The Shares of Indiana Taxes Paid by Businesses and Individuals: An Update for 2006

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Summary
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This paper estimates the share of Indiana taxes paid by businesses and individuals. The results for all taxes show the business share at 37.5%, and the individual share at 62.5%.

The seven largest taxes comprise 90% of the total, $19.1 million out of $21.3 million. These taxes are the property tax, the sales tax, the state individual income tax, the local individual income taxes, the corporate income taxes, the motor fuels taxes and the motor vehicle excise tax.

An earlier study found that in 1991 the business share of these seven largest taxes was 38.1%, and the individual share was 61.9%. This study finds that, in 2006, the business share of the seven largest taxes was 34.9%, and the individual share is 65.1%. The business share of the seven largest taxes has declined in the past 15 years by 3.2 percentage points.

The main causes of this shift are:

- The move to market value property tax assessment increased the share of the tax paid by individuals (homeowners), and decreased the share paid by businesses.
- The increase in the sales tax from 5% to 6% increased the individual share more than the business share, because most of the sales tax is paid by individuals.
- The drop in the importance of the corporate income taxes, due to the 2002 reform and the 2001 recession and slow recovery, reduced the business share of total taxes.
- The large increase in local income tax collections increased the individual share more than the business share, because most of the local income taxes are paid by individuals.

One change moved in the other direction, shifting tax payments from individuals to businesses:

- The increase in the share of the state individual income tax paid by businesses increased the overall share of taxes paid by business, and decreased the individual share.

Including riverboat gaming taxes and unemployment insurance taxes are the main reason why the business share for all taxes, 37.5%, is greater than the share of the seven biggest taxes, 34.9%. Both are considered to be wholly business taxes.

These are measures of statutory incidence, not economic incidence. There is evidence that taxes on businesses affect business profitability, which affects investment, employment and firm location decisions. This in turn affects the availability of products for consumers and jobs for employees. Taxes on businesses are at least partially passed on to consumers in higher prices, or to employees in lower pay. Tax cuts to business are partially passed on in lower prices or higher pay. The decline in the business tax share may have had this effect.

Further shifts in statutory incidence towards individuals and away from business are to be expected. The full elimination of property taxes on inventories in 2007, the trending of real property and the newly available local option income taxes should all increase the individual share of taxes. The growth of corporate income during the present economic expansion works the other way, increasing the business share of taxes.

Introduction

In 1992 I prepared an brief paper for the Indiana Legislative Services Agency and the General Assembly's Commission on State Tax and Financing Policy, titled "Shares of Major Indiana Taxes Paid by Businesses and Individuals, 1991" (DeBoer, 1992). The paper divided payments of the seven biggest Indiana taxes between individuals and businesses. The overall result showed that 38.2% of these taxes were paid by businesses, and the remaining 61.8% were paid by individuals.

Much has changed in the fifteen years since. Indiana has adopted a market value assessment system for the property tax. Property taxes on inventories have been phased out. Property tax credits and deductions have increased. Corporate income taxes have been reformed. Motor vehicle excise taxes have been reduced. Many counties have adopted local income taxes or raised their rates. And riverboat gaming taxes have become one of Indiana's largest revenue sources.

With all these changes, perhaps it is time to look again at the shares of Indiana taxes paid by businesses and individuals. The strategy here is to use the same methods and data sources to look at taxes in 2006 as were used for taxes in 1991. The results will point to the reasons for any changes in the shares of Indiana taxes paid by individuals and businesses.

Results for 1991

Table 1 reproduces the results of the tax share analysis for 1991, from DeBoer (1992). The analysis was done using the seven biggest state and local taxes in Indiana at the time. They were the property tax, the general sales tax, the state individual income tax, the corporate income taxes, the motor fuel taxes, the motor vehicle excise tax, and the local individual income taxes. The analysis estimated the share of each tax paid by businesses, then found the share of each tax in the seven-tax total. The product of these two shares is the share of business tax payments in total taxes. Subtracting this business share from the tax share in total revenue gives the individual tax share. The sums of the shares for each tax are the total business and individual shares.

Unfortunately, the spreadsheets and tables used in the 1991 study have been lost—only the text remains. Fortunately, the text has enough detail to allow the results to be recreated, to within one-tenth of one percent. The earlier study found the total business share to be 38.2%; table 1 shows 38.1%. The difference must be due to rounding the shares paid by business (the first column) to one decimal place, which is all that was reported in the text. The original analysis used more decimal places.

