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APRIL 2016

WEAK ECONOMIC GROWTH IN MISSOURI'S LARGEST CITIES IS HOLDING DOWN STATEWIDE GROWTH RATES

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INTRODUCTION

The ability of a state or a city to provide economic opportunity, jobs, and public services depends fundamentally on production or output in the economy. A growing economy produces higher income, more jobs, and greater tax revenues to support public services. Since cities are the nodes in the increasingly global network of trade and finance, regional and national economic health is directly linked to the economic health of major cities.[1]

Since 2000, Missouri has exhibited very weak economic growth. As we will see in some detail below, the Missouri economy has ranked near the bottom of state rankings on economic growth since 2001, and its recovery since the 2008 recession has been tepid at best. What about Missouri's cities? Eighty-one percent of Missouri's output is produced

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Figure 1: **Average Annual Real GDP Growth, 2001-2014**

Since 2001, Missouri ranks 45th in average annual real GDP growth among the 50 states and Washington, D.C.

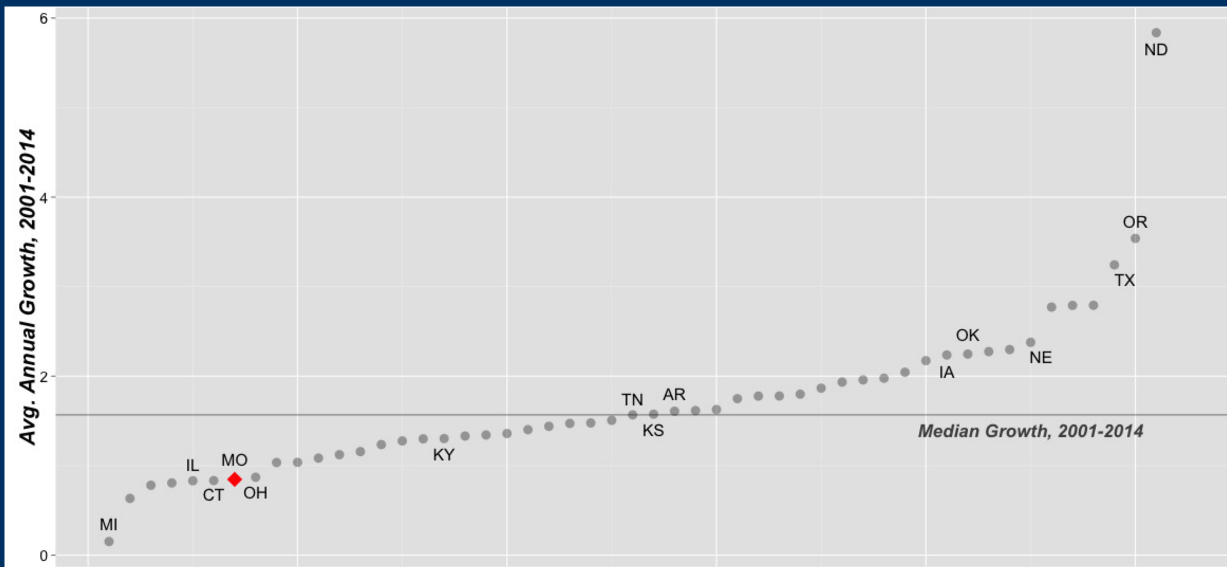
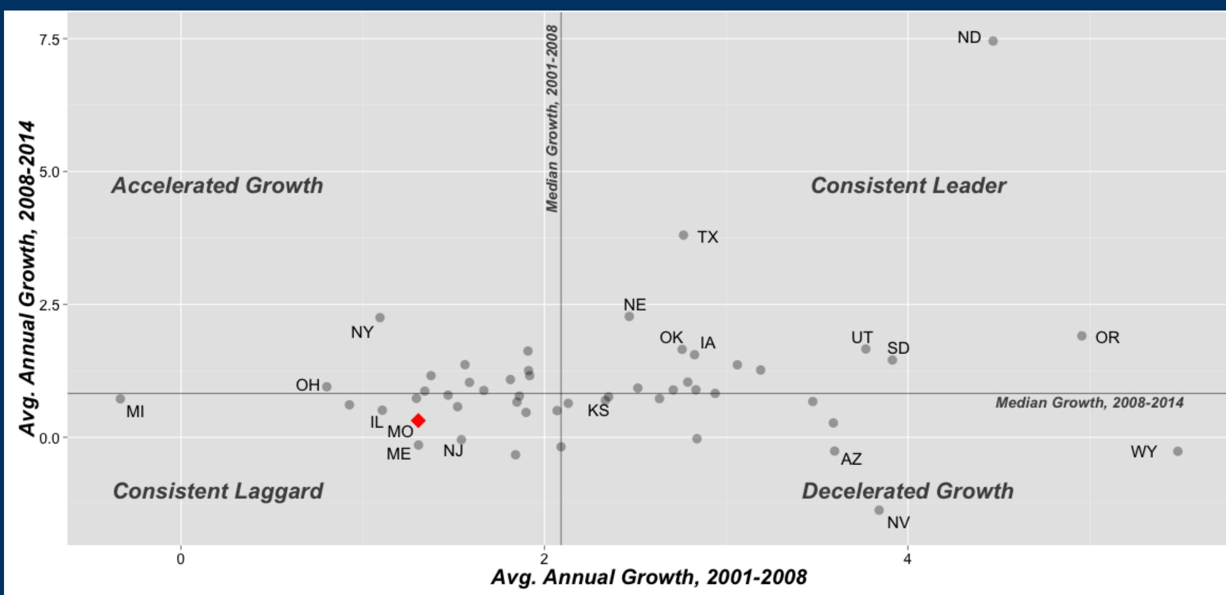


