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The Cincinnati-Middletown Metro Story: Told by STATS Indiana

This is the seventh in a series of articles on Indiana's metropolitan statistical areas (metros). All the data used in this article can be found using the USA Counties and Metros Side-by-Side feature on STATS Indiana (www.stats.indiana.edu).

The Area

The Cincinnati-Middletown metro includes counties from Ohio, Kentucky and Indiana. The main cities—both Cincinnati and Middletown—are located in Ohio. Indiana is the smallest portion of the metro both in number of counties and population. Of the fifteen counties included in the metro, three are within Indiana's borders: Dearborn, Franklin and Ohio counties. These three counties comprise 3.7 percent of the metro's population. However, the Indiana portion of the metro has also seen a larger increase in population over the long haul. From 1990 to 2007, the Indiana portion of the metro grew 23.6 percent—faster than the metro as a whole (15.7 percent), Indiana (14.5 percent) or the United States (21.2 percent).
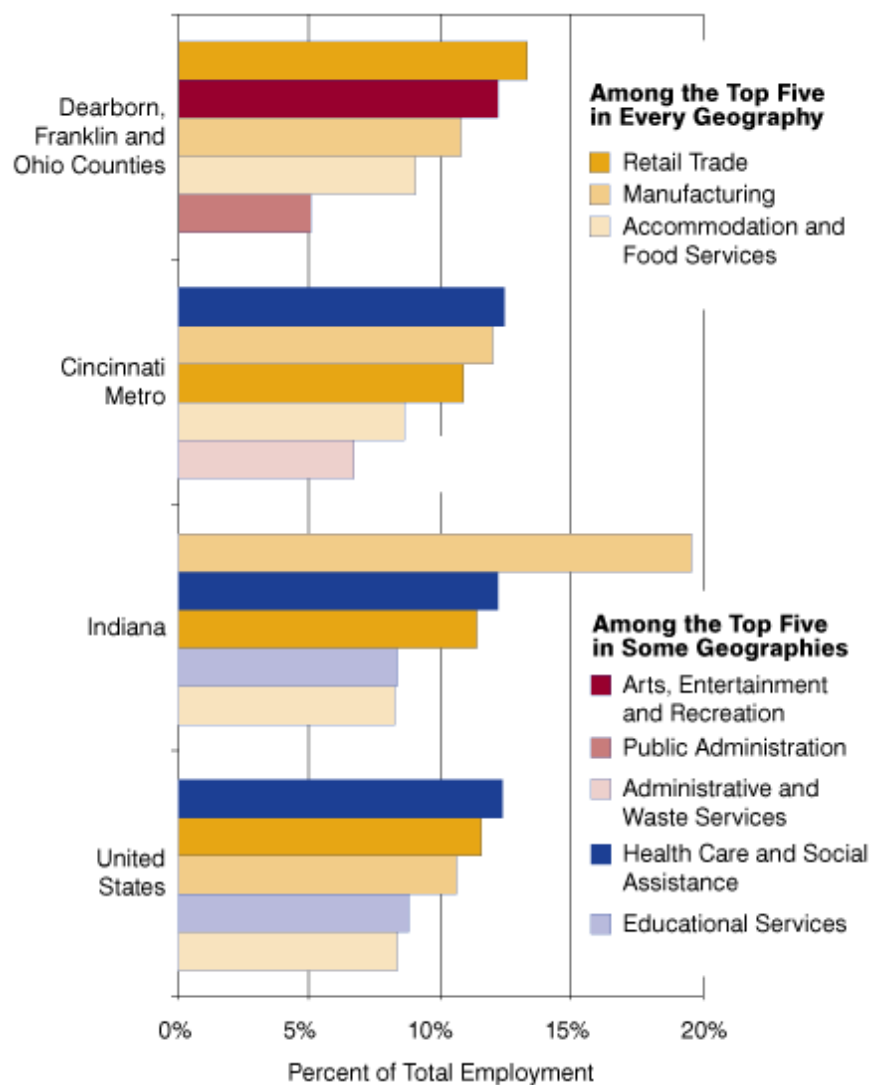
Despite the fact that the Indiana portion of the metro is so small relative to the entire metro, it plays an important role in the metro economy. For example, let's take a look at the components of population change in the Indiana portion of the metro. Dearborn, Franklin and Ohio counties combined saw positive net domestic migration, positive net international migration, and natural increase (more births than deaths) in 2007. Meanwhile, the metro as a whole saw a negative net domestic migration. What does this mean? It appears as though residents of the metro are moving elsewhere. More specifically, it looks like domestic migrants are moving into the Indiana portion of the metro but not the rest of the metro, perhaps in an attempt to be close, but not too close, to the big cities where their jobs are likely located.

