Chillicothe Baseline
2001-2011

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2001-2011

by

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Community Policy Analysis Center
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Acknowledgements

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Chillicothe Advisory Panel

Linda Allen   Green Hills Community Action Agency
Pam Brobst   Principal - Chillicothe RII School
Bob Christison   Ag. Producer
Jerrie Christison   Retired Realtor
Lisa Colson   Green Hills Regional Planning Commission
Robert Cowherd   Attorney
Eva Danner   Livingston Co. Presiding Commissioner
Charles Eddy   Realtor
Leonard Fair   Retired Physician
Brenda Fellhoelter   Web Page Designer
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Kevin Hansen   UO/E County Program Director
Dean Larkin   UO/E Community Development Specialist
Ken Lauhoff   Livingston Co. Commissioner
Wanda Peetom   Chillicothe Housing Authority
EL Reed   Retail Owner - Ag. Business
Todd Rodenberg   City Mayor
Terry Rumery   Farmers Electric
Lurinda Turner   Small Business Development Center
Ed Turner   Realtor
Kenny Warren   Livingston Co. Commissioner

These people contributed insights, questions and important comments throughout the project.
Executive Summary

This report describes a set of annual baseline projections\(^1\) on socio-demographic and economic conditions through 2011 for the City of Chillicothe, Livingston County, Missouri. Findings are based on a comprehensive statistical analysis of the most recent secondary data available, as well as important input provided by the Community Advisory Panel. 2001 serves as a base year for the forecasts, since the majority of available data is for 2001. Thus, some of the data in the base year are actual, and some are projected. Dollar figures are reported in constant 2001 terms, with no attempt to estimate future inflation rates. The actual data in the figures accompanying the report are separated from their forecasted counterparts by dotted line. Since the actual data for cities is much more scarce than it is for counties, many charts depict only the data for the Census years with no estimates in between.

The forecasts in this report are based on the following projected annual growth rates:

- Employment growth rate in Chillicothe: 0.63%
- Labor Force growth rate in surrounding communities: 0.28%
- Employment growth rate in surrounding communities: 0.81%
- Real Per Capita Income growth rate in Chillicothe: 0.68%

After a careful study of trends in these variables over the past 10 years, as well as current economic conditions in the region, the Advisory Panel concluded that the forecasts in this study should be based on the historical growth rates of these variables.

The baseline in this report does not represent a forecast of local economic conditions. Rather, it is a tool designed to help decision-makers see local economic activity as a comprehensive system that is both logically consistent and statistically valid. The model does not account for changes due to the national business cycle or other macroeconomic effects.

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\(^1\) For definition of baseline and scenarios, see “Show Me Model and Scenario Development” section.
Findings

- Over the next 10 years, Chillicothe is expected to experience a small growth in a number of socio-demographic and economic variables.

- If current economic conditions were to prevail, the Chillicothe population is expected to increase by 260 persons over its 2001 level, growing at an annual rate of 0.3 percent.

- Forty percent of Chillicothe residents are employed in the service sector. The sector experienced a 39 percent growth between 1990 and 2000. Retail sale sector, on the other hand, experienced the largest decline of 35 percent, followed by agriculture and transportation sectors (33 and 28 percent decline, respectively).

- Employment by residence in the city is expected to grow at 0.5 percent per year, and employment by workplace – at almost 0.7 percent per year.

- In the baseline, the number of unemployed persons is expected to increase by a mere of 15 persons by 2011 (representing a 3.6 percent unemployment rate which is lower than the “natural rate” of unemployment of about 5 percent).

- In the baseline, the Chillicothe demand for housing is expected to grow at a rate of 0.3 percent per year.

- Per capita income – before inflation – is projected to grow at 0.7 percent annually through 2011. Total personal income is expected to grow by $15 million (in 2001 Dollars) over the projection period – a real growth rate of 1 percent per year.

- Changes in city income and employment will lead to 0.2 percent in annual growth of taxable retail sales in the baseline.

- Assessed property values are expected to grow at 0.9 percent per year, generating more than $7 million increase over the years of the projection.

