Kentucky County Workforce Profiles
Marshall County - Employment & Earnings

Economic development planning relies upon a good understanding of your county's workforce. The information below describes Marshall County's current workforce.

**Occupational Data for Major Kentucky Occupations (by 2 Digit SOC codes)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Office &amp; Admin. Support</td>
<td>280,743</td>
<td>12,161</td>
<td>1,405</td>
</tr>
<tr>
<td>Sales &amp; Related</td>
<td>172,198</td>
<td>8,979</td>
<td>904</td>
</tr>
<tr>
<td>Food Preparation &amp; Serving Related</td>
<td>164,270</td>
<td>8,284</td>
<td>1,077</td>
</tr>
<tr>
<td>Production</td>
<td>163,167</td>
<td>7,093</td>
<td>1,340</td>
</tr>
<tr>
<td>Transportation &amp; Material Moving</td>
<td>154,479</td>
<td>8,608</td>
<td>721</td>
</tr>
<tr>
<td>Healthcare Practitioners &amp; Technical Occupations</td>
<td>113,924</td>
<td>5,561</td>
<td>394</td>
</tr>
<tr>
<td>Education, Training, &amp; Library</td>
<td>104,956</td>
<td>4,792</td>
<td>521</td>
</tr>
<tr>
<td>Management</td>
<td>79,378</td>
<td>3,350</td>
<td>488</td>
</tr>
<tr>
<td>Installation, Maintenance, &amp; Repair</td>
<td>78,644</td>
<td>4,883</td>
<td>822</td>
</tr>
<tr>
<td>Construction &amp; Extraction</td>
<td>68,356</td>
<td>3,887</td>
<td>925</td>
</tr>
</tbody>
</table>

**Distribution of Workforce by Education & Gender (2011)**

<table>
<thead>
<tr>
<th>Education</th>
<th>Gender</th>
<th>Distribution out of 100 people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School</td>
<td>Male</td>
<td>Male</td>
</tr>
<tr>
<td>High School or equivalent</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Some college or Associate's degree</td>
<td>Male</td>
<td>Male</td>
</tr>
<tr>
<td>Bachelor's degree or more</td>
<td>Female</td>
<td>Female</td>
</tr>
</tbody>
</table>

**Average Earnings by Age (2011)**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Total Employment</th>
<th>Overall Average Annual Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-21</td>
<td>686</td>
<td>11,795</td>
</tr>
<tr>
<td>22-34</td>
<td>2,247</td>
<td>36,635</td>
</tr>
<tr>
<td>35-44</td>
<td>2,325</td>
<td>50,019</td>
</tr>
<tr>
<td>45-54</td>
<td>2,542</td>
<td>51,113</td>
</tr>
<tr>
<td>55-64</td>
<td>1,788</td>
<td>53,223</td>
</tr>
<tr>
<td>&gt;65</td>
<td>500</td>
<td>34,392</td>
</tr>
</tbody>
</table>

**Knowledge Distribution of Workforce Skills (2012)**

- Manufacturing: 17%
- Health: 7%
- Science: 11%
- Technical: 14%
- Business: 26%
- Liberal Arts: 24%

Farming, Fishing and Forestry was the fastest growing occupation in Marshall County with 121% growth from 2007-2012.

**Average Earnings by Education Level (2011)**

- Less than High School: $28,000
- High School or equivalent: $35,199
- Some college: $35,199
- Bachelor's or more: $53,751

Source: CENSUS/QWI 2011
Of those employed in Marshall County, 47% are in-commuters. Of employed Marshall County residents, 56% are out-commuters.

**In-Commuters**: Individuals living outside Marshall County who are employed inside Marshall County.

**Out-Commuters**: Individuals living in Marshall County who are employed outside Marshall County.

In-Commuters (2010): 5,013

<table>
<thead>
<tr>
<th>County</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>McCracken County, KY</td>
<td>1,358</td>
</tr>
<tr>
<td>Graves County, KY</td>
<td>554</td>
</tr>
<tr>
<td>Calloway County, KY</td>
<td>490</td>
</tr>
<tr>
<td>Livingston County, KY</td>
<td>368</td>
</tr>
<tr>
<td>Lyon County, KY</td>
<td>220</td>
</tr>
</tbody>
</table>

People living and working in the County (2010): 5,573

<table>
<thead>
<tr>
<th>Average Annual Earnings</th>
<th>Number of Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; $15,000</td>
<td>1,552</td>
</tr>
<tr>
<td>$15,000-$40,000</td>
<td>2,129</td>
</tr>
<tr>
<td>&gt; $40,000</td>
<td>1,892</td>
</tr>
</tbody>
</table>