Jobs and Wages

The Cincinnati-Middletown metro supplies more than one million jobs within the U.S. economy. As an entire metro, health care and social assistance was the industry with the highest employment proportion (12.4 percent); manufacturing was second (12 percent) and retail trade was third (10.8 percent). Indiana and the United States were, not surprisingly, the most similar in terms of top five industries (see **Figure 1**). The smaller the geography, the more likely it is that we will find different niche industries. For example, the Cincinnati metro did not have educational services among its top five industry sectors, but instead had administrative and waste services. Likewise, the Indiana portion of the Cincinnati-Middletown metro differed from the state and nation in that arts, entertainment and recreation, as well as public administration were among the top five industry

sectors in the area.

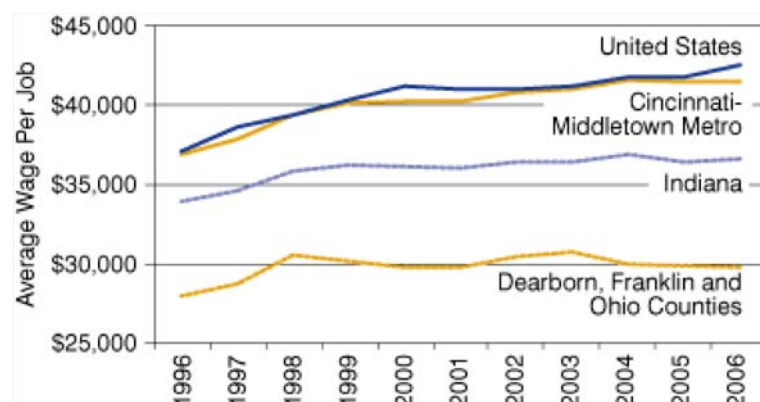## Figure 1: Five Industries with Highest Employment by Geography

Source: IBRC, using Census of Employment and Wage data

To further stress the differences between geographies, we see that—unlike most Hoosier data—the numbers for the Indiana portion of the Cincinnati-Middletown metro show that retail trade was the industry employing the greatest proportion of workers in the area, as opposed to manufacturing, which tends to rank first in most Indiana geographies. In fact, manufacturing ranked third in the Indiana portion of the metro. That said, it is important to note that only four industries in the Indiana portion of the metro weren't flagged with nondisclosure notes. Those industries included construction, retail trade, transportation and warehousing, and accommodation and food services, so it is only in these industries that we can have a true comparison across geographies; the other numbers only give us a starting off point.