Figure 2: **Average Annual GDP Growth, 2008-2014**

Missouri's growth has lagged behind most other states both before and after the 2008 recession.



in its eight metropolitan areas. Sixty-four percent of Missouri's output comes from Kansas City and Saint Louis alone. However, rather than being engines of economic growth, Saint Louis and Kansas City have had growth records well below the national average for large cities. Moreover, growth performance for the Missouri side of Missouri's state-border metro areas has been below that of the Kansas and Illinois sides. Overall, our two large cities have generated a drag on state output. The smaller metro areas have had a mixed record, with some performing much better than others. Only Saint Joseph and Columbia have seen average growth above the national median since 2001. Missouri's dismal economic growth record is a product of the weak performance of her cities.

STATE ECONOMIC GROWTH PERFORMANCE

The measure of production or output for states (and metro areas) that we will focus on is real GDP. Real GDP measures the dollar value of final goods and services produced within a specific geographic location in a given time period, taking out the effect of inflation. In general, cities or states that have more rapid growth of real GDP have a rising standard of living, and more rapid growth of employment and personal income. If a city or state has a growth rate above the U.S. average, then its relative contribution to national economic output is rising. On the other hand, if a state or city's growth rate is below average, then its relative contribution to national economic output is falling.

Before focusing specifically on real GDP growth rates at the metropolitan level, we will first look at how Missouri's overall real GDP growth ranks against those of other states. Figure 1 plots average annual GDP growth from 2001 to 2014 for all 50 states plus Washington, D.C. The chart would be too cluttered if we identified every state, so only Missouri and selected other states are identified, including all bordering states and extreme cases. Clearly, Missouri ranks near the bottom of states in growth performance (45th of 51). From 2001 to 2014, Missouri averaged just 0.85% annual growth, compared to the national median for all states of 1.57%. All of Missouri's neighbors except Illinois grew at a faster rate over this period. [2]

The period from 2001 to 2014 includes two business cycles, broken up by the 2008 recession. To see how Missouri's output stacked up within each business cycle, we computed average annual growth rates for 2001 to 2008 and from 2008 to 2014 separately. We present this information in a scatter plot where the horizontal axis represents average annual growth for 2001 to 2008 and the vertical axis shows average annual growth for 2008 to 2014 (Figure 2). We divide the plot into quadrants using median growth rates for each period. The upper-right quadrant is labeled "Consistent Leaders." Any state falling in this quadrant had above-average growth before and after the 2008 recession. Similarly, the lower-right quadrant —"Consistent Laggards"—are states whose growth record was below average in both periods. States in the upper-left quadrant— "Accelerated Growth"— had below-average growth before the recession and above average growth since. States in the lower-right quadrant —"Decelerated Growth"—had the opposite experience.

Figure 2 shows that Missouri's economic stagnation is not a short-term phenomenon but a long-term trend that goes back at least to 2001. Missouri is in the Consistent Laggard quadrant, huddled near New Jersey and Illinois. On the other hand, states like Texas, Iowa, Oklahoma, and Nebraska are in the Consistent Leader quadrant.

