Developing a Web Application to Identify Industrial Specialization in Southern California

What is an Industry Cluster?
An industry cluster is a grouping of interrelated businesses within geographic proximity and within the same industry. Where an industry cluster is identified, the industry is considered specialized in that area.

How are clusters identified?
Clusters can be identified by using a location quotient. A location quotient or LQ, is a measure that compares a variable in an area to the same variable in a larger reference area.

<table>
<thead>
<tr>
<th>Location Quotient Value</th>
<th>Industry Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 0.75</td>
<td>Non-Specialized</td>
</tr>
<tr>
<td>0.76 ≤ LQ ≤ 1.24</td>
<td>Emerging</td>
</tr>
<tr>
<td>1.25 ≤ LQ ≤ 2.0</td>
<td>Low Specialization</td>
</tr>
<tr>
<td>≥ 2.01</td>
<td>Highly Specialized</td>
</tr>
</tbody>
</table>

For this project:

**Variables:**
- Employment
- Establishment

**Level of Comparison:**
- County/State
- County/Nation

Study Area:
- Los Angeles
- Orange
- Riverside
- San Bernardino
- San Diego

Data Suppression and Estimation Method
The data used in this project was retrieved from the Census Bureau’s 2008 County Business Patterns. Much of the employment information was suppressed to protect confidentiality. To generate the values needed to calculate the location quotients, an estimation method was used. This method was based on the hierarchial coding structure of the North American Industrial Classification System (NAICS) and mid-point values for missing numbers.

Results:
- County/Nation Employment, NAICS 3153 – Cut & sew apparel manufacturing

Web Application Development
The Location Quotients map document was published as a feature service through ArcCatalog.

Web Application Function
The user selects variable, comparison level, and industry here.

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