- City total revenues are expected to grow by 0.1 percent per year, if current economic conditions in the city prevail.

- The demand for public goods and services is expected to grow at an annual rate of 0.8 percent between 2001 and 2011.
## Baseline Summary Table, 2001-2011
### Chillicothe City
(Reported in 2001 Dollars)

<table>
<thead>
<tr>
<th>Variables</th>
<th>2001</th>
<th>2011</th>
<th>Absolute Change¹</th>
<th>Annual Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>8,849</td>
<td>9,112</td>
<td>263</td>
<td>0.30%</td>
</tr>
<tr>
<td>Persons Younger 16</td>
<td>2,060</td>
<td>2,126</td>
<td>66</td>
<td>0.32%</td>
</tr>
<tr>
<td>Persons Older 65</td>
<td>1,663</td>
<td>1,925</td>
<td>41</td>
<td>0.22%</td>
</tr>
<tr>
<td>School Enrollment</td>
<td>2,058</td>
<td>2,067</td>
<td>9</td>
<td>0.04%</td>
</tr>
<tr>
<td><strong>Workforce Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor force</td>
<td>3,069</td>
<td>4,188</td>
<td>219</td>
<td>0.65%</td>
</tr>
<tr>
<td>Employment by Workplace²</td>
<td>4,926</td>
<td>5,245</td>
<td>319</td>
<td>0.65%</td>
</tr>
<tr>
<td>Employment by Residence</td>
<td>3,634</td>
<td>4,038</td>
<td>404</td>
<td>0.63%</td>
</tr>
<tr>
<td>Incommuters³</td>
<td>1,756</td>
<td>1,821</td>
<td>65</td>
<td>0.94%</td>
</tr>
<tr>
<td>Outcommuters</td>
<td>665</td>
<td>722</td>
<td>58</td>
<td>0.87%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>134</td>
<td>150</td>
<td>15</td>
<td>1.15%</td>
</tr>
<tr>
<td><strong>Demand for Housing³</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3,650</td>
<td>4,068</td>
<td>117</td>
<td>0.30%</td>
</tr>
<tr>
<td>Owner-Occupied</td>
<td>2,549</td>
<td>2,825</td>
<td>76</td>
<td>0.30%</td>
</tr>
<tr>
<td>Renter-Occupied</td>
<td>1,401</td>
<td>1,443</td>
<td>42</td>
<td>0.30%</td>
</tr>
<tr>
<td><strong>Economics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Per Capita Income ($</td>
<td>$16,745</td>
<td>$17,810</td>
<td>$1,065</td>
<td>0.70%</td>
</tr>
<tr>
<td>Real Total Personal Income ($1,000)</td>
<td>$148,172</td>
<td>$163,191</td>
<td>$15,019</td>
<td>1.01%</td>
</tr>
<tr>
<td>Assessed Property Value ($1,000)</td>
<td>$76,210</td>
<td>$86,587</td>
<td>$10,377</td>
<td>0.94%</td>
</tr>
<tr>
<td>Taxable Retail Sales ($1,000)</td>
<td>$137,743</td>
<td>$140,689</td>
<td>$2,946</td>
<td>0.21%</td>
</tr>
<tr>
<td><strong>Revenues Sources ($1,000)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City Property Tax Receipts</td>
<td>$586</td>
<td>$886</td>
<td>$100</td>
<td>1.70%</td>
</tr>
<tr>
<td>City Sales Tax Receipts</td>
<td>$2,810</td>
<td>$2,814</td>
<td>$4</td>
<td>0.02%</td>
</tr>
<tr>
<td>Intergovernmental Revenues</td>
<td>$1,499</td>
<td>$1,538</td>
<td>$39</td>
<td>0.26%</td>
</tr>
<tr>
<td>Other Revenues</td>
<td>$14,211</td>
<td>$14,335</td>
<td>$124</td>
<td>0.09%</td>
</tr>
<tr>
<td><strong>Total Revenues ($1,000)⁵</strong></td>
<td>$19,106</td>
<td>$19,372</td>
<td>$267</td>
<td>0.14%</td>
</tr>
<tr>
<td><strong>Total Demand for Expenditures ($1,000)⁶</strong></td>
<td>$19,109</td>
<td>$19,609</td>
<td>$493</td>
<td>0.83%</td>
</tr>
<tr>
<td><strong>Revenues minus Expenditures ($1,000)⁶</strong></td>
<td>$996</td>
<td>-$296</td>
<td>-$1,232</td>
<td></td>
</tr>
</tbody>
</table>

