840	0.001***	18.780
Log(change in population, 2004-2013)	0.081***	30.090	0.001***	30.030
Economical characteristics				
Unemployment rate	4.382***	23.520	0.075***	23.42
Population density	0.265***	65.970	0.005***	63.66
Same house prior year	0.565***	7.140	0.010***	7.140
Structural characteristics				
Parcel-TIF distance	-0.206***	-116.890	-0.004***	-134.220
Agricultural property	-1.043***	-31.230	-0.013***	-43.680
Exempt property	0.383***	12.840	0.008***	10.910
Industrial property	1.634***	51.700	0.065***	27.340
Residential property	-0.866***	-29.940	-0.019***	-23.990
Commercial property	1.319***	45.050	0.042***	26.910
EZ	0.576**	2.830	0.013**	2.180
Abatement	0.833***	17.150	0.022***	11.890
Land (sq. ft.)	-1.70E-09***	-12.080	-2.91E-11***	-12.110
Census characteristics				
Nonwhite	0.764***	26.330	0.013***	26.160
65+	6.727***	43.500	0.115***	43.1
Bachelor's+	1.896***	22.580	0.033***	22.54
Rate of employment in agriculture	-9.723***	-32.490	-0.167***	-32.89
Rate of employment in construction	5.506***	19.280	0.094***	19.270
Rate of employment in manufacturing	4.127***	51.890	0.071***	51.46
Rate of employment in retail	5.647***	23.950	0.097***	23.94
Rate of employment in services	6.461***	63.600	0.111***	62.400
Intercept	-7.412***	-65.130		
AIC	883,900			
Number of observations	3,489,467			

Notes.

1. *** p < 0.001 ** p < 0.05 * p < 0.1 for test on significantly different from zero.

2. The treatment observations were matched to control observations based on groups identified by their DLGF district number. This analysis uses the "Matchby" command in the software package, R.
3. The coefficients derived from a logit regression are not directly interpretable. Rather, we calculate and interpret marginal effects, which give the value change in the outcome variable as a function of a value change in the independent variable, holding all other independent variables constant.
4. The Akaike Information Criterion, or AIC, measures the quality of statistical models. The model specification with the minimum AIC is preferred. After considering other model specifications, we use these model results for calculating the propensity score.
5. These models were re-estimated using only cohorts that adopted TIF prior to and including 2004 when examining its effect on the change in AV and the change in employment from 2004 to 2013.

GAV and Employment Estimation Results

Table A1.3 and A1.4 present the estimation results of GAV and employment.

Table A1.3 OLS Estimation Results of GAV (2nd Stage of Propensity Score)

	Log(change in GAV, 2004-2013)		Log(GAV,2013)	
	Est.	**t-stat**	**Est.**	**t-stat**
Fiscal characteristics				
TIF	0.064***	4.910	0.042*	1.750
Log(gross AV)	-0.168***	-117.930	-	
Log(effective tax rate)	0.080***	9.710	-	
Log(income)	0.100**	2.330	-	
Change in GAV, 2004-2013	-		0.001***	20.570
Change in effective tax rate, 2004-2013	-		0.007***	3.670
Change in income, 2004-2013	-		-0.658***	-6.910
Change in population, 2004-2013	-		-0.045**	-1.960
Economic characteristics				
Unemployment rate	0.786**	2.530	-6.759***	-18.700
Population density	0.044***	10.070	0.000***	8.120
Same house prior year	-1.93E-06***	-12.450	-0.817***	-4.680
Structural characteristics				
Parcel-TIF distance	-0.004***	-14.460	0.002	0.690
Agricultural property	-0.223***	-8.420	4.968***	86.130
Exempt property	-0.519***	-36.120	-2.345***	-47.480
Industrial property	-0.327***	-18.030	5.915***	114.520
Residential property	-0.826***	-84.470	5.481***	114.370
Commercial property	-0.393***	-35.770	5.937***	122.380
EZ			2.409***	8.680
Abatement	-0.399***	-6.050	3.005***	46.280
Land (sq. ft.)	1.89E-09***	16.930	3.18E-09***	17.790
Census characteristics				
Nonwhite	-0.137*	-2.580	0.229***	3.790
65+	-0.286	-1.430	0.990**	3.010

