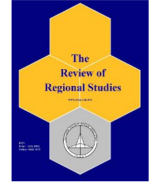




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The Contribution of Micropolitan Areas to a State's Economy: A Shift-Share Case Study for Kansas*

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Abstract: Using Kansas as a case study and employing shift-share analysis, this paper examines the economic performance of a state's micropolitan areas, relative to that state's metropolitan areas. Employment and output data are examined for the period 2010 through 2022. To smooth out the various external shocks and cyclical fluctuations of this extended period, five-year estimated averages for 2006-2010 and 2018-2022 for industry-level employment were used to calculate the growth rates for the shift-share components. The results indicate that both micropolitan and metropolitan areas in Kansas grew more slowly than the overall national average due to the existing mix of industries. While this effect was considerably worse for micropolitan areas, the allocation effect indicates that micropolitan areas were more specialized in industries favorable for future growth, while metropolitan areas were specialized in unfavorable industries. This suggests that smaller cities in Kansas may be relatively more responsive to structural changes in local economies. The shift-share analysis also revealed that Kansas micropolitan areas are as diverse as the state's metropolitan areas, and, therefore, economic development efforts must be tailored to each area's specific economic circumstances.

Keywords: micropolitan, metropolitan, employment, industry mix, regional analysis

JEL Codes: R11, R12, R58

1. INTRODUCTION

In many respects, the economic history of the United States is one of increasing urbanization first initiated by the industrial revolution of the nineteenth century. Over the past two hundred years, American workers living in large cities have enjoyed measurable wage premiums relative to their counterparts in smaller towns and rural areas (Boustan et al., 2018) due to

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the productivity enhancements of agglomerated work environments. Even though the information and technological revolutions of the late twentieth and early twenty-first centuries have significantly weakened the requirement of place-bound work in many industries, large metropolitan cities still dominate the landscape of the American economy. However, since the 1970s, overall migration patterns have, in general, exhibited a positive net flow from metropolitan to nonmetropolitan areas (Rupasingha et al., 2015). This long-run trend of workers moving out of traditional city centers and suburbs into exurbs and smaller communities was exasperated due to the Covid pandemic and remains an ongoing phenomenon at the national level (Haslag and Weagley, 2023; Spell and Perry, 2024). While various factors contributed to this phenomenon during the Covid era, the extent to which the longer-run trend will endure is unknown (Rebhun and Brown, 2025). The significant duration of the trend calls for greater attention to the often-overlooked economic importance of smaller cities located outside of traditional metropolitan areas—specifically, those classified as micropolitan.

The United States Office of Management and Budget (OMB), which determines the official classification of the nation's geographic areas, first defined micropolitan areas in 2003 to distinguish the economic and sociological importance of smaller cities from those of both metropolitan and rural areas (Brown, Cromartie & Kulcsar, 2004). The OMB's operational definition, employed by a variety of governmental statistical agencies, clearly places micropolitan areas as those communities somewhere in between:

Micropolitan statistical areas consist of the county or counties (or equivalent entities) associated with at least one urban cluster of at least 10,000 but less than 50,000 population, plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting ties. (US Census Bureau, 2024).

As of 2022, there were 543 micropolitan areas that met this definition (Bureau of Economic Analysis, 2024). These micropolitan areas are spread across the nation—only three states (Delaware, New Jersey, and Rhode Island) and the District of Columbia do not have a micropolitan area. As seen in Table 1, the number of micropolitan areas within each state is roughly related to each state's geographic size and overall population. However, a number of highly urbanized, high-population states, such as California and Florida, have few micropolitan areas relative to their overall populations. Texas, home to two of the nation's largest metropolitan areas (Dallas-Fort Worth and Houston), has the most micropolitan areas with 46. The median number of micropolitan areas is nine per state.

Sparsely populated states with agricultural-based economies, such as Wyoming and Montana, tend to have relatively higher percentages of their population living in micropolitan areas. Significant clusters of micropolitan areas are found throughout the southern and midwestern states. As seen in Table 1, micropolitan areas in these regions often account for a substantial percentage of a state's overall population. Across all states, the median percentage of the state population living in a micropolitan area is approximately 11 percent.

Since the advent of the micropolitan area definition two decades ago, a small number of academic studies focusing on the nature and characteristics of these population centers

Table 1: Number and Population of Micropolitan Areas by State, 2022

State	State Population	Micropolitan Areas	Micropolitan Population	Percent of State Population
Alabama	5,073,903	13	748,914	14.76
Alaska	733,276	2	45,426	6.19
Arizona	7,365,684	4	250,110	3.40
Arkansas	3,046,404	15	597,399	19.61
California	39,040,616	8	572,039	1.47
Colorado	5,841,039	10	408,382	6.99
Connecticut	3,608,706	1	186,116	5.16
Delaware	1,019,459	0	0	0.00
District of Columbia	670,949	0	0	0.00
Florida	22,245,521	7	371,055	1.67
Georgia	10,913,150	23	1,080,895	9.90
Hawaii	1,439,399	2	280,125	19.46
Idaho	1,938,996	7	314,540	16.22
Illinois	12,582,515	16	777,923	6.18
Indiana	6,832,274	26	1,061,950	15.54
Iowa	3,199,693	15	498,204	15.57
Kansas	2,936,716	15	502,481	17.11
Kentucky	4,511,563	16	931,278	20.64
Louisiana	4,588,023	9	410,865	8.96
Maine	1,389,338	1	125,540	9.04
Maryland	6,163,981	2	70,658	1.15
Massachusetts	6,982,740	1	20,868	0.30
Michigan	10,033,281	17	990,161	9.87
Minnesota	5,714,300	17	737,988	12.91
Mississippi	2,938,928	19	964,906	32.83
Missouri	6,177,168	17	676,595	10.95
Montana	1,122,878	4	359,397	32.01
Nebraska	1,968,060	9	327,353	16.63
Nevada	3,177,421	6	264,975	8.34
New Hampshire	1,399,003	5	552,727	39.51
New Jersey	9,260,817	0	0	0.00
New Mexico	2,113,476	15	627,598	29.70
New York	19,673,200	14	963,679	4.90
North Carolina	10,695,965	22	1,367,305	12.78
North Dakota	778,912	5	192,626	24.73
Ohio	11,759,697	31	1,818,480	15.46
Oklahoma	4,019,271	17	748,994	18.64
Oregon	4,239,379	12	618,116	14.58
Pennsylvania	12,972,091	17	1,061,717	8.18
Rhode Island	1,093,842	0	0	0.00
South Carolina	5,282,955	8	444,422	8.41
South Dakota	909,869	9	243,612	26.77
Tennessee	7,048,976	17	911,936	12.94
Texas	30,029,848	46	1,722,820	5.74
Utah	3,381,236	4	199,796	5.91
Vermont	647,110	3	157,806	24.39
Virginia	8,679,099	3	204,842	2.36
Washington	7,784,477	9	610,084	7.84
West Virginia	1,774,035	6	362,560	20.44
Wisconsin	5,890,543	11	778,370	13.21
Wyoming	581,629	7	268,853	46.22
United States	333,271,411	543	27,432,486	8.23

Note: Bureau of Economic Analysis (2024).

have been conducted by economists and regional scientists. However, to date, the economic literature is almost exclusively *inwardly focused* on micropolitan area activity and outcomes. For example, researchers have examined how the population and employment within micropolitan areas grow and change over time (Mulligan and Vias, 2006; Davidsson and Rickman, 2011; Davidsson, 2012), how micropolitan area characteristics impact wages and quality of life (Weinstein et al., 2022), as well as the conditions surrounding micropolitan housing affordability (Lang and Danielsen, 2008), health outcomes (Peng et al., 2021), and entrepreneurial activity (Liu et al., 2020) within micropolitan areas. While additional studies examine the external impact of macroeconomic conditions and the business cycle on the economic performance of micropolitan areas (Cortes et al., 2015; Cortes, 2021), the impact of micropolitan economic outcomes on regional and state-wide economic development has not been studied to date. Furthermore, the extant literature does not theoretically advance, or empirically describe, how micropolitan and metropolitan areas are expected to differ in their relative macroeconomic contributions. In this paper, we examine the economic performance of a state's micropolitan areas, relative to that state's metropolitan areas, within the context of the state's overall economic performance. To address this issue, we undertake a shift-share analysis using the state of Kansas and the latest available data as a case study.

