

## Background and Introduction

Foundational to rural community prosperity is growing a more diverse economy. Most rural communities have a relatively concentrated economy rooted in one or two basic economic sectors like forestry, agriculture, or manufacturing. Calculating an economy's diversification can be complex. The following provides a **quick method** for estimating economic diversity by calculating economic concentration.

### Economic Diversity and Concentration

Economic diversity and concentration are related, representing the sides of the same coin or concept in this case. A diverse economy has connections to a wide array of economic sectors, markets, and activities. A concentrated economy has relatively limited presence in an array of economic sectors, markets, and activities. In our Quick Methodology, we employ readily available and reliable data from the U.S. Bureau of Economic Analysis provided through [Headwaters Economics](#) and their county-level socioeconomic profiles. Using both employment and personal income data, we can easily calculate a county's economic concentration and in turn provide insight into its economic diversification.

## Questions and Additional Information

Don Macke – e2 Entrepreneurial Ecosystems  
A Hosted Initiative of NetWork Kansas  
402.323.7336 – [don@e2mail.org](mailto:don@e2mail.org)

## Considerations

There are a number of considerations in estimating economic concentration and diversification:

- Basic Versus Non-Basic Sectors
- Employment and/or Personal Income
- Benchmark Communities
- Time Series Analysis

**Basic Versus Non-Basic Sectors.** In economic development, we divide an economy into “basic” and “non-basic” sectors. Basic sectors (e.g., agriculture, manufacturing, energy production, etc.) include those where the economic activity is located within the geographic unit we are employing, but sales are largely outside this geography drawing income into the community from the outside. Growing the basic economy should be a primary focus of any community-centered economic development strategy.

Non-basic sectors are those where the production and sales largely occur within the same geography. Capturing local spending is another important way to grow a stronger economy. Historically, in attraction-based development, growing the basic economy has been a higher priority when compared to growing the non-basic economy. At e2, we believe both are important development strategies.

The challenge today is clearly defining what is a basic versus non-basic or “secondary” economic activity. For example, in Ord, Nebraska there is the 1880s business called Misko Sports. For all intents and purposes, on the surface it is a main street retail operation that falls into the non-basic or secondary part of the Ord economy. But a deeper look at Misko Sports finds that 70 to 80 percent of its sales are through eCommerce, creating basic economic activity. In today’s environment, classifying what is basic and non-basic is challenging. For this reason, in our Quick Methodology, we do not differentiate between basic and non-basic economic activities.

**Employment and/or Personal Income.** We can measure economic activity in a lot of ways ranging from sales, value-added and gross domestic product to employment and personal income generated. Reliable community and county level sales, value-added, and gross domestic product data is hard to find and expensive. Conversely, employment and personal income data is readily available, free and has excellent time-series information. For this reason, our economic concentration calculations employ employment and personal income data from the U.S. Bureau of Economic Analysis (BEA).

**Benchmark Communities.** Economic concentration or diversification indicators for a specific community are valuable, but in and of themselves the meaning is limited. We can enhance the meaning by employing benchmark communities to provide comparisons, helping us understand how our community is doing relative to the comparison or benchmark communities. Likely benchmark communities employing the same BEA data source can include:

1. United States
2. Home state
3. Like peer communities
4. Aspirational peer communities
5. Competitive peer entrepreneurial communities

The U.S. and home state benchmarks are common and easily understood. If it is a rural community, it is possible within the Headwaters Economics profile system to create a “non-metro profile” to generate a more relevant comparison. Employing “like peer communities” takes a bit more work. First, a set of criteria must be selected that can be used to identify potential like communities to provide benchmark comparisons. Second, data from these communities must be compiled for comparison purposes.

At e2 we believe every community should have a defined set of like peer communities including both aspirational and competitive peer communities. Aspirational communities are those like communities that are doing better and could provide insight into what your community could be doing to become more successful. Competitive communities are those like communities where you have direct competition for sales and labor force, for example.

### Headwaters Economics Socioeconomic Profiles

[Headwaters Economics](#) based in Bozeman, Montana, partners with a group of federal agencies to generate a set of profiles employing secondary federal data sources. This is a remarkable resource

and at e2 we use it daily in our work. The Headwaters' profiles can be generated as Word, PDF, and Excel files. To increase ease of data manipulation and generate economic concentration indicators, employing the Excel option is recommended. The data illustrated later in this paper comes from the Socioeconomic Profile. For more detailed analysis, we also recommend the Non-Labor Profile, given how important non-labor income is today in most rural communities.

**Time Series Analysis.** The BEA data provides for both year-to-year and time series analysis. But it will take a bit of work to organize the data into economic concentration indicators. But such year-to-year and time series analysis can help your community track how you are doing in absolute terms and employing comparison benchmark and peer communities.

Now we provide an overview of our e2 Quick Methodology.

### County Level Data and Analysis

The BEA data source is highly reliable but does have a lag. As of August 2020, we have estimates for 2018 representing nearly a two-year lag. Also, this data is available only at the county level, creating challenges for those seeking community level analysis. The Headwaters' resource allows for multi-county regions very easily. For community level analysis, either Census or Esri data must be employed. Both sources have significant constraints. So, we recommend county level analysis whenever possible. In our example with Klamath County, the primary city of Klamath Falls is dominant; therefore, the county level data is reflective of the Klamath Falls reality.

### Proposed Methodology

We recommend calculating economic concentration indicators for both employment and personal income. Using employment is both a traditional way of estimating economic diversity and one of the more important lenses into a community's economy. Adding concentration indicators and employing personal income allows us to consider significantly important non-employment economic sectors like retirees, commuters, and government transfer payments. For many if not most rural counties, these non-labor economic activities are typically among the top five to ten economic drivers based on our extensive analysis throughout the United States.

