

**An Evaluation of the Missouri Historic
Preservation Tax Credit Program's
Impact on Job Creation and Economic
Activity Across the State**

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Executive Summary

Nearly a decade after its creation, the Missouri Historic Preservation Tax Credit (HPTC) program has been used in cities, towns, and counties across the state. By 2010, the program has been hailed as a model for similar programs in states across the US. This fact notwithstanding, the evaluation of the program found in this document has been created to answer questions about how the program has impacted Missouri.

According to data provided by the Missouri Department of Economic Development, there were 1,726 applications where credits were issued under the Historic Preservation Tax Credit Program from 2000 through 2009. While most of these applicants were from the St. Louis and Kansas City Metropolitan areas, the St. Joseph area is the fourth largest beneficiary of the program.

As of the end of 2009 we note the following statistics about the program:

Average tax credit issued:	\$ 482,340
Median tax credit issued:	\$ 78,505
Maximum amount issued:	\$ 20,179,741
Minimum amount issued:	\$ 399
Approximately 33% of the projects used less than \$50,000 in tax credits	
Approximately 57% of the projects used less than \$100,000 in tax credits	
Less than 13% of the projects used more than \$1 million in tax credits	

These usage statistics suggest that the program is widely used across multiple types of projects. In looking at the spatial distribution of the projects across the state, beyond the program's use in St.

Joseph, it is worth noting that we found program use in 42 of the 115 or 37% of the counties across the state. Normalizing HPTC use by an indicator of the amount of potentially eligible properties, the number of housing units in a county built before 1940, Map 1 on the following page shows a fairly even distribution across the state.

Our economic impact analyses, described in detail in this report, find that the HPTC is associated with:

43,150 new or retained jobs with an average salary of \$42,732

\$669,872,192 new sales/use and income tax revenue to the state and local governments

\$2.9 billion in leveraged private investment

Higher-than-expected rates of annual job growth

Higher-than-expected increases in high-paying sustainable jobs

Further insight into these conclusions as well as detailed explanations of how we determined our figures make up the remainder of this document. It becomes evident that the HPTC program is associated with positive economic performance in Missouri over the past ten years that exceeds many expectations. This seems to include a softening of the effects of the recession of the early 2000s. Assuming that the program continues to be administered effectively and responsibly, we see no reason why the HPTC program will not be found to be associated with positive effects during the current recession and growth in the state of Missouri once it is over.

The Missouri Historic Preservation Tax Credit Program in Context

On a dollar-by-dollar basis the majority of the HPTC appears to go to Missouri's two largest urban areas. By design, the HPTC is only eligible to be used on properties listed on the National Register of Historic Places or within a Certified Local Historic District. Map 1 below shows how HPTC are used in counties

across the state, based on the amount of property we might expect to be eligible for listing on historic registries. Although not all counties have taken advantage of the program, there are tens of thousands of potentially historic properties in the state waiting to be the rehabilitated or restored.

Another potential source of confusion that needs to be addressed is the notion that tax credits such as the HPTC represent a state expenditure. Through a

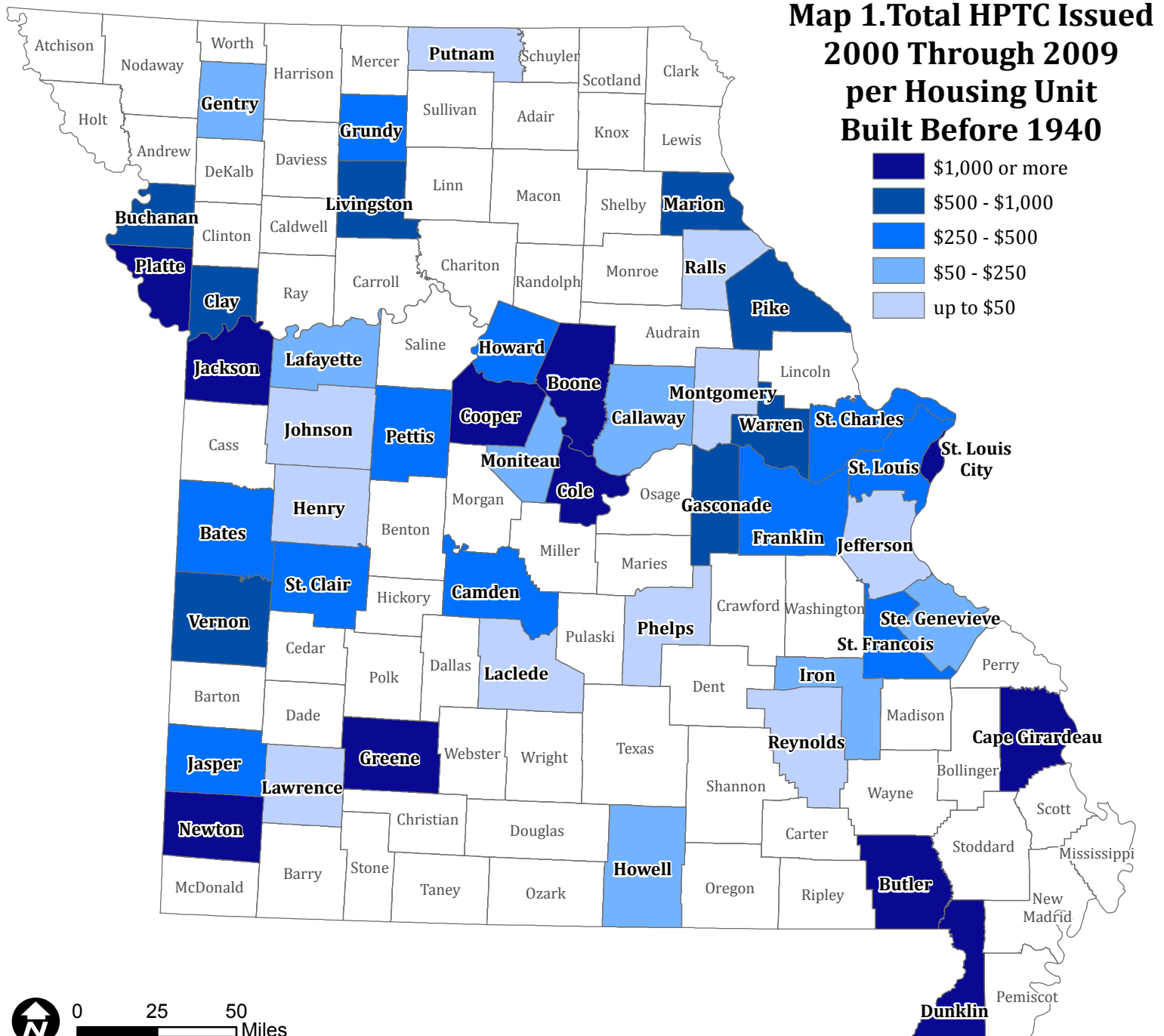
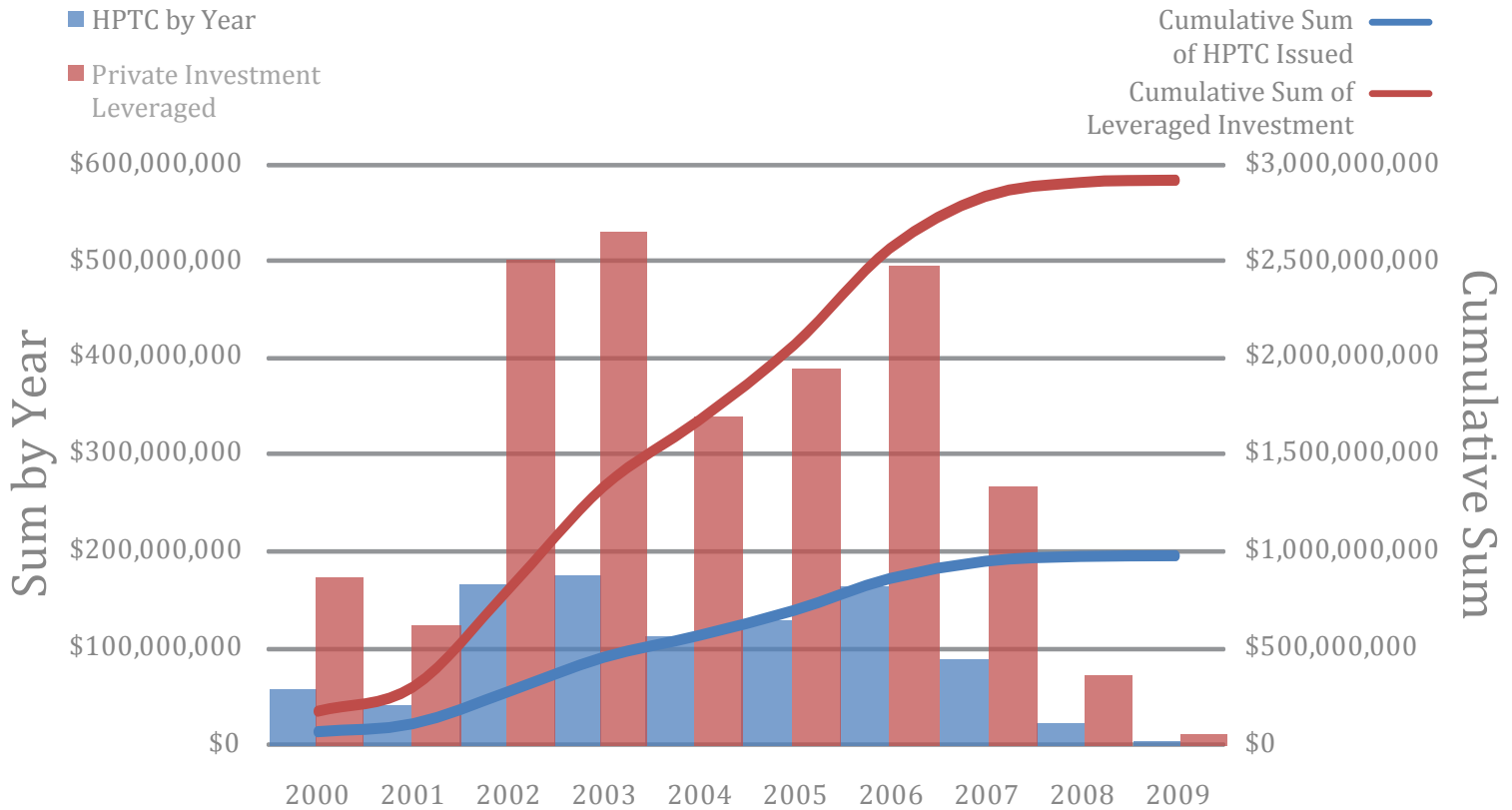


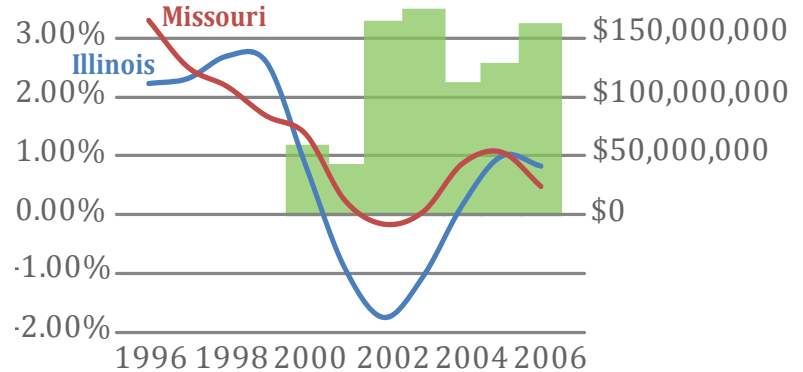
Figure 1. HPTC and Leveraged Private Investment, 2000-2009



series of case studies and interviews, one section asks whether a representative sample of projects receiving the HPTC would have occurred “but for” the availability of the subsidy. From these, we can conclude that the private investment, which by the program’s design is always many times the amount of the project, never would have occurred without the credits. Therefore, while the state does forgo a certain amount of revenue, it is offset many times by the economic activity that otherwise would not have been generated.

Figure 1 above shows how this leveraged private investment compares to HPTC issues. The bars on the graph indicate annual sums of HPTC issued and private investment that can be associated with that amount. The lines represent a cumulative sum of these same figures, showing how these amounts compare over the life of the HPTC program. It becomes clear that the value of credits issued are far less than the volume of private investment that otherwise would not have been created. The extent to which this investment would not have otherwise

Figure 2. Three-year Moving Average of Annual Change in Employment and HPTC Issued



been made is addressed through the case studies found in the next section. How this private investment translates into tax revenue is discussed later.

Figure 2 above shows how Missouri’s job growth compares to Illinois, which does not have a state HPTC program. Of course this relationship doesn’t prove causality. The use of Illinois as a point of comparison will be used more in a later section.

Measuring the HPTC's Impact

Research Design

We begin evaluating the HPTC by looking at the neighborhoods in which projects have taken place. This study is designed to provide an alternative way of looking at the economic impact of the HPTC. Rather than using a traditional input-output model to estimate job creation and increased economic activity, we developed a model to determine what portions of changes over the past decade can be attributed to the use of the HPTC. That is, we analyzed employment, payroll, taxable sales, and demographic data for the past two decades and looked for ways in which things may have changed differently in areas that used the HPTC since the program's inception.