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1. The term ‘Absolute Change’ denotes the absolute difference (i.e., in numerical terms) between the two numbers. This is in contrast to the ‘Relative Change’ that calculates the change in percentage terms.
2. Employment by Workplace includes second jobs.
3. Census 2000 only released the data for the outcommuters for places but not the incommuters. Therefore, CPAC used its own estimate for incommuting 2000.
4. This represents demand, and not supply of housing, and as such does not reflect the vacant units.
5. Excludes Operating Transfers.
6. Often, actual spending alternates from a budget surplus to a deficit. However, on average, Missouri local governments must operate from a balanced budget.
The Chillicothe City Baseline was generated as part of the “Housing Profile and Needs Assessment” protocol developed as a result of the Outreach Development Fund (ODF) program. The “Housing Profile” protocol has been a collaborative effort between the City and the ODF Project Partners (CPAC, CARES, HSEW and UO/E field faculty). Its essential part, the Chillicothe City Baseline, has been developed as a result of collaboration between the City and the Community Policy Analysis Center. The Advisory Panel met on a regular basis during the course of the study to form background information and basic assumptions for the study. The forecasts on socio-demographic and economic conditions through 2011 described in this report will assist public officials and community residents in addressing economic changes. Its findings are the result of an extensive analysis of the local economy, achieved through discussion with key public and private sector leaders throughout the community, and use of the Show Me Community Model, developed by CPAC.

The City of Chillicothe is the county seat and largest city in Livingston County. Two highways, highway 65 and 36, intersect the community. Regional economic development brings both opportunities and challenges. As future population and income levels in the city increase, this will lead to new demands for both public and private sectors. The City of Chillicothe understands the necessity of taking a proactive role in planning for its future in order to provide the adequate quality of life to its future generations.

Findings in this report are discussed in four separate sections. The first section describes future socio-demographic characteristics in the City of Chillicothe when no major changes are introduced into a local economy. The second section reports on labor market, and the third – on economic characteristics in the city under the same conditions. The fourth section examines related fiscal implications for city government in the same settings.

2 ODF is funded by the University Outreach and Extension (UO/E), MU.
3 CPAC, CARES and HSEW stand for Community Policy Analysis Center, Center for Agricultural, Resource and Environmental Systems, and Housing and Sustainable Environment Group. UO/E field faculty in this project were represented by Dean Larkin, Community Development Specialist, NW region and Kevin Hansen, Agriculture and Business Specialist, NW region.
Forecasts and Analysis

I. Socio-Demographic Characteristics

The following population figure can help citizens understand trends in their community that can be used to analyze future service needs for community’s population.

Figure 1. Chillicothe City
Total Population, 1990-2011

Source: US Census Bureau
Analysis by CPAC

Figure 1 illustrates the population change in the City since 1990. According to Census 2000 (July estimate), Chillicothe had 8,916 persons. Chillicothe population increased by a mere 1.3 percent between 1990 and 2000. Note that the chart also shows intercensal estimates for population from 1990 to 1999 derived by the Census Bureau. However, the Bureau estimates “undershot” the actual data as evident from comparing 1999 estimate with 2000 Census data.

Chillicothe accounts for about 60 percent of total population in Livingston County. According to Census 2000, the median age in the City is about 40 years, same as in Livingston County, vs. 36 years for the State of Missouri. In 1990, median age in Chillicothe City was 37 years.

Note, that the Census Bureau has already released the population estimates for places for years 2001 and 2002. According to these estimates, Chillicothe population is experiencing a small decline. In the baseline, Chillicothe population is expected to grow slowly at an annual rate of 0.3 percent. For comparison, the annual population growth rate for the State of Missouri was 0.8 percent since 1990.

