# Kentucky's Rural Economy

October 2025





MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD & ENVIRONMENT BLUEPRINT KENTUCKY

# **Acknowledgments**

#### Report Contributors:

Simona Balazs, MS, Research Director, Blueprint Kentucky, University of Kentucky

Joe Kercsmar, BS, Research Analyst, Blueprint Kentucky, University of Kentucky

Claudia A. Rhodes, PhD, former Health Economics Researcher, Blueprint Kentucky, University of Kentucky

Sarah Bowker, MA, Managing Director, Blueprint Kentucky, University of Kentucky

Jonathon Holland, PhD, Health Economics Researcher, Blueprint Kentucky, University of Kentucky

Beka Burton, CEcD, Economic Development Extension Specialist, Blueprint Kentucky, University of Kentucky

Alison Davis, PhD, Assistant Vice President of Land-grant Engagement, Professor of Agricultural Economics, and Executive Director, Blueprint Kentucky, University of Kentucky

Visit our website at <a href="http://blueprintkentucky.mgcafe.uky.edu">http://blueprintkentucky.mgcafe.uky.edu</a> to learn more about the data in this report, or to download county level data profiles.

If you have questions about the contents of this report, please email Simona Balazs, Research Director, at simona.balazs@uky.edu

The scope of this report was modeled after Ball State University's report, *The State of the Rural Economy in Indiana*, released in September 2022 and available here: <a href="https://www.in.gov/ocra/files/State-of-the-Rural-Economy-Ball-State-Indiana">https://www.in.gov/ocra/files/State-of-the-Rural-Economy-Ball-State-Indiana</a> 2022 Sept.pdf

# **Executive Summary**

Kentucky's economy is defined by both its diversity and its disparities between rural and urban communities. This report examines key dimensions of economic life across the Commonwealth, including population change, migration, immigration, GDP growth, industry mix, per capita income, education, employment structure, agriculture, manufacturing, services, transportation, housing, taxation, and local governance.

#### **Key Highlights:**

- From 2011 to 2019, rural Kentucky's population was decreasing. However, between 2020 to 2024, the rural Kentucky population grew. People who are moving to rural areas are moving to counties that border urban centers. More people are also commuting or working hybrid than before the COVID pandemic, which makes working from outside an urban area easier.
- GDP growth in Kentucky's 85 rural counties (18%) was slower than the 35 urban counties (49%) from 2001-2023.
- On average, rural Kentuckians earn 26% less than their urban neighbors per capita and those with a bachelor's degree earn 40% less. Despite this, counties with a larger percentage of people with a bachelor's degree or higher have a larger per capita income.
- The manufacturing sector contributes most to the state's GDP of any sector, although it comprises a decreasing percentage of employment share. The service and transportation & logistics sectors have the highest growing percentage of the employment share.
- Rural Kentucky has a larger share of firms under 500 employees than urban Kentucky.
- Employees of rural Kentucky firms earn less than employees at urban Kentucky firms regardless of size or age.
- People with higher incomes have higher rates of broadband adoption, regardless of whether they live in a rural or urban area.
- Rural areas have a higher rate of home ownership than urban areas although they also have triple the vacancy rate of urban areas.
- On average, rural areas have more municipalities and school districts per capita than urban areas and less in property and income tax. This means that there is less funding for rural towns and schools than those in urban areas.

# **Table of Contents**

Introduction	5
The Rural and Urban Economy	7
Chapter 1. Formerly Rural Places, or the Role of Changing Rural Definitions	7
Section 1: Population and Changes	10
Chapter 2. Population	10
Chapter 3. Residential Migration Flows	13
Chapter 4. Immigration in Rural Kentucky	16
Section 2: Economic Indicators	19
Chapter 5. Rural Gross Domestic Product (GDP) Growth	19
Chapter 6. Per Capita Income Growth	21
Chapter 7. Educational Attainment	24
Section 3: Employment	26
Chapter 8. Employment Mix	26
Chapter 9. Manufacturing	29
Chapter 10. Services	30
Chapter 11. Agriculture	35
Chapter 12. Transportation and Logistics	38
Section 4: Business Economics	41
Chapter 13. Business Dynamics	41
Chapter 14. Kentucky Entrepreneurship	43
Chapter 15. Capital Expenditures	45
Chapter 16. Shift-Share Analysis of Rural and Urban Kentucky	47
Section 5: Living and Working in the Commonwealth	50
Chapter 17. Commuting Patterns	50
Chapter 18. Broadband Deployment	52
Chapter 19. Housing Stock	54
Section 6: Government	57
Chapter 20. Government Fragmentation	57
Chapter 21. Local Income and Property Taxes	61
Summary and Conclusions	65

# Introduction

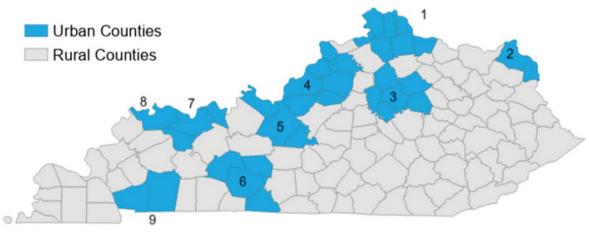
Understanding Kentucky's economic landscape requires understanding both the statewide dynamics and the differences between its rural and urban regions. Kentucky's 120 counties encompass large metropolitan areas like Louisville, Lexington, and Northern Kentucky as well as small towns and remote agricultural communities. These geographies are tied together by labor flows, trade, and governance structures, yet their development paths diverge in important ways. This report seeks to provide an overview of Kentucky's economic landscape through a rural–urban lens. Rural areas provide critical natural resources, energy, food, and labor. Urban areas generate economic growth that sustains state revenues and markets. The balance between the two regions is central to Kentucky's overall development.

The report includes economic measures such as gross domestic product, per capita income, jobs by industry, business economics and entrepreneurship, as well as supporting measures on educational attainment, housing, and commuting.

This report focuses on rural counties and occasionally compares the 35 urban to the 85 rural counties to contrast rural Kentucky with the rest of the state. Rural and urban counties are defined based on the Rural-Urban Continuum Codes, where counties with codes 1-3 are considered **urban** and counties with codes 4-9 are considered **rural**. This aligns with the USDA Economic Research Service's metro and non-metro designations. The county map below highlights the counties coded as metropolitan areas in Kentucky and neighboring states.

It is important to note that rural in this report covers a large amount of variation in rurality. A Kentucky county with a RUCC code of 4, such as Pulaski County (Somerset) which has a population of 66,482, in this report is considered rural alongside Ballard County, which has a population of 7,626 and a RUCC code of 9 (2024 Census Population Estimates).

Figure 1. Rural and Urban Kentucky Counties



- 1 Cincinnati and NKY Metro Area
- 2 Ashland Metro Area
- 3 Lexington Metro Area
- 4 Louisville Metro Area
- 5 Elizabethtown Metro Area
- 6 Bowling Green Metro Area
- 7 Owensboro Metro Area
- 8 Henderson Metro Area
- 9 Hopkinsville Metro Area

Data Source: Rural-Urban Continuum Codes, Economic Research Service, U.S. Department of Agriculture.

The report is structured into six major sections that provide a comprehensive account of how population change, economic indicators, employment, business activity, household conditions, and government structure intersect to influence Kentucky's trajectory. The first section, *Population* and Changes, sets the stage by tracing demographic shifts and migration patterns across the Commonwealth. Section two, Big Picture Economic Indicators, introduces measures that capture overall economic performance, such as GDP, per capita income growth and educational attainment. Employment trends form the focus of the third section. The chapters in this section compare the industrial composition of rural and urban employment, distinguishing between "footloose" and "non-footloose" jobs, and provide a closer look at manufacturing and other sectors. This section illustrates how employment changes across industries have reshaped both the scale and composition of rural and urban economies. The fourth section, Business Economics, examines the dynamics of firm activity, investment, and competitiveness, providing insights into the business environment that underlies regional development. Section five, Living and Working in the Commonwealth, turns attention to the household and community context of economic life highlighting the commuting patterns, broadband access, and housing stock, including vacancy rates and affordability. Together, these chapters shift the focus from production to the lived realities of Kentucky residents, linking infrastructure and household conditions to economic opportunity. The final section, Government, explores the institutional frameworks through which Kentucky's localities are organized and financed, examining government fragmentation and patterns of property and income tax revenues, as well as differences in tax capacity between rural and urban counties.

# The Rural and Urban Economy

The chapters included in this report aim to provide a comprehensive overview of the economic landscape in Kentucky with the purpose of understanding better the similarities and differences between rural and urban areas. To that extent, we focus on metrics such as gross domestic product, per capita income, business dynamics and entrepreneurship. As a starting point, the report examines the dynamics of population change and the challenges associated with defining "rural" and "urban." The classification of counties into rural and urban categories has significant implications for the interpretation of economic data and for the allocation of resources.

#### **Chapter 1. Formerly Rural Places, or the Role of Changing Rural Definitions**

The concept of rural definitions and classifications in the United States has evolved over time due to various factors, including urbanization movements and changes in economic activities (Cattaneo et al., 2021). The definition of rural areas in the United States varies among federal institutions, leading to differences in how these areas are identified and classified. The U.S. Census Bureau, for example, defines rural areas as any population, housing, or territory not in an urban area, while the U.S. Department of Agriculture uses a more multifaceted approach, considering factors such as population size, density, and land use. The Office of Management and Budget also plays a role in defining and classifying rural areas in the United States. OMB classifies counties and county equivalents as metropolitan or nonmetropolitan, with the latter encompassing rural areas. This classification is based on measures of urbanization and economic integration. By incorporating OMB's classification, a more comprehensive understanding of rural areas in the U.S. can be achieved, allowing for better-informed policy decisions and resource allocation. The OMB classification contributes to a more inclusive approach in addressing the unique needs and challenges of rural communities across the nation. The latest revision released by OMB was March 6, 2020 in OMB Bulletin No. 20-01 where metropolitan, used interchangeably with urban, is defined as "an urbanized area of 50,000 or more in population. Micropolitan is defined as an urban cluster of at least 10,000 but less than 50,000. OMB acknowledges that Metropolitan Statistical Areas (MSAs) standards do not translate to an urban-rural definition, citing that many counties regardless of their proximity to a Metropolitan or Micropolitan Statistical Area include both urban and rural areas. Current MSAs, urban, and rural counties are shown in Figure 1.1 below.

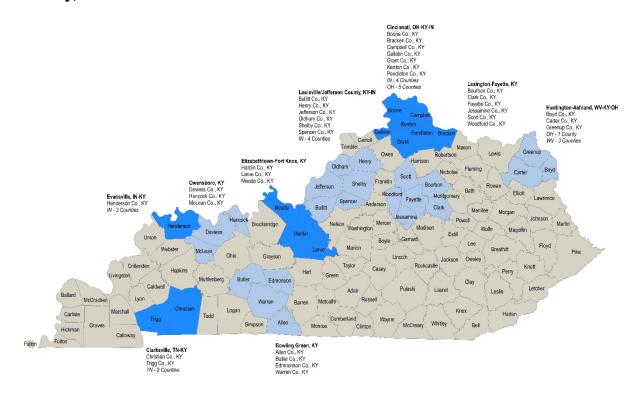


Figure 1.1 Metropolitan Statistical Areas (MSAs) and Non-Metropolitan Counties in Kentucky, 2022

Sources: Data from U.S. Office of Management and Budget; base map from ESRI 2022 Note: **Urban counties (part of an MSA) are shaded in blue colors; rural counties (non-metro) are shaded in gray.** 

U.S. Department of Agriculture's Economic Research Service developed Rural-Urban Continuum Codes (RUCC) to classify all U.S. counties by the degree of urbanization and adjacency to a metropolitan area. This system is based on the OMB definition of metro/nonmetro from 2013, as determined by the 2010 decennial census. The OMB definition update has recently been released as of this writing in 2023, using the 2020 decennial census.

Regarding future changes defining metropolitan and non-metropolitan classifications, OMB has proposed changing the 2010 standards core city MSA population threshold from 50,000 to 100,000. That recommendation was not approved by the committee, pending further research. Had it been implemented, the change would have affected ten Kentucky counties in the Elizabethtown - Fort Knox, Owensboro, and Bowling Green MSAs. Table 1.1 compares the population growth from 2010 to 2020 of those Kentucky MSAs, their core cities, and counties to the state and the nation. The core city of Bowling Green has seen almost 25% increase in population in the ten years between Censuses. The combined population of the city of Elizabethtown and Fort Knox Census Designated Place has increased a modest 1.2%. Owensboro City has grown 5.1%, which is more than Kentucky but less than the nation. The United States population has grown 7.4%, outpacing all the individual counties, aside from Warren County (18.2%) in these particular MSAs. Kentucky's population has increased 3.8%, which has only outpaced Allen, Butler, Edmonson, and McLean Counties in the table. The Bowling Green

MSA (42.6%) and Elizabethtown-Fort Knox MSA (29.9%) have both experienced high population growth between 2010 and 2020.

**Table 1.1. Population Change in Areas Proposed to Convert to Non-Metropolitan Status** *If MSA threshold moves from 50,000 to 100,000 people. The current threshold for MSA is 50,000 people* 

Region	2010	2020	Ten Year Change
United States	308,745,538	331,449,281	7.4%
Kentucky	4,339,367	4,505,836	3.8%
Bowling Green, KY MSA	125,953	179,639	42.6%
Bowling Green City	58,067	72,294	24.5%
Allen County	19,956	20,588	3.2%
Butler County	12,690	12,371	-2.5%
Edmonson County	12,161	12,126	-0.3%
Warren County	113,792	134,554	18.2%
Elizabethtown-Fort Knox, KY MSA	119,736	155,572	29.9%
Elizabethtown & Fort Knox CDP	38,655	39,136	1.2%
Hardin County	105,543	110,702	4.9%
Laue County	14,193	14,867	4.7%
Meade County	28,602	30,003	4.9%
Owensboro, KY MSA	114,752	121,559	5.9%
Owensboro City	57,265	60,183	5.1%
Daviess County	96,656	103,312	6.9%
Hancock County	8,565	9,095	6.2%
McLean County	9,531	9,152	-4.0%

Data Source: Office of Management and Budget, Decennial Census, 2010 and 2020

Since 1974, the first release of the RUCC, 22 counties in Kentucky have switched urban designations at least once. Carter, Madison, Nelson, and Webster Counties have switched from rural to urban and back to rural. Shelby County has switched from rural to urban, back to rural, and to urban again. Since the 2013 release only four counties switched classification. Allen and Butler Counties, both in the Bowling Green MSA switched from rural to urban designations. Nelson and Webster Counties switched from urban back to rural, the second switch for both counties.

Because federal funds are often allocated based on rural or urban classifications, these counties may have lost funding after being labeled "urban" simply due to their proximity to more highly populated areas.

