

*A Macro Data Scavenger Hunt—Helping Students Find and Use*

*State Data in Macroeconomics*

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## **ABSTRACT**

The “Scavenger Hunt” is a semester-long project that offers students an opportunity to individually compile and describe a set of state-level macroeconomic data. By the end of the semester each student submits a fairly comprehensive evaluation of the state’s current macroeconomic conditions, appropriately illustrated with graphs and tables.

One of the most useful skills students can learn in a macroeconomics course is the ability to locate, access and analyze publicly available macroeconomic data. Developing a good working knowledge of common sources of data serves students well in their advanced level economics courses and in their careers. In macro courses taught in a business school, students learn that it is important for managers to be able to access and understand a wide variety of macroeconomic data at national, state and local levels.

This paper describes a semester-long project that offers students the opportunity to individually compile and describe state-level macroeconomic data and relate these data to U.S. national accounts and statistics. The project consists of a series of data-related assignments that focus on these student learning objectives:

- Finding internet data and news sources
- Collecting relevant data and current articles
- Displaying data graphically
- Analyzing trends
- Contributing substantially to in-class discussions
- Writing a professional-quality report

The first day of class, each student chooses a different state to study. The course instructor takes the “home” state to use as an example for the types of analyses required. The process of choosing the state can lead to a good discussion as students explain why they are interested in their states and try to figure out which states are left to choose from. If students are absent, they are asked to pick their state as soon as they come back to class. For online courses, the states can be chosen through the class discussion board. In classes with more than 50 students, the project can be assigned to small groups.

Throughout the semester, students are asked to locate a variety of state data and other information. Some of the assignments include descriptions of:

- State unemployment rates compared to national unemployment rates
- State production compared to U.S. GDP in real, per capita terms
- Trends in population growth
- Changes in the state’s racial/ethnic composition
- Trends in income and poverty
- Trends in state government spending
- Export sector characteristics such as
  - Top exports
  - Top trading partners
  - Percent of total U.S. exports

Students submit short written reports with graphs and analysis related to the particular assignment. The assignments coincide with the macroeconomic topics covered in the class lecture. These reports include tables and graphs illustrating the required data and information from the state’s major newspapers, government agencies and other local resources.

The project is called a “Scavenger Hunt” because students are encouraged to search the web on their own for sources of data, news and other information. At times, the course instructor will use the home state to demonstrate finding good sources of data and creating spreadsheets and graphs. Other times, the students are given the assignment without suggestions for data sources. In subsequent classes and via class emails, students share good sources with each other and the instructor offers suggestions about additional sources.

One of the first tasks given to students is to find links to major newspapers in their states and the official state-government website. The site [www.newspapers.com](http://www.newspapers.com) is a good place to start as it lists newspapers by major cities in each state. Students find the government website by doing a search using the name of the state and the word “government.” For example, a search using “New Mexico state government” retrieves [www.newmexico.gov](http://www.newmexico.gov) and “Pennsylvania state government” retrieves [pa.gov/portal/server.pt](http://pa.gov/portal/server.pt). Another assignment is to find at least one other state source of data. Students are encouraged to look at websites for major state universities to find bureaus of economic and business research or other research centers.

Data sources most commonly used include websites for

- the Bureau of Economic Analysis, [www.bea.gov](http://www.bea.gov),
- the Bureau of Labor Statistics, [www.bls.gov](http://www.bls.gov),
- the Census Bureau, [www.census.gov](http://www.census.gov),
- and the Statistical Abstract of the United States, <http://www.census.gov/compendia/statab/>.

After each assignment is submitted, the graphs and tables are compiled as PowerPoint presentations and used as a basis for class discussions. A student will explain what is happening in the state’s economy and others will ask questions and contribute ideas to help explain the macroeconomic trends. One of the most interesting aspects of this project is the enthusiasm shown in class discussions. They come to identify closely with their states and enjoy working together to analyze the data and to come up with logical explanations for the trends seen.

Recently these assignments have been particularly engaging as the U.S. economy moved towards recession. Students could see that some states were already showing signs of recession as unemployment rates increased, while others—especially those with strong energy sectors—seemed to be better. The end of the Fall 2008 semester was very dramatic as unemployment rates increased in every state.

At the end of the semester, students put all the assignments together and write a final state report that includes their analyses of current macroeconomics conditions and issues. Students are asked to write the report as if they were consultants hired to do an analysis of the state’s recent trends and current macroeconomic conditions. One scenario asks students to write a report to the state’s governor—which requires knowing the governor’s name. Another scenario asks students to write a report to a national business that wants to expand operations in the state. Recently at the end of the report they answered the question, “Do you think your state is in recession—why or why not?”

