

ESSAY

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MISSOURI'S ECONOMIC RECORD IN THE 21ST CENTURY

By R.W. Hafer and Michael Rathbone



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Some rankings can be fairly pointless. A local magazine's ranking of the best restaurant or the best pizza in town more often than not reflects the personal tastes of the magazine's staff than some objective criteria, such as sales. Other rankings can matter quite a deal. One of the more important rankings is how states perform economically compared to one another.

A state's economic performance, measured by increases in output of goods and services or jobs created, and its ranking in those categories relative to other states, is more than just acquiring bragging rights between politicians and civic leaders. Such a comparison provides an approximate comparison of the economic well-being of residents across states, an important factor when individuals and firms decide to



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open a business or relocate from their current locations.

In this essay, we will compare Missouri's economic track record to other states so far in this century. We know, for example, that between 2000 and 2012, the production of goods and services in Missouri grew at an average annual rate of only 0.06 percent. This amounts to a paltry increase of about \$23 for each individual per year. This poor performance pushed Missouri down the rankings among all states, from 28th in 2000 to 36th in 2012, in terms of real GDP per capita.

How did Missouri come to acquire this record of non-achievement? If we compare where Missouri was in 2012 relative to 2000, it is informative, but such a comparison omits useful information. It is like describing a road trip from Saint Louis to San Francisco by merely showing pictures of Saint Louis and San Francisco: it ignores the interesting geography encountered along the way. In this essay, we will provide a road map of Missouri's travels over the last dozen years. For purposes of comparison, we will map Missouri's economic route along with its neighboring states and the U.S. economy.

We map Missouri's economic record by answering two questions. First, how did the Missouri economy perform relative to a select set of states during the years between 2000 and 2007? We choose these years because they are considered a period of overall economic expansion.¹ So, addressing this question is like

asking, how did Missouri perform during the "good times"? Did the state's economy expand faster than, keep pace with, or lag behind other states?

The second question is, how did Missouri's economy fare since the onset of the Great Recession?² The Great Recession, which officially lasted from December 2007 through June 2009, was the most significant economic downturn since the Great Depression of the 1930s. Did Missouri suffer as severe a downturn as other states? Did it recover faster or slower than other states?

Addressing these questions allows us to "grade" Missouri's economic performance thus far in the century. The evidence indicates that Missouri's economic track record, both in absolute and comparative terms, is a poor one. Looking ahead, we find that not only did Missouri's economy fail to grow as fast as the other states in our comparison group during the economic expansion that ended in 2007, but it also has failed to recover as much as other states. The upshot is that Missouri's economy in the 21st century has failed to expand at rates that would buoy hope for substantial improvements in the future standard of living of its residents.

METHODOLOGY

Two widely used measures are employed to assess Missouri's economic road trip over the past dozen years. One measure is Gross Domestic Product (adjusted for inflation) per person (hereafter real

GDP). Real GDP measures the output of goods and services produced within an economy. We use *per capita* real GDP because accounting for the size of the state's population is important. First, adjusting state real GDP data for size of population controls for the sheer size of the economy: California's real GDP is many times bigger than Rhode Islands', though its real GDP per person may not be because of its comparatively large population.

The other reason is that using real GDP *per person* provides a glimpse into the economic well-being of the average individual. Thus, we will use real GDP per capita to gauge the state's economic success.³

The other measure is employment. How many jobs a state's economy creates is a commonly used metric of economic success: A successful economy is one that is creating jobs. Even though growth in real GDP and job creation are correlated—a faster-growing economy generally produces more jobs than a slower-growing one—the two series offer different insights into the behavior of Missouri's economy relative to others.

As mentioned in the introduction, we compare the behavior of Missouri's economy to the U.S. economy and the neighboring states. Using the U.S. economy allows us to consider how Missouri is doing economically relative to the “average” of the other 50 states. The neighboring states consist of Arkansas, Illinois, Iowa, Kansas, Kentucky, Nebraska, Oklahoma, and Tennessee. Even though neighboring states have

different economic, social, and political features that may not make them directly comparable to Missouri, these states provide a useful benchmark if only because of proximity. After all, if one is concerned about migration of individuals and businesses to states with more favorable conditions, it is far easier to relocate to a neighboring state than one located much farther away.