METROPOLITAN-LEVEL GROWTH

Cities are important engines of economic growth. Indeed, some economists argue that in the new global economy, they are key centers of innovation and trade. University of California economist Enrico Moretti calls those cities with the most dynamic and heterogeneous economic activity "brain hubs" (Moretti, 2010). Brain hubs drive economic growth and innovation, and foster so-called "thick labor markets" by attracting highly skilled workers with a diverse array of specialties (Moretti, 2010). By examining metropolitan-level economic growth rates, we can see how Missouri's cities stack up against America's top-growing metro areas.

The Bureau of Economic Analysis (BEA) reports annual economic data for metro areas, which are aggregates of counties established by the Office of Management and Budget (OMB).

Table 1: **Share of 2013 Missouri State GDP, by Metro Area**

Metro Area	2013 Real GDP	% Share of 2013 State GDP
Saint Louis	106,589	41%
Kansas City	58,921	23%
Springfield	15,702	6%
Columbia	7,122	3%
Jefferson City	6,140	2%
Joplin	6,054	2%
Saint Joseph	4,543	2%
Cape Girardeau	3,263	1%
Rural Areas	39,054	19%
Missouri Total	**208,335**	

In deciding to include a county in a metro area, the OMB examines commuting patterns, commercial development, and broader social and economic interactions between the central city and outlying constituencies.[3]

Metro areas may span two or more states, as is the case for four such areas in Missouri—Cape Girardeau, Kansas City, Saint Joseph, and Saint Louis. Since our primary interest is in economic activity on the Missouri side of the border, for metro areas that cross the state line, we report growth rates both for the entire metro area and for only those counties in the Missouri portion of the metro area.[4] Table 1 reports the shares of 2013 state GDP attributable to each of Missouri's eight metro areas.

In 2013, the Missouri counties of Kansas City and Saint Louis accounted for 64% of state GDP, while the six smaller metro areas combined account for only 16% of state GDP, with rural parts contributing the remaining 19%.

In Table 2, we present the breakdown of average annual growth for 2001 to 2013, 2001 to 2008, and 2008 to 2013 for Missouri's large metro areas, small metro areas, and the rural rest of the state. The non-metro, rural areas have seen negative growth since the Great Recession, while the Missouri counties in Kansas City and Saint Louis have seen growth of just 0.19% collectively. In Figure 3, we present an average annual growth plot from 2001 to 2013 similar to that in Figure 1, except we compare the breakdowns of Missouri by large metro, small metro, and

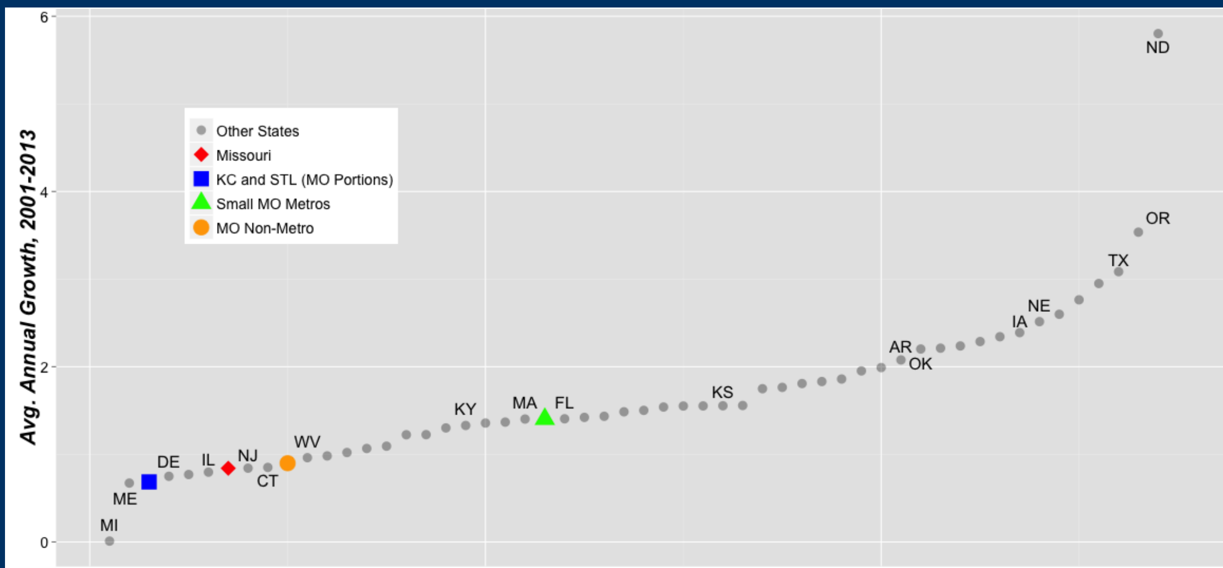
Table 2: **Missouri Real GDP Growth by Large Metro Areas (Kansas City and Saint Louis), small metro areas (Cape Girardeau, Columbia, Jefferson City, Joplin, Saint Joseph, and Springfield), and non-metro areas.**

