

**Information Brief** 

# Intrastate Distribution of State Government Revenues and Expenditures in Indiana

Michael Hicks, Director, Ball State University Center for Business and Economic Research Dagney Faulk, Director of Research, Ball State University Center for Business and Economic Research John Ketzenberger, President, Indiana Fiscal Policy Institute

January 2010



#### Indiana Fiscal Policy Institute

The Indiana Fiscal Policy Institute (IFPI), formed in 1987, is a private, non-profit governmental research organization. The institute's mission is to enhance the effectiveness and accountability of state and local government through the education of public sector, business, and labor leaders on significant fiscal policy issues and the consequences of state and local decisions. IFPI makes a significant contribution to the important, ongoing debate over the appropriate role of government. The institute does not lobby, support, or oppose candidates for public office. Instead, it relies on objective research evidence as the basis for assessing sound state fiscal policy.

#### **Indiana Fiscal Policy Institute**

1 American Square, suite 150 Indianapolis, IN 46282 Phone: 317-917-4407 www.indianafiscal.org

#### Center for Business and Economic Research

The Center for Business and Economic Research (formerly the Bureau of Business Research) is the economic policy and forecasting research center housed within the Miller College of Business at Ball State University. The center publishes the *American Journal of Business*—a peer-reviewed scholarly journal—and the *Indiana Business Bulletin*—a Web site with weekly commentary, analysis and data on economic, business and demographic trends in Indiana. CBER research encompasses health care, public finance, regional economics, transportation and energy sector studies. In addition to research, the center hosts four forecasting roundtables in Muncie and provides economic forecasts throughout the state of Indiana.

#### Center for Business and Economic Research

Miller College of Business, Ball State University Whitinger Business Building, room 149 2000 W. University Ave. Muncie, IN 47306 Phone: 765-285-5926 | Email: cber@bsu.edu www.bsu.edu/cber

#### Acknowledgements

Thank you to Chris Atkins of the Indiana Office of Management and Budget for coordinating the data collection effort for this project, to Adam Horst, Bob Lain, Steve Daniels and Randhir Jha of the Indiana State Budget Agency for assistance with data collection, and to Victoria Meldrum and the CBER publications staff for the formatting and design of this publication.



# Intrastate Distribution of State Government Revenues and Expenditures in Indiana

#### Background

Most Hoosiers describe Indiana as Indianapolis (or central Indiana) and everywhere else. There is some truth to this because central Indiana's economy is more diverse and generally more productive than other regions. Such a view fails to take into account the state's other urban centers, however, painting an incomplete picture. Indiana may indeed be divided into "two states," but it's along rural and urban geography generally. This study illustrates the division between rural and urban Indiana by following the collection of state tax dollars and where they are spent. The relationship between the tax revenue generated in each county and the public expenditures each receives is meant to provide new dimension to the debate over Indiana's budget and tax policy.

It is not a simple task to determine how much tax revenue the state collects in each county or how much it spends. This study does not attempt to determine the flow of federal or local tax revenues in Indiana. But it does account for 98 percent of all taxes collected by the state, including sales tax, the personal income tax, the corporate income tax and several others. The other 2 percent, including financial institutions, railroad car property tax and hazardous waste disposal tax among others, were impossible to determine at the county level and were not considered. This study also examined some 550 separate funds to determine how state tax dollars were allocated. Included was funding for education (kindergarten-12th grade and higher education), Medicaid, and transportation in addition to other funding. In the absence of county-specific information, such as public safety and general government, we allocated state expenditures on a per capita basis, reasoning that the public in general benefits. This study used standard analysis tools to determine who bears the burden of taxes and who benefits from them, which is discussed in detail elsewhere in this report.

The results track the "flow" of Hoosiers' tax dollars on a countyby-county basis for the first time. This is determined by subtracting the amount of state expenditures in each county from the amount of tax collected and dividing by the population. So now we know which counties are net donors (22) and which are net recipients (70) of state tax dollars. With few exceptions, counties in the state's metropolitan areas were donors while those in rural areas were recipients. Overall, those in metropolitan counties paid 82.5 percent of the taxes, or \$11.3 billion, and received 76.5 percent (\$10.5 billion) in state expenditures. More specifically, the ten-county Indianapolis region paid 33.5 percent, or \$4.6 billion, and received 28 percent (\$3.8 billion) back.

This is the first time such a study has been attempted in Indiana, but the experience in other states such as Kentucky and Georgia was helpful in guiding our methodology. This report identifies and describes the assumptions that were made as part of the calculations to determine how revenue and expenditures were allocated to each county. While this study tracks the flow of tax dollars by county in Indiana, it does not attempt to answer any public policy questions that may arise from this information, such as whether the magnitude of the net flows is appropriate. It is hoped, however, that this report will give policymakers more information with greater geographic precision to consider as they contemplate the state's future budget and tax policy.

#### Introduction

This report details the geography of intrastate collection and distribution of taxes in Indiana. We focus on the most recent complete year (calendar year 2008 and fiscal year 2009) and include only state tax collections and distributions. We exclude all local taxes and expenditures and Federal payments, including those associated with state matching funds such as highway construction and Medicaid. We examine the distribution of state revenue and expenditures separately and then the net flow (state revenue minus state expenditures) total and per capita and finally an aggregation of flows between the tencounty Indianapolis metropolitan area and the rest of the state. We use the 2003 definitions of metro areas.

