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## GEORGE MASON UNIVERSITY

# THE ECONOMIC SITUATION

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## December 2007

- GDP growth: A powerful spurt to be followed by a drop in the bucket.
- Christmas toys and Christmas joys.
- Money supply and the next nine months.
- The employment picture.
- GDP growth across the states.
- It's forecast time.
- When states become countries.

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### The great GDP spurt.

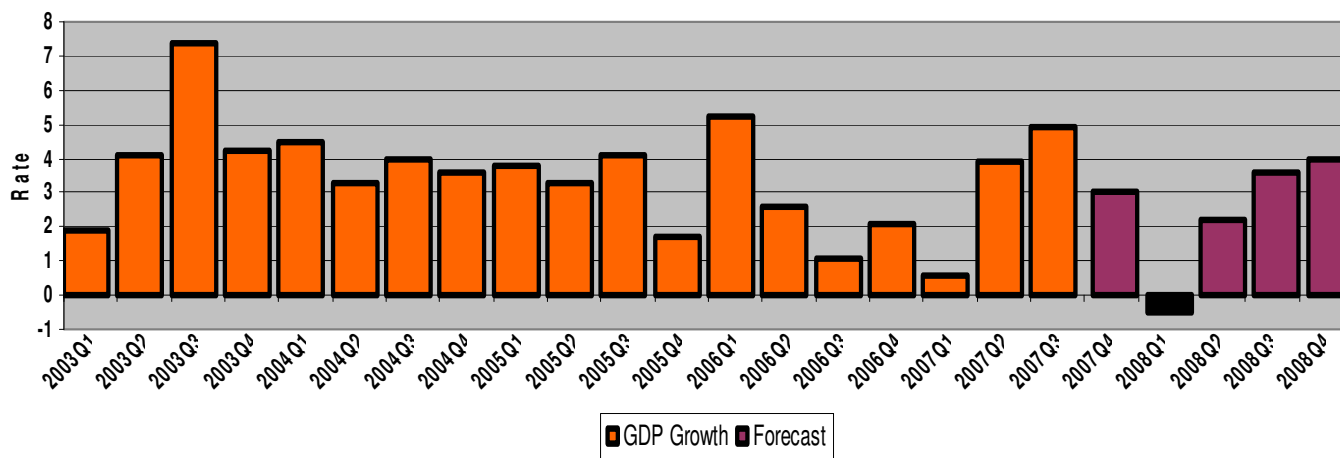
In late November, the Commerce Department provided an almost unbelievably large second estimate for 3Q2007 GDP growth: 4.9%. And the angels sang. Weary from the sub-prime blues, the financially bruised and beaten saw the possibility of new life in the waning days of the year. Was the sub-prime problem over? Could it be that the Great American Bread Machine was ready to roar again?

Any celebrations may be premature.

The 3Q2007 spurt was lifted by an unprecedented export surge that cannot be sustained and by growth in inventory. One percentage point of the 4.9% came from inventory accumulation, which is hardly an unambiguous good thing. About 80% of one major component of the export surge, which is a good thing, came from unusually large aircraft shipments; this will not continue apace.

So what can we say about the future? As shown in the accompanying chart, I expect GDP numbers to weaken in the year's final quarter, and then become barely negative for one quarter. Weakness is already in the data. My projections for the year ahead average about 2.3%. If achieved, this projected 2008 GDP growth will be considerably weaker than that of the current year, which will probably come in at around 2.6%.

## GDP Growth and Projections



### The sub-prime piece of the problem.

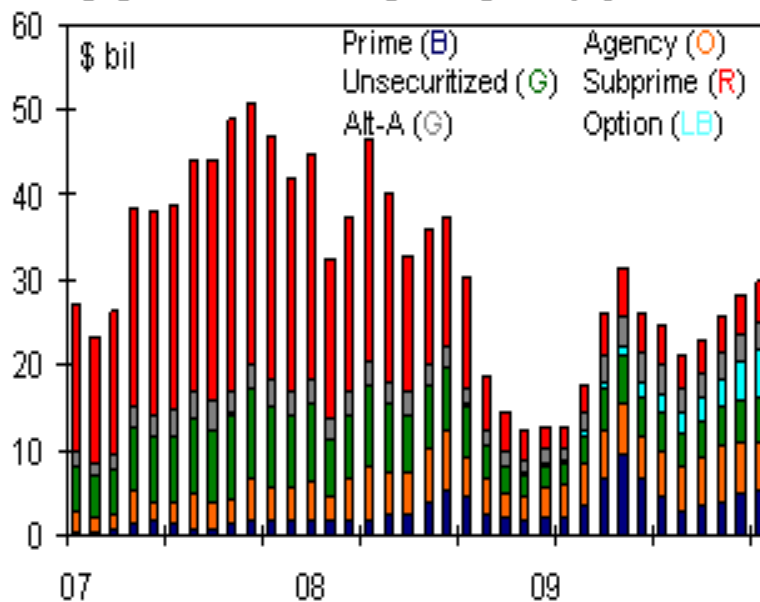
Part of the economy's weakness relates to the growing sub-prime mortgage problem. According to Department of Commerce analysis of 3Q2007 GDP growth, weakness in residential construction activities subtracted one full percentage point from that quarter's GDP growth. Yet while a major part of this loss is offset by increases in nonresidential construction, one might safely forecast that a similar loss for the residential economy will continue quarter-by-quarter across 2008. Even so, the disturbed residential construction market alone cannot generate a recession.

Yet another part of the sub-prime mortgage problem needs to be considered. The declining price of homes generated by the increase in bankruptcy-inspired forced sales takes a bite out of wealth. Reductions in consumption expenditures follow. So far, these reductions seem to have removed about a half a percentage point from real GDP growth. Taken together, things have to get much worse before reductions in consumer spending and residential construction generate a recession.

So what might be done to ease the sub-prime default problem so that at least part of the negative effects can be cushioned?