### Section 1: Population and Changes

#### **Chapter 2. Population**

Initially, we analyze the population trends and compare them between rural and urban areas. The total population in Kentucky's urban counties rose by approximately 166,500 individuals between 2011 and 2023. In contrast, rural areas saw a population gain of just over 1,000 during the same time. Figure 2.1 presents a visual representation of the cumulative population change since 2011.

3,000,000 2,690,117 2,523,613 2,500,000 **Urban Kentucky** gained population every year 2,000,000 2011-2023. 1,500,000 1,000,000 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2,000,000 1,846,208 1,847,237 1,826,673 **Rural Kentucky** 1.750.000 lost population every year 1.500.000 2011-2019, then gained 1,250,000 population every year 2020-2024. 1,000,000

Figure 2.1. Total Population in Rural and Urban Kentucky, 2011-2023

2012 Data Source: Chmura/JobsEQ, 2011-2023

2013

2014 2015

2016

2017

The population trends observed in Kentucky are not exclusive to the state, as many rural areas throughout America have been experiencing a similar trend. As more companies began offering a remote or hybrid work schedule at the start of 2020, over 6,500 individuals moved to rural Kentucky counties between 2020 - 2022 resulting in a cumulative positive population change for the first time in a decade.

2018

2019

2020

2021

2022

Figure 2.2 illustrates the population projection for the next decade. Through the foreseeable future, Kentucky's rural and urban population will experience steady growth, with the urban portion of the state exhibiting an overall faster pace of growth (3.0%) than the rural population (1.5%).

3,000,000 2,500,000 Population Projections 2,000,000 1,500,000 1,000,000 500,000 0 2024 2025 2026 2027 2028 2029 2030 2032 2033 2031 2034 ■ Rural ■ Urban

Figure 2.2. Kentucky Rural and Urban Population Projections, 2024-2034

Rural population is projected to grow by 1.5%, while urban population is projected to grow by 3.0%

Data Source: Chmura/JobsEQ, 2023

A simple comparison of population trends only tells us so much, however. To better understand the nuance of population change, we also examine the socio-demographic of urban and rural populations (*Table 2.1*). As expected, we find that residents of rural areas are slightly older, less well-educated, and whiter than their urban counterparts. Rural areas also have a slightly higher share of uninsured and people in poverty.

Table 2.1. Socio-Demographic Characteristics, 2023

Demographics	<b>Rural Counties</b>	<b>Urban Counties</b>
Population (ACS)	1,847,237	2,690,117
Male	49.7%	49.4%
Female	50.3%	50.6%
Median Age	40.8	38.0
Under 18 Years	22.3%	22.9%
18 to 24 Years	8.7%	9.4%
25 to 34 Years	12.1%	13.7%
35 to 44 Years	12.0%	12.9%
45 to 54 Years	12.7%	12.2%
55 to 64 Years	13.8%	12.8%
65 Years and Over	18.4%	16.0%
Race: White	91.8%	77.9%
Race: Black or African American	3.1%	11.2%
Race: American Indian and Alaska Native	0.2%	0.2%
Race: Asian	0.5%	2.2%
Race: Other Race	0.9%	2.1%
Race: Two or More Races	3.5%	6.4%
Hispanic or Latino (of any race)	2.5%	6.3%
Educational Attainment, Age 25-64		
No High School Diploma	13.1%	8.2%
High School Graduate	37.7%	26.7%
Some College, No Degree	19.9%	20.4%
Associate's Degree	10.0%	9.7%
Bachelor's Degree	11.4%	21.6%
Postgraduate Degree	7.9%	13.4%
Social Description (College Control College Control Co	00.00/	40.40/
Poverty Level (of all people)	20.2%	13.4%
Households Receiving Food Stamps/SNAP	17.0%	9.8%
Enrolled in Grade 12 (% of total population)	1.2%	1.2%
Disconnected Youth	3.3%	2.0%
Children in Single Parent Families (% of all children)	34.3%	34.3%
Uninsured	6.3%	5.6%
With a Disability, Age 18-64	20.4%	13.4%
Foreign Born	32.4%	46.4%
Speak English Less Than Very Well (population 5 yrs and over)	1.6%	6.4%

Data Source: Chmura/JobsEQ, 2023

#### **Chapter 3. Residential Migration Flows**

Residential migration refers to the movement of people into and out of counties within Kentucky and provides an important lens on demographic and economic change. The U.S. Census Bureau's county-to-county migration flow data illustrate how inflows and outflows of residents have shaped both rural and urban counties. Understanding these patterns is critical, as migration directly affects population size, labor force availability, housing markets, and the fiscal capacity of local governments. This chapter examines migration patterns using data from the Census population totals and components of change.

Table 3.1 summarizes the main components of population change in Kentucky between 2020 and 2024: natural increase, net international migration, and net domestic migration. Natural increase refers to the difference between the number of births and the number of deaths in a given area. When births outnumber deaths, natural increase is positive; when deaths exceed births, it is negative. Rural Kentucky recorded a natural decrease of 30,747, while urban areas posted a natural increase of 11,786. At the state level, Kentucky experienced an overall natural decline of 18,961, reflecting an aging population and declining birth rates. The net international migration is the difference between the number of people moving into an area from abroad and the number of individuals who moved abroad. These inflows offset natural population decline in rural counties and contributed to growth in urban areas. Finally, the net domestic migration measures the difference between the number of people moving into a county from other parts of the United States and the number leaving for other U.S. counties. Rural areas recorded a positive net domestic migration of 33,891, indicating that more people moved into rural Kentucky from elsewhere in the U.S. than moved out. Urban areas, by contrast, lost 5,110 residents through domestic migration. At the state level, Kentucky gained 28,781 residents through domestic migration. These data illustrate that rural Kentucky, despite losing population through natural decrease, has been partially sustained by both international and more importantly domestic inmigration. Urban counties, while supported by international migration and higher birth rates, continue to lose residents to other parts of the U.S.

Table 3.1. Migration Flows in Kentucky Counties, 2020-2024

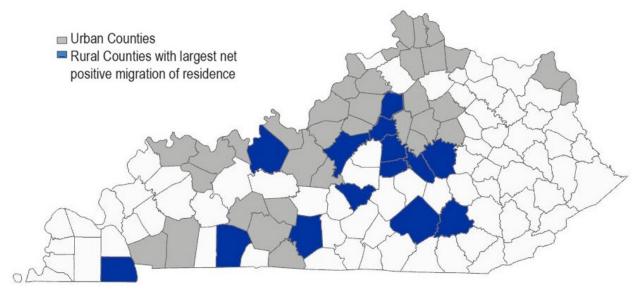
	Natural Increase	Net International Migration	Net Domestic Migration
Rural	-30,747	7,775	33,891
Urban	11,786	62,839	-5,110
Kentucky	-18,961	70,614	28,781

Data Source: US Census Bureau, County Population and Components of Change, 2020-2024

The spatial distribution of these migration flows is uneven. Figure 3.1 depicts rural counties with the largest net positive migration of residents between 2020 to 2024. Most of these counties shares a border with an urban county. This pattern suggests that rural counties adjacent to metropolitan areas are particularly attractive, potentially offering lower housing costs, abundant land and a rural lifestyle while still maintaining access to urban jobs and amenities.

Figure 3.1. Rural Counties with Largest Net Positive Migration of Residence, 2020-2024

County Population and Components of Change, 2020-2024



Data Source: U.S. Census Bureau, County Population and Components of Change, 2020-2024

Rural areas as a whole face ongoing challenge of natural decline, but many have managed to grow through domestic in-migration. Proximity to metropolitan centers appears to be a key factor in attracting new residents to rural counties. Urban areas, while supported by international migration and natural increase, are experiencing domestic outflows, likely reflecting housing costs, congestion, and lifestyle preferences that drive residents toward nearby rural or suburban communities. For policymakers, these trends underscore the importance of supporting counties that are growing through migration, while also addressing the structural challenges in regions that continue to lose population. Investments in housing, infrastructure, and services will be critical in helping counties manage these shifts and leverage migration as a driver of sustainable growth.

#### **Chapter 4. Immigration in Rural Kentucky**

While "migration" pertains to the movement of individuals within a country, "immigration" pertains to the movement of individuals across international borders Overall, immigration plays a modest but increasingly important role in rural Kentucky. While immigrant populations remain relatively small, they can help offset declining population in rural counties. The American Community Survey provides a range of information describing foreign populations, including U.S. citizenship status, race, ethnicity, and educational attainment, among others.

In 2023, immigrants accounted for about 1.6 percent of the rural population and 6.5 percent of the urban population. Figure 4.1 illustrates the growth of the foreign-born population between 2010 and 2023. Urban counties experienced faster overall growth, but in rural Kentucky, immigration helped offset declines in the domestic population. Among the 85 rural counties, 60 percent (51 counties) lost domestic population during this period, yet 35 of those counties saw gains in their immigrant populations. Between 2010 and 2023, rural Kentucky lost about 3,000 native residents while gaining 7,081 foreign-born residents, creating a modest but important demographic shift.

Figure 4.1 Foreign Population in Rural and Urban Kentucky, 2010-2023

Data Source: U.S. Census, American Community Survey, 2021

Origins of immigrants in rural Kentucky are diverse, though the majority come from Latin America and Asia. As illustrated in Figure 4.2, together these regions made up 75 percent of the foreign-born population in 2023. Europe accounted for 16 percent, while Africa represented 6 percent. Between 2010 and 2023, the share from Latin America declined from 50 to 46 percent, while Asia increased from 26 to 29 percent. Smaller increases occurred among European and African immigrants as well. These changes reflect the gradual diversification of rural Kentucky's immigrant community.

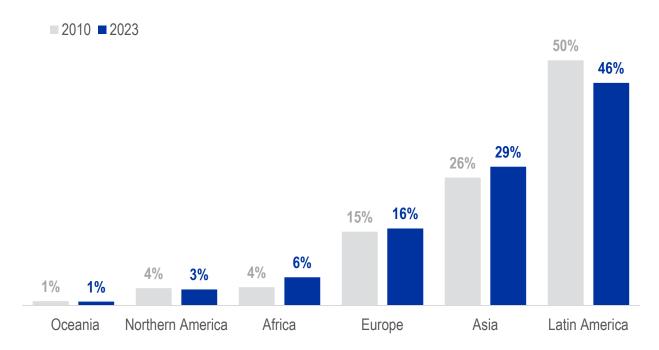


Figure 4.2 Place of Origin of the Foreign Population in Rural Kentucky, 2010 and 2023

Data Source: U.S. Census, American Community Survey, 2023

Language is another important dimension of immigration. Figure 4.3 illustrates that in 2022 nearly 70 percent of the foreign-born population in rural Kentucky spoke Spanish, another Indo-European language, or an Asian or Pacific Island language at home. Among Spanish speakers, 49 percent reported speaking English "very well," while more than one-third reported limited English proficiency. Among speakers of Asian and Pacific Island languages, roughly half reported speaking English "very well," while nearly one-fifth reported that their English proficiency was "not well" or "not at all." The language barriers can further hinder the integration of immigrants into the community and the provision of necessary services.

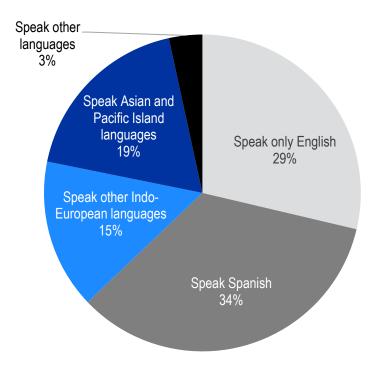
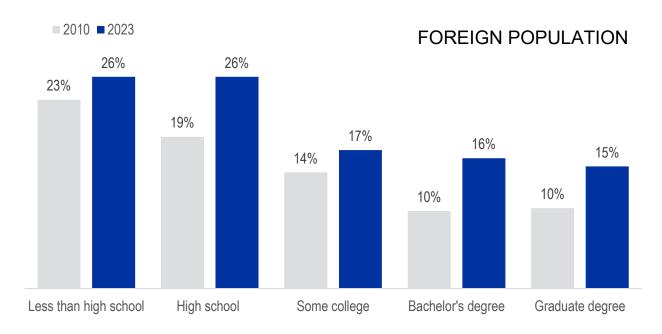


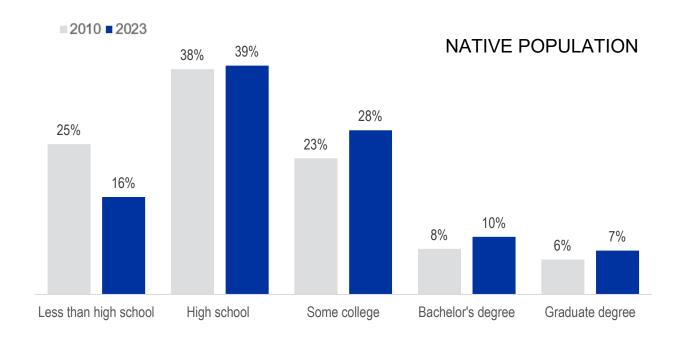
Figure 4.3 Language Spoken by the Foreign Population in Rural Kentucky, 2022

Data Source: U.S. Census, American Community Survey, 2022

Educational attainment among immigrants has also shifted over time. As illustrated in Figure 4.4, immigrants in rural Kentucky are disproportionately represented at both ends of the education spectrum. About 24 percent lack a high school diploma, compared to 16 percent of the native-born population. At the same time, 33 percent of immigrants hold a bachelor's degree or higher, compared to 17 percent of natives. Between 2010 and 2023, the share of immigrants without a high school diploma declined, while the share with a bachelor's degree or more increased, particularly among immigrants from Asia and Latin America.

Figure 4.4 Educational Attainment of the Foreign and Native Population in Rural Kentucky, 2010 and 2023





Data Source: U.S. Census, American Community Survey, 2023

#### **Section 2: Economic Indicators**

#### **Chapter 5. Rural Gross Domestic Product (GDP) Growth**

To gain insight into Kentucky's rural economy, we begin by defining the Gross Domestic Product (GDP), which is a comprehensive measure of the monetary value of goods and services produced within a particular region. GDP considers production from all sources, including land, labor, and equipment. A drawback of this measure is that it does not account for non-traded activities, such as home labor, which are more prevalent in rural areas than urban ones. However, the GDP's relative size and composition have a significant impact on public policy decisions, including investments in education, infrastructure, and other services. Therefore, understanding the size and scale of the rural and urban economies, as well as their evolution over time, is important. This report uses county-level GDP data to illustrate GDP growth over the last twenty years (Figure 5.1). GDP growth in Kentucky's rural counties was slower than in the urban counties over the last 22 years.

