Benchmarking Competitiveness: How QWI can be used to identify areas with high concentrations of high technology employment and to assess the competitiveness of a region.

<table>
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<tr>
<th>Question your work tried to answer</th>
<th>Where are the most competitive regions of the country</th>
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| Local Employment Dynamics data sources used | ___ OnTheMap
___ QWI
___ Industry Focus
___ Raw data files from CD or VRDC
___ Other: ____________________________ |
| Software/ data processing tools used | 1) **Open Indicators Consortium: Weave**
Description: Open Source Analysis and Visualization Environment
(www.openindicators.org)
2) **Oracle: MySQL Workbench and MySQL Community Server**
Description: Open Source Database Server and Graphical Administrator
(www.mysql.com/downloads/)
3) **Oracle: Open Office Calc**
Description: Open Source Spread Sheet Program
(www.openoffice.org) |
| Brief description of methodology (if someone wanted to do a similar analysis, how should they approach it?) | **Create a National Benchmark:**
The national percentage of technology oriented employment across all industries was calculated for 2009.

**Establish an Empirical Standard:**
The percentage employment in technology oriented occupations for each 4 digit NAICS was calculated.

Those industries found to have a percentage employment of technology oriented occupations twice the national average were deemed high technology industries. In addition subsets of high technology industries were defined if more than three-fold and over four times the national average.

**Apply Standard to Assess Regional Competitiveness:**
The 35 industries deemed high technology were mapped by
county using the Q4 2009 QWI data.
The location quotient of the various levels of high technology
industry were mapped and segmented by urban and rural
population totals.

Geospatial analysis and (near fully) tiled public micro data helps
create insight for regional policy makers.

**Benefits of methodology/data**

This approach supports a dynamic method for the assessment of
high technology based on workforce standard that can be updated
as the occupational composition of industry changes. This Method
creates a standard to benchmark regional competitiveness. The
Quarterly Workforce Indicators provides the most completely tiled
public use data source for 4-digit NAICS industry data available at
the county level.

**Drawbacks/problems with methodology/data**

The OES National Cross Industry Employment Matrix does not
include self-employment which is included in the BLS Employment
Projection Program (EPP). However, the EPP does not archive its
data for detailed occupational comparisons over time and excludes
a significant number of industries.

The QWI dataset does not yet have sufficient coverage to conduct
time series analysis of these industries for all states.

**Anything else?**

Location Quotients are often extremely large in counties with
extremely low populations. To account for this location quotients
can be weighted by population size or segmented by a population
standard. In this analysis a population standard of 75,000 (from
the 2000 U.S. Census) was used to distinguish urban and rural
counties. Another standard could be used for this analysis to
account for this phenomenon.

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