To be sure, many of the neighborhoods which have experienced development subsidized by the HPTC program have been on long paths of decline. Old downtowns and neighborhoods across North America have been losing population and businesses to newer suburbs. Many have been lured by the various public incentives to do so, including the provision of interstates and highways which make lower-density living possible and the home mortgage interest deduction, among others. But has the HPTC, as one case study interviewee put it, been successful at "stemming the decline" of these historic neighborhoods? And have HPTC projects created new jobs and state revenue in the process?

This question is much more difficult to understand than a simple analysis to determine if economic activity "went up" in areas experiencing a particular intervention. Therefore, the following section has been provided to illustrate the ways in which our model works. A more detailed methodology can be found in Appendix A.

Initial Findings

The basis for our major findings is model output indicating that each HPTC project is associated with 25 new or retained jobs.

The implications of this increase will be discussed in detail in the section on impacts to the state. First, the following section illustrates how our model compares areas which are similar in many ways, but are distinguished from one another by the presence of HPTC projects. For each group of comparable areas in Missouri and Illinois, we have provided a graph showing year-over-year change in total employment for the counties in which the areas are contained. We have also provided a map of our model with the HPTC count variable taken out.

The result is a set of maps showing the difference between the expected number of jobs in 2007 (based on our four factors) and the actual number of jobs in 2007 in each ZIP code. That HPTC projects, shown as green dots, generally line up with higher-than-expected jobs figures should not be taken as an argument of causation. Our model shows that HPTC projects are associated with increased jobs, and these maps are provided to illustrate how our model works.



Photo of an award-winning project in Harrisonville, MO courtesy of Micheal Griffin, Shaw Hofstra & Associates

Columbia & Springfield vs. Bloomington-Normal & Champaign-Urbana

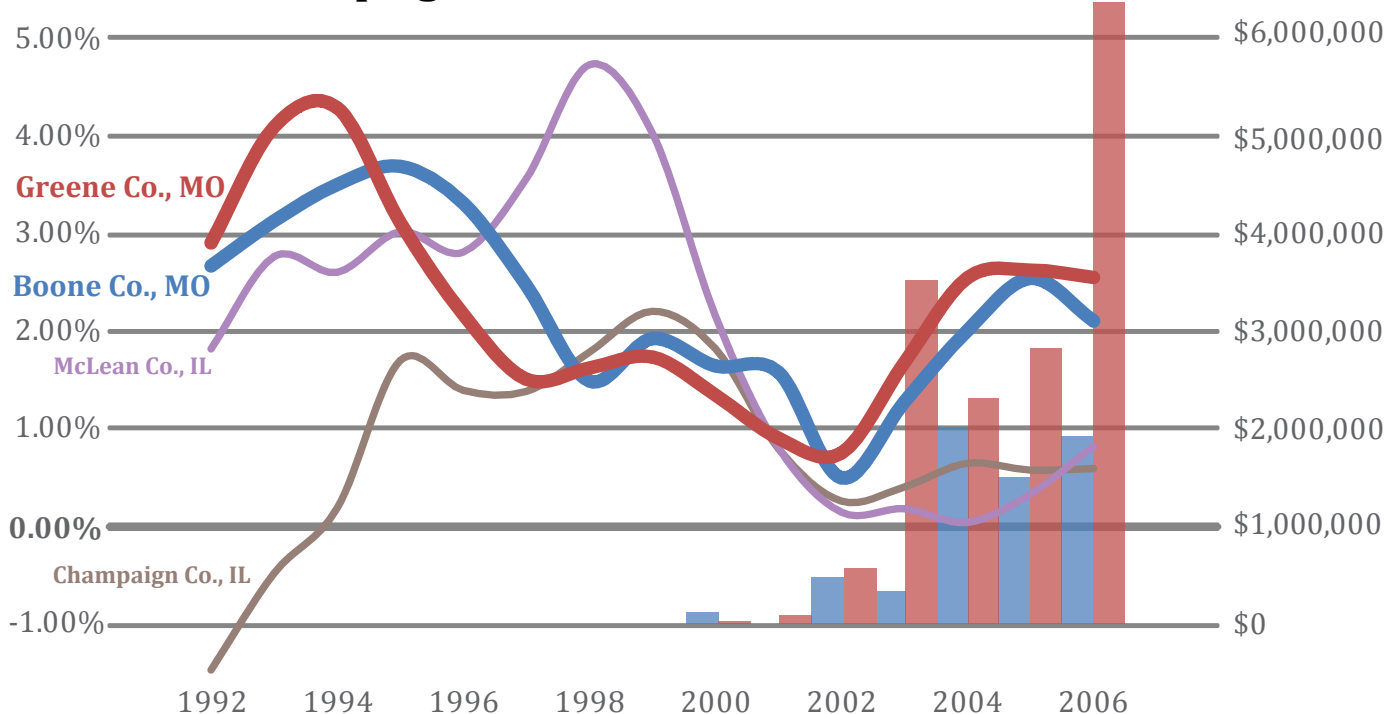
	Boone Co., MO	Greene Co., MO	Champaign Co., IL	McLean Co., IL
Population	149,011	259,227	186,843	163,626
Jobs	112,252	206,675	128,352	111,321
Jobs:Pop	1:1.3	1:1.2	1:1.4	1:1.4
Housing Units Built Before 1940	5.49%	9.81%	11.98%	16.37%
Median Home Value	\$147,675	\$118,362	\$127,993	\$139,790
Residential Vacancy Rate	9.28%	7.95%	8.42%	6.87%
Per Capita Income	\$24,405	\$23,735	\$24,259	\$26,447

Columbia, in Boone County, MO, and Springfield, in Greene County, MO, share a lot in common with McLean County, IL's Bloomington-Normal and Champaign County, IL's Champaign-Urbana. Columbia is home to the University of Missouri and Missouri State University is located in Springfield while Illinois State University is in Bloomington-Normal and University of Illinois in Champaign-Urbana. The four counties are generally of comparable sizes, although Greene County, MO is quite a bit larger than the other three. The group tracks fairly closely on each of the other indicators found in the table at the top-right of this page as well.

employment for each of the counties in three-year averages to smooth out fluctuations. All counties reached a period of flat growth during the recession of the early 2000s, but Boone and Greene Counties began increasing at higher rates once again at around the same time that a number of HPTC projects occurred in each. Growth in the Illinois counties appears to have remained fairly flat throughout this same period. The maps show that the centers of Columbia and Springfield, where a number of HPTC projects can be seen to have taken place, had higher-than-expected numbers of jobs in 2007. Much of the Illinois counties seem to have under-performed, with central Bloomington arriving at far fewer jobs in 2007 than expected.

Figure 3 shows year-over-year change in total county

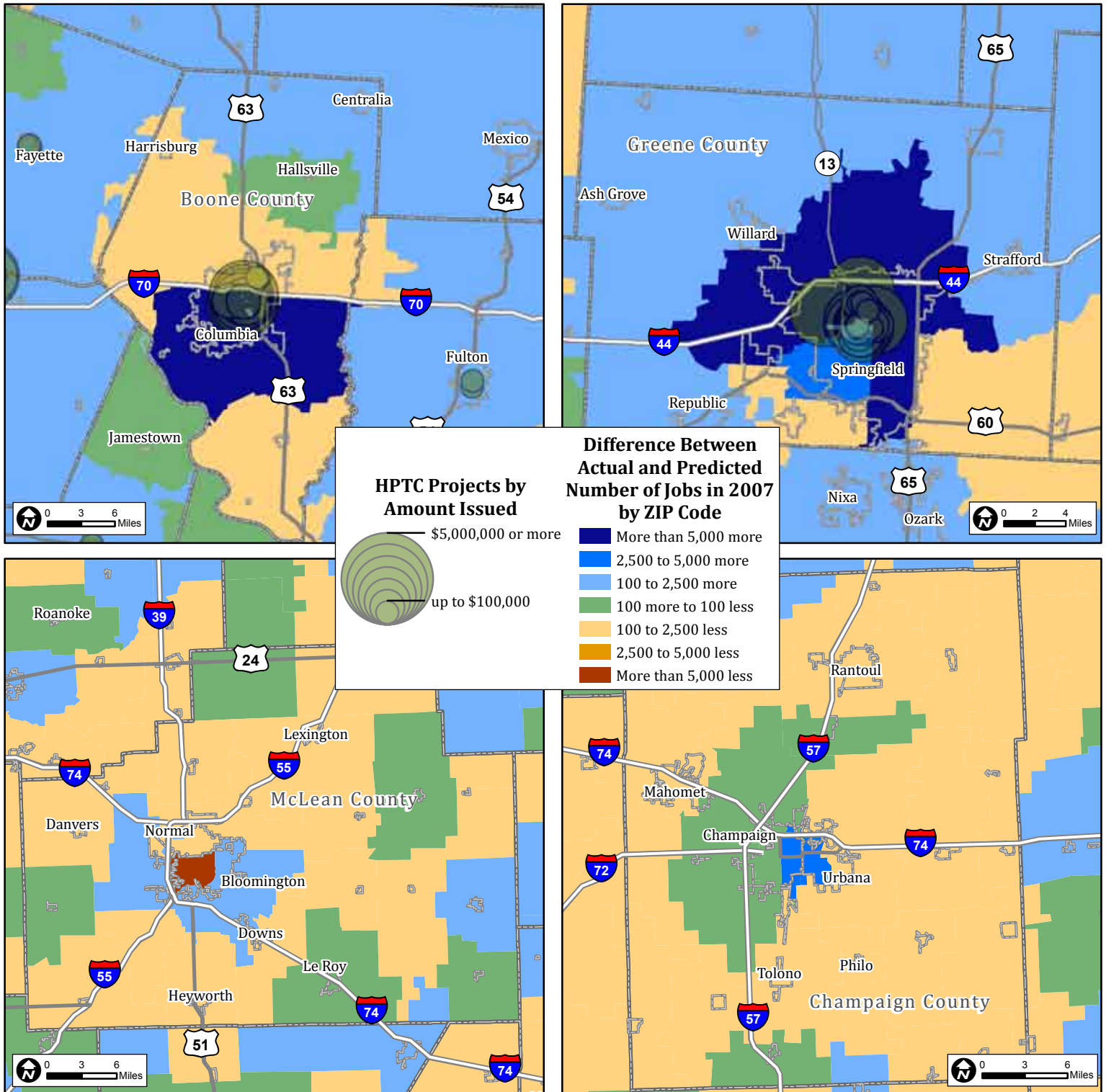
Figure 3. Three-year Moving Average of Year-over-year Change in Total Employment and Total HPTC Issued in Greene and Boone versus McLean and Champaign Counties



That such similar cities are experiencing such different growth trajectories seems noteworthy. Again, while this should not be seen as an indication of causation of any kind, it does serve to support the strength and validity of our predictive model.

credits seems to suggest that patterns of sluggish growth in these mid-sized cities can be overcome with tools such as HPTC.

That projects such as the Tiger Hotel in Columbia wouldn't have occurred but for the provision of HPTC



St. Joseph & Joplin-Carthage-Neosho vs. Rockford & Quad Cities

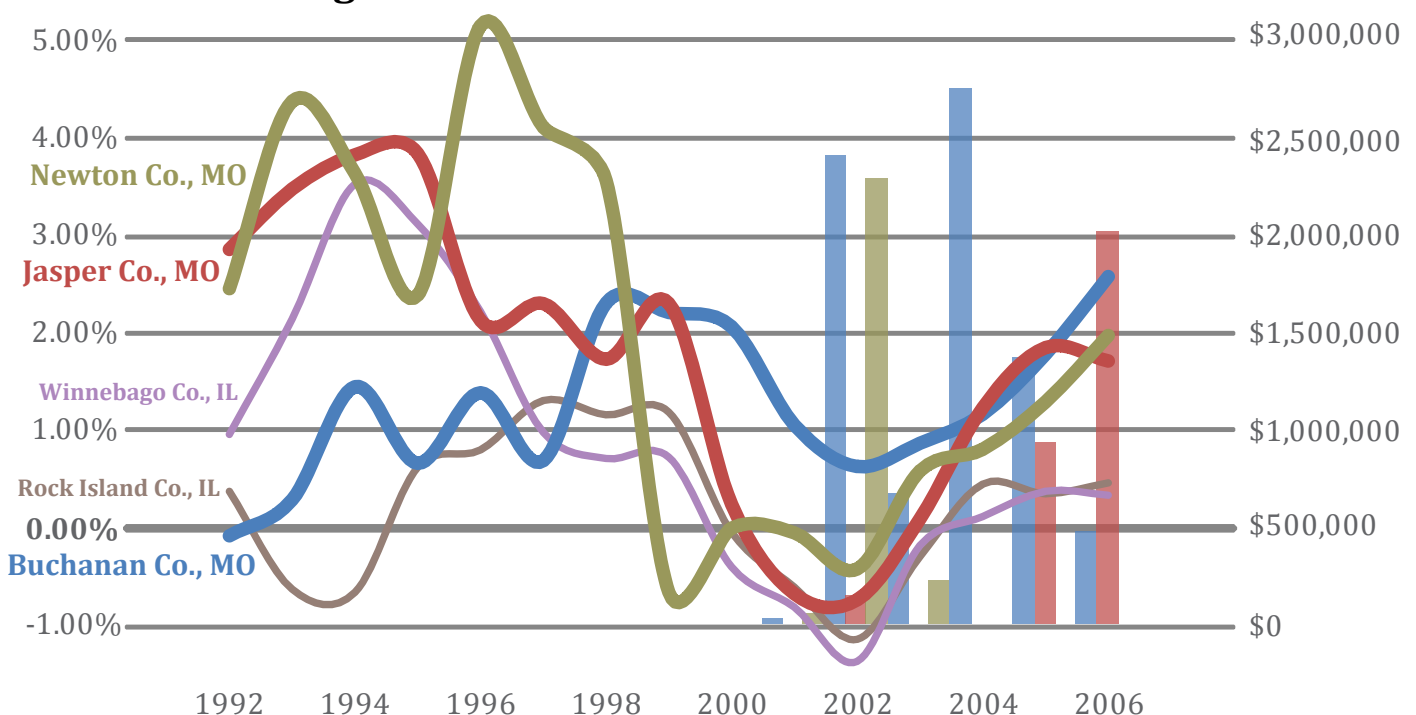
	Buchanan Co., MO	Newton Co., MO	Jasper Co., MO	Winnebago Co., IL	Rock Island Co., IL
Population	84,912	56,963	114,648	300,164	147,338
Jobs	59,804	27,304	78,211	172,838	96,150
Jobs:Pop	1:1.4	1:2.0	1:1.4	1:1.7	1:1.5
Housing Units Built Before 1940	30.89%	12.63%	18.88%	14.86%	24.41%
Median Home Value	\$101,568	\$105,071	\$85,624	\$121,901	\$98,826
Residential Vacancy Rate	10.38%	6.80%	9.07%	6.71%	6.37%
Per Capita Income	\$21,181	\$21,665	\$18,059	\$22,813	\$24,025