As a case study, our analysis is not intended to be a definitive examination of how a state's micropolitan areas impact its broader overall economy. Rather, it is intended as an exploratory study to investigate how micropolitan areas perform relative to metropolitan areas within the context of a relatively representative and stable state economy. As noted in the discussion above, the sparse academic literature on micropolitan areas has yet to address the macroeconomic contributions of these small urban areas and their roles within the broader economy. We recognize the inherent limitations of a case study using a single state; however, we believe that Kansas is a representative¹ midwestern state that shares many characteristics in common with several other states that are home to significant numbers of micropolitan areas. Obviously, every state possesses its own unique cultural, political, and economic characteristics and much work needs to be done to determine what economic commonalities are shared by micropolitan areas across the nation. Thus, the shift-share analysis presented here is only a first step. By calling attention to this gap in the literature, we hope this paper stimulates additional work.

2. BRIEF OVERVIEW OF KANSAS ECONOMY

The state of Kansas is centrally located in the United States and is often dismissed as “flyover country” by those on the East and West Coasts. However, while historically known as an agricultural state, today Kansas has a diversified economy reflecting a broad mix of production and service industries. Originally home to a number of Native American tribes whose economy was based on hunting and small-scale agriculture, since the time of its admission to the United States in 1861, the economic history of Kansas parallels that of the nation as a whole. Founded by settlers and immigrants who relied on farming and

¹The degree to which Kansas is viewed as representative of the U.S. is ingrained in the American vernacular phrase “we aren’t in Kansas anymore” which is commonly expressed when someone finds themselves in an unusual location or situation.

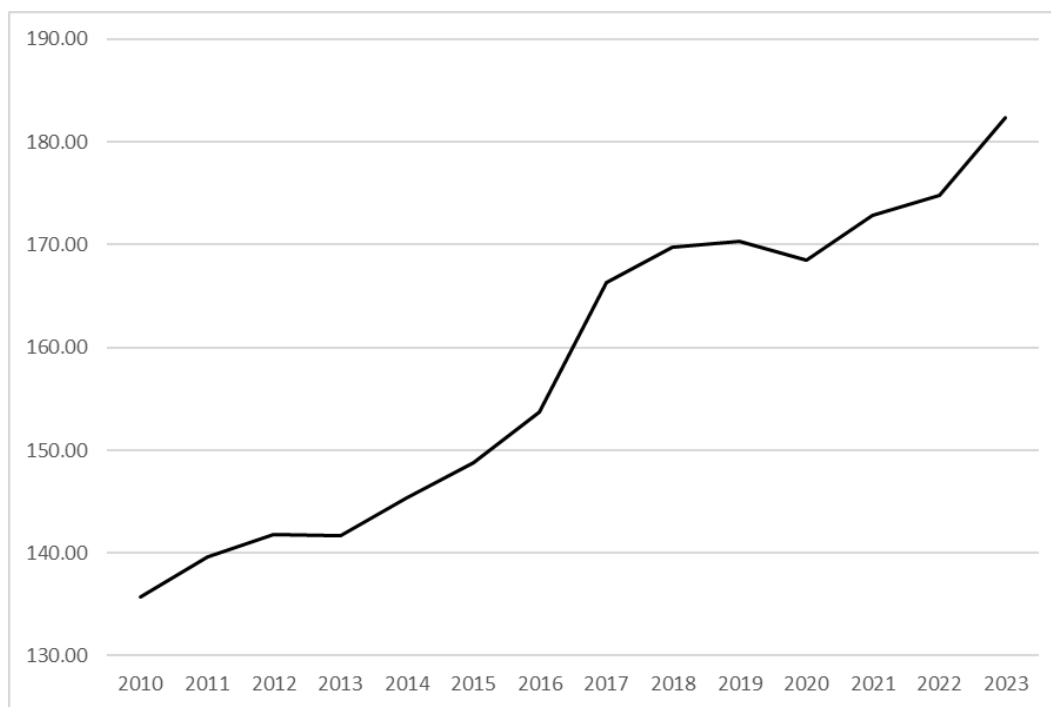
ranching for sustenance, small villages grew over time as transportation networks developed to link rural areas with larger markets to sell their surplus (Shortridge, 1995). In Kansas, the development and expansion of railroads played an outsized role in determining the location of settlements that ultimately grew into towns and urban areas. Several key railway stops, in proximity to existing overland trails, served the cattle trade and mining industries and eventually birthed major cities such as Wichita and Topeka (Shortridge, 2004).

Given its agricultural roots, small towns have been a pervasive characteristic of Kansas throughout its history. Today, approximately 83% of the state's population lives in one of the state's 625 incorporated cities; however, more than 500 of these cities have a population of less than 2,000 (Rashid, 2025). Over the past century, as technological advances shifted the agricultural industry from a dependence on many small farms to a reliance on fewer but larger-scale farms,² the economy of nonmetropolitan areas necessarily diversified, and populations tended to shift to larger towns and cities. While many rural counties in Kansas continue to lose population, a significant proportion of the population now lives in non-rural areas. (Refer to Rumney (2020) regarding the vast literature documenting and exploring the historical shifts in the rural and urban geography of Kansas.) Using the OMB definitions, today, only about 30 percent of the overall Kansas population lives in a rural area (University of Kansas, Institute for Policy and Social Research, Data Library, 2025).

While not dominating the economy as it once did, due to the geographic region and climate, agriculture has historically been a key industry for Kansas, having over 45 million acres of farmland according to the Kansas Department of Commerce (Kansas Department of Commerce, 2024). Today, Kansas remains the nation's top producer of wheat and sorghum and is often known as the "Wheat State" or "Breadbasket of the World" (Melgares, 2021), and is one of the leading cattle-producing and beef-processing states in the nation (US Department of Agriculture, 2025a). Due to the prevalence and importance of agriculture, the state's large manufacturing sector attracts producers in the fields of animal health, food processing, and biosciences, all of which have seen significant growth in recent years (Kansas Department of Commerce, 2024).

The modern Kansas economy is not solely dependent on agriculture and agricultural-based industries. Notably, logistics and distribution are key industries benefiting from the geography and central location of the state. Kansas has the sixth largest rail network in the nation, with 4,748 miles of rail (Association of American Railroads, 2023). Additionally, there are nine interstate highways in Kansas, enabling 85 percent of the U.S. population to be accessible with less than a two-day drive (Kansas Department of Transportation, 2024). A diverse set of manufacturers benefits from the state's location and logistics advantages. This is especially true for the aviation industry. Wichita, located in south central Kansas, is known as the "Air Capital of the World" due to its historical ties to the development of aviation in the early to mid-twentieth century (Kansas Sampler Foundation, 2025). Several major aviation manufacturers remain headquartered with multiple production facilities in the state. The institutions of higher education in Kansas naturally focus their research and teaching on producing a skilled workforce to support the state through strong programs in business, agriculture and related sciences, and aerospace and energy.

²In 1920, Kansas had more than 165,000 farms with an average size of 272 acres. By 2024, the number of farms had fallen to 55,5000 with an average size of nearly 807 acres (US Department of Agriculture, 2025b).