The difficulty in conducting this type of analysis arises from allocating revenues and expenditures among counties. This is not an easy undertaking. We apply standard tools used in fiscal policy analysis to estimate the amount of taxes paid by taxpayers in each county and to quantify the benefits received from state government expenditures.

The limited number of studies that have examined the intrastate distribution of state government revenues and expenditures have consistently found that urban areas subsidize the more sparsely populated areas in states i.e. that urban areas pay more in state taxes than they receive in state expenditures. Coomes and Kornstein (1994, 1999, 2004) have examined this issue over multiple years in Kentucky and have found that the more densely populated urban areas in Kentucky subsidize the more sparsely populated rural areas. In his analysis of Georgia, Bluestone (2009) found that the Atlanta metropolitan area generates more state revenue than it receives in expenditures. The 28-county Atlanta metropolitan area accounted for approximately 61 percent of Georgia state revenue and received approximately 47 percent of Georgia state expenditures in FY 2004.

#### Overview of the Indiana State Tax System

A variety of criteria are used to evaluate state tax systems. Efficiency, equity, revenue stability, revenue adequacy, exportability, administrative costs, compliance costs are all considerations in the structure of a state tax system. A full treatment of these issues is far outside the scope of this work. However, understanding that these goals might be mutually exclusive, explains the variety of tax instruments adopted by Indiana and any other state.

#### Table 1

Revenue Source	Incidence Assumption	Allocation Method
Sales tax	Consumers	DOR data on sales tax collections by county
Individual adjusted gross income tax	Individual earners	DOR tax return data on residence of taxpayer (excluded \$182 million paid by out of state taxpayers)
Gasoline and other fuel taxes	Consumers of gas and fuels (drivers)	Retail sales (included portion of taxes spent by INDOT)
Corporate adjusted gross income tax	70 percent on wages and salaries 30 percent on owners of capital	70 percent on individual income tax payments 30 percent on income from dividends, interest and rents
Riverboat admissions tax and wagering tax	Casino patrons	Estimated residence of casino patrons (included only portion distributed to the general fund)
Cigarette tax	Consumers of cigarettes	Cigarette sales by county (includes portion of tax distributed to general fund, 53.68 percent)
Utility receipts tax and utility services use tax	Consumers of utility services	County personal income
Insurance premium taxes	Consumers of insurance services	County personal income
Inheritance tax	Decedents	Collected by county (excludes 8 percent of revenue distributed to county)
Alcoholic beverage taxes	Consumers of alcoholic beverages	Population (includes portion of tax distributed to the general fund, 50 percent)

Total state revenue in Indiana was approximately \$25.5 billion in FY 2009. This includes state taxes, Federal aid, and various state fees. Taxes accounted for approximately 55 percent of Indiana's total state government revenue in fiscal year 2009. Federal aid accounted for approximately 34 percent of total revenues, and revenue from permits, licenses, and various other sources accounted for just over 11 percent. Like most states, Indiana relies heavily on sales and income taxes to fund state government. More than 75 percent of state tax revenue comes from the general sales tax (approximately 44.5 percent in FY 2009 ) and the individual income tax (approximately 30.9 percent in FY 2009). The remaining 25 percent of tax revenue is from various other taxes. We consider motor fuel taxes (a type of selective sales tax), the corporate income tax, riverboat taxes, cigarette taxes, utility receipts taxes, insurance taxes, inheritance taxes, and alcoholic beverage taxes (Table 1). These are the major sources of state tax revenue in Indiana accounting for approximately 98 percent of tax revenue for FY 2009. There are also other taxes (financial institutions tax, railroad car property tax, race track wagering, parimutual taxes, charity gaming taxes, hazardous waste disposal taxes) that raise a small amount of revenue and that we do not consider in this analysis both because of their relatively small magnitude and the difficulty of allocating these taxes to the county level. Additional state revenue comes from a variety of fees and miscellaneous sources including professional licenses, sale of state property, etc. These are not included in the analysis due to the difficulty of appropriately allocating these funds among counties.

#### The Geographic Distribution of State Revenue

#### Method of allocating revenue shares to counties

In order to allocate state tax revenues to counties, we make certain incidence assumptions about who bears the economic burden of a particular tax. The economic incidence is concerned with whose purchasing power is affected, via either higher prices or lower income, by the tax. See Bluestone (1999) for a more detailed discussion. The entity with the statutory (legal) incidence is usually not the entity that actually bears the economic burden of the tax payment. For example, businesses are legally responsible for sending in the sales tax payments for goods sold, but at least part of the economic incidence is borne by consumers due to higher prices on the good after the tax is imposed. Similarly corporations are legally responsible for paying the corporate income tax but may pass this tax on to workers in the form of lower wages or to share holders in the form of lower dividends. These considerations motivate our decisions regarding allocation of the incidence of taxes. Incidence assumptions are summarized in *Table 1*.

- The General Sales Tax is the largest source of revenue and generated \$6.2 billion in FY 2009 (44.5 percent of total tax revenue). Sales tax revenue was allocated using data from the Indiana Department of Revenue on sales tax collections by county. Ideally the sales tax allocation would reflect the county of residence of the consumer. The data that we use reflects sales tax paid by county of purchase which may be different from the county of residence of the consumer.
- The Individual Income Tax is the second largest source of revenue for Indiana generating approximately \$4.3 billion in FY 2009 (almost 31 percent of state tax revenue). We allocate the burden of the individual income tax to counties using tax return data from the Indiana Department of Revenue. The approximately \$182.6 million in individual income tax payments of out-of-state residents are excluded.
- Gasoline and Other Fuel Taxes accounted for \$798.8 million (5.73 percent) of state tax revenue. These taxes include the gasoline tax, marine fuel tax, motor carrier fuel tax, and motor carrier surcharge tax. We assume these taxes are born by consumers in the form of higher fuel prices than would occur in the absence of the tax. We allocate these taxes based on each county's share of total retail sales as a proxy for fuel sales.