	Log(change in GAV, 2004-2013)		Log(GAV,2013)	
	Est.	t-stat	Est.	t-stat
Bachelor's+	0.153	1.060	2.647***	17.440
Rate of employment in agriculture	7.239***	15.150	-3.321***	-6.110
Rate of employment in construction	1.021**	2.490	4.115***	7.960
Rate of employment in manufacturing	-2.488***	-24.150	-0.849***	-5.510
Rate of employment in retail	-12.414***	-22.420	-6.319***	-13.500
Rate of employment in services	-0.919***	-6.520	-2.565***	-12.850
Intercept	1.863***	3.970	7.318***	31.340
R^2	0.147		0.550	
Number of observations	185,366		245,498	

Table A1.4 OLS Estimation Results of Employment (2nd Stage of Propensity Score)

	Log(change in employment, 2004-2013)		Log(employment, 2013)	
	Est.	t-stat	Est.	t-stat
Fiscal characteristics				
TIF	0.050	1.440	0.120**	3.010
Log(employment)	-0.134***	-13.540	-	
Log(GAV)	-0.005	-1.130	-	
Log(effective tax rate)	0.013	0.420	-	
Log(income)	0.207**	2.190	-	
Change in employment, 2004-2013	-		0.052***	24.150
Change in AV, 2004-2013	-		0.000	0.960
Change in effective tax rate, 2004-2013	-		0.028**	2.830
Change in income, 2004-2013	-		-0.034	-0.230
Change in population, 2004-2013	-		0.069*	1.690
Economic characteristics				
Unemployment rate	1.331*	1.790	-1.610**	-2.580
Population density	-0.005	-0.390	-0.046***	-3.710
Same house prior year	1.44E-07	0.310	-0.330	-1.600
Structural				
Parcel-TIF distance	0.002**	2.070	-0.002	-0.480
Agricultural property	0.044	0.390	-0.753***	-5.000
Exempt property	-0.125**	-2.650	-0.076	-0.590
Industrial property	-0.135**	-3.080	0.330**	2.600
Residential property	0.183***	4.060	-1.235***	-9.460
Commercial property	-0.182***	-5.800	-0.334**	-2.670
EZ	-		0.145	0.550
Abatement	0.378***	3.710	0.490***	5.770
NAICS Industries				
Agriculture	-0.054	-0.190	0.251	0.850

	Log(change in employment, 2004-2013)		Log(employment, 2013)	
	Est.	t-stat	Est.	t-stat
Mining, Utilities, Construction	0.494***	5.920	-0.076	-1.020
Manufacturing	0.711***	10.080	0.793***	10.630
Wholesale/Retail Trade, Transportation, Warehousing	0.406***	11.850	0.061*	1.720
Information, Finance, Real Estate, Management, Administrative Support	0.607***	17.700	-0.320***	-9.080
Educational Services, Healthcare	0.476***	8.420	0.544***	10.060
Entertainment, Food Services	0.145***	3.410	0.778***	16.760
Other Services	0.458***	7.580	-0.380***	-6.120
Public Administration	0.632	1.130	-0.845*	-1.850
Organization type				
Corporation	0.484***	15.250	-0.730***	-22.790
Individual proprietorship	0.250***	6.970	-0.637***	-17.760
Other organization type	-0.032	-0.120	-0.259	-1.230
Partnership	0.530***	8.850	-0.659***	-11.040
Ownership code				
State government	-0.307	-0.740	0.887**	2.070
Local government	-0.940***	-5.240	1.181***	7.750
Private	-0.727***	-4.750	0.068	0.500
Census characteristics				
Nonwhite	0.240*	1.940	0.536***	4.890
65+	0.037	0.070	-1.148**	-2.200
Bachelor's+	0.273	1.250	-0.038	-0.190
Intercept	-2.531**	-2.410	3.086***	10.720
R^2	0.102		0.216	
Number of observations	11,900		16,252	