4 April estimate of Census 2000 reported 8,968 persons in Chillicothe City.
5 Intercensal estimates represent an extrapolation, or a projection of the variable from the known observation forward (say, beginning with Census 1990 figure). Interpolation, on the other hand, is the projection between the two end points (say, between Census 1990 and 2000 data).
We also examined the two population groups that are generally not part of the labor force: young persons in the City (people younger than 16), as well as older population (persons over 65). The young people usually do not make moving/allocation decisions themselves, but rather follow their families. The older part of the population typically constitutes retirees who may, and often do, have a profound effect on the community’s economy. In 2000, young population comprised 23 percent of the total population in Chillicothe, and retirees – about 21 percent.

**Figure 2. Chillicothe City**
*Persons 17 and younger, 1990-2011*

Figure 2 illustrates the change in persons younger than 18 in the City for years 1990 and 2000-2011. In examining the actual data for this segment of the population, note that its 2000 level is 1 percent smaller than its 1990 level. In the baseline, “young” population in the City is expected to grow at an annual rate of 0.3 percent.
Figure 3 represents the changes in persons over 65 in the city for years 1990 and 2000-2011. In examining the actual data for this segment of the population, note that its 2000 level experienced a mere 1 percent increase over its 1990 level. In the baseline, the “older” population in the city is expected to grow at a slow annual rate of 0.2 percent.

If the actual population grows through the baseline period as expected, this growth will lead to small additional demands for housing, health services, higher and continuing education, and family recreation activities.

Figure 4 shows the actual and projected growth in public school enrollment, corresponding to the population trends in school age children. The figure also depicts 5-year school enrollment projection generated by DESE that shows a continuous decline in the school enrollment based on historical trends. In our baseline, school enrollment is increasing very slowly at 0.04 percent per year over its 2001 level.
Figure 4. Chillicothe City
School Enrollment, 1990-2011

Source: Missouri Department of Elementary and Secondary Education (DESE)
Analysis by CPAC

Figure 5. Chillicothe City
Demand for Housing, 2000-2011

Note: The chart reflects the demand, and not the supply of housing, and as such represents occupied housing only, and excludes vacant housing
Analysis by CPAC

According to Census 2000, there are 2.5 persons per household in the State of Missouri, and
2.24 persons per household in Chillicothe City. Figure 5 represents the overall\textsuperscript{6} forecasted demand for housing for years 2001 – 2011. In the baseline, the Chillicothe demand for housing is expected to experiencing a small growth of 0.3 percent per year. Housing projection follows that of the population.

**Figure 6. Chillicothe City**
**Housing Units by category as percent of total, 1990 and 2000**

![Housing Units by category as percent of total, 1990 and 2000](image)

Source: US Census Bureau
Analysis by CPAC

Figure 6 compares the existing housing stock in Chillicothe in 1990 with that of 2000. The total number of housing units in the last decade increased by 5 percent – from 3,878 units in 1990 to 4,060 units in 2000.

\textsuperscript{6} i.e., the demand for both existing and new housing units. By housing units, we mean any type of dwelling, be it houses, apartments, mobile homes, condos, etc.
II. Labor Market Characteristics

Workforce characteristics include the labor force, employment and unemployment levels, and commuting patterns.

Figure 7. Chillicothe City
Labor Force, Employment, Unemployment
1990-2011

Source: US Census Bureau
Analysis by CPAC

Figure 7 illustrates expected growth in the civilian labor force – the number of adults who live in the city and are now either gainfully employed or actively seeking work. Between 1990 and 2000, actual labor force in Chillicothe grew by 135 persons, or 3.5 percent, reflecting, among other things, the national trend of increased labor force participation in the early 1990s. In the baseline, the labor force is expected to grow at a rate of 0.6 percent annually through 2011. This increase is composed of growth in both local labor force and the number of incommuters.

