Five Hundred Reasons Hoosier Incomes Trail the Nation

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In 2008, Indiana's per capita income of $34,103 was $5,648 below the national average of $39,751. This announcement from the U.S. Bureau of Economic Analysis was hardly news. Indiana has lagged the United States in personal income for years. Incomes rose from 2007 to 2008 in Indiana by 2.7 percent, but by 2.9 percent across the United States.

Personal income is the basis for private consumption and government revenue, so slow growth in personal income inhibits growth in Indiana's economy. It makes other objectives (improved education and infrastructure, debt reduction, moderate tax burden, etc.) harder to attain. Indiana's relative decline in per capita personal income can't continue without consequences for Indiana's public sector financing, private sector competitiveness or Hoosier quality of life.

Indiana's low ranking in per capita personal income is usually attributed to the long-term decline in manufacturing employment. As one newspaper report on the BEA announcement explained: "The loss of 178,000 manufacturing positions since 1999, particularly in steel, automotive and electrical industries, largely has eroded any gains."[1]

This article disputes that common explanation and offers an alternative. Instead of a single cause, there are nearly 500 reasons why Indiana lags the nation in personal income. While more complicated, this alternative view suggests that reversing the decline is possible.

Table 1: Hourly Mean Wage by Major Occupational Groups, Indiana and the United States, 2008

Occupation	Hourly Mean Wage	
	Indiana	United States
All occupations	$18.16	$20.32
Management occupations	$42.69	$48.23
Legal occupations	$32.88	$44.36
Health care practitioners and technical occupations	$30.06	$32.64
Computer and mathematical science occupations	$30.04	$35.82
Architecture and engineering occupations	$30.04	$34.34
Business and financial operations occupations	$27.47	$31.12
Life, physical, and social science occupations	$24.93	$30.90
Construction and extraction occupations	$20.93	$20.36
Education, training, and library occupations	$20.92	$23.30
Installation, maintenance, and repair occupations	$19.73	$19.82
Arts, design, entertainment, sports, and media occupations	$18.92	$24.36
Community and social services occupations	$18.29	$20.09
Protective service occupations	$16.49	$19.33
Production occupations	$16.29	$15.54
Sales and related occupations	$16.04	$17.35
Transportation and material moving occupations	$14.97	$15.12
Office and administrative support occupations	$14.45	$15.49
Farming, fishing, and forestry occupations	$13.33	$11.32
Health care support occupations	$12.35	$12.66
Building and grounds cleaning and maintenance occupations	$11.20	$11.72
Personal care and service occupations	$10.86	$11.59
Food preparation and serving related occupations	$8.88	$9.72

Note: Shaded cells indicate that the Indiana wage for the occupation exceeds the U.S. wage.
Source: Occupational Employment Statistics

Manufacturing Didn't Cause It

It is true that Indiana PCPI declined over a period when Indiana's manufacturing sector was shedding jobs. But it is wrong to single out manufacturing as the cause of the decline. Complex outcomes seldom are determined by a single cause. If the Indiana Pacers' Danny Granger scored thirty points in a game and the Pacers lost by nine points, it would be correct to say they lost because he didn't score forty. But a serious effort to improve the team would look beyond Granger to see what his teammates did or failed to do. Thirty points is about as much as a single player can contribute, and expecting Granger to do more may be impractical. Indiana needs to take that same broader approach to explaining and reversing its slow growth in per capita personal income.

Decline in manufacturing employment is a national phenomenon, yet many states have passed Indiana on the national ranking for PCPI since 1965 when Indiana last equaled the national rate. Those states improved without expanding their manufacturing sectors. Indeed, the rest of the

country has shed manufacturing jobs faster than Indiana while achieving faster growth in incomes. These states have succeeded despite manufacturing losses. Just as the outcome of a basketball game reflects what every player does, Indiana's PCPI performance derives from many factors.