Appendix 2: Tax Incentive Review Statute (IC 2-5-3.2-1)

Chapter 3.2. Review, Analysis, and Evaluation of Tax Incentives

2-5-3.2-1
Year Enacted 2014; Year Amended 2015

Sec. 1. (a) As used in this section, "tax incentive" means a benefit provided through a state or local tax that is intended to alter, reward, or subsidize a particular action or behavior by the tax incentive recipient, including a benefit intended to encourage economic development. The term includes the following:

(1) An exemption, deduction, credit, preferential rate, or other tax benefit that:

(A) reduces the amount of a tax that would otherwise be due to the state;

(B) results in a tax refund in excess of any tax due; or

(C) reduces the amount of property taxes that would otherwise be due to a political subdivision of the state.

(2) The dedication of revenue by a political subdivision to provide improvements or to retire bonds issued to pay for improvements in an economic or sports development area, a community revitalization area, an enterprise zone, a tax increment financing district, or any other similar area or district.

(b) The general assembly intends that each tax incentive effectuate the purposes for which it was enacted and that the cost of tax incentives should be included more readily in the biennial budgeting process. To provide the general assembly with the information it needs to make informed policy choices about the efficacy of each tax incentive, the legislative services agency shall conduct a regular review, analysis, and evaluation of all tax incentives according to a schedule developed by the legislative services agency.

(c) The legislative services agency shall conduct a systematic and comprehensive review, analysis, and evaluation of each tax incentive scheduled for review. The review, analysis, and evaluation must include information about each tax incentive that is necessary to achieve the goals described in subsection (b), which may include any of the following:

(1) The basic attributes and policy goals of the tax incentive, including the statutory and programmatic goals of the tax incentive, the economic parameters of the tax incentive, the original scope and purpose of the tax incentive, and how the scope or purpose has changed over time.

(2) The tax incentive's equity, simplicity, competitiveness, public purpose, adequacy, and extent of conformance with the original purposes of the legislation enacting the tax incentive.

(3) The types of activities on which the tax incentive is based and how effective the tax incentive has been in promoting these targeted activities and in assisting recipients of the tax incentive.

(4) The count of the following:

(A) Applicants for the tax incentive.

(B) Applicants that qualify for the tax incentive.

(C) Qualified applicants that, if applicable, are approved to receive the tax incentive.

(D) Taxpayers that actually claim the tax incentive.

(E) Taxpayers that actually receive the tax incentive.

(5) The dollar amount of the tax incentive benefits that has been actually claimed by all taxpayers over time, including the following:

(A) The dollar amount of the tax incentive, listed by the North American Industrial Classification System (NAICS) Code associated with the tax incentive recipients, if an NAICS Code is available.

(B) The dollar amount of income tax credits that can be carried forward for the next five (5) state fiscal years.

(6) An estimate of the economic impact of the tax incentive, including the following:

(A) A return on investment calculation for the tax incentive. For purposes of this clause, "return on investment calculation" means analyzing the cost to the state or political subdivision of providing the tax incentive, analyzing the benefits realized by the state or political subdivision from providing the tax incentive.

(B) A cost-benefit comparison of the state and local revenue foregone and property taxes shifted to other taxpayers as a result of allowing the tax incentive, compared to tax revenue generated by the taxpayer receiving the incentive, including direct taxes applied to the taxpayer and taxes applied to the taxpayer's employees.

(C) An estimate of the number of jobs that were the direct result of the tax incentive.

(D) For any tax incentive that is reviewed or approved by the Indiana economic development corporation, a statement by the chief executive officer of the Indiana economic development corporation as to whether the statutory and programmatic goals of the tax incentive are being met, with obstacles to these goals identified, if possible.

(7) The methodology and assumptions used in carrying out the reviews, analyses, and evaluations required under this subsection.

(8) The estimated cost to the state to administer the tax incentive.

(9) An estimate of the extent to which benefits of the tax incentive remained in Indiana or flowed outside Indiana.