Buchanan County contains St. Joseph, MO and is just over an hour's drive from Downtown Kansas City. Rockford, IL is the seat of Winnebago County, located a similar distance from Chicago. Although Winnebago County is far larger, both cities are "second tier" within their states and located very near the centers of major metropolitan areas. Joplin and Carthage, both found in Jasper County, MO, and Newton County, MO's Neosho are similar to Rock Island County, IL's Rock Island and Moline, half of the "Quad Cities" on the Illinois-Iowa border. Each area is located some distance from any major metropolitan area and serves as regional centers for the surrounding rural areas.

Figure 4 shows that the Illinois counties had more stable growth through the 1990s than the Missouri Counties, which saw more fluctuation. All five counties dipped into negative annual job growth during the early 2000s' recession, but only those that saw some investment and HPTC use seem to have risen to higher year-over-year growth. Most interesting is St. Joseph's Buchanan County, which rose to its highest rate of annual change in two decades after experiencing a few million dollars' worth of HPTC projects.

Although their annual rate of change remained fairly low through the 2000s, Winnebago and Rock Island Counties do seem to have experienced some

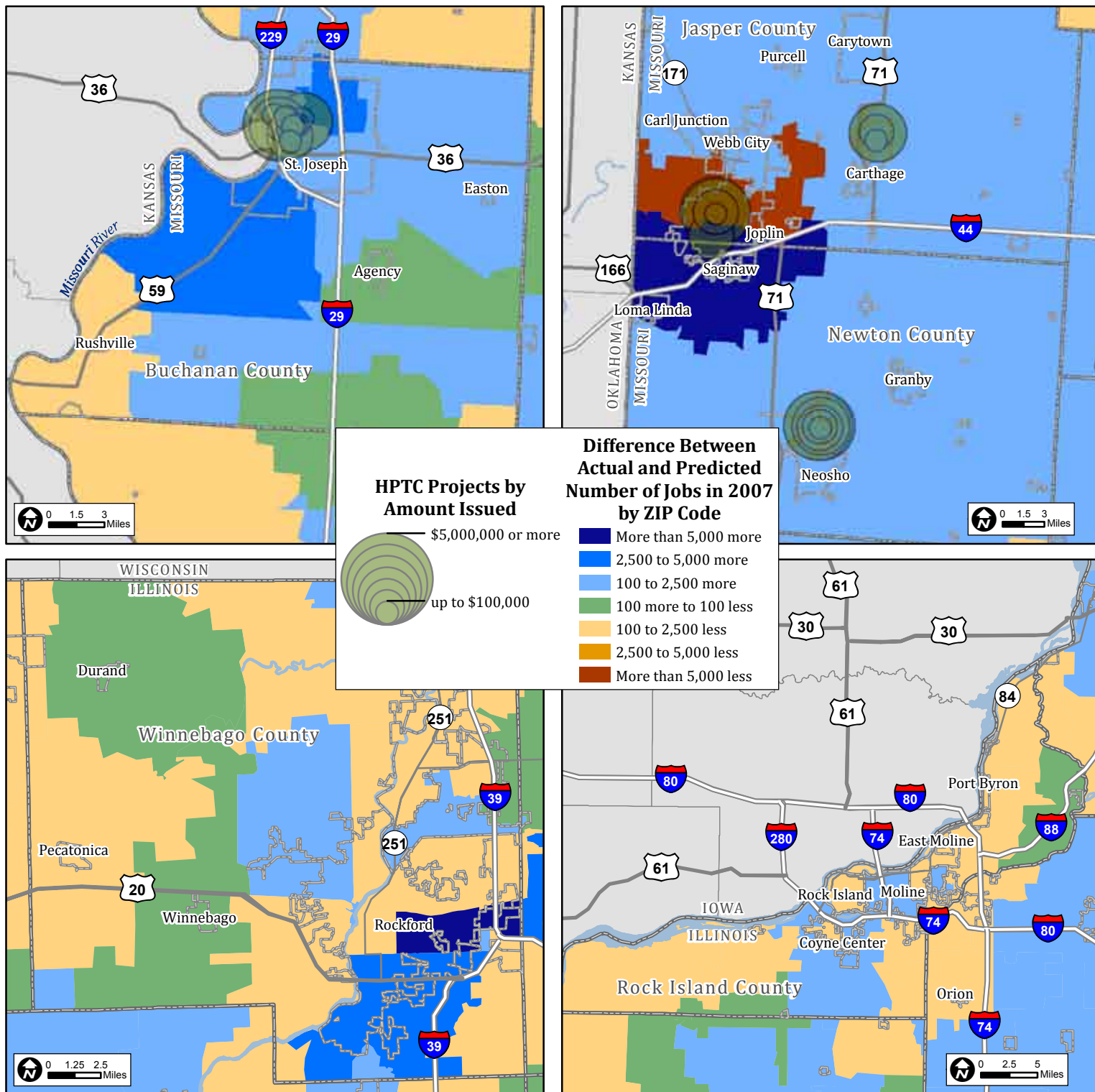
Figure 4. Three-year Moving Average of Year-over-year Change in Total Employment and Total HPTC Issued in Newton, Jasper, and Buchanan versus Winnebago and Rock Island Counties



better-than-expected jobs performance, according to data from our model shown in the maps. Anecdotal evidence suggests that significant downtown rehabilitation efforts have taken place in Moline and Rockford, but it is unclear how public funds have contributed to this.

place in a portion of Joplin that has been determined to be under-performing. However, the Southern part of Joplin and general areas surrounding Carthage and Neosho are showing better-than-expected numbers of jobs. It is unclear what might be causing this.

A number of HPTC projects appear to have taken



Cape Girardeau vs. Carbondale & Decatur

Cape Girardeau, Missouri and Carbondale and Decatur in Illinois are useful points of comparison as they all are home to mid-sized, regional universities. Southeast Missouri University in Cape Girardeau and Southern Illinois University in Carbondale are particularly similar. In addition to these schools, Jackson County, where Carbondale is found, and Cape Girardeau County are located just across the river from one another. They also are each found near regional recreational areas and are seeing in-migration of retirees and others attracted to the wine countries and river- and lake-based activities.

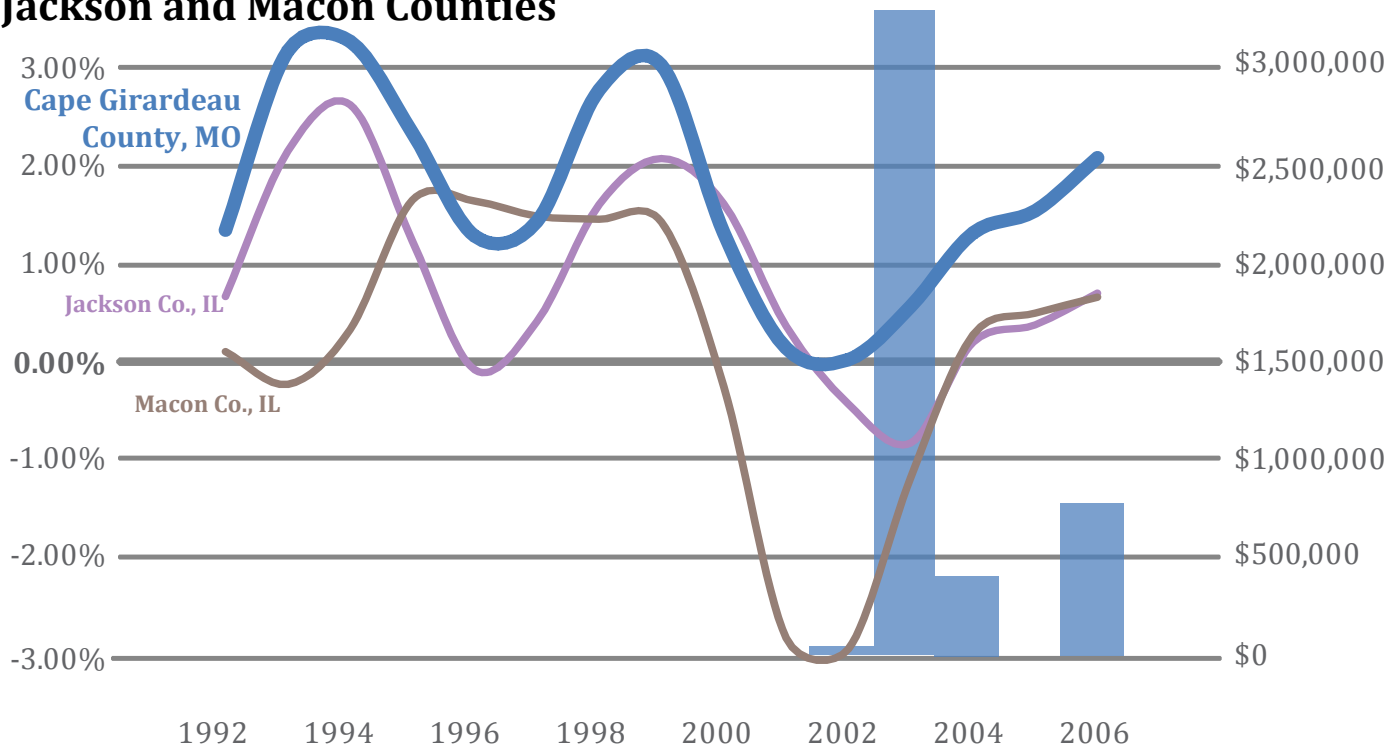
Decatur and Macon County are located further North, but are home to Millikin University. Macon County is by far the largest of the group. It also contains a higher proportion of jobs relative to population and a higher per capita income.

