Taxing Inventory: An Analysis of its Effects in Indiana

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Fewer than ten states tax the assessed value of business inventories as part of the property tax; Indiana is one of them. For years businesses have pressed the Indiana legislature to reduce or repeal this "inventory tax," but a concensus on its eradication has yet to be reached. Most recently, the 1999 session of the Indiana General Assembly debated bills to reduce or eliminate the inventory tax. The Governors' Citizens Commission on Taxes had placed elimination of this tax third from the top of their priority list in their December 1998 report (Citizens Commission on Taxes, 1998). The Senate Republicans proposed a ten year phase out of the tax, replacing lost local revenue with state funds. The House Democrats proposed to exempt the first $12,500 in assessed value of inventories, also replacing lost local revenue with state funds. What passed, in the end, was a $12,500 exemption for all personal property, including business inventories, business equipment and individually owned personal property such as mobile homes and recreational vehicles. To this extent the inventory tax lives on, as do the motives for its alteration.

One of the attractions of inventory tax reduction or elimination is the economic development benefits that it might bring. Proponents of elimination point to Indiana's location at the crossroads of many interstate highways (Styring, 1994). They argue that Indiana could be a major warehouse distribution center if the property tax on inventories was removed. The result could be increases in jobs, incomes and sales. Added income and sales could generate added state revenue through income and sales taxes. Some claim that this additional revenue would be enough to completely offset the cost of the inventory tax cut. Those who support the inventory tax are just as resolute as those who oppose it. They cite the fact that property taxes on inventories raised $395 million for Indiana local governments in 1998 (Indiana Legislative Services Agency, 1998). Indiana assessed inventories at $4.3 billion, 8% of the state's total assessed value.[1]

Would the reduction or elimination of property taxes on inventories increase the amount of inventories held in Indiana? Indiana data can be used to provide evidence on this question. In 1998 average property tax rates on inventories among Indiana counties varied from a low of $4.46 per $100 assessed valuation to a high of $18.46 per $100 assessed valuation. If inventory taxes inhibit inventory location, one would expect high tax rates to inhibit location more than low tax rates. All else equal, if inventory taxes affect inventory location, there would be more inventories in low tax counties and less in high tax counties.

This essay analyzes the response of inventory location to property tax rates in Indiana in 1998, then uses the results to estimate the increase in state revenue if the tax on inventories was eliminated. The analysis attempts to explain what determines the gross assessed value of inventories, which is the sum of taxed inventory assessments and the assessed value of untaxed inventories in enterprise zones. Data are available for the assessed values of business inventories for Indiana counties for 1997-98 (State Board of Tax Commissioners, 1999). Regression analysis may be used to estimate the effects of tax rates and other factors on inventory location.[2]

What Determines Inventory Assessments?

What is the effect of property tax rates on inventory assessments in Indiana counties, "all else equal?" A list of the determinants of inventory assessments is needed in order to know what "all else" might include. (See the **Data Appendix** for data sources.)

The primary interest is in the effect of the *property tax rate* on inventory assessments. The property tax rate is expected to be negatively related to inventory assessments; that is, counties with higher tax rates should see lower inventory assessments, all else equal. The tax rate is measured as the revenue collected by all governments within a county, from property taxes on inventories, divided by the gross assessed value of inventories (multiplied by 100).

Inventory location probably depends on factors related to demand and costs. Wholesale and retail inventories are needed to serve customers in each county. The more customers there are, the greater the quantity of inventories retailers are likely to keep. If these customers have more income, they are likely to buy more of most everything, so firms would keep a larger stock of inventories. *Population and per capita income* are likely to be positively related to the assessed value of inventories.

Manufacturers keep inventories for use in production of their products. The larger the number and size of manufacturers in a county, the more inventories are likely located there. *Manufacturing employment* is a convenient measure of the presence of manufacturing in a county; it is expected to be positively related to inventory assessments.

The *size of a county in square miles* may affect the demand for inventories. Residents of a small county frequently may cross county borders to shop. Retail inventories to serve a small county's consumers are more likely to be located in another county. Consumers in a large county may have to travel far to shop in another county, so the inventories that serve them are more likely to be in a large county. Put another way, all else equal, if inventory facilities are spread across the landscape, counties that occupy

more of that landscape will have more inventories than counties that occupy less. The larger the county in square miles, the more inventory assessed value it is likely to have.

Tax rates are a cost side variable. Also on the cost side are *enterprise zones*, which provide firms with a tax exemption for their inventories. The effect of enterprise zones is incorporated into the average county property tax rates on inventories. But the zones may have an independent effect, indicating a "business friendly" environment. The presence of an enterprise zone in a county is expected to have a positive effect on inventory assessments, beyond the effect on property tax rates.

The convergence of interstate highways in Indiana could make the state a prime location for warehouse facilities. Major highways reduce travel time, and so reduce the cost of serving regional markets. Some Indiana counties have interstate highway mileage within their boundaries, while some do not. In addition, some have state four lane highway mileage and some do not. The *number of miles of major roads* in a county is expected to be positively related to inventory assessments.

Table 1
Means and Standard Deviations

Variable	Mean	Standard Deviation
Inventory Assessed Value	49,558.06	96,554.89
Population	63,740.30	104.568.10
Per Capita Income	20.310.74	2,987.69
Manufacturing Employment	7,481.01	12,036.79
Square Miles	389.89	96.08
Property Tax Rate	7.50	1.66
Enterprise Zone	0.20	0.40
Highway Miles	39.67	44.84
Rent	238.48	50.37
Wage	21,811.13	3,596.99
Distance to Metro Area	9.83	10.72

Warehouse facilities require land, which must be purchased or rented. Firms are less likely to locate warehouses where land is more costly. No data on land rents are available, but data on *contract rents for rental housing* are. These rents partially reflect the rental value of land in the county. Contract rent is expected to be negatively related to inventory assessments.

Warehouse facilities also require employees. Firms may avoid locating warehouses in counties where employees are expensive—that is, where wages are high. The *average wage* in the county is expected to be negatively related to inventory assessments.

Finally, the *distance of the county from the nearest metropolitan area* may have an effect, though its direction is open to question. On the one hand, firms may locate warehouses in counties close to a metro area in order to serve the demands of the large number of people nearby. The closer to a metro area, the larger inventory assessments are expected to be. On the other hand, consumers in counties close to a metro area may shop in the metro county rather than in their home counties. With fewer customers, local firms may stock fewer inventories. The closer to a metro area, the smaller inventory assessments are expected to be.

Table 1 shows the variable means and standard deviations. For the regression, all data are converted to natural logarithms, except the enterprise zone dummy variable, the highway miles variable and the distance to metro area variable. These latter three have some counties with zero values, and the logarithm of zero is not defined. Coefficients on logarithmic variables may be interpreted as elasticities, meaning that they show the percentage effect on inventories of a one percent change in the explanatory variable. For example, the coefficient on population will show the percent change in inventory assessments expected from a one percent change in population. Coefficients on the non-logarithmic variables may be interpreted as the percentage effect on inventories of a one unit change in the explanatory variable. For example, the coefficient on highway mileage will show the percent change in inventory assessments from a one mile change in highway mileage.

Regression Results

Table 2 presents the results of two regressions. The first includes all the variables described above. The second includes only explanatory variables that are significant at least at the ten percent level. The statistical problem of heteroskedasticity was not present in the first regression, according to the White Test. It was present in the second regression, so the results reported here are corrected for heteroskedasticity

using the White heteroskedasticity-consistent standard errors and covariance correction. The R-squared statistic measures the share of the variation in inventories explained by the explanatory variables. The R-squared statistic indicates that each equation explains about 94% of inventory variation.

The enterprise zone, rent and wage variables are dropped for estimation of the second regression. The enterprise zone and rent variables are dropped because they are far from significant in the first. The wage variable is also dropped, though it is significant in the first. The reason is that once the other two variables are eliminated, and the heteroskedasticity correction is made, the wage variable is no longer significant. In the first regression the wage variable has a sign opposite of what is expected. Higher wage costs were expected to discourage inventory location, but according to the regression higher wages are associated with more inventories. It may be that the wage variable, like the income variable, measures the purchasing power of local consumers. Support for this possibility comes from the fact that the per capita income variable becomes more significant (a higher t-statistic) when the wage variable is eliminated. The correlation between the two variables is .603, which is relatively high. In the first regression, the highway miles variable is not significant, but when included in the second regression it is significant.

The variables that remain in the second regression all have the expected signs, and all are significant at the 5% confidence level. The demand side variables, population, per capita income and manufacturing employment, are all positive. Firms appear to locate inventories close to their customers, whether these customers are consumers or firms. The coefficient on square miles is also positive, indicating that in larger counties consumers are less likely to cross county boundaries to shop. Demand side considerations appear to dominate the distance to metropolitan area variable. Its positive coefficient implies that consumers are more likely to shop in their home county when a metropolitan area is farther away. On the cost side, highway miles has a positive coefficient. This implies that the presence of four lane highways increases the attractiveness of a county for warehouse facilities. Add five miles of four lane road and inventory assessments rise one percent.

Property tax rates affect inventory location. Higher property taxes result in fewer inventories located within the county. The coefficient in the first regression is -.45, the coefficient in the second is -.38. These imply that each ten percent increase in the tax rate (for example, from $8.00 to $8.80 per $100 assessed value) is associated with an approximately four percent reduction in inventory assessments.