(10) Whether the effectiveness of the tax incentive could be determined more definitively if the general assembly were to clarify or modify the tax incentive's goals and intended purpose.

(11) Whether measuring the economic impact is significantly limited due to data constraints and whether any changes in statute would facilitate data collection in a way that would allow for better review, analysis, or evaluation.

(12) An estimate of the indirect economic benefit or activity stimulated by the tax incentive.

(13) Any additional review, analysis, or evaluation that the legislative services agency considers advisable, including comparisons with tax incentives offered by other states if those comparisons would add value to the review, analysis, and evaluation.

The legislative services agency may request a state or local official or a state agency, a political subdivision, a body corporate and politic, or a county or municipal redevelopment commission to furnish information necessary to complete the tax incentive review, analysis, and evaluation required by this section. An official or entity presented with a request from the legislative services agency under this subsection shall cooperate with the legislative services agency in providing the requested information. An official or entity may require that the legislative services agency adhere to the provider's rules, if any,that concern the confidential nature of the information.

(d) The legislative services agency shall, before October 1 of each year, submit a report to the legislative council, in an electronic format under IC 5-14-6, and to the interim study committee on fiscal policy established by IC 2-5-1.3-4 containing the results of the legislative services agency's review, analysis, and evaluation. The report must include at least the following:

(1) A detailed description of the review, analysis, and evaluation for each tax incentive reviewed.

(2) Information to be used by the general assembly to determine whether a reviewed tax incentive should be

continued, modified, or terminated, the basis for the recommendation, and the expected impact of the recommendation on the state's economy.

(3) Information to be used by the general assembly to better align a reviewed tax incentive with the original intent of the legislation that enacted the tax incentive.

The report required by this subsection must not disclose any proprietary or otherwise confidential taxpayer information.

(e) The interim study committee on fiscal policy shall do the following:

(1) Hold at least one (1) public hearing after September 30 and before November 1 of each year at which:

(A) the legislative services agency presents the review, analysis, and evaluation of tax incentives; and

(B) the interim study committee receives information concerning tax incentives.

(2) Submit to the legislative council, in an electronic format under IC 5-14-6, any recommendations made by the interim study committee that are related to the legislative services agency's review, analysis, and evaluation of tax incentives prepared under this section.

(f) The general assembly shall use the legislative services agency's report under this section and the interim study committee on fiscal policy's recommendations under this section to determine whether a particular tax incentive:

(1) is successful;

(2) is provided at a cost that can be accommodated by the state's biennial budget; and

(3) should be continued, amended, or repealed.

(g) The legislative services agency shall establish and maintain a system for making available to the public information about the amount and effectiveness of tax incentives.

(h) The legislative services agency shall develop and publish on the general assembly's Internet web site a multi-year schedule that lists all tax incentives and indicates the year when the report will be published for each tax incentive reviewed. The legislative services agency may revise the schedule as long as the legislative services agency provides for a systematic review, analysis, and evaluation of all tax incentives and that each tax incentive is reviewed at least once every five (5) years.

(i) This section expires December 31, 2023.

