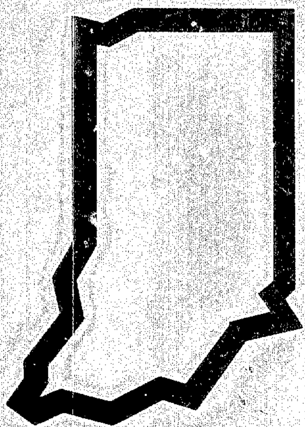

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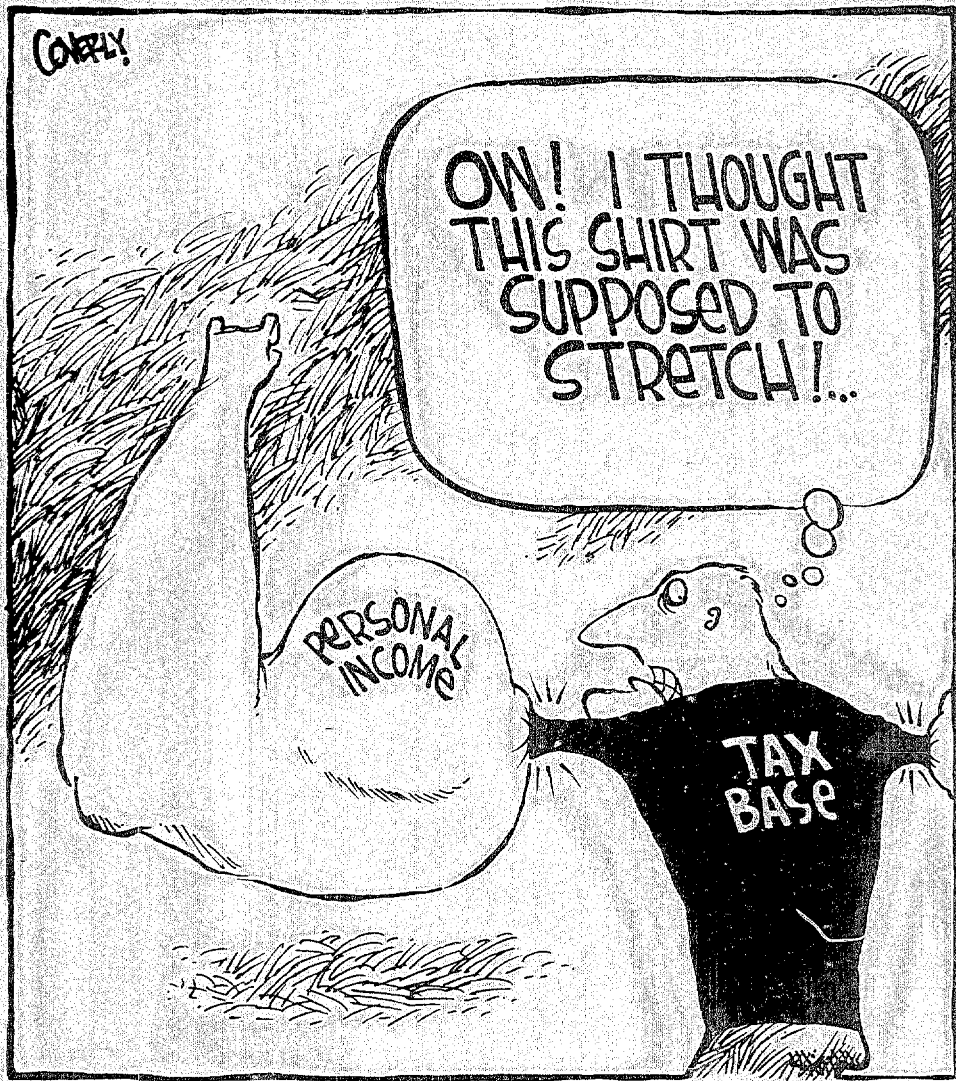

Indiana State Taxes and Expenditures:
A Growth Rate Analysis

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Indiana State Taxes and Expenditures: A Growth Rate Analysis

John M. Huie

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After an extremely difficult legislative session, the 1993 General Assembly passed, over the governor's veto, a budget that may be difficult to live with. Projections suggest that for several months during 1993-95, cash reserves will not cover cash flow needs. In other words, bills will not be paid on time; revenue will have to be borrowed or expenditures actually delayed.

The governor has announced a $180 million budget reduction plan to help solve the problem. Even if he is successful during this biennium, the problem is likely to persist. One of the difficulties is that our tax base does not grow as fast as our economy, measured by personal income growth.

The following analysis compares the rate of growth in actual state tax collections to the rate of growth in Indiana's personal income, providing a gross indicator of the impact of increased taxation. The analysis also estimates what the state revenue projection would be if the state had a tax structure that kept pace with income growth. Following this is a summary of expenditure growth patterns and a discussion of some alternatives.

State Revenue Growth

During 1989-1995, Indiana's personal income is projected to grow by almost 28%, or about 5% per year compounded (see **Table 1**). If the state tax revenue were to grow at the same rate, in general, Indiana would continue to allocate the same percentage of the state's income to pay for state services.

Table 1 also summarizes the growth rate of each of the state's major sources of revenue. As might be expected, only the individual income tax growth approximates personal income growth in Indiana. (The time period 1989-1995 was selected to eliminate any impact of tax rate changes.) The fact that income tax collections grow at a slightly lower rate than income may be due to several factors. Although the science of estimating state personal income is not exact, we can conclude that individual income tax collections grow at about the same rate as personal income.

Growth in sales tax collections over the six-year period is also expected to increase with income, although at a somewhat reduced rate. Sales taxes are expected to grow 4.7% less than personal income over this period. This is not surprising. As income increases, individuals tend to save a higher percentage of it. In addition, a higher percentage is spent for goods and services not subject to Indiana sales tax, such as out-of-state vacations, accounting and legal fees, and other services. Another contributing factor is the fact that sales taxes are heavily weighted toward consumer durables, such as automobiles, refrigerators, and so on. The prices of these items do not keep pace with inflation because of productivity gains. Therefore, the base that is taxed and the tax itself grow more slowly.

The individual income tax and the state sales tax together represent more than 80% of the state's annual taxes, excluding the lottery and motor fuel taxes. Income taxes on corporations and other miscellaneous taxes represent the remaining 20% (again, see Table 1).

The slow rate of growth in these other taxes creates tremendous pressure on tax rates. Indiana's corporate taxes are expected to be nearly static (increasing only 5%) during 1989-95, declining by 4% between 1990 and 1993 but projected to increase by 9.5% between 1993 and 1995, for a six-year increase of less than 5%. The "all other tax" category declined by almost 12% between 1989 and 1993 and is projected to decline another 9% between 1993 and 1995.