Table 2
Regression Results

	Regression 1		Regression 2	
Explanatory Variable	Coefficient	t-Statistic	Coefficient	t-Statistic
Constant	-14.6560**	-4.48	-10.9123**	-3.32
Population	0.6157**	4.87	0.5004**	5.21
Per Capita Income	0.8423**	2.11	1.1344**	3.43
Manufacturing Employment	0.3708**	7.62	0.4242**	7.28
Square Miles	0.2462*	1.97	0.2719**	2.45
Property Tax Rate	-0.4506**	-2.30	-0.3831**	-2.57
Enterprise Zone	-0.1070	-0.98		
Highway Miles	0.0018	1.43	0.0022**	2.55
Rent	-0.2881	-0.81		
Wage	0.7774**	2.56		
Distance to Metro Area	0.0058*	1.68	0.0062**	2.27
R-squared	.9462		.9403	
F-statistic	142.33**		189.11**	
White heteroskedasticity test	77.06		72.25**	

*Significant at 10% confidence level **Significant at 5% confidence level

Tax Elasticity of Business Activity

Proponents of inventory tax elimination argue that it would increase the amount of inventories in Indiana, and hence the jobs and income related to inventories. Evidence exists showing that economic activity is likely to increase if business taxes are reduced. The size of this increase may be represented by a tax elasticity, showing the percentage increase in business activity in response to a one percent reduction in business taxes. Many studies have provided many estimates of the size of this effect. Timothy Bartik (1991) has done the most complete review of the literature on the effects of state and local taxes on economic development. Bartik writes:

> the long-run elasticity of business activity with respect to state and local taxes appears to lie in the range of –0.1 to –0.6 for intermetropolitan or interstate business location decisions, and –1.0 to –3.0 for intrametropolitan business location decisions. That is, if a given small suburban jurisdiction within a metropolitan area raises its taxes by 10 percent, it can expect in the long run a reduction in its business activity by from 10 to 30 percent. If an entire metropolitan area or state raises its taxes by 10 percent, the estimated long run effect would be a reduction of business activity between 1 percent and 6 percent. These estimated tax effects assume public services are held constant as taxes change (pp. 43-44).

The conclusion that tax rates have any effect on business activity is controversial, however. Recently, more studies than not have found that taxes influence business activity, but some studies have found otherwise. McGuire (1992), reviewing Bartik's book, concluded from the same evidence that "the effects of state and local tax policy are so uncertain that concern over this issue should not be a driving force in general fiscal policy decisions" (p.458).

This study finds that taxes affect business activity. The assessed value of inventories is one measure of business activity, so the coefficients on the property tax rate may be treated as tax elasticities. The elasticities of -.45 and -.38 are within Bartik's intermetropolitan range of -0.1 to -0.6.

Inventories are a narrow measure of business activity, so the relationship between the results here and Bartik's range should be interpreted with care. Increases in inventory assessments may be associated with added economic activity. A larger quantity of inventories held in Indiana could increase income of Indiana residents if firms locate more inventory facilities in the state, requiring more employees who earn more income. However, increases in inventory assessments may be associated with changes in the way firms operate. If inventory taxes are cut, keeping inventories is less expensive. This may encourage firms to substitute one method of production for another, while the level of business activity changes little. For example, with inventories cheaper, firms might decrease their emphasis on "just in time" inventory methods. They might dismiss truck drivers and hire warehouse employees, with little change in the overall level of employment or economic activity.

The tax elasticities estimated here may reflect tax effects on both economic activity and on firm operations. The tax elasticity for economic activity alone is probably smaller than the elasticities estimated here. Recent studies using tax elasticities for Indiana have used more conservative estimates. Styring (1994) reviewed the literature and settled on –0.15 in his analysis of the effect of inventory taxes in Indiana. Bohannon and McClure (1998) reviewed the literature and settled on –0.30 in their analysis of the effect of property taxes on Indiana output and employment.

How Much State Revenue Would Inventory Tax Elimination Generate?

The property tax on the assessed value of inventories—the inventory tax—raised $395 million in calendar 1998. It is 8% of total assessed value. Coincidently, it is also 8% of all business taxes, which include property taxes on business equipment, land and buildings, business income and corporate income taxes, and other business taxes. Eliminating the inventory tax would reduce business taxes by 8%. This would increase business activity and generate new revenues from other state taxes. How much?

Table 3 shows a series of calculations using tax elasticities of -0.1, -0.4 and -0.6. Bartik's range was -0.1 to -0.6. The above regressions found an elasticity of approximately -0.4, a figure which probably includes both economic activity and business operation effects. An 8% tax cut with an elasticity of –0.1 would imply an increase in business activity of 0.8%; an elasticity of –0.4 would imply an increase of 3.2%; an elasticity of -0.6 would imply an increase of 4.8%.

Suppose state income reflects these changes in business activity, that is, as business activity increases, employment and wages rise, increasing state income. Additional elasticities may be used to estimate the change in state revenue from percentage increases in income. Regression results for the state income and sales taxes show income elasticities of 1.14 and 0.93, respectively. This means that each one percent increase in income results in a 1.14% increase in income tax receipts and a 0.93% increase in sales tax receipts. In fiscal 1998 Indiana raised $3,433 million in income taxes and $3,278 in sales taxes.

Table 3 shows the implications of these estimates for state revenue. For example, a tax elasticity of -0.4 implies an increase in business activity of 3.2%. If this is a 3.2% increase in income, the income and sales elasticities imply increases in income and sales tax revenues of 3.65% and 2.98%, respectively. Taking fiscal year 1998 income and sales tax collections as a base, the increases in revenue are $125 million and $98 million, respectively, for a total state revenue increase from these two taxes of $223 million. An additional $172 million would be required to offset the $395 million inventory tax cut.

Table 3
Calculation of Added State Revenue From Tax Elasticities

Business Tax Elasticity	-0.1	-0.4	-0.6
Business Tax Reduction	8%	8%	8%
Increase in Indiana Business Activity (Income)	0.8%	3.2%	4.8%
Percent Increase in Income Tax Revenue, Income Elasticity=1.14	0.91%	3.65%	5.47%
Percent Increase in Sales Tax Revenue, Income Elasticity=0.93	0.74%	2.98%	4.46%
Dollar Increase in Income Tax Revenue, based on FY 1998 Revenue=$3,422 million	$31 million	$125 million	$187 million
Dollar Increase in Sales Tax Revenue, based on FY 1998 Revenue=$3,278 million	$24 million	$98 million	$146 million
Total Added State Revenue	$54 million	$223 million	$333 million
Added Cost to Replace $395 million	$341 million	$172 million	$62 million

These added revenue figures represent what would have happened had the inventory tax been completely eliminated for tax payments in 1998. The figures will grow in future years as income and sales tax revenues grow, because the percentage increases in revenues will correspond to larger dollar figures. Added revenues could also grow if, in future years, the inventory tax becomes a larger share of total business taxes. Its elimination would then represent a bigger business tax cut. Of course, in future years inventory tax revenue will increase as well, meaning more revenue must be generated to offset its elimination.

These are long run elasticities. At first, the responses of income to tax changes might be smaller, because it takes time for businesses to change business plans, hire new employees and construct new facilities. When all of these changes are complete, the total effect is reflected by these tax elasticities.

Added state revenue does not fully offset the $395 million cost of inventory tax elimination in any of these simulations. A tax elasticity of about –0.7 would be required for the state tax revenue increases to fully offset the inventory tax cuts. This is beyond Bartik's range of -0.1 to -0.6, and a bigger response than the inventory assessment elasticity of -0.4 found in the above regression.

Conclusion

This paper reports the results of a statistical analysis of the effects of property tax rates and other factors on the assessed value of inventories in Indiana counties in 1997-98. It then applies these results to the question of whether enough extra state revenue would be generated from the elimination of property taxes on inventories to fully offset lost revenue. The evidence here implies that:

- Lower property taxes are associated with a greater amount of inventory assessments, with each 10% reduction in inventory taxes raising the assessed value of inventories about 4%. Reduction or elimination of property taxes on inventories would likely increase the quantity of inventories held in Indiana.
- This tax effect is probably not large enough for inventory tax cuts to be completely offset by added state income and sales taxes from increased business activity.
- All else equal, firms locate their inventories to be near their customers.
- The presence of four lane highway mileage increases the level of inventories kept in a county.

The most important result here is the 4% increase in inventory assessments for each 10% tax rate reduction. It might be argued that the estimate of this response is too small. It is based solely on variations in Indiana tax rates and Indiana inventories. Perhaps the elimination of the property tax on inventories would encourage the location of inventories in Indiana from out of state. This would imply a bigger inventory response to tax rates.

However, it also might be argued that the estimate of this response is too big. As noted above, part of the increase in inventories in response to an inventory tax cut represents a change in business operations. With inventories cheaper, businesses may hire warehouse workers and fire truckers, with little or no change in total employment. There may also be a data problem. Businesses hold tax sales to reduce their inventory assessments on March 1. The assessed value of inventories undoubtedly understates the quantity of inventories on hand throughout the rest of the year. Businesses in high tax counties probably make greater efforts to reduce inventories on the assessment date than do businesses in low tax counties. If so, high tax county inventories are understated by more than low tax county inventories. This implies that some of the relationship between tax rates and inventory assessments is an illusion, true on March 1 but at no other time of the year.

Finally, this analysis focuses only on inventory taxes, not on other policies that could enhance economic development. The results here imply that

eliminating inventory taxes would impose costs on the state. State revenue increases are unlikely to be enough to completely offset local inventory tax revenue losses. With a tax elasticity of -0.4, for example, the state would have to provide about $172 million from its own revenue sources to replace local revenues (see **Table 3**). Is the elimination of property taxes on inventories the best use for $172 million in state funds? Could such funding be devoted to other economic development programs, such as tax cuts for high-tech equipment, or funding for local infrastructure, that might produce more added jobs and income? That is a topic for another day.

Notes

[1] Assessed value is the "base" of the property tax, the dollar measure of property to which property tax rates are applied. The property tax is almost exclusively a local tax, collected by counties, cities, towns, school corporations and other local units. The assessment date is March 1 each year, which is why the end of February always sees an advertising blitz for "tax sales." Businesses try to sell their inventories so their assessment on March 1 is as small as possible.

[2] Regression analysis estimates an equation that best describes the variable to be explained using a number of explanatory variables.

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Data Appendix

- The assessed value of inventories include taxable inventory assessments and untaxed inventories in enterprise zones. Data are from the State Board of Tax Commissioners (1999).

- County population is estimated by the U.S. Bureau of Census, and is for 1997. It is available on the Census Bureau's web site, *www.census.gov* and on STATS Indiana, *www.stats.indiana.edu*.

- County per capita income is estimated by the Bureau of Economic Analysis of the U.S. Department of Commerce. The data are for 1996, the most recent year available at the time of the analysis. Data are available on the BEA website, *www.bea.doc.gov*.

- County manufacturing employment is estimated by the Bureau of Economic Analysis. The data are available for 1997 on the STATSIndiana website, *www.stats.indiana.edu*.