Appendix 3 - Tax Incentive and Incentive Program Descriptions

Corporate Income Tax/Individual Income Tax

Tax Provision	Description
21st Century Scholars Program Credit	50% of contributions to the 21st Century Scholarship Support Fund. The maximum credit is $100 for individuals and $200 for joint filers.
Adoption Tax Credit (Effective 2015)	10% of the federal adoption tax credit claimed for the year. The maximum credit equals $1,000 per eligible child. The credit goes into effect beginning January 1, 2015.
Alternative Fuel Vehicle Manufacturing Investment Credit	15% of qualified investments made between 2007 and 2016 to manufacture and assemble alternative fuel vehicles. Credits are approved by the IEDC. New credits not awarded after December 31, 2016.
Coal Gasification Technology Investment Credit	10% of the first $500 M in qualified investment in an integrated coal gasification power plant (7% if the investment is in a fluidized-bed combustion unit) and 5% of the qualified investment exceeding $500 M (3% if the investment is in a fluidized-bed combustion unit). Credits are approved by the IEDC Board.
Community Revitalization Enhancement District Credit	Percent of qualified investments made in these areas as approved by the IEDC Board.
Community Revitalization Enhancement District Credit (Local)	Percent of qualified investments made in these areas as approved by the IEDC Board.
Earned Income Tax Credit	A refundable tax credit for certain families that have a modified adjusted gross income less than $43,750. The credit amount depends on the number of qualifying children and family income. The maximum credit for 2014 was $491.
Economic Development for a Growing Economy (EDGE) Credit	Incremental income tax withholdings of new or retained employees as approved by the IEDC Board.
Enterprise Zone Employee Income Deduction	The lesser of 50% of earnings or $7,500 if the individual lives and works within an enterprise zone.
Enterprise Zone Employment Expense Credit	Allowed for increased employment expenditures, equal to the lesser of 10% multiplied by the increased wages or $1,500 multiplied by the number of qualified employees.
Enterprise Zone Investment Cost Credit	Percent of qualified investment approved by the IEDC in a business located in an enterprise zone.

Tax Provision	Description
Enterprise Zone Loan Interest Credit	Allowed for interest received from qualified loans.
Headquarters Relocation Credit	Up to 50% of the costs incurred by an eligible business to relocate its headquarters, division or subdivision principal office, or research center to Indiana.
Historic Rehabilitation Credit	20% of qualified expenditures as approved by the DNR. The maximum statewide credit may not exceed $450,000 annually. New credits may not be awarded after June 30, 2016.
Home Insulation Deduction (Reviewed in 2014)	Up to $1,000 for the purchase and installation of home insulation, weather stripping, storm doors, storm windows, and double-pane windows. Repealed effective January 1, 2016.
Homeowner's Property Tax Deduction	Up to $2,500 of property taxes paid on an individual's principal place of residence.
Hoosier Business Investment Credit	Up to 10% of qualified nonlogistics business investments directly related to expanding the workforce in Indiana, not to exceed the taxpayer's state tax liability. For logistics investments, the credit equals 25% of the additional qualified investment made during the taxable year. The total nonlogistics credit for all taxpayers is capped at $10 M per year, while the total logistics credit for all taxpayers is capped at $50 M per year. Credits are approved by the IEDC Board. New credits not awarded after December 31, 2020.
Indiana 529 College Savings Account Contribution Credit	20% of annual contributions to an Indiana College Choice 529 investment plan savings account. The maximum credit per taxpayer is $1,000.
Indiana Colleges and Universities Contribution Credit	50% of contributions to institutions of higher education, up to $100 ($200 if filing a joint return).
Indiana Partnership Long-Term Care Insurance Premiums Deduction (Reviewed in 2014)	Amount of premiums paid during the year on a qualified long-term care policy.
Individual Development Accounts Credit	50% of the amount contributed to a fund if the contribution is not less than $100 and not more than $50,000.
Industrial Recovery Credit	Percent of qualified investments as approved by the IEDC Board.

Tax Provision	Description
Natural Gas-Powered Vehicles	50% of the difference between the price of the qualified vehicle and a similar vehicle that is powered by a gasoline or diesel engine, up to $15,000. The maximum credit per taxpayer is $150,000 per taxable year. The total amount of credits per year may not exceed the lesser of $3 M or the sales tax revenue attributable to natural gas fuel used in providing public transportation.
Neighborhood Assistance Credit	50% of contributions to approve projects that assist economically disadvantaged areas or to employ, train, or provide technical assistance to people who reside in these areas. The maximum credit is $25,000. Total tax credits statewide may not exceed $2.5 M in a fiscal year.
Patent-Derived Income Deduction	Up to $5 M in income from plant or utility patents issued beginning in 2008 to businesses or organizations domiciled in Indiana.
Research Expense Credit	For certain qualified research expenses incurred.
Residential Historic Rehabilitation Credit	20% of qualified expenditures as approved by DNR for the preservation or rehabilitation of the taxpayer's principal residence. The maximum statewide credit may not exceed $250,000 annually.
School Scholarship Contribution Credit	50% of contributions to nonprofit K-12 school scholarship-granting organizations. Total tax credits may not exceed $7.5 M in FY 2015, $8.5 M in FY 2016, and $9.5 M each fiscal year thereafter.
Solar-Powered Roof Vent/Fan Installation Deduction (Reviewed in 2014)	Up to $1,000 deduction if a solar-powered roof vent or fan is installed on a building owned or leased by the taxpayer. Repealed effective January 1, 2016.
Special Rate for Income Derived Inside a Military Base	Rate is 5% of AGI that is derived from sources within a qualified area if the corporation locates its operations in the qualified area. Special rate applies during the year in which the corporation located in that area and the four succeeding years.
Venture Capital Investment Credit	20% of annual qualified venture capital investment up to $1 M. Total new credits awarded may not exceed $12.5 M annually. New credits not awarded after December 31, 2020.