From 1996 to 2006, jobs in the Cincinnati-Middletown metro have been fairly consistent with the U.S. trend and consistently higher than Indiana's average wages per job (see **Figure 2**). The Indiana portion of the Cincinnati-Middletown metro is at the low end of the scale for average wages per job, both numerically and in change over time. During those 10 years, the Indiana portion of the metro grew 6.3 percent, Indiana grew 7.7 percent, the metro as a whole grew 12.3 percent and the nation grew 14.8 percent, thus widening the gap between the U.S. wages and every other geography in this comparison.
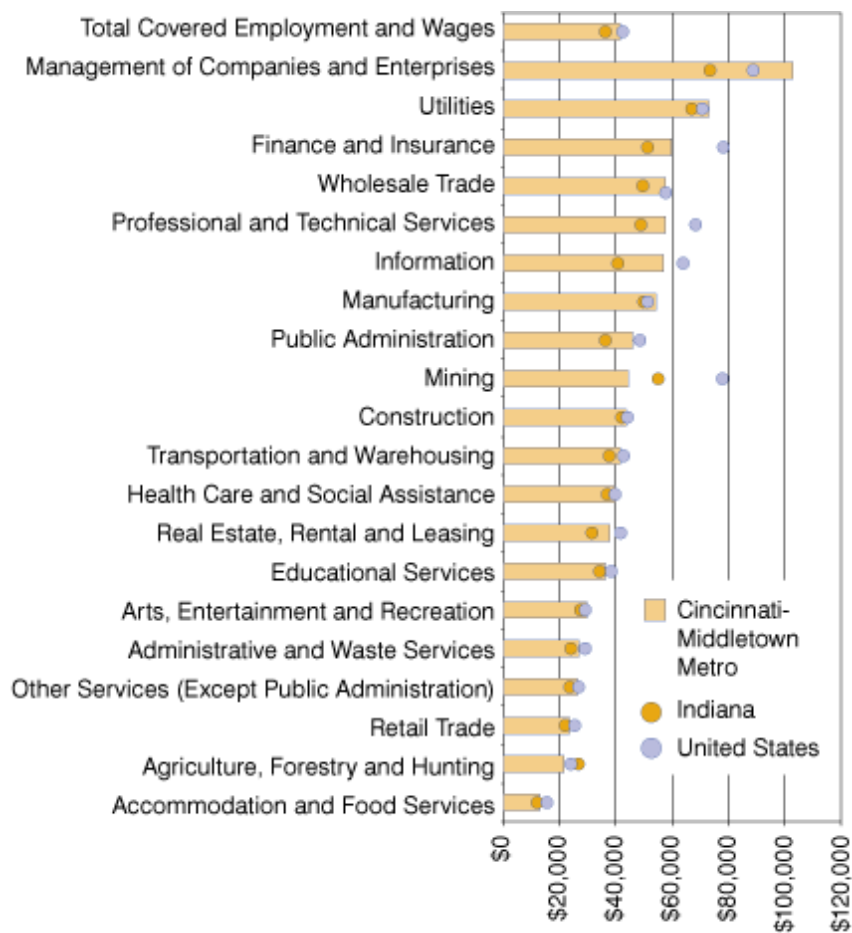
Figure 2: Average Wage Per Job, 1996 to 2006

Source: IBRC, using Census of Employment and Wage data

As far as individual industry sectors are concerned, management of companies and enterprises paid the highest in the Cincinnati-Middletown metro, averaging nearly $103,000 (see **Figure 3**). Of the five industries with the most jobs in the metro, manufacturing paid the most, with an average wage of about $46,600. Health care and social assistance (the largest industry in the metro), paid approximately $39,800 among workers in the field. This was more than the Indiana average for the health care industry ($37,018) and slightly higher than the average wages paid in the United States for the same industry ($39,760). The health care industry was one of five industries in the metro to pay higher average wages than the United States. However, we must keep in mind that the same nondisclosure issues that appeared in the jobs data also hold true in the wage data, as all of it is compiled from the Quarterly Census of Employment and Wages.