- Square miles are the number of square miles within each county's boundaries. The figures were obtained from the Indiana Business Research Center's Indiana Fact Book, 1998-99.

- The property tax rate on inventories are the pre-1998 average rates for all units within a county. These average tax rates are calculated by dividing the inventory tax net levy by the sum of inventory taxable assessed values and untaxed assessed values in enterprise zones.

- The presence of enterprise zones within a county is measured as a zero-one "dummy variable." If the variable equals one the county has an enterprise zone, if it equals zero it does not.

- Rent is contract rent on rental housing. These are data from the Census for 1990, available from the Indiana Business Research Center's Indiana Factbook 1998-99.

- Wage is the average wage paid to all employees within a county. The data are for 1995, and are available from the Indiana Business Research Center's Indiana Factbook 1998-99.

- Highway miles are the sum of interstate and major artery road mileage within each county. Distance from metropolitan statistical area is the distance from the center of each county to the center of the nearest county within a metropolitan area, as defined by the U.S. Bureau of Census. Counties that are within a metropolitan area are considered to have a distance of zero. Data for these variables were created from an Indiana roadmap.

What Do We Want From Economic Development?

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It is unusual to find communities in agreement on the goals of economic development. Some citizens will urge "more" with confidence that more jobs and more people will lead to improved lives for most people. Others, however, will stress the need to raise the level of income and, in particular, the level of wages. These people see benefits from more dollars. Both viewpoints agree that "more" should not mean less convenience, less sense of community, less elbow room.

If we accept the growth rates of all four factors as being important to economic development, how have Indiana counties fared over the past 10 years (1987 to 1997)? Data from the U.S. Bureau of Economic Anaysis allow us to make these comparisons easily. Interpretation, however, can be difficult.

Four factors of development

• *Employment growth* always seems desirable, but may be of little benefit to the county. Employment measures the number of jobs in the county. It does not measure the number of county residents who have jobs, nor does it tell us whether the jobs in the county are full- or part-time jobs. It is possible that job growth puts money into the pockets of commuters from another county. Likewise, the added jobs may be part-time work, with little in the way of fringe benefits.

• *Population growth* often means that retail stores and other services are able to expand, offering greater diversity of products and possibly lowering prices. Land and housing prices tend to rise. But population growth, unmatched by infrastructure development, can lead to serious congestion, public health hazards, and cost escalation.

• *Per capita personal income (PCPI)* growth occurs when the total income of the community grows faster than the population. In fact, a community with no growth in income, but with declining population, will have an increase in per capita personal income. If children leave home, the income of the parents will not change, but the PCPI for that household goes up. Yet, PCPI is the standard for measuring economic well-being despite the fact that it may under- or over-state buying power. When the community is made up of younger people, who put aside large sums of money for their retirement, PCPI can be high while funds available for housing and retail activity are limited. By contrast, a community of older residents, who are receiving pension payments from their lifetime savings, may have great buying power, but low PCPI (which measures only income from current production).

• *Earnings per job (EPJ)* has become an important measure of economic development in recent years. The idea has been advanced that if jobs are being added, they should be at rates which will raise the average level of earnings in the county. This makes good sense, but as noted above, the benefits may be realized in the home counties of commuters. In addition, as with PCPI, the data tell us nothing about the distribution of earnings. One employee making a million dollars a year can raise the average to acceptable levels even though 100 others are making $15,000 each (in this case EPJ would be $24,752).

In each case we will use the percent change from 1987 to 1997. For dollar values (PCPI and EPJ) the data have been adjusted for changes in prices.

Tiny Ohio was the leading county in *employment growth* between 1987 and 1997 with an 89% increase. This was a direct result of the casino which provided many of the 1,300 added jobs on a base of just 1,500. Hamilton county was right behind Ohio with an 88% increase (nearly 43,000 jobs on a 1987 base of 48,000). Third place belonged to Decatur county at 57% with Hendricks in 4th place at 50%. The statewide increase was 22.4%, comfortably ahead of the nation's 20% increase. Only four counties (Pike, Randolph, Miami, and Warren) experienced job losses during the period (see **Table 1** and **Map 1** for details).

Although many jobs were created in Ohio county in the decade, the *population* of the county grew by just 2.5% (rank 63rd) compared with a 7.2% rate statewide. Hamilton, Johnson, and Hendricks counties (suburban Indianapolis) were the state leaders along with Dearborn (suburban Cincinnati). In all, 26 Hoosier counties exceeded the national rate of population growth (10.5%). At the same time, 19 of our 92 counties lost population from 1987 to 1997 (see **Table 1** and **Map 2**).

Indiana's *growth of per capita personal income (PCPI)*, after adjustment for inflation, was 21.2% statewide, well ahead of the 18.7% national rate. Some of this is due to our slower population growth. Again Ohio county led the way with a 36.1% increase, followed at 35.7% by Jennings county. Others in the top ten were Boone, Brown, Ripley, Porter, Wayne and Wells. Newton trailed in last place with a 2.7% increase, far below the 91st county (Pike) at 9.3% (see **Table 1** and **Map 3**).

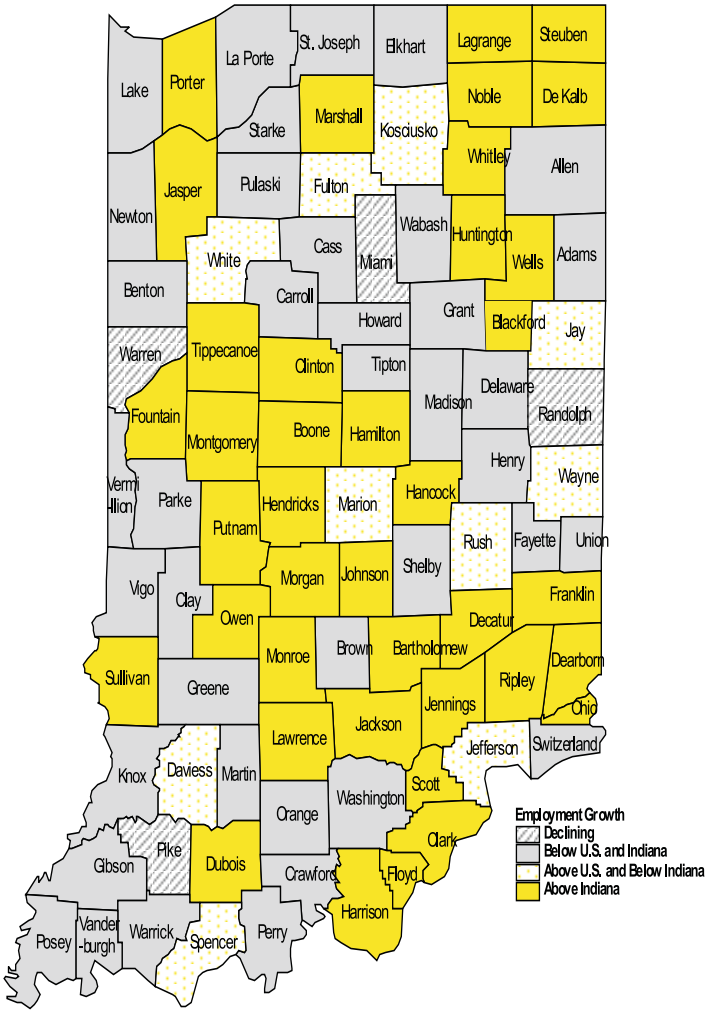
The advances in *real earnings per job (EPJ)* for Indiana (6.2%) trailed behind the nation's advance of 7.5%. Ohio County's state-leading growth of 136% was a movement from the lowest level in the state ($8,700) to a respectable $20,500, still well below the state's $28,200. Other small county's also showed good growth in EPJ (Switzerland was 2nd at 44%, Owen 3rd at 36%). At the other end of the spectrum were 18 Indiana counties where real earning per job declined during the decade. Among these were Warrick, Pike, Putnam, and Dearborn. For details, see **Table 1** and **Map 4**.

Table 1

	PERCENT CHANGE: Employment *Map 1*	Population *Map 2*	Real PCPI *Map 3*	Real EPJ *Map 4*	RANKS: Employment	Population	Real PCPI	Real EPJ	*Composite index*
United States	19.97	10.51	18.65	7.49					
Indiana	22.43	7.16	21.18	6.25					
Adams	19.88	6.32	18.88	-2.86	49	49	48	81	***59***
Allen	18.57	4.59	23.13	7.27	56	55	19	44	***37***
Bartholomew	31.34	8.61	18.54	-4.50	19	37	50	86	***46***
Benton	14.43	1.47	17.22	9.26	68	67	57	37	***69***
Blackford	0.57	-3.14	14.72	10.06	88	91	73	34	***84***
Boone	26.45	14.37	29.86	11.07	30	18	5	27	***9***
Brown	19.00	17.02	26.83	19.57	55	10	7	9	***13***
Carroll	17.20	7.01	8.41	-4.69	60	45	90	87	***83***
Cass	15.42	-2.70	19.79	2.99	67	88	42	63	***75***
Clark	26.75	6.37	22.79	1.80	27	48	22	67	***33***
Clay	19.62	6.79	13.41	1.30	51	46	80	69	***74***
Clinton	23.86	7.66	17.23	10.74	36	43	56	31	***42***
Crawford	11.94	4.07	23.37	14.87	73	57	18	17	***36***
Daviess	22.08	3.58	16.45	0.76	40	60	63	71	***67***
Dearborn	38.41	25.35	14.33	-5.53	11	4	75	89	***23***
Decatur	56.96	7.81	22.38	-2.71	3	42	27	79	***17***
De Kalb	31.53	12.87	17.02	15.74	18	22	58	16	***22***
Delaware	16.54	-2.94	22.42	3.13	63	89	25	60	***64***
Dubois	30.67	7.85	22.15	3.72	20	41	28	56	***29***
Elkhart	19.45	12.90	14.46	4.90	52	21	74	52	***50***
Fayette	5.21	-1.66	15.14	0.98	83	84	70	70	***85***
Floyd	36.13	15.03	21.79	7.96	13	15	30	42	***16***
Fountain	22.63	-0.18	19.74	18.34	38	75	43	12	***43***
Franklin	34.28	9.62	15.43	3.14	14	31	68	59	***40***
Fulton	19.98	10.02	11.90	6.94	48	28	85	47	***63***
Gibson	2.66	-1.20	10.28	-3.79	86	81	87	85	***89***
Grant	8.17	-2.99	17.91	-2.23	79	90	53	78	***81***
Greene	17.21	9.77	10.14	2.93	59	30	88	64	***77***
Hamilton	88.13	60.65	24.47	25.06	2	1	13	4	***2***
Hancock	42.50	20.39	32.00	20.55	6	6	3	7	***3***
Harrison	26.46	17.10	24.17	20.08	29	9	16	8	***12***
Hendricks	50.17	25.92	23.70	4.05	4	3	17	55	***5***
Henry	11.84	0.55	24.48	16.42	74	72	12	15	***39***
Howard	17.85	1.81	20.71	7.74	57	64	36	43	***52***
Huntington	26.02	5.99	15.05	4.33	32	51	72	54	***56***
Jackson	30.52	10.01	19.57	13.22	21	29	44	22	***25***
Jasper	29.05	16.10	7.06	2.92	23	14	91	65	***61***
Jay	21.00	-0.12	16.18	5.67	44	74	66	49	***73***
Jefferson	21.95	7.05	20.29	0.35	41	44	39	74	***49***
Jennings	42.14	17.41	35.74	11.32	7	8	2	26	***4***
Johnson	47.25	26.10	20.48	14.47	5	2	38	18	***6***
Knox	17.16	-2.60	20.11	3.07	61	87	40	62	***72***
Kosciusko	22.11	10.83	19.40	10.12	39	26	45	33	***32***
Lagrange	33.80	15.02	19.31	17.74	15	16	46	13	***15***
Lake	16.03	1.42	22.53	2.79	65	68	24	66	***54***