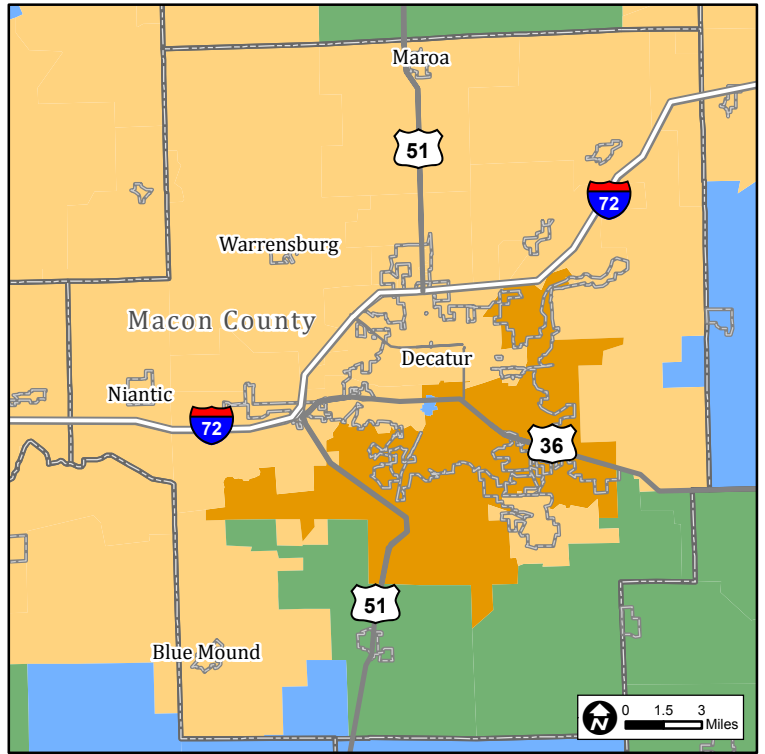
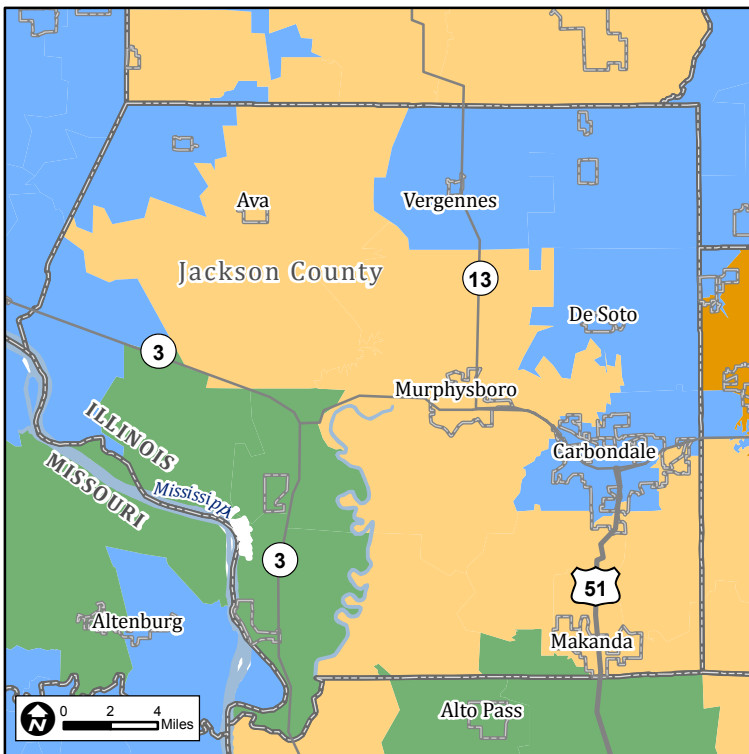
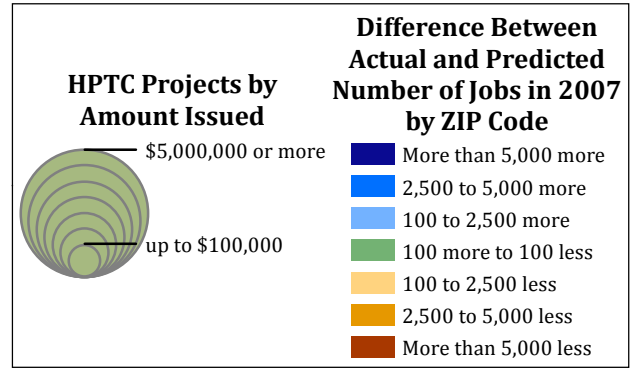
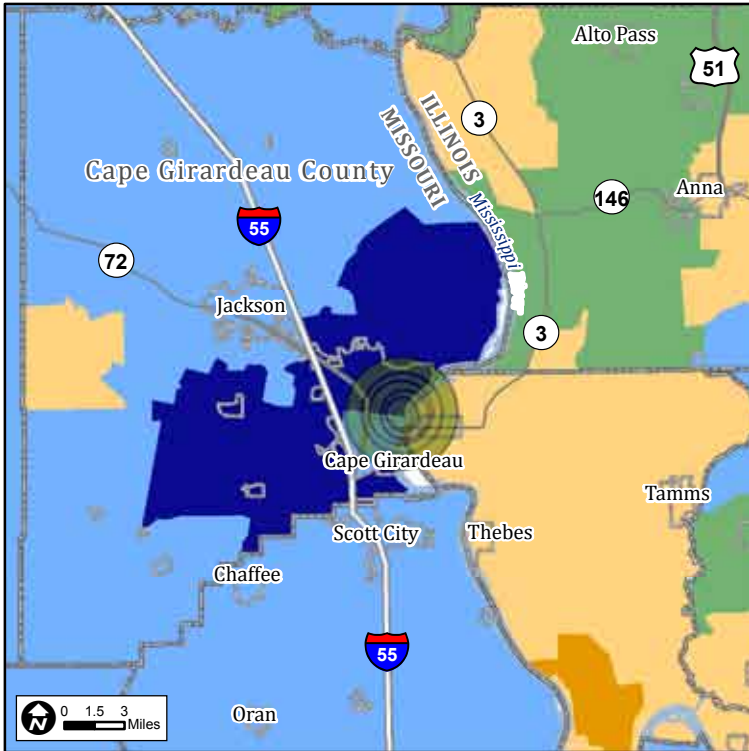
	Cape Girardeau Co., MO	Jackson Co., IL	Macon Co., IL
Population	72,803	57,479	108,324
Jobs	55,442	38,585	67,687
Jobs:Pop	1:1.3	1:1.4	1:1.6
Housing Units Built Before 1940	11.26%	12.36%	19.71%
Median Home Value	\$123,936	\$82,714	\$86,334
Residential Vacancy Rate	7.38%	11.71%	10.03%
Per Capita Income	\$21,818	\$19,676	\$23,637

However, Macon County also appears to have under-performed in the 2000s. Cape Girardeau on the other hand, has seen the area surrounding it's principal city add far more jobs than expected.

While Carbondale has experienced higher-than-expected job growth in contrast with the rest of Jackson County, Cape Girardeau and the immediately surrounding areas have added many more jobs than expected.

Figure 5. Three-year Moving Average of Year-over-year Change in Total Employment and Total HPTC Issued in Cape Girardeau versus Jackson and Macon Counties





Kansas City & St. Louis vs. Chicago

With economies that are by far the most dynamic and complex of any regions studied in this report, the centers of the largest metropolitan areas in Missouri and Illinois show mixed results that are more difficult to visualize. While there is a clear relationship between heavy HPTC use and ZIP codes experiencing job growth that is better than expected, there are many other things going on. It is striking to note that the City of Chicago has added fewer jobs than the model predicted. This finding makes more sense in slow-growth cities such as St. Louis and Kansas City.

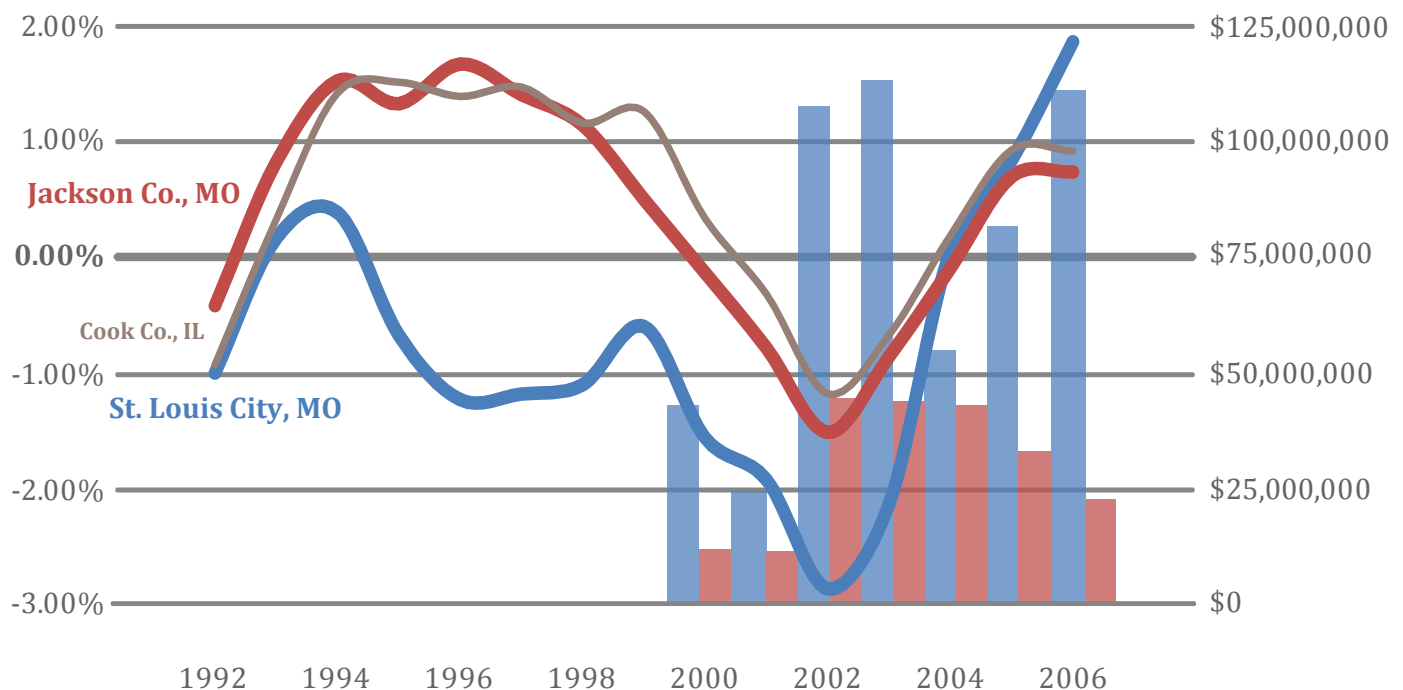
Whereas the illustrations here show the entire regions in which these cities are located, our model looks at a number of factors to pick out and compare only the most analogous areas. Therefore, it is significant that the Central West End in St. Louis and portion of Kansas City that is south of Downtown

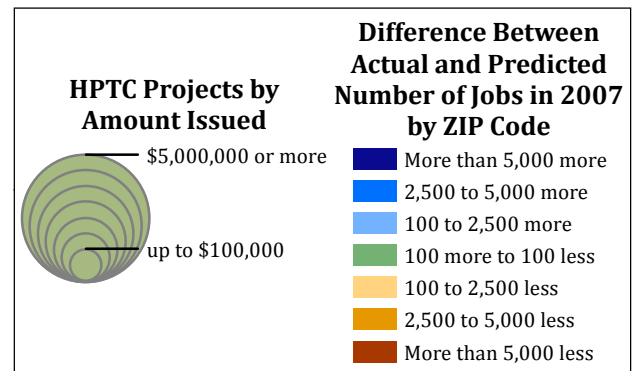
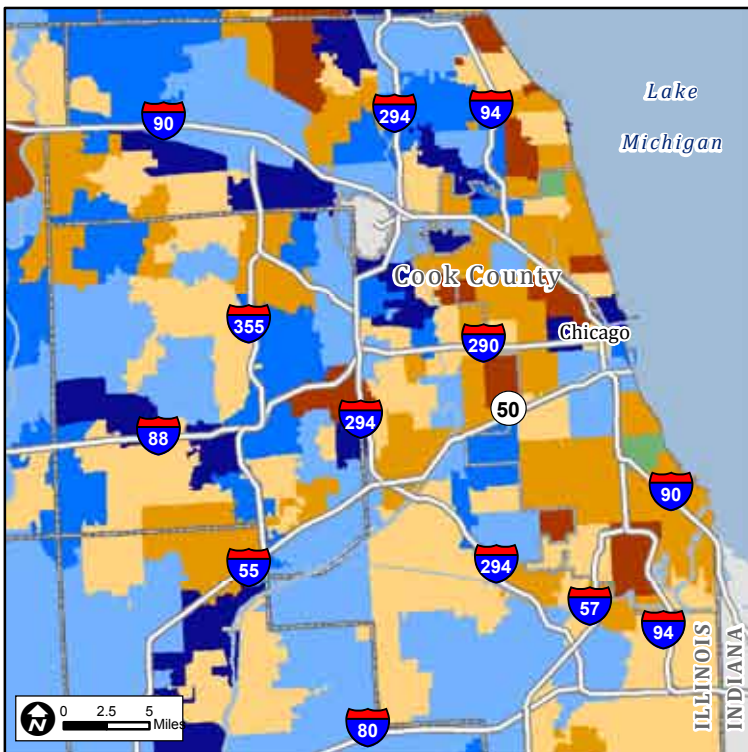
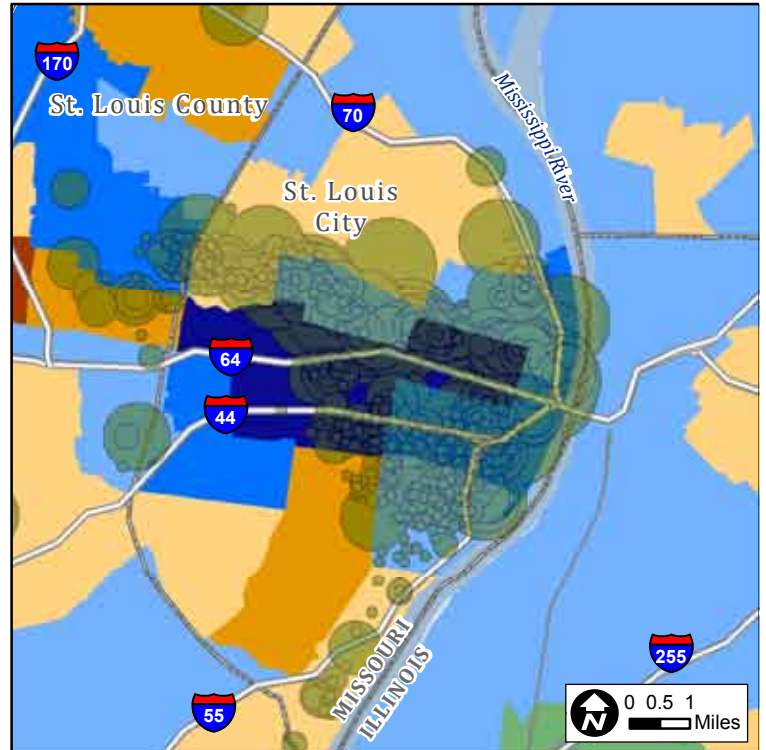
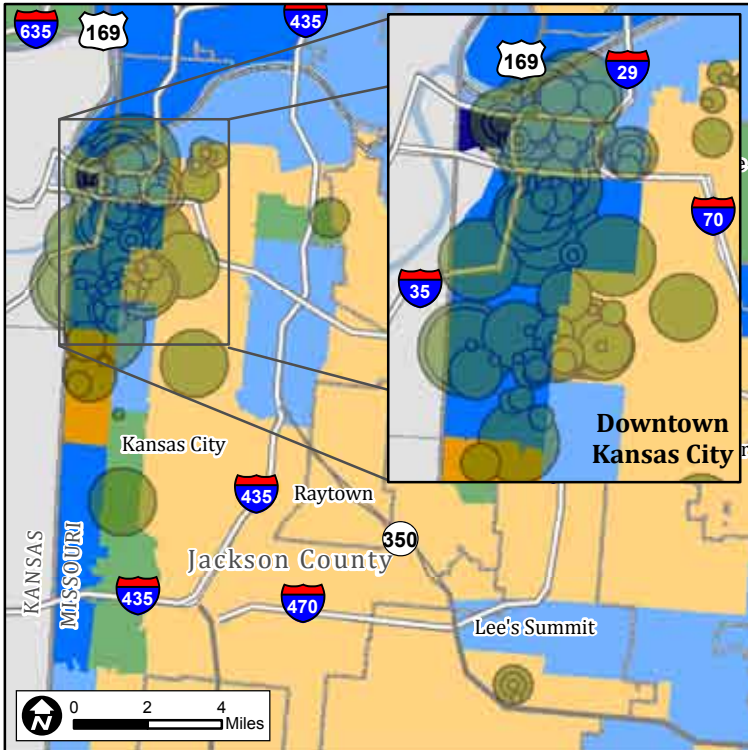
	Jackson Co., MO	St. Louis City, MO	Cook Co., IL
Population	665,821	354,843	5,261,577
Jobs	465,277	282,919	3,349,739
Jobs:Pop	1:1.4	1:1.2	1:1.5
Housing Units Built Before 1940	16.63%	44.73%	24.76%
Median Home Value	\$118,201	\$103,924	\$249,761
Residential Vacancy Rate	10.60%	16.75%	8.48%
Per Capita Income	\$24,418	\$18,696	\$26,698