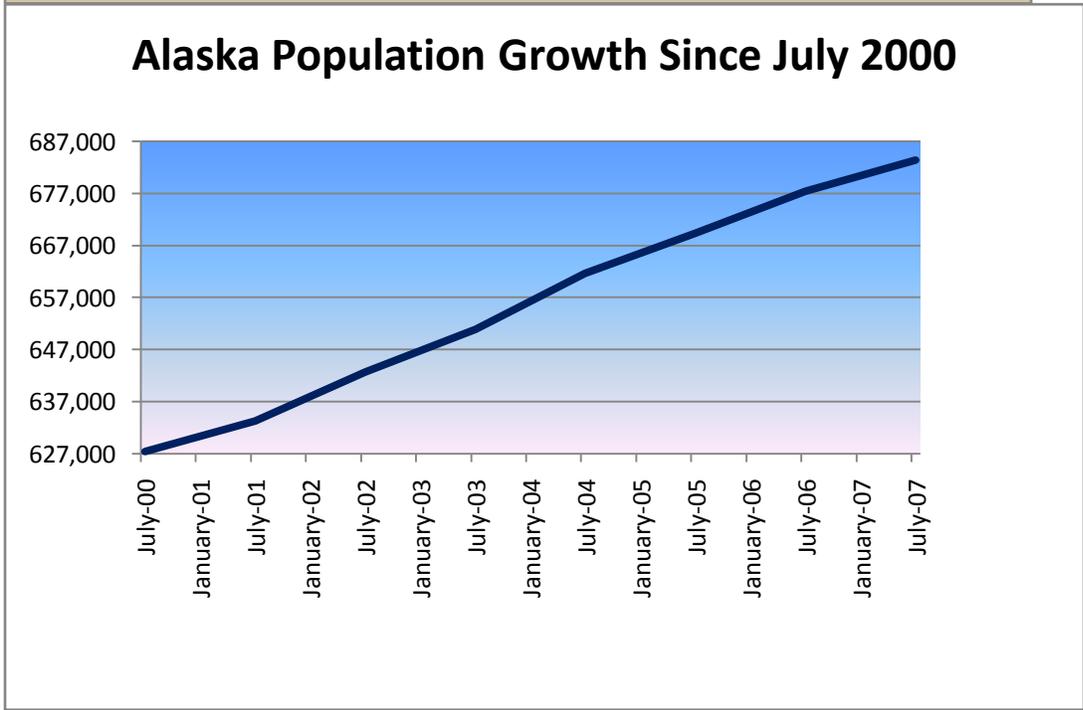
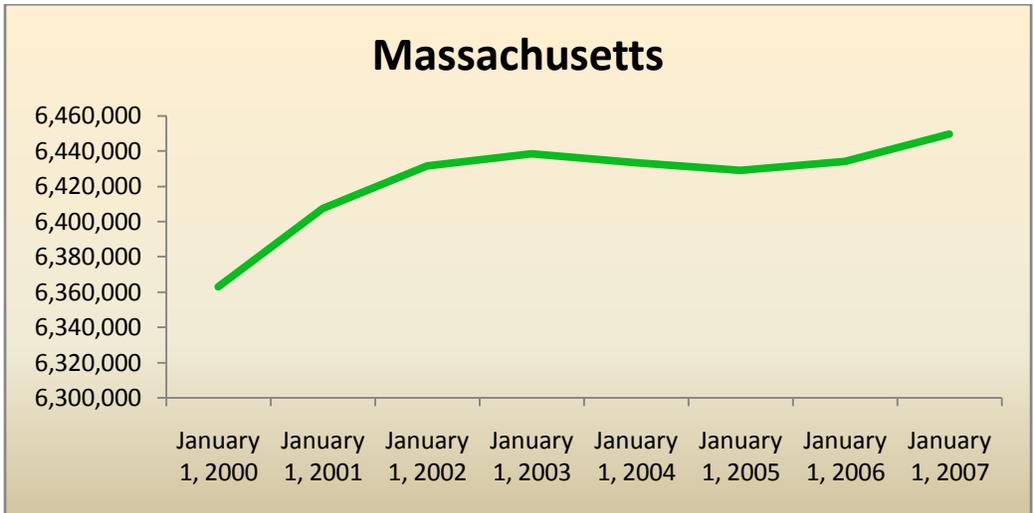
The project's level of difficulty is easily adjusted to fit the course level. For example, in a one-semester lower-division survey course the instructor can give students spreadsheets which contain U.S. data and guide them to find the corresponding state data. In an upper-division intermediate macro course, the students find and collect all the relevant state and U.S. and the assignments can include calculations of growth rates or correlation coefficients.

The appendix gives examples of graphs and tables created by students.