La Porte	16.84	3.00	19.25	3.07	62	62	47	61	***62***
Lawrence	28.67	8.52	16.94	0.43	24	38	59	73	***47***
Madison	4.58	0.64	16.71	-2.81	85	71	61	80	***82***
Marion	21.71	3.90	21.72	9.12	42	59	33	38	***38***
Marshall	24.21	9.08	15.34	8.21	35	34	69	40	***48***
Martin	2.45	-2.33	24.71	14.15	87	86	11	21	***58***
Miami	-13.17	-11.93	14.11	-4.91	90	92	77	88	***92***
Monroe	25.42	12.02	22.39	7.11	33	25	26	46	***24***
Montgomery	26.73	5.51	22.14	11.04	28	53	29	28	***30***
Morgan	24.43	18.81	21.76	8.53	34	7	32	39	***18***
Newton	4.77	8.97	2.67	8.10	84	35	92	41	***87***
Noble	38.66	12.50	24.38	16.86	10	23	14	14	***11***
Ohio	88.54	2.49	36.10	135.67	1	63	1	1	***1***
Orange	11.46	4.25	14.12	1.55	76	56	76	68	***78***
Owen	31.90	23.51	12.17	27.45	16	5	84	3	***14***
Parke	6.16	6.02	16.11	14.35	81	50	67	19	***66***
Perry	10.60	0.34	21.26	12.50	77	73	35	23	***55***
Pike	-13.67	-0.54	9.34	-8.43	92	77	89	91	***91***
Porter	36.38	16.51	29.80	7.24	12	12	6	45	***7***
Posey	12.05	1.65	24.28	18.64	72	66	15	11	***34***
Pulaski	11.80	3.27	14.08	10.82	75	61	78	29	***76***
Putnam	40.36	14.15	10.50	-7.34	9	19	86	90	***51***
Randolph	-13.35	-0.74	12.35	-3.61	91	78	82	84	***90***
Ripley	23.42	12.12	31.11	14.22	37	24	4	20	***10***
Rush	20.06	1.78	21.61	11.46	47	65	34	25	***44***
St. Joseph	19.65	6.53	16.48	3.51	50	47	62	58	***60***
Scott	31.54	8.83	21.76	10.81	17	36	31	30	***21***
Shelby	19.29	8.04	22.85	24.79	54	40	21	5	***19***
Spencer	20.83	5.82	16.23	5.60	45	52	64	50	***57***
Starke	12.62	8.49	12.39	9.94	71	39	81	35	***71***
Steuben	41.03	16.68	15.09	0.67	8	11	71	72	***27***
Sullivan	26.44	-0.53	17.52	-1.03	31	76	54	75	***70***
Switzerland	7.55	14.96	24.92	43.77	80	17	10	2	***8***
Tippecanoe	29.69	9.18	20.04	9.31	22	32	41	36	***28***
Tipton	9.36	1.22	22.73	19.46	78	69	23	10	***45***
Union	17.75	5.14	18.37	21.15	58	54	51	6	***35***
Vanderburgh	19.31	0.74	18.22	4.80	53	70	52	53	***65***
Vermillion	5.98	-1.30	16.23	-3.49	82	82	65	83	***86***
Vigo	16.31	-2.24	17.40	-1.15	64	85	55	76	***79***
Wabash	13.63	-1.54	16.76	-1.77	70	83	60	77	***80***
Warren	-6.34	-1.03	13.51	-2.98	89	79	79	82	***88***
Warrick	14.06	14.06	20.48	-10.96	69	20	37	92	***53***
Washington	15.81	16.18	18.81	10.50	66	13	49	32	***31***
Wayne	21.42	-1.07	25.61	6.23	43	80	9	48	***41***
Wells	27.45	3.96	26.78	11.85	25	58	8	24	***20***
White	20.75	9.12	12.19	3.59	46	33	83	57	***68***
Whitley	27.27	10.80	23.12	5.01	26	27	20	51	***26***

Map 1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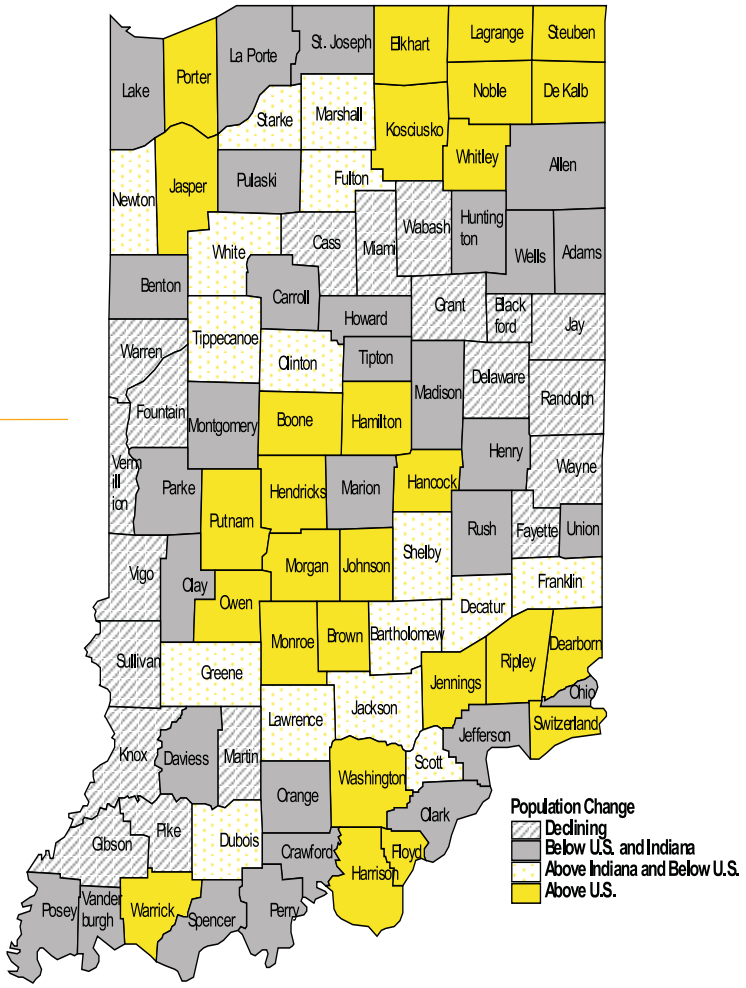
Employment Growth
Declining
Below U.S. and Indiana
Above U.S. and Below Indiana
Above Indiana

Map 2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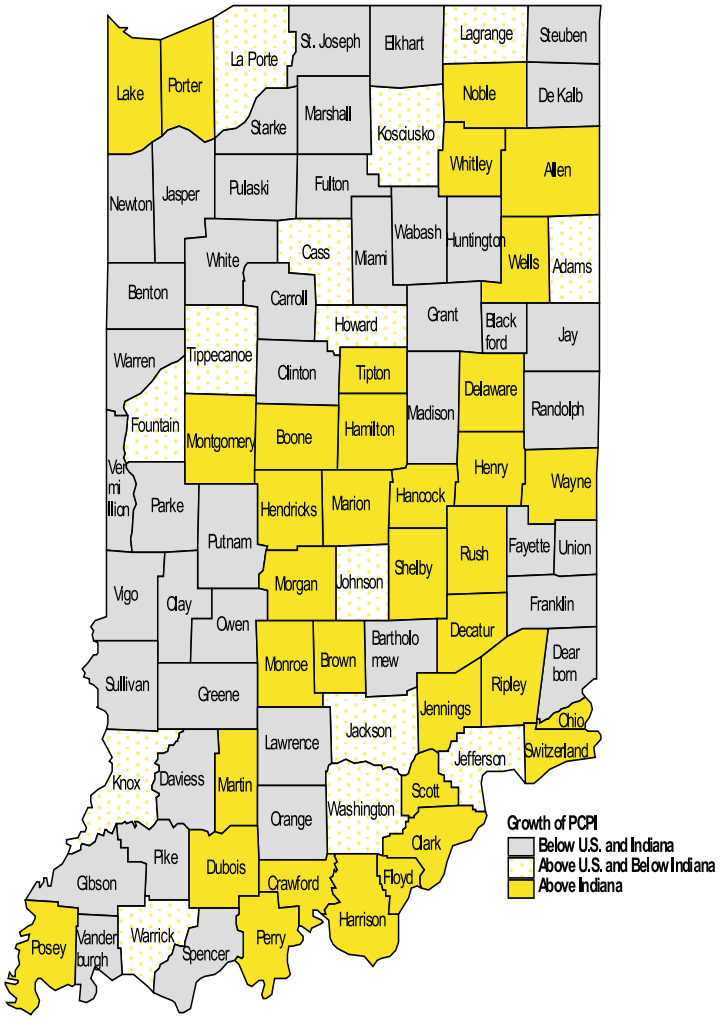
Perry
Population Change
Declining
Below U.S. and Indiana
Above Indiana and Below U.S.
Above U.S.