If Indiana had had a state tax structure in place that kept pace with income growth during 1989 to 1995, the state's anticipated tax collections for the 1993-95 biennium would have been over $1 billion

Table 1
Comparative Growth Rates in Indiana Personal Income and State Tax Revenue, 1989 to 1995 ($ million)

				Percent Change		
Tax/Income	*1989-90*	*1992-93*	*1994-95*	*1990-93*	*1993-95*	*1990-95*
Indiana Personal Income[1]	$88,205.0	$102,155.0	$112,834.0	15.81	10.45	27.92
Individual Income	2,089.5	2,412.5	2,644.9	15.46	9.63	26.58
Sales	2,119.4	2,368.7	2,611.6	11.76	10.25	23.22
Corporate Income	753.3	721.7	790.3	-4.21	9.51	4.90
Big Three[2]	**$4,962.2**	**$5,502.9**	**$6,046.8**	**10.89**	**9.88**	**21.86**
Other	528.9	467.2	423.3	-11.67	-9.40	-19.97
TOTAL	**$5,491.2**	**$5,970.1**	**$6,470.1**	**8.72**	**8.38**	**17.83**

[1]Indiana Personal Income data are for calendar years 1989, 1992, and 1994.
[2]Big Three = Individual income tax, sales tax, and corporate income tax.
Source: State Budget Agency

Table 2
Projected 1994-95 Revenue Using 1989-90 as Base and the Five-Year Indiana Personal Income (IPI) Growth Rate ($ million)

Tax	*Current Projection*	*IPI Growth Rate Projection*	*Difference*	*Difference as a Percent of Total*
Individual Income	$2,644.9	$2,672.9	$28.0	5.05
Sales	2,611.6	2,711.1	99.5	17.95
Corporate Income	790.3	963.6	173.3	31.28
Big Three	**$6,046.8**	**$6,347.6**	**$300.8**	**54.29**
Other	423.3	676.6	253.3	45.71
TOTAL	**$6,470.1**	**$7,024.2**	**$554.1**	**100.00**

Source: State Budget Agency

Table 3
Indiana State General and Property Tax Replacement Fund Expenditure Growth, 1988-89 to 1992-93 ($ million)

Item	*1988-89*	*1992-93*	*Dollar Increase*	*% of Total Increase*	*Percent Increase*
Local Schools	$2,135.0	$2,610.5	$475.5	36.8	22.3
Higher Education	812.0	974.7	162.7	12.6	20.0
Medicaid	450.8	874.6	423.8	32.8	94.0
Property Tax Credits	523.4	629.3	105.9	8.2	20.2
All Other	$1,080.6	$1,204.8	$124.2	9.6	11.5
TOTAL	**$5,001.8**	**$6,293.9**	**$1,292.1**	**100.0**	**25.8**

Source: State Budget Agency

Table 4
Indiana State General and Property Tax Replacement Fund Projected Expenditure Growth, 1992-93 to 1994-95 ($ million)

Item	*1992-93*	*1994-95*	*Dollar Increase*	*% of Total Increase*	*Percent Increase*
Local Schools	$2,610.5	$2,799.5	$189.0	40.4	7.2
Higher Education	974.7	1,002.9	28.2**	6.0	2.9
Medicaid	874.6	963.8	89.2	19.1	10.2
Property Tax Credits	629.3	721.5	92.2	19.7	14.6
All Other	$1,204.8	1,274.0*	69.2**	14.8	5.7
TOTAL	**$6,293.9**	**$6,761.7**	**$467.8**	**100.0**	**7.4**
Adjusted for governor's deficit reduction program			180.0		
			$287.8	**100.0**	**4.6**

*It is estimated that of the total $1.322 billion appropriation, $48.2 million will not be spent. Some of this unspent money could come from reductions in other areas of the budget.
**Through administrative action, the governor plans to reduce the actual state expenditures over the biennium by $180 million—$160 million from state agencies and $20 million from higher education. If successful, this will reduce the total increase to about $288 million or 4.6% over the two years.
Source: State Budget Agency

more than now anticipated (see **Table 2**). The projected revenue for 1994-95 alone would been $554 million more than now projected. Forty-six percent of this $554 million shortfall is due to the state's reliance on a number of miscellaneous taxes that together experienced a decline. These taxes included the cigarette tax, alcoholic beverage tax, and insurance, intangible, and inheritance taxes. Thirty-two percent of the $554 million, or $173 million, is due to the slow growth in corporate tax collections. Of the $554 million shortfall, $100 million comes from slow growth in sales tax revenues. Incidentally, had corporate taxes and the "other" tax category grown even at the same rate as sales and individual income taxes, the state revenue projection for 1994-95 would be higher by $380 million, or about $750 million higher for the 1993-95 biennium.

Indiana's tax structure is not that different from other states; thus, most states face a similar problem. Pressure for rate increases on existing taxes to keep pace with the perceived cost or expansion of state services results in rate increases on a tax base that grows slowly. Like other states, the demand on Indiana's state revenue in recent years is driven primarily by four items: (1) medical cost increases and their impact on the state's share of Medicaid costs; (2) local school funding; (3) higher education; and (4) corrections. In Indiana's case, a fifth item, property tax replacement credits, has also been significant.

State Expenditure Growth

The State Budget Agency reports that actual expenditures by the state from the state general and property tax replacement funds between 1988-89 and 1992-93 increased by 25.8%, or $1.3 billion dollars (see **Table 3**). Of this increase, Medicaid expenditure growth represented $423.8 million, or 33%; local schools represented $475.5 million, or 37%; higher education represented $162.7 million, or 12.6%; and property tax replacement credits represented $105.9 million, or 8.2%. The rest of the state's expenditures, including expenditures for an expanded correctional budget, increased by $124.2 million, only 9.6% of the total increase. Increased state expenditures for all items excluding Medicaid, local school aid, higher education, and property tax replacement credits over 1988-93 increased by less than 12%, or less than 3% per year, including major increases for corrections. Adjusted for inflation, this represents a decline in real terms.

A review of the 1993-95 biennial budget just passed by the Indiana General Assembly shows a two-year increase in appropriations of 7.4% (see **Table 4**). The governor has set as a target about $180 million below that amount for actual expenditures. The appropriations reflect a much smaller increase for

all elements of the budget calculated on an annual basis—about 3.5% compared to almost 5% for 1989-93. The portions of the budget showing the greatest relative decline are Medicaid and higher education. Medicaid still shows a 10% increase, however, compared to a 94% increase over the past five years that represents a substantially slower rate of increase. The higher education budget shows a 3% increase over two years, or less than 1.5% per year. The local school budget increased by 7.2% over the two-year period. The rest of the budget is projected to increase by less than 6%. Also, this portion of the budget will be most affected by the governor's program to reduce actual expenditures. Again, the goal is to reduce expenditures by $160 million below the appropriations level for state agencies; higher education is expected to contribute the remaining $20 million.

Alternatives

Slow growth in state revenue and increases in appropriations have brought the state close to another major decision: cut expenditures further or increase taxes. If Medicaid costs can be held within the current budget, if the $180 million expenditure cuts proposed by the governor are realized, and if projected state tax collections become a reality, then the 1994-95 budget can be balanced by using $110 million of lottery revenue as well as about a $120 million shift in corporate tax revenue from the 1995-97 biennium to the 1993-95 biennium.