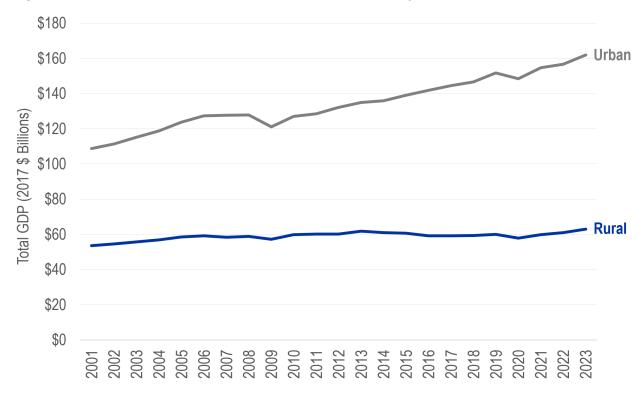


Figure 5.1 Total GDP Growth in Rural and Urban Kentucky, 2001 – 2023

Data Source: U.S. Bureau of Economic Analysis. Data using 2017 inflation-adjusted dollars.

Between 2001-2023, the Kentucky's rural economy experienced a \$4 billion growth in total GDP (in inflation-adjusted 2017 dollars), equating to a 9 percent growth rate. Comparatively, Kentucky's urban regions experienced a much faster growth rate (39%) in total GDP during the same period. While rural Kentucky continues to make a significant contribution to the state's economy, its share of the total GDP has declined from 33.3 percent in 2001 to 28.1 percent in 2023.

Table 5.1 reports the gross domestic product (GDP) of rural and urban areas in Kentucky for the top contributing industries. In 2023, manufacturing remained the single largest contributor to GDP in both rural and urban counties. However, it represented a substantially larger share of the rural economy (20.4%) compared to the urban economy (16.0%). Government and government enterprises also accounted for a greater proportion of rural GDP (14.0%) than urban GDP (12.2%). By contrast, industries such as real estate, rental, and leasing and health care and social assistance contributed slightly larger shares in urban areas (10.2% and 9.1%) than in rural counties (7.9% and 8.8%, respectively). Retail trade, however, plays a more prominent role in rural economies (10.0%) compared to urban counties, where it does not appear in the top five sectors.

At the state level, Kentucky's top contributors to GDP are manufacturing (16.1%), government (11.9%), and real estate (11.2%) dominate, with health care and wholesale trade also ranking among the most important sectors.

These patterns suggest that while manufacturing and government continue to anchor rural economies, urban economies benefit more from industries tied to real estate markets and service-sector concentration. Rural economies, meanwhile, maintain a stronger reliance on retail activity.

Table 5.1 Top Five Industries Contributing to the GDP, 2023

Rural Counties GDP	Urban Counties GDP	Kentucky GDP
Manufacturing	Manufacturing	Manufacturing
20.4%	16.0%	16.1%
Government &	Government &	Government &
government enterprises	government enterprises	government enterprises
14.0%	12.2%	11.9%
Retail	Real estate,	Real estate,
trade	rental & leasing	rental & leasing
10.0%	10.2%	11.2%
Real estate,	Health care &	Health care &
rental & leasing	social assistance	social assistance
7.9%	8.8%	9.1%
Health care &	Wholesale	Wholesale
social assistance	trade	trade
6.4%	8.1%	7.4%

Data Source: U.S. Bureau of Economic Analysis, 2023

#### **Chapter 6. Per Capita Income Growth**

Per capita income is a staple measure of economic wellbeing. It consists of earned wages and transfer payments from the government, that include income maintenance benefits (e.g. Earned Income Tax Credits or Temporary Assistance to Needy Children), unemployment benefits, both private and public, and Social Security benefits. Per capita income also includes non-labor income such as dividends, interest, and rental income.

Rural regions across the United States, including Kentucky, generally exhibit lower levels of per capita income compared to their urban counterparts. In Kentucky, a clear correlation exists between educational attainment and per capita income, as individuals with higher levels of education tend to earn more. However, while educational attainment positively influences income, the rate of increase in per capita income does not fully keep pace with the rise in educational attainment. Differences in wages and proprietor's income on a per capita basis may arise from several factors. The occupational and industrial structure of a small county can create substantial variation, particularly when capital-intensive industries such as manufacturing—often associated with higher wages—are present. Family size and household composition also influence per capita wages, as larger families with many children or non-wage-earning adults tend to report lower per capita income. Despite these influences, educational attainment of the workforce remains one of the most significant determinants of regional differences in earned income.

Between 2013 and 2023, the average per capita income in Kentucky increased by 47%. In forty-seven counties, per capita income increased by 50% or more in the ten-year period (Figure 10). Of those counties, thirty-two are rural counties. Low unemployment rates in the 2010s contributed to increases in wages, which also increased per capita income.

Rural Counties with more than 50% Increase
Urban Counties with more than 50% Increase
Counties with less than 50% Increase

Figure 6.1 Counties with More than 50% Increase in Per Capita Income, 2013-2023

Data Source: U.S. Census Bureau/5-yr ACS, 2013 and 2023

Figure 6.2 presents the annual average unemployment rates for Kentucky and the United States between 2014 and 2024. Overall, Kentucky's unemployment rate has closely followed national trends, with a notable decline throughout the mid-2010s and sharp increases in 2020 during the COVID-19 pandemic. The subsequent drop in unemployment rates after 2021 reflects the broader economic recovery and labor market stabilization.

This is important to consider, since per capita income growth is connected with the employment conditions and income levels. Sustained periods of low unemployment during the 2010s created upward pressure on wages, which contributed to increases in per capita income across much of Kentucky. Understanding these labor market dynamics provides valuable context for why income growth was particularly strong in certain rural counties, even though overall income levels remain lower than in urban areas.

9% 8% 7% 6% Rural KY Urban KY 5% Kentucky **United States** 4% 3% 2% 1% 0% 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

Figure 6.2 Annual Average Unemployment Rates for Kentucky and the U.S., 2014-2024

Data Source: U.S. Bureau of Labor Statistics, LAUS 2014-2024

Figure 6.3 illustrates the relationship between per capita earned income and educational attainment across Kentucky counties. The scatterplot depicts a positive association between counties with higher proportions of adults with post-secondary degrees and higher levels of earned income. This pattern reinforces the idea that education is highly correlated with income growth, regardless of whether a county is classified as rural or urban. It also underscores the importance of workforce development and access to higher education in rural Kentucky. While many rural counties have experienced notable increases in per capita income over the past decade, the gains are uneven and remain strongly tied to local levels of educational attainment. This highlights the need for targeted investments in education and training to sustain income growth in rural regions over the long term.

\$60,000 \$50,000 Per Capita Income \$40,000 \$30,000 \$20,000 \$10,000 \$0 0% 5% 10% 15% 20% 25% 30% 35% 40% 45% Population 18+ with Bachelor's Degree or Higher (%)

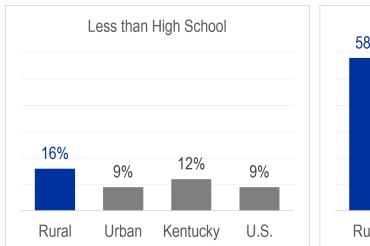
Figure 6.3 Kentucky Counties Per Capita Income vs. Educational Attainment

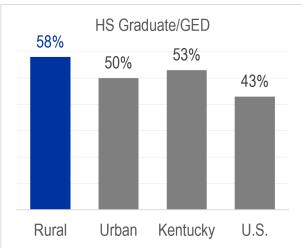
Data Source: U.S. Census/ACS 2019-2023

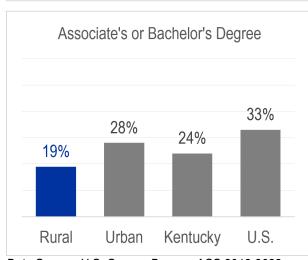
#### **Chapter 7. Educational Attainment**

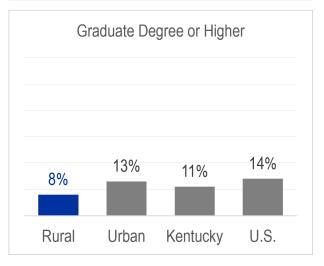
The data in Chapter 6 illustrated a clear relationship between income and education. In this chapter, we further explore educational attainment in Kentucky. Figure 7.1 compares educational attainment in 2022 between rural and urban Kentucky, as well as between Kentucky and national averages. Overall, residents of rural Kentucky have lower levels of educational attainment than their urban counterparts, a trend consistent with patterns observed across many rural and urban areas of the United States. Notably, urban Kentucky also falls below the national average, positioning the state on the lower end of educational attainment nationwide.

Figure 7.1 Educational Attainment in Kentucky and U.S., 2018-2022









Data Source: U.S. Census Bureau, ACS 2018-2022

Educational attainment is one of the most significant drivers of long-term economic growth, making below-average state performance a cause for concern. Over the past decade, Kentucky has experienced mixed trends in educational attainment (Figure 7.2). The share of residents without a high school diploma has declined, while the proportion of individuals earning a master's

degree or higher has risen. Despite these gains, Kentucky continues to lag behind national averages due to both slower growth and persistently lower overall levels of education (Hicks, 2022). These disparities are even more pronounced in the state's rural areas.

33% 31% Rural Urban 8% 4% 3% 3% -24% -33% Less than high school High school graduate Some college or associate's Bachelor's degree or higher graduate (includes equivalency) degree

Figure 7.2 Change in Educational Attainment of Population Age 25 and Older, 2013-2023

Data Source: U.S. Census Bureau, ACS 2013-2023

An examination of educational attainment among the native and foreign-born populations reveals notable differences. According to U.S. Census data, the foreign-born population is increasingly more highly educated (Figure 7.3). A greater share hold at least a bachelor's degree compared to the native population, equipping them with valuable skills in an economy that is increasingly service-oriented.

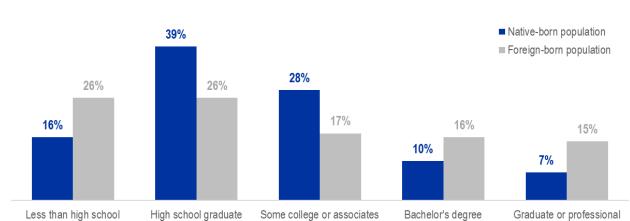


Figure 7.3 Educational Attainment of Native and Foreign-born Population in Rural Kentucky

Data Source: U.S. Census Bureau/5-yr ACS, 2019-2023

# **Section 3: Employment**

#### **Chapter 8. Employment Mix**

To further understand the economic challenges faced by rural Kentucky, we examine employment by industry in Figure 8.1. In 2023, Kentucky's 35 urban counties accounted for nearly 69% of jobs (1,416,657), while the 85 rural counties held the remaining 31% (664,004 jobs).

The three largest industries, by employment, are the same in both rural and urban areas, but their relative importance differs. In rural counties, Retail Trade employs the largest share of workers (19%), followed by Manufacturing (17.2%) and Health Care & Social Assistance (10.7%). Combined, these three industries represent nearly half (47%) of rural employment. In urban counties, the largest sector is Health Care & Social Assistance (13.5%), followed by Manufacturing (12.3%) and Retail Trade (12.1%).

20% ■ Rural ■ Urban 15% 10% 5% Utilities Mining, Quarrying, Oil & Gas Extraction Manufacturing Accommodation & Food Services Construction Wholesale Trade Retail Trade Fransportation & Warehousing Professional, Scientific & Technical Services Management of Companies & Enterprises Agriculture, Forestry, Fishing & Hunting Information Finance and Insurance Estate, Rental Administrative, Support & Waste Management. Educational Services & Social Assistance Arts, Entertainment (except Public Administration) & Recreation Health Care & Leasing Other Services Reall

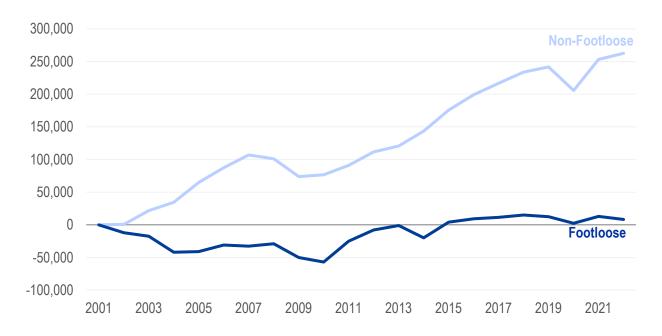
Figure 8.1. Share of Non-Farm Employment by NAICS Sector, 2023

Data Source: Bureau of Economic Analysis, 2023

These results underscore that rural Kentucky relies more heavily on manufacturing and retail employment, whereas urban areas are more service-oriented, with health care serving as the leading sector. Manufacturing is considered a "footloose" industry, producing goods for export beyond the local market, whereas Health Care and Retail are "non-footloose," tied to local consumption. We model the grouping of industries into "footloose" and "non-footloose" based on the methodology used by Hicks and Terrell (2017)¹ and the State of the Rural Economy in Indiana report (Ball State University, 2022)².

Figures 8.2 and 8.3 present longer-term trends in employment growth between 2001 and 2022, distinguishing between footloose and non-footloose jobs. In urban counties, non-footloose jobs expanded dramatically, adding about 260,000 jobs over two decades. Urban footloose industries also grew modestly, adding around 8,000 jobs (Figure 8.2). In rural counties, all net job growth came from non-footloose industries. Rural non-footloose firms added about 55,000 jobs, while footloose industries declined by more than 20,000 jobs over the same period (Figure 8.3).

Figure 8.2. Job Growth Across Footloose and Non-Footloose Firms in Urban Kentucky 2001 - 2022



Data Source: Bureau of Economic Analysis, 2022

<sup>&</sup>lt;sup>1</sup> https://rupri.org/wp-content/uploads/FootlooseJobs-20170330.pdf

<sup>&</sup>lt;sup>2</sup> https://www.in.gov/ocra/files/State-of-the-Rural-Economy-Ball-State-Indiana 2022 Sept.pdf

Non-Footloose -10000 Footloose -20000 -30000 -40000 

Figure 8.3 Job Growth Across Footloose and Non-Footloose Firms in Rural Kentucky 2001 - 2022

Data Source: Bureau of Economic Analysis, 2022

Taken together, these results highlight an important policy challenge. Despite state programs such as the Kentucky Business Investment (KBI) incentives aimed at manufacturing and other export-oriented firms, rural Kentucky experienced a net loss of about 20,000 footloose jobs between 2001 and 2022. Urban areas managed modest gains, but the long-term statewide picture is still a deficit in footloose employment. This reliance on non-footloose sectors leaves rural communities particularly vulnerable to demographic change and local demand constraints.

