**Small businesses with less than 20 employees constitute 95% of all businesses and employ 23% of all employees in Logan County.**

<table>
<thead>
<tr>
<th>Employment Size</th>
<th>Number of Firms</th>
<th>Total Employment</th>
<th>Average Annual Payroll per Firm</th>
<th>Average Annual Payroll per Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1,788</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1-20</td>
<td>358</td>
<td>1,596</td>
<td>$98,567</td>
<td>$22,110</td>
</tr>
<tr>
<td>20-99</td>
<td>37</td>
<td>943</td>
<td>$712,838</td>
<td>$27,969</td>
</tr>
<tr>
<td>100-499</td>
<td>18</td>
<td>638</td>
<td>$1,123,333</td>
<td>$31,693</td>
</tr>
<tr>
<td>500+</td>
<td>60</td>
<td>3,877</td>
<td>$3,070,850</td>
<td>$47,524</td>
</tr>
</tbody>
</table>

**Definitions vary on the term “small business.” They include businesses that are solely owner-operated with zero employees and, according to the U.S. Small Business Administration, can also include businesses with up to 500 employees. However most agree that small businesses are a vital part of a local economy. This profile characterizes small businesses in your county.**

In the chart on the left, the top right quadrant represents firms that have increased their sales and the number of employees hired between 2008 and 2012. The bottom left quadrant shows declining sales and employment. Larger firms will typically be closer to the origin, thus showing lower proportional changes in sales and jobs, whereas smaller firms will tend to be farther from the origin because of higher proportional changes.

**Microenterprises, 2009**

*Includes firms with 0 to 5 employees*

<table>
<thead>
<tr>
<th>Total Microenterprises</th>
<th>2,088</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employment in Microenterprises</td>
<td>2,582</td>
</tr>
<tr>
<td>Microenterprise Share of Total Private Non-Farm Employment</td>
<td>26%</td>
</tr>
<tr>
<td>Microenterprise Share of Total Number of Businesses</td>
<td>90%</td>
</tr>
</tbody>
</table>

As defined here, a microenterprise is any firm with 0 to 5 employees. Even though each microenterprise only employs a few people, they compose a significantly large portion of total number of businesses in Kentucky.
Another defining distinction between businesses is whether or not they are incorporated. An **incorporated business** (or corporation) is owned by shareholders, offers limited liability protection, and can sell equity to finance expansion. An **unincorporated business** (or proprietorship) is privately owned by one person or multiple partners and does not have the ability to sell equity.

**The table above shows that 80% of firms were unincorporated businesses in Logan County.**

For most counties, unincorporated businesses constitute more than half of all firms, but less than half of employment relative to corporations.

**In Logan County, the share of employment from unincorporated businesses changed from 28% to 32% between 2001 and 2011.**

New startups represent a subset of total new businesses in the county and are an indicator of innovation and growth in the economy. Establishments include new physical locations opened by new startups. Jobs include new job openings created by those startups. The figure below shows the number of new establishments and jobs attributed to startups created in each year, not aggregate levels of establishments and jobs.

The **Innovation Index** is based on four major variables: Human Capital, Economic Dynamics, Productivity and Employment, and Economic Well-Being. It measures the innovation capacity and the resulting innovative activities of a county relative to Kentucky and the United States.
Kentucky County Small Business Profiles
Insights for Data Interpretation

Prepared by: Shaheer Burney, CEDIK Research Assistant, and James Allen, CEDIK Research Director

January 2014

CEDIK’s Small Business Profile is made up of several tables and graphs, which collectively seek to characterize small business by firm size, industry, business type, and startups. This document provides detailed information on each and may be used as a tool to assist in interpretation.

Throughout this profile, small business is defined in several ways due to the lack of a standard definition for “small business” in the variety of federal and private data sources used. Thus for each table or graph, the definition of small business used is listed under the title. The motivation for using different definitions for small business is that whether a business is considered “small” depends on a variety of factors, including the industry that the business operates in, the total size of the market, sales revenue, etc. For example, a manufacturing business that employs 50 workers might be considered a small business, while a retail store with the same employment size might not.

Small Businesses by Firm Size
Most of the first page is dedicated to characterizing small businesses based on firm size, and many definitions exist for what firm size constitutes a “small” business. The top-left table shows number of firms, total employment, and average annual payroll by firm and employee. An employment size of “0” indicates self-employed individuals running their own business who have not hired any paid employees. These businesses are commonly known as “mom and pop” stores and may be managed by one or more family members, each of whom is part owner of the business. This category typically includes small bakeries, retail stores, and even small farms.

Next, the bubble chart in the middle of the page plots the percent change in sales with the percent change in jobs between 2008 and 2012. Each bubble represents a different category of employment size for county businesses, and the size (i.e., area) of each bubble corresponds with the share of county employment coming from those businesses. Thus, the largest bubble is the category that employs the most people in the county. Moreover, if a particular category employs no one, then the bubble does not appear. For example, some counties have no one employed in a business belonging to the “500+” employment size category and so this bubble will not appear on the chart.