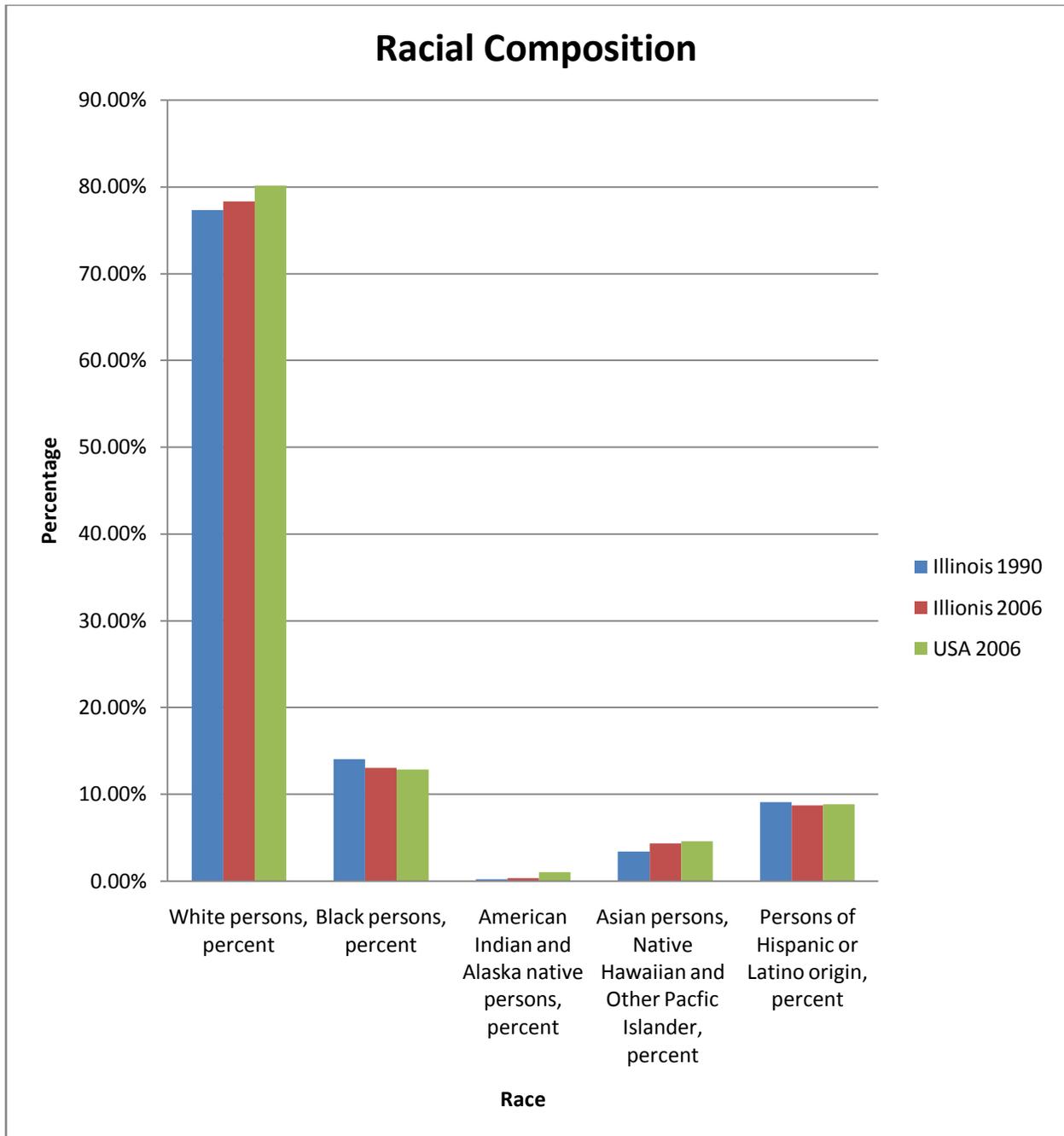
Versions of this project have been assigned in the survey course, principles of macroeconomics, intermediate economics and even an MBA "economics for managers" course that includes a macro component. At every level and in every case, the project is one of the most time-consuming and rigorous that students complete and one that they thoroughly enjoy.