To assess these different economies' peregrinations since 2012, we adopt a technique that often is used to compare economic activity over different business cycles.⁴ In the current context, we index each state's (and the U.S.) values of real GDP and employment to the first year of the period being studied. For example, when considering the 2000-07 period, each state's real GDP for each of those years is divided by the value in 2000 and multiplied by 100. This process sets the initial value of real GDP for each state equal to 100 in 2000. Values for subsequent years indicate how the state is performing not only relative to its 2000 start point, but also relative to the other states. For the second period, we “clean the slate” and use 2007 as our initial reference year. This year, which represents the peak of the overall economy's general business cycle, will illustrate how the economies in our sample fared during and after the Great Recession.

REAL GDP COMPARISONS⁵

In 2000 Missouri's real GDP was \$36,545.⁶ For the overall U.S. economy, real GDP in 2000 was

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\$39,783, or nearly 10 percent greater than Missouri. Missouri ranked about in the middle (28th) of the real GDP measures when compared with the other 50 states. The highest level of real GDP was for Delaware at \$59,072; Mississippi had the lowest at \$26,700. To see how Missouri and our comparison economies fared since then, Figure 1 shows the paths of real GDP for Missouri, the U.S. economy, and the neighboring states between 2000 and 2007.⁷

Every economy in Figure 1 experienced some increase in real GDP over this period. For example, by 2007, real GDP in the overall U.S. economy was approximately 9 percent higher than it was in 2000. The usefulness of Figure 1, messy as it might seem, is that it exposes the increases—or lack thereof—in real GDP between Missouri and its neighboring states. Based on this comparison, the top prize goes to Iowa: By 2007, real GDP in Iowa was about 17 percent higher than in 2000. The figure also reveals the fact that *all* of the other neighboring economies (and the U.S. economy) achieve levels of real GDP that are approximately 5 to 13 percent higher seven years earlier.

All, that is, except Missouri. Real GDP in Missouri increased between 2000 and 2004. From that point until 2007, however, Missouri, unlike any other economy pictured, experienced essentially no growth in output. By 2007, Missouri's real GDP had increased to \$37,246, only \$701 more than in 2000. During a time of general economic expansion, residents of Missouri saw their share

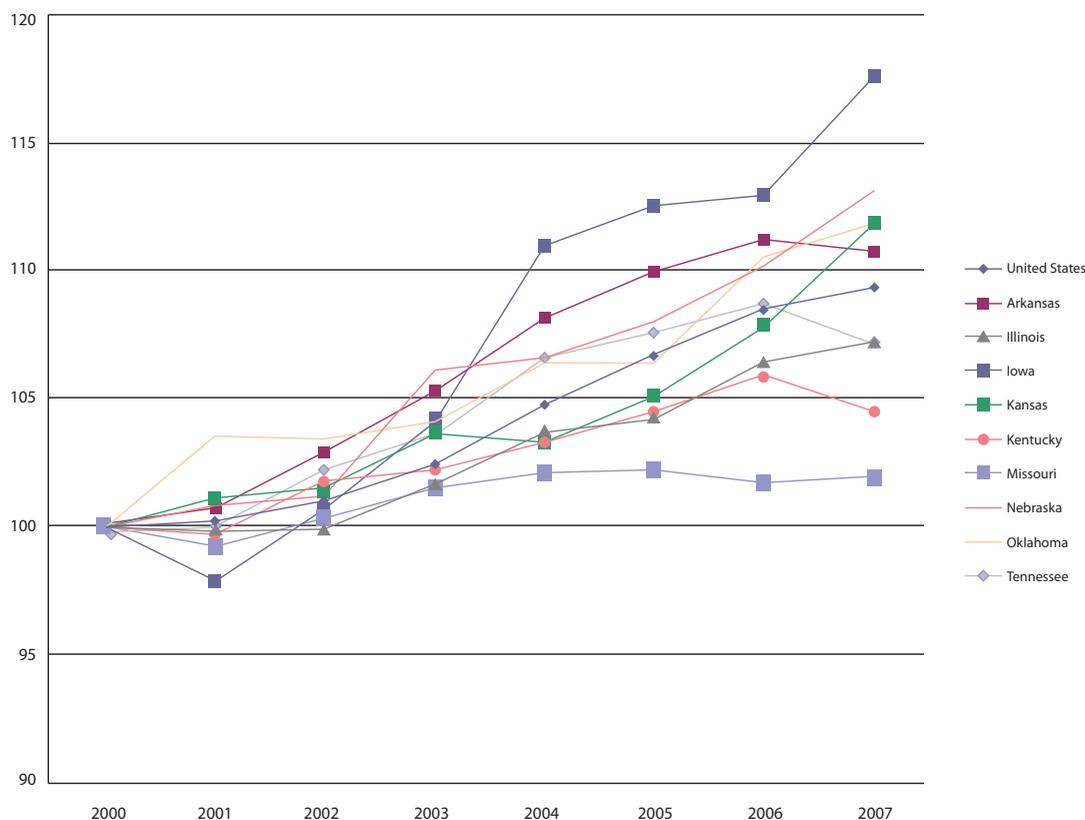
of the state's total output rise only about \$100 a year. Unlike the U.S. economy and the neighboring states, total output of goods and services in Missouri basically failed to grow between 2000 and 2007.

