

The Regional Economic Contributions of Kingdom City Businesses



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Executive Summary

Kingdom City is located at the intersection of Interstate 70 and Missouri Highway 54 and is a two and a half hour drive from Kansas City and a 2-hour drive from St. Louis. The business sector of Kingdom City consists mainly of a series of entities comprised of restaurants and fast food stops, gas and service stations, and hotels. With the exception of the newly created Fireman's Memorial, Kingdom City does not possess what would be considered a primary tourist destination.

Findings

- Businesses located in Kingdom City directly support over 600 jobs with an estimated payroll of over \$7.7 million dollars.
- These businesses generate an additional 143 jobs in Callaway County through indirect and induced effects.
- Kingdom City businesses increase the personal income of Callaway County residents by an amount of over \$10.3 million.
- Through the survey conducted by CPAC, most local business owners estimate that anywhere from 90 to 95 percent of their sales are generated by the interchange and traffic from Hwy. 54 and I-70.
- \$420,000 of total county revenues can be attributed to the existence of Kingdom City.
- If businesses in Kingdom City were suddenly removed from the economy, Callaway County would see a loss of almost \$20 million in retail sales. This \$20 million account for 7.4% of total retail sales in the County.
- Assessed property values would decrease by a total of \$13 million dollars in the County, a vast majority of which would occur directly in the Kingdom City area.

Introduction

The Community Policy Analysis Center (CPAC) is based out of the University of Missouri – Columbia. CPAC's mission is to provide research, outreach, and training that support improved policy decision in Missouri communities.

Background

In early 2002, the Missouri Department of Transportation (MoDOT) hosted a series of public meetings to discuss the possibilities associated with the expansion and construction along I-70. Due to development around the existing interchange at I-70 and Hwy. 54, and the fact that I-70 is expected to be widened to six lanes, MoDOT proposed relocating the interchange around Kingdom City 1.8 miles east of its current location.¹ Many residents and business owners felt this proposal threatened the economic activity in the area as it would bypass existing business locations and result in a drastic reduction of traffic from the highways. Without the economic activity (purchases of food, gas, etc) that is stimulated by traffic from this intersection, many residents feel that Kingdom City would most likely cease to exist.

CPAC was contacted by the Kingdom City Highway Coalition to perform an economic analysis of the businesses located in the community and the economic impacts that traffic from the intersection generates. In a survey conducted by CPAC, most business owners stated that only five to ten percent of their business was generated by local residents, thus indicating that a large majority of their sales are closely related to traffic from I-70 and Hwy. 54.

¹ **Authors' note: At the time of this publication, MoDOT has yet to decide how they will construct a new interchange at this or any other location in the area. Currently, MoDOT along with the engineering firm of Wilbur Smith Associates, are engaged in a public dialogue that discusses alternative options with members of the Kingdom City Highway Coalition and local residents.**

Methodology

Working with the Callaway County Chamber of Commerce and members of the Kingdom City Highway Coalition, a listing of all businesses in the area was created. These businesses were contacted and sent a business survey that asked a series of questions about sales, number of employees, and the amount of business that was related to local residents as opposed to through-traffic. Businesses that did not respond were estimated using a number of different sources or considered to be captured in the analysis through indirect and induced effects (as defined in the “Economic Contributions” section of this report). The information obtained via survey was compiled and then disaggregated according to the type of business (i.e. restaurant, gas station, etc). As a next step in the analysis, CPAC used an economic impact-modeling tool called IMPLAN (IMpact analysis for PLANning) to estimate the economic linkages among the businesses located in Kingdom City and those in the remaining areas of the region.

The results from the IMPLAN analysis provided CPAC with numbers on total employment and personal income associated with Kingdom City businesses. CPAC then employed its own Show Me community impact model and estimated the effects on population, retail sales, labor force, and other socio-demographic and economic variables.

For more information on IMPLAN and the Show-Me Model, please see Appendix.

The Economic Contributions of Kingdom City Businesses

IMPLAN Results

The transactions that take place at Kingdom City businesses support jobs and add personal income to the region. Using the survey results, it is estimated that Kingdom City businesses directly support 606 jobs with a total payroll of over \$7.7 million. These are the **direct** effects that occur from businesses being located in Kingdom City. In addition, these businesses buy goods and services from other businesses in the area, or in economic terms, they have linkages with other sectors. These linkages produce effects that are called **indirect** effects and consist of the additional employment and personal income that occur from business to business transactions. Finally, **induced** effects occur as those people employed spend their personal income for goods and services in the local area. When one considers all these effects, Kingdom City businesses support 749 jobs with an employee payroll of almost \$10.3 million.