APPENDIX—EXAMPLES OF STUDENT WORK

*Population Growth*

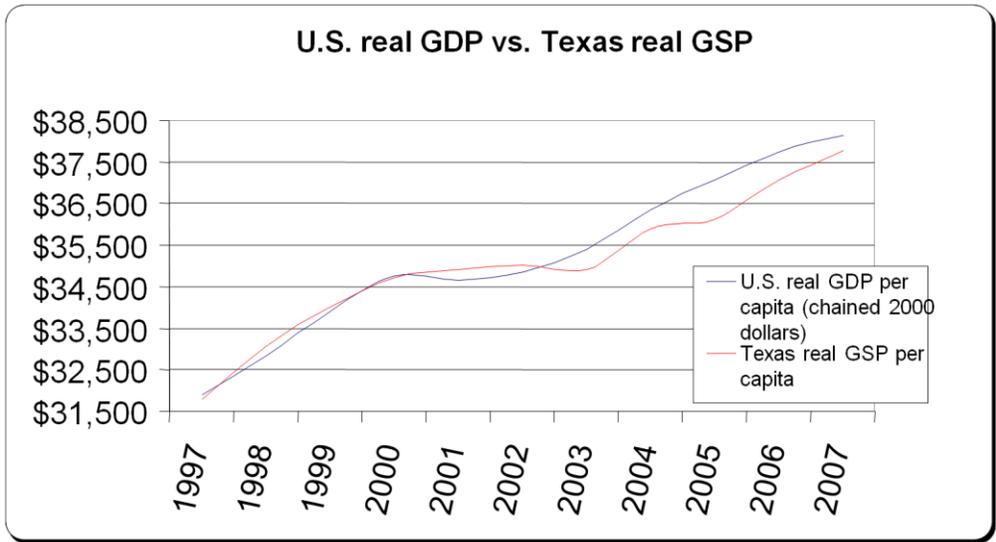
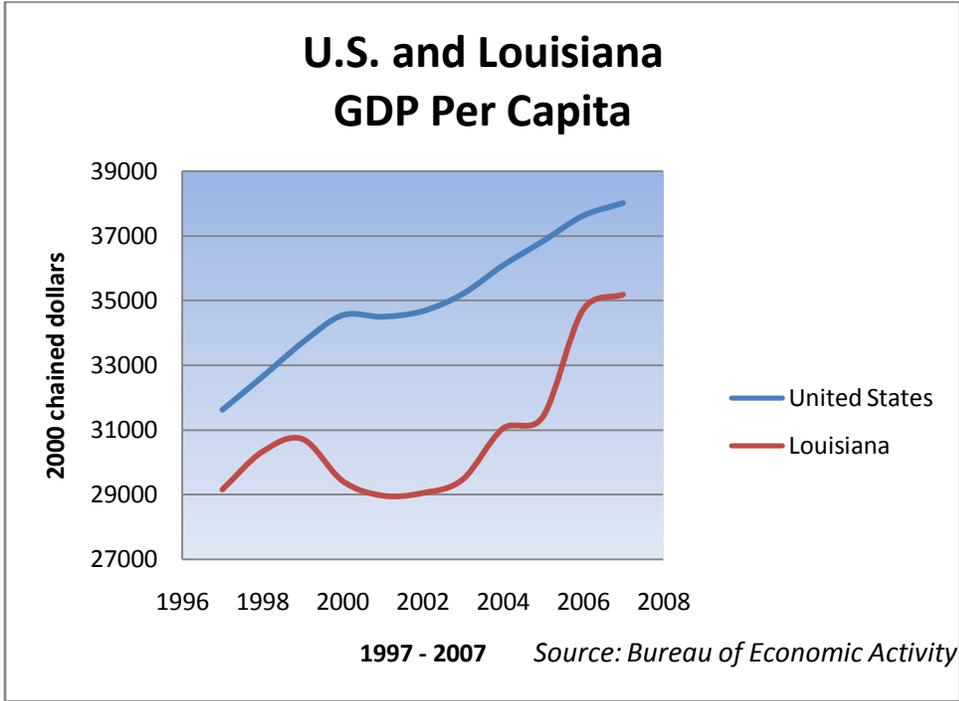


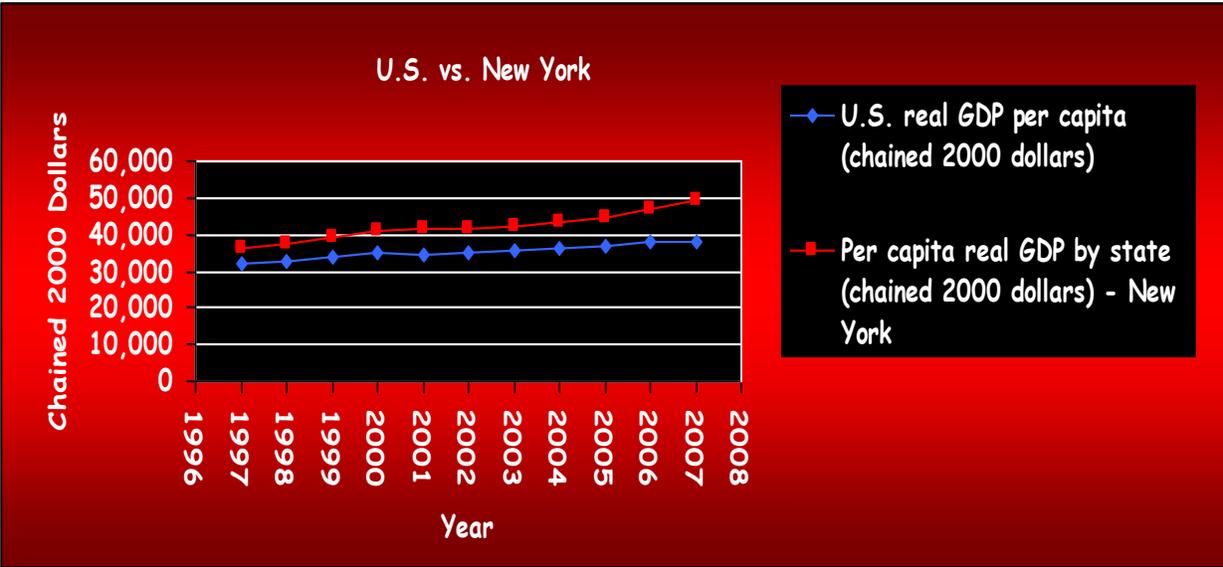
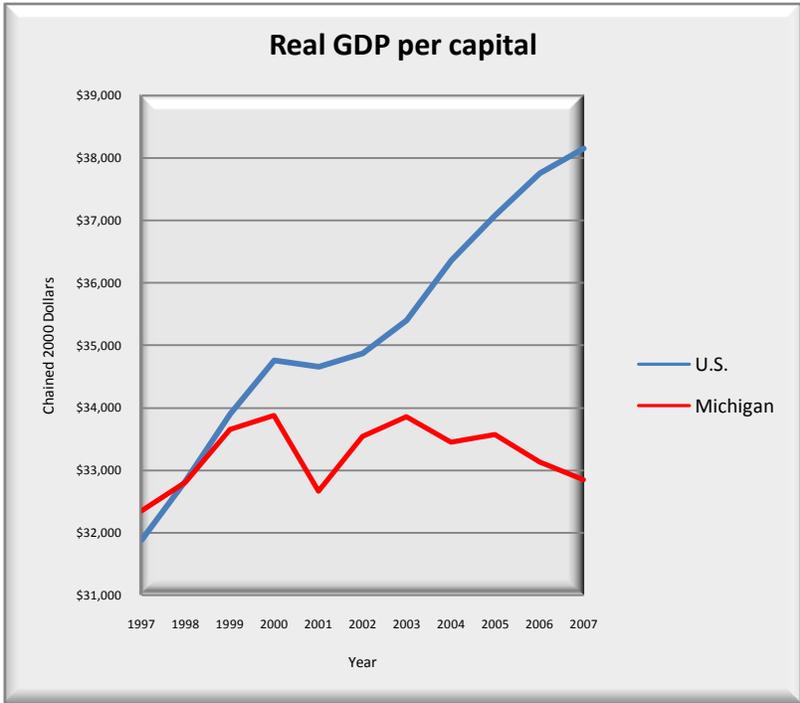
*Demographic Changes*