The 1993 General Assembly gave the governor many of the legal tools for cutting Medicaid costs to the state. However, even if the current Medicaid costs are cut to the current appropriation level, one would still expect the rate of increase beyond 1994-95 to exceed the anticipated rate of growth in tax collections. One major unknown regarding future medical costs is what happens at the federal level and its impact on the states. In addition, appropriations for local schools, higher education, and property tax replacement credits will continue to put pressure on the state's revenue capacity. In the case of local schools, pressure is caused by the strong local political constituency and the requirement to reduce funding inequalities between schools. In the case of higher education, the pressure comes from increased enrollments and the desire to provide an education for all who want one. Unless state revenues increase much more rapidly than expected or Medicaid costs can be reduced even further than anticipated, it is highly likely that local school aid and/or higher education funding will have to be cut below the levels now in the budget or new revenues will be required.

If a decision is made to increase taxes rather than cut education, an infinite number of alternatives exist. However, they boil down to two basic approaches: either increase the rates on one or more existing taxes or expand the tax base to which taxes apply.

This analysis has shown that the major slow growth components of the current base have been corporate income taxes and the "other" tax group. To the extent that Indiana continues to rely on these two tax sources, revenue will continue to grow slowly and to put pressure on the rate of other taxes, primarily individual income and sales taxes.

Using 1990 data (the latest available), state and local taxes as a percent of the state's personal income are shown in **Table 5**. Based on this comparison, Indiana's general sales tax rates are lower than the U.S. average but higher than three of the four Midwestern states. The state's individual income tax as a percent of personal income is higher than the U.S. average but lower than four of the five surrounding states. Selective sales taxes, primarily on cigarettes and alcoholic beverages, are lower in Indiana than the U.S. average and lower than four of our five comparative states. Overall, Indiana's state and local taxes are lower than the U.S. average and lower than all surrounding states. Indiana ranked 43rd in 1990. Within the sales taxes, Indiana depends more on the general sales tax and less on the selective sales taxes than either the U.S. average or the surrounding states. This suggests that other states depend even more heavily on a group of selected sales taxes (cigarette and alcoholic beverage taxes) that are not growing. Increasing rates on these taxes can produce added revenue but do not address the major structural problem of a slow-growing tax base.

One opportunity for substantial increases in revenue—without increasing rates—is expanding the sales tax base to items not now subject to the tax.

Table 5
State and Local Taxes as Percent of Indiana Personal Income

	General Sales & Gross Receipts Taxes	*Selective Sales & Gross Receipts Taxes*	*Total Sales Taxes*	*Individual Income Taxes*	*Total All State and Local Taxes*	*Rank Among 50 States*
Indiana	2.5*	0.9	3.4*	2.6	10.2	43
Illinois	2.5	1.5	4.1	1.9	10.9	32
Kentucky	2.1	1.9	4.0	3.0	10.7	37
Ohio	2.3	1.2	3.6	3.3	10.9	29
Michigan	2.0	0.8	2.8	2.7	11.8	16
Wisconsin	2.5	1.3	3.8	3.3	12.6	6
U.S. Average	2.8	1.3	4.1	2.4	11.5	

Based on 1990 data.
* Indiana figure adjusted to remove the state corporate gross income tax.
Source: Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism, *September 1992.*

Two primary targets are purchases of goods and services used in production by agriculture and business, and retail sales not now subject to the sales tax.

A sales tax on purchases made for and incorporated into production becomes a hidden tax either passed on to the consumer or absorbed by business owners or their employees, depending on the competitive nature of the industry. The impact of this tax would need to be evaluated for each major industry in the state. Most businesses today operate in a global economy and may not be able to simply pass these increases on to the consumer. Many would have to absorb a major share of the tax. For some, this would undoubtedly make Indiana a less attractive place to do business.

Whereas a number of alternatives could be suggested, two other areas seem to warrant mention for expanding the retail sales tax base: (1) expansion of mail order sales, and (2) retail services. Mail order sales have been increasing rapidly in the last several years, and all indications suggest continued growth in this marketing approach. Although there are legal and compliance complications, they must be overcome. This marketing approach is continuing to reduce the sales tax collections. It is estimated that an additional $50-60 million annually could be collected from taxes on mail order sales if they could be administered.

A sales tax applied to all retail services would represent a potential increase of several hundred million dollars annually in state tax collections, depending on the services included. Many states are expanding the sales tax to include such items as computer software, auto repairs, legal services, and so on. Recent estimates made by the state for a select list of services and allowing for an exemption for services used in the production of other products or services yielded an annual estimate of almost $500 million in annual taxes. An increase of this magnitude would allow for a decrease in the tax rate while still providing some increase in state revenue. If the goal were to make the tax initially revenue-neutral, the current $.05 rate could be reduced to $.04 while still providing a new tax base expected to increase more rapidly in the future.

An increase in the individual income tax is also an alternative. One way to increase the rate of growth in collections would be to adopt a rate structure that would tax higher incomes at higher rates. So long as the upper rates are not excessive compared to other states, it would not likely precipitate significant relocation of individuals or incomes to avoid the higher rates. Alternatively, one could increase the current flat rate while at the same increasing the income level that would be exempt from the state income tax. This provides a more progressive tax structure. However, it would have a minimal impact on the growth rate of the overall tax collections.

Several other issues are also being discussed by policymakers. The role of the property tax in Indiana's state-local tax mix is one issue. A significant portion of the current property taxes supports local schools and welfare—both acknowledged to be primarily the responsibility of state government. Although property tax is much less significant to local school funding than it once was, concerns about its use continue to be discussed. In addition, considerable discussions concerning the property tax role in funding welfare costs continue to receive attention. Indiana's corporate gross income tax has been a bone of contention within the business community for years. Finally, Indiana's excise tax on automobiles is substantially higher than surrounding states.

History suggests that a change in the way we pay for state and local services is about due. The last major changes occurred in 1963, 1973, and 1982. A modest increase in income tax rates also occurred in 1987, but it was not a major restructuring program.

It is inevitable that periodic changes will be necessary. As long as our overall tax structure does not provide a tax base whose growth rate is closer to the growth in our economy, increases in the tax rates on existing taxes are likely to be the major solution. Indiana has a choice. Public debate concerning the alternatives should, and likely will, continue.

An Evaluation of the Fiscal Condition of Cities in Indiana, 1970-1990

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The author wishes to thank Mr. Peter Ballios, Budget Manager, Washtenaw County, Ann Arbor, Michigan, for relevant information on the topic.

In recent times there have been increasing fiscal problems for the nation's cities. Although in the 1970s the finances of state and local governments were in relatively strong condition, this was reversed in the 1980s and particularly in the 1990s. It appears that demands on state and local resources have grown significantly while their revenues have not increased proportionately.

This article evaluates the fiscal condition of cities in Indiana over the 1970-1990 period. It is composed of two parts. The first examines the changing economic environment in which all cities have had to operate, including changes from the federal and state governments that have affected revenues and expenditures of city budgets. The second part examines the effects of these trends on the fiscal condition of cities in Indiana and adjoining states as reflected in changes of their bond ratings over time. Finally, the analysis draws conclusions and implications for future developments.