Figure 1: State of Kansas Real GDP, 2010-2023

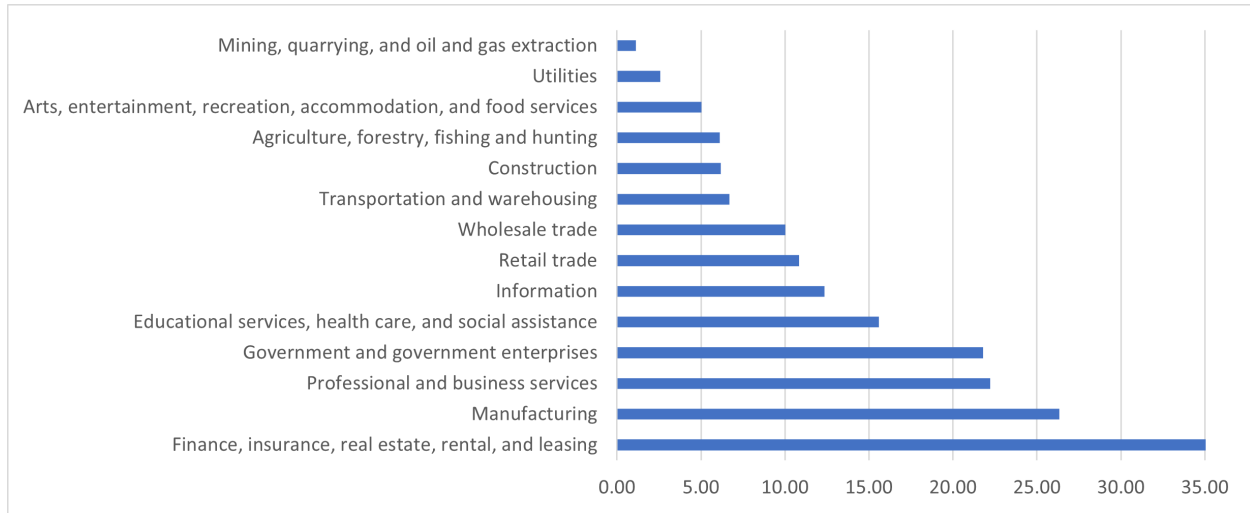
Note: Bureau of Economic Analysis (2024).

Figure 1 reveals the Kansas economy has shown relatively stable and steady annual growth in real state GDP over the past several years, with the exception of the Covid pandemic period. Between 2010 and 2023, real Kansas GDP rose from \$135.7B to \$182.4B, a cumulative increase of 34.4% (Bureau of Economic Analysis, 2024). Figure 2 shows the contribution to real state GDP by industrial sector for 2023. The largest sector is the finance, insurance, and real estate (FIRE) area with approximately \$35B in real output, followed by manufacturing with more than \$26B in contributions to real state GDP. Manufacturing is next, followed in importance by the professional and business services sector and the governmental sector. Together, these top four industrial sectors account for more than half of the state's GDP. What was historically an important economic component of the state's economy, the mining and extraction area is today the smallest industrial sector in Kansas with \$1.12B value of production.³

Table 2 presents the 2018-2022 five-year averages of selected demographic and economic characteristics for the state's micropolitan and metropolitan areas. When added together, the overall working-age population (ages 16 and above) of the micropolitan areas totals nearly 400,000. Thus, if aggregated together and considered as one economic region, the micropolitan areas would be the third largest economic entity in Kansas, with a working-age population base between that of Wichita and Topeka. As expected, the table reveals variations within and across the micropolitan and metropolitan areas. For example, while Kansas micropolitan areas overall reported a lower average unemployment rate than metropolitan

³For our shift-share analysis the mining, quarrying, and oil and gas extraction sector has been combined with the agriculture, forestry, fishing, and hunting sector.

**Figure 2: Contributions by Industrial Sector to State of Kansas
Real GDP, 2023**

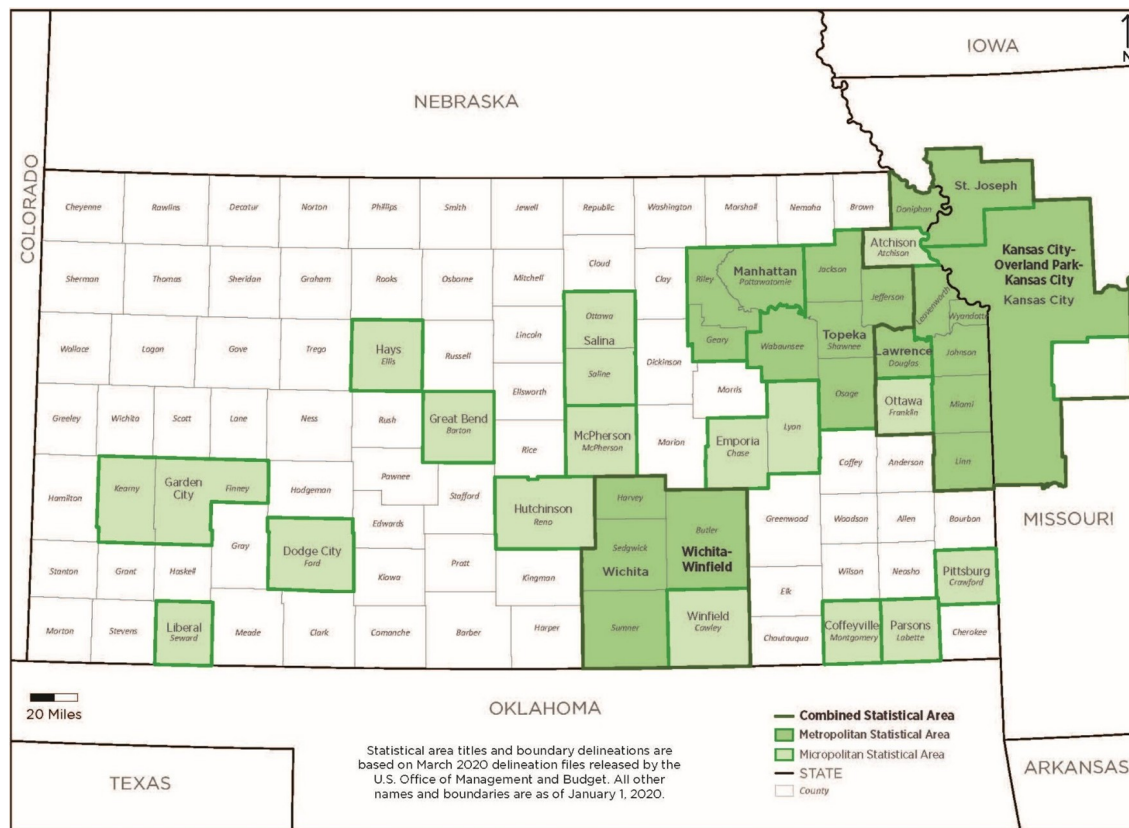


Note: Bureau of Economic Analysis (2024).

**Table 2: Selected Demographic and Economic Characteristics:
Five-Year Averages, 2018-2022**

Region	Population (16+)	LFPR	Unemp. rate	Poverty rate	White	Population (25-64)	Population (65+)	Median Household Income	Mean Household Income
United States	266,411,973	0.635	0.053	0.125	0.614	0.645	0.205	75,149	105,833
Kansas	2,315,454	0.662	0.040	0.116	0.768	0.625	0.207	69,747	94,263
Metropolitan	2,723,586	0.660	0.044	0.135	0.779	0.647	0.195	66,576	87,362
Kansas City	1,729,804	0.681	0.042	0.100	0.735	0.665	0.195	78,827	104,372
Wichita	503,344	0.655	0.050	0.128	0.729	0.641	0.201	66,643	88,511
Topeka	185,487	0.626	0.039	0.117	0.792	0.620	0.237	65,665	84,919
Manhattan	106,559	0.704	0.043	0.183	0.746	0.544	0.129	61,270	79,760
Lawrence	99,980	0.704	0.048	0.163	0.787	0.541	0.157	66,153	89,488
St. Joseph	98,412	0.591	0.044	0.118	0.852	0.633	0.217	60,896	77,121
Micropolitan	398,843	0.652	0.036	0.141	0.767	0.604	0.214	59,354	76,123
Hutchinson	49,794	0.616	0.042	0.123	0.846	0.607	0.250	57,390	74,762
Salina	47,735	0.665	0.036	0.144	0.834	0.621	0.234	61,030	78,891
Pittsburg	31,438	0.647	0.039	0.209	0.871	0.548	0.193	49,779	67,083
Garden City	31,014	0.694	0.051	0.131	0.456	0.644	0.160	68,481	85,151
Emporia	27,909	0.673	0.026	0.157	0.739	0.559	0.197	56,068	72,289
Winfield	27,471	0.587	0.053	0.140	0.806	0.602	0.233	55,726	74,917
Dodge City	25,230	0.703	0.032	0.119	0.423	0.656	0.154	67,997	81,063
Coffeyville	24,990	0.577	0.047	0.169	0.798	0.605	0.244	51,513	66,032
McPherson	24,507	0.654	0.021	0.106	0.906	0.577	0.242	71,250	82,937
Hays	23,473	0.737	0.033	0.153	0.896	0.556	0.187	59,665	88,751
Ottawa	20,706	0.651	0.026	0.083	0.906	0.634	0.217	68,217	81,761
Great Bend	20,101	0.644	0.041	0.145	0.832	0.601	0.263	54,634	72,632
Parsons	15,748	0.598	0.024	0.152	0.862	0.617	0.250	56,143	71,778
Liberal	15,730	0.700	0.027	0.136	0.332	0.670	0.141	57,131	72,107
Atchison	12,997	0.630	0.045	0.145	0.889	0.559	0.213	55,281	71,685

Note: U.S. Census Bureau (2023).