TABLE 2: Share of Total Employment by Major Occupational Groups, Indiana and the United States, 2008

Occupation	Indiana		United States	
	Employment	Percent Share of Jobs	Employment	Percent Share of Jobs
All occupations	2,927,620	100%	135,185,230	100%
Office and administrative support occupations	450,530	15.4%	23,231,750	17.2%
Production occupations	374,060	12.8%	9,919,120	7.3%
Sales and related occupations	298,630	10.2%	14,336,430	10.6%
Food preparation and serving related occupations	264,460	9%	11,438,550	8.5%
Transportation and material moving occupations	262,990	9%	9,508,750	7%
Health care practitioners and technical occupations	162,990	5.6%	7,076,800	5.2%
Education, training, and library occupations	162,970	5.6%	8,451,250	6.3%
Construction and extraction occupations	139,150	4.8%	6,548,760	4.8%
Installation, maintenance, and repair occupations	131,970	4.5%	5,374,850	4%
Management occupations	108,520	3.7%	6,152,650	4.6%
Building and grounds cleaning and maintenance occupations	91,470	3.1%	4,429,870	3.3%
Business and financial operations occupations	90,600	3.1%	6,135,520	4.5%
Health care support occupations	75,250	2.6%	3,779,280	2.8%
Personal care and service occupations	63,400	2.2%	3,437,520	2.5%
Protective service occupations	57,010	1.9%	3,128,960	2.3%
Architecture and engineering occupations	47,260	1.6%	2,521,630	1.9%
Computer and mathematical science occupations	45,020	1.5%	3,308,260	2.4%
Community and social services occupations	32,480	1.1%	1,861,750	1.4%
Arts, design, entertainment, sports, and media occupations	31,850	1.1%	1,804,940	1.3%
Life, physical, and social science occupations	20,060	0.7%	1,296,840	1%
Legal occupations	14,000	0.5%	1,003,270	0.7%
Farming, fishing, and forestry occupations	2,950	0.1%	438,490	0.3%

Note: Shaded cells indicate that the Indiana percent share of jobs exceeds the U.S. percent share.
Source: Occupational Employment Statistics

The solution to problems caused by the loss of one industry need not be a recovery of that same industry. Massachusetts' PCPI has stayed high despite losses as great as those Indiana has suffered. Whaling and shipping made Massachusetts a national economic powerhouse in the late 1800s. Those industries declined and Massachusetts sank with them, but rose again in the early 1900s by growth in textile manufacturing. When textiles began moving to the South or overseas, Massachusetts adapted again by capturing a share of the new biotechnology sector. West Virginia, by contrast, has never found anything to replace coal mining as the engine of its economy.

Since most people derive the majority of their income from wages earned at work, comparing wages for occupations, rather than industrial change, is a more pertinent tool for determining where Indiana's PCPI falls below the U.S. level.

Most Jobs Pay Less in Indiana

Hoosier workers earn less than similar workers in other states for hundreds of occupations. Indiana mean wages are lower in nineteen of twenty-two major occupational groups (see **Table 1**). The only major job types for which Indiana incomes exceed the U.S. rates are construction and extraction jobs, manufacturing production jobs, and the very small farming, fishing and forestry group.

Table 2 shows the relative size of occupational groups in Indiana and the United States. Indiana has relatively more jobs in five groups. These include high-wage health care professions and low-wage food service jobs, as well as installation, maintenance and repair, production, and transportation and material-moving occupations. A larger share of total jobs means those occupational groups could be especially significant in helping to boost Indiana's PCPI. But, as **Table 1** shows, Indiana pays less to workers in all but the

production jobs category. Therefore, rather than being the cause of Indiana's income deficit, production jobs in manufacturing keep us as close to the national average PCPI as we are.