Table 1 shows the direct, indirect, and induced effects of Kingdom City businesses with regards to output, employment, and total personal income.

Table 1- Effects of Kingdom City Businesses

| | Direct | Indirect | Induced | Total |
|-----------------------|---------------|--------------|--------------|---------------|
| Output | \$ 73,779,151 | \$ 4,202,421 | \$ 4,857,636 | \$ 82,839,208 |
| Employees | 606 | 53 | 90 | 749 |
| Total Personal Income | \$ 7,748,006 | \$ 1,093,200 | \$ 1,457,279 | \$ 10,298,485 |

Projections generated via Show Me community impact model

In order to analyze the possible effects of the interchange on the surrounding area, CPAC made several assumptions. As mentioned earlier, most business owners estimated that only five to ten percent of their business could be attributed to local residents, thus ninety to ninety-five percent of their business is generated by through-traffic from the interchange. With that in mind, CPAC assumed that a reduction of ninety percent or more in business would result in the closures of all businesses. Therefore, when analyzed via the Show Me Model, all jobs and sales generated by Kingdom City businesses were considered lost in the Callaway County area in 2002. This assumption led to the results depicted in Table 2.

In reviewing the projections made by the Show Me Model, the loss of business activity in Kingdom City would result in an immediate decline of County revenues in the amount of \$420,000. Of this amount, nearly half would be through sales and property taxes.

Kingdom City generates a large amount of retail sales in the County (almost \$20 million), and represents 2.4% of the County's assessed property value. Without Kingdom City, the County would see a 2.6% reduction in property tax revenues and a decline of 6.2% in sales tax revenues in 2010. In addition, it is estimated that the County would lose almost 1,800 residents and 913 jobs.

Table 2 summarizes the baseline results generated by the Show Me Model (see Appendix for the definitions of baselines and scenarios). The data for year 2000 reflects what actually happened in the Kingdom City area for that year. The baseline numbers display the projections that have been made by the model if no changes in policy or economic activity were to occur in the area. The scenario numbers illustrate the estimated numbers on what would occur if all Kingdom City businesses were to shut down in 2002, and makes projections on what the effects would be in 2010.

This analysis assumes that none of the business lost in Kingdom City will be gained in other parts of the County. In fact, it is likely that some business would be recovered elsewhere in the county and in this sense the estimates in

Table 2 overstate the impacts. On the other hand, research shows that transportation improvements frequently hasten the concentration of business activities in larger centers. Without Kingdom City businesses to attract consumers, other businesses in the County may also be hurt rather than helped. All things considered, the magnitude of any overstatement of impacts is hard to know with certainty, but is likely to be relatively small.

Economic Contribution of Kingdom City businesses to Callaway County Economy

Scenario Results Compared to the Baseline, 2000-2010

(Reported in 2000 dollars)