Area	Avg. Annual Growth, 2001–2013	Avg. Annual Growth, 2008–2013	Avg. Annual Growth, 2001–2008
Missouri (entire state)	0.85%	0.19%	1.31%
Large metro areas*	0.66%	0.19%	1.04%
Small metro areas	1.40%	0.87%	1.79%
Non-metro areas	0.90%	–0.36%	1.81%

**Missouri sides only*

Figure 3: **Average Annual Real GDP Growth, 2001-2013, 50 states and Washington, D.C., featuring Missouri large metros, small metros, and non-metro areas.**

Growth rates for Missouri and her two largest cities since 2001 have been dismal.



rural areas to other states nationwide. If the Missouri counties of Kansas City and Saint Louis were looked at together as a state, they would rank ahead of only Michigan and Maine in terms of average annual GDP growth. Figure 4 is similar to Figure 2, except that like Figure 3 it features the breakdowns of Missouri's growth by large, small, and non-metro areas. Missouri's small metro areas (green triangle) have seen slightly accelerated growth rates since the recession, while the Kansas City and Saint Louis areas and rural counties are consistent laggards when compared to other states.

Figures 3 and 4 show combined Kansas City and Saint Louis growth rates compared to other states. When compared to other large cities, the economic picture is not much better for the state's largest metro areas. Looking at only the Missouri sides of these metro areas, growth rates appear even weaker. Overall, Saint Louis has the seventh-lowest growth ranking among its peers. If the Missouri counties of the Saint Louis metro area were their own city, they would rank fifth to last among cities with more than one million people (Figure 5). Kansas City's growth rate is being bogged down to an even greater extent by its Missouri counties. If we take away growth on the Kansas side of the Kansas City area, the Kansas City metro area's Missouri side drops ten places. For Saint Louis' Missouri counties, only Rochester, Memphis, New Orleans, and Detroit have seen worse average annual growth from 2001 to 2013 (Figure 5). Overall, growth in the Kansas City area is just 0.25% below the national median for cities with more than one million people, but the Missouri side of the area is more than 0.5% below the national median, with an average annual growth rate comparable to those of Buffalo, Pittsburgh, Richmond, and Birmingham.

Figure 6 plots the pre-2008 and post-2008 growth rates for cities with more than one million people. Average annual growth from 2001 to 2008 is on the horizontal axis, and average annual growth from 2008 to 2013 is on the vertical axis. The plot is divided into four quadrants by the intersection of the median growth rates for these two periods. Relative to other cities, the plot shows who has been a consistent leader in economic growth (upper right quadrant) and a consistent laggard (lower

Figure 4: **Average annual growth, 2001–2008, vs. average annual growth, 2008–2013, 50 States and Washington, D.C., featuring Missouri large metros, small metros, and non-metro areas.**

Growth rates for Missouri and her major cities have been consistently below average since 2001.