Table 1
Estimated Share of Major Indiana Taxes Paid by Businesses, 1991

	Share Paid by Business	Revenue (millions)	Share of Tax Revenue in Total	Business Share in Total	Individual Share in Total
Property	63.7%	2,879.7	30.9%	19.7%	11.2%
General Sales	21.6%	2,201.4	23.6%	5.1%	18.5%
State Individual Income	11.8%	2,184.0	23.4%	2.8%	20.7%
Corporate Income	100.0%	642.2	6.9%	6.9%	0.0%
Motor Fuels	47.1%	582.0	6.2%	2.9%	3.3%
Motor Vehicle Excise	5.1%	432.9	4.6%	0.2%	4.4%
Local Individual Income	11.8%	401.1	4.3%	0.5%	3.8%
Total		9,323.3	100.0%	38.1%	61.9%

In 1991 property taxes made up more than half of business tax payments for the major taxes. Property taxes were by far the largest tax businesses paid. This was not true of individuals. The state individual income tax had the highest share for individuals, followed by the general sales tax. Add in the local individual income taxes, and about a quarter of all major Indiana taxes were paid by individuals through an income tax. The property tax ranked a distant third for individuals.

Property taxes loomed so large for businesses in 1991, because the property tax was primarily a business tax. Almost 64% of property taxes were collected on business land, buildings, inventories and equipment. Sales and income taxes were paid primarily by individuals.

Changes in Tax Composition

Some taxes are paid primarily by businesses, some primarily by individuals. If the mix of these taxes change, the business and individual shares will change, even if the shares of each tax paid by business do not change. This is the easiest part of the 1991 analysis to update, so that's where I start.

Table 2 shows the same business shares as table 1, but updates the revenue figures to 2006. Changes since 1991 require two modifications. First, the state established a commercial vehicle excise tax (CVET) in 2001. Prior to that year, businesses paid property taxes on their heavy vehicles, so the 1991 property tax would have included these vehicles as business equipment. CVET is listed separately in table 2, but for comparison it could be added to the 2006 business property tax share.

Indiana reformed its corporate income taxes with the tax restructuring of 2002. The corporate gross income tax was eliminated, but utilities were required to pay a new utility receipts tax. The old supplemental net income tax was folded into the corporate adjusted gross income tax. The

2006 corporate income tax figure is the sum of the corporate income tax and the utility receipts tax.

Table 2
Composition Changes: 1991 Tax Shares and 2006 Revenue Shares

	Share Paid by Business 1991	Revenue 2006 (millions)	Share of Tax Revenue in Total	Business Share in Total	Individual Share in Total	Business Share Change from '91	Individual Share change from '91
Property	63.7%	5,654.2	29.6%	18.8%	10.7%	-0.8%	-0.5%
General Sales	21.6%	5,336.8	27.9%	6.0%	21.9%	0.9%	3.4%
State Individual Income	11.8%	4,381.6	22.9%	2.7%	20.2%	-0.1%	-0.5%
Corporate Income (+Util Receipts)	100.0%	1,002.5	5.2%	5.2%	0.0%	-1.6%	0.0%
Motor Fuels	47.1%	871.2	4.6%	2.1%	2.4%	-0.8%	-0.9%
Motor Vehicle Excise	5.1%	712.9	3.7%	0.2%	3.5%	0.0%	-0.9%
Local Individual Income	11.8%	1,118.1	5.8%	0.7%	5.2%	0.2%	1.4%
Commercial Vehicle Excise	100%	54.9	0.3%	0.3%	0.0%		
Total		19,132.2	100.0%	36.1%	63.9%	-2.0%	2.0%

Changes in the composition of major taxes have reduced the business share slightly, by two percentage points. Three changes in tax shares stand out: the business share paid in corporate income taxes has declined, and the individual shares paid in sales and local individual income taxes have increased.

Corporate income taxes are paid entirely by business. Including the utility receipts tax, corporate taxes grew more slowly than total taxes during 1991-2006. Table 3 shows that corporate tax collections grew only 56% from 1991 to 2006, slower than the overall 105% growth. Since corporate taxes are entirely paid by business, the slow growth in this tax contributes to a decline in the business tax share.

The declining share of corporate income taxes in Indiana’s tax mix is not new. The 1992 tax share paper looked at changes over the 1980 to 1991 period, and found that

> In 1980 the corporate income taxes raised $542.4 million, while the seven major taxes together raised $4,060.9 million. Corporate income taxes were 13.4% of the total. In 1991, corporate income taxes accounted for $642.2 million of the $9.3 billion from the seven major taxes, or 6.9% (DeBoer 1992).