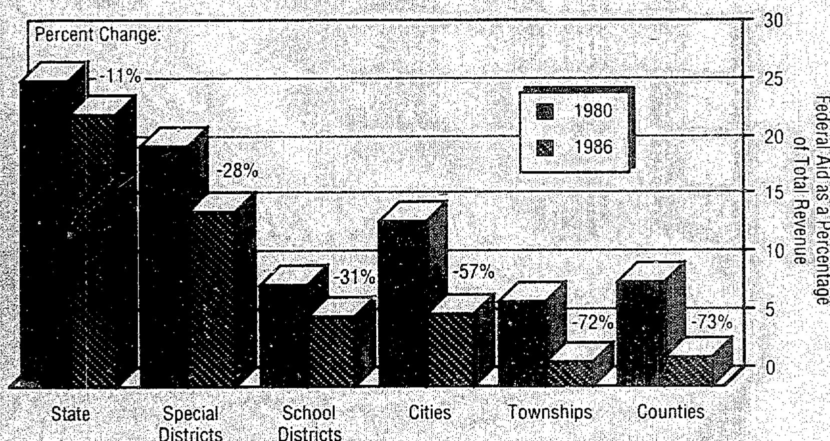
Past Trends in City Budgets

City finances in the United States have gone through significant changes over time. In the 1970s, city economies were generally strong, resulting in growing tax revenues (through property, income, and sales taxes) as spending programs grew. The federal government also was providing a substantial amount of funds to states and cities. During the 1980s, however, there was a deterioration in the fiscal condition of cities that has been exacerbated in the 1990s. This phenomenon was basically the result of an increasing divergence between revenues and expenditures in cities' budgets. This is examined below.

With regard to developments adversely affecting the *revenues* of state and local governments, one may first note that the tax rate cuts, brought about as a result of the Omnibus Budget Reconciliation Act (OBRA) of 1981, and the indexation of income taxes to inflation resulted in a slower growth of federal government revenues in the 1980s than in the previous decade. In the absence of corresponding reductions in spending, the result was a significant growth in the federal budget deficit. Eventually the Gramm-Rudman-Hollings Act of 1985 was adopted as well.

There was also a decline in federal grants-in-aid. **Figure 1** illustrates the effect, at different levels of government, of reduced federal aid during 1980-86. Although such funds decreased for both states and cities, it was the cities that experienced the greatest decline. The share of federal aid to total revenues for states decreased by 11%, whereas the corresponding share to cities declined by a significant 57%, and to townships by 72%. This imposed a much greater strain on city budgets.

Figure 1
Decreases in Federal Aid as a Share of Total Revenues, by Type of Government (1980-86)



Note: General Revenue Sharing program funding was netted out from fiscal year 1985-86, to reflect its elimination in fiscal year 1987.

Source: GAO 1990, p. 18. Extracted from L. Rymarowicz and D. Zimmerman, "Federal Budget and Tax Policy and the State-Local Sector Retrenchment in the 1980s," Congressional Research Service Report, 88-600, E, September 9, 1988.

The elimination of General Revenue Sharing (GRS) also had a negative impact on city revenues. Enacted in 1972, this program had distributed fiscal assistance to all 50 states and about 39,000 general purpose local governments. However, the program was eliminated for states in 1980 and for local governments in 1986. In some communities, revenue sharing had constituted a considerable share of total revenue—as much as 23% in some fiscally distressed places. Consequently, the loss of GRS forced such governments to seek replacement revenues or cut services.

An indirect form of federal assistance to states and localities is tax subsidies, whereby the federal government forgoes collecting revenues from corporations and individuals. A relatively significant tax subsidy was eliminated as part of the Tax Reform Act of 1986. The Act, whose major goal was to lower individual and corporate tax rates by broadening the tax base, eliminated the deduction of state and local sales taxes on federal tax returns. This change reduced the growth in state and local tax subsidies beginning in 1988, affecting states that relied heavily on sales taxes for revenue. The resulting negative impact on sales dealt a blow to state and city finances.

City revenues were also hurt because of the increased need for spending at the state level, which in turn was affected by federal mandates relating to

Medicaid. During the early 1980s, because of rapidly rising Medicaid expenditures, the Reagan Administration and Congress agreed on program cutbacks; as a result, OBRA reduced AFDC eligibility in 1981. By the mid-1980s, however, there were growing concerns that OBRA cutbacks were too severe. The trend of diminishing coverage was halted and eventually reversed as a consequence of major expansions in Medicaid eligibility and services legislated between 1984 and 1989. Starting with the Deficit Reduction Act of 1984, there was annually at least one piece of federal legislation that expanded Medicaid eligibility or services. These incorporated both mandates and options for which federal matching funds would be provided. **Figure 2** provides a chronological list of such pieces of legislation and the population they affected.

Figure 2
Major Federal Mandates Affecting Medicaid Eligibility and Services (1984-90)

Law	*Population Affected*
Deficit Reduction Act (DEFRA) 1984	Infants and children, pregnant women, AFDC families, SSI recipients
Consolidated Omnibus Budget Reconciliation Act (COBRA) 1985	Pregnant and postpartum women, adoptive and foster children, children with special needs
Omnibus Budget Reconciliation Act (OBRA) 1986	Infants and children, severely impaired people, aliens, SSI recipients
Employment Opportunities for Disabled Americans Act (EODAA) 1986	Disabled people
Immigration Reform and Control Act (IRCA) 1986	Newly legalized aliens
Anti-Drug Abuse Act (ADAA) 1986	Homeless people
OBRA 1987	Nursing home applicants
Medicare Catastrophic Coverage Act (MCCA) 1988	Pregnant women and infants
Family Support Act (FSA) 1988	AFDC families with and without unemployed parents
Implementation Beyond 9/30/89	
OBRA 1987	Nursing home residents
OBRA 1989	Pregnant women, infants, and children
OBRA 1990	Infants, children, pregnant women, elderly, and disabled people

Source: GAO, Medicaid Expansions, *1991, pp. 11-12, where a more detailed description of program features is provided.*

States increasingly became concerned about the cost of these expansions, because state governments are typically required to balance their (operating) budgets, and health care costs were growing faster than inflation. Medicaid expenditures grew rapidly, affected by increases in both the number of recipients and expenditures per recipient. During 1984-89, the states' share of Medicaid expenditures increased by 60%, from $17 billion to $27 billion; over this period, Medicaid outlays generally represented the most rapidly growing segment of state budgets. Total state Medicaid spending grew at an average annual rate of 10% (per fiscal year), compared to around 8% for education (per calendar year). Over the 1984-89 period, moreover, Medicaid expenditures grew by an average of 61% while general revenues rose by an average of 45%. Concerns over the growth of Medicaid expenditures have been exacerbated by the overall trends in state finances: from 1984 to 1989, state general expenditures increased 8.4%, whereas general revenues increased only 7.7%. Furthermore, projections by the U.S. Congressional Budget Office estimated that state Medicaid spending will grow from $40 billion in 1991 to $95 billion in 1997—a considerable and worrisome 140% increase.