Figure 7 also represents employment by residence (i.e., the number of Chillicothe residents who hold jobs, regardless of where these jobs are located: inside or outside the city limits). Employment by residence data is equal to Labor Force - Unemployment (i.e., it already accounts for the net commuting). Between 1990 and 2000, Chillicothe employment by residence increased by 181 persons, or 5 percent. In the baseline, the employment by residence is expected to increase by approximately 200 employees between 2001 and 2011 – at an annual growth rate of over 0.5 percent.

Figure 7 also shows the number of unemployed adults in the Chillicothe labor force. From the actual portion of the data, the city level of unemployment decreased by 46 persons, or 26 percent between 1990 and 2000. In the baseline, the number of unemployed persons is expected to increase to approximately 15 persons by 2011.
Figure 8 represents Chillicothe employment by major industry for years 1990 and 2000. Service sector employed 40 percent of Chillicothe residents in 2000, up from 30 percent in 1990. Notice that several sectors experienced a decline in jobs in the last decade, with the largest decline of 35 percent experienced by the retail sector. Nationally, employment is growing the fastest in the services and retail trade sectors.

Figure 9 depicts employment by workplace, i.e., the number of jobs located in the city regardless of who is taking those jobs – local residents or in-commuters. Chillicothe employment experienced a 7 percent increase between 1994 and 1997, followed by a 2-year
The number of jobs in the city increased by almost 4 percent between 1999 and 2000. The 2001 jobs remained at their 2000 level.

In the baseline, employment by workplace is growing at almost 0.7 percent per year (based on its historical growth rate) and is expected to gain about 320 jobs by 2011 over its 2001 level.

Note that in our model, we explicitly consider commuters, rather than implicitly accounting for net commuters, i.e. we use the following identity: Labor Force = Employment (by workplace) + Unemployment + Outcommuters – Incommuters.

Figure 10 represents expected changes in the number of commuters in the baseline. Incommuters are people who live outside of the community, but whose place of employment is within the community. Outcommuters are residents of Chillicothe who work outside of the city. On the graph, notice a large gap between in- and outcommuters. In 2000, outcommuting was 21 percent larger than its 1990 level.

Forecasts of commuting patterns are especially important in estimating changes in retail sales. In the baseline, forecasted incommuting experiences an annual growth of over 0.94 percent through 2011. Outcommuting is expected to grow at 0.87 percent per year over the years of the forecast, with the gap between in- and outcommuters increasing somewhat over the years of the projection. Outcommuting affects employment by residence, resulting in different behavior.

Note that there is no secondary data available for employment by workplace on a city level. Census Bureau only publishes employment by residence for places (i.e., for cities, towns and villages). The Chillicothe numbers for employment by workplace came from the Zip Code Business Patterns, U.S. Census Bureau [http://censtats.census.gov/](http://censtats.census.gov/). There is only one zip code in Chillicothe: 64601. Even though there are some jobs in this zip code that are located outside the city limits, the Advisory Panel concluded that their number is minute (no more than 130 jobs) and does not need to be subtracted from the total number of jobs reported for Chillicothe zip code.

Both Census 1990 and 2000 released the data on outcommuters, but not the incommuters on the city level. Therefore, CPAC used its own projections for incommuting between the years 1990 and 2000. CPAC also had to adjust outcommuting data from Census 2000, because the Census data were based on the number of persons employed 16 years and older that answered “yes” to the question: “Were you at work last week?” (i.e., at the time the Census was conducted), not on the total employment by residence.
III. Economic Characteristics

Figure 11. Chillicothe City
Per Capita Income (in 2001 Dollars), 1990-2011

In 2000, Chillicothe per capita personal income (PCI) was $16,172 in nominal terms, and $16,632 in 2001 dollars. For comparison, in 1990, Chillicothe PCI was $15,580 (in real 2001 dollars), which is about 7 percent less than its 2000 level. Chillicothe 2000 PCI was equal to 81 percent of the State average (of $20,503, in 2001 dollars) and 97 percent of the County average (= $17,160 in 2001 dollars).