Map 3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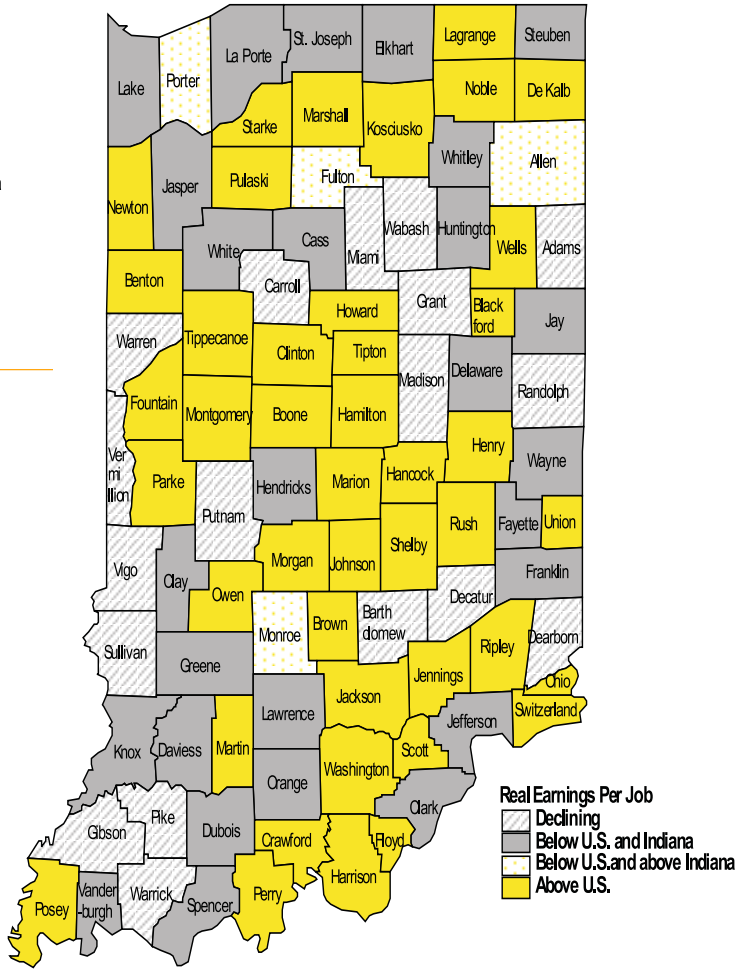
Growth of PCPI
Below U.S. and Indiana
Above U.S. and Below Indiana
Above Indiana

Map 4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Real Earnings Per Job
Declining
Below U.S. and Indiana
Below U.S.and above Indiana
Above U.S.

A composite development index

Each of the four factors can be standardized and those scores added to produce a composite index of economic development.[1] Although far from a definitive measure, this index gives equal value to each of the four factors, places each county's performance in the context of the state's 92 counties, and reflects the variability of experience throughout the state (see **Table 1** and **Map 5**).

Not surprisingly, Ohio county wins the economic development derby for the period 1987 to 1997. A project of the magnitude of the riverboat on a small, economically depressed county is bound to be dramatic. Nor will anyone be surprised to learn that Hamilton, Hancock, Hendricks, and Johnson counties held the 2nd, 3rd, 5th, and 6th places. But would you have expected to find Jennings County in 4th place? Jennings was in the top ten for three of the four measures, missing out only on EPJ, where it ranked 26th.

Miami, Pike and Randolph counties held positions 90 to 92 in the composite ranking. Miami is a good example of how such studies as this tell us the truth but pervert our view of reality. The partial closure of the Grissom Airbase led to a decline in population, employment and earnings in Miami County. But that is old news from the earlier years of the period under consideration. Miami has done much better and would not be trailing the list if we had chosen a five-year rather than ten-year period.

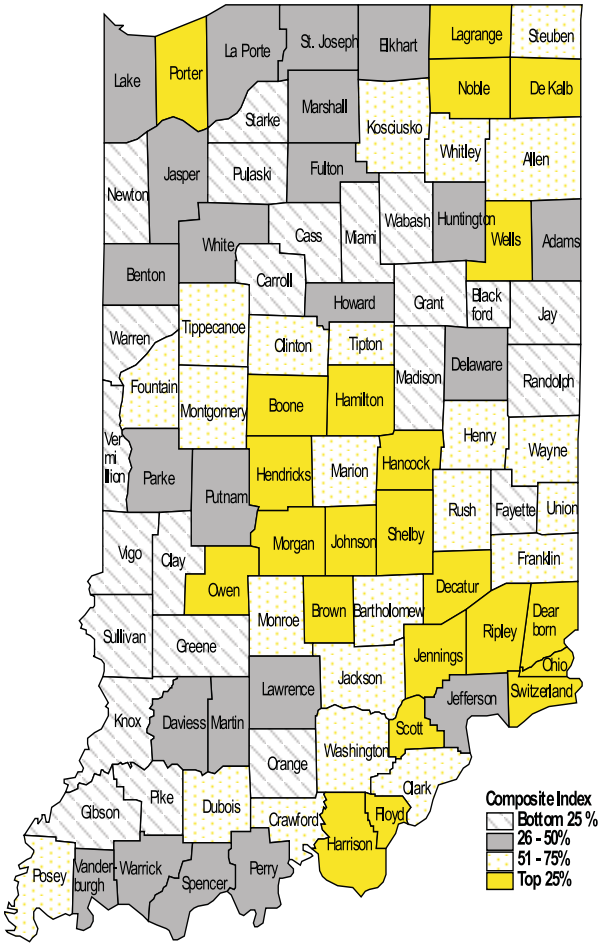
A Concluding note

No number can describe success or failure. But, if we have chosen important factors for assessing economic development, then the relatively simple technique used here, gives a quick and useful first cut at evaluating the efforts of and the obstacles faced by professional and volunteer developers across the state.

Notes

[1]Each percentage change is expressed as a Z-value (the difference between the observed value and the mean of distribution, divided by the standard deviation of the distribution). These values are then summed and ranked to provide the information in **Table 1** and **Map 5**.

Map 5



City and Town Population: Sub-county Population Estimates for July 1, 1998

Joan Rainey

Research Director, Indiana Business Research Center, Kelley School of Business, Indiana University

The population of all U.S. sub-county areas have been estimated for July 1, 1998 by the U.S. Bureau of the Census. Released Wednesday, June 30, 1999, an analysis of the Bureau's estimates for Indiana cities, towns and townships was conducted by the Indiana Business Research Center, in the Kelley School of Business at Indiana University. Estimates for all of these areas for Indiana are available on the website STATS Indiana (*www.stats.indiana.edu*). Additional analysis and a description of the methodology are available on the IBRC website (*www.iupui.edu/it/ibrc*).

As produced by the Census Bureau, these estimates are the result of a demographic technique called the Distributive Housing Method. To this extent, it is important to note that these estimates are not the result of a direct count of the population, as will be done in census year 2000. The Indiana Business Research Center serves as the state's official liason with the U.S. Bureau of the Census. Its present and future role will be to work with the state and its localities to provide a full and accurate census count in the year 2000 (see *www.iupui.edu/it/ibrc/2k*). Sub-county is the Census Bureau term for cities, towns and townships.

Hoosier Cities and Towns with Population Exceeding 20,000

Looking at the largest cities and towns in Indiana (those with 1998 population estimated at 20,000 or more):

- The fastest-growing "big" city/town in Indiana between 1990 and 1998 was Fishers in Hamilton County. Fishers had a 1990 population of about 7,000 and an estimated 1998 population of more than 18,000 people during the eight years since the Census. That is a growth rate of 256 percent.

- Fishers' growth rate was almost 4 times that of the second fastest growing Hoosier city: Carmel. The population of Fishers has more than tripled between 1990 and 1998.

- The two other fastest growing larger Hoosier cities/towns were also in Hamilton County: Carmel (66%) and Noblesville (47%).

- Other cities and towns experiencing growth exceeding 10% were Lawrence (29%, Marion county), Greenwood (26%, Johnson county), Schererville (19%, Lake county), Portage (14%, Porter county) and Merrillville (12%, Lake county).

- During that same 8-year period, the state of Indiana grew by 6.4% and the nation as a whole by 8.7%.

- Other Hoosier cities growing faster than the state between 1990 and 1998 were Jeffersonville (8.3%, Clark county) and West Lafayette (7.0%, Tippecanoe county).