- The Corporate Income Tax generated \$541 million in revenues (3.9 percent of state tax revenue) in FY 2009. We adopt a method developed by Chamberlin and Prante (2007) based on estimates by Randolph (2006) and used by Bluestone (2009) to allocate the corporate income tax to counties. The tax burden of the corporate income tax is divided between the owners of capital and workers with owners bearing 30 percent of the burden and workers bearing 70 percent of the burden. We assume that the Indiana corporate income tax is paid by Indiana residents. We recognize that a portion of the 30 percent of the tax burden that we attribute to owners of capital will be paid by out-of-state residents. This is a relatively small share and will not affect the overall analysis. County-level data on income from dividends, interest, and rent (Bureau of Economic Analysis) is used to determine the share of capital owners. Individual income tax liability (from the Indiana Department of Revenue) is used to determine labor's share of the burden.
- **Riverboat Taxes** generated approximately \$575.7 million in state tax revenue (4.13 percent of tax revenue). The county allocation of riverboat tax revenue was determined from estimates of the county of residence of casino patrons from the Indiana State Budget Agency.
- Cigarette Taxes generated approximately \$516.8 million in revenue (3.71 percent of total tax revenue) in FY 2009. Cigarette sales by county is available from the Census Bureau. This information is used as the allocation of cigarette tax revenues to counties. Only the portion of the tax distributed to the general fund is included in our estimates.
- The state of Indiana received approximately \$2,53.6 million in Utility Taxes in FY 2009. These taxes include the utility receipts tax and the utility services use tax and were 1.35 percent of total state tax revenue. We assume that these taxes are ultimately borne by the consumer in the form of higher utility rates than would occur in the absence of the tax. We use personal income as a proxy for utility use and allocate this tax based on each county's share of personal income.
- Insurance Premiums Taxes generated \$187.4 million in revenue (1.4 percent of tax collections) in FY 2009. We assume that the insurance premiums tax is passed on to the purchasers of the insurance in the form of higher premiums than would be paid in the absence of the tax. The tax should be allocated according to the county of residence of insurance purchasers. We use personal income as a proxy for insurance purchases under the assumption that insurance purchases are highly correlated with income. We allocate the insurance premiums tax based on each county's share of personal income.
- Inheritance Taxes accounted for \$185.5 million (1.33 percent) of state tax revenue. In Indiana the inheritance tax is collected

by the county, so county collections was used as allocation of inheritance tax revenue.

The state of Indiana received approximately \$43.5 million (0.31 percent of total taxes) in Alcoholic Beverage Taxes in FY 2009. We assume that these taxes are borne by consumers in the form of higher prices for alcoholic beverages than would occur in the absence of the tax. We allocate these taxes based on each county's share of population.

#### The Geographic Distribution of State Expenditures

Method of allocating expenditure share to counties

Indiana's state government allocates spending of tax revenues through roughly 550 separate funds ranging from K-12 tuition assistance (more than \$4.6 billion) to the preservation and display of the state's Civil War battle flags (roughly \$38,000 last year). A further \$3.2 billion is allocated through a series of fees ranging from unemployment compensation fund collections to the sale of excess property. Most of these fees have specific allocations (often directly supporting the agency which collected the fee), and are not included in this analysis. In addition, the state received more than \$7.4 billion in federal aid in 2008—much of it linked to levels of state spending in such areas as highway and health care funding. We included no Federal expenditures in this analysis.

The spending is tied to specific activities, some of which are also linked directly to a tax instrument. More commonly, these funds are derived from the state's General Fund. As with the tax instruments examined above, it is necessary to assign expenditures for state activity to the locations that benefit from the spending. In these instances it is important to allocate the expenditures in a manner that aligns them with the incidence of the benefits of this spending. More simply, in this process we are trying to align state spending with the individuals and households who benefit from that spending.

To align spending with households, and ultimately the counties in which the households are located, we make certain assumptions of incidence. There are effectively two types of incidence assumptions we must make-either the activity benefits residents specifically within a county or the benefits of an activity falls upon all residents of the state. In some cases, the administrative record or expenditure formula performs this task for us. For example, while the benefits of providing Medicaid may have broad benefits, we know specifically where these payments were made at the county level. As a consequence, administrative records are the most effective allocation mechanism and we make no further adjustment for incidence. In other circumstances, the location of the payment is not reflective of the benefits of the activity. For example the state operates several prisons from which offenders across Indiana are incarcerated. This is a benefit that accrues to all Hoosiers even though expenditures are made specifically to government activity within just a few counties in which state prisons are

#### Table 2

Incidence Assumption	Allocation Method		
County of residence	Administrative report of payment		
County of residence	Based on "college intent" by 2007 high school students		
County of residence	Administrative report of payment		
County of residence	Administrative report of payment		
County of residence	Home of record of state employee		
All residents	Per capita basis		
All residents	Per capita basis		
All residents	Per capita basis		
County of residence	Administrative report of payment		
County of residence	Administrative report of payment		
All residents	Per capita basis		
All residents	Per capita basis		
	Incidence Assumption County of residence County of residence County of residence County of residence County of residence All residents All residents All residents County of residence County of residence County of residence All residents All residents All residents		

located. As a consequence, we must allocate these activities in a way that reflects the incidence of the benefits. *Table 2* summarizes these allocation decisions.