Figure 3: Map of Kansas Micropolitan and Metropolitan Areas

Note: U.S. Census, Population Division (2021).

areas, they experienced a higher poverty rate. Also, the population base for micropolitan areas tended to be older than that of the metropolitan areas. Perhaps most significantly, household incomes were significantly lower in the smaller micropolitan areas relative to the larger metropolitan areas. In fact, the table reveals a 12% income advantage for Kansas households in metropolitan areas.

As seen in Table 1 and Table 2, Kansas has a total of 15 micropolitan statistical areas⁴ (more than the national mean of 11) with a combined overall population (all ages) of 502,481, comprising 17.11% of the state population (again, more than the national mean that stands at 13.05%). As shown in Figure 3, these micropolitan areas are not clustered but widely distributed throughout the state. Micropolitan areas are found throughout the state's various geographic and cultural areas except for the northwest corner, which is a sparsely populated and rural agricultural area on the Great Plains. Each micropolitan area has its own unique set of characteristics and economic histories. Due to the diversity of industries and their natural densities and dispersions within the state, and the relatively higher than average number and population share for micropolitan areas, Kansas is a useful case study for examining

⁴Five Kansas counties (Leavenworth, Wyandotte, Johnson, Miami, and Linn) are included in the Kansas City MO-KS metropolitan area. The St. Joseph, MO-KS metropolitan area consists of four counties: three in Missouri (Andrew, Buchanan, and DeKalb) and one in Kansas (Doniphan). We include both the Kansas City and St. Joseph metropolitan areas in our analysis for completeness.

the relative differences between micropolitan and metropolitan statistical areas on a state's economy.

3. ANALYSIS

Shift-share analysis decomposes growth in employment (or some other time-varying metric) into component parts and thus allows for a better understanding of the challenges and opportunities facing each region's prospects for employment growth. Shift-share analysis does not reveal the causation of the growth over time but reveals the relative conditions under which the growth occurs (Grimes and Ray, 1988). It also sheds light on the relative contribution each micropolitan region's economy makes to the overall state economy.

The standard or classical shift-share analysis breaks up a region's growth into a national effect, an industry mix effect, and regional share effect:

$$\sigma_{ij} = G_{ij} + N_{ij} + R_{ij} \quad (1)$$

The widely adopted (Esteban-Marquillas, 1972) formulation enhances the classical shift-share formulation by separating the industry mix effect from the regional share effect and does so by breaking the regional share component into a competitive effect and allocation effect, leaving the national and industry mix effects unchanged.

The model specification of the Esteban-Marquillas shift-share technique is as follows:

$$\sigma_{ij} = G_{ij} + N_{ij} + C_{ij} + A_{ij} \quad (2)$$

where σ is the addition to employment, e , in industry i , region j , and period t . Following standard notation, a lower-case e represents employment for a sub-region within the United States, in this case the state of Kansas and its micropolitan and metropolitan areas, and E represents employment for the United States. The national growth effect, G , is the addition to regional employment attributed to the national growth rate in total employment. The industrial mix effect, N , is the addition to regional employment attributed to the industry's growth rate at the national level. The competitive effect, C , is the addition to regional employment attributed to the difference between the region's industry growth rates and the nation's industry growth rates if the region had the same distribution of employment as the nation. The allocation effect, A , is the addition to regional employment attributed to the difference between the region's industry growth rates and the nation's industry growth rates according to the region's degree of specialization in its industries.

The calculations for each effect are as follows:

$$\sigma_{ij} = e_{ij,t} - e_{ij,t-1} \quad (3)$$

$$G_{ij} = e_{ij,t-1} \left(\frac{E_t - E_{t-1}}{E_{t-1}} \right) \quad (4)$$

$$N_{ij} = e_{ij,t-1} \left[\left(\frac{E_{i,t} - E_{i,t-1}}{E_{i,t-1}} \right) - \left(\frac{E_t - E_{t-1}}{E_{t-1}} \right) \right] \quad (5)$$

$$C_{ij} = h_{ij,t-1} \left[\left(\frac{e_{i,t} - e_{i,t-1}}{e_{i,t-1}} \right) - \left(\frac{E_{i,t} - E_{i,t-1}}{E_{i,t-1}} \right) \right] \quad (6)$$

$$A_{ij} = (e_{ij,t-1} - h_{ij,t-1}) \left[\left(\frac{e_{i,t} - e_{i,t-1}}{e_{i,t-1}} \right) - \left(\frac{E_{i,t} - E_{i,t-1}}{E_{i,t-1}} \right) \right] \quad (7)$$

$$h_{ij,t-1} = e_{j,t-1} \left(\frac{E_{i,t-1}}{E_{t-1}} \right) \quad (8)$$

Interpreting the components can often be a challenge. If σ is positive, then the region's employment grew over the period of time being investigated. A positive G indicates a positive national growth rate. If $\sigma > G$, then the region's share of national employment is growing, and vice versa. A positive N indicates an advantageous distribution of industries that are growing fast in the United States generally; a positive C indicates that the region's industries are growing faster than those same industries at the national level; and a positive A indicates the region owns a higher share of employment in those industries with faster regional growth or a lower share of employment in those industries with slower regional growth, or, stated another way, the region specializes in industries in which it enjoys a competitive advantage over the national industries.

The following shift-share analysis employs data from the American Community Survey (US Census Bureau, 2023) for the years 2010, the earliest single year available for the micropolitan areas of Kansas, and 2022, the most recent year available. Five-year estimated averages for the periods 2006-2010 and 2018-2022 for industry-level employment were used to calculate the shift-share components, as one-year estimates are not available for micropolitan areas.⁵ One-year estimates from 2023 were used for demographic and economic characteristics. It is important to note that the base period averages contain within them the employment levels during the pre-financial crisis bubble as well as the post-financial crisis crash, while the terminal period averages contain within them the pre-COVID-19 induced economic crisis, the crash in employment during the pandemic, and the quick rebound during its recovery. Kansas was relatively sheltered from the worst effects of both crises, and the five-year estimates smooth out the severity of each period's unique shocks. The goal of this analysis is to examine a long period of economic growth rather than to explore the effects of the business cycle.⁶ Two-digit North America Industrial Classification System (US Census Bureau, 2022) codes were used for classifying industrial sectors, with some small and similar industries combined for ease of calculation and exposition.

4. RESULTS

Table 3 presents the growth rate in total employment over the sample period. The total growth in overall employment in the United States between 2010 and 2022 was 12.04%,

⁵According to the Census Bureau Handbook, Micropolitan areas fall below the sample size threshold needed to provide reliable data for one-year estimates.

⁶The base and terminal points chosen for shift-share analysis are arbitrary and will always suffer from cycle-related discrepancies in performance across regions. The lack of one-year estimates for micropolitan areas also makes it impossible to ascertain the relative effects of each crisis on each area.