**Figure 3: Average Wage Per Job in the
Cincinnati-Middletown Metro, Indiana and the United
States, 2006**

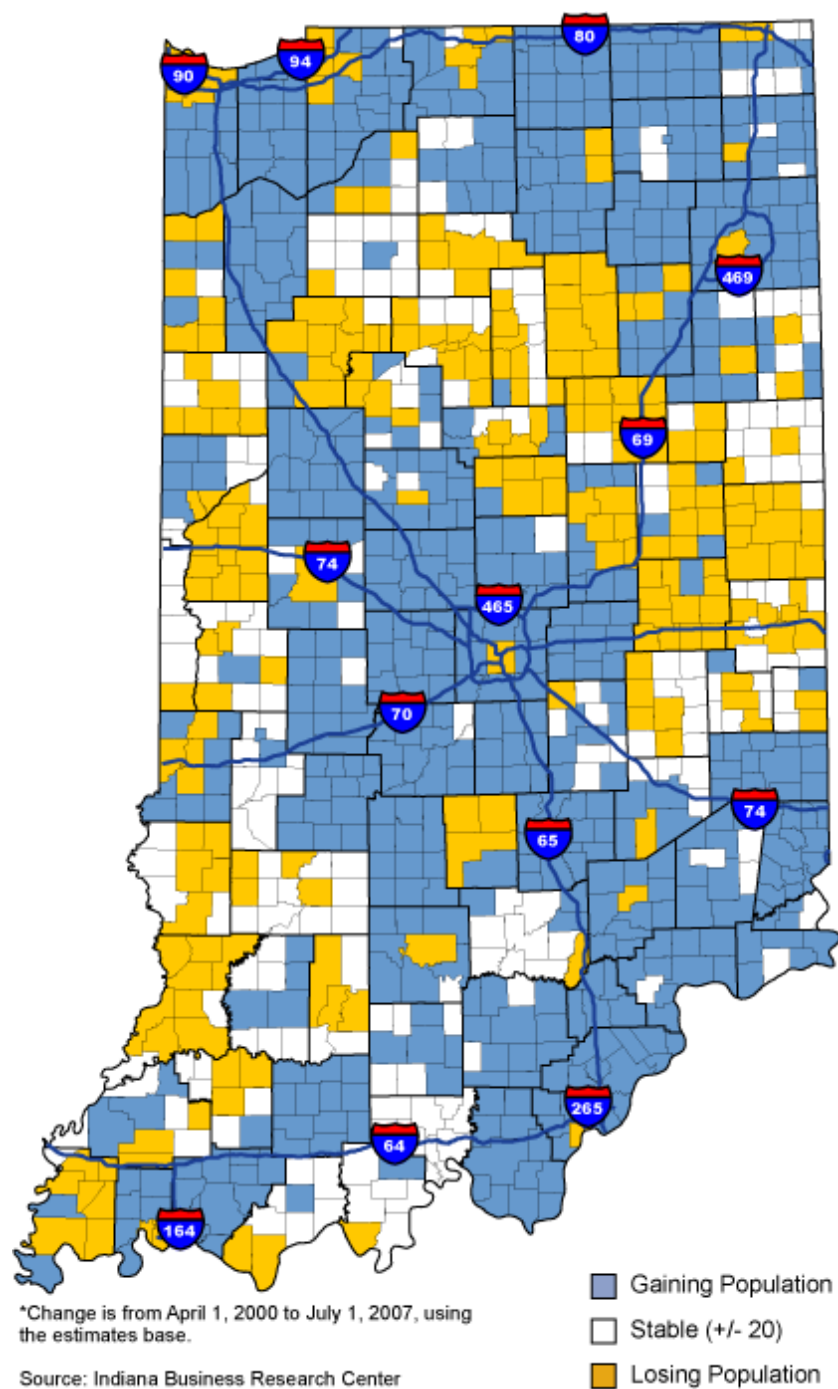Source: IBRC, using Quarterly Census of Employment and Wages data

Conclusion

Since the Indiana portion of the Cincinnati-Middletown metro is so small, it is difficult to compare the three counties to the metro overall, the state or the nation. For one, neither of the two largest cities in the metro are located within Indiana's state boundary, which results in the Indiana portion not stacking up so well against the other geographies when looking strictly at the data. Secondly, because the area is so small, many of the data are nondisclosable, making a comparison even more difficult. The good news is that the population data show increased migration and a natural increase in the three Indiana counties, perhaps indicating that even if the Indiana portion of the metro isn't where people are finding jobs, they do find it a pleasant place to live.

Molly Manns, Associate Editor
Indiana Business Research Center, Kelley School of Business, Indiana University

to 2007*

*Change is from April 1, 2000 to July 1, 2007, using the estimates base.

Source: Indiana Business Research Center

- Gaining Population
- Stable (+/- 20)
- Losing Population

To access these data in their entirety, visit STATS Indiana (www.stats.indiana.edu) or Hoosiers by the Numbers (www.hoosierdata.in.gov).

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What Do You Mean the Data Are Suppressed? Understanding the Ins and Outs of QCEW Disclosure Rules

Perfect information: it's an assumption we would all like to make when looking at a dataset; but life is not neat and tidy and neither is our data. In order to protect the confidentiality of company-specific information, not all data collected by the government are released to the public. You can call it suppression, nondisclosure or withholding, but whatever the name, it can lead to inaccurate analysis if you don't know what to watch for. This article will look at the disclosure rules for one of the most frequently used data sets: the Quarterly Census of Employment and Wages (QCEW), from the Bureau of Labor Statistics (BLS).