are performing better than the Northshore area of Chicago, directly North of their Downtown.

That downtowns in Kansas City and St. Louis are adding jobs as fast or faster than downtown Chicago seems significant given that Missouri's largest cities have been shedding jobs and residents as Chicago has sustained a reasonable level of growth over the past several decades. Looking at St. Louis and Kansas City individually, it is also worthwhile to note that areas in each of those jurisdictions which added fewer jobs than expected tend to be those areas receiving little in the way of HPTC.

Figure 6. Three-year Moving Average of Year-over-year Change in Total Employment and Total HPTC Issued in St. Louis City and Jackson County versus Cook County





“But for” the HPTC . . .

In order to understand the underlying logic behind the developer decision to use HPTC we developed a series of case studies that examined the details of individual projects throughout the state. The goal for these case studies was to understand the nature of the ‘but for’ element of the tax credit tool, to identify whether the HPTC program was essential for project success and if so, what sort of outcomes were there that might be associated with the project. The cases were developed using a series of confidential interviews of individuals involved in the case study projects from both the private and public sector. This material was supplemented by an economic impact analysis of the sample cases for each cluster to assess their relative impact on the state economy.

The economic impact of a business, organization, or event is a measure of the amount of, and the way that, dollars associated with that entity circulate through the region. The estimates presented in this section of the report were developed with a computer model called IMPLAN, which stores a profile of the Missouri economy in a database. The model uses production functions for each industry in the region to calculate how spending in one industry circulates through other industries in Missouri. This economic impact can be expressed either as an annual flow of dollars (output), or an equivalent number of employees.

There are three levels of impact that we considered when we developed these figures: the direct impact, the indirect business spending impact, and the induced household spending impact. All three of these are expressed in terms of an annual flow of dollars (output) or annual jobs. The total impact is the sum of these three factors.

Direct Impact

This is the most basic part of an organization’s economic impact. It measures the dollars and jobs that the organization directly generates. When expressed in dollars, the direct impact is an

approximation of a company’s output. Alternatively, the direct impact is the average annual value of output associated with the given number of jobs in that industry.

Indirect Impact

This is a secondary measure of a business’s economic impact. It represents the dollars and jobs generated by the operating expenses of the organization. Examples might be purchase of raw materials from a local supplier or the professional services of an accounting or law firm. This spending generates revenue and employment at firms that supply those goods or services. Every dollar that an organization spends locally to conduct its business supports another business in some way.

Induced Impact

This is a tertiary measure of a business’ economic impact. It is a measure of the business revenue generated by the personal spending of the organization’s employees. This gets translated as peripheral spending at places like the local grocery store. The employee’s paychecks support revenue and jobs in the same way that the organization’s spending on equipment supports revenue and jobs.

Case Study Selection

In order to ensure that our case study analysis was cross-sectional, we used a standard cluster analysis to stratify the HPTC projects into six relatively homogeneous categories. Projects were assigned to one of six clusters based on the total amount of tax credits issued to the project and five indicators of neighborhood composition, including the following: percent of population living in urbanized versus rural areas, median household income, percent of occupied housing units that were built before 1940, total number of business establishments, and total number of workers. All indicators were reported by ZIP Code Tabulation Areas for the year 2000, the year that our overall analysis begins, and extracted from the Missouri Census Data Center and US Census County Business Patterns websites. From each category or “cluster” we semi-randomly selected a minimum of

two projects that represented both residential and commercial redevelopment and a general sense of the individual projects' representativeness of its cluster. In presenting analyses of two to three projects from each category we feel that we have represented the entire distribution of HPTC projects throughout Missouri in terms of geography, size, and scope. The following is a general description of the six clusters.

1. Small-town/urban – This cluster has a lower residential population and greater number of jobs with a moderate number of employers and moderate amount of tax credits issued.

2. Big City Central Business District – This cluster occurs only in the downtowns of St. Louis and Kansas City, has 100% urban population, many jobs, many employers, and the highest amounts of tax credits issued on average.

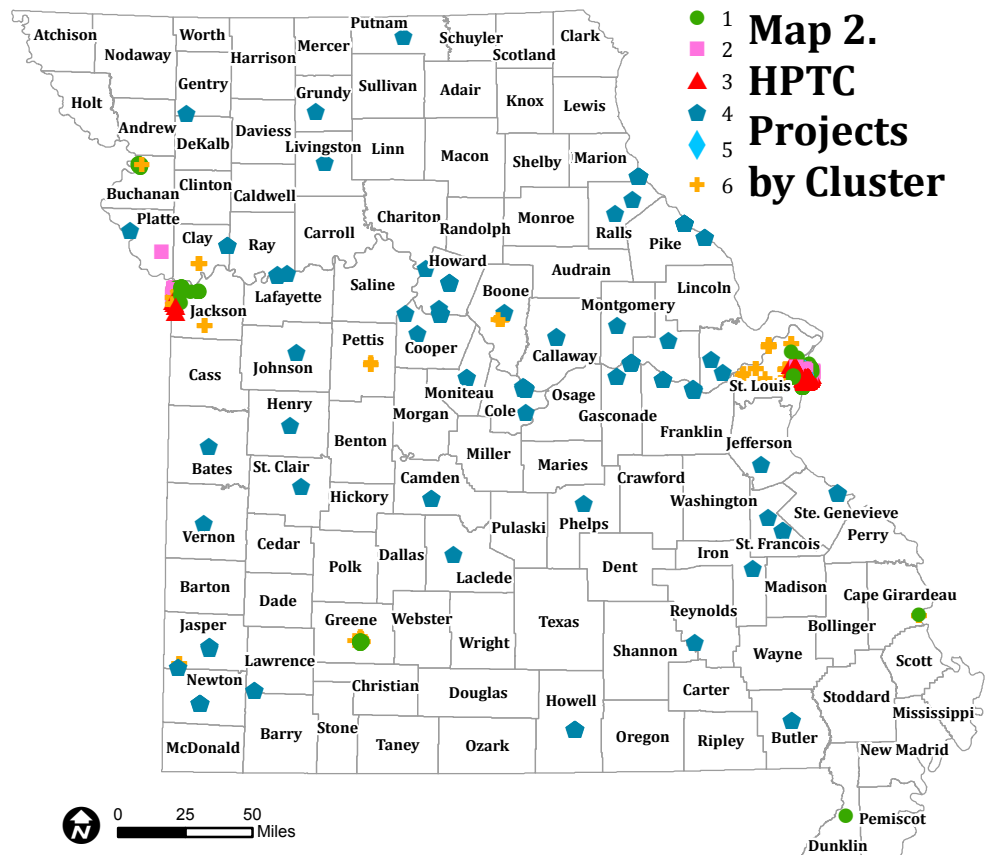
3. Historic Urban Neighborhood – This cluster has projects that are found generally in South St. Louis around the Benton Park Historic District as well as St. Louis' Central Corridor and Southeast Kansas City. These projects are characterized by low tax credit amounts and neighborhoods with the highest numbers of building built before 1940 and the lowest numbers of businesses.

4. Rural and small town landmarks – Projects in this cluster received relatively small tax credit amounts and are usually in ZIP codes with very few residences built before 1940. There are typically few jobs and businesses in these areas.

5. Revitalized Neighborhood -- Projects in this cluster are almost exclusively located in either the St. Louis Forest Park Southeast, Shaw, or Soulard neighborhoods. These are among the lower-cost projects in terms of tax credits issued and in an area that is second only to Cluster 2 in average number of jobs and businesses and has the lowest median household income. What makes the cluster unique is the level of investment and overall impact versus household income. These were previously declining neighborhoods that had strong tax credit induced investment.

6. Suburban Landmarks – This cluster includes tax credit projects that are located in what used to be outlying rural areas but have become the suburbs of nearby Metro areas. These areas have the highest median incomes; moderate numbers of jobs, employers, and residences built before 1940; a relatively high percentage of rural populations mixed in with urban; and are near the biggest receivers of tax credits on a per-project basis.

Clusters 1 through 3 represent variations of projects found primarily in downtown, midtown, or central city locations in either Kansas City or St. Louis. Clusters 4 and 6 represent small and mid-sized communities throughout the state. Finally, Cluster 5 uniquely represents a set of neighborhood preservation projects found only in St. Louis that many have argued demonstrate how historic preservation can stabilize neighborhoods as many of these projects are found in locations where previously high rates of crime and overall neighborhood distress occurred. Map 2 below shows a distribution of the different clusters across the state.



Cluster 1 -- Small-town/urban

In Cluster 1 the average tax credit issued was \$291,710 and in 2000 was almost exclusively urban in nature, as defined by the US Census. Each zip code averaged 6,221 employees, 335 business establishments and 3,306 buildings built before 1940. The median household income for the cluster was \$20,497. While many of the projects in this cluster are located in both Kansas City and St. Louis, a number of projects are also located in cities such as St. Joseph.

Projects in this cluster have a range of impact on the state economy. The Western Union Telegraph project in Kansas City typifies the sort of mixed use project in a mostly urban environment. Such projects appear to have a fairly sizable impact on the statewide economy. Most likely the project in St. Joseph did not create the level of permanent jobs that the project in Kansas City did due to the residential scope of the project but it is worth noting that such projects are also fairly common in this cluster and even with the smaller size of impact, the labor income exceeded the \$22,200 average cost per job that our model estimated for the HPTC.

THE LOFTS @ 415

Historic Name: Noyes Norman Shoe Company Building
 Location: 415 N. 3rd St., St. Joseph
 Tax Credit Amount Issued: \$1,152,247

The Noyes Norman Shoe Company Building originally housed a shoe factory but later became an abandoned, empty warehouse. In early 2004, construction started on the conversion of the space to 46 market-rate apartments. Construction was completed by the end of the year. Without the use of the historic

preservation tax credit program and local tax abatement, the building would remain abandoned. Both programs were cited as required to make the project financially feasible.

Downtown redevelopment in Saint Joseph started with historic preservation tax credit projects by a short list of developers. The greatest impact this and other early projects had on the area was showing other developers that historic redevelopment could be successful in downtown Saint Joseph. Since the completion of this project, many times more redevelopment projects have occurred in the area, and this development activity has had a positive cumulative impact on the surrounding area. Historic preservation tax credit projects were described as catalysts for job creation and economic growth in the community. Due to the residential end-use of this particular project, permanent jobs directly associated with the site include a part-time property manager and a part-time maintenance employee.

The project's greater job impact came in the form of the temporary construction jobs that were created during the rehabilitation of this building. Subsequent projects have continued to provide demand for construction in the area. The increase in downtown residential population has also created incremental increases in the work required in industries related to real estate development and construction such as realtors, appraisers, and suppliers.

The city had an important role in the success of the project. It was instrumental in helping the project receive approval of local tax abatement, was helpful with building codes, and later took a proactive role in marketing the property. The success of early projects gave the city confidence to make city-backed loans for new development available.