The data indicate that Missouri did not enjoy the fruits of the general economic expansion during the early part of the decade. How did it fare during and after the Great Recession? That question is addressed in Figure 2, where each state's real GDP in 2007 is indexed to equal 100.

Between 2007 and 2009, the recession years, Missouri's economy weathered the economic storm relatively better than the overall U.S. economy and several of the neighboring states. Even though Missouri's economy declined, the economies of Iowa, Illinois, Kentucky, and Tennessee all suffered relatively more severe downturns. In contrast, the economies of Arkansas, Oklahoma, and Nebraska suffered relatively milder downturns in real GDP than Missouri. The performance of Missouri and Kansas were comparable.

If Missouri avoided as serious a decline in real GDP as some other states during the Great Recession, did Missouri get a “leg up” on the competition during the subsequent recovery years? The answer, as revealed in Figure 2, is, unfortunately, no. The paths of real GDP in Figure 2 show that between 2009 (the end of the recession) and 2012, every state's real GDP rose to a higher level than Missouri's. Four states—Kansas, Kentucky, Nebraska, and

Figure 1
State Real GDP per Capita Performance Index: 2000-2007
Missouri, the United States, and Neighboring States



Notes: The index value is obtained by dividing each state's real GDP by the value in 2000 then multiplying this value by 100. This process sets the initial value of real GDP for each state equal to 100 in 2000. Subsequent values indicate how the state is performing relative to its 2000 start point.

Tennessee—regained or surpassed their 2007 levels of output by 2012. To add some perspective to this comparison, what would real GDP in Missouri be if its economy had expanded at the average of the neighboring states since 2009? Under this scenario, Missouri's real GDP in 2012 would have been \$37,376 instead of \$36,815. The fact is that real GDP in Missouri in 2012

