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

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

Occupation	Kentucky (2012)	Bluegrass Development District (2012)	Boyle County		
			Total (2012)	10 yrs. Change	5 yrs. Change
Office & Admin. Support	280,743	53,484	2,247	-17%	-6%
Sales & Related	172,198	32,623	1,439	-15%	-7%
Food Preparation & Serving Related	164,270	33,036	1,409	18%	-11%
Production	163,167	31,652	1,465	-53%	-31%
Transportation & Material Moving	154,479	23,053	924	-31%	-14%
Healthcare Practitioners & Technical Occupations	113,924	23,252	1,164	11%	1%
Education, Training, & Library	104,956	23,061	881	2%	2%
Management	79,378	16,577	639	-20%	-7%
Installation, Maintenance, & Repair	78,644	13,380	484	-26%	-9%
Construction & Extraction	68,356	10,906	377	-31%	-1%

Source: EMSI 2012

Distribution of Workforce by Education & Gender (2011)

Education	Gender	Distribution out of 100 people
Less than High School	Male	
	Female	
High School or equivalent	Male	
	Female	
Some college or Associate's degree	Male	
	Female	
Bachelor's degree or more	Male	
	Female	

Source: CENSUS/QWI 2011

Community and Social Service was the fastest growing occupation in Boyle County with 37% growth from 2007-2012.

Knowledge Distribution of Workforce Skills (2012)

Manufacturing 15%
Health 8%
Science 11%
Technical 14%
Liberal Arts 26%
Business 26%

Source: EMSI 2012

Employment & Average Annual Earnings by Age (2011)

Age group	Total Employment	Overall Average Annual Earnings
14-21	1,067	11,948
22-34	3,598	29,631
35-44	3,133	41,565
45-54	3,576	42,816
55-64	2,356	41,436
>65	628	26,901

Source: CENSUS/QWI 2011

Average Earnings by Education Level (2011)

$53,751
$35,199

County Male • County Female • State Male • State Female

Source: CENSUS/QWI 2011

Of those employed in Boyle County, 64% are in-commuters.
Of employed Boyle County residents, 55% are out-commuters.

In-Commuters: Individuals living outside Boyle County who are employed inside Boyle County.
Out-Commuters: Individuals living in Boyle County who are employed outside Boyle County.

In-Commuters (2010): 9,272
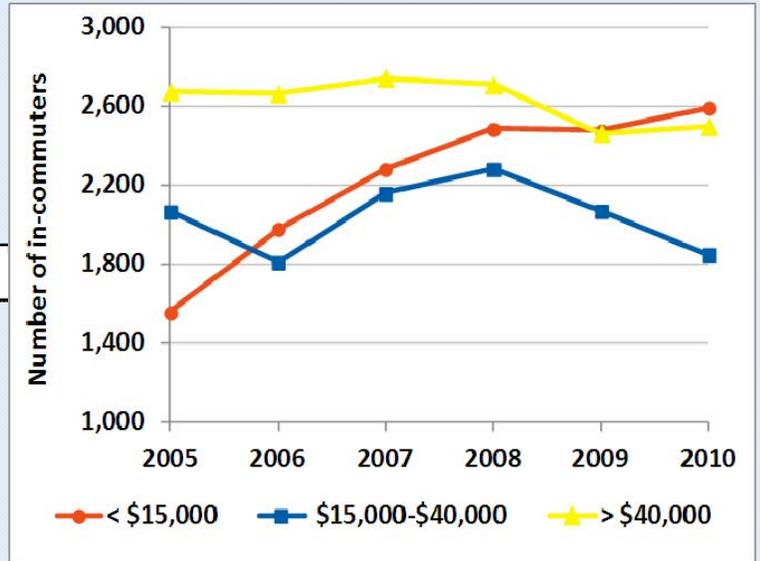
Top 5 counties people commute from for work (2010)

County	Count
Lincoln County, KY	2,026
Mercer County, KY	1,055
Garrard County, KY	635
Casey County, KY	597
Fayette County, KY	437
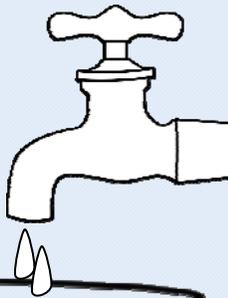
People living and working in the County (2010): 5,144

Average Annual Earnings	Number of Employed
< $15,000	1,292
$15,000-$40,000	2,222
> $40,000	1,630

Out-Commuters (2010): 6,228

Top 5 counties people commute to for work (2010)

County	Count
Fayette County, KY	1,226
Jefferson County, KY	810
Mercer County, KY	802
Lincoln County, KY	427
Jessamine County, KY	341

*All data on this page are from CENSUS/OnTheMap

In-Commuters by Average Annual Earnings (2005-2010)

Legend: < $15,000 ; $15,000-$40,000 ; > $40,000

In 2010, Boyle County had more in-commuters than out-commuters.

Since 2005, in-commuters had increased by 8% and out-commuters increased by 6%.

Out-Commuters by Average Annual Earnings (2005-2010)

Legend: < $15,000 ; $15,000-$40,000 ; > $40,000

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CEDIK's Workforce Profile is comprised of four sections. The first page contains "Occupational Data," "Knowledge Distribution," and "Workforce Demographics" while the second page describes "Commuting Patterns." In an effort to provide as much data as possible on two pages, precise definitions of some measures were not included. Thus, questions may arise including: What does this number represent exactly? How can I interpret this? This short overview provides additional clarification to the meaning of the selected measures in the profile.

1. Occupational Data

The table in this section provides 2012 employment numbers for the top ten occupations in the state of Kentucky, ranked from the highest to smallest. For example, Office and Administrative Support occupations are the most common, providing over 280,000 jobs in the state. Employment within these occupations is also reported at the regional Area Development District and county level. In addition to 2012 employment numbers, a percent change in employment is also provided at the county level for both a 10-year time period (2002-2012) and a 5-year period (2007-2012). If the percent change is positive, then county employment has increased for this occupation within the given time period. Conversely, if the percent change is negative, then county employment has declined. Both the minor and major recessions that started in 2002 and 2007, respectively, may also have impacted employment in these areas. Data for this table were acquired from Economic Modeling Specialists Inc. (EMSI). The occupations are classified 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 2012 employed occupations, the pie chart reflects the knowledge distribution of the 2012 workforce and not the training or experience of its potential workforce. Therefore, if a large manufacturing plant closed in your county last year, 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.

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 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 every 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://lehd.ces.census.gov/applications/qwi_online/;

CENSUS/Longitudinal Employer-Household Dynamics/OnTheMap for Commuting Patterns, retrieved from http://onthemap.ces.census.gov/.

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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

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