The Impact of the Great Recession on Total Employment and Unemployment Rates in the U.S.

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Introduction

The economic downturn of 2008-09 was so severe that it has become known as the *Great Recession* and by most accounts the subsequent recovery has been relatively slow. The most basic method of judging the severity of a recession and the success of a recovery is to look at labor market information. In particular, the unemployment rate and the number of jobs (total employment) are often used for this purpose. This poster presents data from the U.S. Bureau of Labor Statistics for 2007, 2009 and 2011 using maps to describe the recession and recovery at a national level as well as compare the effects across states.

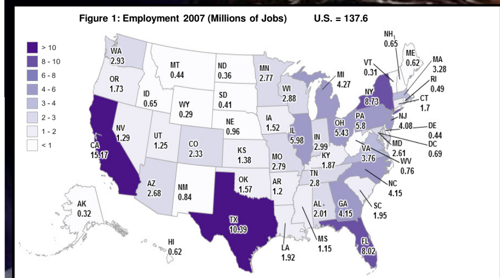

Figure 1: Employment 2007 (Millions of Jobs) U.S. = 137.6

Figure 1 shows the level of total employment measured in millions of jobs for each state in 2007 before the recession began. In the U.S. as a whole, there were 137.6 million jobs at this time ranging from a low of just under 300,000 in Wyoming to a high of over 15 million in California. The lighter colors show states with more jobs while the darker colors show states with fewer jobs. These employment numbers are dependent on a state's population, however knowing the initial level of employment before the recession is useful in interpreting the impact of the recession and subsequent recovery in terms of job losses and gains. The first row of Table 1 also presents this data for each state listed horizontally in alphabetical order.

Figure 2 shows the unemployment rate for each state in 2007. The overall unemployment rate in the U.S. was 4.6% at this time ranging from a low of 2.7% in both Hawaii and Utah to a high of 7.1% in Michigan. The lighter colors show states with lower unemployment while the darker colors show states with higher unemployment. Once again, knowing the initial level of unemployment in each state will help in interpreting the impact of the recession and subsequent recovery. The first row of Table 2 also presents this data for each state listed horizontally in alphabetical order.

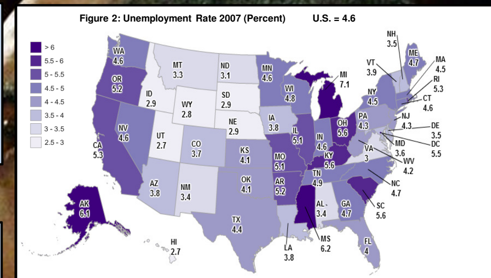

Figure 2: Unemployment Rate 2007 (Percent) U.S. = 4.6

Together, the total number of jobs and the unemployment rate are typically used to describe the labor market and measure the general health of the U.S economy. It is worth noting that as economic conditions change, the unemployment rate can actually increase even as employment is rising if the labor force is also expanding. The opposite is also true as the unemployment rate can fall while employment is declining if people are leaving the labor force. Overall, the maps presented in Figures 1 and 2 show a reasonably healthy economy across the U.S before the *Great Recession* hit.

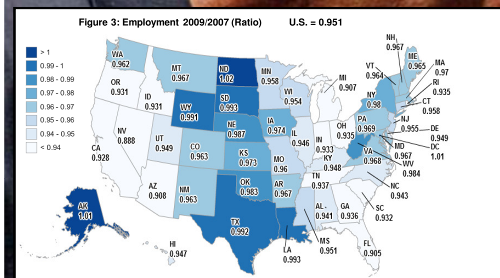

Figure 3: Employment 2009/2007 (Ratio) U.S. = 0.951

Figures 3 and 4 show the impact of the recession on the number of jobs and the unemployment rate in each state. The number presented for each state is the 2009/2007 ratio for employment in Figure 3 and the unemployment rate in Figure 4. In terms of employment, Nevada lost the most jobs between 2007 and 2009 sitting at 88.8% of their 2007 level. Florida, Michigan and Arizona were also hit hard with each state losing just under 10% of their employment compared to 2007. In contrast, North Dakota (2.1%), the District of Columbia (1.1%) and Alaska (0.9%) actually gained jobs over this period, while South Dakota, Louisiana, Texas and Wyoming each lost less than 1% of their jobs. To put this in perspective, the U.S. as a whole experienced a decline of 4.9% in employment over this period. In Figure 3, the lighter colors represent states where the recession hit the hardest and darker colors show the least affected states. The second row of Table 1 also shows these 2009/2007 employment ratios for each state listed horizontally in alphabetical order.