Figure 1
Indiana Cities/Towns Adding the Largest Number of Persons, 1990-1998

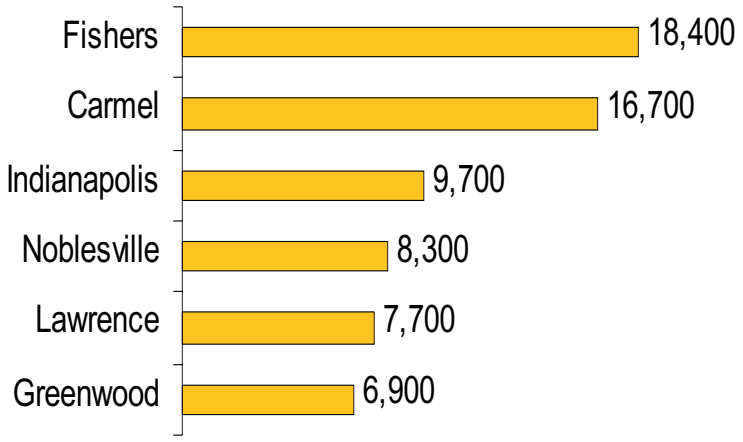


Figure 2
Indiana Cities with Population Decline Exceeding 2,000 Persons, 1990-1998

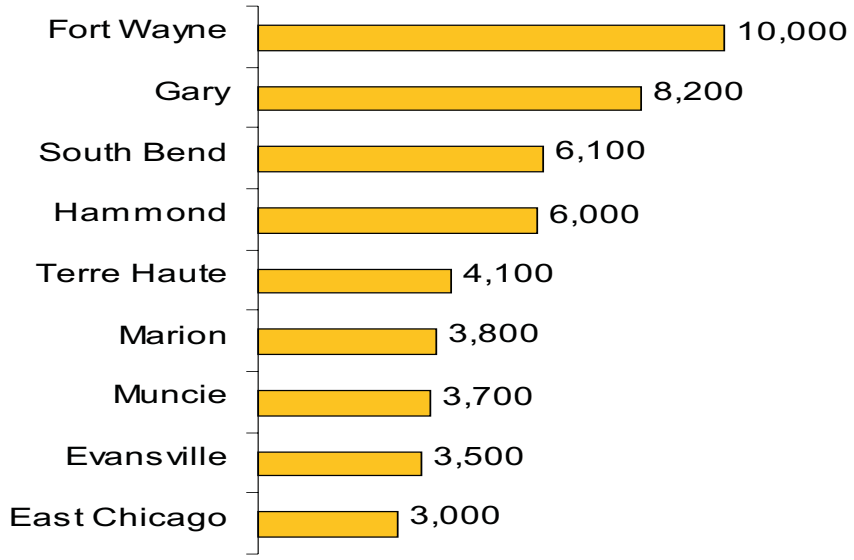
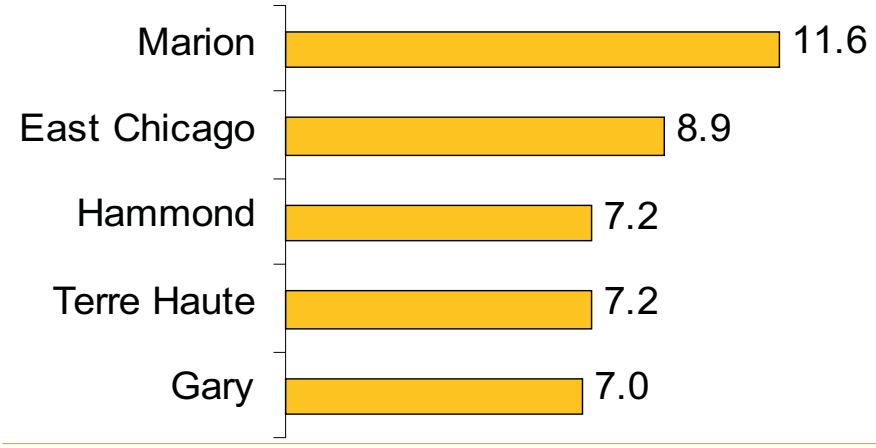


Figure 3
Large Cities with Highest Rates of Population Decline, 1990-1998



There has been no change in the ranking of Indiana's ten largest (most populous) cities since 1990.
Fishers jumped from being the 80th largest Hoosier city/town in 1990 to 30th in 1998. Carmel moved from 26th in 1990 to 15th in 1998. Noblesville went from 40th to 28th. New to the 20,000 group since 1990 are Fishers, Munster and Noblesville.

Smaller Cities and Towns

The fastest-growing Hoosier city or town with population less than 20,000 has been Westfield in Hamilton county. This town of 3,300 tripled in population since the 1990 census, with an estimated 1998 population of almost 10,000, for a growth rate of 202%. Other fast growing Hoosier towns and smaller cities include St. John, De Motte, Santa Claus, Brownsburg, Mooresville, Whiteland, Porter, Whitestown and Cloverdale.

Indiana Townships

Of the 1008 townships in Indiana, 942 of them experienced population increase between April 1, 1990 and July 1, 1998, with the remaining 66 townships seeing population decline.

Looking More Closely at Hamilton County

These estimates are consistent with county population estimates for 1998 that were previously released by the Census Bureau. According to the estimates, Hamilton county grew by 49.3% between 1990 and 1998. All townships, cities and towns in the county have experienced growth during this period; however the growth is not evenly distributed across the county. Most of the growth has occurred in the county's three largest cities. with population increases in each of the two most recent years.

Population Change in Miami County

The city of Peru in Miami county declined by 1500 persons for an 11.8% rate of population loss since the 1990 census. However, the estimates indicate that the population loss in Peru has turned around since 1996, with population increases in each of the two most recent years.

Moderate Population Growth in Cities and Towns

Indiana's population has grown from 5.5 million persons in 1990 to almost 5.9 million persons in 1998. This growth of 355,000 persons represents a growth rate of 6.4% for the state.

When all 569 Hoosier cities and towns are combined, as a group they experienced population growth of 113,000 persons from 3,580,000 in 1990 to 3,694,000 in 1998 for a growth rate of 3.2%. The balance of Indiana's population that does not reside in cities or towns increased from 1,964,000 to 2,206,000 for an increase of 242,000 persons or 12.3%.

Grouping Cities by Size

With an estimated 1998 population of 752,000, Indianapolis is not only the largest city in the state, but is four times as populous as the second largest city, Fort Wayne. Indianapolis experienced population growth of 1.3% between 1990 and 1998. However, the estimates indicate that the growth in Indianapolis occurred between 1990 and 1994 and that the largest Hoosier city has experienced population loss in each of the four most recent years.

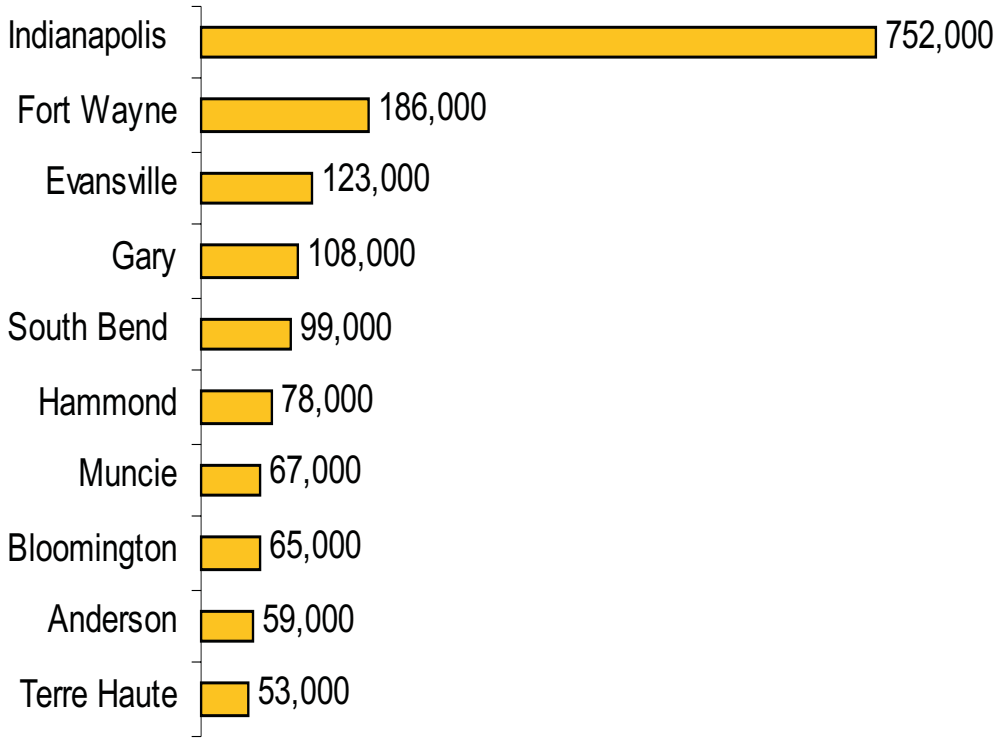
Fort Wayne, Evansville, and Gary, with populations between 100,000 and 200,000 have each experienced population loss, and as a group have declined at 4.9%.

Of the six cities with populations between 50,000 and 100,000, only Bloomington grew, while South Bend, Hammond, Muncie, Anderson and Terre Haute all lost population. This group of six cities together experienced population loss of 4.2%

Cities with population between 25,000 and 50,000 together grew by 9.8%. However, when rapidly growing Fishers, Carmel, and Noblesville (together experiencing growth of 86.5%) are excluded from this group, the remaining cities and towns of this size combine for growth of only 3.3%.

Smaller cities and towns in the following groups experienced these rates of population increase: 15,000 to 20,000 (3.5%), 5,000 to 15,000 (8.2%), and towns with populations smaller than 5,000 grew by 5.5%.

Figure 4
Indiana's Most Populous Cities, 1998



County Income Growth: How Healthy? How Efficient?

James C. Smith

Research Economist and Adjunct Lecturer in Finance, Indiana Busines Research Center, Kelley School of Business, Indiana University

In the Summer issue of the *Indiana Business Review*, we looked at the growth of per capita personal income in Indiana counties since 1969. This growth rate can be a tricky number to interpret. Per capita personal income is the ratio of real personal income to population. Total income may be growing at a phenomenal rate, but if population grows at the same rapid rate, per capita personal income remains unchanged.

On the other hand, an equal increase in per capita personal income (PCPI) may mask very different underlying trends. From 1969 through 1997, for example, PCPI in Jay County grew about 1.15% per year. So did PCPI in Daviess County. Yet in Daviess County, both income and population showed signs of growth. In Jay County, income hardly changed, and population actually fell. But the growth rate in income per capita comes out the same.

How healthy?

So perhaps there are different kinds of growth. Whether healthy growth is occurring depends on which of the two components is growing or declining. One way to think about this is to consider the four possible combinations: income up, population up; income up, population down; income down, population up; and income down, population down. Some combinations may be healthier than others. **Figure 1** shows the relationships, in four quadrants.

All other things being equal, when both income and population are growing in a county, the county is experiencing prosperity. PCPI itself may rise a little or fall a little, depending on which factor is moving faster. But things are looking good. When both income and population are falling (the lower left quadrant), the county faces a general decline. Its economic life is slowly withering.

If total income is growing but the population is not, that may be a sign that older, wealthier residents are staying in a county but younger ones are leaving. Over the long term, this situation (the upper left quadrant) can erode the foundation of a county's economy.