Suppression and What to Do about It

You are most likely to run into suppression issues when looking at a small geographic area (such as a county or a region that is built using county-level data), an industry with few employers, an industry that is dominated by a single employer, or one where state and local government plays a large role (such as educational services).

There are various levels of suppression, so the first step in properly analyzing your data is to know why the information is being withheld. This is especially important if you are doing comparisons among places that you are not familiar with and, therefore, might not know if they have a major employer in a given industry.

One quick way to check that out is by using a tool developed by the Indiana Business Research Center called the Simple Business Lookup available on the Hoosiers by the Numbers website (www.hoosierdata.in.gov/simpleBusLookup.asp). This tool uses publicly available data to show employers in Indiana's regions and counties by size and industry.

Primary Suppression

Primary suppression (dubbed the 80/3 rule) occurs when one of the following conditions is true:

1. There are fewer than three establishments in the given industry for a geographic area.
2. One firm constitutes more than 80 percent of area employment in a given industry.[1]

However, it is important to also be aware that, "at the request of a state, data are also withheld where there is reason to believe that the 'fewer than three' rule would not prevent disclosure of information pertaining to an individual firm or would otherwise violate the state's disclosure provisions.

Information concerning federal employees, however, is fully disclosable."[2]

Another issue to consider is that the 80 percent rule applies at the account level, so if a company has multiple establishments, the entire firm's employment in a given geography is combined across establishments to see if primary suppression applies.

As an example of how the Simple Business Lookup can help you parse out these issues, **Table 1** shows that Martin County's mining sector (NAICS 21) is not disclosed because Indian Creek Stone Products is the only employer in that sector (criteria #1); meanwhile, the data for furniture and related product manufacturing (NAICS 337) in Jasper County is most likely nondisclosable because of the dominance of Sealy Components (criteria #2).

Table 1: Martin County Mining and Jasper County Furniture Businesses

Employer Name	Industry	City	Employer Size	Annual Sales(in Thousands)
Martin County Mining				
Indian Creek Stone Products	Stone-natural (212311)	Shoals	10-19	$1,000-$2,499
Jasper County furniture and related product manufacturing				
Five Star Painting	Kitchen Cabinets & Equipment-household (337110)	Demotte	5-9	$1,000-$2,499
Greene's Amish Custom Cabinet	Cabinets (337110)	Rensselaer	10-19	$1,000-$2,499
QT Cabinetry and Refacing	Cabinets (337110)	Demotte	1-4	$500-$999
Sealy Components	Mattresses-manufacturers (337910)	Rensselaer	250-499	$50,000-$99,999
Vanchouwen Custom Cabinet	Cabinets (337110)	Demotte	1-4	$500-$999

Source: InfoUSA, using Simple Business Lookup

If the data are not disclosed because there are a small number of establishments with relatively few employees, it should not negatively impact your overall analysis if you basically ignore them. However, if you're dealing with a nondisclosed major employer, you will want to keep that in mind when calculating percent of total employment or when comparing to other geographic areas.

Secondary Suppression

Secondary suppression occurs when the value of certain withheld data may be discernable through simple calculations of other released data. For example, if data for one industry group in a county are suppressed, then data for a second industry group in the county (the one with the smallest non-zero employment figure) must also be suppressed.

Moreover, "total covered employment" is really an aggregation of the four different types of ownership: private, local government, state government and federal government. Ultimately, for the data coming from BLS, the disclosure rules kick in at these individual ownership levels and not at the total covered employment level to prevent you from using the pieces to calculate the missing values.

The educational services sector illustrates this issue nicely. **Table 2** shows that Marion County has 93 local government-owned establishments and six state government-owned establishments in the education sector; however, BLS does not disclose these data because one state employer surpasses the 80 percent threshold. Therefore, they do not publish the data for local government-owned establishments either to prevent one from calculating the suppressed state-owned numbers. (One can argue that government employment is public record so it should always be disclosed, but that is a topic for another day.)