The share of corporate income taxes in total taxes declined much more during the 1980s than it did during 1991-2006. The 1980s decline occurred because corporate income tax rates did not increase as much as individual income and general sales tax rates.

The 2002 tax reform eliminated the gross income tax for all corporations but utilities. This was a tax break for corporations except utilities. The utility receipts tax has a higher rate than the old corporate gross income tax had, 1.4% compared to 1.2%. Most corporations paid the adjusted gross and supplemental net income taxes, however, at a combined rate of about 7.75%. The new adjusted gross income tax rate is 8.5%.

Table 3
Growth of Seven Major Taxes, 1991-2006

	Revenue 1991 (millions)	Revenue 2006 (millions)	Percent Change
Property	2,879.7	5,654.2	96.3%
General Sales	2,201.4	5,336.8	142.4%
State Individual Income	2,184.0	4,381.6	100.6%
Corporate Income	642.2	1,002.5	56.1%
Motor Fuels	582.0	871.2	49.7%
Motor Vehicle Excise	432.9	712.9	64.7%
Local Individual Income	401.1	1,118.1	178.8%
Total (not counting CVET)	9,323.3	19,077.3	104.6%

Total corporate income tax revenues have grown very little since 1998. Partly this may be due to the corporate tax reform, but also to the 2001 recession and subsequent slow recovery. In 2001, before the reform, corporate tax revenue was down about 15% from 1998. By 2004 it was down 35%. Only in 2006 did it recover beyond its 1998 level. Should the economic expansion continue, corporate tax revenue will probably grow faster than total taxes, and the corporate share will increase.

The increases in individual shares due to the general sales tax and local individual income taxes are more easily explained. The sales tax rate rose from 5% to 6% in 2002. This rate increase explains almost all of the increase in the sales tax share of total taxes.

Many more counties have adopted local income taxes since 1991. In that earlier year, 51 counties had the county adjusted gross income tax (CAGIT), 49 of them at the highest rate, 1%. In 2006 56 counties had CAGIT, 9 at rates higher than 1%. In 1991 23 counties had the county option income tax (COIT), all at rates less than 1%. In 2006 28 counties had COIT, 12 at 1%. And, in 1991 23 counties had the then new economic development income tax (EDIT), 5 with rates above 0.25%. In 2006 use of EDIT had grown substantially, to 74 counties. Of those counties, 49 had rates above 0.25%. Little wonder that the local individual income taxes were the fastest growing major tax source over the 1991-2006 period. They were seventh largest in revenue in 1991; fourth largest in 2006.

The composition of the Indiana tax base has changed since 1991, and this has contributed to a two percentage point drop in the business share of total taxes, and a two point increase in the individual share. The primary reasons are

- The decreasing share of the corporate income taxes in the total. This was due partly to the tax reform of 2002 and partly to the 2001 recession and the subsequent slow recovery.
- The 2002 rate increase in the general sales tax from 5% to 6%. The sales tax is primarily paid by individuals, so this tax hike increased the individual share of total taxes.
- New adoptions and rate increases of the local individual income taxes. These taxes also are primarily paid by individuals. Local income tax revenue grew more rapidly than any other major tax.

Changes in Tax Shares

Tax shares show how much of each individual tax is paid by businesses, and how much by individuals. In some cases this calculation is obvious and straightforward (all of the corporate income tax is paid by businesses). In some cases it is not (two different methods for the general sales tax give widely differing results). The methods used to calculate shares for each tax require explanation.

Property Tax. The Department of Local Government Finance (DLGF), and before 2001 the State Board of Tax Commissioners, and the Indiana Legislative Services Agency (LSA), for many years have published estimates of the shares of the property tax paid by owners of different property types. For pay 1991 the "residential and individual" percentage was estimated to be 36.3% (LSA, 1991). This is the share of property taxes paid on residential property and individual personal property. The remaining property taxes, 63.7%, were paid by owners of farm, other business, bank and utility real and personal property. This was the percentage used for the business share of the property tax in the 1992 study.

For 2006, the share of property taxes paid by owners of residential real property, individual personal property and agricultural homesteads was 48.91% (LSA 2006). The remainder, 51.09%, was paid by commercial, industrial, agricultural business, utilities and "exempt organizations."