An answer to the question relates to the next chart taken from the Wall Street Journal. Here we see time-phased dimensions of the sub-prime mortgage problem that relate to adjustable rate mortgages. Across 2008 a large amount of mortgages will be repriced at substantially higher interest rates. Repricing will increase the pace of defaults and bankruptcies.

## First Payment Resets Peak This Fall Mortgage debt outstanding facing first payment reset



Ongoing Washington discussions focus on avoiding part of the costly default problem by holding rates down for homeowners who are making timely payments. Given the cost of default and benefits of continued cash flow, doing something like this may make sense. But doing it is not so simple. The mortgages in question are not resting happily in the vaults of local banks and S&Ls so that straightforward discussions with the mortgage owners and borrowers could occur. They have long since been sold to intermediaries where interest cash flows were stripped and sold, servicing was sold, and the residual claims were then packaged as assets for bonds that were sold to other lenders. This specialization has reduced costs and increased the amount of funds available for borrowers. But as a result, unwinding the loans and getting agreement on changes in anticipated cash flow will not be easy.

But it may be doable. And since part of the subprime problem was generated by Federal Reserve actions, it seems reasonable that part of the solution would come from Washington.

Sadly, though, it is difficult to find a free lunch. If sub-prime borrowers are to be assisted politically, the cost of doing so will likely be borne by other borrowers. Of course, if lenders who bear the costs of default can minimize those costs by rearranging payment schedules, it is possible to get an efficiency gain. And that is a free lunch.

### **Cautious buyers and fewer boxes under the tree.**

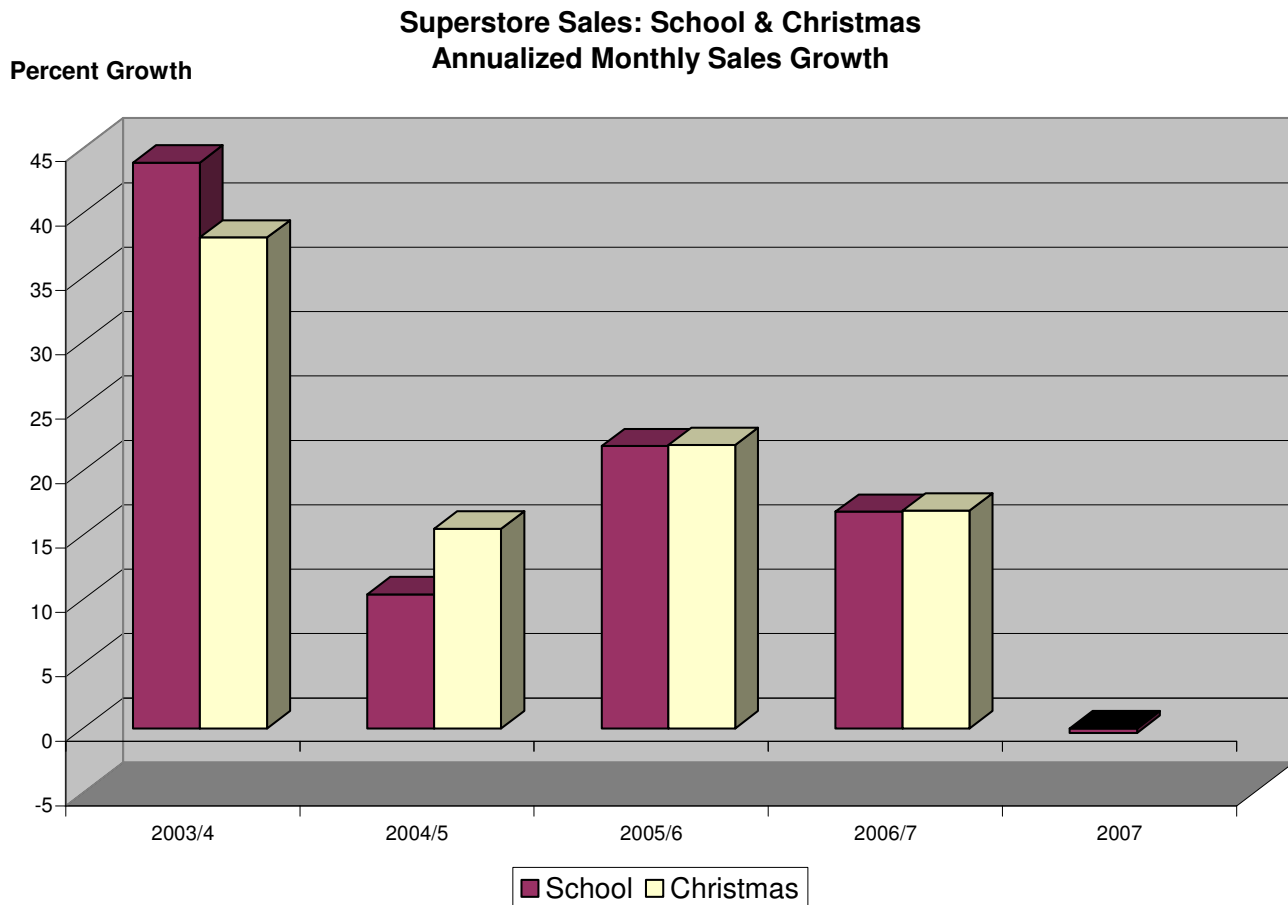
Though I cannot bear the thought of being cast in the role of the Grinch that stole Christmas, I must say that things don't look all that rosy for end-of-year shoppers. Higher gasoline and heating costs, rising bankruptcies, and tighter home equity line credit translate into slower retail sales. It turns out that back-to-school sales map tightly to Christmas and end-of-year sales, especially for super store and club retailers. For example, in 2005, annualized growth in September sales for that important set of retailers was 21.9%. Growth for January 2006 was 22%. In 2006, the September number was 16.8%. January 2007 was 16.9%.