As a result of federal mandates, states also experienced fiscal strains in areas other than health care, including education, corrections, and anti-drug abuse programs. For example, states were mandated to provide $76 million for student incentive grants, which was the 50% matching level for 1987 grants, despite a decline in federal funds to $64 million in 1991. Court decisions have also been forcing states to spend more on mental health and correctional institutions; in 1992, 41 states were under court order or consent decrees to reduce overcrowding and otherwise improve prison conditions. Once again, because of these developments, transfers of state funds to local governments were constrained.

On the spending side, one factor contributing to higher *expenditures* by local governments has been the implementation of additional regulations. Despite the federal government's efforts to reduce them, more regulatory requirements sprang up between 1980 and 1990, mandating increased spending by state and local governments in the areas of environment and education. For example, municipalities were required to implement testing for nearly 80 additional chemicals in their water supplies, and in 1986 Congress added 83 new drinking water contaminants to be controlled by local governments under the State Drinking Water Amendment of 1986. School districts were required to identify asbestos hazards in local schools and then remove them. Adding to these bur-

dens, there was a decline in federal funding for local government administration and oversight of such programs. The result has been a continual strain on the fiscal position of cities.

The fiscal effects on cities from changes at the federal and state levels can be illustrated briefly by reference to two Indiana municipalities: Fort Wayne and South Bend/Mishawaka. In 1970, almost 25% of Fort Wayne's expenditures were financed by funds from the federal and state governments; this share increased to 41% in 1981. Over 1981-87, however, there was a significant decline in the relative importance of these funding sources—from $23.2 to $9.1 million, accounting for only 15% of city revenues in 1987. The rating of the city's general obligation bonds, maintained at Aaa through the 1980s, dropped to Aa in the 1990s (shown in **Figure 3**). This coincides rather closely with the decline in intergovernmental funds.

In South Bend/Mishawaka, two adjoining cities in northern St. Joseph County, the 1980s saw reductions of intergovernmental funds in the combined county/city revenues—from $37.8 million in 1980 to $26.8 million in 1990. This was an absolute decline of $11 million, and a decline of $37.8 million in the amount expected if these revenues had grown at the same rate as inflation.

Fiscal problems in these cities' budgets were also affected by measures passed by the Indiana legislature during the 1970s, which limited the total increase in local revenues from property taxes to 5% in most cases. The effect was a reduction in property taxes relative to income; in St. Joseph County, the property tax levy as a percent of income dropped during 1974-80 from almost 3.5% to 2.5%. The effect of a low property tax rate was especially serious for the county, which also faced the severe problem of a declining industrial structure initiated by the closing of Studebaker in the 1960s.

On the expenditure side, cities across the state were faced with the problem of having to accommodate a continually increasing demand for services while receiving less federal aid and being prohibited from raising additional revenues through property taxes. For example, local governments faced increased demands in the 1980s pertaining to infrastructure (primarily roads) and law enforcement. Miles of roads had to be built, maintained, and patrolled. The total number of cases filed by the prosecutor's office in St. Joseph County more than doubled from 1980 to 1990, from 4,602 to 11,026. (In reality, this underestimates the actual increase in the work load, since only a fraction of police cases end up being filed.) The fiscal problems confronting St. Joseph County were faced by virtually all counties in Indiana; in response, the majority of them adopted some combination of a local option income tax. St. Joseph County, however, did not enact such a tax; in the absence of increased revenues, the alternative has been to constrain the provision of services. In 1990, South Bend/Mishawaka spent $3.62 million less in real terms for roads and streets than in 1980.

Figure 3
Bond Ratings of Cities in Indiana: 1970-1991

	1970	*1974*	*1978*	*1982*	*1986*	*1990*	*1991*
Bloomington						A1	
Columbus						A	A1
Elkhart	Aa	Aa	Aa	Aa	Aa	Aa	A
Evansville	Aa		Aa	A1	A1	A1	A1
Fort Wayne	Aaa	Aaa	Aaa	Aaa	Aaa	Aa	Aa
Gary	A	A	A	A		Baa	A1
Hammond	A1	A1	A1	Baa1	Baa	Baa	
Indianapolis	Aa	Aaa	Aaa	Aaa	Aa	Aaa	Aaa
Kokomo	Aa	Aa	Aa	A1			
Richmond		Aa		A1	A1	A1	A1
South Bend	Aa	Aa	Aa	Aa	A1	A	
West Lafayette							A
Valparaiso							A

Note: Ratings refer to general obligation/bonded debt. For meaning of symbols, see Figure 4.
Source: Moody's Municipal and Government, *various years.*

Defining Fiscal Condition

There does not seem to be a single way of defining and thus measuring "fiscal condition" at the city level. Basically, fiscal condition is affected by a city's cash inflows from different sources compared to its cash outflows for various programs. These cash flows are reflected in budget developments, although their separation into operating budgets and those for capital projects makes measurement in this framework more complex. In general, if there is a net surplus of revenues over expenditures across all budgets in a given year, the city's financial condition is regarded as positive. Conversely, a net deficit in the budget(s) indicates a negative fiscal position. It is also relevant to assess financial developments over a period of time to ascertain trends more reliably. The examination that follows concerns bond ratings at the city level.

Bond Ratings

The ratings of bonds sold by local governments are used in this assessment as an indicator of the cities' fiscal condition. The basic type of bond for municipal governments is the general obligation bond, which is backed by the full faith, credit, and taxing power of the government. Changes in the various factors that affect cities' budgets and their creditworthiness are

expected to be reflected in their bond ratings. A high rating on a city's general obligation bonds indicates a fiscally sound, well-run government. It is more than just a point of pride for a city; it can translate into savings of millions of dollars on bond interest payments. Moreover, the rating on general obligation bonds affects other bonds as well because, although analysts at the rating agencies evaluate each bond individually, the general obligation rating is a benchmark. A downgrade there often leads to a rating drop for other kinds of bonds issued by the local government. Specific types of bond ratings are described in **Figure 4**.

In developing a bond rating, agencies use facts and figures in four basic categories: economic diversity, debt burdens, administrative processes, and fiscal performance. This information provides a statistical picture of a locality's long-term ability to repay debt. Moreover, in the unstable environment of the 1990s, the raters have been placing additional importance on two areas that are not measured by hard numbers: (1) how realistic a jurisdiction is about its economic situation, and (2) whether the political leaders are unified in their will to deal with their problems.

Figure 4
Key to Moody's Bond Ratings

Aaa	Judged to be the best quality; they carry the smallest degree of risk. Interest payments are protected by a large or exceptionally stable margin, and principal is secure.
Aa	Judged to be of high quality by all standards. They have a smaller margin of protection or larger fluctuation of protective element than Aaa. Together with the Aaa group, they comprise what is known as high-grade bonds.
A	Possess many favorable investment attributes and are considered as upper-medium grade obligations. Factors giving security to principal and interest are considered adequate but elements may be present that suggest a susceptibility to impairment sometime in the future.
Baa	Considered as medium-grade obligations; they are neither highly protected nor poorly secured. Such bonds lack outstanding investment characteristics and, in fact, have speculative characteristics as well.
Ba	Judged to have speculative elements; their future cannot be considered as well assured. Uncertainty of position characterizes bonds in this class.
B	Generally lack characteristics of a desirable investment. Assurance of interest and principal payments or of maintenance of other terms of the contract over any long period of time may be small.
Caa	Of poor standing; such issues may in fact default or there may be present elements of danger with respect to principal or interest.
Ca	Represent obligations that are speculative to a high degree; such issues are often in default or have other marked shortcomings.
C	Lowest rated class of bonds; issues so rated can be regarded as having extremely poor prospects of ever attaining any real investment standing.