#### **Chapter 9. Manufacturing**

The following graphs provide a visual representation of trends in Kentucky's manufacturing sector, comparing rural and urban manufacturing employment at the county level from 2001 through 2023. Figure 9.1 illustrates manufacturing's share of total employment in rural and urban areas during this period. Prior to the 2009 recession, rural manufacturing employment declined steadily, while urban areas also experienced losses, though at a slower pace. Following the recession, rural manufacturing employment never fully recovered; modest gains in the 2010s were subsequently offset by another decline during the COVID-19 pandemic in 2020. Between 2001 and 2023, Kentucky's manufacturing sector shed approximately 37,000 jobs, with rural counties accounting for 68 percent of these losses.

18% 16% Manufacturing Employment 14% 12% Urban 10% 8% 6% 4% 2% 0% 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021 2023

Figure 9.1 Manufacturing Sector Employment Share of Total Employment, 2001-2023

Data Source: Chmura/JobsEQ, 2023

The only manufacturing subsectors to experience net employment growth during this period were food, beverage, and tobacco product manufacturing. By contrast, traditional industries such as textiles and metals experienced significant losses due in large part to several high-profile plant closures. For example, AK Steel in Ashland was permanently closed after its blast furnace was decommissioned, Fruit of the Loom closed its Jamestown textile facility in 2014 after moving operations abroad, and the Paducah Gaseous Diffusion Plant — once the only American-owned uranium enrichment facility — closed a decade ago. These closures, along with automation and productivity gains, explain why manufacturing employment has declined over time. Rural counties have been disproportionately affected, underscoring the structural challenges facing Kentucky's manufacturing sector.

#### **Chapter 10. Services**

The service sector plays an increasingly important role in Kentucky's economy. It encompasses a wide range of activities, from professional and technical services to health care, education, retail, and hospitality. Because these jobs make up a growing share of employment in both rural and urban areas, understanding their scale, growth, and compensation is essential for assessing long-term economic opportunities. This chapter uses county-level data from 2001–2023 to examine rural and urban service employment in Kentucky, focusing on job levels, shares of total employment, and earnings.

Table 10.1 provides a breakdown of service industries in 2023. Urban Kentucky supported more than 973,000 service jobs, representing 74.5% of total urban employment. Rural counties supported approximately 408,000 service jobs, accounting for 48.9% of rural employment. Health Care and Social Assistance accounted for the largest share of service employment (14.3% of urban jobs; 15.8% of rural jobs), while Accommodation and Food Services and Educational Services also represented significant shares of workers, particularly in rural counties. The smallest service sector was Management of Companies and Enterprises, with just 0.3% of rural jobs and 1.4% of urban jobs.

Average annual wages in service industries rose substantially between 2001 and 2023. On average, urban service sector wages reached about \$54,900, while rural service sector wages averaged \$39,890. Across every sector, urban jobs paid higher average annual wages than their rural counterparts. Although urban wages remain higher overall, certain rural service sector wages experienced faster growth, narrowing gaps in some areas. For example, rural administrative and support services and professional services posted some of the largest wage gains.

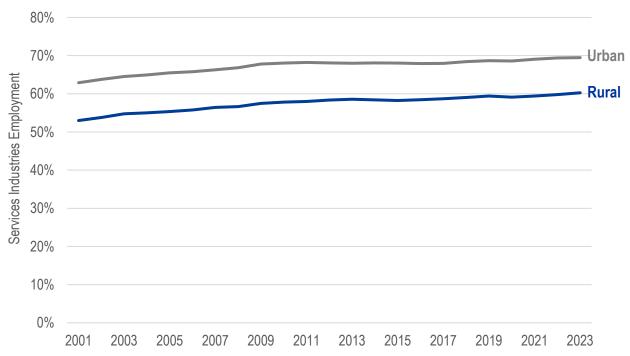
Table 10.1. Service Industries Employment and Average Per Worker Earnings in Kentucky, 2023

itentucky, 2020	RURAI	_	URBAI	V
NAICS Service Industry Sectors	Number of Jobs (Percent Share)	Average Earnings	Number of Jobs (Percent Share)	Average Earnings
Accommodation and Food Services	55,572 (8.2%)	\$19,805	124,236 (8.9%)	\$24,565
Administrative and Support and Waste Management and Remediation Services	32,028 (4.7%)	\$41,138	90,820 (6.5%)	\$43,653
Arts, Entertainment, and Recreation	7,118 (1.1%)	\$24,520	26,060 (1.9%)	\$34,544
Construction	39,126 (5.8%)	\$56,700	71,852 (5.1%)	\$68,316
Educational Services	60,977 (9.0%)	\$39,341	101,567 (7.2%)	\$55,271
Finance and Insurance	14,746 (2.2%)	\$58,866	54,862 (3.9%)	\$96,472
Health Care and Social Assistance	107,073 (15.8%)	\$53,059	200,589 (14.3%)	\$67,112
Information	8,040 (1.2%)	\$54,265	16,727 (1.2%)	\$75,284
Management of Companies and Enterprises	1,972 (0.3%)	\$83,840	20,290 (1.4%)	\$116,391
Professional, Scientific, and Technical Services	21,510 (3.2%)	\$66,516	71,797 (5.1%)	\$83,747
Real Estate and Rental and Leasing	6,667 (1.0%)	\$44,375	20,682 (1.5%)	\$59,430
Transportation and Warehousing	29,047 (4.3%)	\$57,931	11,8102 (8.4%)	\$64,343
Other Services (except Public Administration)	24,218 (3.6%)	\$32,366	55,760 (4.0%)	\$38,495
All service industry sectors	408,094 (60.3%)	\$39,890	973,344 (69.5%)	\$54,900

Data Source: Chmura/JobsEQ, 2023.

The share of service employment has risen steadily in both rural and urban areas since 2001. As Figure 10.1 illustrates, services now account for almost 70% of all jobs in urban Kentucky and about 60% in rural areas. Both areas experienced growth, but the gap widened as urban service industries expanded at a faster pace. In urban areas, the fastest growth was in management of companies (70%), transportation and warehousing (60%), and health care and social assistance services (55%). In rural areas, the strongest growth occurred in professional and technical services (56%), administrative and waste and remediation service (32%), and management of companies (31%).

Figure 10.1. Service Industry Sector Share of Total Employment in Kentucky, 2001-2023



Data Source: Chmura/JobsEQ, 2001-2023

#### HEALTH CARE SERVICES

Health care spending represents a substantial share of the U.S. economy, accounting for nearly one-fifth of total economic activity. In 2021, health expenditures rose by 2.7 percent, reaching \$4.3 trillion.<sup>3</sup> The high and rising cost of health care poses a significant challenge, with wideranging effects on both the economy and individual well-being. For many American families, these costs have become burdensome: approximately half of U.S. adults report difficulty affording health care, and about four in ten delayed or forwent necessary medical care in the past year due to cost. Affordability thus serves as a critical barrier to access and has adverse implications for health outcomes.

Importantly, financial strain is not limited to the uninsured. Nearly one-third of insured adults report concerns about affording their monthly premiums, while 44 percent express worry about meeting their deductible before coverage begins.<sup>4</sup> The burden of health care costs on both insured and uninsured individuals underscores the urgent need for comprehensive, affordable, and equitable health care solutions. Addressing these challenges is essential to improving accessibility, reducing financial insecurity, and promoting better health outcomes across the United States

The health care affordability challenges experienced in Kentucky align with national trends, as revealed by a consumer health care experience state survey conducted by Altarum's Healthcare Value Hub in 2020. The survey indicated that 58% of Kentucky adults reported encountering one or more health care affordability issues. In 2020, 18% of adult respondents in Kentucky were uninsured either for the entire year or part of it, and among those without coverage, 39% cited high insurance costs as the primary reason for lacking insurance. The findings further highlight the impact of high health care costs on individuals' access to care.

Approximately 30% of Kentuckians reported delaying seeking medical attention or undergoing necessary procedures due to the financial burden associated with health care. Additionally, 24% stated that they had skipped recommended medical tests or treatments, and 23% reported not filling a prescription, all as a result of the high costs involved.<sup>5</sup> These statistics underline the significant challenges faced by individuals in Kentucky when it comes to affording and accessing health care services. Addressing the affordability of health care and improving access to necessary medical care are crucial aspects for ensuring the well-being of the population in Kentucky and across the nation.

Within the service sector, Health Care and Social Assistance is the largest employer in both rural and urban areas of Kentucky. Despite minor fluctuations and a slight dip around 2020, counties in Kentucky have experienced consistent growth in health care and social assistance employment between 2001 and 2023. However, the gap between urban and rural employment has widened

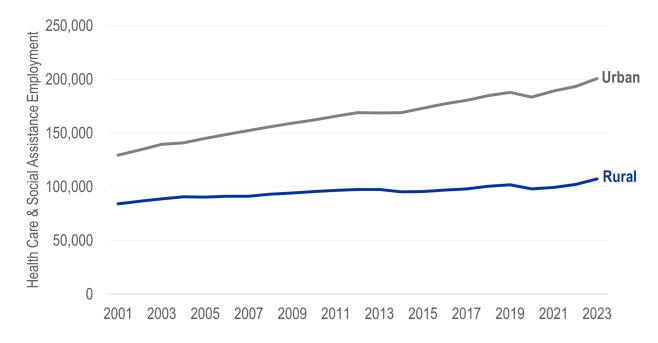
<sup>&</sup>lt;sup>3</sup> American Medical Association. Trends in health care spending. <a href="https://www.ama-assn.org/about/research/trends-health-care-spending#:~:text=Health%20spending%20in%20the%20U.S.,2020%20(10.3%25%20percent)</a>. Accessed May 19, 2023

<sup>&</sup>lt;sup>4</sup> Montero A, Kearney A, Hamel L, et al. Americans' Challenges with Health Care Costs. Kaiser Family Foundation. https://www.kff.org/health-costs/issue-brief/americans-challenges-with-health-care-costs/. Accessed May 19, 2023

<sup>&</sup>lt;sup>5</sup> Altarum Healthcare value hub. Kentucky Residents Struggle to Afford High Healthcare Costs; COVID-19 Fears Add to Support for a Range of Government Solutions Across Party Lines. <a href="https://www.healthcarevaluehub.org/application/files/3315/9732/6039/Hub-Altarum">https://www.healthcarevaluehub.org/application/files/3315/9732/6039/Hub-Altarum</a> Data Brief No. 73 - Kentucky Affordability Brief.pdf. Accessed May 19, 2023

significantly over this period, especially in recent years. This trend may indicate disproportionate economic growth favoring urban areas.

Figure 10.1 Health Care and Social Assistance Employment, 2001-2023



Data Source: Chmura/JobsEQ, 2001-2023

#### **Chapter 11. Agriculture**

The Commonwealth of Kentucky has a large agricultural sector, with approximately 15 million acres in agricultural use (2021 U.S. Census of Agriculture). Agriculture plays a crucial role in sustaining the state's economic growth and development. The fertile soil and favorable climate of Kentucky have made it an ideal location for agricultural activities, attracting farmers and investors alike. The agricultural sector contributes to the state's overall GDP in addition to providing employment opportunities to a non-trivial portion of the population. Beyond these economic contributions, agriculture in Kentucky has also helped in preserving the state's rural heritage. Extending beyond just the production of raw goods, the agricultural cluster encompasses food processing, agribusiness, and distribution networks, adding further value to the economy. Additionally, the rural tourism industry, closely linked to agriculture, has bolstered the local economy by attracting visitors to farm tours, farmers' markets, and agritourism events.

Over time, advances in technology and mechanization have revolutionized farming practices, boosting productivity while reducing the demand for labor. Nationally, on-farm employment declined from about 40% of the U.S. workforce in 1900 to fewer than 2% by 2020. Kentucky has followed this pattern. According to the Bureau of Economic Analysis (BEA), agricultural employment in Kentucky declined from about 100,700 workers in 2001 to 82,300 in 2021. Farmland values have also shifted over time. As depicted in Figure 11.1, the price per acre in Kentucky (inflation-adjusted to 2020 dollars) has risen substantially since 1900, reflecting both productivity improvements and periods of higher commodity prices. Peaks in land values align with national agricultural cycles, including the post–World War II expansion and the commodity price surge around 2012.

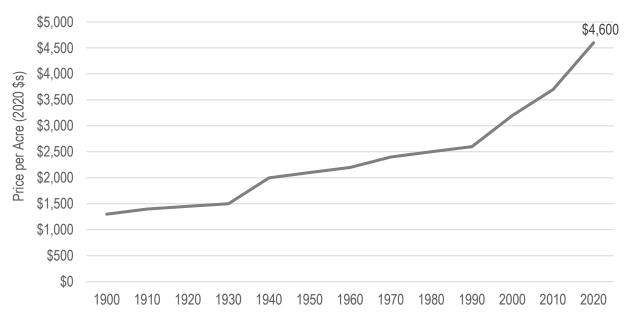


Figure 11.1. Land Price per Acre in Kentucky, 1900-2020\*

Data Source: USDA land prices (decennial, 1860-1900), Bureau of Labor Statistics (various price indices) \* Data are inflation-adjusted to 2020 price levels

Agriculture remains vital in rural areas and plays a modest role in Kentucky's economy overall. In 2021, production agriculture accounted for about 1.0% of state GDP. In rural counties, agriculture represented roughly 3–4% of GDP and about 1 in 25 jobs, while manufacturing made up nearly 30% of GDP and 1 in 5 jobs. These figures highlight the importance of agriculture locally, but also the importance of a diversified Kentucky economy. Agricultural employment also varies by subsector.

Figure 11.2 illustrates employment changes from 2011 to 2021. Crop production and animal production together account for the majority of farm jobs, though both have experienced fluctuations tied to commodity prices, weather patterns, and market demand. However, farm employment may be partially undercounted and actual farm work is likely higher than reported here. Also, there are large seasonal variations in farm employment that may not be clearly captured. Likewise, we do not know what amount of farm work is provided by proprietor families and, therefore, is not captured by these data. This is not uncommon for industries with a higher number of small businesses and seasonal demand for labor.

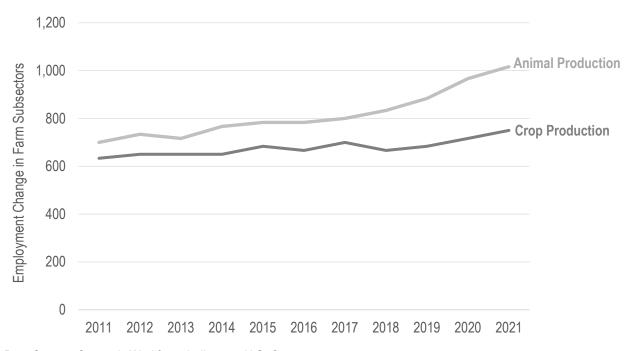


Figure 11.2 Employment Change in Farm Subsectors, 2011-2021

Data Source: Quarterly Workforce Indicators, U.S. Census

The 2022 Census of Agriculture revealed that the number of farms in Kentucky and the number of acres in farming have dropped since 2017. The agriculture sector only contributes about 3.3% to the rural GDP. Even with these declines, agriculture remains an important sector for many rural counties, particularly where commodity production is concentrated. Figure 11.3 illustrates rural sales by commodity in 2022. Animal production and crop production remain the backbone of Kentucky agriculture, with livestock and poultry representing a significant share of total farm sales.