So what was the growth in back to school sales in September 2007? A very bleak minus 0.35%. The forecast is for less being spent for Christmas, but perhaps with greater care being exercised when selecting those special gifts for special people.

Of course, some old timers and younger folk, too, know that Christmas joy is not necessarily about tinsel and electronic toys. There can be other precious memory moments that come with preparing special treats in kitchen, making a pilgrimage to grandmother's house, or helping in a soup kitchen.

We old timers also remember a first pair of ball bearing skates, a baby doll with eyes that could close, or a Radio Flyer wagon.

Yes, we know that tinsel matters, too. The relevant data are seen in the next chart.



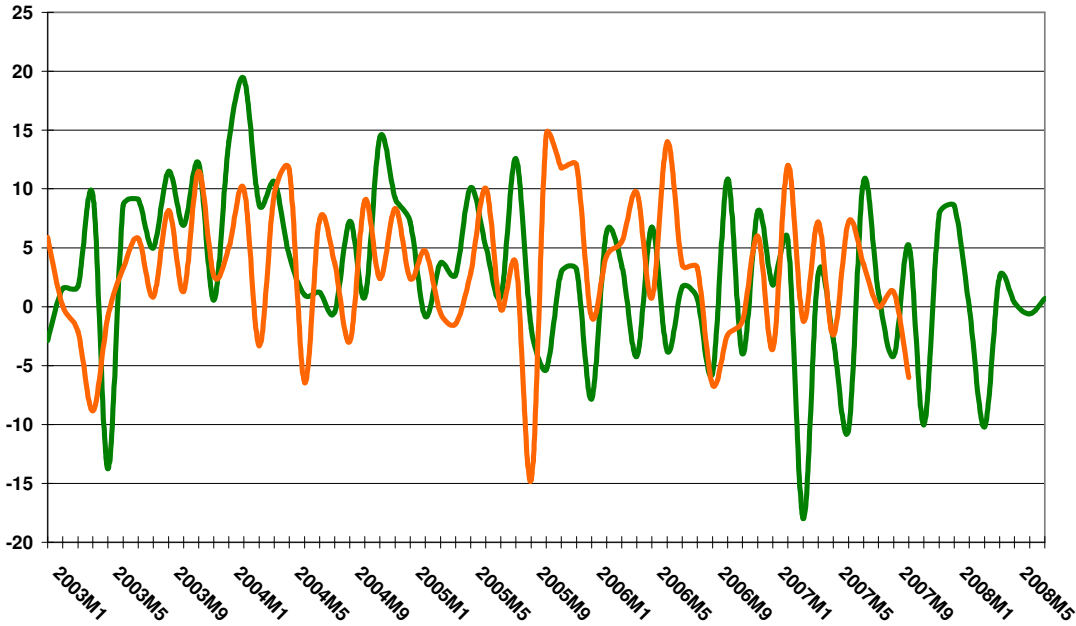
### Money supply and the next nine months.

What about the road ahead?

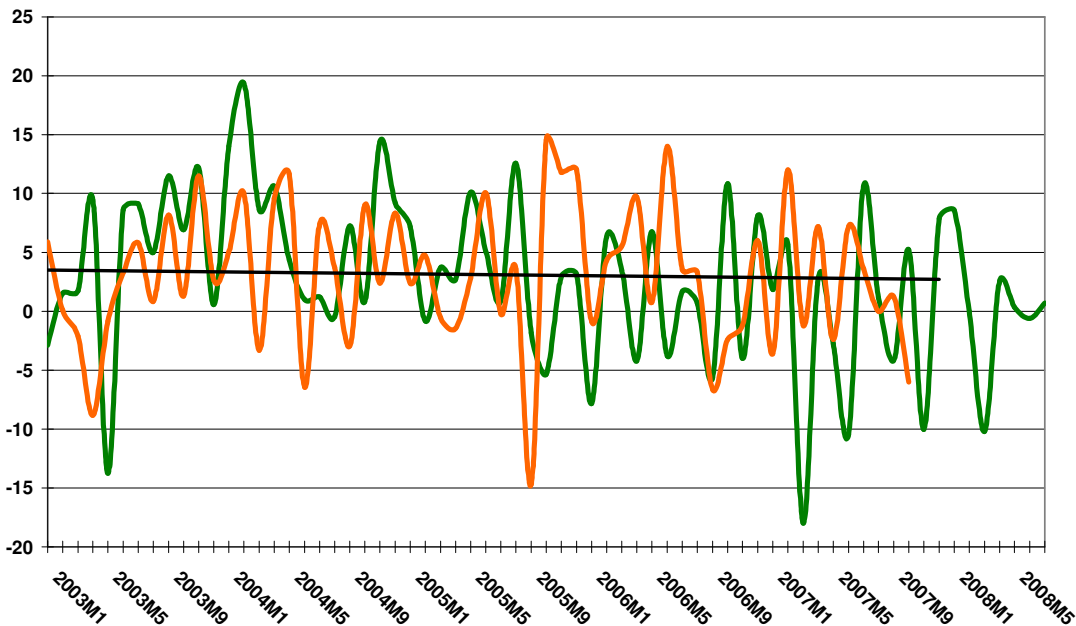
Prospects for overall economic performance are traced out in the next chart. The chart maps growth in lagged growth in the nation's money supply (M-1) into monthly Industrial Production data. Using a nine-month lag between money growth and industrial production enables a forecast that extends to August 2008.