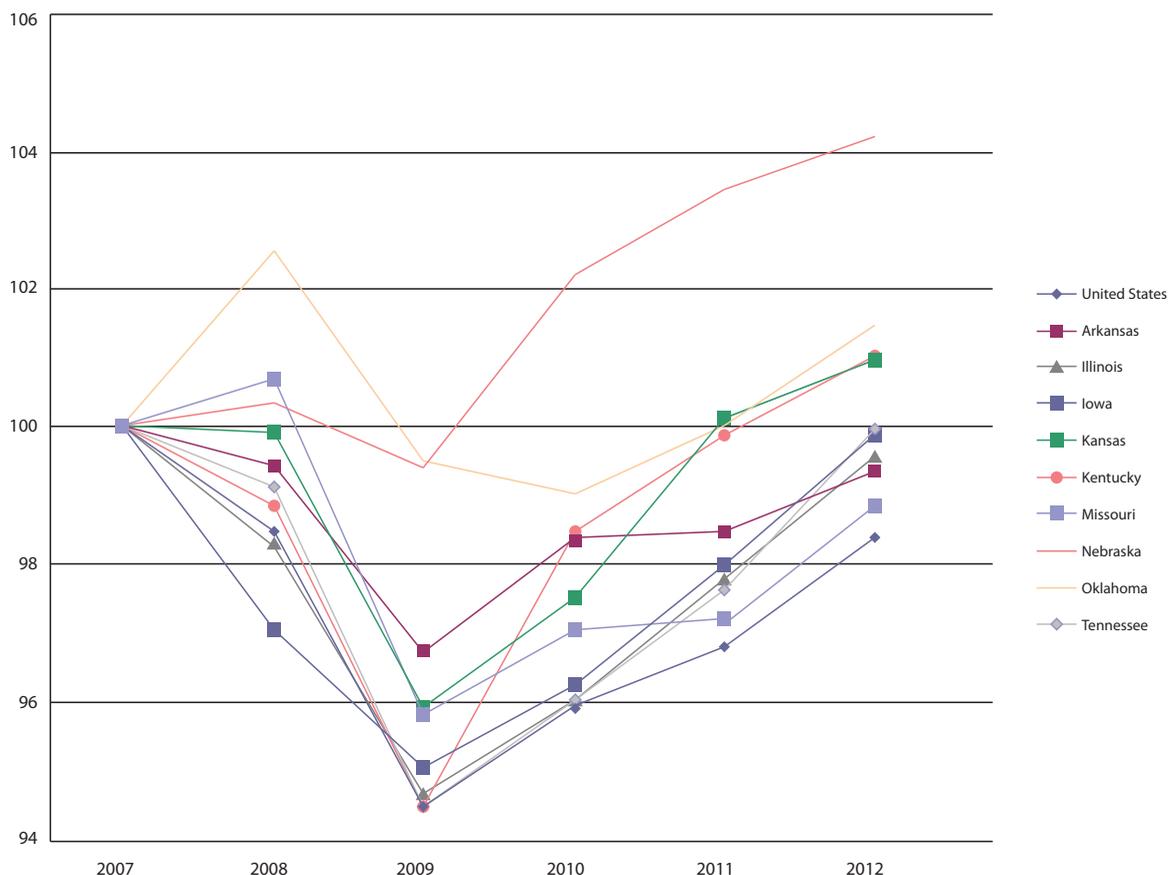
remained below its 2007 level, a performance that betters only that of the overall U.S. economy in Figure 2.

EMPLOYMENT COMPARISONS

The output of a state's economy does not tell its complete economic story. To many, a more concrete measure to assess a state's economic success is how many jobs its economy

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Figure 2
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Notes: The index value is obtained by dividing each state's real GDP by the value in 2007 then multiplying this value by 100. This process sets the initial value of real GDP for each state equal to 100 in 2007. Subsequent values indicate how the state is performing relative to its 2007 start point.

In the current context, we index each state's (and the U.S.) values of real GDP and employment to the first year of the period being studied.

creates. Given the popularity of this gauge, we will conduct the same comparisons as above, this time using employment instead of real GDP.

Figure 3 plots the track record of employment, measured as total non-farm employment, for Missouri, the overall U.S. economy, and the neighboring states. As before, this figure uses 2000 as the benchmark year from which employment comparisons are made. In contrast to

Figure 1, employment growth during the first few years of the century tells a different story of economic activity. In Figure 3, we see that employment levels in each state decline during the first few years of the decade, reflecting the well-known fact that employment growth was dampened following the recession of 2001, along with the events of September 11, 2001. Employment did not begin to rise until 2003 and 2004.⁸ Using employment, Illinois suffered the

relatively largest decline.