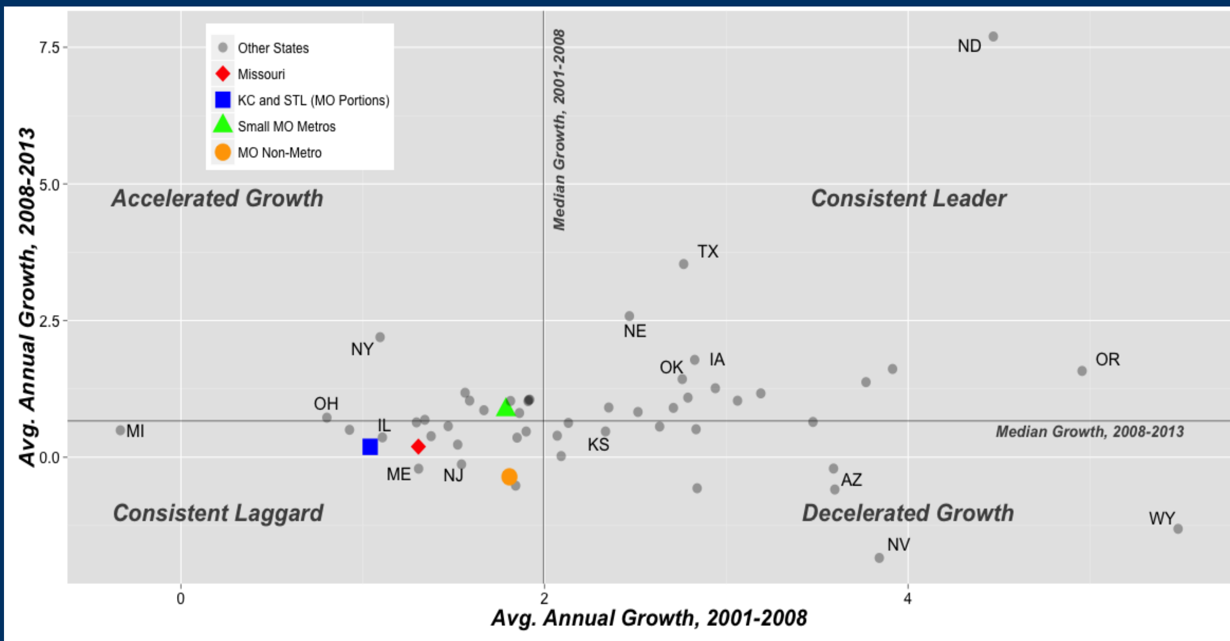


Figure 5: **Average Annual Real GDP Growth, 2001-2013, all U.S. cities with population greater than 1,000,000.**

Growth rates for Missouri and her two largest cities since 2001 have been dismal. (The median growth rate reported here is for all U.S. cities with population greater than 1,000,000.)

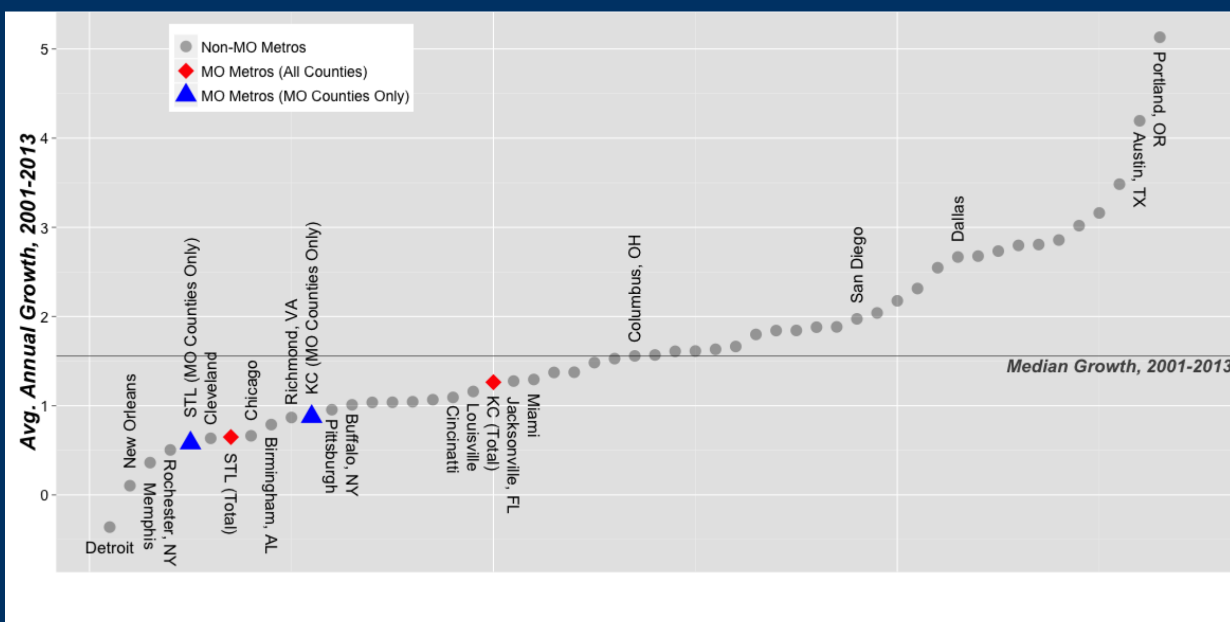


Figure 6: **Average Annual Growth, 2001-2008, vs. Average Annual Growth, 2008-2013 for cities with population greater than 1,000,000.**

Growth rates for Saint Louis and Kansas City have also lagged in the current economic recovery. (The median growth rates reported here are for U.S. cities with population greater than 1,000,000)