Typically, we expect firms with increasing sales to hire more workers (top-right quadrant) and firms with declining sales to reduce their workforce (bottom-left quadrant). Firms in the top-left and bottom-right quadrants can be considered in transition. Firm behavior also depends on other factors, such as the nature of the firm’s product, firm age, industry classification, etc. For example, large firms tend to experience small percentage changes in sales and employment because they are so big already, so we expect their bubble to be closer to the center of the chart, where the percent change is small for both jobs and sales. On the other hand, smaller firms usually experience high rates of growth and thus will be farther away from the center of the chart. The presence of high growth firms—that is, bubbles of small employee firms out in the top-right quadrant—is generally an attribute of a robust economy.

Small Business Employment in Top Ten Industries
In the pie chart in the bottom-left corner of the first page, employment for small businesses with between one and fifty employees are categorized by industry, as defined by the North American Industry Classification System (NAICS) at the 2-digit level. Employment for each industry is written just below the industry name, and the size of the pie slice indicates the share of small business employment within that industry. However, because there are a total of 20 industries classified by NAICS at the 2-digit level, this chart features a maximum of the top ten industries by employment for this particular county and then groups all other industries into an “Other” category. Therefore, industries may vary by county, though many counties have high levels of employment in similar industries. Also, it is possible that some counties have fewer

Kentucky County Small Business Profiles online: www.cedik.ca.uky.edu/data_profiles/small_business
than ten industries shown if employment data for small businesses in these industries does not exist or was not disclosed by the U.S. Census Bureau because it could easily be traced back to the firms. Please note that including businesses with smaller employment size might leave out important industry sectors such as manufacturing, simply because a typical small manufacturing business might employ a larger workforce than a typical small retail store.

**Small Business Employment by Business Type**
The second page of the profile starts with a table that looks at employment and median earnings between incorporated and unincorporated businesses in the county. An incorporated business is one that is legally recognized as a separate entity from the owner and is owned by shareholders. This allows owners to have limited liability; that is, the owner cannot be made liable for any debt of the business over and above the owner’s investment in the business. Incorporated businesses have the ability to sell equity (stocks) to raise funds for investment. An incorporated business is also known as a corporation. In contrast, unincorporated businesses include sole proprietorships (owned and managed by one individual), partnerships (multiple owners and managers), and tax-exempt cooperatives (owned and managed by users of the business’s services). They do not have limited liability and cannot sell equity to the general public. An unincorporated business can also be known as a proprietorship.

Furthermore, this top table is also significant in that it is the only part of the profile that looks at small business employment and earnings by gender. In most counties, it seems that the vast majority of employees in these small businesses are men and those men, on average, make more than their female counterparts. Explanations for this discrepancy may include gender differences between risk-taking preferences, education, and average earnings by gender for a given county, though this will vary by county.

Next, the middle-right line graph looks at the share of total employment in proprietorships. Here, it is important to note that proprietorships (i.e., unincorporated businesses) can have multiple employees, regardless of the number of owners and managers. Typically proprietorships employ fewer people but are more common relative to corporations (i.e., incorporated businesses). The line graph shows employment in proprietorships as a share of total employment. Total employment in proprietorships includes managers and other employees. The trend of this line graph varies significantly between different counties, though several experience at least a small decrease in 2008 as a result of the economic recession.

**New Startups and Innovation**
Startup companies are instrumental for innovation and are an indicator of a growing economy. The bottom-left bar graph shows establishments and jobs created by new startups each year between 2009 and 2012. Establishments include new physical locations occupied by startup companies each year and jobs represent new employees hired by those startups. It is important to note that a startup is defined as a new business that was created in that given year. Therefore, the graph depicts the number of new startups created in the county each year, not the total number of startups that may be operating but started in previous years. As a result, the graph does not convey the success of these startups and whether or not they continue to operate or are now closed.

Finally, the bottom-right graph illustrates the Innovation Index, a tool developed by researchers and sponsored by the U.S. Economic Development Administration. The index measures a region’s innovation activity and capacity by using four major indicators: Human Capital, Economic Dynamics, Productivity and Employment, and Economic Well-Being. Human Capital takes into account the educational attainment of residents, the population growth rate, the types of occupational mixes, and employment in high-technology firms. Economic Dynamics include measures for investment in venture capital, availability of broadband internet, firm entry and exit in the economy, and business size. Productivity and Employment reflects growth of high-tech employment, job growth relative to population growth, patent activity, and current level and growth of the county’s GDP. Finally, Economic Well-Being is based on the poverty rate, unemployment rate, migration patterns, worker wage/salary, and growth in income per capita. The four indicators are weighted to reflect their contribution to innovation activity. Human Capital, Economic Dynamics, and Productivity and Employment are weighted 30% each while Economic Well-Being is attributed 10%. Innovation is important because it can be found behind every successful startup and growing small business, and therefore is important for the economy.