Estimated Operational Economic Impact of The Lofts @ 415 on Missouri

	Direct	Indirect	Induced	Total
Jobs	1.0	0.3	0.2	1.5
Total Value Added	\$56,877	\$16,761	\$16,887	\$90,525
Labor Income	\$21,229	\$10,221	\$9,244	\$40,694
Output	\$89,815	\$29,487	\$29,000	\$148,302

WESTERN UNION BUILDING

Historic Name: Western Union Telegraph Building
Location: 100 E. 7th St. Kansas City
Tax Credit Amount Issued: \$832,509

The Western Union Building originally operated as a primary location for Western Union Telegraph's telegraph wire switching functions serving a five state region in the Midwest. In the 1950s the company expanded the building's operations to include nationwide and international telecommunication functions as Western Union came to dominate the industry. The company operated in that location well into 1970s until the building became functionally obsolete as the rapid changes in the telecommunications industry forced the company to move operations.

In 2002 Watkins & Co. applied for historic preservation

tax credits, coupled with tax increment financing in an effort to redevelop the site as a mixed use commercial building. The \$4.5 million project resulted in attracting 2 new restaurants and an advertising firm to the downtown location. The availability of tax credits provided the equity needed as a down payment for the project financing, providing access to needed capital. The project would not have moved forward without the state historic preservation tax credit program.

Estimated Operational Economic Impact of Western Union Building on Missouri

	Direct	Indirect	Induced	Total
Jobs	194.0	109.7	115.3	419.0
Total Value Added	\$11,321,771	\$5,944,198	\$7,887,644	\$25,153,613
Labor Income	\$10,862,564	\$3,932,082	\$4,318,001	\$19,112,647
Output	\$23,584,988	\$10,659,103	\$13,545,621	\$47,789,712

Cluster 2 -- Big City Central Business District

In Cluster 2 the average tax credit issued was \$2,715,600 and like Cluster 1 in 2000 was almost exclusively urban in nature. Yet unlike Cluster 1, each zip code averaged 29,541 employees, 768 business establishments and only 1,046 buildings built before 1940. The median household income for the cluster was \$23,921. The projects in this cluster are located exclusively in either Kansas City or St. Louis, in the core downtown areas where there are high concentrations of employees and businesses but lower concentrations of residential population. The projects in this cluster tend toward larger scale, multiple use projects that layer development incentives to stimulate job creation and broader economic development.

The economic impacts associated with the projects in Cluster 2 have a much more sizeable effect, much of this due to the more commercial nature of the end uses. Note that even with the smaller number of jobs associated with the National Archives project that the associated impact for this project on the state economy far exceeds the cost of the state investment.

THE WESTIN AT CUPPLES STATION

Historic Name: Cupples Station
 Location: 811 Olive St. St. Louis
 Tax Credit Amount Issued: \$1,853,943

Built in 1894, Cupples Station served as a national

freight depot serving as the primary mid-continental transshipment point for commerce in the US. Part of an original 20 building block, by 1971, only 10 remained as half of the warehousing facilities were demolished to make way for Busch Stadium. The rest remained vacant until 1998 when the plan was announced to redevelop the four remaining blocks into a series of residential, commercial, and office spaces. The first stage of this project, The Westin at Cupples Station, included a 257 room hotel, spa and conference center, 400,000 sq. ft. in class A office space, restaurants, banking and other retail services and a parking garage. They applied for historic preservation tax credits in 2003, using the credits as equity to secure financing for the remainder of the \$59 million in project costs. All who were interviewed for the project agreed that it would not have moved forward without the initial investment made by the State of Missouri through the Historic Preservation Tax Credit Program.

The City development agency credits the historic preservation tax credit program with the dramatic turnaround in downtown St. Louis. Without the equity opportunity the city would not have been able to attract enough developer interest to move projects forward to generate further developer interest. The redevelopment of historic buildings is extremely cost prohibitive even when there is a market. The tax credit program helps level the playing field.

Estimated Operational Economic Impact of The Westin at Cupples Station on Missouri

	Direct	Indirect	Induced	Total
Jobs	150.0	28.8	39.7	218.5
Total Value Added	\$7,980,303	\$2,433,028	\$3,102,179	\$13,515,510
Labor Income	\$4,519,508	\$1,537,745	\$1,698,260	\$7,755,513
Output	\$12,719,408	\$4,508,302	\$5,327,443	\$22,555,153

NATIONAL ARCHIVES

Historic Name: Adams Express Building
 Location: 38 W. Pershing Rd.,
 Kansas City
 Tax Credit Amount Issued: \$1,609,344

The Adams Express Building, built at the turn of the 20th century, served as a major railroad station and depot for the exchange of goods, handling money transfers, mail distribution, grain storage, livestock trade, dry goods shipment and produce marketing throughout the Midwest. The project partners came together in 2007 and applied for historic preservation tax credits to provide equity funding for the more than \$10 million in total project costs. The intended use for the building was a state-of-the-art office space that would eventually house the US National Archives and museum. The project became part of a broader revitalization effort adjacent to the downtown Kansas City Power and Light district.

The tax credits were an integral part of the project. The project partners all agreed that without this development tool the project would not have been economically feasible. Older buildings have many attractive features yet considerable aging infrastructure that requires costly upgrades. Additionally, building functionality is often outdated. The historic preservation tax credit program provided the needed equity to make the project work, economically.

The city uses the tax credit program to keep the urban real estate market competitive with the surrounding suburbs. Vacant buildings often require considerable additional resources to renovate for a future use yet are often more desirable than new construction as they offer a sense of character and place. Further, rehabbing existing buildings reduces regional fiscal stress by concentrating limited public resources along existing public infrastructure lines. New construction in outlying areas often requires the development of new public infrastructure many times in areas where existing fiscal stress can least afford to extend new public infrastructure lines.

Estimated Operational Economic Impact of the National Archives on Missouri

	Direct	Indirect	Induced	Total
Jobs	20.5	31.8	28.6	80.9
Total Value Added	\$3,334,015	\$1,888,119	\$1,919,612	\$7,141,746
Labor Income	\$2,332,392	\$1,265,702	\$1,050,869	\$4,648,963
Output	\$7,663,634	\$3,491,582	\$3,296,590	\$14,451,806

Cluster 3 -- Historic Urban Neighborhood

In Cluster 3 the average tax credit issued was \$174,570 and in 2000 was entirely urban in nature. Each zip code averaged 14,664 employees, 563 business establishments and 7,840 buildings built before 1940. The median household income for the cluster was \$28,063. The projects in this cluster are located entirely the St. Louis metropolitan area, with all but a fraction of the projects located in the historic urban neighborhoods of the City of St. Louis. The projects in this cluster tend toward higher end residential with some commercial projects that support these residential neighborhoods. Again, the commercial projects are larger scale, multiple use that layer development incentives to stimulate job creation and broader economic development while supporting the historic neighborhood.

Impacts associated with these projects reflect the nature of their location in more full-service urban neighborhoods. These projects often serve as primary catalysts for their respective neighborhoods and the estimated economic impacts these profiled projects had on the state bear that out. Again, as with the projects in the previous clusters, the state tax credit investment appears to have yielded considerable positive economic impact for the state.

CHASE PARK PLAZA

Historic Name: Chase Park Plaza
 Location: 232 N. Kingshighway Blvd., St. Louis
 Tax Credit Amount Issued: \$9,972,758

The Chase Park Plaza Hotel project was one of the first projects in the state to receive historic preservation



tax credits. Originally built in 1922 as an elegant hotel, replete with marble floors and grand ballrooms, the Chase Hotel with its Chase Club, was a well-known stop over for popular big band acts like Bob Hope and Dean Martin in the 1950s. The Park Plaza started as a separate project of the original owner, eventually to become an exclusive apartment complex. The Chase hotel continued operations into the 1980s when the original owner sold the building, at which point the hotel fell into disrepair. By 1991, the property was a common hangout for vagrants and homeless individuals.

In 1997, a group of investors purchased the property and applied for the newly available state historic preservation tax credits to help fund the \$250 million renovation project. This first phase of the project included the hotel renovation, 5 restaurants, a 5 screen movie complex, fitness center, and salon and day spa. The historic preservation tax credit program was the catalyst for this project. It would not have happened otherwise.

Estimated Operational Economic Impact of The Chase Park Plaze on Missouri Economy

	Direct	Indirect	Induced	Total
Jobs	420.0	80.6	111.0	611.6
Total Value Added	\$23,993,846	\$7,315,226	\$9,327,115	\$40,636,187
Labor Income	\$13,588,504	\$4,623,435	\$5,106,045	\$23,317,984
Output	\$38,242,600	\$13,554,816	\$16,017,672	\$67,815,088

CORONADO PLACE

Historic Name: Coronado Hotel
 Location: 3701 Lindell Blvd.,
 St. Louis
 Tax Credit Amount Issued: \$634,489

The Coronado Hotel was built in 1925 to be one of St. Louis' finest hotels. A location that also included apartments, the Coronado regularly hosted such luminaries as Charles Lindberg, Rudolph Valentino, and President Harry S. Truman. The Hotel closed in the 1980s and remained vacant until 2003 when developers applied for historic preservation tax credits to renovate the structure into a residential, retail, and office complex across from the Saint Louis University campus. The \$43.5 million project was additionally supported by the state brownfield tax credit program to address contamination issues that were present on the site.

Since completion of the Coronado

Hotel several other nearby projects have come on line. These include a mixed use project, the Moolah Theater, with residential spaces and a single screen boutique movie theater and bowling alley. Additionally, a block of new construction mixed use residential and commercial was recently completed further west on Lindell Blvd. Clear indications from those interviewed were that the Coronado project served as the catalyst for the additional development in the area.



Estimated Operational Economic Impact of the Coronado on Missouri Economy

	Direct	Indirect	Induced	Total
Jobs	103.0	19.4	18.8	141.2
Total Value Added	\$2,428,174	\$1,259,398	\$1,284,669	\$4,972,241
Labor Income	\$1,718,784	\$731,388	\$703,281	\$3,153,453
Output	\$5,347,104	\$2,787,446	\$2,206,192	\$10,340,742

Cluster 4 -- Rural and small town landmarks

In Cluster 4 the average tax credit issued was \$251,900 and in 2000 was approximately 53% urban in nature. Each zip code averaged 6,539 employees, 407 business establishments and 1,196 buildings built before 1940. The median household income for the cluster was \$35,306. The projects in this cluster are located entirely outside the major metropolitan areas of the state. The projects in this cluster are generally smaller but range from residential to commercial with many multiple use projects that layer development incentives to stimulate job creation and broader economic development.

Even for the projects generated few jobs, there appeared to be an economic driver cycling the effects of the project throughout the statewide economy. These projects represent those found outside any major metropolitan area and even in these smaller communities the HPTC program benefits appear to exceed the cost. The value added and overall economic output do not tend to be as large but there is a positive economic impact that can be associated with these projects.

PARKLAND SENIOR HOUSING

Historic Name: Presbyterian Orphanage of Missouri
 Location: 412 W. Liberty St., Farmington
 Tax Credit Amount Issued: \$1,048,439

The Parkland Senior Housing project provides affordable housing to 40-45 senior citizens. This historic preservation project involved the adaptive re-

use of multiple buildings in 41 housing units and was completed in 2008. Since its completion, it has been described as “the place to live” for this demographic in Farmington.

The project would not have been possible without the use of historic preservation tax credits. Additional incentives were also required and included federal and state low-income housing tax credits, community development block grant funds from the city of Farmington, and federal historic preservation tax credits. Each was a vital component to making the project possible.

The senior housing development is located in a neighborhood adjacent to downtown and was not in a blighted condition. Leading up to and following the project, many residential renovations have taken place and indicate that the neighborhood is actively working to maintain or improve the condition of its housing stock. The Parkland Senior Housing project holds to and furthers this community value.

Estimated Operational Economic Impact of Parkland Senior Housing on Missouri

	Direct	Indirect	Induced	Total
Jobs	2.0	.05	.05	3.0
Total Value Added	\$2,428,174	\$1,259,398	\$1,284,669	\$4,972,241
Labor Income	\$1,718,784	\$731,388	\$703,281	\$3,153,453
Output	\$5,347,104	\$2,787,446	\$2,206,192	\$10,340,742

PALACE HOTEL OFFICE BUILDING

Historic Name: Palace Hotel
 Location: 2-4 W. Ohio, Butler
 Tax Credit Amount Issued: \$794,326

The renovation of the Palace Hotel building on Butler’s city square was made possible using historic preservation tax credits and a local tax abatement. The use of these tax credits and incentives were required in order to make the redevelopment project financially possible. The building now provides office space for an estimated 20 employees working for the State of Missouri. The second floor of the building, once occupied and providing office space for an additional estimated 15 office workers, is now vacant.

The estimated construction cost of the project was \$1.5 million. Since the completion of this project, several other property owners have made improvements to their buildings in the form of exterior repairs and painting. The redevelopment of this abandoned building serviced as a catalyst for area improvements and improved property values surrounding the courthouse.

Estimated Operational Economic Impact of the Palace Hotel Office Building on Missouri

	Direct	Indirect	Induced	Total
Jobs	35.0	21.9	23.1	80.0
Total Value Added	\$2,016,490	\$1,059,460	\$1,425,221	\$4,501,171
Labor Income	\$1,965,211	\$705,967	\$780,221	\$3,451,399
Output	\$4,185,891	\$1,872,829	\$2,447,563	\$8,506,283

NEOSHO HISTORIC OFFICE BUILDING

Historic Name: Haas Wholesale Grocery
 Location: 201 N. Washington, Neosho
 Tax Credit Amount Issued: \$1,048,439

This historic Haas Wholesale Grocery building, built in 1898, was renovated in 2003 and provides 30,000 square feet of class “A” office space in downtown Neosho. This project would not have been possible without the use of historic preservation tax credits, local tax abatement, federal historic preservation tax credits, and brownfield tax credits to remove asbestos and lead-based paint. This project and related municipal and county projects resulted in a major improvement

for the downtown area and served as a catalyst for continued development in the downtown area.