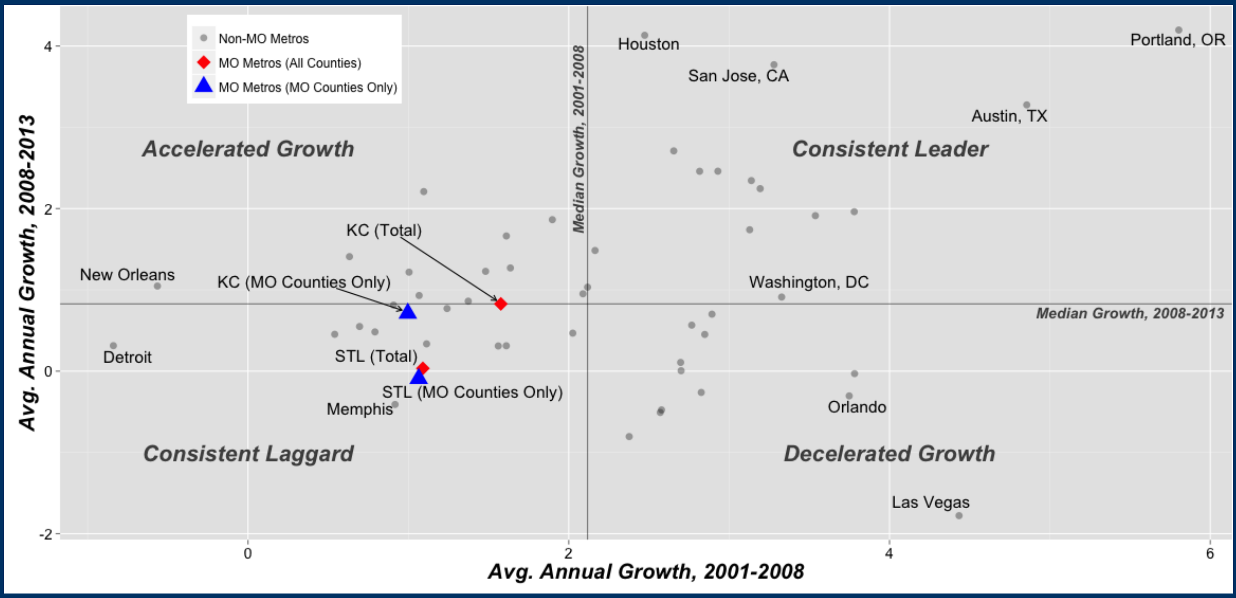


Figure 7: **Average Annual Real GDP Growth, 2001-2013, all U.S. cities with population less than 500,000.**

Growth rates for Saint Louis and Kansas City have also lagged in the current economic recovery. (The median growth rate reported here is for all U.S. cities with population less than 500,000.)