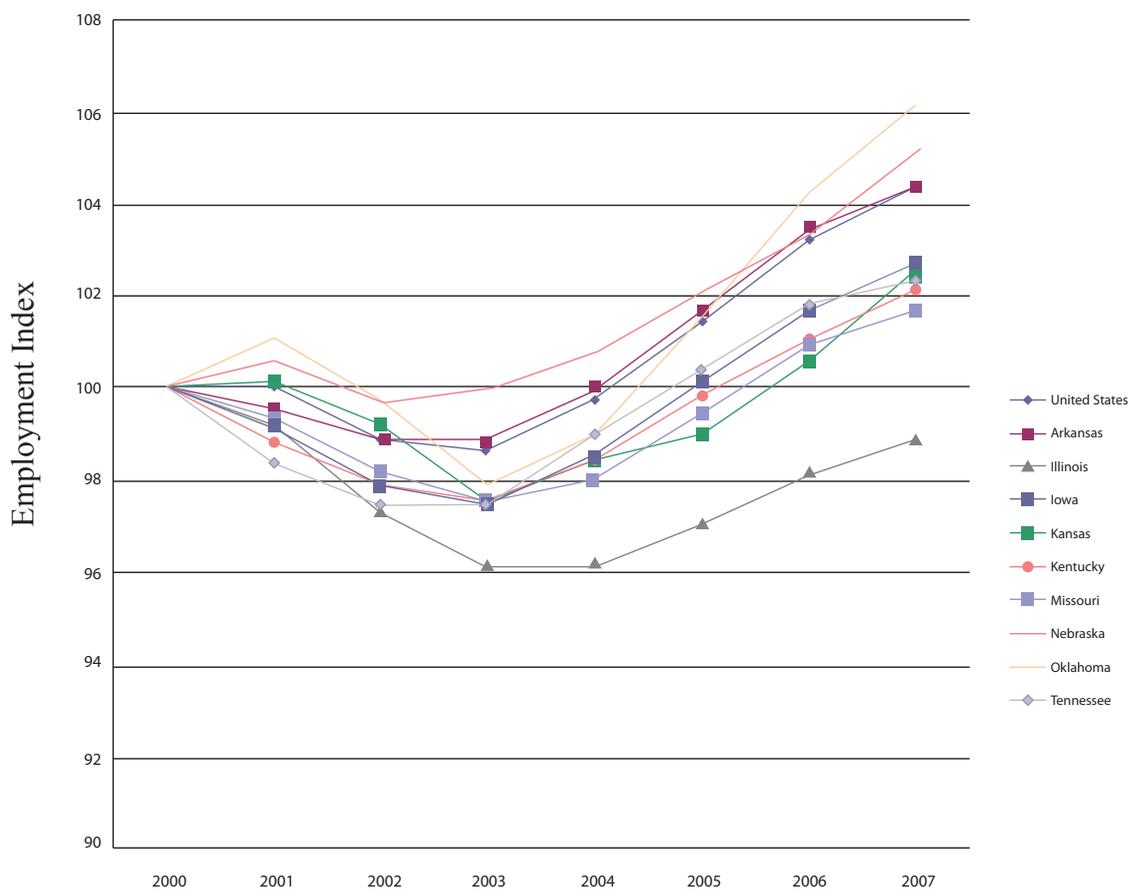
How does Missouri's employment record over the 2000 to 2007 period compare with the neighboring states and the U.S. economy? Except for Illinois, Missouri lags behind all other states and the overall economy. Job expansion was the highest in Oklahoma (about 6 percent). In Missouri, however, the increase in the number of jobs was less than 2 percent. Even though employment in Missouri was higher in 2007 than

in 2000, other states (except Illinois) and the overall economy created relatively more jobs during the economic expansion, which ended in 2007.