Digging Deeper

The U.S. Bureau of Labor Statistics' Occupational Employment Statistics (OES) survey is the most detailed and complete survey of wages in the country. Current OES data include the hourly wage rates and the number of jobs for 657 occupations encompassing 93 percent of all Indiana jobs.[2]

Indiana pays a lower average hourly wage for 505 of the 657 occupations in the OES survey. Of the 2.7 million Hoosier workers accounted for at this level of detail, almost 2.2 million workers are in occupations for which Indiana pays lower mean hourly wages than workers in the rest of the country earn for similar work. About 80 percent of the workers accounted for in this survey work in these lower-paying occupations. Many of these occupations pay good wages. But even high-wage Hoosier jobs such as engineering manager ($46.74 per hour) put us further behind as long as the rest of the country pays them better ($57.97 per hour) and employs more of them.

Indiana pays more than the U.S. mean hourly wage for 152 occupations. Of these, Indiana has fewer jobs, relative to its total, for most occupations. There are, in fact, only 81 occupations out of 657 for which Indiana pays a premium and employs a relatively large number. Thirty-four of these are manufacturing production occupations (see **Table 3**).

The occupations most detrimental to Indiana's goal of earnings parity are those that pay lower wages and have more jobs. That combination occurs in 176 occupations. **Table 4** shows ten of these occupations using examples from several of the major groups and both high- and low-wage jobs.

The differences between the United States and Indiana are small in several cases, but the margin in mean hourly wage is very great for some occupations. Human resources managers earn $11.03 less per hour in Indiana, on average, and computer hardware engineers make $13.38 less per hour.

These deficiencies are hard to explain. Why, for instance, do Hoosier cashiers earn $0.60 less per hour than cashiers in New Mexico? Why do corrections officers and jailers in Indiana make nearly $10 less per hour in Indiana than in Illinois? Why do forty-five other states pay more to retail clerks than Indiana?

Of course, not all occupations pay less in Indiana. The mean hourly wage of $32.90 for airfield operations specialists in Indiana is highest of all states in the survey and $12.44 more per hour than the U.S. average. The $19.66 that surveillance officers at gaming establishments earn in Indiana is more than in any other state but Pennsylvania. But these examples are few in number and do not come close to offsetting the occupations for which Indiana pays less.

Economists typically explain prices in terms of the costs of inputs and the value of outputs. But among workers doing the same job in different states, the value of output is very similar

Table 3: Number of Occupations for Which Indiana Has More Jobs or Pays Better

Occupational Group	Indiana Has More	Indiana Pays More	Indiana Has and Pays More
All occupations	257	152	81
Production occupations	68	45	34
Installation, maintenance, and repair occupations	28	19	11
Construction and extraction occupations	20	22	10
Transportation and material moving occupations	19	13	9
Health care practitioners and technical occupations	26	11	5
Personal care and service occupations	5	6	3
Office and administrative support occupations	15	8	3
Management occupations	9	1	1
Business and financial operations occupations	7	2	1
Life, physical, and social science occupations	5	3	1
Health care support occupations	8	4	1
Protective service occupations	4	1	1
Building and grounds cleaning and maintenance occupations	4	3	1
Computer and mathematical science occupations	1	1	0
Architecture and engineering occupations	8	1	0
Community and social services occupations	4	2	0
Legal occupations	1	1	0
Education, training, and library occupations	2	0	0
Arts, design, entertainment, sports, and media occupations	8	1	0
Food preparation and serving related occupations	7	0	0
Sales and related occupations	7	4	0
Farming, fishing, and forestry occupations	1	4	0

Source: Occupational Employment Statistics

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for most jobs. A counter clerk at a video-rental store does the same job in Maine, Mississippi or Muncie, and differences in their value of output is a minor factor in their wage differences.

Cost of Living Doesn't Explain It

Indiana's cost of living is lower than that of most other states, and some readers will no doubt suppose Hoosier workers are better off despite lower incomes. The data do not support this notion, however. While energy and housing cost less in Indiana, other items are not much cheaper here than elsewhere in the country.