There are complications to this analysis that should be noted. The most obvious one is that this report makes no judgment on the optimality of taxes or spending, nor do we review the formularies used to allocate expenditures. We are simply attempting to match the location of state revenue collections and expenditures. Second, our assumptions of incidence, though grounded in decades of theory and the predominant methods of allocation, remain assumptions. While it is commonly accepted for example, that the benefits of a public safety system (including state prisons) is a benefit that falls upon all residents of a state, many communities still vie for the location of these activities, viewing the presence of the jobs accompanying a prison as a benefit that accrues locally. Finally, some state expenditures, most notably those on infrastructure are "lumpy" and are not uniformly distributed each year. As a consequence, in one year a county might receive transportation funding for new bridge construction, while an adjacent county might receive bridge funding in a later year. So, any single year assessment of expenditures overstates the variability of these payments. Over the long term, infrastructure expenditures are less variable.

In order to explain this more fully, we briefly review the largest expenditure groups or funds. There are more than 550 combined funds or disbursement mechanisms for state dollars, so considerable aggregation is needed.

• K-12 Education is by far the largest single expenditure by Indiana or any other state. In addition to the state school funding formula that distributes more than \$4.6 billion to school districts, the state also distributes funding to school systems in 75 smaller funds for such activities as textbooks and training for superintendents. We allocate these funds based upon the county to which they were administratively distributed. The only deviation from this involves a small number of school districts that straddle a county border. In those instances we allocate the funds based upon the population of each county within the school district border.

- Medicaid expenditures represent the second largest fund with more than \$1.2 billion in spending from Indiana's General Fund. The Federal government contributes roughly three dollars for each dollar of state spending in this arena. This study only reports those expenditures made from Indiana state tax revenues. These funds are administratively dispersed to recipients in all 92 counties, hence records for Medicaid disbursement are available for each county, and we allocate these funds to each county based on the administrative disbursements.
- Other Health Care funding from 55 separate categories accounts for more than \$650 million in expenditures across the state. These funds distribute directly to activities in all counties based upon individual programmatic activities and so we allocate them based upon the county in which the payments are made.
- Wages and Benefits for State Employees comprise annual expenditures of roughly \$1.2 billion. State employees live and work in each of Indiana's 92 counties. We apportion payments from this fund directly to each employee's domicile county. Fringe benefits are not as clearly designed, with the state paying for 39 different types of fringe benefits from FICA and Social Security to different types of retirement, health and related funds. Some of these expenditures are highly correlated with wages (such as retirement and FICA), while others are correlated with the size of the employees family (such as health benefits). Even within both of these examples, some variation exists such as an SSI exclusion for higher income state employees and higher fixed costs on health plans. However, we have assumed that in aggregate, these funds are best allocated to counties based upon the share of wages associated with each county.
- Transportation related expenditures were made from a variety of funds administered by the Indiana Department of Transportation. These expenditures are the most likely to distort the distribution



because infrastructure expenditures are far more 'lumpy' than those on human or other governmental services. For example, the construction of a bridge or highway ramp within a county is an expensive undertaking most likely undertaken in a single year (certainly one budget biennium). As a consequence, one county receiving these expenditures within a single year will appear to be a heavy recipient of state transportation funding. In the next year, there may be no infrastructure expenditures within the county. Indeed, between 2007 and 2009, 13 counties had at least one year without any highway infrastructure projects. So, we find a great deal of year-to-year variation in each county's receipt of highway funding (changing as much as 175 percent in a single year). If we average the expenditures over a three year period we find a very strong relationship between infrastructure spending and population (about twice as statistically explanatory than a single year's comparison). For the purposes of this report we look only at fiscal year 2009 expenditures, but note that this is not a good representation of the overall equity in transportation funding to counties.

- State support of Higher Education is also made through 53 different funds. These expenditures are made in support of specific components of state supported higher education missions such as the building of school facilities, purchase of equipment and tuition support. These expenditures are made to educational institutions in 66 of Indiana's 92 counties. However, the benefits accrue primarily to students receiving the educational subsidies. As a consequence, we place the incidence of this expenditure on the home location of college students. The measure we use is the response of 'intent for postsecondary education' provided by the State Department of Education. In this case we allocate the expenditures to each county based on the most recent year's share of high school students planning to attend college. There is no existing administrative data linking these students to specific postsecondary institutions in Indiana, however it is probable that the proportional distribution of college students in Indiana mirrors the share of students intending to pursue postsecondary education.
- Family and Children Fund expenditures comprise roughly \$164 million in 2009. These distributions are made administratively and can then be tied directly to a county. This is true also of Riverboat Tax distributions, Economic Development funding and Homestead Credit distributions under the phase-in of HEA 1001 (P.L. 146-2008), the state budget.
- Public Safety expenditures by the state, along with Conservation and Environmental funding, General Government and Miscellaneous expenditures were allocated on a per capita basis. The argument for assuming a per capita basis on these is particularly compelling. Public safety funds are directed to state level activities such as courts and prisons, which obviously benefit all residents. Likewise, conservation and environmental expenditures



#### Fig. 1: Geographic Distribution of Per Capita Net Tax Payments

benefit residents far more broadly than in the locations where specific activities occur within the state. General government and miscellaneous activities involve governmental operations on almost 300 different funds in all counties. These include activities ranging from monument commissions to maintenance of the capital building. The benefits of these activities accrue to all Hoosiers and are thus allocated on a per capita basis.