How does employment in Missouri behave during and after the Great Recession? Figure 4 provides the answer.⁹ Employment in Missouri was about 4 percent lower in 2009, the nadir of the recession, than at the onset of the recession in 2007. Figure 4 shows that Missouri did

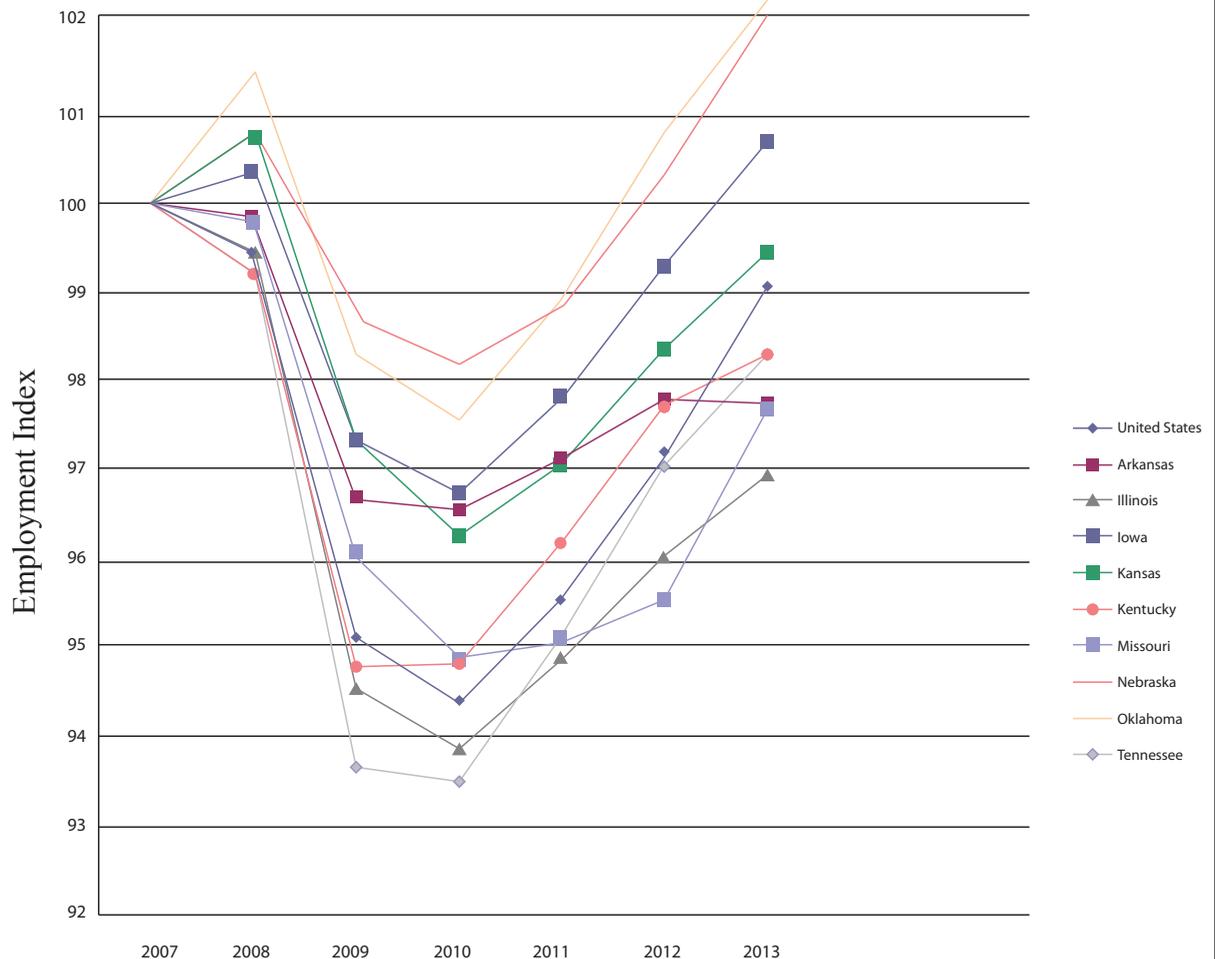
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Figure 4
State Employment Performance Index: 2007-2013
Missouri, the United States, and Neighboring States



Notes: The index value is obtained by dividing each state's employment by the value in 2007 then multiplying this value by 100. This process sets the initial value of employment for each state equal to 100 in 2007.

Subsequent values indicate how the state is performing relative to its 2007 start point.