| Variables | Scenario | 2000 | 2002 | 2010 |
|--|----------------|-----------|-----------|-----------|
| Population | Baseline | 40,766 | 42,782 | 51,917 |
| | Scenario | 40,766 | 41,322 | 50,137 |
| | Difference | 0 | -1,460 | -1,780 |
| | Percent Change | 0.0% | -3.4% | -3.4% |
| Labor force | Baseline | 21,693 | 22,797 | 27,798 |
| | Scenario | 21,693 | 21,997 | 26,823 |
| | Difference | 0 | -799 | -974 |
| | Percent Change | 0.0% | -3.5% | -3.5% |
| Employment | Baseline | 19,648 | 20,646 | 25,172 |
| | Scenario | 19,648 | 19,897 | 24,258 |
| | Difference | 0 | -749 | -913 |
| | Percent Change | 0.0% | -3.6% | -3.6% |
| Number Unemployed | Baseline | 571 | 635 | 925 |
| | Scenario | 571 | 589 | 869 |
| | Difference | 0 | -46 | -56 |
| | Percent Change | 0.0% | -7.2% | -6.0% |
| Incommuters | Baseline | 3,143 | 3,253 | 3,747 |
| | Scenario | 3,143 | 3,173 | 3,650 |
| | Difference | 0 | -80 | -97 |
| | Percent Change | 0.0% | -2.5% | -2.6% |
| Outcommuters | Baseline | 6,889 | 7,120 | 8,162 |
| | Scenario | 6,889 | 6,977 | 7,988 |
| | Difference | 0 | -142 | -174 |
| | Percent Change | 0.0% | -2.0% | -2.1% |
| Real Per Capita Income | Baseline | 20,673 | 21,352 | 24,301 |
| | Scenario | 20,673 | 21,103 | 24,017 |
| | Difference | 0 | -249 | -284 |
| | Percent Change | 0.0% | -1.2% | -1.2% |
| Total Personal Income (\$1,000) | Baseline | 842,739 | 913,488 | 1,261,644 |
| | Scenario | 842,739 | 872,013 | 1,204,162 |
| | Difference | 0 | -41,475 | -57,481 |
| | Percent Change | 0.0% | -4.5% | -4.6% |
| Assessed Property Value (\$1,000) | Baseline | 566,461 | 587,498 | 687,393 |
| | Scenario | 566,461 | 573,623 | 669,338 |
| | Difference | 0 | -13,875 | -18,055 |
| | Percent Change | 0.0% | -2.4% | -2.6% |
| Retail Sales (\$1,000) | Baseline | 240,273 | 269,493 | 406,783 |
| | Scenario | 240,273 | 249,675 | 381,406 |
| | Difference | 0 | -19,818 | -25,377 |
| | Percent Change | 0.0% | -7.4% | -6.2% |
| Property Tax Revenues | Baseline | 3,205,559 | 3,322,300 | 3,887,209 |
| | Scenario | 3,205,559 | 3,243,837 | 3,785,109 |
| | Difference | 0 | -78,463 | -102,099 |
| | Percent Change | 0.0% | -2.4% | -2.6% |
| County Sales Tax Revenues (\$1,000) | Baseline | 1,432 | 1,617 | 2,441 |
| | Scenario | 1,432 | 1,498 | 2,288 |
| | Difference | 0 | -119 | -152 |
| | Percent Change | 0.0% | -7.4% | -6.2% |
| Total Revenues (\$1,000) | Baseline | 9,097 | 10,210 | 13,202 |
| | Scenario | 9,097 | 9,790 | 12,660 |
| | Difference | 0 | -420 | -542 |
| | Percent Change | 0.0% | -4.1% | -4.1% |
| Total Expenditures (\$1,000) | Baseline | 8,969 | 10,915 | 15,359 |
| | Scenario | 8,969 | 10,349 | 14,601 |
| | Difference | 0 | -566 | -759 |
| | Percent Change | 0.0% | -5.2% | -4.9% |

Tax Impacts

In conjunction with studying the effects of the interchange, the Kingdom City Highway Coalition asked CPAC to examine the amount of tax revenue generated by Kingdom City. This part of the report does not address any relationships between the city and the highways, but simply provides totals on the amount of taxes generated by Kingdom City and the entities receiving them for 2001.

Fuel taxes

Large portions of total sales that take place in Kingdom City consist of diesel and gasoline sales. These sales generate sizable amounts of revenue through both federal and state taxes. Using reported sales of fuel by local businesses, CPAC estimates that in 2001 fuel sales resulted in \$10.5 million in federal taxes and over \$8 million in taxes and fees being contributed to state revenues.

Hotel taxes

Callaway County imposes a 3.5% percent tax on hotel lodging receipts. Of this 3.5%, the County retains .02% for its General Fund and the remaining amount goes to the Callaway County Tourism Board. This Board operates the Mid-Missouri Tourism Center and the Fireman's Memorial located northwest of the intersection at I-70 and Hwy. 54. In 2001, this tax generated \$177,558 for Callaway County. Of this amount, 32 percent (\$56,322) can be attributed to the 4 hotels located in Kingdom City.

Sales Taxes

According to the Department of Revenue, for 2001 Kingdom City had \$24,079,366 sales, or 9.28 percent of the total County retail sales (\$259,512,769). CPAC estimates that Kingdom City retail sales contribute over \$1 million dollars to the state and \$120,396 to the County General Fund.