Table 3: Growth in Employment, 2010-2022

Region	2010	2022	Growth (%)
United States	141,833,331	158,913,204	12.04
Kansas	1,390,619	1,452,870	4.48
Metropolitan	1,582,559	1,726,738	9.11
Kansas City	1,001,343	1,123,353	12.18
Wichita	294,636	309,497	5.04
Topeka	113,936	111,091	-2.50
Manhattan	55,047	60,734	10.33
Lawrence	59,332	66,803	12.59
St. Joseph	58,265	55,260	-5.16
Micropolitan	240,848	249,759	3.70
Hutchinson	30,316	29,360	-3.15
Salina	31,844	30,558	-4.04
Pittsburg	18,202	19,531	7.30
Garden City	18,385	20,389	10.90
Emporia	18,913	18,185	-3.85
Winfield	16,472	15,273	-7.28
Dodge City	16,250	17,165	5.63
Coffeyville	16,154	13,703	-15.17
McPherson	15,289	15,658	2.41
Hays	16,402	16,719	1.93
Great Bend	14,126	12,396	-12.25
Parsons	10,468	9,176	-12.34
Liberal	10,429	10,717	2.76
Atchison	7,598	7,822	2.95

Note: U.S. Census Bureau (2023).

while employment in the state of Kansas grew at just 4.48%. Kansas's aggregated metropolitan areas grew at 9.11% while aggregated micropolitan areas grew at just 3.70%. However, individual metropolitan and micropolitan areas experienced significant variations in employment growth, with some reporting substantial declines. In fact, two of the six metropolitan areas and seven of the 15 micropolitan areas had a lower total employment count in 2022 than in 2010.

Table 4 and Table 5 present the shift-share components of the aggregated metropolitan and micropolitan regions of Kansas. The negative growth in regional employment reflected in the column indicates an unfavorable industry mix for both micropolitan and metropolitan areas in Kansas relative to the nation, but the effect is considerably worse for the micropolitan areas. Unsurprisingly, the micropolitan regions of Kansas have a much larger proportion of employment in agriculture and mining than the United States and the metropolitan regions of Kansas. Most also have a larger proportion of employment in manufacturing and a much smaller proportion of employment in the FIRE and professional and administrative sectors. The results show that agriculture, mining, and manufacturing had large negative differential growth rates, while the professional and administrative sector and the health sector had large positive differential growth rates in both the micropolitan and metropolitan areas of Kansas when compared to the overall national economy for our sample period.

All the negative values in the column indicate that many Kansas industries grew more slowly relative to the nation, and again, the effect appears relatively greater for the state's

Table 4: Shift-Share Components for Aggregated Kansas Regions

Industry	σ	G	N	C	A	σ	G	N	C	A
Ag+Mining	-134	1,430	-1,559	-2	-3	303	2,049	-2,234	842	-355
Construction	780	1,653	-552	-402	81	10,395	12,570	-4,194	2,184	-164
Manufacturing	523	5,085	-4,283	-175	-104	-2,274	23,109	-19,466	-5,360	-556
Wholesale	-590	777	-1,562	223	-28	-6,998	6,169	-12,400	-725	-41
Retail Trade	-1,165	3,452	-1,394	-3,111	-112	8,370	21,455	-8,663	-4,512	90
Transportation	1,530	1,044	1,679	-1,398	204	21,453	8,143	13,091	216	3
Utilities	927	299	-34	543	118	28	1,603	-183	-1,402	11
Info	-729	468	-873	-476	153	-17,663	5,810	-10,849	-9,835	-2,789
FIRE	-86	1,305	-595	-1,238	443	8,709	14,574	-6,649	719	66
Prof+Admin	1,793	1,491	2,292	-4,032	2,042	44,850	19,060	29,298	-3,654	145
Education	2,286	3,102	396	-1,042	-171	11,359	17,923	2,290	-8,651	-203
Health	994	4,070	3,157	-5,714	-519	41,607	24,372	18,907	-1,681	10
Arts	1,335	340	56	1,640	-701	2,606	3,601	599	-1,726	132
Food Accom	1,196	1,948	179	-944	13	11,828	12,012	1,101	-1,388	104
Other	268	1,350	-358	-757	33	4,741	8,787	-2,330	-1,810	94
Public	-17	1,189	-353	-1,007	154	4,865	9,340	-2,771	-1,682	-21
Total	8,911	29,003	-3,804	-17,891	1,602	144,179	190,575	-4,454	-38,468	-3,474

Note: Author calculations using U.S. Census Bureau (2023).

micropolitan areas. Indeed, most of the micropolitan areas' sluggishness in the aggregate appears to be due to their industries growing more slowly than their national counterparts.

An important difference between Kansas micropolitan and metropolitan areas can be seen in the results for the allocation effect. The positive values in column when paired with positive values in column C indicate that those regions tend to specialize in favorable industries. Positive values in column when paired with negative values in column indicate that those regions are allocating less labor to their slower-growing industries. Negative values in both columns indicate over-allocating labor to slow-growing industries, and a negative paired with a positive indicates regions under-allocating labor in faster-growing industries. For example, the large positive allocation effect in the professional and administrative services industries in micropolitan areas, coupled with their large negative competitive effect, reveals that these smaller cities are not allocating a significant amount of labor to their slower-growing industries, but the two positive effects in the utilities industry indicate that they are specializing in a locally competitive industry. In the aggregate, the total allocation effect for Kansas micropolitan areas was found to be positive, while the total allocation effect was negative for the metropolitan areas. This suggests that the smaller cities allocated their labor more effectively and may be relatively nimble and able to adjust more effectively over time to structural changes compared to larger metropolitan areas.

While aggregating the data of the micropolitan and metropolitan areas tells one story, disaggregating the data by core city-area may tell another. Table 6 presents the proportion of employment in each industrial sector for each micropolitan and metropolitan area in Kansas. Unsurprisingly, the metropolitan areas have a much smaller proportion of their employment in the agriculture and mining industries and a much larger proportion of employment in financial, professional, and administrative services. Perhaps more surprisingly, micropolitan areas have a much larger proportion of employment in manufacturing than metropolitan

Table 5: Shift-Share Contribution to Employment Growth for Kansas Regions

Industry	σ	G	N	C	A	σ	G	N	C	A
Ag+Mining	-0.056	0.594	-0.647	-0.001	-0.001	0.019	0.129	-0.141	0.053	-0.022
Construction	0.324	0.686	-0.229	-0.167	0.034	0.657	0.794	-0.265	0.138	-0.010
Manufacturing	0.217	2.111	-1.778	-0.072	-0.043	-0.144	1.460	-1.230	-0.339	-0.035
Wholesale	-0.245	0.323	-0.649	0.093	-0.012	-0.442	0.390	-0.784	-0.046	-0.003
Retail Trade	-0.484	1.433	-0.579	-1.292	-0.046	0.529	1.356	-0.547	-0.285	0.006
Transportation	0.635	0.434	0.697	-0.580	0.085	1.356	0.515	0.827	0.014	0.000
Utilities	0.385	0.124	-0.014	0.226	0.049	0.002	0.101	-0.012	-0.089	0.001
Info	-0.303	0.194	-0.363	-0.198	0.063	-1.116	0.367	-0.686	-0.621	-0.176
FIRE	-0.036	0.542	-0.247	-0.514	0.184	0.550	0.921	-0.420	0.045	0.004
Prof+Admin	0.744	0.619	0.952	-1.674	0.848	2.834	1.204	1.851	-0.231	0.009
Education	0.949	1.288	0.165	-0.433	-0.071	0.718	1.133	0.145	-0.547	-0.013
Health	0.413	1.690	1.311	-2.372	-0.216	2.629	1.540	1.195	-0.106	0.001
Arts	0.554	0.141	0.023	0.681	-0.291	0.165	0.228	0.038	-0.109	0.008
Food Accom	0.497	0.809	0.074	-0.392	0.006	0.747	0.759	0.070	-0.088	0.007
Other	0.111	0.560	-0.149	-0.314	0.014	0.300	0.555	-0.147	-0.114	0.006
Public	-0.007	0.494	-0.147	-0.418	0.064	0.307	0.590	-0.175	-0.106	-0.001
Total	3.700	12.042	-1.579	-7.428	0.665	9.110	12.042	-0.281	-2.431	-0.220

Note: Author calculations using U.S. Census Bureau (2023).

areas. Importantly, the individual profiles of metropolitan areas in Kansas are not uniform. Kansas City makes up over half of the metropolitan aggregate's totals and is far wealthier than the other metropolitan areas. Topeka, the state capital, has a large public sector, and Manhattan and Lawrence are dominated by the two large, flagship state universities. Like metropolitan areas, micropolitan areas are economically and demographically heterogeneous. For example, contrast Hays, located in the western part of the state on Interstate 70 and home to one of the three regional public state universities, with Liberal, in the southwest corner of the state, with no interstate highway and no university. Hays has a much larger proportion of employment in food accommodations and education than the other Kansas micropolitan areas. On the other hand, Liberal has a much larger proportion of employment in agriculture, mining, and manufacturing.