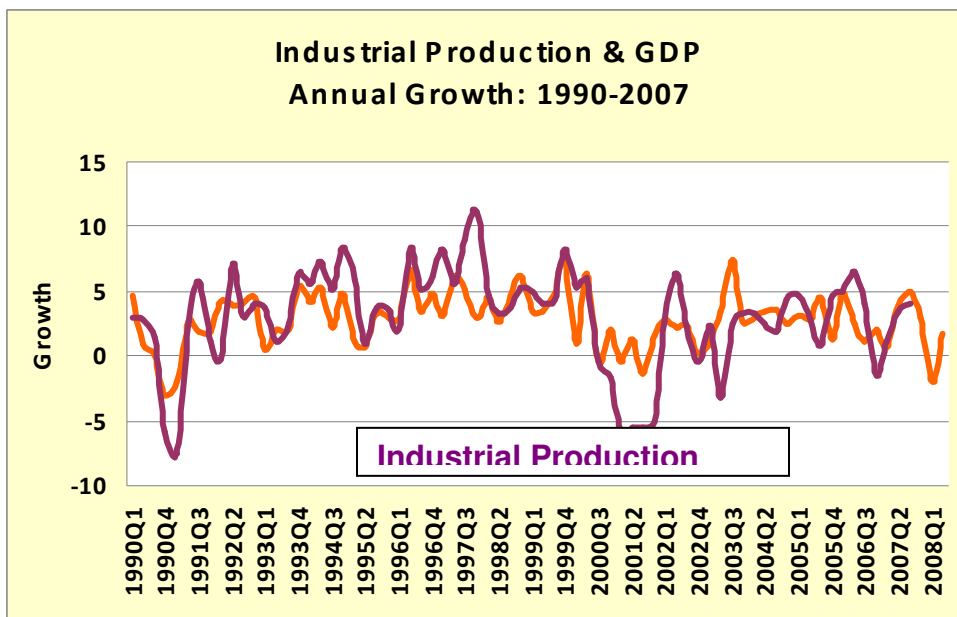
Examination of the money supply growth for the forecast period indicates a series of peaks and valleys lie ahead. Along the way, production should average about 2.3%. The second Industrial Production chart contains a trend line, which has an ever-so-slight negative tilt to it. Growth along the trend averages 3.12%, which mimics GDP growth (3.19%) for the same periods. The relationship between growth in GDP and Industrial Production is shown in the third chart. (I call attention to the serious production sag that occurred in the 2000-2001 recession.)

**Money Supply and Industrial Production**  
2003 - 2008  
Projections to 8/2008



**Money Supply and Industrial Production**  
2003 - 2008  
Projections to 8/2008





I show money supply-based projections for the orange GDP line that reach out through 2Q2008. These projections indicate one quarter of negative growth, which is not enough to yield a recession. But close.

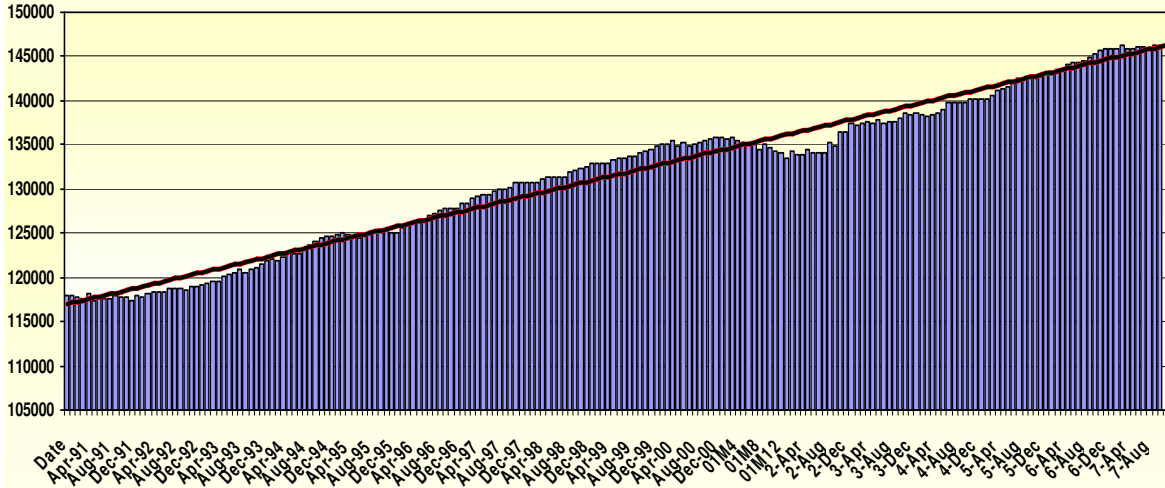
### What about jobs?

Between October 2006 and October 2007, about one million additional jobs were added in the economy, based on the Bureau of Labor Statistics Household Survey. The record for October 2005-October 2006 is much stronger. Some 2.7 million jobs were added during that period, and about that same number was added in 2004-05. We have been running down hill for quite some time now.

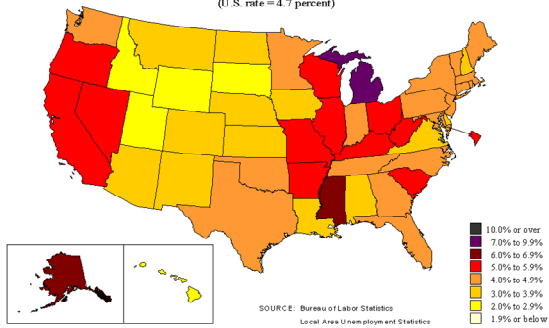
The employment picture is shown in the next series of charts. The first chart shows total employment for the nation. The next set shows unemployment for the states. For the sake of comparison with a recessionary period, the state outline chart compares October 2007 data with data for May 2003. There are now just three states with unemployment exceeding six percent. These are Alaska, where citizens receive oil-based income without working, Michigan, still adjusting from older auto making, and Mississippi, which is now home to a large number of post-Katrina immigrants.

States in the north central manufacturing heartland also show higher unemployment. Along these lines, some careful sifting of national metro data by Tim Dunne at the Federal Reserve Bank of Cleveland reveals that regions with higher year 2000 manufacturing employment have shown systematically weaker economic growth. The same research also shows that economic growth has lagged in regions with lower mean temperatures. Human communities seem to prefer warmth to cold..., all else equal. I note that the October 2007 chart displays the powerful strength found in the Southwest and West Central states.