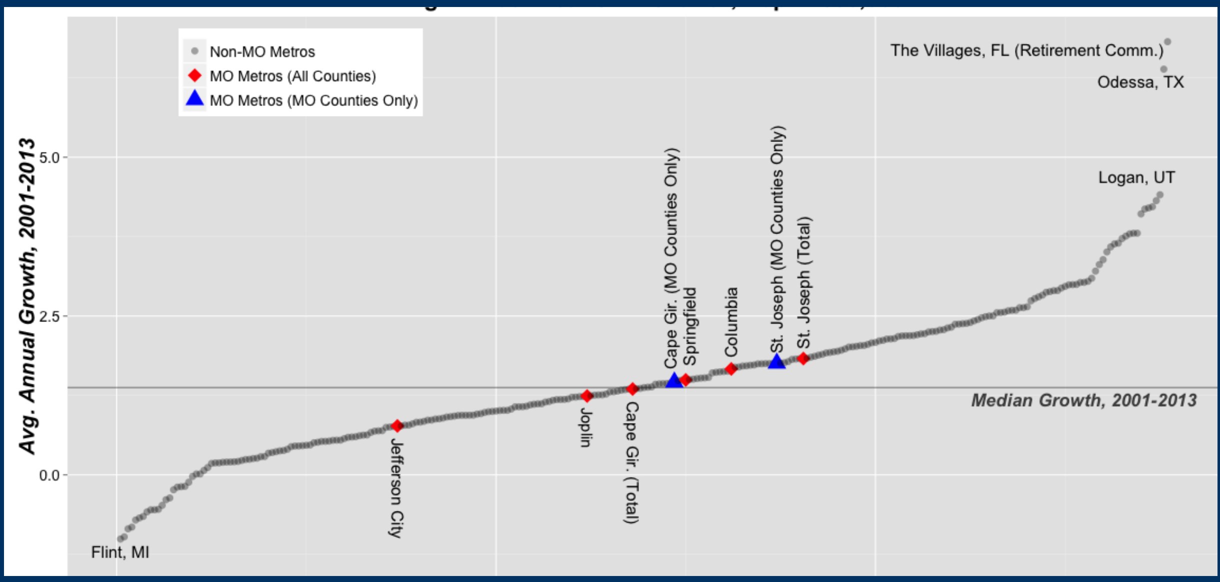
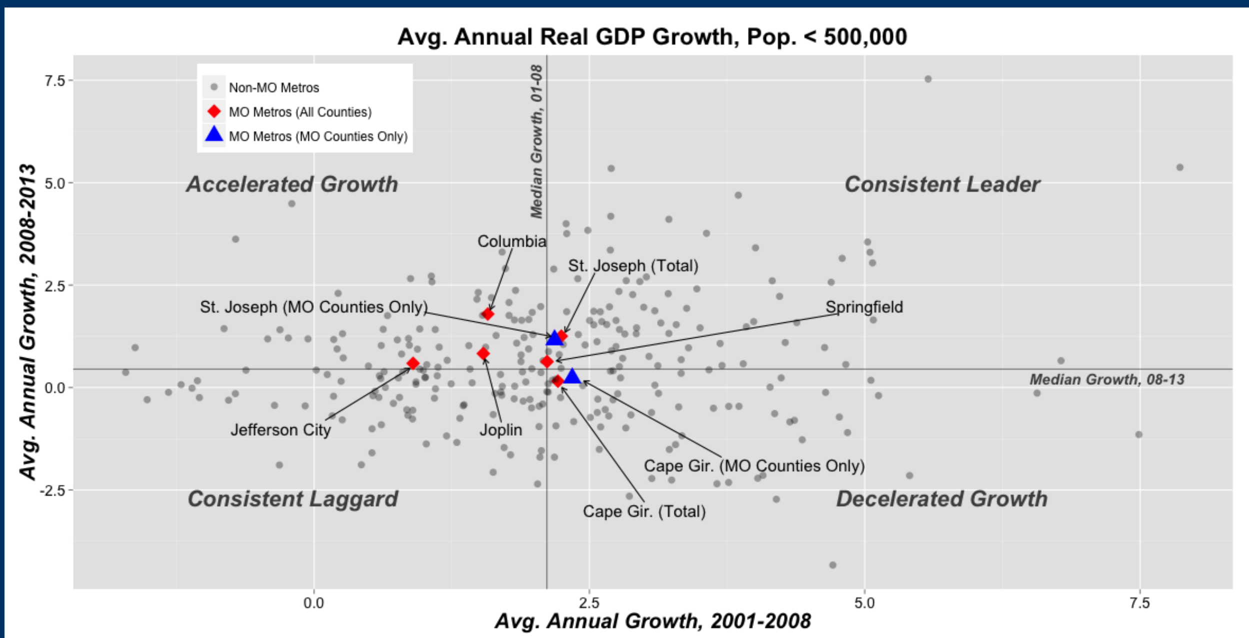


Figure 8: **Average annual growth, 2001–2008, vs. average annual growth, 2008–2013, for cities with populations below 500,000.**

The growth performance of Missouri's smaller metro areas in the current economic recovery generally has been better than that of other smaller metro areas.



left). Cities in the upper left quadrant have seen growth accelerate since the recession, while those in the lower right quadrant have seen growth decelerate.

Saint Louis is a consistent laggard, while Kansas City has seen about median growth since 2008, but has performed poorly in the current economic recovery. The contrast between the entire Kansas City metro area and its Missouri counties is striking. The plot suggests that the Missouri counties struggled significantly more than the Kansas counties from 2001 to 2008, but growth on both sides of the state line have been fairly similar since 2008.

Figure 7 shows the average annual growth rate from 2001 to 2013 for all cities with fewer than 500,000 people. From this picture, it appears that Missouri's smaller cities are experiencing better growth relative to their peers than Saint Louis and Kansas City. Cape Girardeau, Springfield, Columbia, and Saint Joseph are all at or above the national median growth rate since 2001. When removing Alexander County, IL, which includes the historically majority-minority impoverished community of Cairo, IL, from the GDP measurements, Cape Girardeau's numbers actually improve. In fact, Cape Girardeau is the only one of the four state-border metro areas experiencing better growth on the Missouri side than across the state line. In this subset of American metro areas, for example, we see that Saint Joseph's Missouri-side average annual growth lags behind its overall growth.