Note: Bonds in the Aa, A, Baa, Ba, and B groups that Moody's believes possess the strongest investment attributes are designated by the symbols Aa1, A1, Baa1, Ba1, and B1.

Ratings on general revenue bonds for Indiana cities are presented in Figure 3 for the 1970-91 period. Two phenomena can be pointed out here. First, there has been a general trend toward reduced bond ratings over time. With the exception of Indianapolis, which experienced an increase to Aaa, and Gary, whose rating went down and then up in 1991, all the other cities show downgrades. Second, a number of cities (Bloomington, Columbus, West Lafayette, and Valparaiso) show bond ratings only in the 1990s. This indicates increasing pressures on city budgets, making it necessary for them to enter the financial market as borrowers at this time—something they did not do in the 1970s or 1980s. Moreover, these cities tend not to have high bond ratings (at A or A1), indicating rather weak fiscal positions. Subsequently, such ratings result in a higher cost of borrowing, as well as additional pressures on city budgets.

Of the remaining cities that had bonds over the period of analysis, most experienced declines (though relatively small) in their bond ratings. These cities include Elkhart, Evansville, Fort Wayne, Hammond, Richmond, and South Bend; the declines were generally from Aa to A or A1.

Bond Ratings Across States

There is also an examination of bond ratings of cities in states adjoining Indiana for a comparative analysis, presented in **Figures 5** through **8**. In Figure 5, which refers to Illinois, one observes that of the five cities presented, four experienced declines over time and one (Springfield) held its rating constant. Thus, the trend in declining bond ratings is also observed in Illinois, with a more marked trend than that in Indiana. Bond ratings for Michigan cities, presented in Figure 6, show decreases in two cases (Kalamazoo and Lansing) and the same rating in three cases. Thus, the trend of downward moves in bond ratings also holds for Michigan.

In the bond ratings for cities in Ohio (Figure 7), again one can observe a similar picture: ratings went down in three cities, stayed the same in two, and rose in Columbus, the capital. Finally, Figure 8 shows that in Kentucky, bond ratings went down in two cases and stayed the same in one (Newport), once more indicating a downward overall trend. Thus, of the cities in the four adjoining states to Indiana, there were 11 in which bond ratings went down over time, seven in which the rating stayed the same, and an increased rating in only one. This means a decline in bond ratings in 58 percent of these cities, compared to 54 percent in Indiana.

Figure 5
Bond Ratings of Cities in Illinois, 1970-1991

City	*1970*	*1974*	*1978*	*1982*	*1986*	*1990*	*1991*
Centralia	A	A	A	A	A	Baa1	Baa1
Chicago	A1	A1	Aa	A	Baa1	A	A
Peoria	Aa	Aa	A	Aa	A1	A	
Rockford	A1	A1	Aa	A	Baa1	A	A
Springfield	Aa	Aa	Aa	Aa	Aa	Aa	Aa

Figure 6
Bond Ratings of Cities in Michigan, 1970-1991

City	*1970*	*1974*	*1978*	*1982*	*1986*	*1990*	*1991*
Ann Arbor	A1	A1	A1	A1	A1	A1	A1
Detroit	Baa	Baa	Baa	Ba	Ba	Baa	Baa
Grand Rapids	Aa	Aa	Aa	Aa	Aa	Aa	
Kalamazoo	Aaa	Aaa	Aaa	Aa	Aa	Aa	Aa
Lansing	Aaa	Aaa	Aaa	Aaa	Aa	Aa	Aa

Figure 7
Bond Ratings of Cities in Ohio, 1970-1991

City	*1970*	*1974*	*1978*	*1982*	*1986*	*1990*	*1991*
Akron	A	A1	Aa	A	A	A	A
Cincinnati	Aa	Aa	Aa	Aa	A1	Aa	Aa
Cleveland			A	Ba1	Baa	Baa1	Baa1
Columbus	Aa	Aa	Aa	Aa	A1	Aa1	Aa1
Dayton	Aa	Aa	Aa	A	A	A	A
Toledo	Aa	Aa	Aa	A1	A	A	A

Figure 8
Bond Ratings of Cities in Kentucky, 1970-1991

City	*1970*	*1974*	*1978*	*1982*	*1986*	*1990*	*1991*
Covington	A1	A1	A1	A	Baa1	Baa1	Baa1
Louisville	Aa	Aa	Aa	Aa	A1	A1	A1
Newport	A	A	A	A	A	A	A

In summary, then, the trend has been to downgrade ratings of general obligation bonds for cities in Indiana and adjoining states, with a more marked downward trend observed in the latter. There were also a few upgrades observed in Indiana (Indianapolis and Gary) and Ohio (Columbus). Thus, some cities across states managed to respond to the increase in fiscal pressures considerably better than others. One notes also that of the three cities whose ratings increased over time, two were relatively large and the capitals of their states (Indianapolis and Columbus). One can only speculate on whether state capitals are somehow better able to manage their finances than other cities.

Conclusions

In examining the fiscal position of cities in Indiana over the 1970-1990 period, we can see that since the 1980s city finances have been adversely affected by changes on both sides of the budget. Revenue growth has been restrained, and expenditures have been under pressure to increase significantly.

On the revenue side, there have been considerable reductions in funds from the state and federal governments. It has also been difficult for cities to generate revenues from additional sources as a result of public resistance to higher taxes. As for expenditures, pressures to increase spending have been intensified by additional regulations from the federal government relating to the environment and other areas. City finances have also been adversely affected by a steady increase in expenditures for the Medicaid program, which has reduced the amount of funds available to states.

The effects of these trends on local governments have been evaluated through an examination of bond ratings, and the assessment indicates a steady deterioration of financial conditions over time in Hoosier cities. The same phenomenon can be observed in adjoining states, where the deterioration seems to be even more pronounced. Moreover, the forces that had a negative impact on city finances in the past (from the revenue and expenditure sides) are still operative.

Consequently, city governments are facing the same strong pressures in their fiscal position. This suggests that the concept of a "structural deficit" can apply to local governments. In fact, such a phenomenon seems to have been developing in city budgets in the late 1980s and 1990s, basically as a result of spending programs that grow faster than the revenues to support them. Eventually, the divergence between revenues and expenditures becomes a perpetual problem that occurs and needs to be solved every year by local governments.

References

R.C. Fisher, *State and Local Public Finance* (Glenview, IL: Scott, Foresman & Co., 1988).