A decline in total income in the face of growing population is another red flag. Shown in the lower right quadrant, these conditions will produce a major slide in per capita personal income. Such a county is attracting more and more people who have less and less money. A likely consequence is the increasing dependence of these relatively poorer residents on the more well-off counties.

For **Figure 2**, we fit a random walk percent change model to each county for the period 1969-1997. This provides an estimate of the "best fit" annual percent change. Each dot represents a county and gives its population and income growth rates. Because of the wide variability in year to year growth in some counties, the best fit annual percent change for one of the factors may be zero: no clear growth or decline pattern was present. These counties are shown at zero growth, and many of these points plotted on top of each other. (The

Figure 1

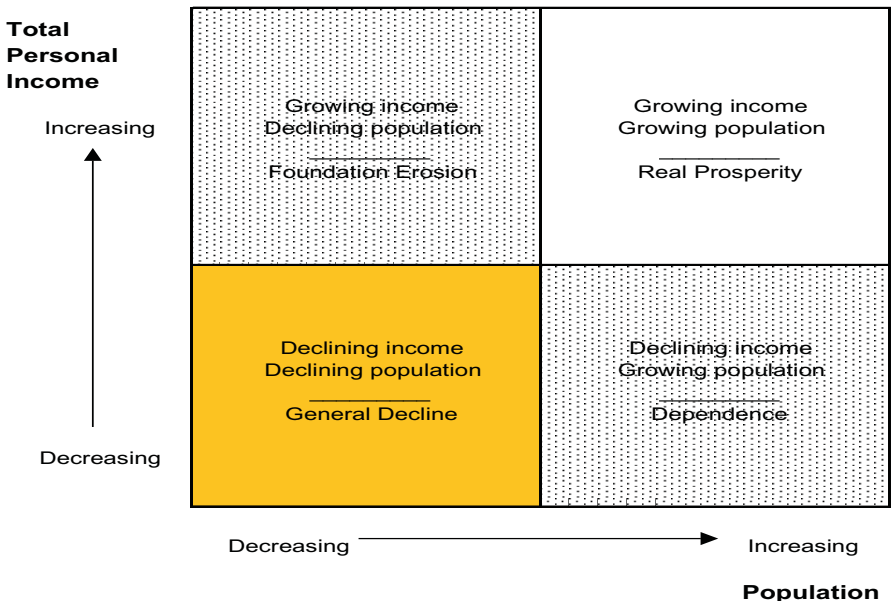
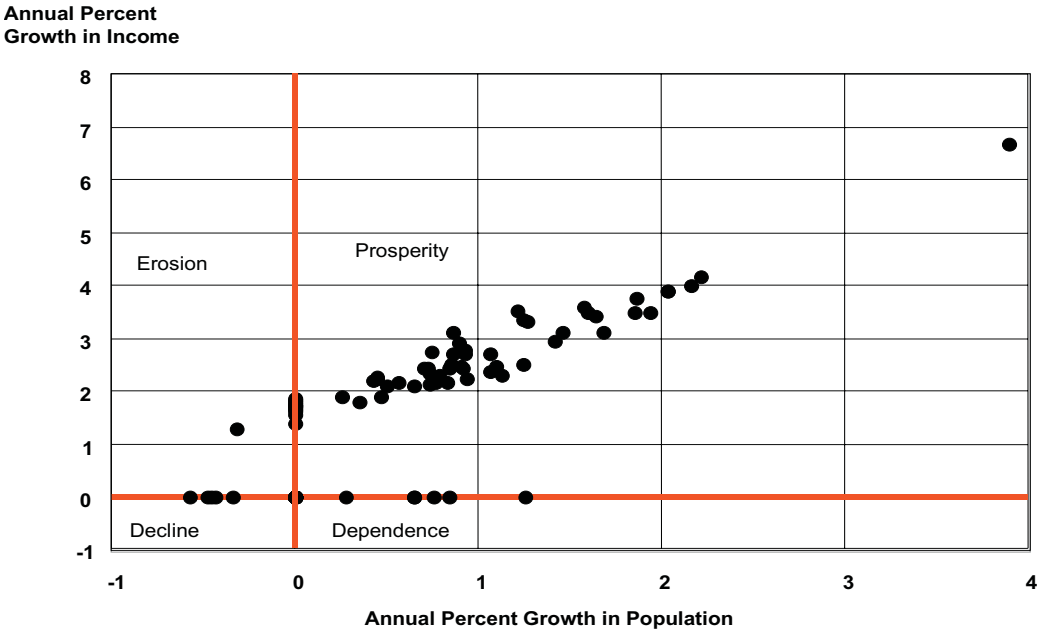


Figure 2



complete spreadsheet showing the annual percent change calculations for each county may be found on the IBR web version at *www.iupui.edu/it/ibrc/ibr*.

Forty-nine counties are firmly in the *Prosperity* quadrant, with significant growth in both population and total income (Hamilton county is the obvious winner in the upper right corner: very high growth in both factors). Another 11 average significant increases in income, while their population growth has been bouncing around zero (the points located on the vertical zero axis). No Indiana counties fall into the either the *Dependence* quadrant or the *Decline* quadrant. Several, however, showed a tendency toward a population increase with zero growth in income, and their data points are found toward the right along the horizontal axis. Jasper county is farthest out, with a 1.26% average population growth and no significant income growth.

A trend toward population decline shows up in six counties. They are represented by those points to the left of the vertical zero axis. In one of these shrinking counties, namely Vigo County, income has been rising, so its data point appears in the upper left quadrant. This combination suggests some long-term erosion of its economic foundation.

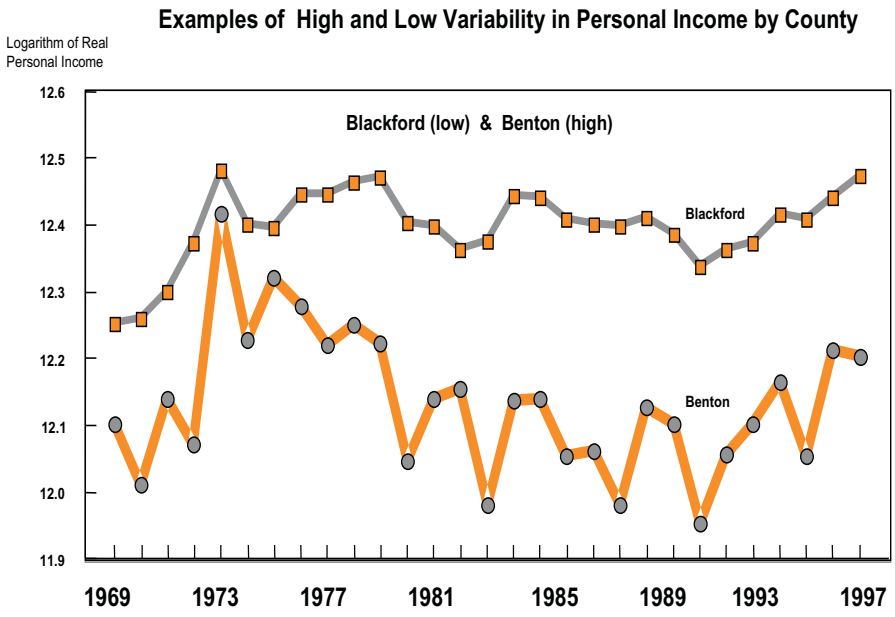
The other five counties losing population were Benton, Blackford, Grant, Lake and Wayne. In each, its total real personal income has been hovering around a zero growth rate.

How Efficient?

Although we have calculated an average percent change for the county growth rates, many counties do not stick to the average very closely. Income levels fluctuate much more widely than county populations. Annual changes in personal income are sometimes small, sometimes large, sometimes close to their average and sometimes far above or below it. Other counties appear to grow more steadily, with less meandering. **Figure 3** shows two examples. The estimate for average annual income growth in the counties of Blackford and Benton is zero. But Blackford's pattern appears much less variable than Benton's. So we may ask whether one kind of growth pattern is better than another. Perhaps there is an efficiency advantage in more stable growth and less extreme fluctuation.

To compare variability among counties, we looked at the typical variability around the average growth rate (technically, the standard deviation of the differences in the logarithms). Using that number we can estimate the average range of variation, expressed as plus or minus a number of percentage points. This range is a gauge of the extent to which a county bounces around above and below its average growth rate.

Figure 3



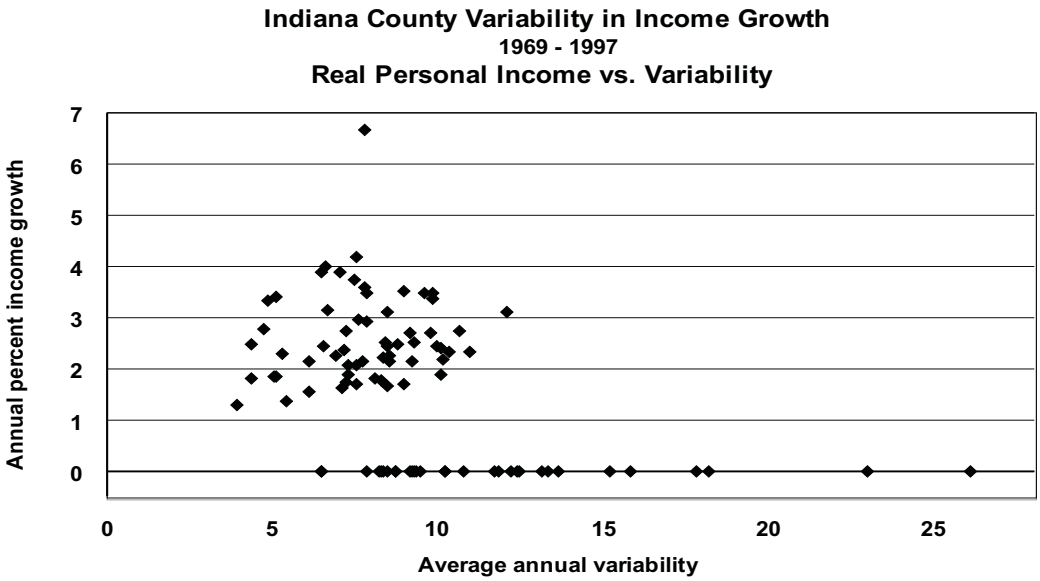
The next question concerns variability inefficiency. More specifically, do counties with high variability exhibit lower growth rates? To answer that question, each county is plotted on the total income chart (see **figure 4**). Counties with high variability are farther to the right. Counties with high growth rates are closer to the top. (For the complete list of county growth rates and variability calculations, see the IBR website at *www.iupui.edu/it/ibrc/ibr*.