Furthermore, contrast the demographic heterogeneity of McPherson, which has little racial and ethnic diversity, low poverty, high median income, and a relatively low labor force participation, to Dodge City, where whites are a minority and labor force participation is high, but income and poverty are still close to that of McPherson; and to Pittsburg, where labor force participation and the percent of whites are comparable to McPherson, but poverty is high. Because of this heterogeneity, attempts to classify micropolitan areas into types based on their characteristics and performance are difficult and arbitrary, though some groupings make sense. For example, Liberal, Dodge City, and Garden City are all in the southwest part of the state, relatively isolated from the metropolitan areas, and have white minorities. Hays, Emporia, and Pittsburg are similarly sized areas with regional state universities, with the significant education industry and relatively young populations that accompany them. Hutchinson, Salina, and McPherson are larger micropolitan areas in close

Table 6: Proportion of Employment by Kansas Metropolitan and Micropolitan Area

	Ag + Mining	Construct	Mfg	Wholesale	Retail Trade	Trans- portation	Utilities	Info	FIRE	Prof + Admin	Educ	Health	Arts	Food Accomm	Other	Public
United States	1.64	6.88	9.99	2.40	10.99	4.95	0.84	1.90	6.66	12.14	9.32	13.94	2.08	6.88	4.73	4.69
Kansas	3.11	6.38	12.41	2.53	10.63	4.34	0.97	1.67	6.48	9.83	10.53	14.11	1.75	6.22	4.46	4.57
Metropolitan	1.00	6.65	10.98	2.56	10.80	5.16	0.77	1.77	7.51	11.76	9.28	14.13	1.88	6.46	4.50	4.77
Kansas City	0.77	6.70	9.32	2.81	10.85	5.71	0.72	2.03	8.62	13.33	8.04	14.02	1.92	6.18	4.43	4.55
Wichita	1.23	6.55	17.41	2.35	10.92	3.96	0.55	1.24	5.09	9.17	9.95	14.25	1.65	7.10	4.69	3.87
Topeka	1.72	7.84	9.75	2.03	9.32	4.91	1.74	1.41	7.17	7.80	9.30	15.73	1.77	5.66	4.76	9.07
Manhattan	1.82	6.10	6.64	1.57	11.35	2.68	0.99	1.61	4.86	9.18	20.52	12.61	2.04	7.44	4.01	6.59
Lawrence	0.90	4.72	8.53	1.53	11.56	3.44	0.76	1.40	5.23	11.03	17.42	12.56	2.82	9.18	4.81	4.11
St. Joseph	2.23	6.66	18.85	2.15	10.70	6.01	1.00	0.86	4.87	6.04	8.39	16.02	1.29	5.93	4.48	4.51
Micropolitan	4.70	5.81	17.12	2.35	11.01	4.09	1.37	1.26	4.30	5.68	11.23	13.93	1.66	6.96	4.59	3.95
Hutchinson	3.61	5.84	15.49	2.14	13.67	4.27	1.07	1.58	5.13	7.25	9.79	13.58	1.32	5.75	5.51	4.00
Salina	3.05	4.47	15.12	2.55	11.49	3.51	0.94	1.00	4.91	6.39	11.15	16.92	1.73	7.15	5.56	4.06
Pittsburg	2.49	5.39	13.94	1.86	10.37	3.42	1.01	1.22	3.89	5.41	13.99	14.66	2.78	8.59	6.92	4.07
Garden City	8.64	5.84	20.72	3.08	12.46	5.03	1.92	0.96	2.79	3.82	9.68	10.55	1.01	6.63	3.05	3.83
Emporia	2.95	4.10	22.66	1.83	12.56	4.38	1.44	1.01	2.85	4.73	14.32	11.23	1.63	8.16	3.63	2.51
Winfield	4.26	4.78	18.29	1.38	9.65	3.75	1.94	1.24	4.51	4.29	13.60	15.82	2.23	5.14	4.50	4.63
Dodge City	4.65	7.59	28.75	2.16	7.45	4.72	1.78	0.64	3.09	6.30	8.06	9.13	2.56	6.89	3.73	2.49
Coffeyville	3.96	5.41	19.86	1.42	11.81	3.74	1.74	1.25	3.27	6.58	9.20	15.60	1.39	6.08	4.71	3.99
McPherson	4.69	6.15	21.73	0.93	6.15	3.35	0.75	1.26	7.48	6.20	10.32	12.89	1.48	7.22	5.27	4.14
Hays	6.07	5.61	4.71	1.97	11.54	2.28	1.16	2.61	6.02	5.54	15.16	16.96	2.36	12.06	3.06	2.89
Great Bend	8.44	8.25	9.98	2.35	9.39	3.32	1.97	1.25	5.66	6.35	8.15	14.03	1.39	6.99	6.16	6.34
Parsons	2.62	5.87	19.23	1.65	9.19	3.37	0.75	1.45	3.85	5.79	11.85	21.68	0.46	4.99	3.48	3.79
Liberal	11.63	5.51	26.23	2.22	9.26	3.40	0.50	0.60	2.60	1.90	11.65	10.56	0.73	5.62	3.78	3.82
Atchison	4.72	6.94	8.86	3.96	12.16	5.14	0.95	1.85	4.03	6.33	15.11	12.39	1.64	6.09	4.60	5.24

Note: Author calculations using U.S. Census Bureau (2023).

proximity to each other in the central corridor of the state. Coffeyville, Parsons, and Winfield are all shrinking, aging micropolitan areas in the southeast corner. Atchison and Great Bend do not fit as neatly into any of the other groupings, but each is small and has a lower median income. Aggregating these heterogeneous micropolitan areas into a single region or type classification masks the differences across each city area. For example, of the three micropolitan areas with four-year regional and state universities, Emporia and Pittsburg are adjacent to metropolitan areas, while Hays is not.⁷ Their performance over the period also varied widely. Similar distinctions can be found across classifications of micropolitan areas, and the relevant information for policymakers and community developers in these areas lies largely in their respective disaggregated data.

Table 7, Table 8, and Table 9 present the industry mix effect, competitive effect, and allocation effect by industry for each micropolitan and metropolitan area in Kansas.⁸ Looking at the competitive and allocation shift-share components for the disaggregated areas, nearly every micropolitan area's retail trade grew at a slower rate than the national retail industry. The same is true for transportation and education, but most micropolitan areas' arts industry is growing faster. Most Kansas micropolitan areas have an advantageous specialization in their FIRE and professional and administrative sector and a disadvantageous specialization in education and health. The specific reasons for these trends will require additional research beyond shift-share analysis to reveal them.

⁷Cherokee County, KS, the county directly south of Pittsburg, was added to the Joplin, MO, metropolitan area in 2023.

⁸Following the recommendation of (Herzog and Olsen, 1977), the competitive effect and allocation effect components were also calculated using the terminal period distribution of employment to assess the sensitivity of the sign to the changes in the regional industrial structure. None of the components for any region in our analysis changed sign.