In terms of the unemployment rate, every state experienced increases between 2007 and 2009. This means that states with higher employment in 2009 (ND, DC, AK) all must have had increasing labor forces over the same period. Alaska (7.8% > 6.1%), North Dakota (4.3% > 3.1%) and Arkansas (7.4% > 5.2%) saw the smallest increases with 2009/2007 ratios of 1.28, 1.39, 1.42 respectively. On the other end of the spectrum, Alabama, Nevada, Idaho, Utah, Arizona, Florida and Hawaii all experienced increases in their unemployment rate to more than 2.5 times their 2007 levels. Alabama had the largest increase over this period nearly tripling from 3.4% to 9.7%. To put this in perspective, the U.S. unemployment rate more than doubled from 4.6% to 9.3%. North Dakota had the lowest unemployment in 2009 at 4.3% while Michigan had the highest at 13.3%. In Figure 4, the lighter areas represent where the recession had the least impact on unemployment while the darker areas show the states that were hit hardest . The second row of Table 2 also shows these 2009/2007 unemployment rate ratios for each state listed horizontally in alphabetical order.

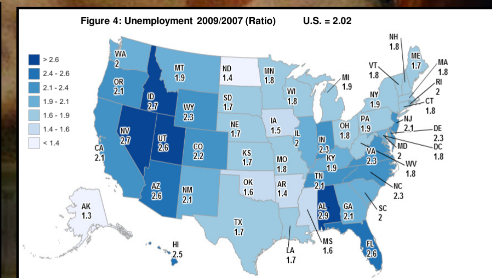

Figure 4: Unemployment 2009/2007 (Ratio) U.S. = 2.02

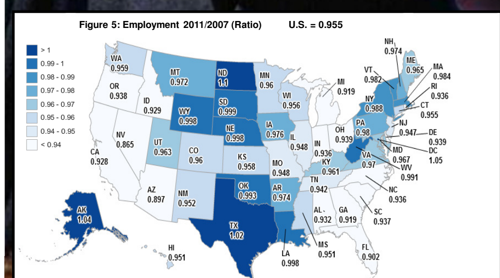

Figure 5: Employment 2011/2007 (Ratio) U.S. = 0.955

The data confirm that the recovery can be best described as slow and perhaps even non-existent. Figures 5 and 6 show the impact of the recovery from the recession on the number of jobs and the unemployment rate in each state. Specifically, the number presented for each state is the ratio of 2011 to 2007 for employment in Figure 5 and the unemployment rate in Figure 6.

In terms of employment, only four states (ND, DC, AK, TX,) had at least the same number of jobs in 2011 as before the recession in 2007, while another six states (SD, LA, WY, NE, OK and WV) had climbed to within 99% of their 2007 employment levels. On the other end of the spectrum, 19 states were still at less than 95% of their 2007 employment levels with Florida, Michigan and Georgia at less than 92% and Arizona both at less than 90% of their 2007 employment levels respectively. To put this in perspective, compared to 2007 the U.S as a whole inched from a 4.9% loss of jobs in 2009 to a 4.5% loss in 2011. The third row of Table 1 also shows these 2011/2007 employment ratios for each state listed horizontally in alphabetical order.

The unemployment rate also shows little to no recovery with every state having a higher unemployment rate in 2011 compared to 2007. North Dakota is the closest to their 2007 level of 3.1% with an unemployment rate of 3.4% in 2011 followed by Alaska with a 2011 unemployment rate of 7.5% compared to 6.1% in 2007. In contrast, the 2011 unemployment rate in 19 states remains at least twice as large as it was in 2007. In particular, Nevada, Alabama, Florida, and Utah are all at least 2.5 times their 2007 unemployment rates, while Idaho has an unemployment rate of more than three times their 2007 level. To put this in perspective, ten states have a 2011 unemployment rate of at least 10% with Nevada leading the way at 13%. Moreover, the overall unemployment rate for the U.S stands at 8.9%, nearly double the pre-recession level of 4.6%.