The methods for measuring this business share have changed. First, until pay 1995 the State Tax Board based the shares on gross taxes levied, prior to the subtraction of credits. In pay 1995 and after shares were based on net taxes levied, after credits. Second, in 2006 "exempt organizations" are included at a small fraction of the total. They were not included in 1991. Third, in 2006 agricultural homesteads are counted as residential property. In 1991 all agricultural property was counted as business property.

These changes create problems for the comparability of the shares in 1991 and 2006. The change from gross to net taxes may be a less serious problem than one might think. The residential share dropped just a little when the change was made. In pay 1994 the share was 39.47%; in pay 1995 the share was 38.87%. The property tax replacement credits (PTRC) were applied evenly to all property then (that is not true now). Applying PTRC would not have changed the shares very much. The homestead credit rate was only 4% in pay 1995, and only 5% in 1991. Applying this credit would not have reduced the individual share by much, because these rates were so small. There is no way to correct the 1991 figures to reflect net taxes (which is the appropriate measure). Fortunately, it appears that such a correction would make only a small difference in the tax shares.

The 2006 shares include a non-business, non-individual category, “exempt organizations,” accounting for 0.39% of net tax payments. The data are available to remove these payments and recalculate the shares.

Most problematic is the classification of agricultural homesteads. In 1991 all agricultural property was included in the business share; in 2006 agricultural homesteads were counted with residential and individual property. Agricultural land and business buildings were counted as business in both years. The data do not exist to adjust the 1991 shares to be consistent with the 2006 definitions, so 2006 must be adjusted instead. This will allow a consistent comparison between the two years, though by rights agricultural homesteads should be counted as individual property. In a later section agricultural homesteads will be classified as individual.

Agricultural homesteads are 2.72% of net payments. Subtracting this figure from the 48.91% individual share leaves 46.19%. Dividing this figure by 99.61% (to eliminate the 0.39% exempt organizations) yields 46.37%. The analysis will use 46.4% as the individual share of the property tax, and the remainder, 53.6%, as the business share of the property tax.

General Sales Tax. What is meant by the business share of the general sales tax? After all, businesses remit almost all of the sales taxes to the state, so in a sense the sales tax is paid 100% by businesses. Businesses are expected to pass these taxes forward to consumers, however. In this sense the sales tax is paid 100% by customers. But some of these customers are other businesses. The sales tax paid on business to business sales will be counted as the business share of the general sales tax.

The analysis in 1992 used three methods for determining the sales tax paid on business purchases. One produced an estimate near 30%, one near 20%, and the other near 10%. The middle estimate was used.

In 1992 Raymond Ring (1989) had recently published an analysis of this topic, concluding that in Indiana in 1979 businesses paid 32% of the general sales tax. The national average was 41%. Ring calculated these shares by estimating consumer spending on taxable goods and services by the residents in each state, using survey data from the Bureau of Labor Statistics’ Consumer Expenditure Survey. He multiplied this spending by each state’s tax rate to get estimated taxes paid by individuals, then divided by total sales tax revenue. The result was the estimated share of sales tax revenue paid by individuals; the remainder was assumed to be paid by businesses.

A second method used taxable sales data by industry from the Indiana Department of Revenue. Some industries, like mining, manufacturing and wholesale trade, sell most of their products to other businesses. Other industries, like retail trade, sell most of their products to individuals. Still others, like construction, sell to both. The sum of taxable sales of those industries that sell mostly to individuals, plus half of the sales of industries that sell to both, was assumed to be the sales to individuals. This figure divided by total taxable sales gave the individual share, and the remainder was the business share. The business share of the general sales tax was calculated to be 21.6% using this method, quite a bit less than Ring's estimate.

The third method used data on business use taxes, and results from an input-output model of Indiana. The method found that 9.6% of sales taxes were paid by business. This method will not be duplicated here. Those interested in the details of this method should consult DeBoer (1992).

Ironically, Ring (1999) published another article on the same topic ten years later, providing estimates for 1989, a date much closer to our original 1991 data. Using the same method, he finds the business share of Indiana sales taxes to be 46%, with the national average still at 41%. His results seem to show a substantial increase from the 32% business share found for 1979. Indiana had been below the national average for the business share; ten years later it was above average.

Ring may have used a Bureau of Census estimate of Indiana total sales tax revenue for 1989, however. Census estimates always overstated Indiana general sales taxes, apparently counting the old corporate gross income tax as a sales tax. With the denominator in his calculation too large, Ring came up with an individual share that was too small. Using his estimate of individual sales with the Indiana's sales tax revenue data yields a business share of 34.6%, a slight increase from 1979, but still less than the national average. (Note that Ring's 1979 sales tax revenue estimate was more accurate.)