Out-Commuters (2010): 7,097

<table>
<thead>
<tr>
<th>County</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>McCracken County, KY</td>
<td>2,696</td>
</tr>
<tr>
<td>Calloway County, KY</td>
<td>1,124</td>
</tr>
<tr>
<td>Graves County, KY</td>
<td>446</td>
</tr>
<tr>
<td>Jefferson County, KY</td>
<td>393</td>
</tr>
<tr>
<td>Livingston County, KY</td>
<td>300</td>
</tr>
</tbody>
</table>

*All data on this page are from CENSUS/OnTheMap.
2. Knowledge Distribution

The premise for the knowledge distribution is that every occupation is classified based on the Standard Occupational Classification (SOC) system and are reported at the two-digit level. The knowledge distribution is reported into six categories: Manufacturing, Healthcare, Science, Technical, Liberal Arts, and Business knowledge. Each slice of the pie chart reflects the corresponding percentage for those 6 categories based on the Standard Occupational Classification (SOC) system and are reported at the two-digit level.

2. Knowledge Distribution

Data representing the county’s knowledge distribution are presented as a pie-chart on the first page of the profile. At its most basic level, the knowledge distribution is reported into six categories: Manufacturing, Healthcare, Science, Technical, Liberal Arts, and Business knowledge. Each slice of the pie chart reflects the corresponding percentage for those 6 categories based on the occupations that are currently present in your county. The premise for the knowledge distribution is that every occupation requires a certain mix of skills that are determined by worker experience, job requirements, and work attributes. To calculate the knowledge distribution, each occupation is “assigned” to a certain skill set. Because the knowledge distribution only considers occupations that are currently present in your county, this will be reflected in a smaller manufacturing knowledge distribution, though a large manufacturing knowledge base may still remain in your county.

CEDIK also retrieved these data from EMSI, though it originates from O*Net, the Occupational Information Network developed with the sponsorship of the U.S. Department of Labor/Employment and Training Administration. O*Net is a free online occupational database that is updated on an annual basis. For more information on the collecting methodology and types of data please visit O*Net at [http://www.onetcenter.org/dataCollection.html](http://www.onetcenter.org/dataCollection.html).

3. Workforce Demographics

Two tables and a graph provide demographic information about the people employed in your county. These workforce demographic data are collected from the U.S. Census Bureau’s Quarterly Workforce Indicators (QWI). QWI is an application of the Census’s Longitudinal Employer-Household dynamics and is reported in several ways. For this profile, county-level data are organized by education level, gender, and age groups. Employment numbers are defined based on the receipt of wages. Because the wages are not reported as full-time, part-time, long-term or temporary, people working for more than one employer in a quarter can be counted twice. Further, because employment is recounted quarterly, someone employed all year with one employer will be counted four times. For this reason, CEDIK reports in the tables the average total employment for the four quarters of 2011.

The first table is the percent distribution of workforce by education and gender, and it contains exactly 100 human figures among its 8 categories. Each human figure represents one percent of the workforce. Thus, for example, if there are 6 human figures in the first category, then 6% of your workforce is made up of males who have not attained a high school degree. Alternatively, the information in the table can be read as “Out of 100 people in the county workforce, 6 are male with less than a high school degree.”

The second table in the lower left corner contains employment and average annual earnings (all in U.S. dollars) for the workforce, divided by age groups. As previously stated, it is not clear whether these annual earnings represent part- or full-time employment, though this may explain the significantly lower wages among age groups 14-21 years and >65 years, both of which are more likely to work part-time. Additionally, while this second table is divided by six age groups, QWI data are divided into eight groupings. For those age groups where the data were aggregated (specifically, age groups 14-21 and 22-34), the average annual earnings were weighted based on percent employment distribution in that aggregated group. For example, average annual earnings for the 14-21 age group is in fact an average of average annual earnings for two groups (i.e., 14-18 years old and for 19-21 years old), but properly adjusted since the latter group makes up a larger percentage of the workforce.

Finally, the bar graph in the lower right corner presents the average annual earnings by education level and gender. The eight bars in the figure represent county-level annual earnings. Blue bars represent male earnings and orange bars represent female earnings, each subdivided among four different education levels. Additionally, the two lines represent the overall average annual earnings.
earnings for the state of Kentucky, but split by gender (not
education); male and female are shown as a green and yellow line,
respectively. While the figure differs for each county, each bar
chart reveals a clear income gap between men and women within
each education level and also at the state level. The figure also
allows for comparison between county earnings and the state
average. For example, if the blue bar for the education level of
“Bachelor’s or more” exceeds the green horizontal line for state
average earnings for male, then the county’s male workers a four-
year college degree earn more on average than the typical male
employee in Kentucky. Conversely, if the blue bar for “Less than
High School” is less than the green horizontal line, this indicates
that men without a high school degree earn less on average than
the typical Kentucky male. The same logic applies to the orange
bars and yellow line representing female earnings.