Table 7: Industrial Mix Effect by Kansas Metropolitan and Micropolitan Area

	Ag + Mining	Construct	Mfg	Wholesale	Retail Trade	Trans- portation	Utilities	Info	FIRE	Prof + Admin	Educ	Health	Arts	Food Accomm	Other	Public
Kansas	-0.005	-0.003	-0.014	-0.007	-0.005	0.007	0.000	-0.006	-0.003	0.015	0.002	0.012	0.000	0.001	-0.001	-0.002
Metropolitan	-0.001	-0.003	-0.012	-0.008	-0.005	0.008	0.000	-0.007	-0.004	0.019	0.001	0.012	0.000	0.001	-0.001	-0.002
Kansas City	-0.001	-0.003	-0.010	-0.009	-0.006	0.009	0.000	-0.008	-0.005	0.021	0.001	0.012	0.000	0.001	-0.002	-0.002
Wichita	-0.002	-0.003	-0.022	-0.006	-0.005	0.007	0.000	-0.004	-0.003	0.014	0.001	0.012	0.000	0.001	-0.001	-0.001
Topeka	-0.002	-0.003	-0.009	-0.006	-0.006	0.009	0.000	-0.005	-0.004	0.014	0.001	0.014	0.000	0.001	-0.001	-0.003
Manhattan	-0.003	-0.003	-0.007	-0.004	-0.006	0.005	0.000	-0.004	-0.003	0.013	0.003	0.010	0.000	0.001	-0.001	-0.003
Lawrence	-0.001	-0.002	-0.008	-0.005	-0.006	0.004	0.000	-0.008	-0.003	0.017	0.003	0.010	0.000	0.001	-0.001	-0.001
St. Joseph	-0.003	-0.003	-0.016	-0.007	-0.006	0.008	0.000	-0.004	-0.004	0.010	0.001	0.013	0.000	0.001	-0.002	-0.002
Micropolitan	-0.007	-0.002	-0.018	-0.006	-0.006	0.007	0.000	-0.004	-0.002	0.010	0.002	0.013	0.000	0.001	-0.001	-0.001
Hutchinson	-0.004	-0.003	-0.014	-0.008	-0.007	0.007	0.000	-0.005	-0.003	0.013	0.001	0.014	0.000	0.001	-0.002	-0.002
Salina	-0.003	-0.002	-0.018	-0.007	-0.006	0.008	0.000	-0.004	-0.003	0.013	0.001	0.012	0.000	0.001	-0.002	-0.002
Pittsburg	-0.003	-0.003	-0.012	-0.005	-0.006	0.006	0.000	-0.004	-0.002	0.011	0.002	0.016	0.000	0.001	-0.002	-0.001
Garden City	-0.011	-0.002	-0.019	-0.009	-0.007	0.008	0.000	-0.002	-0.003	0.007	0.002	0.009	0.000	0.001	-0.001	-0.001
Emporia	-0.006	-0.002	-0.020	-0.008	-0.005	0.005	0.000	-0.005	-0.002	0.008	0.002	0.009	0.000	0.001	-0.001	-0.002
Winfield	-0.005	-0.003	-0.023	-0.004	-0.005	0.007	0.000	-0.002	-0.003	0.009	0.001	0.014	0.000	0.001	-0.001	-0.002
Dodge City	-0.007	-0.002	-0.029	-0.009	-0.005	0.008	0.000	-0.004	-0.002	0.006	0.001	0.010	0.000	0.000	-0.002	-0.001
Coffeyville	-0.004	-0.002	-0.023	-0.004	-0.005	0.010	0.000	-0.002	-0.002	0.011	0.001	0.016	0.000	0.001	-0.002	-0.001
McPherson	-0.007	-0.002	-0.022	-0.006	-0.005	0.006	0.000	-0.003	-0.003	0.009	0.002	0.013	0.000	0.000	-0.001	-0.001
Hays	-0.009	-0.002	-0.006	-0.008	-0.007	0.003	0.000	-0.004	-0.003	0.009	0.002	0.015	0.000	0.001	-0.001	-0.002
Great Bend	-0.012	-0.002	-0.011	-0.006	-0.005	0.005	0.000	-0.002	-0.004	0.009	0.001	0.016	0.000	0.001	-0.002	-0.001
Parsons	-0.004	-0.002	-0.021	-0.005	-0.005	0.011	0.000	-0.004	-0.002	0.005	0.002	0.020	0.000	0.000	-0.001	-0.002
Liberal	-0.017	-0.002	-0.019	-0.004	-0.007	0.007	0.000	-0.005	-0.002	0.007	0.001	0.007	0.000	0.001	-0.001	-0.001
Atchison	-0.005	-0.003	-0.017	-0.003	-0.005	0.006	0.000	-0.003	-0.002	0.005	0.002	0.014	0.000	0.001	-0.002	-0.002

Note: Author calculations using U.S. Census Bureau (2023).

The heterogeneity of the Kansas metropolitan and micropolitan areas makes it difficult to draw many general conclusions from the results in Table 7 through Table 9. However, it is possible to identify high- and low-performing areas. For example, Kansas City, Lawrence, and Manhattan far outperformed their metropolitan counterparts, and Garden City, Pittsburg, McPherson, and Atchison outperformed their micropolitan neighbors in the competitive effect—many of their industries are growing faster than the industries’ national growth rates. Kansas City, Wichita, and St. Joseph did well on the allocation effect, as did Hutchinson, Salina, Emporia, Winfield, Hays, Coffeyville, Parsons, and Liberal—employment is relatively high in their best-performing industries and relatively low in their worst-performing industries. There will be takeaways for policymakers and economic developers working with the individual core cities that anchor each metropolitan and micropolitan area. For example, those areas with a negative competitive effect in retail trade indicate that their mix of retail establishments is growing at a rate less favorable than that at the national level, and steps could be taken to attract retailers with a higher growth potential. Or, those areas with negative allocation effects can take steps to reallocate labor away from less competitive industries and toward more competitive industries.

5. CONCLUSIONS

In many states, micropolitan areas make up a substantial portion of the population and contribute significantly to the state’s overall economy. This study examined the relative performance of micropolitan areas in the state of Kansas between 2010 and 2022 using shift-share analysis across two-digit NAICS industrial sectors. To smooth the shocks and cyclical fluctuations imbedded in the economic data from this time period, employment measures were aggregated across all micropolitan areas and five-year averages were used with 2006-2010 serving as the base period and 2018-2022 as the terminal period. Results were compared

Table 8: Competitive Effect by Kansas Metropolitan and Micropolitan Area

	Ag + Mining	Construct	Mfg	Wholesale	Retail Trade	Trans- portation	Utilities	Info	FIRE	Prof + Admin	Educ	Health	Arts	Food Accomm	Other	Public
Kansas	-0.001	-0.002	-0.006	0.000	-0.009	-0.006	-0.001	-0.005	0.000	-0.007	-0.007	-0.013	0.001	-0.005	-0.001	-0.003
Metropolitan	0.001	0.001	-0.003	0.000	-0.003	0.000	-0.001	-0.006	0.000	-0.002	-0.005	-0.001	-0.001	-0.001	-0.001	-0.001
Kansas City	0.002	0.004	0.002	-0.001	0.000	0.003	-0.001	-0.006	0.004	0.000	-0.003	0.003	-0.001	0.001	-0.003	0.002
Wichita	-0.001	-0.004	-0.018	0.002	0.004	-0.009	-0.002	-0.004	-0.004	-0.004	0.003	-0.009	0.000	-0.002	0.005	-0.003
Topeka	0.001	0.005	0.009	0.000	-0.032	-0.010	-0.001	-0.008	-0.010	-0.033	-0.014	-0.021	-0.007	-0.007	-0.001	-0.007
Manhattan	0.000	-0.009	0.005	0.002	-0.008	-0.004	0.001	0.001	0.003	0.012	-0.010	0.010	0.009	-0.003	0.010	-0.006
Lawrence	0.005	0.003	0.021	0.001	0.007	0.019	0.006	-0.011	-0.006	0.009	-0.023	0.019	0.007	0.000	0.008	0.007
St. Joseph	-0.003	-0.017	0.010	-0.006	-0.023	0.003	0.002	-0.009	-0.024	-0.025	-0.014	-0.017	-0.010	-0.017	-0.013	-0.014
Micropolitan	0.000	-0.002	-0.001	0.001	-0.013	-0.006	0.002	-0.002	-0.005	-0.017	-0.004	-0.024	0.007	-0.004	-0.003	-0.004
Hutchinson	0.001	-0.014	0.009	-0.007	-0.011	-0.010	-0.001	-0.003	-0.006	-0.028	-0.007	-0.042	-0.005	-0.021	0.000	-0.010
Salina	0.004	-0.021	-0.022	-0.001	-0.026	-0.019	0.005	-0.009	-0.010	-0.046	0.016	0.004	0.003	-0.016	-0.004	-0.010
Pittsburg	0.004	-0.024	0.031	0.005	-0.021	-0.002	0.002	-0.004	0.010	-0.033	-0.004	-0.038	0.060	-0.009	0.020	0.007
Garden City	0.002	0.025	0.026	0.001	-0.011	0.004	0.002	0.004	-0.034	-0.024	-0.004	-0.003	0.011	-0.009	-0.005	0.001
Emporia	-0.007	-0.010	0.012	-0.011	0.005	0.009	-0.001	-0.011	-0.018	-0.028	-0.023	-0.014	-0.002	-0.009	-0.009	-0.029
Winfield	0.003	-0.033	-0.031	-0.003	-0.020	-0.017	0.032	0.015	-0.013	-0.049	0.023	-0.028	0.004	-0.024	-0.004	-0.008
Dodge City	-0.002	0.029	0.006	-0.008	-0.041	-0.003	0.028	-0.012	-0.004	0.080	-0.018	-0.042	0.025	0.033	-0.013	-0.008
Coffeyville	0.000	0.008	-0.030	-0.004	-0.008	-0.029	0.004	0.008	-0.020	-0.039	-0.027	-0.059	-0.003	-0.008	-0.017	-0.007
McPherson	-0.002	0.007	0.001	-0.014	-0.046	-0.012	-0.006	-0.001	0.039	0.004	-0.027	-0.035	0.002	0.036	0.007	0.017
Hays	-0.001	-0.008	-0.029	-0.007	-0.026	-0.001	-0.003	0.010	0.013	-0.015	-0.007	-0.017	0.010	0.025	-0.004	-0.022
Great Bend	-0.003	0.010	-0.022	-0.002	-0.031	-0.008	-0.001	0.017	-0.025	-0.021	-0.028	-0.061	-0.004	-0.026	-0.008	0.016
Parsons	-0.005	0.000	-0.021	-0.007	-0.028	-0.033	-0.002	-0.003	-0.011	0.051	-0.013	-0.043	0.003	-0.006	-0.016	-0.016
Liberal	-0.001	-0.004	0.042	0.011	-0.050	-0.014	-0.006	-0.015	-0.024	-0.085	0.017	0.018	0.024	0.003	-0.012	-0.002
Atchison	0.005	-0.016	-0.053	0.077	0.030	0.012	0.001	0.015	0.020	0.094	-0.012	-0.049	-0.002	-0.005	-0.006	-0.006