Ring's estimates are for 1989, and this analysis requires estimates for 2006. Again, data were acquired from the Department of Revenue on taxable sales by industry. Since 1991 the industrial classifications have changed from SIC codes to NAICS codes, and this change means the two measures cannot be perfectly comparable. Industries were classified as selling mostly to business, mostly to individuals, or to both, based on 2-digit NAICS codes. Mining, manufacturing, wholesale trade, management services and administrative support were assumed to be sales to business. Construction, transportation and warehousing, information, finance, insurance and real estate, professional services, and other services were assumed to be half individual and half business. Utilities, retail trade, educational services, health care and social assistance, arts, entertainment and recreation, and accommodation and food services were assumed to be sales to individuals. The results shows 23.3% of taxable sales to businesses, 76.7% to individuals.

Like Ring's estimates for 1979 to 1989, these results show a slight increase in the business share, from 21.6% in 1991 to 23.3% in 2006. The 23.3% figure will be used in this analysis, because it is based on 2006 data, and because the method is consistent with that used in 1991.

State and Local Individual Income Taxes. Some of the income taxed by the individual income taxes is business income. Income from dividends, S-corporations, business partnerships, rental property and the like are business income. At one time Indiana required taxpayers to report income from various sources, but this ended in 1988. That was close enough to our original 1991 date to use, and it was found that 11.8% of taxable income derived from business sources.

Since Indiana's income tax uses a flat rate, that share was taken as the business share of the individual income tax. Both the state and local income taxes use the same tax base.
The Legislative Services Agency has access to Federal tax returns for Indiana taxpayers. The Federal returns provide the breakdown of income by type. Faulk and Landers (2004) used this data for 2001 to find that 15% of Indiana taxable income derived from businesses. An update using data for 2004 puts the business share at 16.1%. This is a small increase from the 1991 estimates.

Motor Fuels Taxes. Indiana has several motor fuels taxes. The gasoline tax, motor carrier surcharge tax, and special fuel tax raise almost all of the revenue. The method used is similar to that used for the sales tax. DeBoer (1992) found a source that estimated that 25% of gasoline sales were to businesses, while 10% of special fuels (diesel) sales were to individuals. 100% of motor carrier surcharge taxes were assumed to be to business.

Under these assumptions, in 1991 47.1% of motor fuel taxes were estimated to be paid by business. Since then special fuel and motor carrier fuel sales have increased slightly faster than gasoline sales. Now, this method yields a business share estimate of 48.6%.

Corporate and Motor Vehicle Excise Tax. No change is assumed in the business and individual shares of these two taxes. The corporate income tax (including the utility receipts tax) is assumed to be 100% business. In 1991 it was assumed that 5.1% of the motor vehicle excise tax was business, based on the share of corporate fleet vehicles in total registrations. The 2006 estimates will use this assumption too.

Results. Table 4 shows the changes in the shares between 1991 and 2006. The business shares increased for four of the seven major taxes: general sales, both state and local individual income, and motor fuels. All these increases were relatively small. The business share of the property tax, however, dropped substantially. The move to market value assessment shifted taxes to homeowners from businesses.

Table 4
Change in Business Tax Shares, 1991-2006

	Business Tax Share 1991	Business Tax Share 2006	Change
Property	63.7%	53.6%	-10.1%
General Sales	21.6%	23.3%	1.7%
State Individual Income	11.8%	16.1%	4.3%
Corporate Income	100.0%	100.0%	0.0%
Motor Fuels	47.1%	48.6%	1.5%
Motor Vehicle Excise	5.1%	5.1%	0.0%
Local Individual Income	11.8%	16.1%	4.3%

Table 5 shows the results using the new shares with 1991 revenues. This isolates the effect of the changes in the tax shares, much as table 2 isolated the effect of the changing composition of tax revenues. In this case the changes in the business and individual shares are "zero sum." Since the revenue totals are the same for each tax, there is no shifting of burden among taxes. An extra dollar paid by individuals is a dollar not paid by businesses.