First, we identify the core data within the Headwaters Socioeconomic Profile. Then we need to calculate both employment and personal income economic concentration indicators:

**Employment.** Obtaining employment data from the Headwaters' Socioeconomic Profile is easy. Turn to Part 16 of the Profile and there is employment data for 21 economic sectors. Using the Excel format, you can import this data into your own Excel spreadsheet, as illustrated in the next section of this paper. Be sure to exclude "Non-services" and "Services" subtotals, as they will distort your analysis.

### Data Years

In the Headwater profiles selected data years are provided enabling time series comparisons. However, it is possible to bypass the Headwaters' resource and go directly to BEA and procure data

from 1969 through the most current data year (currently 2018) to generate more detailed comparative times series analysis.

**Personal Income.** Generating personal income derived economic concentration indicators requires a bit more work. But all the data you need can once again be procured through the Headwaters Socioeconomic Profile. There are three sources of data you need to populate your spreadsheet for analysis:

1. Part 10 – Non-Labor Earnings
2. Part 24 – Earnings by Industry
3. Part 36 – Commuting Data

**Non-Labor Earnings.** In Part-10 of the profile there are four specific data points you want to secure, all related to non-labor earnings:

- Dividends, Interest and Rent
- Age-Related Transfer Payments<sup>1</sup>
- Hardship-Related Transfer Payments<sup>1</sup>
- Other Transfer Payments<sup>1</sup>

**Earnings by Industry.** In Part 24 of the Profile, you want to harvest data points from the Labor Earnings Table excluding the “Non-service” and “Service” subtotals.

**Commuting Data.** From Part 36 of the Profile, you want to harvest the “Inflow” commuting data point. By inflow, we are capturing the household earnings realized by persons living in the county but working outside the county to bring income into the county. Commuting is a huge part of many rural economies.

**Methodology.** Using the samples and our model Excel Spreadsheets found in the Example section of this paper, it is easy to calculate economic concentration indicators.

#### Caution

This quick method has clear limitations. It provides only a high-level sector analysis. For example, it does not address the diversity within transfer payments or manufacturing, for example. But more detailed and granular analysis is possible employing more detailed BEA data. To do so requires significant additional work.

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<sup>1</sup> Government transfer payments are increasingly important. Primarily funded by the U.S. Government, and in some cases state and local governments, these payments include everything from veterans’ benefits to farm subsidies to Social Security and Medicare. Headwaters Economics ([www.headwaterseconomics.org](http://www.headwaterseconomics.org)) provides a county-level profile for all non-labor income including more detailed information on three primary kinds of government transfer payments including age-related, hardship-related, and other transfer payments.

## Examples

The following pages provide Economic Concentration calculations for both Employment (Figure 1) and Earnings (Figure 2) by major economic sector employing U.S. Bureau of Economic Analysis data for 2018 for Klamath County, Oregon.

**Figure 1. Economic Concentration Calculations - Employment**

<b>Job-Based Economic Diversification - Klamath County, Oregon</b>			21 Sectors
<b>Sector</b>	<b>2018</b>	<b>Concentration</b>	
Government	4,999	15.76%	Top Sector
Health Care and Social Services	4,411		
Retail Trade	3,626	41.09%	Top 3 Sectors
Accommodations and Food Service	2,759		
Manufacturing	1,982	56.03%	Top 5 Sectors
Other Services	1,878		
Farm	1,697		
Administrative and Waste Services	1,503		
Construction	1,444		
Professional and Technical Services	1,317	80.74%	Top 10 Sectors
Real Estate, Rental and Leasing	1,293		
Transportation and Warehousing	1,049		
Wholesale Trade	894		
Finance and Insurance	838		
Arts, Entertainment and Recreation	471	95.07%	Top 15 Sectors
Forestry, Fishing & Ag Services	459		
Management Companies	408		
Educational Services	355		
Information	196		
Utilities	86		
Mining	60		
Total	31,725		

The top 3 sectors capture just over 41% of all economic activity based on employment. The top 5 sectors increase economic concentration to over half or 56% and the top 10 sectors out of a total of 21 possible sectors account for nearly 81% of all employment.

Figure 2. Economic Concentration Calculations - Earnings

Earnings-Based Economic Diversification - Klamath County, Oregon			25 Sectors
Sector	2018	Concentration	
Dividends, Interest and Rent	\$528,825	17.67%	Top Sector
Age-Related Transfer Payments	\$459,289		
Government	\$377,588	45.64%	Top 3 Sectors
Hardship-Related Transfer Payments	\$304,562		
Health Care and Social Services	\$246,317	64.05%	Top 5 Sectors
Retail Trade	\$128,792		
Other Transfer Payments	\$117,629		
Manufacturing	\$115,874		
Outbound Commuting	\$97,114		
Accommodations and Food Service	\$86,081	82.28%	Top 10 Sectors
Construction	\$78,966		
Other Services	\$63,537		
Transportation and Warehousing	\$59,869		
Professional and Technical Services	\$59,742		
Real Estate, Rental & Leasing	\$51,988	92.78%	Top 15 Sectors
Wholesale Trade	\$47,788		
Administrative and Waste Services	\$45,462		
Finance and Insurance	\$41,517		
Management Companies	\$25,799		
Forestry, Fisheries & Ag Services	\$22,638		
Utilities	\$12,098		
Educational Services	\$9,316		
Farming	\$5,741		
Arts, Entertainment & Recreation	\$4,597		
Mining	\$1,182		
Total	\$2,992,311		

Based on earnings, the Klamath County economy is more concentrated with over 18% of all earnings captured in the top three sectors, over 47% in the top five sectors and over 82% in the top 10 sectors.