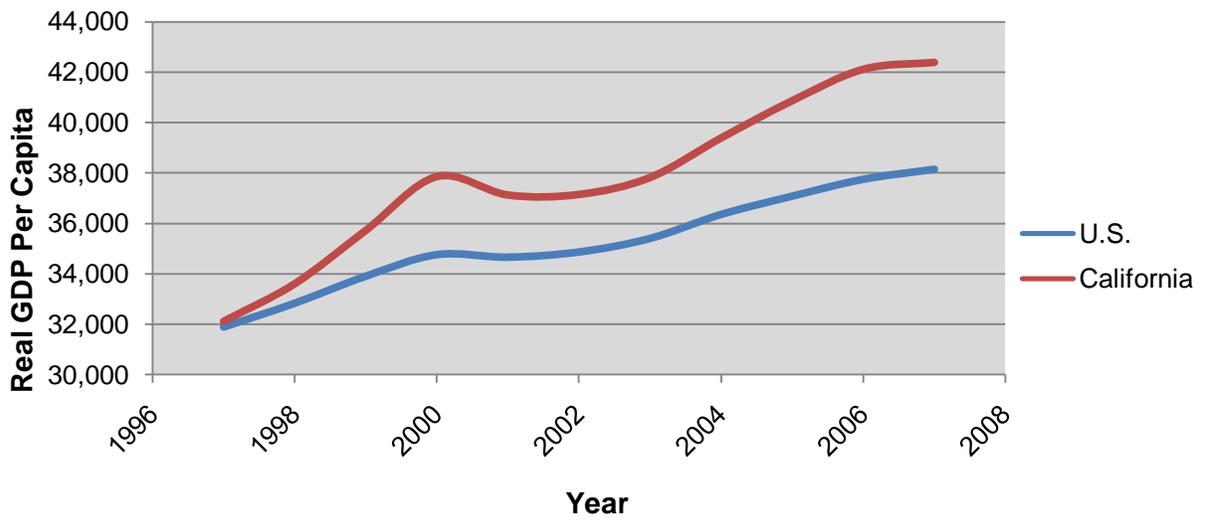
**Production**

*Real GSP compared to Real GDP (per capita chained 2000 dollars)*

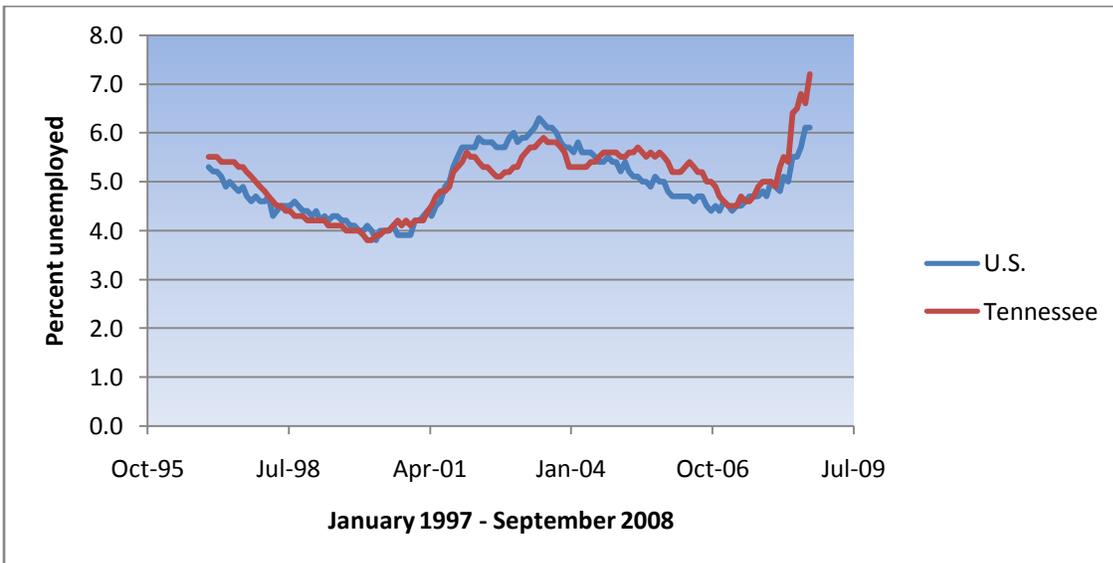