Table 5
Tax Share Changes: 2006 Tax Shares and 1991 Revenue Shares

	Share Paid by Business 2006	Revenue 1991 (millions)	Share of Tax Revenue in Total	Business Share in Total	Individual Share in Total	Business Share Change from '91	Individual Share change from '91
Property	53.6%	2,879.7	30.9%	16.6%	14.3%	-3.1%	3.1%
General Sales	23.3%	2,201.4	23.6%	5.5%	18.1%	0.4%	-0.4%
State Individual Income	16.1%	2,184.0	23.4%	3.8%	19.7%	1.0%	-1.0%
Corporate Income	100.0%	642.2	6.9%	6.9%	0.0%	0.0%	0.0%
Motor Fuels	48.6%	582.0	6.2%	3.0%	3.2%	0.1%	-0.1%
Motor Vehicle Excise	5.1%	432.9	4.6%	0.2%	4.4%	0.0%	0.0%
Local Individual Income	16.1%	401.1	4.3%	0.7%	3.6%	0.2%	-0.2%
Total		9,323.3	100.0%	36.7%	63.3%	-1.4%	1.4%

The result shows a slight shift in tax burden from businesses to individuals, of 1.4%, caused entirely by the move to market value assessment for property taxes.

Changes in Tax Composition and Tax Shares

The business and individual shares in Indiana's major taxes result from a combination of changes in the composition of taxes and changes in the shares of each tax paid by business and individuals. Table 6 shows this combined result.

Table 6
Composition and Share Changes: 2006 Tax Shares and 2006 Revenue Shares

	Share Paid by Business 2006	Revenue 2006 (millions)	Share of Tax Revenue in Total	Business Share in Total	Individual Share in Total	Business Share Change from '91	Individual Share change from '91
Property	53.6%	5,654.2	29.6%	15.8%	13.7%	-3.8%	2.5%
General Sales	23.3%	5,336.8	27.9%	6.5%	21.4%	1.4%	2.9%
State Individual Income	16.1%	4,381.6	22.9%	3.7%	19.2%	0.9%	-1.4%
Corporate (+Util Receipts)	100.0%	1,002.5	5.2%	5.2%	0.0%	-1.6%	0.0%
Motor Fuels	48.6%	871.2	4.6%	2.2%	2.3%	-0.7%	-1.0%
Motor Vehicle Excise	5.1%	712.9	3.7%	0.2%	3.5%	0.0%	-0.9%
Local Individual Income	16.1%	1,118.1	5.8%	0.9%	4.9%	0.4%	1.1%
Commercial Vehicle Excise	100.0%	54.9	0.3%	0.3%	0.0%		
Total		19,132.2	100.0%	34.9%	65.1%	-3.2%	3.2%

Overall, the individual share of the seven major taxes appears to have increased by 3.2% from 1991 to 2006.

The main causes of this shift are:

- The move to market value property tax assessment increased the share of the tax paid by individuals (homeowners), and decreased the share paid by businesses.

- The increase in the sales tax from 5% to 6% increased the individual share more than the business share, because most of the sales tax is paid by individuals.

- The drop in the importance of the corporate income taxes, due to the 2002 reform and the 2001 recession and slow recovery, reduced the business share of total taxes.

- The large increase in local income tax collections increased the individual share more than the business share, because most of the local income taxes are paid by individuals.

One change moved in the other direction, shifting tax payments from individuals to businesses:

- The increase in the share of the state individual income tax paid by businesses increased the overall share of taxes paid by business, and decreased the individual share.

Tax Shares in 2006: All Indiana Taxes

The major taxes are most but not all Indiana taxes. In particular, gaming taxes on riverboat casinos have been established since 1991. These taxes are now the eighth largest state and local tax, almost as large as the motor vehicle excise tax. Tobacco tax rates also have increased substantially since 1991, and are arguable now a major revenue source. And, other studies of tax shares include unemployment insurance taxes. Revenue from these taxes are almost as large as gaming taxes.

Table 7 extends the analysis to include all Indiana taxes. The seven major taxes already analyzed comprise 90% of the total, the other taxes just 10%. Simple assumptions are made about the business and individual shares of these taxes. Gaming, unemployment insurance, utility receipts (listed separately from the corporate income taxes), insurance, commercial vehicle excise, financial institutions and wheel taxes are assumed to be 100% business taxes. Cigarette, inheritance, food and beverage, motor vehicle excise surtax and alcoholic beverage taxes are assumed to be 100% individual. The local hotel/motel taxes are assumed to be half business, half individual.

The results for all taxes show the business share at 37.5%, and the individual share at 62.5%. This business share is higher than the share calculated with just the seven biggest taxes, 34.9%. The all-tax share is higher because the biggest added tax sources, gaming taxes and unemployment insurance taxes, make up 57% of the added revenue, and these taxes are assumed to be 100% business.