4. Commuting patterns
The second page of the workforce profile describes commuting
patterns of workers in and out of county. Visually, the page is
divided into three spaces. The top table and graph pertain to
information about people living outside of your county but who
are employed inside, who we refer to as in-commuters. Inside the
“bucket” in the middle of the page, information is presented for
those who both reside and work in your county. Finally, the
bottom of the page mirrors the information provided on the top
of the page, but for out-commuters—those people that reside in
your county but work outside of it. The image of the “leaky
bucket” easily illustrates the “flow” of commuters in and out of
your county. If your county has more in-commuters than out-
commuters, then it fills the bucket more than it leaks, which is
called a positive net job flow. Conversely, if your county has fewer
in-commuters than out-commuters, then it leaks more than it is
being filled: a negative net job flow.

For any county, how many people in-commute and out-commute
affects the county’s economy. In both cases, it is likely that
commuters will spend part of their earnings in their county of
work and some in their county of residence. In-commuters may
shop and dine in your county (especially on lunch break), but they
would likely spend more locally if they resided in your county too.
Similarly, out-commuters may pay property tax in your county, but
ideally, you’d like them to work in your county where they would
spend less money on transportation and more on local businesses.
Since ideal commuting patterns are unique for each county and
region, we also provide the top five counties of origin for in-
commuters and top five counties of destination for out-commuters
by 2010 employment. With this information, you can explore how
your county can best capture the business of your commuters.

Another important aspect of commuting patterns relates to the
question: who are your in-commuters and out-commuters? Does
your county import or export highly paid workers, who are often
highly educated and/or experienced? To answer this, study the two
graphs on the second page that provide information about in-
commuters and out-commuters, respectively, over time (2005-
2010) and grouped by average annual earnings into three
categories. Within the two graphs, the three income categories
are: people with annual earnings of less than $15,000, between
$15,000-$40,000, and more than $40,000. Examine the top graph
for in-commuters. If the number of people that commute into the
county for work is higher for the >$40,000 average annual
earnings category, then it is likely that your county attracts more
highly skilled people to work in your county. This is good, but also
begs the question: why aren’t these highly skilled individuals living
in your county? On the other hand, in the bottom graph of out-
commuters, if the number of people with average annual earnings
>$40,000 is greater than the other two categories, then your
county is losing/exporting highly trained workers. Combining this
information with the top five counties of origin/destination may
help you to understand who are the in-commuters and out-
commuters in your county.

The data for this section are provided by the U.S. Census Bureau’s
OnTheMap, a mapping application that generates information
about where people work and where they live for the year 2010.
More information about commuting patterns can be found at
http://onthemap.ces.census.gov/.

Conclusion
Information on the top Kentucky occupations, workforce
demographics, and commuting patterns in your county raises
several important policy-related questions. What type of workers
does your county want to retain from the local workforce and/or
attract from outside counties? What types of occupations are
provided in your county and what are the ones that the county
would like to have but are underrepresented? Does the local
workforce appear to be skilled for desired economic growth? How
does the commuting patterns of your county affect the county’s
economy and can commuters be used a source of potential
growth? While the data in this profile can start to answer these
questions, they can only truly be answered in the local context.

If your community is interested in addressing these issues, please
contact CEDIK to see what community and economic
development resources we may be able to offer you.

References:
Economic Modeling Specialists Inc. (EMSI) for Occupational Data
and Knowledge Distribution, retrieved from http://
www.economicmodeling.com/;
CENSUS/Longitudinal Employer-Household Dynamics/Quarterly
Workforce Indicators for Workforce Demographics,
retrieved from http://leh.d.census.gov/applications/
qwi_online/;
CENSUS/Longitudinal Employer-Household Dynamics/OnTheMap
for Commuting Patterns, retrieved from http://
onthemap.ces.census.gov/.

If you have further questions regarding the data in this profile, please
contact CEDIK Research Director James Allen at (859) 257-7272 x253.
Kentucky County Workforce Profiles online:
www.cedik.ca.uky.edu/data_profiles/workforce

University of Kentucky

Community and Economic Development Initiative of Kentucky
www.ca.uky.edu/CEDIK