At the same time as the renovation of the office building, the city of Neosho was able to obtain a block grant with matching private funds in order to upgrade storm drainage in the area. This addressed a recurring problem. Community development block grant dollars were used by Newton County to demolish a condemned mill building and make infrastructure improvements in order to facilitate further downtown redevelopment. Since this time, similar historic preservation projects have been completed in the downtown area.

Estimated Operational Economic Impact of the Neosho Historic Office Building on Missouri

	Direct	Indirect	Induced	Total
Jobs	32.0	20.0	21.2	73.2
Total Value Added	\$1,843,649	\$968,649	\$1,303,059	\$4,115,357
Labor Income	\$1,796,764	\$645,456	\$713,345	\$3,155,565
Output	\$3,827,100	\$1,712,301	\$2,237,772	\$7,777,173

Cluster 5 -- Revitalized Neighborhood

In Cluster 5 the average tax credit issued was \$73,521 and in 2000 was 100% urban in nature. Each zip code averaged 31,665 employees, 763 business establishments and 6,442 buildings built before 1940. The median household income for the cluster was \$28,604. The projects in this cluster are located entirely in the city of St. Louis in neighborhoods that until recently were considered in various stages of distress indicated by high crime, poverty and vacancy rates. The projects in this cluster are among the smallest and are generally residential in nature. Analyzing impact in this cluster is more challenging given that there are no landmark projects to profile.

The typical project involved the rehabilitation of a single family home. What stands out as unique about this cluster is how that rehab work has transformed a handful of neighborhoods in the city of St. Louis. These were neighborhoods that 10 years ago only urban pioneers would invest resources or time. The historic preservation tax credit program provided the opportunity and leverage for a set of interested developers to invest considerable funds over the past 10 years and the change has been dramatic. Consider the Forest Park Southeast neighborhood.

In 2000, the neighborhood had the following statistics:

- 48% Vacancy rate
- \$56,316 Median housing value
- 65% of the housing stock is rental
- \$25,351 Median household income

In 2008, after considerable developer investment consider those same statistics:

- 21% Vacancy rate
- \$93,723 Median housing value
- 63% of the housing stock is rental
- \$37,758 Median household income

Developers involved in projects indicated that once the market came back in these neighborhoods, they took risks with investing in new construction infill projects. They all agreed that they never would have considered this sort of investment without the tax credit program. The tax credits allowed them to leverage equity they otherwise did not have in these risky neighborhoods. The historic preservation tax credit program created the catalyst for development activity serving two purposes. It created a market where one previously did not exist and it stabilized neighborhoods. From fiscal investment perspective, this case demonstrates strong public benefit from minimal public investment.

Cluster 6 -- Suburban Landmarks

In Cluster 6 the average tax credit issued was \$333,960 and in 2000 was approximately 96% urban in nature. Each zip code averaged 21,710 employees, 1,172 business establishments and 2,670 buildings built before 1940. The median household income for the cluster was \$43,652. The projects in this cluster are located around the state in more suburban areas and smaller metropolitan regions and include both residential and commercial type projects.

These projects are all exceeding what we've determined to be the per job cost for the HPTC program. These projects also profile efforts found outside the two major metropolitan areas and again, demonstrate the contributing effects of such projects to the state-wide economy.

MARQUETTE TOWER OFFICE BUILDING

Historic Name: Marquette Hotel
Location: 338 Broadway St., Cape Girardeau
Tax Credit Amount Issued: \$3,258,906

The adaptive-reuse and historic renovation of the Marquette Hotel into offices for the State of Missouri and private firms would not have occurred without the use of historic preservation tax credits. Addition-

ally, brownfield tax credits to remove asbestos and lead-based paint and a local 25-year tax abatement were required to make the project financially feasible. Since the renovation of this project, a neighboring building conducted a remodeling project to improve its appearance. Other indirectly-related improvement projects have also occurred in the surrounding area.

Estimated Operational Economic Impact of the Marquette Tower Office Building on Missouri

	Direct	Indirect	Induced	Total
Jobs	66.0	38.7	40.7	145.4
Total Value Added	\$3,637,404	\$1,910,054	\$2,543,051	\$8,090,509
Labor Income	\$3,503,269	\$1,265,754	\$1,392,164	\$6,161,187
Output	\$7,570,785	\$3,413,247	\$4,367,236	\$15,351,268

MAIN STREET PLACE LOFTS

Historic Name: Christman’s Department Store
 Location: 501 South Main Street, Joplin
 Tax Credit Amount Issued: \$1,036,828

The full economic impact of the historic redevelopment of this project will be realized when the first floor commercial space is completed. Currently, three living-wage service and property management jobs are directly associated with this project and serve the residential population of the building.

The first phase of the redevelopment of the historic Christman’s Department Store as Main Street Place Lofts in Joplin was completed in December of 2008. The second through fifth floors of the building are home to 46 for-rent lofts or for-sale condos. Future phases call for retail and offices on the first floor of the building.

This project contributed to improvement of the downtown district in Joplin which consists of several square blocks. Since this project started, other developments of a similar type have begun. Both this project and other related historic preservation tax credit projects in Joplin have contributed to the redevelopment of the downtown.

Historic preservation tax credits were essential to the redevelopment of this building. Additional tax credits and incentives were also required to make the project financially feasible and include brownfield voluntary cleanup program, federal historic tax credits, and local property tax abatements.

Estimated Operational Economic Impact of the Main Street Place Lofts on Missouri

	Direct	Indirect	Induced	Total
Jobs	3.0	0.8	0.7	4.5
Total Value Added	\$130,997	\$44,184	\$46,671	\$221,852
Labor Income	\$59,759	\$27,325	\$25,550	\$112,634
Output	\$219,181	\$77,955	\$80,149	\$377,285

ENGINEERED PACKAGING, INC BUILDING

Historic Name: J. E. King Manufacturing
Company Building
Location: 1350 St. Louis Street,
Springfield
Tax Credit Amount Issued: \$246,292

In the summer of 2003, Engineered Packaging, Inc was in the process of looking for a new building when their existing plant was damaged by a fire. A decision on where to relocate needed to happen within a very tight schedule. The company had already been looking at locations within the city of Springfield as many of its manufacturing employees were dependent upon public transportation. The company purchased their new building for \$240,000 and spent over \$1,000,000 in renovations using insurance dollars. During this time, the company applied for historic preservation tax credits.

Unlike most other projects, this project was financially feasible without the use of historic preservation tax credits due to the availability of funds from the company's fire insurance policy. In fact, company

leadership had to make the decision to purchase and renovate the building prior to knowing whether the building would qualify under the program; however, had it not been for these unique circumstances, the historic preservation tax credit would have been needed to fund the project. This project is located within an enterprise zone which reduces the company's real estate tax liability.

Historic preservation tax credits were seen as a catalyst for neighborhood improvement and job creation in the immediately surrounding area and the community as a whole. The area surrounding the project was considered blighted prior to the move, but general maintenance and upkeep of surrounding areas has improved since the completion of the project. Additionally, a few small office renovations have occurred in the immediate area. Separately, the community in general has benefited from other historic preservation tax credit projects. In the nearby downtown district, other development projects have been completed which have added more jobs to the downtown.

Estimated Operational Economic Impact of Engineered Packaging on Missouri - Jobs Created

	Direct	Indirect	Induced	Total
Jobs	45.0	91.1	74.4	210.5
Total Value Added	\$9,377,580	\$8,105,835	\$5,092,344	\$22,575,759
Labor Income	\$4,524,724	\$5,143,847	\$2,787,756	\$12,456,327
Output	\$66,279,832	\$19,466,694	\$8,745,193	\$94,491,719

Estimated Operational Economic Impact of Engineered Packaging on Missouri - Jobs Retained

	Direct	Indirect	Induced	Total
Jobs	30.0	60.7	49.6	140.3
Total Value Added	\$2,578,426	\$1,337,325	\$1,364,275	\$5,280,026
Labor Income	\$1,796,764	\$645,456	\$713,345	\$3,155,565
Output	\$5,677,783	\$2,959,596	\$2,342,901	\$10,980,280

Conclusions from Case Study Interviews

The cluster analysis of how the HPTC program is used across the state revealed that different locations use the program in different ways but all finding the tool essential in getting these projects started. Two primary lessons stand out:

- The Historic Preservation Tax Credit Program was the essential development tool in each of the case study projects. With the exception of the Engineered Packaging Case, without the program these projects would not have been possible. It made these historic renovations economically feasible. In the case of Engineered Packaging, the HPTC made it possible for the company to expand operations and add 45 new jobs.
- The Historic Preservation Tax Credit Program pays for itself in economic impacts to the state. According to our calculations, each job created directly by the program cost the state approximately \$22,200 but based in the economic impact analysis of these case study projects, each project individually more than covers that cost in economic output to the state.

The overriding opinion among those surveyed for the case studies was that the HPTC program offers an additional equity benefit that helps the developer write down the risk and allows them to gain access to needed funds early on in the development process. This early access to capital is what allows up-front investment to occur and spurs development in otherwise risky sectors of the state economy. Banks view the tax credits as equity allowing the developers to leverage them and qualify for a more favorable risk rating when borrowing funds. This more favorable rating reduces the overall cost of borrowing thereby reducing the debt coverage ratio within the developer's proforma and increasing the overall likelihood for project success.

As more developers produce more successful projects using the program, this stimulates the market for other infill, often new construction projects that do not use the program, demonstrating the market priming intention of the Historic Preservation Tax Credit program.



HPTC's Impact on Missouri

The state has received an estimated \$161,974,950 in sales/use tax revenue and \$394,802,307 in income taxes from economic activity associated with the HPTC program since 2000 for an estimated total of \$669,872,192. Since a job created can be presumed to last longer than the year of the initial HPTC investment, growth in HPTC-related revenue is almost exponential, as Figure 7 below shows. It is important to note that this represents sales/use and income taxes only. The state collects other special business taxes which we are not accounting for here.

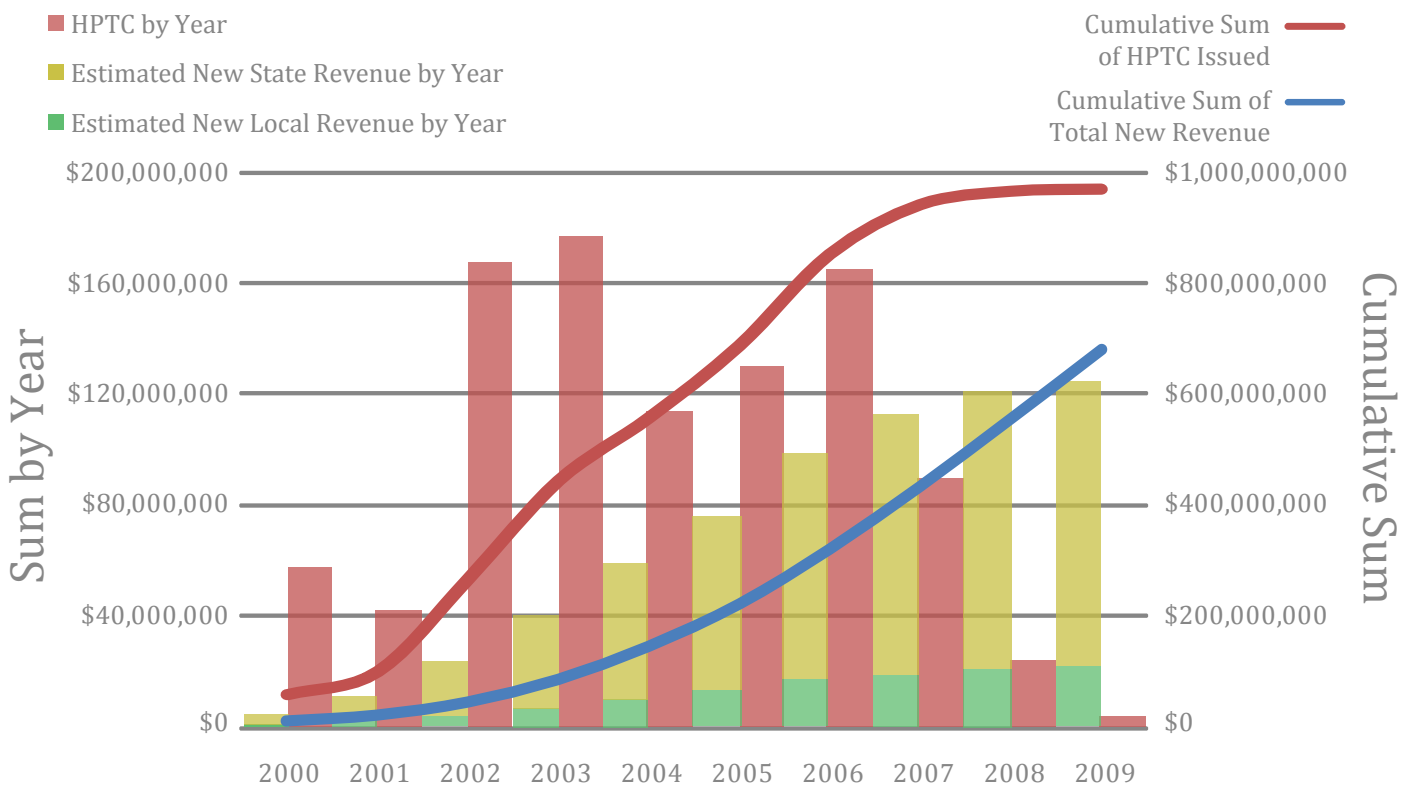
Due to new job growth and economic activity spurred by the Missouri HPTC program, counties and local governments have benefitted as well. Assuming a 2.95% average local sales tax rate, the HPTC program can be associated with \$113,094,935 in new local sales tax revenue. Assuming a 1% earnings tax rate in Kansas City and St. Louis plus an additional 0.5% payroll tax in St. Louis, the two municipalities received a total of \$75,214,832 in new earnings tax revenue associated with HPTC projects. However, these calculations do not take into account increased property tax collections. But they also do not take into account Tax Increment

Financing or other property tax abatement programs which might divert some of this revenue for a time. Therefore, these figures should only be considered a rough estimate of increased revenue to local and county governments.

