

Tools for Comparing and Targeting Industries

Have you explored what industry is present or not present in a given region? Is there room for growth in a particular industry sector?

Businesses that are exploring the possibility of locating to a region and economic development professionals who are looking for industries to consider for recruitment can use several tools to help guide their decision-making process. This process involves calculations of a ratio and a breakdown of local employment change into three components.

The calculation of the ratio is based on employment in an industry for a county, the total employment for the same county, the employment of the same industry in the nation and the total employment in the nation. If the ratio is greater than 1.25, the industry is an exporting industry and should be considered for recruitment.

Example Scenario:

Say that you are interested in having ABC Plastics Company, an “All Other Plastics Product Manufacturing” firm (NAICS 326199), move to or startup in Luzerne County. According to [“County Business Patterns”](#) from the U.S. Census Bureau, we can use the following information to determine whether the industry should be considered.

2006

- 966 paid employees in the industry in Luzerne County,
- 129,972 total paid employees in Luzerne County,
- 441,383 paid employees in the industry in the United States, and
- 119,917,165 total paid employees in the United States,

2011

- 1,009 paid employees in the industry in Luzerne County
- 123,796 total paid employees in Luzerne County
- 318,187 paid employees in the industry in the United States
- 113,425,965 total paid employees in the United States

The the ratio for 2006 = 2.0 and the ratio for 2011 2.9, which indicates that this industry is an exporting industry in both 2006 and 2011. This increase in the ratio tells us that this industry is more important to the Luzerne County economy than the economy of an average county in the nation. This also tells us that in addition to meeting local demand, products are being exported to areas outside Luzerne County. To meet this production, we can assume there is a well trained workforce, a network of suppliers that provide raw materials for the manufacturing of the final

product and a solid transportation network that is used in moving the final product to other areas.

[Penn State College of Agricultural Sciences Agricultural Research and Cooperative Extension](#) has additional information about this ratio.

Since the industry is an exporting industry, we can proceed to the second calculation, which is the breakdown of local employment change. The three components of local employment change are from the employment change of that particular industry in the national economy (National Growth), the performance of that particular industry at the national level (Industrial Mix), and from local effects or competitive advantage (Competitive Share). If the Competitive Share is positive, then that industry has a competitive advantage.

Example Scenario:

Looking at the same industry, in the example above, with a starting year of 2006 and an ending year of 2011:

National Growth is equal to:

$$((113,425,965-119,917,165)/119,917,165) \times 966 = -52$$

Industrial Mix is equal to:

$$(((318,187-441,383)/441,383)-(113,425,965-119,917,165)/119,917,165) \times 966 = -217$$

Competitive Share is equal to:

$$(((1,009-966)/966)-(318,187-441,383)/441,383) \times 966 = 313$$

Since the Competitive Share is positive, this indicates a competitive advantage. This competitive advantage occurred as a result of Luzerne County having an increase in employment in this particular industry as compared to the nation having a decrease during this period. This competitive advantage could be as a result of local effects such as a trained workforce, a solid supply chain and the presence of a transportation network for moving the final product to other locations.

As a check, the sum of the National Growth, Industrial Mix and Competitive Share effects equals 44, which is close to the actual employment change of 43 (1,009-966).

[Penn State College of Agricultural Sciences Agricultural Research and Cooperative Extension](#) has additional information about this breakdown of local employment change.

Other factors such as the number of establishments and number of employees within an industry and a comparison between the percent increase in the employment of an industry in the region as compared to the nation should be considered. In this example, there was a decrease of a firm in Luzerne County from 2006 (13 firms) to 2011 (12 firms). In the United States, there was a decrease of 1,087 firms from

7,440 in 2006 to 6,353 in 2011. There was an increase of 43 paid employees in Luzerne County and a decrease of 123,196 paid employees in the United States during the period.

In conclusion, with an increase in employees in the “All Other Plastics Product Manufacturing” industry from 2006 to 2011 in Luzerne County as compared to a decrease nationally, along with this industry being an exporting industry and having a competitive advantage as compared to the average county in the nation, and appearing to have local effects such as a trained workforce, a network of raw product suppliers and a solid transportation network, ABC Plastics Company should be considered for either moving to or starting in Luzerne County.