Sales Tax

Tax Provision	Description
Aircraft Parts	Materials, parts, equipment, and engines used in the repair, maintenance, refurbishment, remodeling, or remanufacturing of an aircraft or avionics system of an aircraft.
Aviation Fuel	Aviation gasoline, jet fuel, and fuel used as a substitute for aviation gasoline or jet fuel.
Cargo Trailers/RVs Sold to Certain Nonresidents	Sales of RVs and trailers to a resident of another state that has a reciprocal exemption.
Certain Aircraft	Aircraft purchased for rental or leasing if the annual amount of gross lease revenue is greater than or equal to 7.5% of the book value or net acquisition price. Any aircraft rented or leased for predominant use in public transportation. Aircraft sold to a person who is not an Indiana resident.
Certain Racing Equipment	Tangible personal property that comprises any part of a professional motor racing vehicle or a two-seater Indianapolis 500-style race car, excluding tires and accessories.
Research and Development Property	Tangible personal property that has not previously been used in Indiana for any purpose and is acquired for the purpose of experimental laboratory research and development for new products, new uses of existing products, or improving or testing existing products.

Property Tax

Tax Provision	Description
Aircraft Deduction	Aircraft that seat up to 90 passengers or that are used to transport only property. The aircraft must be owned by a taxpayer with an Indiana corporate headquarters or its subsidiary. The deduction equals 100% of the property's AV.
Brownfield Revitalization Zone Deduction	The designating body may grant a 3-, 6-, or 10-year abatement for real and personal property located in a brownfield revitalization zone. The deduction equals the increase in the property's AV multiplied by a percentage based on year and duration.
Certified Technology Park Deduction	Personal property located in a certified technology park and used to conduct high-technology activity. The deduction equals 100% of the property's AV. The term of two to ten years is determined by the county fiscal body.
Coal Combustion Product Deduction	Building designed and constructed to use qualified materials throughout the building. Qualified materials must consist of at least 60% coal combustion products by weight. The deduction is available for three years and equals 5% of the building's AV.
Deduction for Purchases of Investment Property by Manufacturers of Recycled Components	Personal property used to manufacture recycled components composed of at least 15% coal combustion waste generated in Indiana. The deduction equals 15% of the investment property's AV only in the first year that the investment property is subject to assessment.
Enterprise Zone Investment Deduction	Qualified investments including buildings, manufacturing or production equipment, retooling, and infrastructure within an enterprise zone. The deduction equals the increase in AV of the enterprise zone property as compared to the AV in the base year.
Enterprise Zone Obsolescence Deduction (Marion County)	Newly purchased real property in an enterprise zone in Marion County if an obsolescence depreciation adjustment was allowed for the property in the year preceding the year in which the owner purchased the property. The deduction equals the amount of the former owner's obsolescence adjustment multiplied by 100% in year one, 75% in year two, 50% in year three, and 25% in year four.
Geothermal Energy Heating or Cooling Device Deduction	Real property or mobile home equipped with geothermal heating, cooling, hot water, or electricity production. The deduction equals the device's AV.
Hydroelectric Power Device Deduction	Real property or mobile home equipped with a hydroelectric power device. The deduction equals the device's AV.
Infrastructure Development Zone Deduction	Gas storage, transmission, and distribution facilities; broadband and advanced service transmission facilities; and water treatment, storage, and distribution facilities in an infrastructure development zone. Eligible property in the zone is 100% exempt.