Note that the BEA (Bureau of Economic Analysis, Department of Commerce) and the Census definitions of income differ. In general, the BEA’s definition is much more inclusive of different kinds of income than the Bureau’s. For example, according to the BEA, Livingston PCI in 2000 was $25,130 (in nominal terms), which is $8,445 higher than its corresponding Census figure. The personal income of an area is defined by the BEA “as the income received by, or on behalf of, all the residents of the area. It consists of the income received by persons from all sources—that is, from participation in production, from both government and business transfer payments, and from government interest (which is treated like a transfer payment).” For comparison, the definition of income used by the Census Bureau “reflects money income before taxes and does not include the value of noncash benefits such as employer-provided health insurance, food stamps, or medicaid.” Here, we use the Census figures for Chillicothe because PCI from other data sources is not available on a place (i.e., city, town, village) level.

Figure 11 shows a projected increase of $1,170 in Chillicothe real per capita income over the next ten years. Chillicothe per capita income will remain below the expected per capita income for both the State of Missouri and Livingston County, if no major additional changes will take place in the community’s economy. As mentioned previously, all dollar figures are standardized to 2001 dollars to discount any changes in income caused by inflation.
Income measures are an important part of community’s profile. Changes in income can give important indications about the well being of the community. The per capita income indicator is often used to measure both local quality of life and productivity growth in a local economy. Typically, real per capita income growth of one percent per year is considered desirable in most areas. In the baseline, the per capita income grows at an annual rate of 0.7 percent based on its historical growth rate. This rate falls short of the desirable one percent figure. If the growth rate included inflation (i.e., if it were given in nominal terms), the rate would be higher. For example, if inflation were measured at 2 percent per year, the nominal per capita income growth would be 2.7 percent.

Figure 12. Chillicothe City
Total Personal Income (in 2001 Dollars), 1990-2011

Figure 12 shows the Chillicothe total personal income (TPI) in 2001 dollars, again in accordance with the Census definition of income. TPI serves as an indication of the size of the local economy, vs. PCI is an indication of growing well-being of individuals. In 2000, Chillicothe TPI was 8 percent larger than its 1990 level (in real terms). In the baseline, Chillicothe TPI is growing through the projection period at a rate of 1 percent annually. This growth is the result of the growth in both population and real per capita income in the City. Note that Chillicothe TPI declines from 2000 to 2002 due to the population decline in the same time period, as estimated by the Census Bureau.
Because of their direct link to the city financial statement, knowing the levels of assessed property values and total taxable retail sales in the city can play an important role in the planning process.

Figure 13. Chillicothe City
Assessed Property Values (in 2001 Dollars), 1995-2011

Source: Missouri State Auditor’s Office
Note: Data for Property Values include real and personal property, and utilities.
Analysis by CPAC

Figure 13 represents the value of assessed real and personal property in Chillicothe. Between 1995 and 1997, the assessed property value in the city increased by 28 percent (in real terms). Assessed property values also showed increase between 1998 and 2001.

In the baseline, the assessed property value is expected to increase by 0.9 percent annually between 2001 and 2011. The increased valuation is projected as if the reassessment were to take place each year. Actual assessed valuation will vary according to the assessment process. Property reassessment in Chillicothe takes place every two years.
Figure 14 represents the actual and anticipated levels of taxable retail sales in Chillicothe, measured in 2001 dollars. Between the years 1991 and 1994, city retail sales showed steady increase, after which they leveled off. Between 2000 and 2002, Chillicothe retail sales declined by almost 4 percent. Over the next 10 years, taxable sales in the City are expected to grow at a slow annual rate of 0.2 percent. Changes in employment and population size, changes in commuting patterns, and growth in personal income all contribute to changes in retail sales. One should keep in mind that nationally, taxable retail sales are a declining portion of personal income, because more and more people spend more money on non-taxable sales, such as services and Internet sales.

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9 According to Missouri statute Chapter 144, RSMo 1986 and 1993 Supplement, sales taxes in Missouri must be paid on the gross receipts of tangible personal property, admission to entertainment and athletic events, utilities, restaurant meals, hotel accommodations, and rental of tangible personal property. There are three major categories exempt from paying or charging sales taxes. First, non-profit or governmental organizations do not pay any sales tax on items that are otherwise considered taxable. Second, businesses that purchase retail items for further resale are also exempt from paying sales tax. Finally, sales tax may not be charged on selected services and commodities, such as medical services, vehicle repair, and household maintenance and repair.