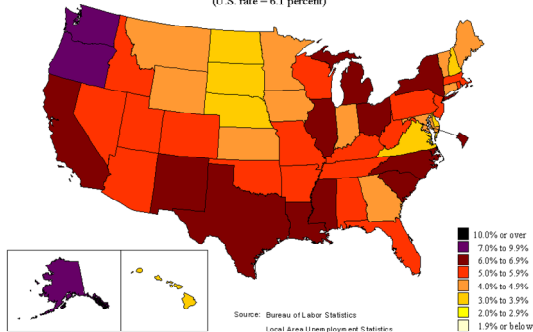
**Total Employed, 16 and Over, Seasonally Adjusted  
Household Survey, with Trend  
1/1991 - 10/2007**



**Unemployment rates by state,  
seasonally adjusted, October 2007  
(U.S. rate = 4.7 percent)**

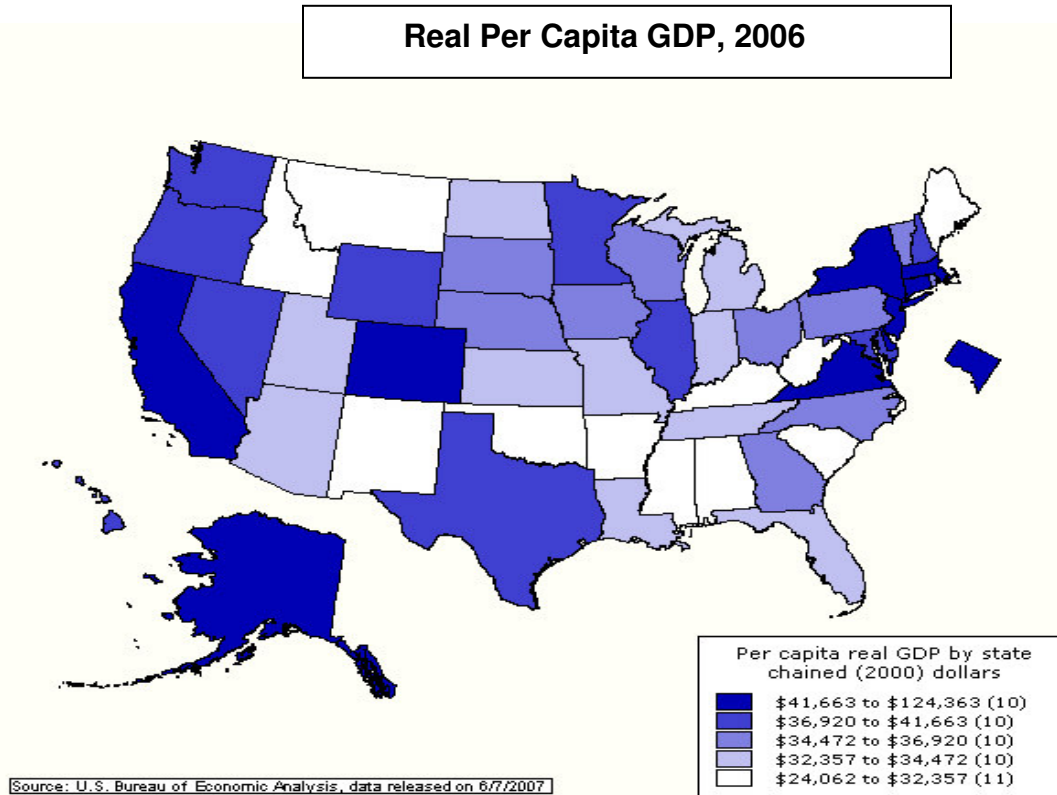


**Unemployment rates by state,  
seasonally adjusted, May 2003  
(U.S. rate = 6.1 percent)**



## Real per capita GDP and education.

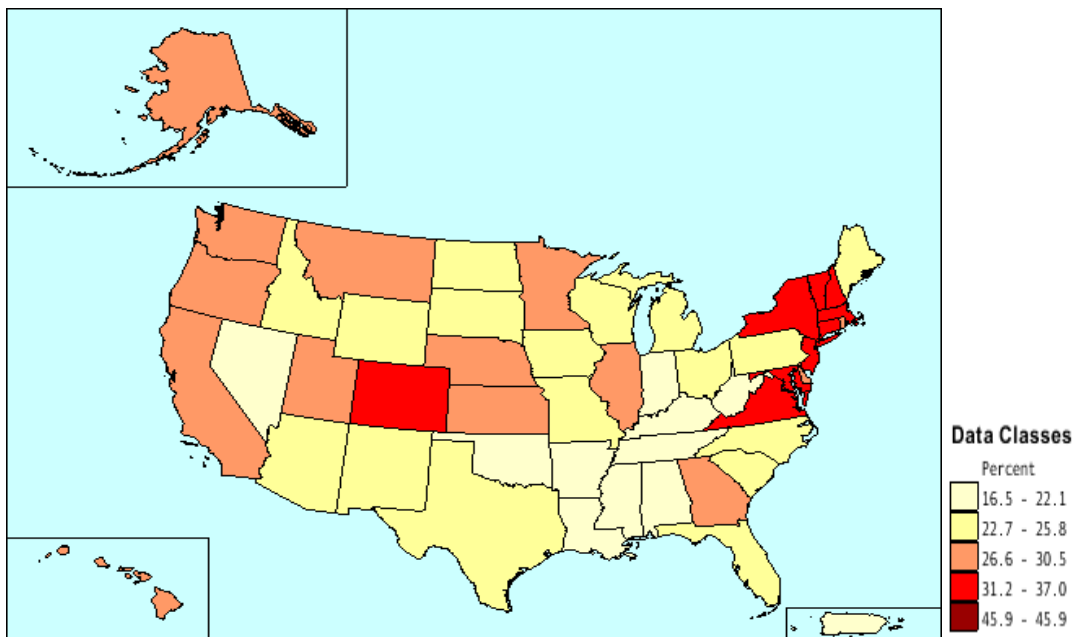
The strength of the far west is seen again in the next chart that reports state per capita GDP for 2006. As someone once said: Go west, young man..., and young woman.