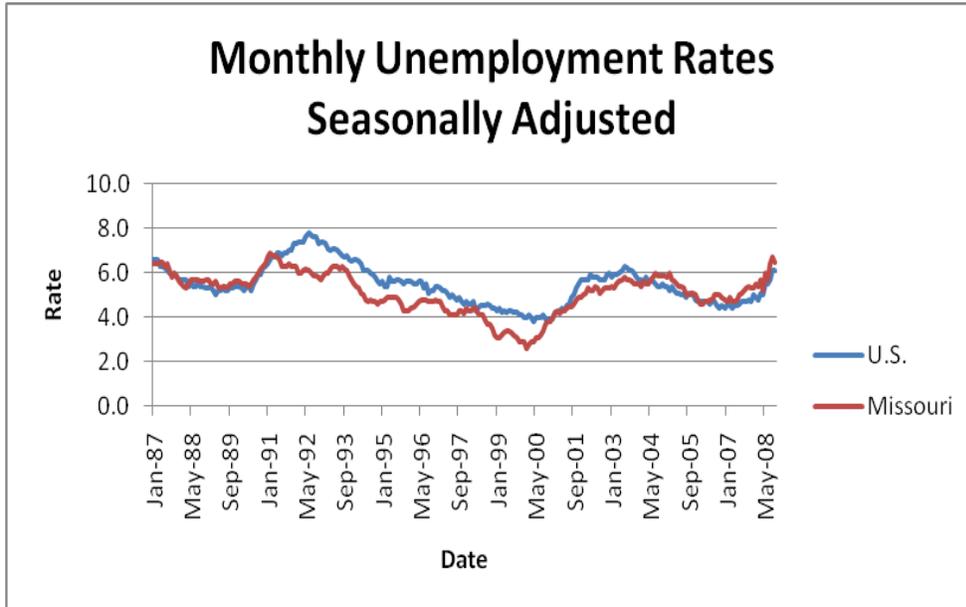


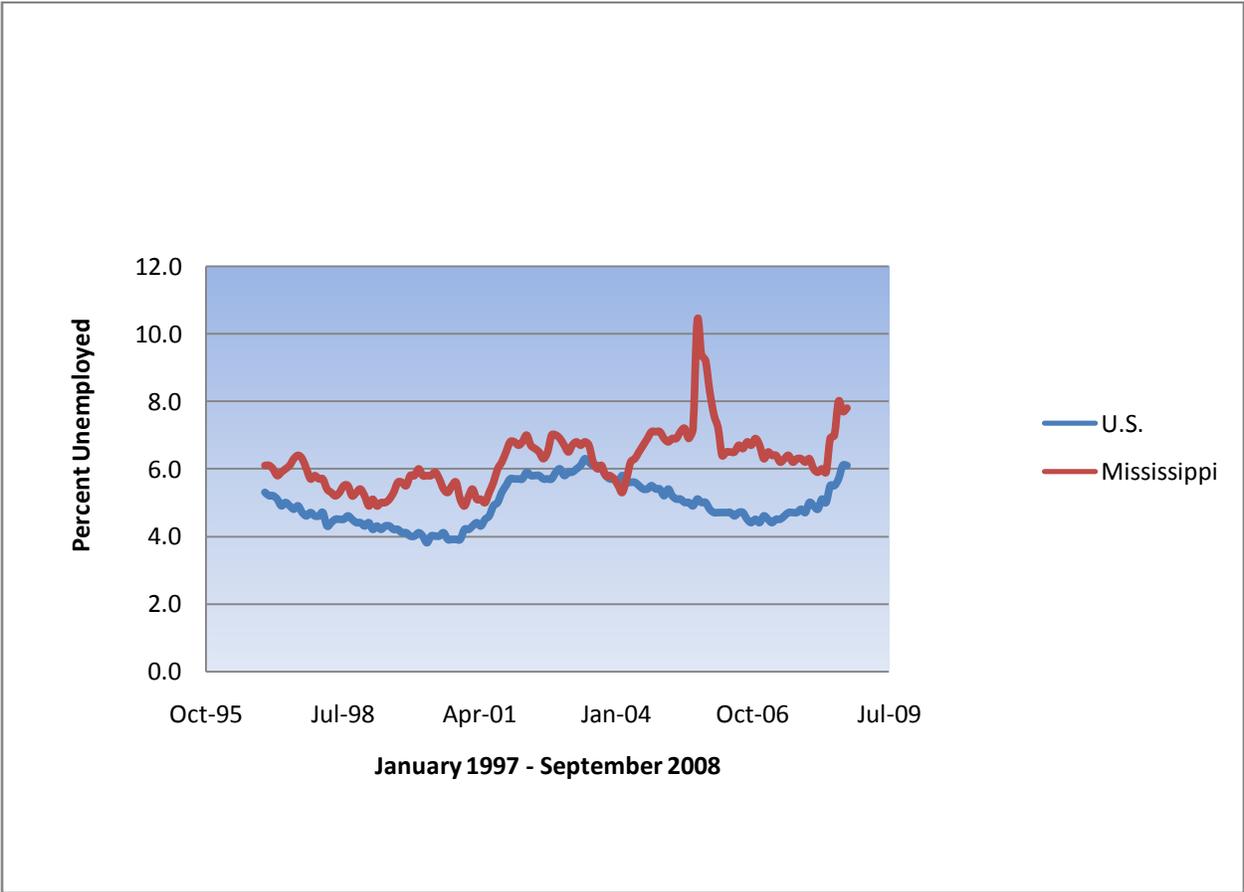
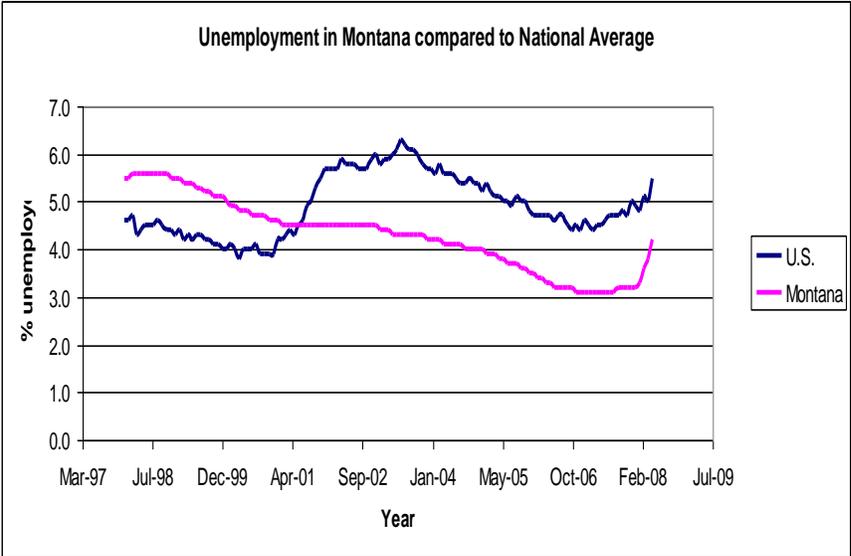