We can detect only a vague hint of a downward sloping pattern. There is a weak tendency for lower growth rates to be associated with higher variability. However, many exceptions can be found. It is not a very strong correlation (the actual correlation coefficient is about –0.4).

Using data from 1969 through 1997, we have arrived at average percent changes in county population and income statistics, the two components of per capita personal income. In about half of Indiana's counties, the annual change in both income and population is up. A few, however, show signs of weakness. This weakness comes about in two ways. Either the population is declining, which pushes these counties into the left quadrants on our diagram, or there is a lack of income growth. Without income growth, counties slide toward the lower quadrants of decline or dependence.

These estimated growth trends, however, are sometimes overshadowed by the large fluctuations in the measures. Still, many counties avoid much of an efficiency penalty. Counties whose income levels fluctuate widely can indeed be high growth counties, a fact that Lagrange county has proven. Over this period, personal income in Lagrange County grew at more than a 3% annual rate despite varying widely between plus or minus 12%.

Figure 4



A Perspective: Mosaic or Melting Pot

Richard Gordon Hatcher

Professor of Law
Valparaiso University
and
Mayor of Gary, Indiana
1968-1988

Race continues to drive every important decision made in our region. Evidence for this fact can be found no matter which direction we may turn. Race easily explains the failure of the region to develop the stadium that may have lured the Bears from Chicago. Race is a major reason for the difficulty the Gary Airport has in becoming the third major regional airport, or for that matter, a successful mid-sized airport. Race in large part explains the significant population declines in Gary, East Chicago and Hammond and the rapid growth of suburban communities in South county. Racial considerations in large part determined where the region's major retail development would take place. It occurred along U.S. 30, instead of the more natural development along the corridor of I-80 and I-94, as this expressway enters Lake County and winds its way through Gary, Hammond and on into Illinois. Race decided where our largest hospitals, largest financial institutions are located and perhaps will decide the location of our largest educational institutions. Finally, it is fair to say that race played a significant role in the formation and founding of the very town in which this conference is taking place. I mention all this, not to rub old wounds raw, but to suggest that this is an issue which must be faced and defeated if the region is to grow and prosper. No matter where we live in the Region, race is a fact of our daily lives. Our unwillingness to confront it as a community handicaps our efforts towards revitalization and renaissance. If we are to become competitive in national and global markets, we must first learn to appreciate and respect each other. We must treat each other fairly. Even though we won't agree on everything, we must be willing to listen to each other. In other words, we must come together.

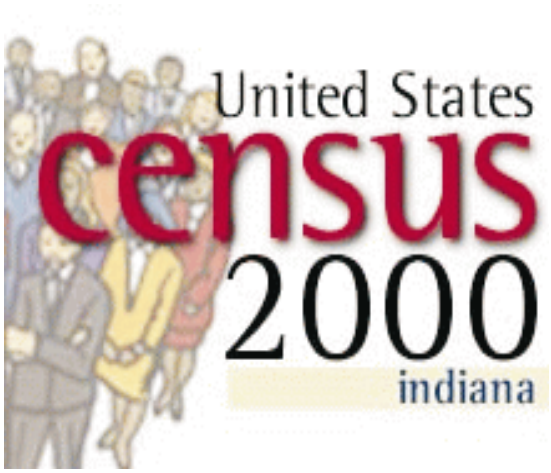
Having said that, there are strengths in the region that should be exploited. First of all, I believe we are underutilizing our academic resources. A University Consortium, comprised of Indiana University Northwest, Purdue University Calumet, Valparaiso University, St. Joseph College and Indiana Vocational Technical College, could bring together some of the finest minds in the region to foster the development of new technical and bio-technical products that could be manufactured here and exported around the world. Secondly, the Gary Airport has the potential to produce more than 100,000 jobs and attract more than a billion dollars in investment to the region. We should not waste another minute and begin focusing major region-wide developmental efforts on this diamond in the rough. This is a decision that we can make without awaiting or asking someone else's permission. Thirdly, utilizing certain provisions of the 1996 Telecommunications Act, this area can become a national and an international Telecommunications Center, with the tremendous economic development and job creating potential it represents. Another project that is near and dear to my heart and that has the potential of bringing hundreds of thousands of visitors into our region from all over the United States and all over the world, every year, is the National Civil Rights Hall of Fame. Its potential to infuse millions of dollars into the economy of the region mandates that we proceed to construct it immediately. Finally, if this region is to take its rightful place among the greatest destinations in our country, we must immediately begin a systematic well-organized effort to attract a Professional Sports Franchise. If a small town like Greenbay can do it, then so can we.

The Region has an image problem that must be fixed if we are to achieve some of the objectives discussed at this conference. It is an image that suggests divisiveness and danger. One of the ways that we can begin to change our image is for the news media to discontinue its demonization of the city of Gary. We can't continue to paint this city with the darkest (no pun intended) colors and expect the metropolitan area to thrive, prosper and grow. Gary is our largest city in the region; Gary has the largest lakefront in the region; Gary has the largest Convention Center in the region; Gary has the largest mass-transit system in the region; Gary has the largest steel mill in the region. At some point, we must come to the realization that Gary is critical to the growth of the region. The tail cannot wag the dog - it is an unnatural state of being.

There is room for all flowers to bloom in the Calumet Region if we can make our diversity a strength instead of a weakness, an asset instead of a liability. Every community, every city, every town in this area is unique and has something to contribute to the whole. The melting pot theory has failed, because it requires some of us to subjugate our heritage and history to that of the majority. Most minorities reject this concept. A better approach would be that espoused by a man for whom I had great admiration while he was with us, Bishop Andrew Grutka. Bishop Grutka spoke of a mosaic. Made up of many small pieces of multi-colored glass anchored in cement, to form a beautiful picture. Our region has all the pieces, black, white, brown, red and yellow. Our job, yours and mine, is to bring those pieces together and create Bishop Grutka's beautiful dream of a Calumet Region Mosaic. A kaleidoscope of colors, all individual and different, but working together to form a region that teaches the rest of America how to build together, play together, worship together, educate our children together and prosper together. We are the Keepers of the Dream. We have a solemn obligation to act. If we don't, then we fail ourselves, we fail each other and most of all, we fail our children.

For God's sake, let's get ourselves together.

Most Hoosiers Will Be Counted--But Most Isn't Enough



Carol O. Rogers

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Over the decades, people have grumbled about answering the census questions that roll around every ten years. Even one hundred years ago, a Fort Wayne Sentinel headline proclaimed on May 30, 1900:

CENSUS MAN COMING: HE'LL ASK BLUNT QUESTIONS, BUT HIS ORDERS ARE TO BE FIRM AND ALWAYS POLITE

Although people have grumbled about doing the census and likely always will, Indiana had one of the highest mail return rates in the country in 1990. Hoosier households have traditionally filled out the form and sent it back. But with the stakes high in terms of federal monies coming back to our state based on population and the potential loss of a congressional seat (see *Indiana Business Review*, Volume 73, Number 10, October 1998), it is imperative that Indiana be counted as completely and accurately as possible. Most households sending back their forms isn't enough; we need every household to fill out that form, designate accurately the number of persons in that household, and send it back to the Census Bureau. Having those forms sent quickly also helps save dollars. The Census Bureau wants the initial return rate to be high, thus helping put resources on more difficult areas to count.

Hard-to-Enumerate Areas in Indiana Counties

A tool developed recently by the Census Bureau to assist in locating what might be hard-to-count areas within a county or community is now available to us in Indiana. It is a database that has information, by census tract, detailing 1990 data on mail-response rates, non-response rates, and socio-economic variables that – based on research by the Census Bureau and academicians – tend to correlate with households that don't respond to the Census. Those variables, taken together, were used to devise a hard-to-count "score" if you will, or index.

We have taken these scores and produced maps that are now available on Indiana's Census 2000 web site (*www.iupui.edu/it/ibrc/2k*). We also have the rather lengthy documentation that accompanied the database if the reader would like to gain a fuller understanding of what and how these scores were determined.

Local communities can use these maps to see which census tracts were more difficult to enumerate than others in 1990 and use their local knowledge to determine if that may still be true and focus efforts in those areas. Keep in mind that the data are from 1990 and therefore may not be particularly useful in census tracts where there has been significant change in housing and households.

Indiana Census Awareness and Use Statewide Effort (ICAUSE)

A program to create awareness of the importance of the Census in Indiana is underway and is being funded by the State of Indiana. The establishment of the Indiana Statewide Complete Count Committee in June was the first step in this program and already many of those committee members have gotten out the word about the census. The Indiana State Department of Health (ISDH) distributed Census 2000 bags and informational materials at the Indiana State Fair in August and reported "they are the best bags in the Exposition Building and people were asking really good census questions." ISDH also inspects migrant labor camps and will be distributing Census 2000 information to them, both in Spanish and English.

The Indiana Department of Revenue will put a census awareness message on the IT-40 form that will go to millions of Indiana households in early 2000. The Indiana Department of Education is encouraging schools to participate in the Census in the Schools program that will incorporate Census 2000 into the curriculum of K-12 schools. The Governor and Lt. Governor and members of the Census Data Advisory Committee of the General Assembly are passing along the census message in many or all of their speeches around the state. All of these efforts help create awareness among the residents of Indiana and will help "get the count out" as it were.

At least 50 more cities and towns in Indiana have signed proclamations and begun complete count committee efforts. Local communities are working with businesses, chambers of commerce, schools, libraries, utilities and others to spread the word that the census is coming next April and that having a complete count will help all of us.

Hungry for more information about the Census in Indiana? Use the web site at *www.iupui.edu/it/ibrc/2k*. Want to know more about what the feds are doing? Check out the Census Bureau site at *www.census.gov/dmd/www/2khome.htm*.