## The human capital story

Part of the variation in state per capita GDP is explained by brains. What percent of the adult population has a bachelor's degree? The next chart reports the state data. Notice the common patterns in the two charts.





## Percent of above 25 population with a bachelor's degree, 2006

### Mapping education levels and per capita GDP.

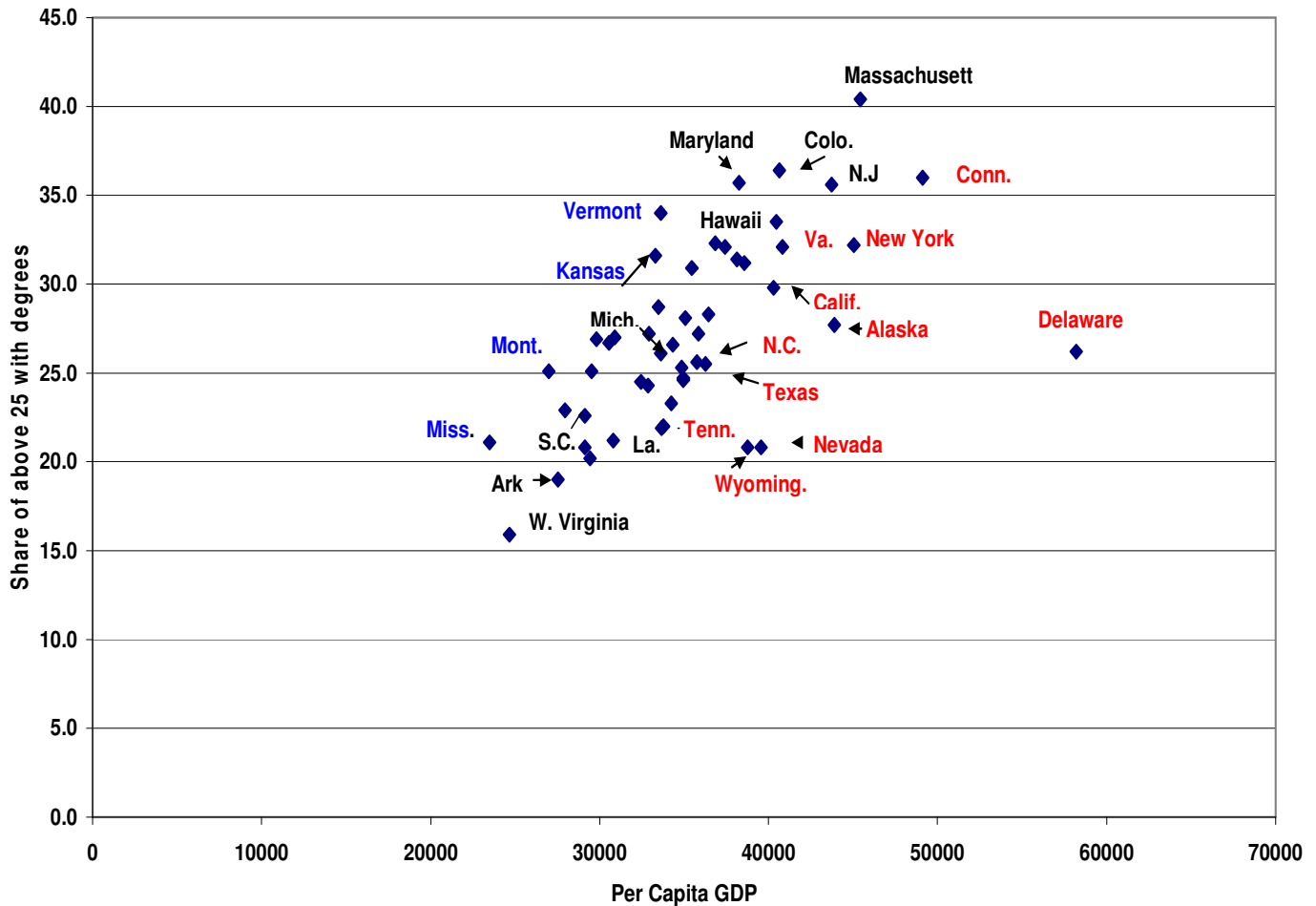
In the next chart, I have mapped the data for bachelor's degrees into the data for state per capita GDP. The states that show higher GDP relative to their education attainment peers are colored red. These states lie on the eastern boundary of the chart. The peers are at roughly the same horizontal level. The red states have highest per capita GDP given the level of bachelor's degree attainment. In almost every case, one can identify specialized factors that may explain the higher GDP levels: Wyoming's coal production, Nevada's gambling specialization, Tennessee and TVA-inspired industries, financial institutions and Delaware, New York's financial center leadership and Connecticut's New York bedroom connection.

But then there is North Carolina, which deserves special study. North Carolina's first mover recognition of the emerging knowledge economy with the opening of the Research Triangle may explain the unusually strong standing in the chart.

There are also some internal states to wonder about. These are states on the same horizontal level near the western border of the chart that have not performed relatively well in GDP production. Colored blue, they include Mississippi, Montana, Kansas, and Vermont.

Invariably, however, the tendency remains the same: A development strategy can be thought of as actions taken that add to the brains in a state and then employ the brains in wealth-producing activities. More brains, more GDP, provided the brains get connected.