10 such as legal, health, personal services, etc.
IV. Fiscal Characteristics

Figure 15. Chillicothe City
Total Revenues and Expenditures (in 2001 Dollars), 1999-2011

Source: City Auditor

Note: Data reflects governmental and proprietary fund types, as well as component unit. Chillicothe City’s governmental funds consist of general, special revenue, and capital project funds. City proprietary funds are represented by the enterprise fund. The City’s enterprise fund is the Municipal Golf Course fund. Component unit represents Chillicothe municipal utilities.

Analysis by CPAC

Figure 15 represents the actual as well as the expected growth in total revenues and demand for total expenditures for Chillicothe government in 2001 dollars. In the baseline, total revenues (i.e., revenues from city property tax, sales tax, fines, licenses and fees, as well as from intergovernmental transfers, and other revenues) are expected to increase at a slow annual rate of slightly more than 0.1 percent between 2001 and 2011 (see Baseline Summary Table at the beginning of the report). The demand for public goods and services is expected to grow at an annual rate of 0.8 percent between 2001 and 2011.

If the future demand for public goods and services were to grow faster, it might challenge the city government to deliver public services more efficiently, as well as to generate new sources of government revenues.
The property tax contributes a small portion to the city revenues (3 percent in 2001). At the same time, for year 2001, sales tax constitutes almost 15 percent, and intergovernmental revenues – 8 percent of total city revenues.

Note that all Missouri counties receive sales tax revenues two months behind, which largely depends on when the businesses turn in their reports. A similar lag exists for Missouri cities. In practical terms it means that if some businesses in a county decided to "hold on" to their sales tax at the end of the year, then those funds would be reflected in sales tax revenue increase at the beginning of next year.

In conclusion, this report examines current and potential future socio-demographic and economic conditions in Chillicothe under the assumption that no major changes will occur in the local economy. The report will assist local policy-makers and community residents in understanding the current trends and will serve as a basis for making informed decisions.
Show Me Model and Scenario Development

The Show Me model uses statistically estimated relationships to forecast changes in economic, social, and fiscal conditions for Missouri communities under alternative economic settings. 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 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 forecasts of changes in fiscal deficits or surpluses. The forecasts generated by the model are also shown in a series of graphs for ease of interpretation. The model does not account for changes due to the national business cycle or other macroeconomic effects.

By employing the Show Me model, alternative scenarios can be compared to baseline projections. Baselines are typically 10-year projections that assume no changes in policy or economic trends in the community. Scenarios, on the other hand, reflect a shock (a real or a hypothetical one) that is expected in the local growth rates of independent variables (employment, external labor force, external employment and total personal income). Questions such as: “Something just happened or is about to happen in our community…what does it mean?” or “How important is this industry to our economy?” can be answered with the creation of a scenario. Both baselines and scenarios are developed collaboratively with residents of the community. The baseline does not represent a forecast of local economic conditions. Rather, it is a tool designed to help decision-makers see local economic activity as a comprehensive system that is both logically consistent and statistically valid.

The basic calculations underlying baselines and scenarios are frequently generated from sources outside the Show Me model. Trend analysis is often used to make preliminary estimates of baselines. Input-output models such as IMPLAN are frequently used to generate estimates of total employment and income changes associated with certain scenarios. These total employment and income changes/effects consist of the direct, indirect and induced effects. Direct effects are changes in the industry directly affected; indirect effects are changes in inter-industry purchases (ex: inputs); and induced effects are the changes in the spending of disposable income.

Once a scenario is created, the employment and income impacts are used as inputs into the baseline model, creating new forecasts for variables included in the model. On the graphs generated by the model, two lines would exist for each variable – one representing the level of the variable with the change, and one – without a change. This process of examining the impact of various policy choices provides a valuable method for community residents to understand the consequences of current trends and alternative policies.
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. Significant funding for the Center is provided by 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.

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