Missouri is experiencing job growth in a number of key industries. Table 2 ranks these industries by the difference between growth in counties which have experienced HPTC investment and growth in Illinois and Missouri counties which have not. HPTC counties outpace non-HPTC counties in all industries with an average annual salary over \$45,000 except for one. Across-the-board declines in Information industry jobs likely reflect the fallout of the tech bubble's burst and the recession of the early 2000s. HPTC counties saw the Construction industry grow as it shrank in all others. In HPTC counties, these jobs have an average annual salary of over \$48,000, which may point to the highly-skilled trades involved in historic rehabilitation projects. Faster growth in Management; Finance and Insurance; and Professional, Scientific, and Technical Services are also encouraging, given the high salaries associated with each.

Although Manufacturing declines in all counties, the decline was less drastic in HPTC counties. Given nationwide declines in Manufacturing jobs, the relatively smaller decrease seems significant, although not

Figure 7. HPTC and New Sales/Use & Income Tax Revenue, 2000-2009



necessarily explained by our research. With the exception of Information, and possibly Health Care and Social Services, the industries in which HPTC counties post slower growth tend to be lower-wage jobs. Slower growth in Accomodation and Food Service and Retail Trade likely point to the fact that a large portion of job growth in booming newly-developed counties on metropolitan fringes and in rural areas tend to be those in the service sector, catering to either new exurban residents or retirees in amenity-based locales.

More insight into these trends can be gained from Table 1, which shows total job growth by industry in Missouri only, and the proportion of that growth which has taken place in counties having seen HPTC developments. The tables shows that the majority of high-growth industries are growing in counties which have used the HPTC. Over 90% of net new jobs in Professional, Scientific, and Technical Services; Management; Educational Services; and Real Estate since 2000 can be found in HPTC counties. Again, large net decreases in Information are troubling, but since growth in non-HPTC counties is so modest, it seems unlikely that this

Table 2. High-growth Industries in Missouri and Proportion of New Jobs in Each Which Have Been Created in Counties That Have Used HPTC, 2000-2007

	Missouri		MO No	% of Change
	Total	HPTC	HPTC	in HPTC Counties
Health Care & Social Services	36,009	27,534	8,475	76.46%
Accomodation & Food Service	32,323	27,701	4,622	85.70%
Professional, Scientific, & Technical Services	24,092	22,326	1,766	92.67%
Management	13,531	12,652	879	93.50%
Educational Services	9,162	9,124	38	99.59%
Finance & Insurance	6,590	4,847	1,743	73.55%
Real Estate & Rental & Leasing	5,996	5,741	255	95.75%
Construction	5,839	5,037	802	86.26%
Retail Trade	5,163	1,484	3,679	28.74%
Arts, Entertainment, & Recreation	3,529	1,463	2,066	41.46%
Administrative & Support & Waste Management & Remediation Services	3,241	133	3,108	4.10%
Transportation & Warehousing	2,794	-684	3,478	-
Information	-16,301	-16,959	658	104.04%
Manufacturing	-43,935	-35,190	-8,745	80.10%

points to any major shift other than the tech-bubble fallout. Transportation and Warehousing jobs are also worth noting. The net decrease in HPTC counties and large increase in non-HPTC counties seems indicative of a national shift toward truck-based freight and rural logistics centers far from metropolitan areas, as opposed to historically high use of rail and barge transportation, which would be more likely to take place in cities and towns.

Table 1. Change in Total Jobs by Industry in Counties Containing HPTC Projects Compared to Missouri and Illinois Counties Which Have Not, 2000-2007

	HPTC	No HPTC	Difference	Average Pay in HPTC Counties
Management	21.97%	4.08%	17.89%	\$91,512
Real Estate & Rental & Leasing	17.83%	3.74%	14.09%	\$33,023
Manufacturing	-12.52%	-23.09%	10.57%	\$46,589
Construction	4.04%	-4.45%	8.49%	\$48,269
Professional, Scientific, & Technical Services	19.84%	11.86%	7.98%	\$53,564
Administrative & Support & Waste Management & Remediation Services	0.09%	-3.19%	3.28%	\$25,022
Finance & Insurance	4.03%	2.45%	1.58%	\$56,724
Arts, Entertainment, & Recreation	5.03%	4.02%	1.01%	\$34,851
Educational Services	16.42%	16.20%	0.22%	\$30,921
Accomodation & Food Service	15.10%	15.66%	-0.56%	\$13,157
Health Care & Social Services	9.63%	12.11%	-2.48%	\$37,299
Retail Trade	0.56%	4.92%	-4.36%	\$22,755
Transportation & Warehousing	-0.88%	8.90%	-9.77%	\$37,044
Information	-21.85%	-11.58%	-10.27%	\$52,634

Study Implications

The goal of this study was to determine whether Missouri's HPTC program was having a positive impact on the state economy. With rising state budget concerns lawmakers have been growing increasingly apprehensive about the various state economic development programs and whether they were having the desired economic effect on the state economy. Earlier state funded studies had considered statewide effects of the HPTC program and noted dramatic success. In 2001, researchers from Rutgers University had determined that the then 4 year old program had contributed about \$292 million in in-state wealth. The analysis was built on a set of multipliers and assumptions based on the state economy.⁷ After the release of that study interest in the program grew, especially in the urban areas, leading to concerns of programmatic abuse. Critics of the program continue to charge that those benefits are isolated to the major metropolitan areas in the state and come at the expense of smaller, more rural locations. This study was designed to examine that sub-layer of effect that is associated with the HPTC program that we can now say benefits those smaller communities as well. It appears as though smaller communities that know how to use the HPTC program do so quite well and see positive economic impacts from its use.

We see a couple of primary implications as a result of this research. First, there is a need for additional education and outreach into the smaller and mid-sized communities across the state on the uses of the HPTC program uses and benefits. Given that only 37% of the counties across the state currently have at least one project there is opportunity around the state to further its use. Additionally, among those participants from smaller and mid-sized communities the common belief was that the program stimulated further economic development. Some of these smaller communities not currently using the HPTC might be concerned by an initial lack of resource capacity nearby but there are increasingly a number of development and profes-

sional services firms around the state that specialize in the preservation and redevelopment of historic properties. Second, there is both a fiscal and an environmental benefit associated with the reuse of existing buildings and this needs to be further promoted. Environmentally, reusing existing buildings and materials preserves the environment by discouraging additional new development. The tax credits help level the playing field by offering the equity incentive. The fiscal benefit extends to state and local governments by keeping development closer to existing infrastructure and encouraging density where infrastructure can best support that type of development. Denser development allows for a more efficient delivery of government services.

Ultimately, we hope that this study has illuminated the benefits provided by the HPTC program and how it is used across the state. We intend it to serve as an opening for a broader discussion about the uses of such development incentives. May it serve its purpose.



⁷*Economic Impacts of Historic Preservation in Missouri.* Center for Urban Policy Research at Rutgers University. December 2001.

Appendix A

Our Model

To begin estimating the impact of the HPTC we created a model of employment growth by ZIP code between 2000 and 2007 for all of Missouri and Illinois. Our date range is 2000 through 2007 because 2007 is the most recent year for which there are County Business Patterns data available at the ZIP code and county levels. Since HPTC has been used in most major cities in Missouri, a model which looked only at Missouri would not be robust enough to make any reliable predictions. Illinois was included to ensure that the model contained enough points of comparison for areas experiencing HPTC-stimulated investment.

We chose Illinois because it is the only state bordering Missouri which has no state HPTC program. While parts of Illinois have made use of Federal historic preservation incentives, it seems to have been at lower levels than Missouri and has not been supplemented with additional state funding. We feel that Illinois contains an appropriate mix of urban and rural areas which can be compared to those in Missouri. The next section will illustrate this sentiment in more detail.

ZIP code data was used in our model for a number of reasons. First, we chose them because it is the lowest level of geography for which both the US Census Bureau's County Business Patterns and Missouri Department of Revenue data were available. The other alternative would have been to analyze counties. But there are only 218 total counties between Missouri and Illinois compared to 2,240 ZIP codes. We felt that more observations would increase the strength of our model. Secondly, counties would often be too large in terms of geography to catch the influence of a few new developments. By using ZIP codes we believe that we were able to capture more of the immediate effects of HPTC projects.

The core of our employment growth model is based on a number of common neighborhood economic change predictors, reduced to four factors in order to increase validity and predictive strength. The

variables on which these factors are based include:

- Population Change, 1990-2000
- Vacant Housing Unit Change, 1990-2000
- Percent Renters Change, 1990-2000
- Non-white Population Change, 1990-2000
- Median Household Income Change, 1990-2000
- Total Housing Units Built Before 1940, 2008
- Percent Vacant Housing Units, 2008
- Per Capita Income, 2008
- Total Population, 2008
- Total Population, 2000
- Change in Number of Jobs, 1994-2000
- Total Jobs, 1994
- Total Jobs, 2000

*Demographic variables came from the Nielsen Claritas Pop Facts 2008 dataset. Employment data was downloaded from the US Census Bureau's County Business Patterns website.

A simple factor analysis reduced these variables into four factors. These factors were entered into our model, a simple Ordinary Least Squares regression which can be summarized as:

$$E_{2007} = J + N + P + I + C$$

Where

E_{2007} = Total employment in 2007

J = Factor describing jobs and job change between 1994 and 2000

N = Factor describing neighborhood characteristics in 2008, including the number of residences built before 1940

P = Factor describing 2008 population levels and population change 1990 to 2000

I = Factor describing household and per capita income in 2008 and change 1990 to 2000

C = Count of HPTC projects issued credits from 2000 through 2006

Our Count variable received a coefficient of 25.212. This is interpreted to mean that, holding all things constant, an increase of 25 jobs is associated with each additional HPTC project taking place within a ZIP code. We were more than a little surprised by

the strength of this model, which had an R Square value of .933 and Durbin-Watson value of 1.793. All independent variables are significant at the 1% level. The influence of collinearity was ruled out after conducting some diagnostics showing Variance Inflation Factors of no more than .04 over 1 for all of our independent variables.

Our Assumptions

We must acknowledge that the validity of our model rests on the assumptions that have gone into our research design. First, we assume no other major interventions taking place on a large scale that might impact older neighborhoods in such unequal ways across Missouri and Illinois. Federal Historic Preservation programs; state and federal Enterprise Zones and Empowerment Zones; Tax Increment Financing districts; etc are all assumed to have equal potential of being implemented across all of Missouri and Illinois. The Missouri HPTC, however, may only be used in Missouri.

Second, we must recognize the fact that ZIP code boundaries are not static. ZIP codes are designed and drawn to be efficient mail-delivery routes, not approximations of neighborhoods. Therefore, their size and shape may dilute certain effects. And boundary changes may lead to unexpected and inaccurate changes in our data. However, these effects have an equal chance of occurring across all of Missouri and Illinois. In fact, an attempt to control for changes in ZIP code area and perimeter proved to be unnecessary, as these variables had to be thrown out of our model due to insignificance.

Finally, we assume that the most important impacts of an HPTC project will be within the immediate neighborhood. To be sure, not all construction jobs created by new HPTC projects are going to be counted within the same ZIP code. However, the offices that move into rehabbed buildings, retail establishments that open to cater to new residents and workers, and other spin-off development will be. In this sense, our findings might represent what some might feel is an under-count. But we believe that temporary work is less significant than the ability of a program such as HPTC to create sustainable jobs in entirely new markets.

Revenue Calculations

We computed sales taxes at County-level to capture more spinoff. We calculate annual figures by taking 25 jobs multiplied by the number of projects each year, and in doing so, assume jobs are created in the same year as the project. Further, we assume all jobs created since 2000 still exist in each subsequent year

We also use jobs as an indicator of economic activity to estimate taxable sales associated with each project. We calculated the amount of taxable sales per job in each county in each year and then applied this figure to the total number of jobs associated with projects each year.

State tax revenue was estimated as 4.225% of taxable sales associated with each HPTC project. A cumulative sum of this revenue was calculated year-to-year on the assumption that taxable sales associated with a project in an area are comparable from one year to the next.

We computed income taxes at the ZIP code-level to capture more precision in wages as average pay by ZIP code is more likely to reflect the earnings associated with each job at this level. In doing this, we assume the same things about job creation and sustainability as above. We base income taxes generated on 6% of average annual pay over \$9,000.