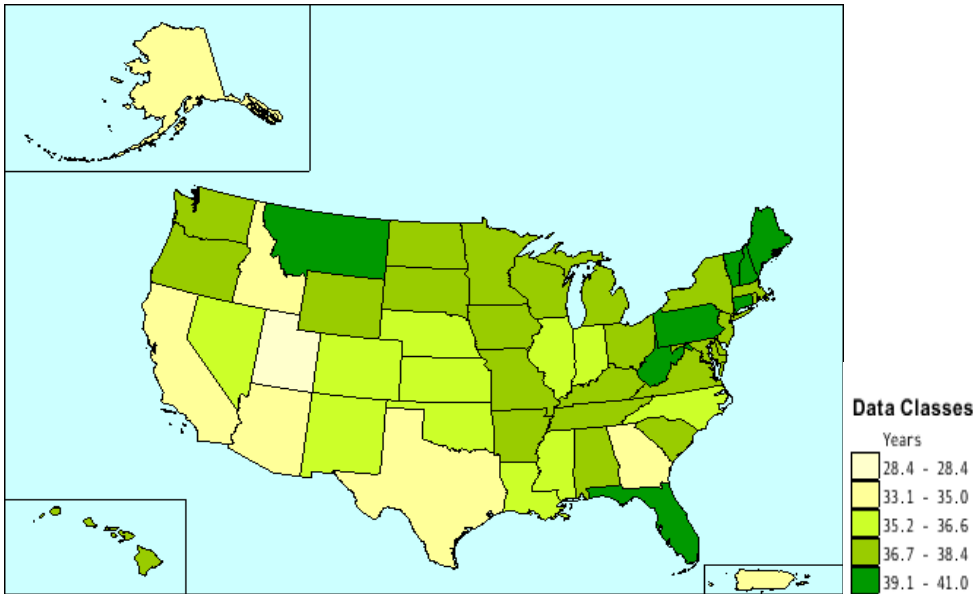
## Bachelor's Degrees & Per Capita GDP, 2006



### What about median age? Does the average age of workers matter?

Of course, investment in brains matters, but so does the age of a state's population. Clearly, a state with a larger share of younger workers will tend to have a higher level of GDP production than a state that has a larger retirement population. The next chart reports the median age data. In the Southeast, South Carolina, Alabama, Tennessee and Florida rank in the higher second median age tier. Georgia, Texas, and California—three states with larger immigrant populations and higher per capita GDP—rank in a lower tier.

## Median Age, 2006

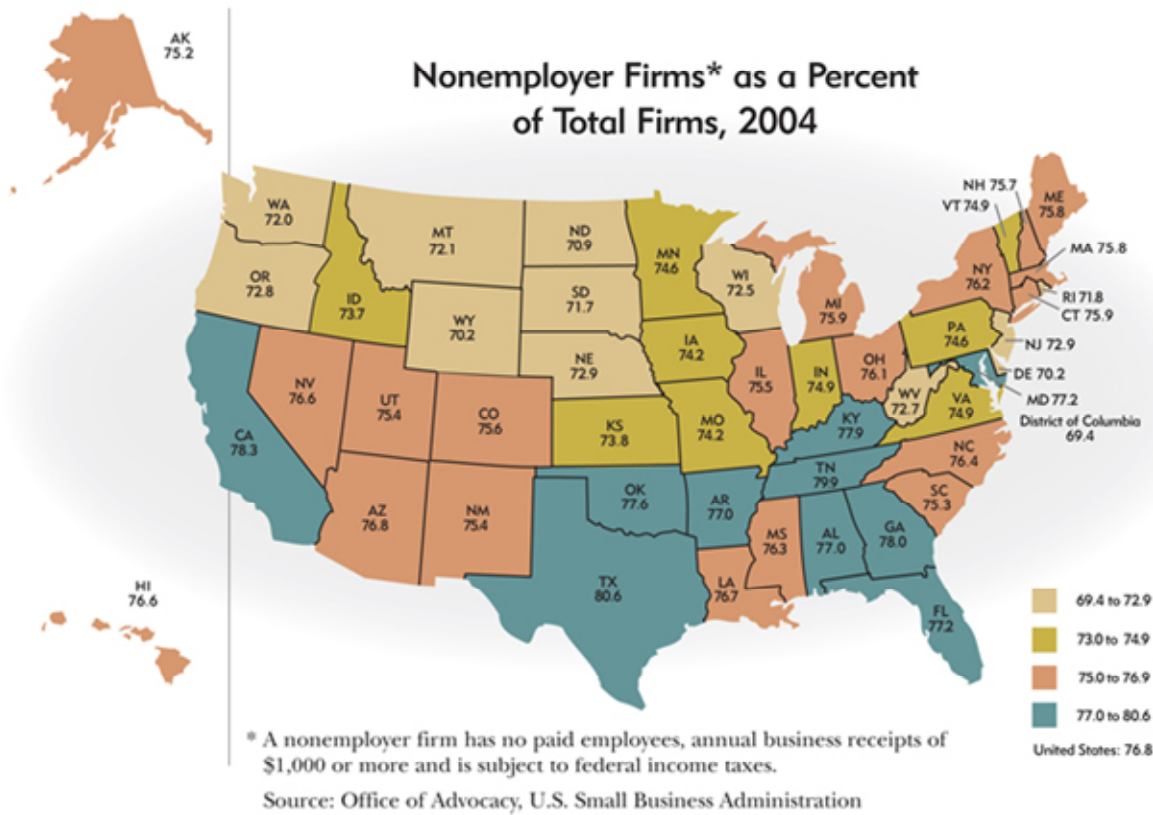


### More on the new knowledge economy.

The new knowledge economy is characterized by smaller, more specialized operations. In the American industrial revolution that arrived in the early 1900s, manufacturing plants were large and highly integrated. Logs, wool, iron ore, and sand rolled in the back door, and finished automobiles rolled out the front door. With larger markets, came greater specialization, and with the knowledge revolution came disintegration. Today, seats, dashboards, electronic systems, engine assemblies and body components roll in the back door. New automobiles roll out the front door..., just as before.