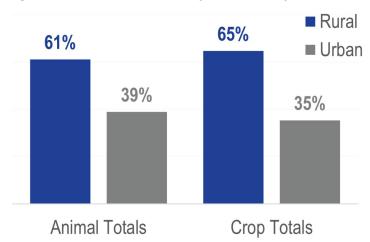


Figure 11.3. Percent Sales by Commodity Totals, 2022

Data Source: USDA/NASS QuickStats, 2022

Agriculture in Kentucky continues to evolve. Employment in the sector has declined, but productivity and farmland values remain strong. Agriculture contributes a small share of state GDP, though it remains more significant in rural counties where communities rely on farming for both economic activity and cultural identity. As a result, policies and investments aimed at supporting agricultural resilience — particularly in rural counties — are critical to sustaining both economic prosperity and the preservation of Kentucky's agricultural heritage.

# **Chapter 12. Transportation and Logistics**

Employment in Kentucky's Transportation and Warehousing sector has grown in urban counties and stayed stable in rural counties from 2001 to 2023. As illustrated in Figure 12.1, urban counties gained about 44,000 jobs in total, with especially sharp increases after 2014, while rural counties gained slightly over 4,000 jobs. The employment share of logistics jobs rose from 3.6% to 4.2% in rural areas, and from 6.0% to 9.9% in urban areas. These gains highlight the increasing importance of transportation and logistics as a driver of economic growth, particularly in urban Kentucky.

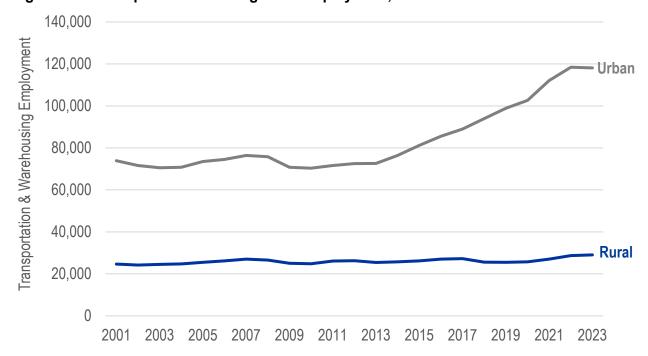


Figure 12.1 Transportation and Logistics Employment, 2001-2023

Data Source: Chmura/JobsEQ, 2001-2023

Kentucky's logistics wages have outpaced average wages for all sectors for the past two decades. As depicted in Figure 12.2, logistics workers earned about 32% more than the statewide average in 2002, though this value narrowed to around 12% more by 2023. Despite this smaller gap, logistics jobs remain relatively well-paid compared to the broader economy. Figure 12.3 breaks down this comparison between rural and urban areas. In 2002, urban logistics wages were approximately 28% higher than rural logistics wages. By 2023, this gap had narrowed significantly, with urban wages only 11% higher. Rural logistics wages were 33% higher than rural wages overall in 2022 and about 23% higher in 2023. Urban logistics wages also lost ground relative to other urban sectors, declining from 28% in 2002 to just 6% above all wages overall, in 2023.

\$70,000 **Transportation** & Warehousing \$60,000 **All Sectors** Average Annual Wage \$50,000 \$40,000 \$30,000 \$20,000 \$10,000 \$0 2002 2005 2008 2011 2014 2017 2020 2023 Data Source: Chmura/JobsEQ, 2023

Figure 12.3. Wage Comparison for Logistics and All Sectors for Rural and Urban

Figure 12.2 Wage Comparison for Logistics and All Sectors in Kentucky, 2002-2023

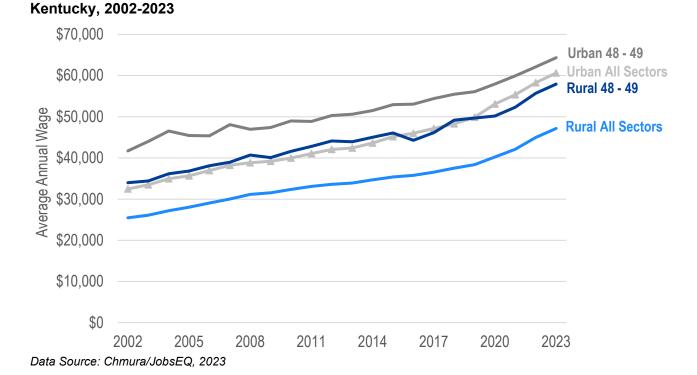


Table 12.1 lists Kentucky's largest transportation and warehousing occupations in 2022. More than one-third of these jobs pay less than \$37,000 annually, and several of the largest occupations

face high automation risks. The single largest occupation, laborers and freight movers (30% of logistics jobs), has an 85% probability of being automated. Other high-risk roles include industrial truck operators (93%) and heavy truck drivers (79%). In total, more than half of logistics jobs have automation probabilities above 79%, underscoring the vulnerability of the sector to technological disruption.

Table 12.1. Largest Occupations in Transportation and Warehousing in Kentucky, 2022

Transportation and Warehousing Jobs	Employment Share	Average Annual Wages	Automation Probability
Cleaners of Vehicles and Equipment	2.6%	\$31,900	0.37
Packers and Packagers, Hand	4.4%	\$33,700	0.38
Laborers and Freight, Stock, and Material Movers, Hand	30.3%	\$36,500	0.85
Bus Drivers, School	3.9%	\$42,500	0.89
Industrial Truck and Tractor Operators	7.0%	\$43,700	0.93
Automotive Service Technicians and Mechanics	4.3%	\$43,700	0.59
Light Truck Drivers	8.1%	\$48,100	0.69
Bus and Truck Mechanics and Diesel Engine Specialists	2.0%	\$50,500	0.73
Heavy and Tractor-Trailer Truck Drivers	15.2%	\$52,600	0.79
First-Line Supervisors	4.5%	\$59,600	0.029
Remainder of Occupations	17.7%	\$60,739	-

Data Sources: Chmura/JobsEQ 2022, Frey and Osborne (2013)

Several hundred miles of multiple Interstate highways crisscross Kentucky, connecting the state to the rest of the nation. Combined with being home of Cincinnati/Northern KY International airport VG and Louisville Mohamed Ali Airport, two of the top five largest cargo airports, Kentucky is a popular location for hubs and distribution centers of major logistics facilities, including UPS's Worldport.<sup>6</sup> While urban areas dominate logistics employment due to their connectivity and infrastructure, rural counties attract warehouse investment because of lower land costs and availability of space. The high probability of automation for several occupations in the transportation and warehousing sector is worrisome for future job growth particularly given the growing popularity of self-driving vehicles and drone delivery services, automation risk should be expected.

<sup>6</sup> https://www.bts.gov/browse-statistical-products-and-data/freight-facts-and-figures/top-25-airports-landed-weight-all

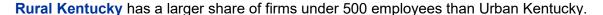
# **Section 4: Business Economics**

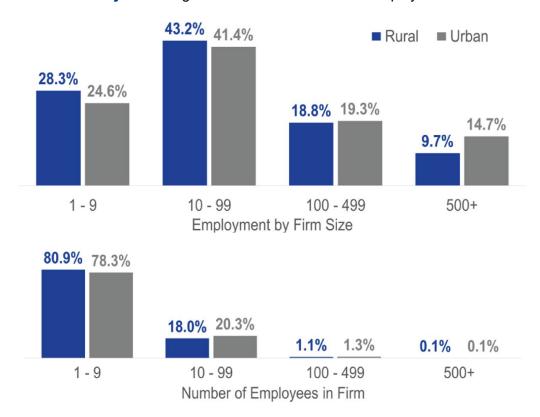
# **Chapter 13. Business Dynamics**

Business size and structure influence how resilient local economies are to shocks and how much they contribute to job creation and income growth. The following figures illustrate differences between rural and urban businesses in Kentucky with respect to firm size, establishment changes, and longer-term dynamics.

Figure 13.1 depicts that rural Kentucky has a higher share of small and medium-sized firms (0–249 employees) compared to urban areas. Firms with 250–499 employees account for about six percent of rural businesses and five percent of urban businesses. In contrast, large firms with 500 or more employees represent 59 percent of firms in urban counties but only 49 percent of firms in rural counties. This difference reflects the greater reliance of rural economies on smaller establishments, while urban economies benefit from the concentration of large employers that often provide higher wages, greater stability, and more specialized employment opportunities. Smaller firms in rural areas, however, contribute to local resilience by being more adaptable and embedded in their communities.

Figure 13.1. Employment Share (top) and Establishment Share (bottom) by Firm Size in Rural and Urban Kentucky, 2024





Data Source: YourEconomy, 2024

Firm starts, closures, and relocations also illustrate important aspects of economic dynamism. As depicted in Figure 13.2, business turnover has followed similar trends in both rural and urban counties over the past decade. Between 2015 and 2024, most of the net change in the number of firms has come from new establishments, indicating that business creation has been the main driver of growth. Firm closures have also been steady across both geographies, suggesting that survival rates are comparable in rural and urban counties.

12,000 2015 2016 2017 2018 2019 2020 2021 2022 2023 10,000 Rural **FIRMS STARTED** Urban 8,000 -2,000FIRMS CLOSED 6,000 -4,000 4.000 -6,000 2,000 -8,000 -10,000 0 2015 2016 2017 2018 2019 2020 2021 2022 2023 2023 -12.000300 2015 2016 2017 2018 2019 2020 2021 2022 2023 250 FIRMS MOVED IN FIRMS MOVED OUT 200 -50 Rural -100 150 Urban Urban -150 100 -200 50 Rural -250 0 2015 2016 2017 2018 2019 2020 2021 2022 2023 -300

Figure 13.2. Firm Changes in Rural and Urban Kentucky, 2015-2024

Data Source: YourEconomy, 2015-2024

The relative balance of starts and closures is important for understanding local economies. In many rural counties, a smaller number of new firms can have a great impact on employment and services, particularly if these businesses are in industries such as health care, logistics, or advanced manufacturing. Conversely, the loss of even a single large employer can significantly affect rural communities, where the employment base is smaller. Urban counties, by contrast, tend to have more diversified economies where the entry or exit of individual firms is less disruptive. For both rural and urban counties, new firm creation is a critical engine of growth, and the ability of Kentucky communities to foster a diverse ecosystem of small and medium firms remains essential for economic resilience.

# **Chapter 14. Kentucky Entrepreneurship**

Entrepreneurship plays an important role in the growth and development of rural and urban economies. To evaluate differences across Kentucky, two measures are considered: business applications per capita and proprietary income as a share of total personal income.

Figure 14.1 illustrates annual business applications per 1,000 residents between 2015 and 2023. In 2023, urban Kentucky recorded 13.6 applications per 1,000 population, while rural counties recorded 9.8 applications per 1,000. The figure also depicts that the gap between rural and urban areas has widened slightly over the decade. Although both regions experienced growth in new business activity, the pace was stronger in urban counties, indicating greater entrepreneurial intensity in metropolitan areas.

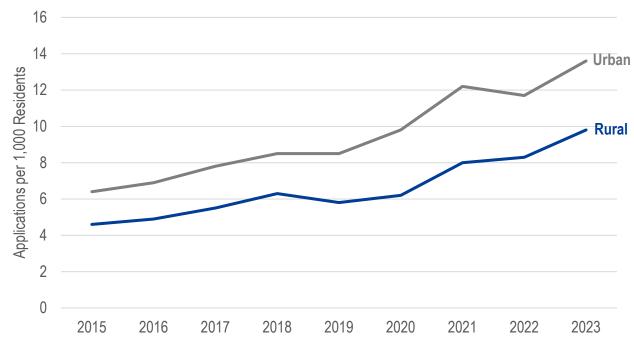


Figure 14.1. Business Applications, 2015-2023

Data Source: U.S. Census, Business Dynamics Statistics 2023

Another perspective on entrepreneurship comes from measuring proprietors' income relative to total personal income. In 2023, proprietors' income accounted for 7.3 percent of total income in rural Kentucky, close to 7.0 percent in urban Kentucky. The value of proprietors' income is higher for urban counties (62% of total) compared to rural counties (38% of total). Farms contributed about 9 percent of rural proprietary income, while farm income represented only 5 percent of urban proprietary income.

Figure 14.2 illustrates trends in proprietary income shares between 2001 and 2023. Both rural and urban areas saw increases between 2008 and 2013. Rural areas, however, experienced a relative decline after 2013, while urban levels remained relatively stable. The rural decline closely tracks the peak and subsequent fall of global corn and other commodity prices beginning in 2012, which affected farm-related earnings. Urban proprietary income, by contrast, remained steadier over time and was less tied to agricultural fluctuations.

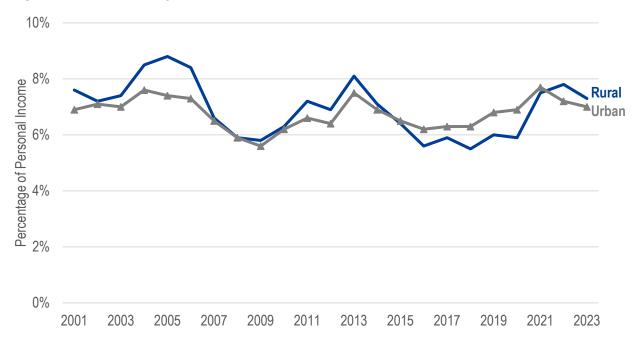


Figure 14.2. Proprietary Income as Share of Total Personal Income, 2001-2023

Data Source: Bureau of Economic Analysis, 2023

Most of the income gap between regions is not explained by entrepreneurial activity alone. Instead, broader economic factors, including industrial structure and wage levels, likely account for much of the disparity. Over the last few years, the state's Office of Entrepreneurship within the Cabinet for Economic Development, has been focused on developing the pipeline of high-tech and research-backed companies in Kentucky that have the potential for significant growth and can complement the state's existing businesses strengths, with manufacturing being Kentucky's leading industry.

There have been a few studies of causal differences in entrepreneurship between regions, but for the most part, there is little evidence of meaningful differences resulting from public policy specifically focused on entrepreneurship. Rather, policies that remove barriers to self-employment, along with increased levels of human capital account for the bulk of entrepreneurship differences between regions (see Hicks and Faulk, 2018<sup>7</sup>; Matejovsky, Mohapatra and Steiner, 2014<sup>8</sup>; and Hall and Sobel, 2008<sup>9</sup>).