#### Net Taxes

Net taxes are the difference between total revenue and total expenditures. Indiana, like 48 other states (Vermont being the exception) effectively requires a balanced annual budget. This annual balancing occurs administratively at the end of the state fiscal year (June 30th) for the biennial budget. However, matching specific taxes paid to expenditures made in a given year is not a simple matter. This



Fig. 2: Per Capita Net Tax Payments by County

Vonderkrunk		1 251 00
Hendricks	961.1	3
Hamilton	904.30	0
Bartholomew	648.13	1
Monroe	622.98	
Dubois	558.81	1
Marion	4/6.78	i i
Clark	442.07	i.
Kosciusko	359.82	1
Elkhart	357.25	1
Porter	341.15	1
Johnson	339.58	1
Boone	320.50	
Adams	185.40	1
St. Joseph	132.50	i i
Tippecanoe	132.07	i.
Dearborn	123.20	1
Posey	<b>51.34</b>	1
Daviess	0.46	I.
-40.47	Wells	
-101.84	Lagrange	
-117.18	Rush	
-128.37	DeKalb	i
-142.36	GIDSON	I.
-143.34 _144.12	Vigo	I.
-191.71	Montgomery	1
-193.13	Brown	1
-215.77	Harrison	
-218.15	Floyd	
-230.62	l lpton Franklin	1
-235.46 -285.47	Morgan	i
-295.69	Delaware	i i
-319,50	Jasper	I.
-345.26	Ripley	1
-356.37	Shelby	1
-377.39	Lake	1
-392.01	Fulton	
-410.06	Hancock	1
-411.83	Grant	
-426.36	White	i
-426.52	Carroll	I.
-453.40	Huntington	1
-490.79	Pulaski	1
-519.94	LaPorte	1
-534.68	Orange	
-565.56	Decatur	
-583.88	Clipton	
-641.34	Knox	1
-643.83	Warrick	I.
-670.73	Wabash	1
-674.90	Warren	I.
-675.40	Wayne	1
-009.70	Kashington	
-739.39	Pike	
-744.76	Blackford	
-753.45	Scott	i i
-759.41	Starke	i i
-774.55	Switzerland	I.
-7782 29	Marshall	I.
-831.82	Jay	1
-835.98	Benton	1
-845.61	Fayette	
-859.53	Owen	
-874.60	Spencer	i
-0/4.02	Vermillion	i i
-921.74	Randolph	I.
-974.33	Jackson	I.
-1,002.45	Greene	1
+1,026.12	Lawrence	
-1.064.23	Ohio	1
-1,076.19	Jefferson	i i
-1,093.09	Jennings	1
-1,095.57	Perry	1
-1,307,35	Crawford	1
-1,303.7	Clay	I
-1.398.47	Miami	1
-1,418.35	Parke	1
-1,522.18	Sullivan	1
1,944.11	Cass	
\$ 2 000 \$ 1 500 \$ 1 000 \$ 500 \$	0 \$500 \$1.000	\$1 500
		* 1.5UU

is primarily because expenditures are made in fiscal years (July 1-June 30) while income taxes (and many others) are paid on calendar years. Further complicating the matter are simple administrative issues such as year-to-year carryover of funds, corrections to year-end taxes, and supplementary revenue sources such as the sale of public equipment or interest on some state fund accounts. Also, the state, over time, maintains a balance in seven different expenditures funds in fiscal year 2009. In order to compare taxes and revenues at a single point in time it is necessary to allocate the fiscal/calendar year discrepancy and the fund balance to each county. We allocate the difference between revenues and expenditures to each county by population share.

The geographic distribution of net taxes provides some understanding of the influence that metropolitan status plays in the flow of funds in Indiana. The map in Figure 1 outlines the level to which individual Indiana counties pay taxes and receive state government expenditures. The map possesses two color themes, orange and gray. Orange-themed counties have per capita taxes which exceed per capita government expenditures. The more intense the orange color, the higher the net taxes. Gray-themed counties had government expenditures per capita that exceeded per capita taxes. The more intense the gray color theme, the higher the net revenues that accrue to the county. The maps shows that on a per capita basis net taxes tend to flow from large metropolitan counties to smaller metro and rural counties. The exceptions are Steuben, Kosciusko, Adams and Dubois counties, which are nonmetropolitan counties but pay more in taxes than they receive in revenue. Steuben County is bordered by two states both of which have higher gasoline and cigarette taxes than Indiana and has two interstate highways running through it. As a result this county collects a disproportionate share of cigarette and gasoline tax revenue. Kosciusko, Adams and Dubois counties are each proximate to a metropolitan area and have residents with relatively high household incomes. Personal income tax, corporate income tax, and sales tax payments, gasoline taxes are higher than the state median (excluding Marion County). These factors suggest that the spending and tax gap are the result of local conditions. When combined with high volatility in year to year expenditures on infrastructure these types of variations are not unexpected. See the appendix for more details on state revenues and expenditures by county.

The geographic distribution of net tax payments to each county, on a per capita basis, also provides a tool for understanding the flow of funds. *Figure 2* shows the ranking of counties by net taxes. The orange bars indicate counties where state revenue per capita is higher than state expenditures per capita. The gray bars indicate the opposite: counties where state expenditures per capita are greater than state revenues per capita. On a per capita basis, residents of Vanderburgh County pay the most in state taxes relative to state expenditures while Cass County receives the most state expenditures relative to taxes paid.