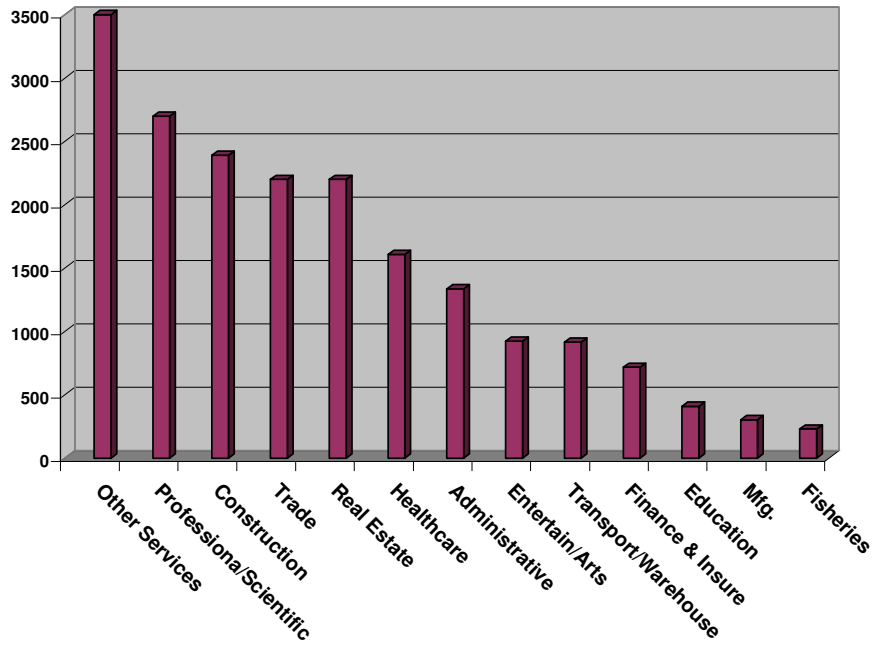
For example, we now call a community of component producers and an assembly operation an automotive cluster, a new handle for a disintegrated industry. Somehow cluster sounds better than a disintegrated industry, doesn't it?

The knowledge economy has delivered another dominant business type that few seem to recognize. The nonemployer firm, discussed in my last Report, is one that has no employees. In 2004, there were 19.5 million such firms in the United States with aggregate annual sales of \$883 billion. This is up from 17.2 million firms and sales of \$770 billion in 2002. Notice the data in the next map. More than 70% of U.S. firms today have no employees. Yet they account for huge amounts of economic activity.



What do these nonemployer firms do? The bar chart here gives the data for the nation. I call particular attention to the share accounted for by technical and professional services. These are the entrepreneurial engines of the new knowledge economy.

**U.S. Nonemployer Firm Sector Employment, 2004**  
(Thousands)



**Just-in-time in spades.**

Supply chain management is another icon of the new economy. Logistics has taken on renewed importance since the sharp 2000-2002 manufacturing recession. Accelerated use of advanced information technology, coordinated warehousing, and efficient transportation yields a powerful result seen in inventory-sales ratios. As reported in the next chart, the ratio is resting at an all-time low point. On-premises storage of component parts and finished goods is becoming a thing of the past as the inventory-carry burden is shifted back into the supply chain. Trucks and rail cars will become the ultimate warehouses as the ratio approaches a value of one dollar in inventory for each dollar of sales. It can't get much smaller than that.

**Total Business Inventories/Sales Ratios: 1998 to 2007**  
(Data adjusted for seasonal, holiday and trading-day differences but not for price changes)



## Report card time.

In December each year, I make a single shot forecast for key economic data for end of December of the next year. Now this is risky business. One shot is all I get. It takes a good sense of humor to do it this way. I provide below the end of December 2007 forecast I made in December 2006. Since I am writing this newsletter in the first week of December 2007, I do not know what the final numbers will be. But I do not know the values for December 1, so I report those now in red.

I provide my preliminary 2008 forecast in green. A final forecast will be generated in a couple of weeks when more December data are available.

	Actual 12/31/06	Forecast 12/31/07	12/1/07	Forecast 12/08
Real GDP Growth	3.2%	2.5%	2.7%	2.3%
CPI Inflation	2.6%	2.5%	3.5%	2.5%
30-yr. Mortgage	5.82%	6.0%	5.69%	6.20%
Unemploy Rate	4.5%	4.0%	4.7%	4.8%
Prime	8.25%	7.75%	7.50%	7.00%
Dow	12,460	13,200	13,371	14,200
Employ Growth	150M	175M	130M	125M
Oil	\$58	\$45	\$88	\$70
Gold	\$510	\$600	\$789	\$700

As indicated, I won't get an accuracy loving cup for this year's forecast. GDP, the Prime, and the Dow are the only three items that came in close. Overall, the 2007 economy has been heavier with inflation than I expected last December, and now with 90% of the world's crude oil controlled by governments, there is little room for making sense of what happened to the oil and gold numbers.

The green data show my current forecast expectations for December 2008. As explained earlier in this Outlook, I expect to see slower GDP growth and lower inflation. I also expect to see mortgage markets to be functioning again with higher rates driven by adjustments to the sub-prime problem. With slower GDP growth comes higher unemployment and a lower Prime. Yet ever optimistic, I expect the Dow to be looking ahead to ever better days.

I will give my final data in a special January newsletter.

## Life in these United States.

And now for the miscellaneous department, Wordpress.com has developed a new U.S. map that substitutes countries for states on the basis of similar GDP levels. The result here helps one appreciate just how massive the U.S. GDP is relative to the rest of the world. The rendering also helps one appreciate the massive economic size of Texas and California.



### Final thoughts.

Now, I close with a thank you for those who have read my reports in 2007 and sent suggestions for improving them. It is a pleasure to comment on the Great American Bread Machine and in doing so to observe how markets and freedom working together generate wealth and order.

My best wishes for 2008. It will be a good year. Pass the word!