<sup>&</sup>lt;sup>7</sup> https://doi.org/10.1108/JEPP-D-18-00013

<sup>8</sup>https://www.researchgate.net/publication/262232027 The Dynamic Effects of Entrepreneurship on Regional Economic Growth Evidence from Canada

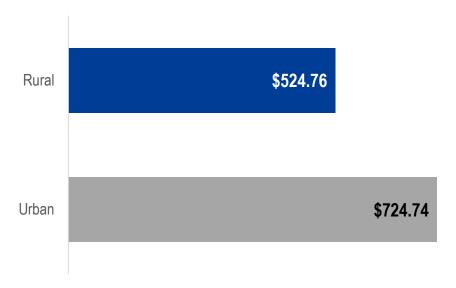
<sup>&</sup>lt;sup>9</sup> https://addletonacademicpublishers.com/contents-aje/195-volume-1-2008/1084-institutions-entrepreneurship-and-regional-differences-in-economic-growth

# **Chapter 15. Capital Expenditures**

Capital expenditures refer to the funds businesses allocate to acquire, upgrade, or maintain tangible assets such as land, buildings, technology, and machinery. These assets are essential to production and long-term operations, enabling firms to maintain efficiency, expand capacity, or pursue growth.

The 2022 Economic Census provides county-level data on capital expenditures in the manufacturing sector. Rural Kentucky manufacturing industries reported \$962,024,000 in capital expenditures, including buildings, structures, machinery, and equipment. This amount represents about one-third of the state total. Urban Kentucky manufacturing industries, by comparison, reported \$1,9 billion in capital expenditures, or roughly two-thirds of the total. The disparity highlights the greater concentration of manufacturing investment in urban areas, although rural areas still account for a significant share. This disproportionate distribution of capital expenditures in manufacturing is reinforced when considering per capita values, as well (Figure 15.1). As the figure illustrates, urban counties report higher per capita capital expenditures (\$725) than rural counties (\$525).

Figure 15.1. Per Capita Capital Expenditures in the Manufacturing Sector for Buildings, Structures, Machinery and Equipment in Rural and Urban Kentucky, 2022



Data Source: U.S. Census Bureau, Economic Census

Capital expenditures differ from operating expenses, which are the day-to-day costs of running a business. Operating expenses include salaries, rent, utilities, and other recurring costs necessary for sustaining operations. While capital expenditures represent longer-term investment, operating expenses capture the ongoing flow of resources through an economy.

Figure 15.2 depicts per capital operating expenses across industry sectors in Kentucky in 2022. In every sector, urban areas reported higher values than rural areas. The health care and social assistance sector had the largest gap, followed by wholesale trade. These differences suggest that not only is capital investment greater in urban Kentucky, but the ongoing cost base of urban business activity is much larger as well.

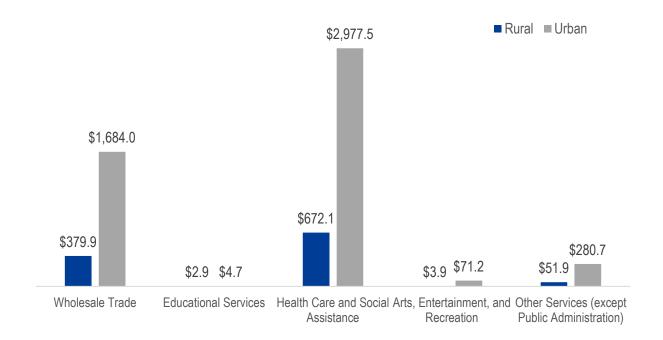


Figure 15.2. Per Capita Operating Expenses in Rural and Urban Kentucky, 2022

Data Source: U.S. Census Bureau, Economic Census, 2022

Capital and operating expenditures provide two perspectives on the economic landscape. Capital expenditures indicate where businesses are making long-term investments in assets, while operating expenses reflect the scale of ongoing business activity.

# **Chapter 16. Shift-Share Analysis of Rural and Urban Kentucky**

Regional economies change composition over time. Some sectors grow, others shrink. These changes may be linked to trends in the national economy (such as a recession or recovery), to local changes, or to a particular industry that may be more concentrated in one area compared to another.

Shift-share analysis decomposes employment change into three effects: national, industry, and local growth. The following tables compare employment growth in Kentucky's rural and urban counties across these three sources of change. The national growth column represents the change that would have occurred within the region (rural or urban) if overall employment had expanded at the national rate. For instance, if the U.S. economy grew by 2 percent and the region had one million jobs, the national shift-share effect would equal 20,000 jobs.

The industrial mix column in Table 16.1 reflects the portion of employment change attributable to each sector of the economy. It measures the number of jobs that would be expected in each region based on national industry growth trends. Industrial mix share is calculated by subtracting the overall national growth rate from the industry-specific growth rate to estimate the additional jobs associated with a region's industry composition. For example, if a region had 100,000 manufacturing jobs and manufacturing grew nationally by 3 percent while the overall economy grew by 2 percent, the industry mix contribution would equal 1,000 jobs (or 1 percent). In essence, the industrial mix component indicates how much a region's employment growth or decline can be explained by the particular industries that make up its economy.

The local effect, or 'local competitiveness,' captures the number of jobs created or lost in each sector beyond what can be explained by the national growth rate and the industry mix of the region. This component is particularly important, as it reflects the unique local factors influencing employment outcomes. While shift-share analysis does not provide a causal explanation for local competitiveness, it does indicate the extent to which a region or industry is performing better or worse than expected.

In the following tables we focus on the last decade (2013-2023), which includes the sharp decline in employment due to Covid-19. Though the economy has been on a growing trajectory since then, some of the industries in Kentucky have experienced losses during this time frame.

Table 16.1. Shift-Share Analysis of Kentucky's Rural Counties, 2013-2023

Industry Title	Actual Growth	National Growth	Industry Mix Share	Local Competitiveness
Agriculture, Forestry, Fishing and Hunting	-2,479	2,946	-5,898	473
Mining, Quarrying, and Oil and Gas Extraction	-8,182	1,860	-7,323	-2,719
Utilities	-181	882	-265	-798
Construction	6,596	4,285	4,522	-2,211
Manufacturing	1,724	11,314	-4,909	-4,681
Wholesale Trade	1,348	2,160	-849	37
Retail Trade	-217	10,229	-5,830	-4,615
Transportation and Warehousing	2,600	3,247	6,488	-7,136
Information	-1,052	1,141	-1,695	-498
Finance and Insurance	-647	1,955	-568	-2,034
Real Estate and Rental and Leasing	788	740	-303	351
Professional, Scientific, and Technical Services	4,920	2,143	1,844	932
Management of Companies and Enterprises	-1	210	57	-268
Administrative and Support and Waste Management and Remediation Services	-2,432	4,373	-3,799	-3,006
Educational Services	-3,224	8,168	-3,717	-7,675
Health Care and Social Assistance	15,019	12,040	4,422	-1,444
Arts, Entertainment, and Recreation	909	819	421	-331
Accommodation and Food Services	5,152	6,323	72	-1,243
Other Services (except Public Administration)	-1,337	3,325	-3,029	-1,634
Public Administration	1,041	5,317	-2,045	-2,231
Unclassified	169	12	-4	161
Total	20,513	83,489	-22,409	-40,567

Data Source: Chmura/JobsEQ 2023

Between 2013 and 2023, Kentucky's rural counties experienced net employment growth of just over 20,000 jobs. However, if these counties had grown at the national employment rate, expected growth would have been 83,489 jobs. The composition of Kentucky's rural economy is underrepresented in nationally expanding industries, resulting in a loss of more than 22,000 jobs attributable to the industry mix effect. The local competitiveness effect further illustrates employment changes after accounting for national growth and industry growth, with rural Kentucky losing approximately 40,500 jobs due to local factors.

Table 16.2. Shift-Share Analysis of Kentucky's Urban Counties, 2013-2023

Industry Title	Actual Growth	National Growth	Industry Mix Share	Local Competitiveness
Agriculture, Forestry, Fishing and Hunting	-943	1,974	-3,027	110
Mining, Quarrying, and Oil and Gas Extraction	-272	216	-460	-29
Utilities	47	707	-415	-245
Construction	15,643	7,496	9,007	-860
Manufacturing	21,058	18,597	-5,470	7,931
Wholesale Trade	5,248	6,671	-2,793	1,371
Retail Trade	1,057	16,796	-15,447	-291
Transportation and Warehousing	40,647	9,658	48,508	-17,519
Information	-4,490	2,571	-2,416	-4,645
Finance and Insurance	-3,574	7,251	1,554	-12,379
Real Estate and Rental and Leasing	3,241	2,241	209	791
Professional, Scientific, and Technical Services	10,437	7,760	7,709	-5,032
Management of Companies and Enterprises	1,849	2,306	1,616	-2,073
Administrative and Support and Waste Management and Remediation Services	-3,413	11,411	-8,451	-6,372
Educational Services	-1,299	13,243	-5,584	-8,958
Health Care and Social Assistance	39,728	21,361	11,249	7,118
Arts, Entertainment, and Recreation	7,703	2,482	1,711	3,510
Accommodation and Food Services	12,560	14,280	-463	-1,258
Other Services (except Public Administration)	-1,897	7,418	-6,163	-3,151
Public Administration	-96	6,320	-2,141	-4,275
Unclassified	242	45	-14	211
Total	143,476	160,802	28,718	-46,045

Data Source: Chmura/JobsEQ 2023

In contrast to the slower rural growth, urban Kentucky created more than 140,000 jobs. Most of the growth was driven by the national growth rate and Kentucky's industry mix. The difference is represented by the local competitiveness. Similar to the rural counties, when considering the local competitiveness, the urban counties had a loss of almost 46,000 jobs. Kentucky's competitive industries, regardless of urban/rural classification include agriculture and real estate. Kentucky's urban areas appear to have a competitive advantage in healthcare, manufacturing, wholesale trade, and arts, entertainment and recreation whereas Kentucky's rural areas appear to have a competitive advantage in professional services and wholesale trade. Tables 16.1 and 16.2 emphasize that the local economic conditions in Kentucky are not necessarily a rural-urban issue. Many of Kentucky's industries underperformed compared to the national averages regardless of rural or urban setting.

# Section 5: Living and Working in the Commonwealth

# **Chapter 17. Commuting Patterns**

Commuting flows provide valuable insight into the residential and labor market patterns of Kentucky counties. Where people live versus where they work shapes both household economies and regional development. In Kentucky, commuting patterns differ sharply between rural and urban areas, reflecting employment opportunities, income levels, and geographic location.

Commuting to work is a significant aspect of daily life for many people, and it plays a crucial role in shaping the dynamics of both urban and rural communities and economics. As expected, many more people are commuting to urban areas than to rural areas. Urban counties, particularly Louisville, Lexington, and Northern Kentucky counties connected to Cincinnati, attract the largest numbers of commuters. The U.S. Census Bureau's OnTheMap data indicate that the top five urban counties collectively have a net inflow of over 210,000 workers, while the top five rural counties report a much smaller inflow of around 25,000. Figure 17.1 depicts the leading counties of residence for workers commuting into the five largest urban areas of the state. This pattern underscores the strong role of urban areas as employment centers, drawing workers from surrounding counties.

12 643 7,423 1 943 9.356 209 18,754 187 858 3.154 666 1.173 13,824 14.926 9,626 5,988 2,030 7,499 3,553 Jefferson 3.042 1,750 4,809 1,213 3.915 20.883 7,225 Warren 2.830 7,724 9,073 1.727 1,999 1,608

Figure 17.1. Top Counties for In-Commuters to Urban Areas of Kentucky

Data Source: U.S. Census Bureau/OnTheMap, 2021

Commuting has important consequences for the distribution of income. When residents of rural counties travel into urban counties for employment, their wages are earned in the city but largely

spent in their home communities. This means that urban counties gain through concentrated job creation, while rural counties benefit from the spending power that commuters bring back to their local economies. Conversely, when rural residents commute outward, the costs of travel (time, fuel, vehicle maintenance) can reduce the net benefit of these earnings, limiting the multiplier effect in rural economies. Table 17.2 identifies the top five rural and urban counties with the highest and lowest net flows of income. A positive value means more income is flowing into a county than out, while a negative value means more income is flowing out than in.

Table 17.2. Top Five Counties with the Highest and Lowest Net Flow of Income Due to Commuting Workers, 2023

Rural County	Net Flow of Income (\$1,000)	<b>Urban County</b>	Net Flow of Income (\$1,000)
Madison	\$574,774	Oldham	\$2,473,890
Anderson	\$444,972	Campbell	\$1,595,339
Nelson	\$433,339	Bullitt	\$1,374,237
Garrard	\$302,588	Shelby	\$793,948
Lincoln	\$270,345	Jessamine	\$730,417
Franklin	-\$952,285	Jefferson	-\$9,998,287
McCracken	-\$701,352	Fayette	-\$3,537,458
Carroll	-\$309,945	Christian	-\$3,285,773
Perry	-\$172,812	Boone	-\$1,013,660
Boyle	-\$170,714	Warren	-\$558,125

Data Source: BEA, 2023

Rural counties such as Madison, Anderson, and Nelson report positive net flows, reflecting their proximity to larger job markets and the ability of residents to bring income back home. By contrast, rural counties such as Franklin, McCracken, and Carroll report negative net flows, suggesting that more of their residents' earnings are tied to jobs outside the county and less income circulates locally. Among the urban counties, Oldham, Campbell, and Bullitt stand out for large positive net inflows, driven by their role as residential communities for workers employed in nearby metropolitan centers. At the other end of the spectrum, Jefferson, Fayette, and Christian counties record negative flows, consistent with their status as major job centers where income is earned but not necessarily all retained in the county.

Overall, rural counties display more variation in commuting-related income flows than urban ones. Many rural counties benefit from their proximity to metropolitan centers like Louisville, Lexington, and Cincinnati, where job opportunities are concentrated. Others, especially those further from metro areas, face persistent income leakage as residents travel longer distances for work. These patterns highlight both the opportunities and challenges of commuting in Kentucky. For rural counties near urban centers, commuting strengthens household incomes and supports local economies. For more remote areas, however, reliance on commuting can limit local economic activity and contribute to population decline. Understanding these patterns is essential for policymakers seeking to strengthen regional labor markets, reduce income leakage, and invest in infrastructure that supports both mobility and local job creation.