Tax Provision	Description
Intrastate Aircraft Deduction	Aircraft used for service between qualifying Indiana airports that seat at least nine passengers or that are used to transport only property. The deduction equals 100% of the property's AV.
Low-Income Housing Exemption	All or part of real property is exempt from property taxation if (1) the improvements on the real property were constructed, rehabilitated, or acquired for the purpose of providing housing to income-eligible persons, (2) the property is subject to an extended use agreement, and (3) the property owner has entered into an agreement to make payments in lieu of taxes.
Marine Opportunity District Deduction	New manufacturing equipment installed in a maritime opportunity district. The deduction equals 100% of AV in years 1 to 6; 95% in year 7, 80% in year 8, 65% in year 9, and 50% in year 10. The deduction may not reduce a taxpayer's total personal property net assessment in the first year below the previous year's net assessment. The deduction is subject to approval by Ports of Indiana.
Personal Property Abatements in an Economic Revitalization Area	New manufacturing, research and development, logistical distribution, and information technology equipment located in an economic revitalization area. The local designating body determines the length of the deduction from 1 to 10 years. The designating body must specify an abatement schedule.
Real Property Abatements in an Economic Revitalization Area	Improvements made to real property located in an economic revitalization area. The local designating body determines the length of the deduction from 1 to 10 years. The designating body must specify an abatement schedule.
Rehabilitated Property Deduction	Buildings and structures at least 50 years old if the owner paid at least $10,000 for the rehabilitation. The deduction is available for five years and equals 50% of the increase in AV (limited to $124,800 for a single-family dwelling or $300,000 for other property).
Rehabilitated Residential Property Deduction	Residential real property that has been rehabilitated. The pre-rehabilitation AV may not exceed $37,440 for a single-family dwelling, $49,920 for a two-family dwelling, or $18,720 per unit if more than two dwelling units. The deduction is available for five years and equals the increase in AV (limited to $18,720 per rehabilitated unit).
Resource Recovery Systems Deduction	Tangible property directly used to dispose of solid waste or hazardous waste by converting it into energy or other useful products. The deduction equals 95% of the system's AV. This deduction currently applies to only one property, located in Marion County.
Resource Recovery/Coal or Oil Shale System Deduction	Tangible property used to convert coal into a gaseous liquid fuel or charcoal. The deduction equals 95% of the system's AV multiplied by the fraction (Indiana coal converted/total coal converted).

Tax Provision	Description
Solar-Energy Systems Deduction	Real property or mobile home equipped with solar energy heating or cooling system. The deduction equals system's cost.
Wind-Powered Devices Deduction	Real property or mobile home equipped with wind-powered equipment designed to provide mechanical energy or produce electricity. The deduction equals the device's AV.

Other

Tax Provision	Description
Certified Technology Park	Special zones established by local units that capture state and local tax revenue for high-technology business development in the zones.
Community Revitalization Enhancement Districts	Special district established by local units that may capture state and local tax revenue for development purposes in the districts.
Enterprise Zones	Special zone established by municipal units where tax incentives are provided for development in the zones.
Lower Rates for Smaller Riverboats	Special lower wagering tax rates for riverboat casinos that generate less than $75 million in annual gross revenue.
Motorsports Investment District	Geographic area including the Indianapolis Motor Speedway. Revenue is captured from certain incremental sales tax, individual income tax, and admissions fee revenue.
Professional Sports Development Areas	Special areas established by local units that may capture state and local tax revenue for sports and convention development purposes in the areas.
Promotional Free-Play Deduction	Wagering tax deduction for wagers made by casino patrons using noncashable vouchers, coupons, electronic credits, or electronic promotions provided by the casino.
Tax Increment Financing	Special district established by local units that capture incremental property tax revenue for development purposes in the districts.

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