To many, a more concrete measure to assess a state's economic success is how many jobs its economy produces.

not, however, suffer the greatest relative loss in employment: Illinois, Kentucky, and Tennessee all suffered relatively greater job loss. Missouri has not, however, experienced the fastest job recovery since the bottom of the recession. During the post-recession period, Iowa, Nebraska, and Oklahoma each experienced job

growth that returned them to levels surpassing those of 2007. Every other neighboring state as well as the overall economy has not regained the jobs lost since 2007.

Missouri has experienced one of the weakest jobs recovery compared with its neighbors and the overall

economy. In 2013, Missouri's employment remained about 3 percent lower than it was in 2007. As shown in Figure 4, this outcome is similar to that for Arkansas and Illinois. Indeed, if it were not for a relatively sharp increase in job creation in 2013, Missouri would have maintained its grip on last place in the job-creation race.

What would employment in Missouri be if it had mimicked the average experience of its neighbors in the years since the Great Recession? Using the bottom of the recession (2009) as the start point, Missouri would have seen 40,000 additional jobs than what was actually recorded in 2013. The bottom line is that Missouri witnessed one of the weakest jobs recoveries since the end of the Great Recession.

CONCLUSIONS

Comparing the performance of the Missouri economy to its neighboring states thus far in the century reveals that Missouri is lagging. Using real GDP as one measure of economic success, the state's economy did not enjoy the bounce of the general economic expansion that occurred between 2000 and 2007. And while Missouri's economy did not suffer as deep a decline during the Great Recession as the overall economy and several neighboring states, neither has it recovered as fast as the others in recent years.

A similarly discouraging picture emerges when considering Missouri's ability to create jobs over the past dozen years. The state's economy

failed to create jobs at the same pace as in the neighboring states (except Illinois) and the overall economy between 2000 and 2007. Since the end of the Great Recession in 2009, Missouri has posted a poor record in jobs generated. As of 2013, Missouri trailed all of its neighboring states (except Arkansas and Illinois) and the overall U.S. economy, and it lags far behind Nebraska and Oklahoma when it comes to job creation in the post-recession era.

The state's economic record during the first dozen years of this century warrants, at best, a grade of "D." That grade will not put Missouri on anybody's list of preferred places to live or start a business. The record thus far portends sliding standards of living for future Missouri residents. How we got into this predicament, and how we can get out of it, should be a top priority for the state's political and business leaders.

Missouri has experienced one of the weakest jobs recovery compared with its neighbors and the overall economy.

NOTES:

¹ According to the National Bureau of Economic Research (NBER), the peak of the previous business cycle occurred in March 2001 and ended in December 2007. Because we use annual data, our choice of 2000 through 2007 closely aligns with this period of economic expansion.

² Notice that data from 2007 are used in both periods. Even though the official peak in the business cycle is December 2007, starting the period in 2008 would include a significant portion of the recession in our reference year. In essence, our use of 2007 frames the question in terms of economic activity since the peak of the previous business cycle.

³ One caveat to the use of real GDP per capita is that a state with a high real GDP per person may also be a state that has, relatively speaking, higher crime rates or higher levels of pollution. Even with this caveat, individuals and businesses are more likely to locate in a state that demonstrates economic growth than one trailing most other states. We also should note that a similar story is told if we use personal income per capita instead of real GDP per person.

⁴ See, for example, almost any macroeconomics textbook, or the NBER's website at www.nber.org.

⁵ For the sake of convenience, we will henceforth refer to real GDP per capita simply as real GDP.

⁶ All state data in this study are available from the Show-Me Institute's new website, Show-Me Data.org. Details of data construction are available at that site and from original sources. Real GDP per capita is measured in terms of 2005 purchasing power.

⁷ We should note that in Figures 1 and 2, the same story is told if we use real GDP unadjusted for size of population.

⁸ This reflects one characteristic of the post-2001 recession: Although the recession was mild in terms of reductions in output, job growth was slow to develop during the subsequent recovery. This often times is attributed to the events of September 11, 2001 (which occurred near the bottom of the recession in November 2001), which slowed job expansion.

⁹ Note that Figure 4 extends through 2013 due to the availability of employment data.



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