# **Chapter 18. Broadband Deployment**

The COVID-19 global pandemic underscored the importance of reliable, high-speed broadband Internet access for work, education, and community engagement. Businesses reap numerous advantages from utilizing broadband, such as enhanced productivity through e-commerce, integrated supply chains, and improved management. Similarly, residential broadband usage brings benefits like streamlined retail operations, reduced commuting, increased home entertainment options, improved healthcare availability, and enhanced access to educational opportunities. Several studies have highlighted the positive impact of broadband access on small business growth and economic development in Kentucky, especially in rural regions. 10,11

According to the 2021 American Community Survey, 23 percent of rural households and 16 percent of urban households in Kentucky lacked internet access. Among households with internet, 83 percent of urban households and 76 percent of rural households had broadband connections. Figure 18.1 illustrates broadband access trends between 2017 and 2021. Urban areas consistently reported higher overall access rates than rural areas, but rural areas experienced slightly faster growth in adoption during this period. In other words, while rural Kentucky lags behind in broadband penetration, its adoption has been catching up gradually.

83% 81% 78% 76% 76% 74% 74% 70% 66% 63% Rural Urban Rural Urban Rural Urban Rural Urban Rural Urban 2017 2018 2019 2020 2021

Figure 18.1. Share of Households with Broadband Access in Kentucky, 2017-2021

Data Source: Author's calculations using data from the U.S. Census ACS

<sup>10</sup> Narine Badasyan & David Shideler & Laura Taylor, 2007. "The economic impact of broadband deployment in Kentucky," Regional Economic Development, Federal Reserve Bank of St. Louis, Nov issue, pages 88-118.

11 David Shideler, Narine Badasyan; Broadband impact on small business growth in Kentucky. *Journal of Small Business and* 

Enterprise Development 26 October 2012; 19 (4): 589-606. https://doi.org/10.1108/14626001211277415

Households with higher incomes, regardless of location, are more likely to subscribe to broadband. Disparities in broadband adoption between rural and urban areas are most pronounced among lower-income households, reflecting the combined effects of affordability constraints, limited device availability, and digital literacy challenges. For higher-income households, the urban–rural divide is less substantial, approximately half that of lower-income populations. Figure 18.2 depicts broadband usage trends, by income level, from 2017 to 2023.

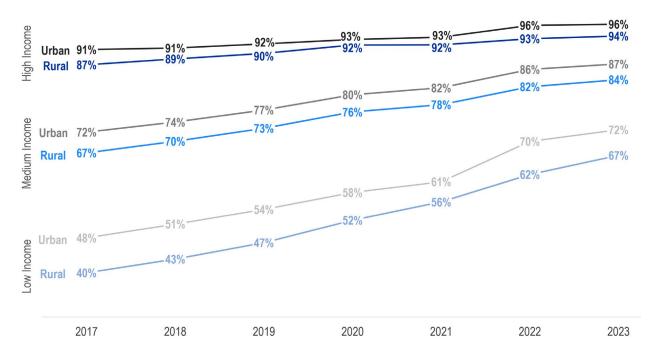


Figure 18.2 Share of Households with Broadband Usage, 2017-2023

Data Source: U.S. Census Bureau/5-yr ACS, 2017-2023

The COVID-19 pandemic underscored the consequences of the digital divide - both between rural and urban areas and across income levels - in ways that researchers and practitioners in rural Kentucky had not fully recognized over the past decade. The limited availability of broadband Internet imposes significant public sector costs, particularly in essential areas such as education, healthcare, and economic development. There have been substantial public investments directed toward rural broadband expansion via grants, loans, and direct support to providers. Yet, after more than a decade of steady growth, broadband adoption rates have largely plateaued, especially among lower-income households and in rural regions.

Rural communities generally have lower levels of household wealth, older populations, and lower educational attainment compared to urban areas. These are factors that are strongly associated with reduced broadband demand. Persistent barriers such as limited perceived value, affordability challenges, inadequate device access, and low digital literacy continue to hinder adoption, despite ongoing infrastructure investments.

### **Chapter 19. Housing Stock**

According to estimates from the U.S. Census Bureau, Kentucky has 2,027,472 housing units, of which approximately 117,000 (5.8%) are vacant, as shown in Table 19.1. Vacancy rates in rural counties (9.4%) are nearly three times higher than those in urban counties (3.2%). Urban areas tend to have an older housing stock, with 23.7% of homes built before 1960, compared to 17.7% in rural counties.

Homeownership is more common in rural Kentucky, where 72.2% of housing units are owner-occupied, compared to 65.6% in urban counties. On average, home values are considerably lower in rural areas—21.3% of rural homes are valued below \$50,000, compared to just 5.3% in urban regions. Conversely, urban areas have a higher share of renter-occupied housing (34.4%) than rural counties (27.8%).

**Table 19.1 Characteristics of Housing Units, 2023** 

	Rural	Urban	
Category	Counties	Counties	Statewide
Housing Units	846,520	1,180,952	2,027,472
Percent Occupied	90.6%	96.8%	94.2%
Percent Vacant	9.4%	3.2%	5.8%
Percent Built in 1960 or Earlier	17.7%	23.7%	21.2%
Occupied Housing Units	766,685	1,143,645	1,910,331
Percent that are Owner-Occupied	72.2%	65.6%	68.3%
Percent that are Renter-Occupied	27.8%	34.4%	31.7%
Percent of Owner-Occupied Units with a Value < \$50,000	21.3%	5.3%	11.7%
Percent of Owner-Occupied Units with Housing Burden	10.4%	3.3%	6.1%

Data Source: U.S. Census, ACS 5-year 2019-2023

Figures 19.1 and 19.2 present the number of new single-family building permits and the Federal Housing Finance Agency's House Price Index (HPI), which tracks changes in single-family home prices. The HPI is derived from sales and refinancing transactions of the same properties and serves as a weighted repeat-sales index, capturing average price movements over time.

As shown in the figures, urban areas have consistently issued more building permits than rural areas. Both urban and rural permitting activity declined sharply between 2006 and 2011, reflecting the effects of the Great Recession. Since then, urban counties have experienced a

stronger recovery than rural counties. Although the gap between urban and rural permits has narrowed slightly since 2005, it remains substantial.

Similarly, urban home prices have remained higher, and have grown more rapidly, throughout the entire period. The price gap between urban and rural areas widened considerably between 2012 and 2020.

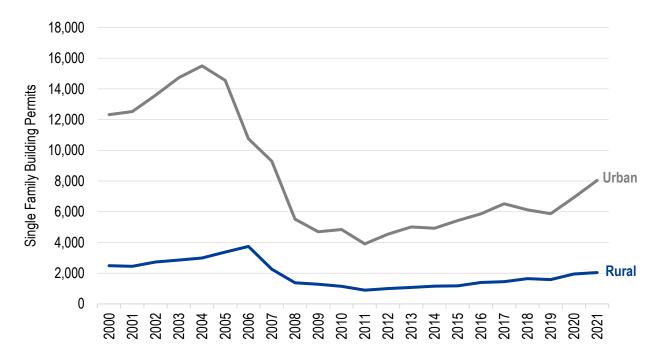


Figure 19.1 Housing Permits, 2000-2021

Data Sources: BLS, FRED, FHFA 2001-2021

In urban counties, single family building permits increased significantly from 2000 to 2005. Between 2005 and 2011, there was a sharp decline, likely due to the 2008 housing crisis, hitting a low around 2011. After 2011, a gradual recovery began. For rural counties, permit numbers remained relatively low and stable compared to urban areas. A modest rise occurred from 2000 to 2006, followed by a declined until 2011. After that, there was a slow but steady recovery, reaching around 2,000 permits in 2021.

The Housing Price Index (HPI) follows a similar trend for urban counties, with a slight decline or stagnation from 2008 to 2012 – reflecting the housing market crash and economic downturn. From 2012 onwards, there is a strong and accelerating increase, especially after 2016. In rural areas there is a gradual increase between 2001 and 2008, followed by a mild dip and stagnation between 2008 and 2014. Like urban areas, prices begin rising again around 2015. The most notable rise occurs between 2020–2021, most likely due to COVID-19 impacts (e.g. remote work driving migration to rural areas), supply constraints or increased demand for space outside cities.

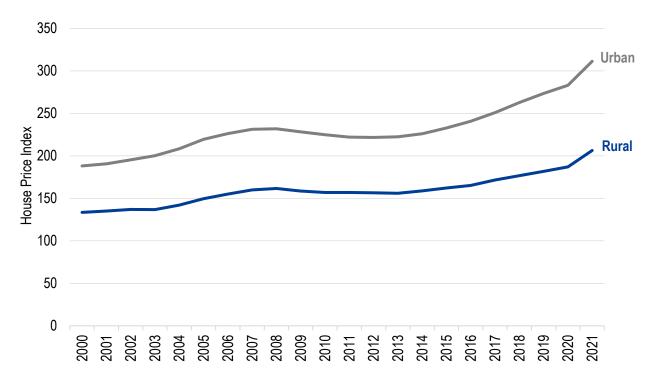


Figure 19.2 Housing Price Index, 2000-2021

Data Sources: FRED, 2000-2021

Considered jointly, these two measures offer insight into whether housing supply is responding to changes in prices and demand. In urban counties, for instance, the House Price Index (HPI) showed strong growth, while building permits declined sharply between 2005 and 2011 and recovered only gradually thereafter. This imbalance likely contributed to housing supply shortages and subsequent price increases after 2012.

Rural areas experienced both lower building permit activity and more modest HPI growth, followed by a sharp increase in prices during 2020–2021. This recent surge may reflect shifting housing preferences during the pandemic and provides a useful basis for evaluating how local housing markets are responding to broader economic and demographic trends.

# **Section 6: Government**

# **Chapter 20. Government Fragmentation**

Kentucky's local government structure comprises counties, municipalities, school districts, and special districts. Any changes in classification require legislative action and cannot be made otherwise. Table 20.1 provides an overview of the local government count in Kentucky. In this context, municipal governments refer to cities. The number of municipalities grew from 313 in 1952 to 435 in 1992, with a slight decrease to 417 in 2022. While Kentucky has 120 total counties, it is important to note that Lexington/Fayette County and Louisville/Jefferson County are categorized as joint county and city and are not counted in "Counties" in Table 20.1, but rather as Municipalities. Kentucky does not have township governments.

Table 20.1. Number and Type of Local Governance in Kentucky, 1952-2022

Kentucky	1952	1962	1972	1982	1992	1997	2002	2007	2012	2017	2022
Counties	120	120	120	119	119	119	119	118	118	118	118
Municipalities	313	365	378	425	435	434	424	419	418	417	417
Townships	0	0	0	0	0	0	0	0	0	0	0
School Districts	232	208	191	180	176	176	176	175	174	173	171
Special Districts	130	179	446	517	590	637	720	634	628	614	601
State Total	796	873	1,136	1,242	1,321	1,367	1,440	1,346	1,338	1,322	1,307

Data Source: U.S. Census Bureau, Census of Governments, 2022

For census purposes, Kentucky distinguishes between county school districts and independent school districts (city), treating them as separate governmental entities. County school districts cover the entire county, excluding any localities within an independent school district. Independent school districts mainly include cities of the first through fifth classes, although certain cities like Louisville and Fayette are served by county school districts. Each school district is governed by an elected board of education. Over time, the number of school districts in Kentucky has experienced a significant decrease, declining from 232 in 1952 to 171 in 2022.

Kentucky's statutes grant authority for the establishment of various special districts or authorities, which are considered as separate governmental entities. These special district governments are independent and serve specific purposes, distinct from school district governments, with significant administrative and fiscal independence from general-purpose local governments. Their primary role is to provide specialized services that are not already offered by existing general-purpose governments. While most special district governments focus on a single function, some are permitted by their enabling legislation to offer multiple, usually related, types of services. To be recognized as a special district government rather than a subordinate agency, an entity must demonstrate three key attributes: organized existence as a separate entity, governmental nature, and substantial autonomy.

Like other states, the number of special districts in Kentucky has experienced a significant increase since the 1950s. However, a decrease in special districts occurred between 2002 and

2022, which can be attributed primarily to the reclassification of school building corporations, which are now considered components of school districts rather than separate special districts. Kentucky includes a wide range of special district governments, such as Ambulance Service Districts, Conservation Districts, Drainage Districts, Fire Protection Districts, Flood Control Districts, Hospital Districts, and Public Library Districts, among others.

### RURAL/URBAN DIFFERENCES

According to Table 20.2, there is a noticeable disparity in the average number of local governments between urban counties (15.9) and rural counties (9.2). However, when we consider the population factor and scale the number of local governments per person, we observe a different trend. Table 20.3 reveals that rural areas have a significantly higher number of local governments per capita compared to urban areas. On average, the number of local governments per 1,000 population is over five times greater in rural areas than in urban areas.

Table 20.2. Average Number of Governments per County in Kentucky, 2022

Per County	Total	Municipalities	Townships	Special Districts	School Districts
State Average	11.1	3.5	0.0	5.1	1.4
Rural Average	9.2	2.4	0.0	4.5	1.3
Urban Average	15.9	6.5	0.0	6.6	1.8

Data Source: U.S. Census Bureau/Census of Governments, 2022; Kentucky Department for Local Government/ SPGE, 2025

Table 20.3. Average Number of Local Governments per Thousand People in Kentucky, 2022

Per 1K People	Total	Municipalities	Townships	Special Districts	School Districts
State Average	0.501	0.160	0.000	0.230	0.066
Rural Average	1.390	0.359	0.000	0.682	0.199
Urban Average	0.256	0.105	0.000	0.106	0.029

Data Source: U.S. Census Bureau/Census of Governments, 2022; Kentucky Department for Local Government/ SPGE, 2025

The structure of local governance in rural areas has important fiscal implications. Because rural areas have a smaller taxpayer base to support each unit of local government, the average cost of providing public services tends to be higher, while the range and quality of services are often lower than in urban areas. This stems from the high fixed costs and administrative overhead inherent in local governance, which must be distributed among a much smaller number of taxpayers in rural counties. For example, every municipal government requires a council, website, and administrative offices, and each school district or special district must cover its own management and operational expenses.

Local governments in Kentucky are granted the authority to impose and collect taxes to support their general operating expenses. The specific types of taxes imposed may vary based on the classification of the local government. Common forms of taxation include levies on trades, personal property, and other ad valorem taxes. These tax revenues are typically utilized to finance a wide range of governmental services. It's important to note that local governments in Kentucky are not permitted to levy income or sales taxes. As a result, they rely on alternative revenue sources, such as property taxes, business- or income-related taxes (such as occupational license tax), intergovernmental revenue, and service charges/fees. Among these, occupational and business license taxes, as well as property taxes, are typically the most significant revenue streams for Kentucky's local governments.