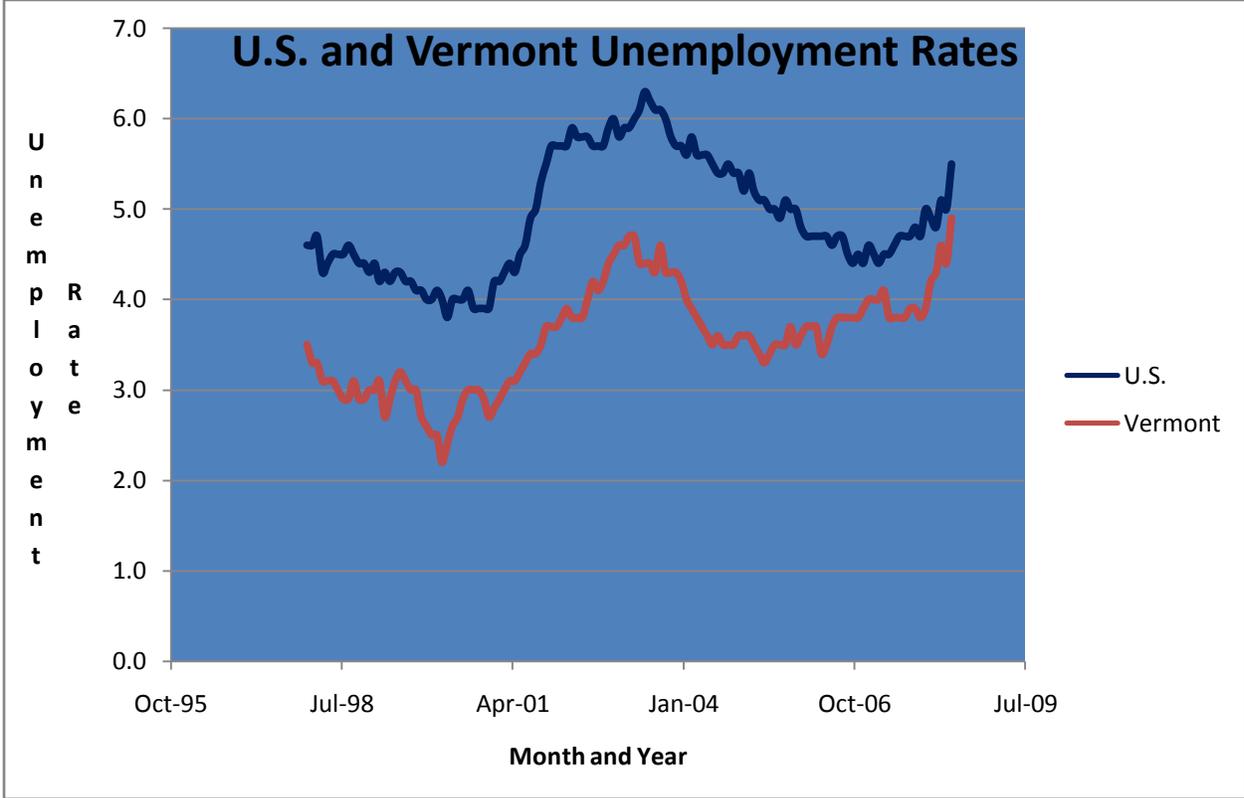
## U.S. vs. California Real GDP Per Capita