Table 2: Educational Services in Marion County, 2007:3

Ownership Code	Establishments	Employment
All	372	7,303 (D)
State Government	6	(D)
Local Government	93	(D)
Private	273	7,303

Note: (D) indicates an item is affected by nondisclosure issues relating to industries or ownership status.
Source: Quarterly Census of Employment and Wages

This suppression by ownership is especially important to consider in sectors where government plays a prominent role (think education and health care), as well as when you are comparing a county to another geography, such as the state or the nation. The U.S. or state numbers will be a true calculation of total covered employment with no disclosure issues. However, if some of the underlying ownership codes are not disclosed, the county's total covered employment for a given industry may really only include private data.[3] As a result, it would be inappropriate to compare the two and it would be better to compare total private employment for each geographic area instead. You can access data by ownership from Hoosiers by the Numbers or the BLS website (see **Table 3**).

Table 3: Online Sources of Quarterly Census of Employment and Wages Data

USA Counties IN Profile		Annual total covered employment time series; two-digit NAICS breakdown for most recent year	Establishments; jobs; average annual wage per job; wage rank; percent of U.S. average wage; percent distribution of jobs by sector; job distribution ranks for major sectors (accessible on the overview page)	Nationwide: U.S. total, states, counties
USA Counties and Metros Side by Side			Establishments; jobs; average annual wage per job; percent distribution of jobs by sector	Nationwide: U.S. total, states, counties, metro areas, micropolitan areas, metro divisions, combined statistical areas; Indiana: custom regions
States IN Profile			Establishments; jobs; average annual wage per job; wage rank; percent of U.S. average wage; percent distribution of jobs by sector	Nationwide: states
Overview: Annual Covered Employment and Wages		Two-digit NAICS breakdown for a selected year	Establishments; jobs; over-the-year (OTY) job change; average annual wage per job; OTY wage change; OTY wage percent change	Nationwide: U.S. total, states; Indiana: counties, metro areas, metro divisions, economic growth regions
Time Series: Annual Covered Employment and Wages		Annual time series data down to the three-digit NAICS level	Establishments; jobs; average annual wage per job	
QCEW by Ownership		Quarterly time series data with annual averages down to the three-digit NAICS level by ownership	Establishments; jobs; total wages, average weekly wage per job; percent change from previous quarter; OTY percent change	Nationwide: U.S. total; Indiana: counties, metro areas, metro divisions, economic growth regions
Current QCEW Data by NAICS	IDWD	Quarterly time series data down to the three-digit NAICS level	Establishments; jobs; quarterly wages, average weekly wage per job	Indiana: counties, regions, metro areas, micropolitan areas, metro

				divisions, combined statistical areas, custom regions

Not as Straight-Forward as It Sounds

BLS does not disclose their detailed methodology for suppression because they want to prevent anyone from reverse-engineering the data in order to get to the suppressed numbers. So basically, we don't really know all the little things they are doing to protect confidentiality.

Each state's workforce agency, such as the Indiana Department of Workforce Development (IDWD), has its own disclosure rules that may differ from those of BLS. Therefore, it is quite possible to see different things disclosed depending on where you look. For example, STATS Indiana uses both QCEW data based on the BLS guidelines, as well as data based on the IDWD guidelines. This is not to introduce confusion but to provide users with the best output targeted to their needs. BLS data allows comparisons across the nation, whereas the data based on IDWD guidelines is subject to less withholding in some cases, thus providing a more detailed picture if numbers within the state are all you care about.

Table 4 looks again at Marion County's education sector, and compares what you get depending on which guidelines are used. Obviously, the total employment figures based on the IDWD guidelines does not encounter the same disclosure problems for the ownership classes as the BLS data because it applies the disclosure guidelines to total covered employment and not at the individual ownership levels (since those are not reported, it is unnecessary to do it at that level of detail); therefore, this gives you a better picture of what the industry actually looks like. (If you happen to also be curious why the number of establishments is lower in this STATS Indiana output, it is because establishments that report zero employment and wages are excluded from the data set.)

Table 4: Educational Services in Marion County from Two Sources, 2007:3

NAICS Code	Establishments	Employment
Data from Hoosiers by the Numbers, based on BLS guidelines	372	7,303 (D)
Data from STATS Indiana, based on IDWD guidelines	330	33,407

Note: (D) indicates an item is affected by nondisclosure issues relating to industries or ownership status.
Source: Quarterly Census of Employment and Wages

What's a Data User to Do?