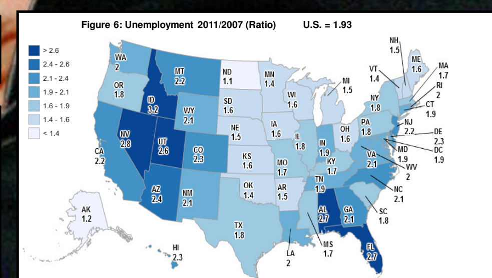

Figure 6: Unemployment 2011/2007 (Ratio) U.S. = 1.93

Conclusion

The U.S. economy lost approximately 6.8 million jobs between 2007 and 2009. In terms of an employment recovery, the U.S. economy is still 6.2 million jobs below pre-recession levels in 2007. Although there has been some recovery in terms of unemployment, on average the ten most populous states in the nation have a higher unemployment rate than the nation as a whole (9.7% > 8.9%). These data confirm that the recovery can be best described as slow and perhaps even non-existent. Overall, most of the good labor market news over this period has been associated with an expansion in oil and natural gas exploration and extraction which has been concentrated in a few states (ND, AK, TX, SD, LA and WY). In terms of the future, 2012 is a presidential election and thus we can expect to hear a lot of debate over jobs and the economic recovery or the lack thereof. Remember, IT'S THE ECONOMY STUPID!

Table 1: United States Total Employment by State 2007, 2009 and 2011

State	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
2007 (Mil)	2.01	0.32	2.68	1.20	15.17	2.33	1.70	0.44	0.69	8.02	4.15	0.62	0.65	5.98	2.99	1.52	1.38	1.87	1.92	0.62	2.61	3.28	4.27	2.77	1.15	2.79
2009/2007	0.941	1.01	0.908	0.967	0.928	0.963	0.958	0.949	1.01	0.905	0.936	0.947	0.931	0.946	0.933	0.974	0.973	0.948	0.993	0.965	0.967	0.970	0.907	0.958	0.951	0.960
2011/2007	0.932	1.04	0.897	0.974	0.928	0.960	0.955	0.939	1.05	0.902	0.919	0.951	0.929	0.948	0.936	0.976	0.958	0.961	0.998	0.965	0.967	0.984	0.919	0.960	0.951	0.948

State	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	US
2007 (Mil)	0.44	0.96	1.29	0.65	4.08	0.84	8.73	4.15	0.36	5.43	1.57	1.73	5.80	0.49	1.95	0.41	2.80	10.39	1.25	0.31	3.76	2.93	0.76	2.88	0.29	137.6
2009/2007	0.967	0.987	0.888	0.967	0.955	0.963	0.980	0.943	1.02	0.935	0.983	0.931	0.969	0.935	0.932	0.993	0.937	0.992	0.949	0.964	0.968	0.962	0.984	0.954	0.991	0.951
2011/2007	0.972	0.998	0.865	0.974	0.947	0.952	0.988	0.936	1.10	0.939	0.993	0.938	0.980	0.936	0.937	0.999	0.942	1.02	0.963	0.982	0.970	0.959	0.991	0.956	0.998	0.955

Table 2: United States Unemployment Rate by State: 2007, 2009 and 2011

State	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
2007 (%)	3.4	6.1	3.8	5.2	5.3	3.7	4.6	3.5	5.5	4.0	4.7	2.7	2.9	5.1	4.6	3.8	4.1	5.6	3.8	4.7	3.6	4.5	7.1	4.6	6.2	5.1
2009/2007	2.85	1.28	2.55	1.42	2.13	2.24	1.80	2.29	1.76	2.55	2.06	2.52	2.66	1.96	2.26	1.47	1.73	1.91	1.74	1.74	1.97	1.82	1.87	1.76	1.55	1.82
2011/2007	2.74	1.23	2.42	1.54	2.23	2.30	1.91	2.29	1.85	2.65	2.13	2.33	3.17	1.84	1.89	1.58	1.61	1.73	1.97	1.57	1.94	1.67	1.46	1.43	1.68	1.71

State	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	US
2007 (%)	3.3	2.9	4.6	3.5	4.3	3.4	4.5	4.7	3.1	5.6	4.1	5.2	4.3	5.3	5.6	2.9	4.9	4.4	2.7	3.9	3.0	4.6	4.2	4.8	2.8	4.6
2009/2007	1.91	1.66	2.72	1.80	2.12	2.06	1.87	2.30	1.39	1.80	1.61	2.13	1.86	2.04	2.02	1.72	2.12	1.73	2.63	1.77	2.27	2.02	1.83	1.81	2.32	2.02
2011/2007	2.24	1.45	2.83	1.49	2.16	2.09	1.78	2.13	1.10	1.57	1.44	1.83	1.81	2.04	1.82	1.59	1.94	1.84	2.63	1.41	2.07	1.98	2.00	1.56	2.11	1.93

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