Table 7
Estimated Share of Indiana Taxes Paid by Businesses and Individuals, 2006

	Share Paid by Business 2006	Revenue 2006 (millions)	Share of Tax Revenue in Total	Business Share in Total	Individual Share in Total
Property	51.1%	5,654.2	26.5%	13.6%	13.0%
General Sales	23.3%	5,336.8	25.1%	5.8%	19.2%
State Individual Income	16.1%	4,381.6	20.6%	3.3%	17.3%
Local Individual Income	16.1%	1,118.1	5.2%	0.8%	4.4%
Motor Fuels	48.6%	871.2	4.1%	2.0%	2.1%
Corporate Income	100.0%	796.1	3.7%	3.7%	0.0%
Motor Vehicle Excise	0.0%	712.9	3.3%	0.0%	3.3%
Gaming	100.0%	616.7	2.9%	2.9%	0.0%
Unemployment Insurance	100.0%	613.8	2.9%	2.9%	0.0%
Cigarette	0.0%	355.5	1.7%	0.0%	1.7%
Utility Receipts	100.0%	206.4	1.0%	1.0%	0.0%
Insurance	100.0%	177.7	0.8%	0.8%	0.0%
Inheritance	0.0%	149.0	0.7%	0.0%	0.7%
Innkeepers	50.0%	62.9	0.3%	0.1%	0.1%
Food/Beverage	0.0%	55.0	0.3%	0.0%	0.3%
Commercial Vehicle Excise	100.0%	54.9	0.3%	0.3%	0.0%
MV Excise Surtax	0.0%	48.7	0.2%	0.0%	0.2%
Financial Institutions	100.0%	41.4	0.2%	0.2%	0.0%
Alcoholic Beverage	0.0%	40.5	0.2%	0.0%	0.2%
Wheel Tax	100.0%	5.0	0.0%	0.0%	0.0%
Total		21,298.4	100.0%	37.5%	62.5%

The Utility Receipts Tax
The utility receipts tax was created in the tax reform of 2002 to replace the corporate gross income tax for utilities. Since the old tax was considered to be paid entirely by business, the new tax has been treated that way, too. However, at least one utility (Verizon Wireless) has placed "IN Utility Receipts Surcharge" on its consumer bills under "surcharges." This utility appears to be treating the utility receipts tax as a kind of excise tax, to be passed on to consumers. Perhaps other utilities are doing the same, without being so explicit on their bills.

If so, the utility receipts tax could be treated like other excise taxes—the cigarette tax or food/beverage tax—as a 100% individual tax. Since this tax is 1% of total Indiana taxes, switching it from business to individuals would decrease the business share by one percentage point to 36.5%, and increase the individual share to 63.5%.

Economic Incidence

The utility receipts tax question leads to the larger question of economic incidence. Businesses may pass some or all of their taxes to customers in higher prices or to employees in lower wages and benefits. The economic incidence of a tax shows who ultimately bears its burden, through higher prices or lower incomes.

The economic incidence mechanism works like this. A tax is imposed on a business. The tax makes the business less profitable. Firms are discouraged from expanding their operations, making new investments, or hiring new employees. They may decide to relocate elsewhere. The supply of the firm's product decreases. That raises the price to consumers. The demand for employees decreases. That reduces wages and benefits. It takes time for the firm to make these investment and employment decisions. Once it does, though, the burden of the tax is at least partially passed on in higher prices or lower pay.

Economic incidence works in the other direction, too. A business tax cut should make businesses more profitable, cause business to expand, and to increase the supply of products and the demand for labor. Prices wind up lower and pay higher than they otherwise would have been. Some of the benefit of the business tax cut is passed on to customers and employees. That's the economic development justification for business tax cuts.

There is evidence that this burden shifting takes place. In a study of commercial rental property in Indianapolis, Joyce Man (1999) found that districts with higher property taxes had higher rents, and districts with lower property taxes had lower rents. The property taxes on landlords were partially passed on in rents charged to tenants. Apparently higher taxes make owning rental property less profitable, so less rental property is made available, and the rents are higher. Lower taxes make owning rental property more profitable, so more rental property is made available, and rents are lower.

The business and individual tax shares shown here represent statutory incidence—estimates of who remits the taxes. Economic incidence shows who ultimately bears the tax burden. This is not to say that statutory incidence is unimportant. The statutory taxes on business affect business profits, which sets in motion the changes in demand and supply that ultimately change prices and pay.