To make a long story short, it pays to look a little closer at the data that are not disclosed. See if you can figure out why they are not disclosed and your analysis will be the better for it (is it because of few establishments, a dominant employer or perhaps secondary disclosure issues?). Understand why you might get different numbers from different places and know which output you need to use when. After all, the devil is in the details.

Notes

1. This "more than 80 percent" figure is according to the BLS guidelines at www.bls.gov/opub/hom/homch5_d.htm#Presentation. If the state agency suppression guidelines from the Indiana Department of Workforce Development are used, data are actually suppressed if one firm constitutes "80 percent or more" of employment.
2. http://www.bls.gov/opub/hom/homch5_d.htm#Presentation
3. As mentioned earlier, federal government data are always disclosable; however, the federal government does not own establishments in all industries.

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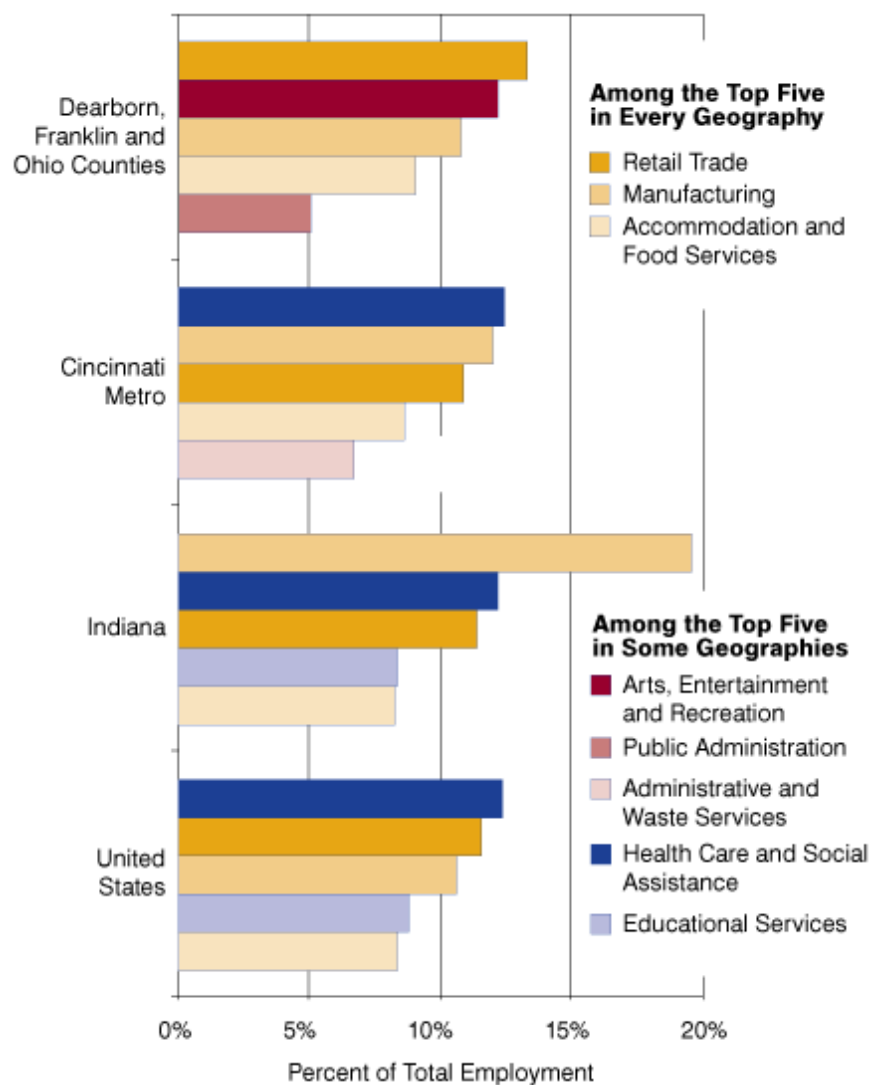
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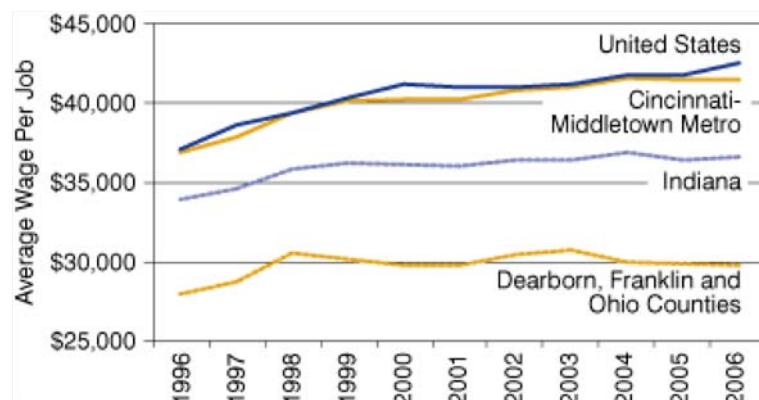