#### LOCAL GOVERNMENT CONSOLIDATION

Concerns over fragmentation have fueled discussions about consolidation. Advocates argue that merging local governments could reduce duplication, improve efficiency, and support regional planning. Consolidation is seen as a potential solution that could lead to more streamlined and effective governance. Despite the long-standing suggestion of government consolidation as a solution for various local government challenges, only a limited number of communities have reached the stage of offering such an option to their voters. Moreover, in most cases where consolidation has been presented to voters, it has been rejected. 13

As of 2022, Kentucky ranked 26th among all states in terms of total number of general and special local governments. The state is predominantly governed by county governments, except for the former county of Fayette. In 1974, Fayette County merged with the City of Lexington to establish a unified governmental entity known as "Lexington-Fayette Urban County." Similarly, in 2003, the city of Louisville and Jefferson County merged to form the Louisville-Jefferson County Metro Government. These consolidated entities are classified as municipal governments rather than county governments in census reporting. <sup>14</sup> When a county and a city undergo consolidation, the governmental and corporate functions of the city are combined with those of the county that encompasses it. This unified government replaces and supersedes the previously existing separate governments of the city and county. <sup>15</sup>

#### INDEPENDENT SCHOOL DISTRICTS

Independent school districts in Kentucky are defined by geographic boundaries that are not based on county lines but instead reflect historical community divisions. These districts levy their own taxes and operate separately from county systems, even though they are subject to many of the same state laws. At the beginning of the 20th century, independent districts were far more common. Their numbers rose from about 200 in 1900 to 388 in 1922, as many towns and small cities chose to maintain local control of their schools rather than merge into county wide districts. A 1908 state law requiring counties to become single districts encouraged

<sup>&</sup>lt;sup>12</sup> Kavanagh SC. Does consolidating local governments work? Government Finance Officers Association. <a href="https://gfoaorg.cdn.prismic.io/gfoaorg/d6e13e48-5380-4c04-9207-ca985d94bbdd">https://gfoaorg.cdn.prismic.io/gfoaorg/d6e13e48-5380-4c04-9207-ca985d94bbdd</a> LocalGovernmentFragmentation-DoesConsolidationWork Nov2020.pdf. Accessed May 2023.

<sup>&</sup>lt;sup>13</sup> Lyons WE. The politics of City-County merger: the Lexington-Fayette County experience. University Press of Kentucky. 2014.

<sup>&</sup>lt;sup>14</sup> U.S. Census. Kentucky Local Governments. <a href="https://www2.census.gov/govs/cog/2007/ky.pdf">https://www2.census.gov/govs/cog/2007/ky.pdf</a>. Accessed May 2023.

<sup>&</sup>lt;sup>15</sup> Kentucky General Assembly. Kentucky Revised Statutes. KRS Chapter 67C.101 Election to approve consolidation of county and city of the first class – Powers, privileges, and jurisdiction of consolidated local government. https://apps.legislature.ky.gov/law/statutes/statute.aspx?id=24002. Accessed May 2023.

further consolidation, but local communities could still opt to keep independent systems. Over the following decades, financial challenges and state laws reduced their numbers—by 1931, only 191 independent districts remained.

In 1934, the General Assembly clarified the distinction between county and independent districts and set a minimum enrollment requirement of 200 students for independents. From that point forward, consolidations gradually continued, sometimes voluntarily as districts faced rising costs, and sometimes by mandate. Court-ordered consolidations also occurred in response to desegregation requirements, such as the mergers in Lexington/Fayette (1967) and Louisville/Jefferson County (1975).

Independent districts have persisted where communities had sufficient resources and strong local commitment to maintain them. As late as the 2000s, voluntary consolidations were still taking place, such as Harrodsburg with Mercer County (2006), Providence with Webster County (2007), and Monticello with Wayne County (2014). Although their numbers have steadily declined - from 232 in 1952 to 173 in 2017 - independent school districts remain part of Kentucky's unique local governance landscape. Under Kentucky law, when an independent district formally requests a merger, the county district must absorb its students and assume responsibility for any debt. 16

<sup>&</sup>lt;sup>16</sup> Timmel KM, Hoppmann GW, Alexander A, et al. Office of Education Accountability. Legislative Commission. Kentucky's independent school districts: A primer. <a href="https://apps.legislature.ky.gov/lrc/publications/ResearchReports/RR415.pdf">https://apps.legislature.ky.gov/lrc/publications/ResearchReports/RR415.pdf</a>. Accessed May 2023.

# **Chapter 21. Local Income and Property Taxes**

Taxation and expenditure policies are fundamental to understanding differences in the quality and capacity of public services across Kentucky's rural and urban regions. These policies shape not only how local governments raise revenue but also how those revenues are distributed and how effectively they can be used to deliver services. Local governments rely on a mix of own-source revenue (such as property and occupational license taxes) and transfers from state and federal governments. The balance between these sources varies greatly across counties, reflecting local tax bases, economic structures, and willingness to tax.

Not all counties levy the same taxes. In addition, for some counties there is a heavy reliance on intergovernmental (federal or state) revenue sources. For this study, we look at two main tax revenue sources for Kentucky counties: income taxes and property taxes. Property tax and income tax are two important sources of revenue for the government of Kentucky. These taxes play a vital role in funding various public services and infrastructure development in the state.

Property tax is a tax levied on the value of real property, such as land and buildings. It is based on the assessed value of the property and is typically collected by local governments. Property tax revenues are used to fund essential services such as education, public safety, and infrastructure maintenance. Property tax rates in Kentucky can vary depending on the location and the type of property. For example, residential properties may have different tax rates than commercial properties. This variation ensures that the tax burden is distributed equitably among property owners based on the value of their properties. On the other hand, income tax is a tax imposed on individuals and businesses based on their income or earnings. The income tax system in Kentucky is structured to provide funding for the state government and its various programs and services. The state levies income tax on individuals and businesses based on their earnings, with different tax brackets and rates based on income levels. By focusing on property taxes and income taxes, we can better understand both the commonalities and the divergences between rural and urban Kentucky.

# **Property Taxes**

Property tax has long been one of the main sources of local government finance in Kentucky. Revenues are tied to the assessed value of land and buildings, making this tax especially sensitive to property wealth and development patterns. Figure 21.1 illustrates the per capita property tax revenues in rural and urban counties from 2015 to 2023, adjusted for inflation.

Urban counties consistently generate significantly higher per capita revenues from property tax than rural counties. This reflects not only higher property values in cities, but also denser development and a broader base of commercial and industrial property. Rural counties, by contrast, have more limited tax bases and, as a result, lower per capita revenues, even when statutory rates are similar or slightly higher.

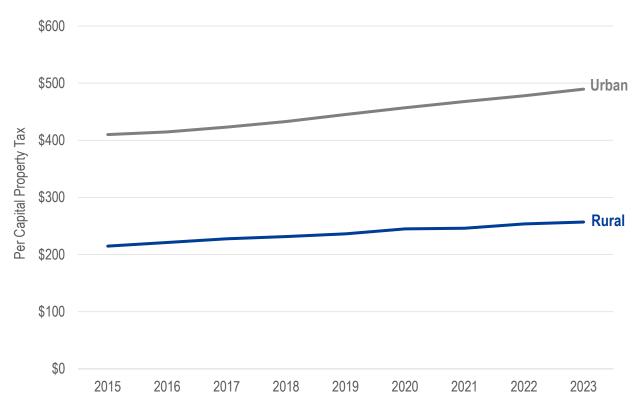


Figure 21.1. Per Capita Property Tax, Adjusted for Inflation, 2015-2023

Data Source: Kentucky Department of Local Government; Fayette and Jefferson Annual Budget reports, U.S. Census

#### **Income Tax**

In addition to property taxes, Kentucky counties rely on income-based taxes, technically classified as occupational license taxes. These taxes are levied on wages, business receipts, or net profits, depending on local policy. Figure 21.2 depicts per capita income tax collections in rural and urban counties from 2015 to 2023. While collections fluctuate over time, urban areas consistently collect substantially more per capita from income taxes, largely because of higher wages and a more diversified employment base. Rural counties, with lower average earnings and fewer high-paying jobs, collect far less from the same tax instruments.

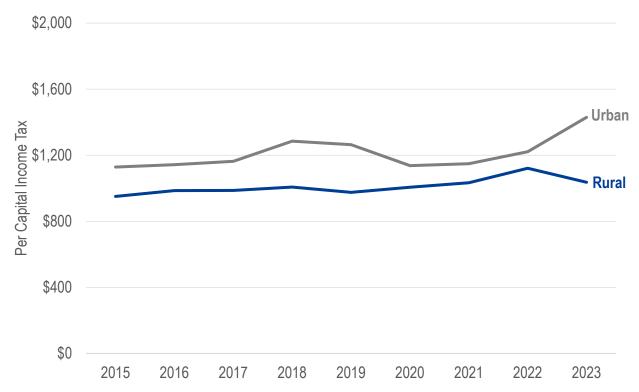


Figure 21.2. Per Capita Income Tax, Adjusted for Inflation, 2015-2023

Data Source: Kentucky Department of Local Government; Fayette and Jefferson Annual Budget reports, U.S. Census

#### Tax Capacity and Yield

In 2023, the property tax rates in Kentucky ranged from 3.2 to 44 cents per \$100 of assessed value, while income tax rates ranged between 0.50% and 2.25% <sup>17</sup>. Yet looking at per capita tax revenues highlights a persistent gap between rural and urban counties. Urban areas consistently generate more per person from both property and payroll-based taxes (see Figures 21.1 and 21.2). This pattern indicates a more robust economic base in urban counties, supported by higher property values, expanded development, larger payrolls, and higher wage levels.

<sup>&</sup>lt;sup>17</sup> Kentucky Association of Counties, https://kaco.org/

The tax base is the key driver of tax capacity and, ultimately, revenue. For property taxes, it is tied to assessed property values. Urban counties have higher-value land and denser development, and thus, higher tax revenue capacity. Rural counties, by contrast, may apply similar tax rates to urban counties, but their lower property values and dispersed land uses translate into much smaller yields.

The same dynamic applies to income taxes. Capacity here depends on the aggregate payroll base—total wages paid within the county. Urban counties benefit from higher wages, larger workforces, and more diverse industries, which expand the base. Rural counties face weaker payrolls, fewer high-paying jobs, and more limited business activity. Even at the same rate, their collections lag far behind.

In Kentucky, rural governments face a structural disadvantage: lower property values and smaller payrolls limit their capacity, and therefore their yield, even when their tax rates are on par with, or slightly higher than, those in urban counties. Addressing this structural imbalance requires strategies that either expand rural tax bases or provide compensating revenue streams. Expanding the base means fostering higher property values and stronger payrolls through targeted economic development, infrastructure investment, and workforce training. At the same time, compensating mechanisms such as enhanced state aid, regional revenue-sharing, or specialized local revenue tools can help offset capacity gaps.

#### **Summary and Conclusions**

This report examines the economic, demographic, and social conditions of rural and urban Kentucky through a county-level lens highlighting rural-urban differences. Drawing on Census, Bureau of Economic Analysis, Bureau of Labor Statistics, and other federal and state data sources, the report summarizes trends in population, income, employment, industry mix, housing, infrastructure, taxation, and governance. The chapters highlight both the distinct challenges and the shared opportunities faced by rural and urban areas, with an emphasis on how these differences shape Kentucky's overall growth. The picture is one of contrasts. Kentucky's economy is moving forward, but not all parts of the state are sharing equally in that progress. The analysis illustrates a pattern familiar to many states with a mix of metropolitan and rural counties: population growth and economic expansion are concentrated in urban centers, while rural areas struggle to keep pace. This divide is not absolute - rural counties Rural Kentucky outperforms urban in homeownership, affordability, manufacturing concentration, natural resource industries, and in some instances in per capita income growth.

Population dynamics are at the base of this story. Urban counties continue to grow, while some of the rural counties faces stagnation or decline. However, some rural counties gained residents during the pandemic years as remote work made rural living more feasible, but these gains were modest compared to the longer-term trend of population changes. The demographic composition also diverges - rural areas tend to have older, less diverse, and less educated populations. These differences shape labor market participation, educational attainment, and ultimately income levels.

The economic data reinforce this pattern. Kentucky's rural economy remains an important contributor, representing close to one-third of the state's gross domestic product. Yet the growth rates over the past two decades favor urban counties. Urban Kentucky has diversified into professional services, healthcare, logistics, and technology, while rural economies remain more dependent on manufacturing, retail trade, and agriculture. Manufacturing remains productive but has not been able to sustain employment, leaving rural counties especially vulnerable to plant closures and automation. Agriculture continues to define much of rural life and culture, but as a share of GDP and employment, it is modest compared to other industries.

Services and logistics have become the growth engines of Kentucky's economy. Health care and social assistance now employ more Kentuckians than any other sector, and logistics has surged thanks to Kentucky's location as a transportation hub. These sectors bring opportunities but also risks. Many service-sector jobs are low-wage and at high risk of automation. Logistics jobs pay relatively well but are concentrated in urban corridors, reinforcing the imbalance between rural and urban labor markets. For rural counties, the challenge lies in accessing these growth industries while maintaining the viability of traditional sectors such as agriculture and small-scale manufacturing.

Per capita income has risen across the state, and some rural counties recorded increases of more than 50 percent over the past decade. Still, disparities remain. Urban residents on average earn more, and the connection between education and income is evident in both rural and urban settings. Counties with higher shares of college-educated residents also report higher per capita incomes, highlighting education as an important determinant of long-term prosperity. Without targeted investment in human capital, rural areas may find it increasingly difficult to compete in a knowledge-based economy.

Infrastructure and housing conditions also play a decisive role in shaping these outcomes. Broadband access remains uneven, with rural households lagging behind in both availability and adoption. Housing vacancy rates are nearly twice as high in rural counties, and building new housing is less profitable due to lower demand and higher construction cost ratios. These structural disadvantages discourage new investment and limit the ability of rural areas to attract and retain residents. At the same time, the housing markets in urban areas face their own pressures, with rising prices and affordability concerns shaping household decisions.

Local governance and taxation add another layer of complexity. Kentucky's system of counties, municipalities, school districts, and special districts creates a fragmented landscape. In rural areas, the costs of multiple overlapping governments are spread across a smaller taxpayer base. Property taxes form a more significant portion of rural government revenues, while urban counties rely more heavily on occupational income taxes. This imbalance reflects differences in economic structure and capacity but also underscores the fiscal challenges facing rural governments as they attempt to deliver services with limited resources.

The findings from this report point toward several important implications. First, the economic health of rural communities is tied to the overall health of the state, but Kentucky cannot rely solely on its urban growth for progress. Second, investments in education, broadband, housing, and infrastructure are critical levers for closing the rural—urban gap. These investments would not only improve quality of life but also enhance the ability of rural communities to participate in emerging sectors such as healthcare, logistics, and advanced manufacturing. Third, local government capacity must be strengthened. Fragmentation, limited tax bases, and heavy reliance on state and federal transfers undermine rural service delivery. Addressing these issues requires a thoughtful balance between consolidation where appropriate and targeted support for local autonomy where needed.

Ultimately, the findings of the report indicate that disparities in GDP growth, educational attainment, and infrastructure access will persist without targeted investments, while evidence-based policies in these areas could strengthen the role of rural regions in Kentucky's overall economic performance.