Fig. 3: Distribution of Per Capita Net Tax Payments

*Figure 3* compares per capita income in each of Indiana's 92 counties with the net taxes paid. The orange dots indicate counties where state revenue per capita is higher than state expenditures per capita. The gray dots indicate state expenditures per capita are higher than state revenue per capita. As clearly indicated, richer counties pay more taxes than they receive in state spending, while poorer counties receive more state spending than they pay in taxes.

#### Metropolitan counties

*Table 3* shows the division of state tax revenue and expenditures between metropolitan and nonmetropolitan counties (2003 definition). Taxpayers in the 46 metropolitan counties pay 82.5 percent of the taxes (\$11.3 billion, \$2,261 per capita) and receive 76.7 percent (\$10.5 billion, \$2,103 per capita) of the revenue.

We also include separate tabulations for the ten-county Indianapolis metropolitan area and the rest of the state. The Indianapolis metro counties pay more in state taxes than they receive in state expenditures. Of the 13.7 billion in state tax revenue allocated to counties, more than 33 percent (\$4.58 billion, \$2,673 per capita) were paid by taxpayers in the Indianapolis metropolitan counties while these counties received 28 percent of state expenditures (\$3.8 billion, \$2,229 per capita). In contrast, counties outside the Indianapolis area in aggregate pay less in state taxes (\$9 billion, \$1,951 per capita) than they receive in expenditures (\$9.86 billion, \$2,114 per capita).

#### Conclusion

This study examines the geographic source of Indiana's tax revenues and the disbursement of these taxes through more than 550 state funds. We are particularly intent upon assigning taxes and expenditures to residents in specific counties to better illustrate the flow of state tax dollars among regions within Indiana.

This effort requires us to make incidence assumptions based upon the most likely tax payers and then assign these taxes to specific counties. We do the same for expenditures, linking beneficiaries to spending. While residents in Ohio County benefit, albeit modestly, from health care expenditures for children in Porter County, the child and her family in Porter County derive most of the benefit. So, in principle we have attempted to assign benefits based to the primary beneficiary. Since most State funds are distributed in close formularies (e.g. schools), our assumptions of incidence do little to alter the result.

What is most clear is that on a per capita basis the transfer of tax dollars through the state's fiscal system flows from rich to poorer places and from urban to rural places. This is consistent with the results by analysts from other states who examine the distribution of state government finances.

#### References

- Bluestone, Peter. 2009. Georgia revenues and expenditures: An analysis of their geographic distribution. Georgia State University Fiscal Research Center Report No. 188, Feb. WEBLINK
- Chamberlaine, Andrew and Prante, Gerald. 2007. Estimating federal tax burdens for major city areas, counties and U.S. congressional districts. *Tax Foundation Working Paper No. 2*, March. http://www.taxfoundation.org/ files/wp2.pdf.
- Coomes, Paul A. and Kornstein, Barry. 1999. The intrastate distribution of state government revenues and expenditures in Kentucky fiscal year 1996-97. University of Louisville, Aug. 30, http://monitor.louisville.edu/taxes/Report\_FY97.pdf
- Coomes, Paul A. and Kornstein, Barry. 2004. Kentucky's Economic Competitiveness A Call for Modernization of the State's Fiscal Policies. *University of Louisville*, Dec. http://monitor.louisville.edu/taxes/Manuscript%20fy03. pdf
- ---, Stober, William, and Thalheimer, Richard. 1994. Measuring the intrastate distribution of state government funds: A case study. *Journal of Economic* and Social Measurement 20: 285-329.
- Randoph, William C. 2006. International burdens of the corporate income tax. Congressional Budget Office Working Paper Series, 2006-09, http://www.cbo. gov/ftpdocs/75xx/doc7503/2006-09.pdf
- Stats Indiana. Boundary Maps. Metro Areas. 2003 Definitions. http://www.stats. indiana.edu/maptools/maps/boundary/msa03/pdfs/indiana\_msas.pdf



Rest of state per capita

### Table 3: State Tax Revenue and Expenditures in Metro and Nonmetro Counties of the State

Region	Population	Personal Income (\$ in thousands)	Total Revenue (\$)	Total Expenditures (\$)	
Total	6,376,792	210,447,553	13,677,985,873	13,677,985,873	
Metro total	4,989,373	170,732,393	11,281,365,891	10,492,860,236	
Metro share	78.2%	81.1%	82.5%	76.7%	
Nonmetro total	1,387,419	39,715,160	2,396,619,982	3,185,125,637	
Nonmetro share	21.8%	18.9%	17.5%	23.3%	
Indianapolis metro total	1,715,459	65,094,385	4,584,960,947	3,823,291,532	
Indianapolis metro share of state total	26.9%	30.9%	33.5%	28.0%	
Outside Indianapolis total	4,661,333	145,353,168	9,093,024,926	9,854,694,341	
Outside Indianapolis share of state total	73.1%	69.1%	66.5%	72.0%	
Region	Personal Income (\$ in thousands)	Total Revenue (\$)	Total Expenditures (\$)	Net Taxes (\$) (Total Revenue-Total Expenditures)	
Total per capita	33,002	2,145	2,145		
Metro per capita	34,219	2,261	2,103	158	
Nonmetro per capita	28,625	1,727	2,296	-568	
Metro Indianapolis per capita	37,946	2,673	2,229	444	