Note: Author calculations using U.S. Census Bureau (2023).

Table 9: Allocation Effect by Kansas Metropolitan and Micropolitan Area

	Ag + Mining	Construct	Mfg	Wholesale	Retail Trade	Trans- portation	Utilities	Info	FIRE	Prof + Admin	Educ	Health	Arts	Food Accomm	Other	Public
Kansas	-0.001	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	-0.001	0.000	0.000	0.001	0.000	0.000
Metropolitan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kansas City	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	-0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wichita	0.000	0.000	-0.017	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000	-0.001	0.001
Topeka	0.000	0.000	-0.002	0.000	0.000	-0.001	-0.001	0.000	-0.001	0.009	0.000	-0.003	-0.001	0.002	0.000	-0.007
Manhattan	0.000	0.000	-0.002	-0.001	-0.001	0.002	0.000	0.000	-0.001	-0.004	-0.013	-0.002	-0.003	0.000	-0.003	-0.004
Lawrence	-0.003	-0.001	-0.006	0.000	0.000	-0.009	-0.003	-0.006	0.001	-0.001	-0.033	-0.004	0.000	0.000	-0.001	-0.002
St. Joseph	-0.001	-0.001	0.005	0.000	0.000	0.000	0.000	0.003	0.002	0.012	0.002	-0.002	0.001	0.001	-0.001	-0.001
Micropolitan	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.008	-0.001	-0.002	-0.003	0.000	0.000	0.001
Hutchinson	0.001	0.001	0.002	0.000	-0.002	0.001	0.000	0.000	0.002	0.010	0.000	-0.006	0.002	0.000	0.000	0.001
Salina	0.001	0.005	-0.013	0.000	-0.003	0.001	-0.002	0.002	0.003	0.015	-0.002	0.000	-0.001	-0.002	0.000	0.001
Pittsburg	0.001	-0.002	0.001	-0.002	-0.002	0.001	0.000	0.001	-0.005	0.014	-0.002	-0.012	-0.039	-0.003	0.000	-0.002
Garden City	0.009	-0.009	0.017	0.000	-0.003	0.000	0.002	-0.002	0.008	0.015	0.000	0.001	-0.007	-0.001	0.001	0.000
Emporia	-0.009	0.004	0.009	-0.001	0.000	-0.003	0.000	0.001	0.009	0.016	-0.016	0.003	0.001	-0.001	0.002	-0.001
Winfield	0.002	0.000	-0.034	0.001	0.003	0.002	-0.018	-0.010	0.004	0.027	0.000	-0.004	-0.001	0.002	0.001	0.000
Dodge City	-0.004	-0.007	0.009	-0.002	0.002	0.000	-0.014	0.003	0.002	-0.055	0.000	0.007	-0.011	-0.011	0.000	0.003
Coffeyville	0.000	-0.004	-0.032	0.002	0.001	-0.006	0.000	-0.005	0.010	0.017	0.000	-0.021	0.001	0.002	-0.002	0.002
McPherson	-0.004	-0.002	0.001	0.003	0.009	0.003	-0.007	0.000	-0.013	-0.002	-0.010	-0.003	-0.001	-0.012	-0.001	-0.006
Hays	-0.004	0.001	0.012	0.000	-0.006	0.001	-0.002	-0.002	-0.004	0.008	-0.004	-0.004	-0.003	0.005	0.003	0.001
Great Bend	-0.013	-0.002	0.000	0.000	0.003	0.003	-0.001	-0.012	0.000	0.011	0.002	-0.018	0.001	-0.005	-0.001	-0.003
Parsons	-0.004	0.000	-0.018	0.002	0.004	-0.011	0.000	0.001	0.005	-0.037	-0.002	-0.029	-0.002	0.002	0.003	0.002
Liberal	-0.006	0.001	0.032	-0.004	-0.015	0.002	-0.003	0.000	0.011	0.052	0.000	-0.007	-0.020	-0.001	0.001	0.000
Atchison	0.005	-0.003	-0.029	-0.047	-0.006	-0.002	0.000	-0.007	-0.011	-0.068	-0.008	-0.009	0.000	0.001	0.000	-0.001

Note: Author calculations using U.S. Census Bureau (2023).

to those for the state's metropolitan areas using the same technique.

While the Kansas economy grew substantially over the sample period, the findings indicated that an unfavorable mix of industries existed for both the micropolitan and metropolitan areas. However, the effect was considerably worse for micropolitan areas. Likewise, Kansas industries tended to grow more slowly than their counterparts at the national level, and again, this effect was greater for the micropolitan areas relative to the metropolitan areas within the state. Results for the allocation effect revealed that micropolitan areas are specializing in industries favorable for growth, whereas metropolitan areas were found to specialize in unfavorable industries. As a descriptive analytic technique, shift-share analysis

cannot inherently reveal the factors behind this finding. However, the results may indicate that smaller cities are relatively more effective in their ability to respond to structural changes necessary to maintain growth when compared to larger metropolitan areas. One possible explanation may be linked to the relative sizes of business entities in micropolitan versus metropolitan areas. Micropolitan areas with relatively smaller-sized investments in plants and equipment may find that local businesses are more nimble than their metropolitan counterparts in adjusting production when structural changes in the economy occur. Larger-scaled metropolitan firms may face additional financial and time constraints that limit their response when structural adjustments become necessary. Additional work is necessary to verify if our results are generalizable and to clearly identify the factors underlying them.

In addition to the shift-share analysis for the aggregated areas, the analysis was also completed using the five-year averages for the individual micro and metro areas. These results revealed that the micropolitan areas were as economically heterogeneous as the metropolitan areas, with no strong and stable patterns evident across cities. However, many micropolitan areas experienced slower growth in retail trade than the national retail industry. While the same was true for transportation and education, micropolitan areas enjoyed a faster-growing arts industry. Given the heterogeneity of results across the individual micropolitan and metropolitan areas, the findings indicate that each area needs to be aware of its own unique circumstances and tailor choices concerning economic development strategies accordingly.

As an exploratory descriptive case study, the shift-share results presented here suggest that micropolitan areas are worthy of additional study as unique economic units. We call on future researchers to take up this challenge.

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