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## Community and Regional Economic Analysis: Unveiling Economic Dynamics with the Location Quotient Method and Beyond

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# Cornhusker Economics

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## **Community and Regional Economic Analysis: Unveiling Economic Dynamics with the Location Quotient Method and Beyond**

Location Quotient (LQ) is an important analytical tool for economic developers and practitioners, enabling informed decision-making on strategic investments in specific local industries. This method serves as a valuable metric in evaluating and understanding the economic characteristics of a community. By using the Location Quotient, economic developers can identify sectors with competitive advantages, guiding targeted investments to stimulate local growth and economic development. In addition, it provides insights into whether a community is producing a surplus of goods beyond its local needs and engaging in trade with external markets. Industries associated with this scenario are commonly referred to as export industries. Also, it sheds light on types of businesses that are not well-matched with the local demands or preferences of the population, leading to consumption leakage. In essence, location quotients are a powerful tool for assessing economic self-sufficiency and identifying areas where local needs may not be adequately met by existing businesses. Its application extends to uncovering unique and specialized industries, identifying key players in export and non-export sectors, recognizing vulnerable export industries, and disseminating important information and knowledge about economic trends, opportunities, and challenges. This process is essential for empowering individuals,

businesses, and policymakers within a community to make informed decisions that contribute to economic well-being.

According to Shaffer et al. (2004), a location quotient (LQ) measures the relative concentration of a given industry in a locality compared to a larger geographic area, such as a nation, state, or region. The location quotient is computed as the ratio of an industry's local employment share to its share in the reference larger area, as expressed by the formula:

$$LQ = (e_i / \Sigma e) / (E_i / \Sigma E)$$

Where:

$e_i$  = Local employment in industry  $i$

$\Sigma e$  = Total employment in the locality

$E_i$  = Reference area employment in industry  $i$

$\Sigma E$  = Total reference area employment

For example, the locality can be a municipality or county and the reference larger area can be the state in which the municipality or county is located. Employment data is generally obtained from the Bureau of Labor Statistics, Census Bureau, State Labor Department, and local economic development agencies. Usually, employment information is not found for smaller communities (in this case, county data can be used). Generally, 2-3-digit

NAICS codes should be used to determine location quotients (i.e., food manufacturing). The percentage of the local labor force employed in sector  $i$  (ex, food manufacturing) is determined by dividing the number of local people employed in sector  $i$  by the total local employment. The percentage of workers employed regionally (county, state, nation) in sector  $i$ , is determined by dividing the number of people employed regionally in sector  $i$  by the total regional employment.

The location quotient provides information for 3 important conditions. A location quotient of less than one indicates that the industry cannot satisfy local consumption and the difference must be imported. A location quotient equal to one indicates production just meets the local consumption demand. An industry with a location quotient greater than one is considered an export industry—in this case, local production satisfies local consumption, and the excess can be exported to other areas. It is important to notice, however, that a location quotient probably needs to exceed 1.25 before it represents much export activity. These export industries are known as the engines that move the local economy because of their pivotal role in driving economic growth. In general, export industries are more successful and make more profit than non-export industries, those not able to satisfy local demand. Being able to identify the most prosperous (or declining) local industries can be critical in the allocation of investments.

However, it is important to emphasize that when employing the Location Quotient for major investment decisions, a thorough Location Quotient analysis spanning multiple years is critical. This extended analysis ensures a more comprehensive picture of the local economy, with trends clearly delineating the stability, emergence, or decline of the local industries over time. This longitudinal approach provides a more robust foundation for informed decision-making in the dynamic landscape of economic development.

Moreover, in addition to the Location Quotient analysis, several other economic development analytical tools can contribute valuable insights to investment decisions, such as population-employment ratios and shift-share analysis. The use concomitant of these tools boosts the information provided by the Location Quotient analysis,

offering a more holistic perspective. Recognizing that each analytical tool provides only a partial view, it is essential not to rely solely on one method when making investment decisions. Comprehensive decision-making necessitates leveraging multiple tools to gain a more nuanced and accurate understanding of local economies.

#### **Reference:**

Shaffer, R., Deller, S., & Marcouiller, D. (2004). *Community economics: linking theory and practice* (2<sup>nd</sup> ed.). Blackwell Publishing.

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