1,951

2,114

-163

31,183

# Appendix

## Table A1: Population, Income, Revenues and Expenditures by County

County	Population	Personal Income (\$ in Thousands)	Total Revenue (\$)	Total Expenditures (\$)	Net Taxes (\$)	Net Taxes Per Capita (\$)	Per Capita Income (\$)	Metro Counties Yes/No	Indy Metro Counties Yes/No
Adams	33,985	916,435	62,499,583	55,856,363	6,643,219	195	26,966	No	No
Allen	350,523	11,752,526	794,581,265	729,593,922	64,987,343	185	33,529	Yes	No
Bartholomew	75,360	2,756,216	195,636,762	146,793,478	48,843,284	648	36,574	Yes	No
Benton	8,769	269,621	13,790,819	21,121,505	-7,330,686	-836	30,747	Yes	No
Blackford	13,093	335,272	18,838,240	28,589,347	-9,751,107	-745	25,607	No	No
Boone	55,027	2,683,816	138,975,353	121,339,375	17,635,978	320	48,773	Yes	Yes
Brown	14,550	510,870	26,492,838	29,302,910	-2,810,072	-193	35,111	Yes	Yes
Carroll	19,864	576,299	32,996,726	41,469,186	-8,472,460	-427	29,012	Yes	No
Cass	39,123	1,103,066	64,993,315	141,052,683	-76,059,368	-1,944	28,195	No	No
Clark	106,673	3,431,030	237,138,377	193,879,686	43,258,691	406	32,164	Yes	No
Clay	26,703	693,126	38,731,770	75,628,705	-36,896,935	-1,382	25,957	Yes	No
Clinton	34,069	916,938	50,098,203	71,415,533	-21,317,330	-626	26,914	No	No
Crawford	10,624	263,355	10,656,028	24,545,348	-13,889,319	-1,307	24,789	No	No
Daviess	30,147	889,753	55,388,598	55,374,765	13,833	0.46	29,514	No	No
Dearborn	49,985	1,623,942	89,530,623	83,372,284	6,158,339	123	32,489	Yes	No
Decatur	24,998	749,362	47,275,751	61,413,674	-14,137,924	-566	29,977	No	No
DeKalb	41,884	1,215,920	77,850,014	83,226,459	-5,376,445	-128	29,031	No	No
Delaware	114,685	3,179,897	219,578,453	253,490,194	-33,911,740	-296	27,727	Yes	No
Dubois	41,449	1,636,696	110,962,125	87,800,104	23,162,021	559	39,487	No	No
Elkhart	199,137	6,595,065	468,888,559	397,747,766	71,140,793	357	33,118	Yes	No
Fayette	24,265	647,070	36,733,499	57,252,281	-20,518,782	-846	26,667	No	No
Floyd	73,780	2,753,251	130,678,863	146,773,706	-16,094,843	-218	37,317	Yes	No
Fountain	17,041	491,521	25,686,824	38,082,290	-12,395,466	-727	28,843	No	No
Franklin	23,343	733,726	36,577,307	42,493,756	-5,916,449	-253	31,432	Yes	No
Fulton	20,319	587,234	35,396,580	43,361,883	-7,965,302	-392	28,901	No	No
Gibson	32,666	1,006,425	55,149,865	59,800,346	-4,650,481	-142	30,810	Yes	No
Grant	68,609	1,868,951	113,145,504	141,400,524	-28,255,020	-412	27,241	No	No
Greene	32,577	887,482	47,740,976	80,397,720	-32,656,744	-1,002	27,243	Yes	No
Hamilton	269,785	12,095,594	813,632,379	569,667,094	243,965,285	904	44,834	Yes	Yes
Hancock	67,282	2,620,647	128,128,843	155,718,735	-27,589,891	-410	38,950	Yes	Yes
Harrison	37,067	1,138,776	65,653,482	73,651,613	-7,998,131	-216	30,722	Yes	No
Hendricks	137,240	4,605,605	431,278,435	299,373,260	131,905,175	961	33,559	Yes	Yes
Henry	47,162	1,310,565	77,040,945	126,491,649	-49,450,704	-1,049	27,789	No	No
Howard	83,381	2,703,700	180,485,080	180,330,728	154,352	2	32,426	Yes	No
Huntington	37,570	1,111,431	57,406,209	74,735,205	-17,328,996	-461	29,583	No	No
Jackson	42,193	1,256,510	92,405,865	133,515,733	-41,109,867	-974	29,780	No	No
Jasper	32,544	972,050	59,218,322	69,616,286	-10,397,963	-320	29,869	Yes	No
Jay	21,412	559,836	28,679,882	46,490,884	-17,811,002	-832	26,146	No	No
Jefferson	32,820	901,018	58,139,187	93,459,605	-35,320,417	-1,076	27,453	No	No
Jennings	28,040	763,744	39,024,833	69,675,146	-30,650,313	-1,093	27,238	No	No
Johnson	139,158	4,573,891	315,199,192	267,943,446	47,255,746	340	32,868	Yes	Yes
Knox	38,057	1,144,110	70,816,440	95,224,036	-24,407,597	-641	30,063	No	No
Kosciusko	76,275	2,662,088	163,894,906	136,449,430	27,445,476	360	34,901	No	No
Lagrange	37,172	861,875	58,200,147	61,985,596	-3,785,449	-102	23,186	No	No
Lake	493,800	15,637,354	890,431,620	1,076,787,023	-186,355,403	-377	31,667	Yes	No
LaPorte	110,888	3,191,921	216,135,792	273,791,265	-57,655,474	-520	28,785	Yes	No
Lawrence	45,913	1,281,500	76,115,923	123,228,273	-47,112,350	-1,026	27,911	No	No