S.D. Gold, "The Budget Shootout," *State Government News*, March 1992, pp. 7-9.

E.S. Knapp, "Deficits by Mis-Design," *State Government News*, July 1991, pp. 8-11.

H.F. Ladd and J. Yinger, *America's Ailing Cities* (Baltimore: Johns Hopkins University Press, 1989).

P. Lemov, "Bad Times and Bond Ratings," *Governing*, March 1991a, pp. 32-36.

P. Lemov, "Local Government and the Budget Axe, *Governing*, August 1991b, pp. 26-30.

V. Miller, "Hung Out to Dry," *State Government News*, November 1992, pp. 23-25.

Moody's Public Finance Department, *Moody's on Municipals* (New York: Moody's Investor Service, 1991).

E. Perlman, "Mandates Sink State Budgets," *City & State*, November 4, 1991, pp. 1, 23.

J. Roos, "Doing More With Less—The Fiscal Crisis in St. Joseph County Government," Michiana Urban Observatory, South Bend, Indiana, 1992.

T.R. Schwartz and J.E. Peck, eds., *The Changing Face of Fiscal Federalism* (Armonk, NY: M.E. Sharpe, Inc., 1990).

F.X. Steggert, "City Stress, the New Federalism, and Urban Aid: South Bend and Comparison Cities," Michiana Urban Observatory Report, South Bend, Indiana, 1991.

U.S. General Accounting Office, *Federal-State-Local Relations: Trends of the Past Decade and Emerging Issues* (Washington: U.S. GAO, 1990).

U.S. General Accounting Office, *Medicaid Expansions: Coverage Improves but State Fiscal Problems Jeopardize Continued Progress* (Washington: U.S. GAO, 1991).

A Sector-based Strategy for Economic Development

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Research Fellow, Indiana Economic Development Council, Inc., Indianapolis. *This article is a result of research funded in part by the U.S. Economic Development Administration. The project received valuable support and assistance from the Industrial Research Liaison Program, the Indiana Business Research Center, and the Indiana Department of Commerce.*

Economic developers are challenged to put theory into practice, to have good reasons for what they do. Every action ought to be in sync with the agency's mission, which ought to be informed by accepted theory. When theory changes, practitioners should reconsider their mission and their methods.

Most changes in policy are merely pendulum swings from one immediate priority to another. But a whole new understanding of what makes a successful local or regional economy is taking shape. This article argues that the theory of "competitive advantage" offers Indiana a new approach to industrial development and requires innovative policy approaches.

Cluster Theory

The term "competitive advantage" recalls "comparative advantage," which was first articulated by David Ricardo nearly 200 years ago and has been the prevailing theory of resource allocation ever since. But comparative advantage no longer explains economic outcomes and strategies. It assumes that intrinsic local factors determine economic outcomes. Access to commodities, capital, land, and other factors determine which firm can produce a product better or cheaper. Access to technology is relatively unimportant. Methods change slowly and everyone has the same access to the tools and technology.

However, economic analysts have perceived a growing number of exceptions to the rules of comparative advantage. The success of Japanese firms cannot be explained in such terms because that nation has some of the most expensive land, energy, and commodities in the world. This leads proponents of competitive advantage to look beyond the traditional factors of production.

Competitive advantage recognizes that technology often contributes more to economic success than the factors on which comparative advantage is based. Certainly technology is no longer constant or universal. In addition, several other key determinants are necessary for competitive advantage:

- supply and support from related businesses;
- aggressive company strategies;
- inter-firm rivalries;
- sophisticated primary consumers;
- superior work force; and
- adequate factors of production.

The principles of competitive advantage are articulated by Michael Porter in his 1990 book, *The Competitive Advantage of Nations*. One of the more tangible consequences of competitive advantage is the formation of local or regional industry clusters. Even as the world economy integrates, production of specific products is becoming more and more concentrated in fewer locations. The reason for this is suggested by Stuart A. Rosenfeld (1992):

> Many firms in close proximity to one another, producing similar and related goods and services, yield expertise, cumulative knowledge, and constant innovation. Increased association and informal contacts among firm owners and their employees lead to mutual learning and development of more advanced problem-solving skills and attract support services and other resources.

Indiana businesses such as Cummins Engine Company already rely on this principle. When designing new components, Cummins deals with tool and die shops and other suppliers located within one hour of Columbus, so frequent face-to-face meetings can take place. The company relies on these meetings to improve product designs and prevent mistakes that might go undetected in the absence of dialogue.

Industry Clusters in Indiana

Without a precise definition of an industry cluster, there is no perfect way to measure them. Indiana has 286 instances of a sector employing 10% or more of a county's total manufacturing employment, and 79 instances in which the industry employs more than 25%. There are only 15 cases, however, in which all the following criteria are satisfied:

- At least 25% of the county's manufacturing employment is in one standard industrial classification (SIC).
- At least 5% of the state's employment in the SIC occurs in the county.
- At least 500 people are employed in the county in the SIC.
- At least three firms are engaged in the county in the SIC.

The 15 counties and nine industry sectors depicted in the **Table** on the next page are only the most readily apparent clusters in Indiana.

Warsaw and Kosciusko County are home to the world's largest medical implant manufacturers. Most of the artificial hip joints and other implants in the world are produced there. Like Japan, Warsaw has no inherent advantages: no essential natural resources, no prime location, no advanced infrastructure. Yet the implant makers and their suppliers continue to invest in Warsaw. Representatives of those firms claim it is because of the top-quality supplier network and skilled work force in Kosciusko County—which is exactly what the competitive advantage gurus would expect them to say. If industry clusters are forming around local competitive advantage, economic developers need to find their role—and that of government—in sustaining and advancing them.

Table
Industry Clusters in Indiana

Industry Sector	*County*	*Employment*	*Percent of State Employment*	*Percent of County Mfg. Employment*
Industrial Machinery	Fayette	4,063	6.3	73.4
	Bartholomew	5,674	8.8	41.5
Steel	Porter	7,965	11.8	68.7
	Lake	26,709	39.6	61.8
Automotive or Consumer Electronics	Madison	10,803	14.3	67.5
	Howard	10,245	13.6	57.2
	Monroe	4,328	5.7	47.7
Chemicals	Posey	1,990	6.1	65.7
Furniture, Cabinetry and Pianos	Dubois	5,352	23.7	49.8
	Ripley	2,230	9.9	49.4
	Washington	1,205	5.3	46.9
Publishing	Montgomery	3,836	9.6	49.0
Recreational Vehicles	Elkhart	16,646	38.4	32.4
Medical Implants	Kosciusko	4,438	19.9	32.3
Fabricated Metals	Grant	3,402	6.4	29.2

Government's Role

Economic development policies typically aim to achieve one of two divergent goals: a healthy general business climate or assistance to a single firm. The first is extremely broad and its benefits diffuse. The other is so specific that it often benefits only the single grant recipient—and can cause harm to its competitors. A sector-based strategy provides a desirable middle approach.

By focusing on industry clusters, economic developers might provide meaningful assistance to many firms at once by providing for their common needs. The balance of this article suggests what government agencies should and should not do in view of the competitive advantage theory and the presumed advantages of industrial clustering.