Overall, Hoosier costs are about 92.8 percent of the U.S. average cost of living.[3] But Hoosier incomes are only 85.8 percent of the U.S. PCPI. The deficit in incomes more than offsets the savings from living in Indiana. If Hoosier incomes were in proportion to our cost of living, PCPI would be 92.8 percent of the United States, or $2,786 per person higher than it is.

Steady Growth Is Not Enough

Indiana PCPI equaled the nation in 1965. **Figure 1** shows the trend since then with Indiana and U.S. incomes rising over time, but Indiana falling further below the U.S. PCPI.

Indiana incomes grew in nominal terms in every year from 1965 to 2008 and in inflation-adjusted terms in thirty-one of those years. But Indiana grew more slowly than the United States in twenty-seven of those forty-three years. Our economic development policies are successful if measured against Indiana only. But by the more important yardstick of U.S. PCPI, Indiana fails to keep pace.

Economic Development Can't Fix It

The state's leaders are right to invest in high-skill, high-growth, and high-tech companies; but the PCPI gap isn't going to be closed through economic development. Indiana pays less than the United States average for high-tech occupations, just as for unskilled jobs, and their effect on the PCPI gap is the same. Industrial engineers make $3.04 less per hour here, on average, than in the rest of the country. Chemists make $6.19 an hour less. Computer software engineers make $8.22 less per hour here. Far from being the solution, the high-tech industries help to keep the income gap wide.

The gap won't be closed by attracting one firm at a time, even if that firm pays very high wages.

TABLE 4: Selected Occupations Where Indiana Employs More, but Pays Less than the U.S. Average

Occupation	Indiana			United States	
	Employment	Mean Hourly Wage	Share of Jobs	Mean Hourly Wage	Share of Jobs
Combined food preparation and serving workers, including fast food	78,540	$7.61	2.87	$8.36	2.16
Registered nurses	56,500	$27.48	2.06	$31.31	2.03
Janitors and cleaners, except maids and housekeeping cleaners	49,480	$10.92	1.81	$11.30	1.71
Secretaries, except legal, medical, and executive	41,380	$13.72	1.51	$14.42	1.49
Bookkeeping, accounting, and auditing clerks	41,330	$15.47	1.51	$16.25	1.48
First-line supervisors/managers of retail sales workers	26,470	$18.79	0.97	$19.19	0.95
First-line supervisors/managers of production and operating workers	24,760	$25.70	0.90	$25.72	0.53
Carpenters	22,160	$19.26	0.81	$20.64	0.72
Mechanical engineers	7,770	$33.15	0.28	$37.59	0.19
Industrial production managers	6,240	$41.34	0.23	$43.85	0.12

Source: Occupational Employment Statistics

Suppose a new business that will employ 1,000 aerospace engineers is attracted to Indiana. Suppose the company will pay a rate that only the top 10 percent of all aerospace engineers get. In Indiana, that's $49.35. Nationwide, the top 10 percent earns $64.70. Assuming the national rate and 2,080 hours of pay, those 1,000 engineers would earn a combined $134.6 million in a year. It sounds like a marvelous boost to state incomes, but it would raise the annual PCPI of all Hoosiers by no more than $21.10. The PCPI deficit of $5,648 would barely change.

There's another point to make about the hypothetical aerospace firm. Those 1,000 engineers wouldn't make their own coffee, clean their offices or manage their computer network. The firm would employ hundreds more people as secretaries, janitors, etc. If those support workers earned the sub-standard wages that are typical in Indiana for their occupations, they would offset the engineers' higher earnings. The firm's overall effect on state PCPI could be negligible despite the engineers.