## Table A1 Continued

County	Population	Personal Income (\$ in Thousands)	Total Revenue (\$)	Total Expenditures (\$)	Net Taxes (\$)	Net Taxes Per Capita (\$)	Per Capita Income (\$)	Metro Counties Yes=Yes No = No	Indy Metro Counties Yes=Yes No = No
Madison	131,501	3,925,372	231,845,020	282,017,750	-50,172,729	-382	29,851	Yes	No
Marion	880,380	33,237,274	2,482,024,322	2,062,276,012	419,748,310	477	37,753	Yes	Yes
Marshall	46,709	1,329,871	69,299,388	105,839,369	-36,539,981	-782	28,471	No	No
Martin	9,969	286,480	14,060,045	21,802,273	-7,742,228	-777	28,737	No	No
Miami	36,219	902,838	48,545,553	99,196,631	-50,651,078	-1,398	24,927	No	No
Monroe	128,992	3,767,800	270,851,625	190,492,146	80,359,479	623	29,210	Yes	No
Montgomery	37,805	1,104,554	68,546,193	75,793,817	-7,247,624	-192	29,217	No	No
Morgan	70,668	2,318,239	122,635,385	142,808,988	-20,173,603	-285	32,805	Yes	Yes
Newton	13,933	400,173	19,428,695	27,563,853	-8,135,158	-584	28,721	Yes	No
Noble	47,601	1,285,747	69,584,560	90,214,937	-20,630,377	-433	27,011	No	No
Ohio	5,773	165,000	7,836,274	13,980,050	-6,143,776	-1,064	28,581	Yes	No
Orange	19,571	508,085	30,852,265	41,316,487	-10,464,223	-535	25,961	No	No
Owen	22,375	566,804	26,265,769	45,497,684	-19,231,915	-860	25,332	Yes	No
Parke	17,152	428,674	22,668,113	46,995,569	-24,327,457	-1,418	24,993	No	No
Perry	18,929	524,999	31,263,650	52,001,767	-20,738,117	-1,096	27,735	No	No
Pike	12,569	343,999	15,556,083	24,849,483	-9,293,401	-739	27,369	No	No
Porter	162,181	6,330,096	341,927,790	286,599,596	55,328,194	341	39,031	Yes	No
Posey	26,079	907,701	49,815,739	48,476,871	1,338,868	51	34,806	Yes	No
Pulaski	13,712	408,735	24,109,906	30,839,555	-6,729,649	-491	29,809	No	No
Putnam	37,183	1,063,716	53,201,859	85,722,996	-32,521,137	-875	28,608	Yes	Yes
Randolph	25,801	704,544	35,795,361	59,577,240	-23,781,879	-922	27,307	No	No
Ripley	27,400	778,422	50,010,640	59,470,867	-9,460,227	-345	28,410	No	No
Rush	17,297	534,632	34,391,521	36,418,365	-2,026,845	-117	30,909	No	No
St. Joseph	266,680	9,396,281	566,927,522	531,592,578	35,334,945	132	35,234	Yes	No
Scott	23,627	604,597	35,265,089	53,066,960	-17,801,871	-753	25,589	No	No
Shelby	44,186	1,384,733	73,392,341	89,138,718	-15,746,376	-356	31,339	Yes	Yes
Spencer	20,111	610,730	33,282,859	50,834,354	-17,551,495	-873	30,368	No	No
Starke	23,658	548,697	32,116,688	50,082,920	-17,966,232	-759	23,193	No	No
Steuben	33,368	966,386	73,784,013	59,033,056	14,750,957	442	28,961	No	No
Sullivan	21,328	524,319	29,600,258	62,065,363	-32,465,105	-1,522	24,584	Yes	No
Switzerland	9,696	257,332	12,141,915	19,651,954	-7,510,038	-775	26,540	No	No
Tippecanoe	164,237	4,682,114	324,529,758	302,838,880	21,690,877	132	28,508	Yes	No
Tipton	15,923	543,771	27,310,692	30,982,838	-3,672,145	-231	34,150	Yes	No
Union	7,157	220,674	10,827,416	20,601,811	-9,774,396	-1,366	30,833	No	No
Vanderburgh	174,729	6,386,585	549,001,508	330,400,859	218,600,650	1,251	36,551	Yes	No
Vermillion	16,234	475,429	24,588,025	39,300,360	-14,712,335	-906	29,286	Yes	No
Vigo	105,968	2,968,882	210,923,854	226,195,433	-15,271,579	-144	28,017	Yes	No
Wabash	32,706	998,510	59,725,486	81,662,526	-21,937,039	-671	30,530	No	No
Warren	8,547	238,908	11,076,163	16,844,519	-5,768,356	-675	27,952	No	No
Warrick	57,656	2,116,280	97,436,125	134,556,749	-37,120,625	-644	36,705	Yes	No
Washington	27,949	757,741	34,804,945	54,081,294	-19,276,349	-690	27,112	Yes	No
Wayne	67,795	1,966,362	137,784,006	183,572,449	-45,788,443	-675	29,005	No	No
Wells	27,964	807,590	53,195,715	54,327,339	-1,131,624	-40	28,880	Yes	No
White	23,800	687,134	44,684,471	54,831,916	-10,147,445	-426	28,871	No	No
Whitley	32,667	1,013,663	57,170,966	61,859,890	-4,688,924	-144	31,030	Yes	No
Total	6,376,702	210 447 553	13 677 985 873	13 677 985 873					
	5,57 5,7 5L	2.3,11,000	,,,,	,,					