Property Taxes

Kingdom City collected \$13,214.38 in real and personal property taxes for the year 2001. The assessed value of Kingdom City for 2001 was reported as just over \$7 million with a city levy rate of .2058. Kingdom City also contributes the estimated amounts to several taxing jurisdictions:

| | |
|-------------------------------------|-----------|
| Callaway County Ambulance District | \$8,454 |
| Callaway County Library | \$14,091 |
| North Callaway Fire Protection Dist | \$19,065 |
| North Callaway Co R-I - Operations | \$193,757 |
| North Callaway Co R-I - Bonds | \$39,456 |
| Callaway County - General Revenue | \$21,841 |
| Callaway County - Road and Bridge | \$16,909 |

Summary

Businesses in Kingdom City, Missouri have a positive fiscal impact on the surrounding area and make sizable contributions to the local economy. Many business owners feel that their economic vitality is derived from being located in a convenient area for traffic from the interstate and highway to access their services and to purchase goods. Therefore, local business owners believe that relocating the existing interchange on I-70 around Kingdom City would be detrimental to their businesses. This report shows the overall impact of potential (hypothetical) closure of businesses in Kingdom City on the Callaway County's economy.

It is important to note that this report does not address any of the proposed changes to the interchange of I-70 and Highway 54. Nor does it speculate on the economic outcomes that would be associated with the implementation of any specific plan. In order to assess the overall economic impact of any specific plan, traffic projections would need to be made and the amount of accessibility would have to be evaluated in determining the effects.

Appendix

About IMPLAN

IMPLAN is an input-output model that is used by CPAC to generate estimates of total employment and income changes associated with certain scenarios (as defined below). A change in employment or income has a multiplier effect because of the inter-industry linkages in the local economy. IMPLAN measures these linkages. The Show Me model is then used to allocate the estimated changes in employment and income over several years.

About the Show Me Community Impact Model

The Show Me Model uses statistically estimated relationships to predict changes in economic, social, and fiscal conditions for Missouri communities under alternative economic conditions or scenarios. The model considers the effects of changes in employment, labor force, property tax base, personal income, retail sales, and demographics. The Show Me Model projects changes in population, commuting patterns, unemployment, tax revenues, and county expenditures, among other variables. The heart of the model is a series of labor market relationships—the demand for workers (local and nearby jobs), and the supply of workers (local and external labor forces). The labor market module allocates all members of the available labor force between local jobs, external jobs, and unemployment. The fiscal relationships are based on cross-sectional data from local governments. The fiscal module measures: 1) the costs of providing public services, 2) the demand for public services, and 3) the size of the local tax base. Together these estimates of public costs and revenues lead to projections of changes in fiscal deficits or surpluses. The Show Me model, based on statistical relationships, generates 10 years of annual projections for the variables of interest. The projections are also shown in a series of charts and graphs for ease of interpretation.

By employing the Show Me model, alternative scenarios are compared to baseline projections. Baselines are typically 10-year projections that assume no

changes in policy or economic trends in the community. Baseline projections are developed collaboratively with residents of the community, and utilize residents' knowledge of the local economic conditions. Scenarios, on the other hand, reflect the impacts of a shock or extraordinary change (a real or a hypothetical one) in key community variables (employment, external labor force, external employment and total personal income). This process of examining the impact of various policy choices, or "what-if" analysis provides a valuable method for community residents to understand the consequences of current trends and alternative policies. The basic assumptions underlying baselines and scenarios are commonly generated from sources outside the Show Me model. Trend analysis is often used to make preliminary estimates of baselines. As pointed out earlier, input-output models such as IMPLAN are frequently used to generate estimates of total employment and income changes associated with certain scenarios.

The Community Policy Analysis Center provides objective analysis and policy decision support for Missouri communities. Located at the University of Missouri-Columbia, CPAC is part of the Social Sciences Unit of MU's College of Agriculture, Food and Natural Resources. Major funding for the Center is provided by the University of Missouri Outreach and Extension.

CPAC scientists work closely with state and local government leaders, local businesses and community groups to provide research and educational programs that will inform key decisions, and assist them in understanding how policy decisions at all levels of government affect their community's quality of life.

For further information, please contact the Community Policy Analysis Center- by phone (573/882-9009), fax (573/882-2504) or by mail:

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