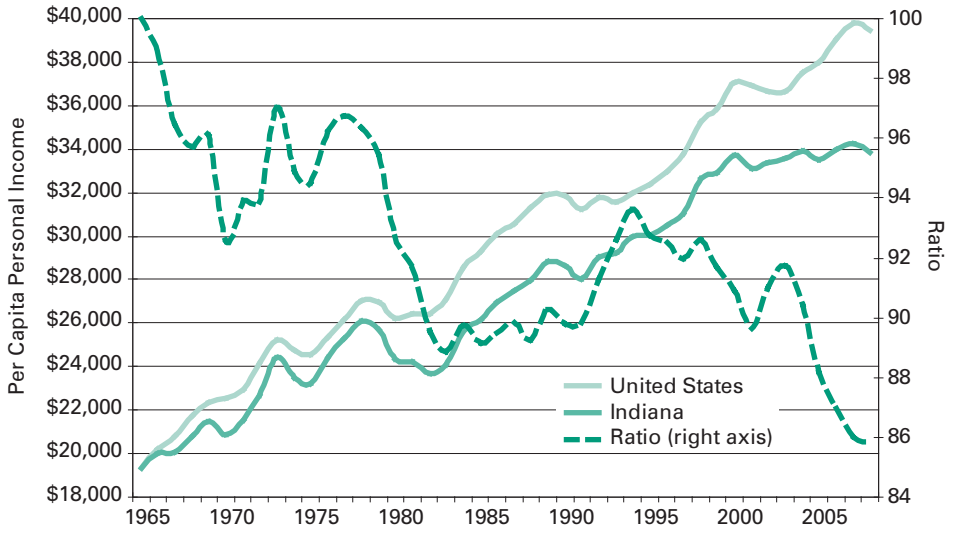
Any new business that comes to Indiana and pays its employees more than the current statewide average helps to raise Hoosier incomes. But it doesn't help Indiana gain ground on the United States unless it pays more than the national rate.

Earnings Can't Do It All

This article discusses how Indiana's mix of jobs and its lower hourly wages contribute to the gap in per capita personal income relative to the United States. These two factors explain most of the difference, but there are other factors besides jobs and wages.

Annual earnings are affected by the number of hours for which a worker gets paid during the year. Spells of unemployment or shortened work weeks can diminish incomes in one place relative to another even when hourly wages are equal.

FIGURE 1: Per Capita Personal Income, 1965-2008



Source: Bureau of Economic Analysis

Also, earnings from work account for only about 69 percent of total personal income. The rest comes from dividends, interest and rents, and from transfer receipts. Since Hoosiers earn less from investments and receive less welfare, even if Indiana achieved parity in earnings from jobs, a deficit in PCPI would still exist.

Conclusion

The comedian Steve Martin disclosed a secret method by which a person could earn a million dollars and not pay taxes on it. "First, earn a million dollars," he said, "And then, don't pay taxes on it!"

Raising the personal incomes of Hoosiers will require a similar approach. It can only be done by raising the personal incomes of Hoosiers.[4] Effective policies need to be as broadly based as possible—not limited to preferred industries or targeted careers. Bio-technology, advanced manufacturing and logistics are industries that ought to be promoted, but those industries will never be big enough to erase the deficit in PCPI for Indiana's entire population. They won't even start to close the gap unless Hoosiers in those industries are earning more than their colleagues across the country.

Indiana shouldn't adopt policies just to move a few spots higher in PCPI than its current thirty-ninth rank among the states. Ranking low among the states doesn't cost Indiana anything. But a serious effort to raise PCPI would pay off in important ways. If Indiana wages were on par with the United States, higher incomes would lead to millions more dollars in consumer spending and government revenue.

Notes

1. Ted Evanoff, "Indiana Incomes: We're Stuck," *Indianapolis Star*, March 25, 2009, page A1.
2. Teachers are not included in the survey, nor are professional athletes and other professions for which Indiana has less than a significant number of survey responses.
3. Source: www.top50states.com/cost-of-living-by-state.html
4. Morton Marcus made the same point in "Dissecting Indiana's Decline in Personal Income," *Indiana Business Review*, Spring 2002: www.ibrc.indiana.edu/ibr/2002/spring02/spring02_art1.html.