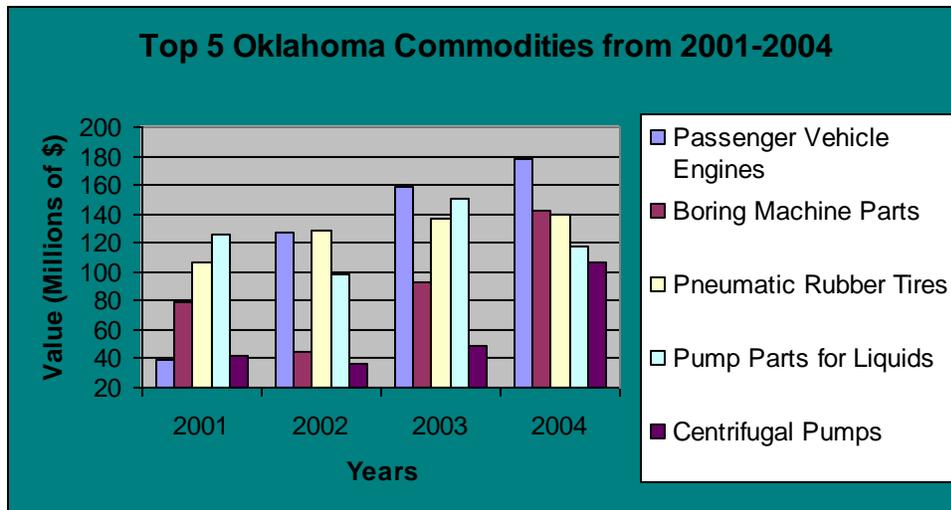
**Unemployment**  
**State & U.S. Monthly, Seasonally Adjusted Unemployment Rates**





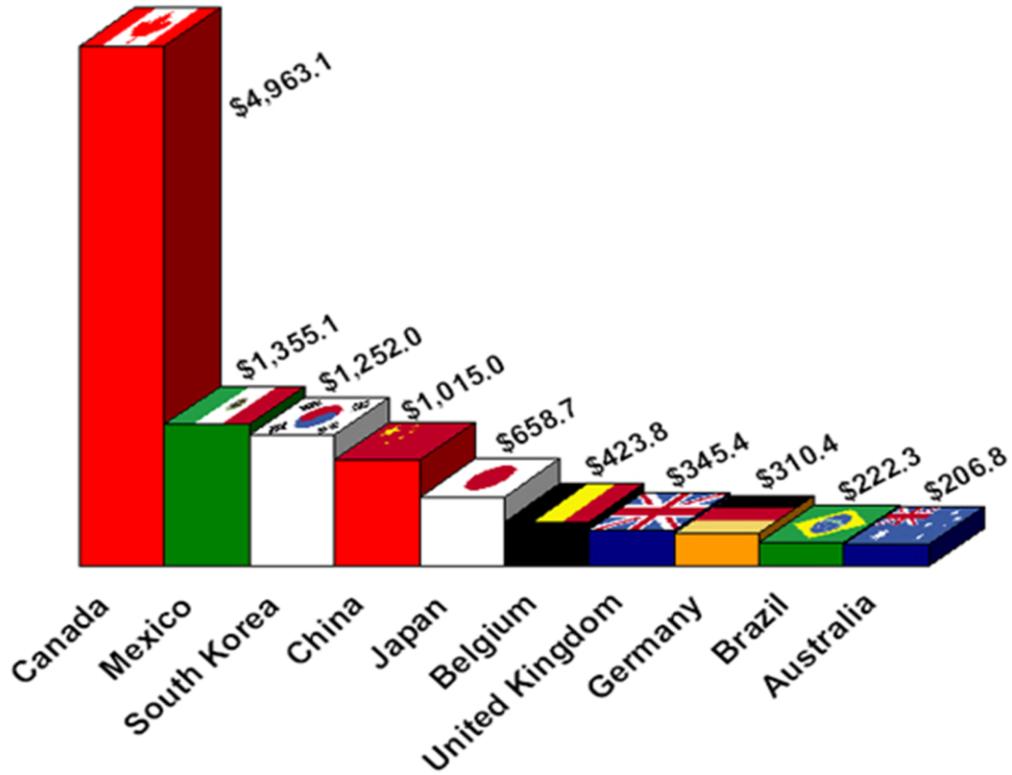


*Top Exports*



*Principal Trading Partners*

**Missouri's Top Ten Export Partners 2007**  
(in millions)



[www.missourieconomy.org](http://www.missourieconomy.org)