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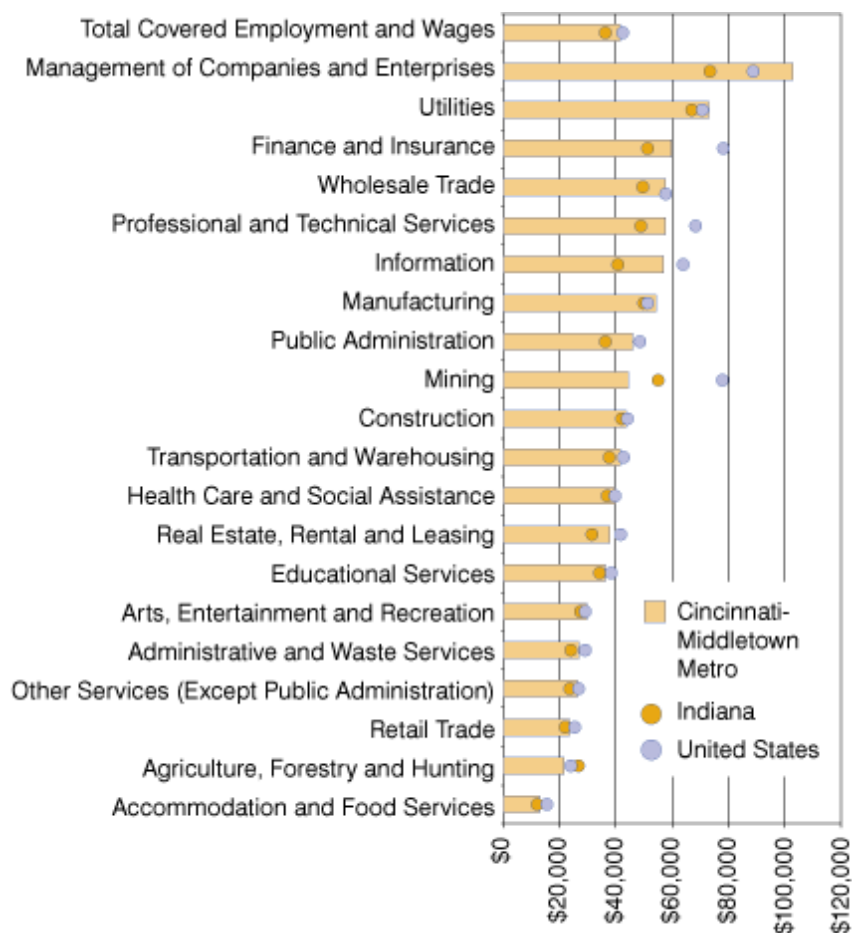
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Figure 3: Average Wage Per Job in the Cincinnati-Middletown Metro, Indiana and the United States, 2006

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Conclusion

Since the Indiana portion of the Cincinnati-Middletown metro is so small, it is difficult to compare the three counties to the metro overall, the state or the nation. For one, neither of the two largest cities in the metro are located within Indiana's state boundary, which results in the Indiana portion not stacking up so well against the other geographies when looking strictly at the data. Secondly, because the area is so small, many of the data are nondisclosable, making a comparison even more difficult. The good news is that the population data show increased migration and a natural increase in the three Indiana counties, perhaps indicating that even if the Indiana portion of the metro isn't where people are finding jobs, they do find it a pleasant place to live.

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