Figure 8 is like Figure 6, except for cities with fewer than 500,000 people. Most of Missouri's smaller cities are clustered near the national medians for both 2001 to 2008 and 2008 to 2013. In fact, both Springfield and Cape Girardeau experienced median-level average annual growth between 2001 to 2008 and 2001 to 2013. Among this subset of Missouri's cities, Jefferson City and Columbia seem to deviate the most from the central cluster. Jefferson City's growth from 2001 to 2008 lagged behind the national median, though it has been about average since then. Meanwhile, Columbia has accelerated its pace of growth since the recession, a phenomenon that may be driven by the well-documented increase in demand for higher education during economic downturns.

Figures 6 and 8 show that the economic fortunes of many metro areas can change. Neither plot suggests a strong positive relationship between growth in one period and the next. In Figure 6, for example, the number of cities with over one million people that saw growth decelerate after the recession was about the same as the number that saw growth continue at an above-average pace. Places like Orlando, New Orleans, Las Vegas, and even Columbia show that one period's trends do not necessarily foretell those of the next. Just because Saint Louis, for example, is a consistent laggard today does not mean that in twenty years the city cannot be a consistent leader.

CONCLUSION

In Missouri, where over half of output comes from the Saint Louis and Kansas City metropolitan areas, the state's economic fortunes as a whole are tied to the performance of those two cities. Unfortunately, Saint Louis and Kansas City have experienced very poor growth in recent years compared to major metro areas in other states. In addition, the Missouri portions of these two areas have performed worse than the Illinois and Kansas portions. The fairly average performance of Missouri's smaller metro areas has not been enough to pull its ranking up from near the bottom of states in terms of economic growth between 2001 and 2014. Improved state economic growth will require much better performance by our two large cities. In terms of government policy, business as usual is not working. Lower and more efficient tax structures, better schools, and more streamlined and market-based government programs can help.

APPENDIX A: DATA AND METHODOLOGY

All state and metro area real GDP data are from the Bureau of Economic Analysis (BEA) and represent the inflation-adjusted value of final goods and services in the corresponding regions. In all, the BEA records annual real GDP for all states and all of the nation's metro areas with a 2010 census population greater than 50,000 people. This amounts to 381 metro areas. The delineations of metro areas are established by the OMB. For larger cities like Saint Louis and Kansas City, metro areas can include several counties. In deciding whether to include a county in a metro area, the OMB examines commuting patterns, commercial development, and broader social and economic interactions between the central city and outlying constituencies.

Because the Cape Girardeau, Kansas City, Saint Joseph, and Saint Louis metro areas include counties in Illinois and Kansas, in Figures 6 through 9 we report real GDP growth rates for both the entire metro area (red diamond) and only the Missouri counties (blue triangle). In Figures 4 and 5, observations for Missouri large metros and Missouri small metros include only data from Missouri counties. The BEA does not publish county-level real GDP data; however; it does publish county-level personal income data. To estimate real GDP at the county level in each metro area, we first deflated the personal income data for each county using the national implicit price deflator published by the Federal Reserve Bank of Saint Louis. We then summed the personal incomes of every Missouri county in each of the four Missouri metro areas that overlap state borders and divided this number by the total personal income for the whole metro area, which results in a fraction between 0 and 1. We then multiplied this fraction by total metro real GDP to get an estimate of real GDP in each metro's Missouri footprint. The formula is as follows:

$$GDP_{MO\ Side} = \left(\frac{Total\ Pers.\ Income_{MO\ Counties}}{Total\ Pers.\ Income_{Metro\ Area}} \right) * GDP_{Total\ Metro}$$

The data presented in Figures 3 through 9 were extrapolated using this formula.

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NOTES

1. Glaeser, Edward. *Triumph of the City*. New York: Penguin Books, 2011; Moretti, Enrico. *The New Geography of Jobs*. New York: Houghton Mifflin Harcourt, 2012.

2. In Haslag and Pretnar, "Where Is Missouri Growing?" (Show-Me Institute, 2015; available at: http://showmeinstitute.org/publication/taxes-income-earnings/where-missouri-growing), we reported that Missouri ranked 49th of the 50 states in average annual growth since 1997. For this paper, we focus on growth since 2001 because the Bureau of Economic Analysis time-series for metro-area output begins in 2001.

3. There are 3,143 counties in the United States, and 1,167 of these counties belong to 381 metro areas.

4. Our methodology for estimating growth in the Missouri part of a metro area is described in Haslag and Pretnar (2015).

NOTES

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