Future Tax Changes

Changes in the near future will probably increase the individual share of Indiana taxes slightly. The year 2007 saw the full elimination of property taxes on inventories, and the shift of these taxes to other property owners (including homeowners), and in some counties to income taxpayers. Inventory taxes are 100% business taxes, so their elimination will increase the individual tax share.

The newly available local option income taxes, mostly designed for property tax relief, should increase share of local income tax in total taxes. Local income taxes are largely paid by individuals. To the extent that counties adopt these new income taxes, the individual share should increase. This shift to individuals would be erased, however, if counties devote all of the tax relief to homeowners, which is an option.

Working in the other direction, though, is the continued economic expansion and the increase in corporate income. Corporate income tax revenues should grow faster than other revenues during the expansion, and this will increase the business share of taxes.

On net, it seems most likely that the individual tax share will increase slightly over the next several years.

Comparison to the Annual COST Study

Each year for the past five the Council on State Taxation has commissioned the Ernst and Young accounting firm to prepare a study titled *Total State and Local Business Taxes* (Cline, Neubig and Phillips, 2007). Included in the study are business share estimates for the fifty states.

The COST study using 2006 data arrives at a higher business share for Indiana, 45.6%, than the 37.5% found here. The COST study breaks down the total dollars paid by businesses in broad tax categories, which allows a comparison of these results (see Table 4 of the 2007 COST study).

The comparison is shown in Table 8. Taxes in this study are combined to match the COST categories for comparison. Only the unemployment insurance tax is identical. The corporate income tax totals are similar, and the COST study includes license fees that are not considered here.

The COST study puts the sales tax on business inputs at $1.7 billion, which implies a business share of the sales tax of about 32%, compared to 23% used in this study. The COST business share is closer to Ring's estimates quoted above. The COST study used a sophisticated estimation method, applied to total Indiana sales tax revenue data (Cline, Neubig, Phillips and Fox, 2005). This study uses a simple estimation method, applied to detailed Indiana sales tax revenue data. Both results are plausible.

This study finds a much larger business payment to excise and gross receipts taxes than the COST study. The COST study treats pari-mutuals as individual taxes. Perhaps this includes riverboat gaming taxes. If gaming taxes were assigned to businesses the two estimates would be much closer.

This study also finds a much larger business payment to individual income taxes than the COST study. Landers and Faulk (2004) and DeBoer (1992) treat dividends and capital gains as business income. The COST study treats them as individual income, and considers only the income of pass-through entities like partnerships and S corporations as business income. Dividends and capital gains make up more than half of the business income counted here. This could explain the difference in the estimates.

This leaves by far the biggest difference between the two, the business payment to property taxes. This study puts the business share of property taxes at $2.9 billion; the COST study has

$6.0 billion. The COST figure must be an error. According to Indiana data, in pay 2006 Indiana's net property tax levy was only $5.9 billion, less than the amount attributed to business by the COST study. The COST study obtained its data from state sources—one can only assume that the authors misunderstood the numbers they received.

With a corrected property tax figure, the COST business share would actually be *less* than the share found here, about 32% compared to this study's 37.5%. The difference would be the treatment of gaming taxes, and income taxes on dividends and capital gains, as business income in this study, and as individual taxes in the COST study.

Table 8
Two Estimates of Indiana Taxes Paid by Businesses, 2006

COST	Taxes in Billions	DeBoer	Taxes in Billions	Difference
Property Tax	**6.0**	**Property**	**2.9**	3.1
Sales tax on business inputs	**1.7**	**General Sales**	**1.2**	0.5
		Motor Fuels	0.4	
		Gaming	0.6	
		Utility Receipts	0.2	
		Insurance	0.2	
		Innkeepers	0.0	
		Commercial Vehicle Excise	0.1	
		Wheel Tax	0.0	
Excise and Gross Receipts	**0.6**	**Total Excise/Gross Receipts**	**1.5**	-0.9
		Corporate Income	0.8	
		Financial Institutions	0.0	
Corporate Income	**1.0**	**Total Corporate Income**	**0.8**	0.2
				0.0
Unemployment Insurance	**0.6**	**Unemployment Insurance**	**0.6**	0.0
		State Individual Income	0.7	
		Local Individual Income	0.2	
Individual Income Tax	**0.3**	**Total Individual Income**	**0.9**	-0.6
Licenses and Other Taxes	**0.2**	n/a		0.2
Total Business Taxes	**10.4**	**Total Business Taxes**	**8.0**	2.4

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