Don't pick winners or create clusters. Critics have always maintained, with good reason, that government cannot pick winners. Fortunately, a sector-based strategy does not require government to make arbitrary choices. Candidates for public assistance should develop initially on their own. Porter says, "Clusters often emerge and begin to grow naturally. Government policy had little to do with the beginning of Silicon Valley or the concentration of mechanical firms around Modena, Italy. Once a cluster begins to form, however, government at all levels can play a role in reinforcing it."

Indiana's economy still relies heavily on the old comparative advantages (labor, resources, and location), but several industry clusters have grown around unique local competitive advantages—often the skill and spirit of the people in the communities. The concentration of medical implant manufacturers in Warsaw is traced back to an accident of history: the founder of De Puy, Inc. was there during the Spanish-American War, and his federal contract for wire splints spawned the growth of three major orthopedic implant makers and more than 20 supplier firms. The furniture and cabinet makers in Jasper credit their robust German ancestors, even more than the presence of southern Indiana hardwoods, as the cause of their concentration. Folks in entrepreneurial Fort Wayne say plant closings and layoffs at major local employers gave engineers and other design-oriented industrialists the freedom to pursue the product and process innovations they envisioned but could not pursue under a large corporate structure.

Promote dynamism. A sector-based strategy must make local industry competitive. "The proper role of government policy," writes Porter, "is to stimulate dynamism and upgrading. Government policy should also [help] firms to enter new industries where higher productivity can be achieved."

Clustering may be a way to enhance productivity and competitiveness, but it is not an objective in itself. Statistical analysis of Indiana counties shows an inverse correlation between industrial concentration and population income and no correlation between industrial concentration and local productivity. Merely concentrating is not a solution, unless the concentration of vertically integrated firms contributes to better products and greater productivity.

Consider local factors. Industry targeting typically has been undertaken either to diversify the economy or to capture a piece of a growing market. Rarely has inherent local advantage (distinct from existing industrial base) been allowed to guide strategy. A 1991 study by Growth Strategies Organization, Inc. on behalf of the Indiana Department of Commerce is typical of traditional industry targeting efforts. One key criteria was "expected national demand" for an industry's output. The report assumes that Indiana should pursue industries that are expected to flourish elsewhere. It fails to make any qualitative analysis of the industry within the state and the competitive advantages of Hoosier companies.

Not surprisingly, existing Indiana businesses oppose targeted attraction and favor efforts to build up the existing industrial base. "The state can hit the occasional grand-slam homer," says Don Laipple,

executive vice president of Automation Engineering of Fort Wayne, "but I don't think that's the way to win the game. There is enough basic industry in this state that the strategy has to grow from what we have."

Assist small suppliers and promote collaboration. Nothing is more essential to a sector-based strategy than long-term relationships between firms. The relationships between existing manufacturers in Columbus and their client tool and die shops is a major reason why Toyota Industrial Equipment Mfg., Inc. located there. Masakazu Kato, executive vice president, says, "Toyota found in Columbus the kind of inter-firm cooperation it was used to in Japan."

These relationships strengthen every link in the chain of production, making the whole process more efficient. Michael Brewer of De Puy, Inc. in Warsaw says, "We've done just about everything on the list to cut our costs and adopt the best business practices available. But our ability to compete in the years to come depends on our suppliers, who are smaller companies that haven't come as far as we have."

Many entrepreneurs have a better idea for a product or process, but lack business acumen (Larson and Clute 1979). Usually, small and new business owners place too much confidence in their opinions rather than the signals of the market and the industry, and they often do not know how to develop a market niche, pricing strategy, or distribution network. These failings can be fatal, and small businesses need help from somewhere.

At present, Indiana has some fine government programs to assist small business, but perhaps the best kind of assistance for a small firm is a long-term collaboration in a network with a major manufacturer. Timothy Cruser of Cummins Engine Company explains that Cummins invests substantially in the quality control, productivity, and management of its suppliers, and that the company views out-sourcing as a way to maximize productivity.

Stuart Rosenfeld agrees: "Perhaps the most widely discussed form of vertical network is that which links large corporations with their suppliers. Buyers lend expertise to suppliers to raise the latter's quality standards, the specialized expertise of smaller supplier firms spurs innovation, and pooled resources lead to better design and quicker solutions to production problems."

Government is like the father of the bride. The objective is to get the small business into a long-term partnership that will provide all its needs in the future. The father's role is to get the bride to the church and escort her down the aisle, overcoming the weaknesses and failings that might disqualify her from entering into a satisfactory partnership.

Promote locally customized training opportunities. The days are gone when a son counted on a job in the same factory where his father worked. But the long-term viability of Indiana's leading industries depends more than ever on a steady supply of highly skilled workers. The requisite skills vary from one industry to the next, so as industries cluster in particular communities, the requisite vocational skills will vary as well.

Communities have specific occupational requirements to match their industrial character. Their interest in ensuring adequate workers is best served through local training programs. Local employers can participate in designing training programs and contribute to the development of the work force they will employ.

Broker information. Government cannot speak for the market, but in many ways it can promote businesses in clusters by brokering information. Primarily, government should better articulate its own regulations. Government procurement and contracts are a powerful tool for promoting existing business. Public conduits of information on markets can save companies considerable time and money, whether for export opportunities or local supply networks.

Many business people agree that the state's promotional efforts accomplish little. In the first place, every state publishes similar propaganda. In the second, the needs of any industry or business are so specific that unfocused advertisements rarely provide useful information. A better use of the state's advertising budget might be promoting specific localities and their industrial clusters.

Know more than we know now. The foregoing are a few essential aspects of a sector-based strategy for Indiana, but before such policies are implemented, better information is needed. Not enough is known about inter-firm relationships. "Industrial policy" focuses too much on horizontal groups rather than on the vertically integrated producers who form the value-added chain of production.

The argument for building policy around industry sectors is that clustering leads to greater innovation and productivity. But does it? The proofs provided by Rosenfeld and Porter need to be replicated in Indiana. Then, if clustering is proven effective, the state still needs a rational way of selecting which regions and clusters to promote.

Industry councils are needed in each of Indiana's major industries to help articulate the common ground they share. "Organizing the industry is a first step," says Frank Sabatine, formerly director of the Business Development Division of the Indiana Department of Commerce and now at Ball State University. "Firms think of each other as competitors and don't collaborate, so the government and the public don't recognize the industry. A unified and organized voice lets an industry tell government how it can help."

References

M. Ross Boyle, "Indiana Business Retention and Expansion Targets Study," unpublished report, Growth Strategies Organization, Inc., Reston, Virginia, May 1991.

Carl M. Larson and Ronald C. Clute, "The Failure Syndrome," *American Journal of Small Business*, October 1979, pp. 35-43.

Michael E. Porter, *The Competitive Advantage of Nations* (New York: The Free Press, 1990).

Stuart A. Rosenfeld, *Competitive Manufacturing: New Strategies for Regional Development* (New Brunswick, NJ: Rutgers University Center for Urban Policy Research, 1992).

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