

Using the Great Depression to forecast the recovery from the Great Recession

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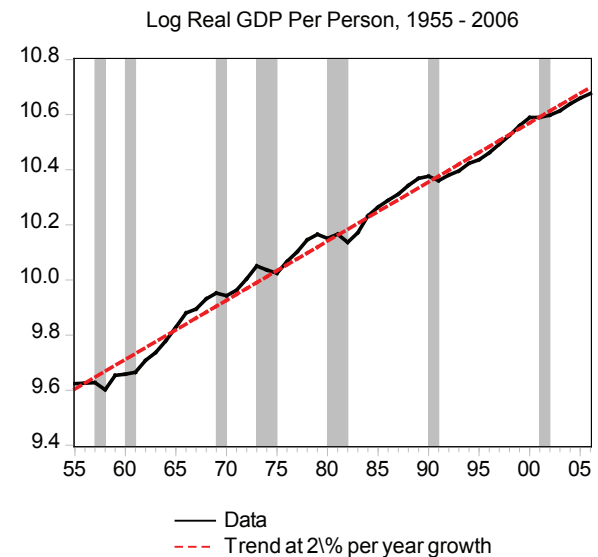
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US Economic History: 1955 - 2006
Real GDP Trend and Cycles

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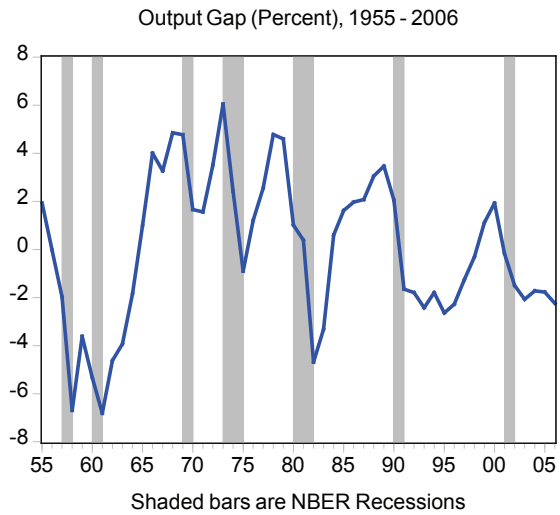
- This is not a typical recession. This is a recession induced by a financial crisis.
- Standard behavior of major macroeconomic variables over past 50 years have not held. This makes forecasting difficult.
- Last financial crisis in the US: Great Depression.
- Can we use experience of the Great Depression to help forecast:
 - Real GDP
 - Employment and Job Creation

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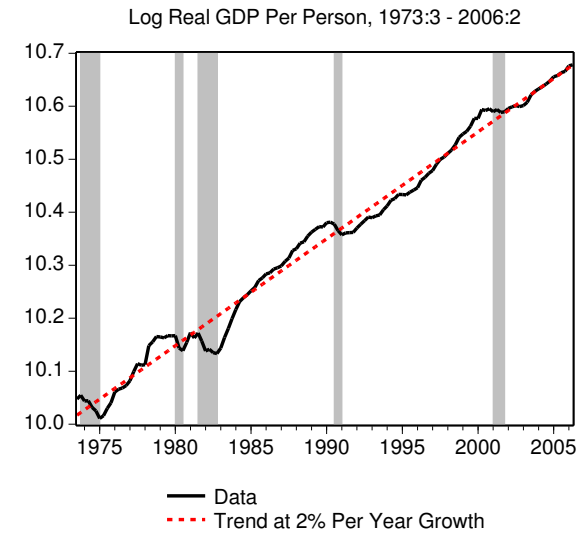


Fact 1: Trend rate of growth of per-capita real GDP 2% per year

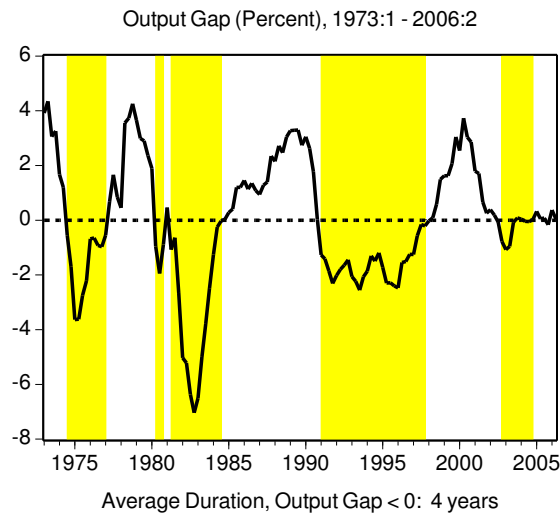
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Fact 2: Real GDP almost always within 5% of trend

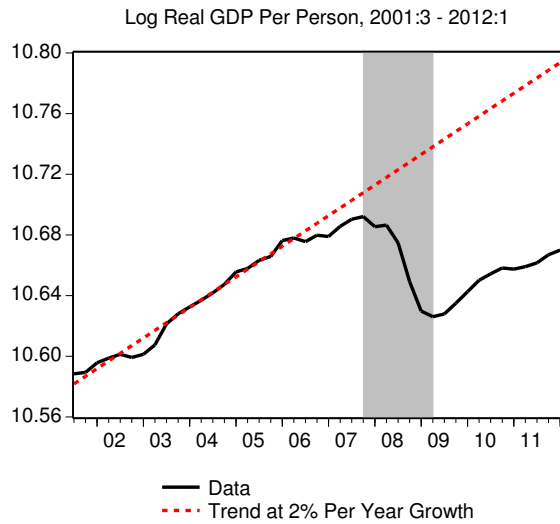


Data from 1973 - 2006 show an even tighter relationship

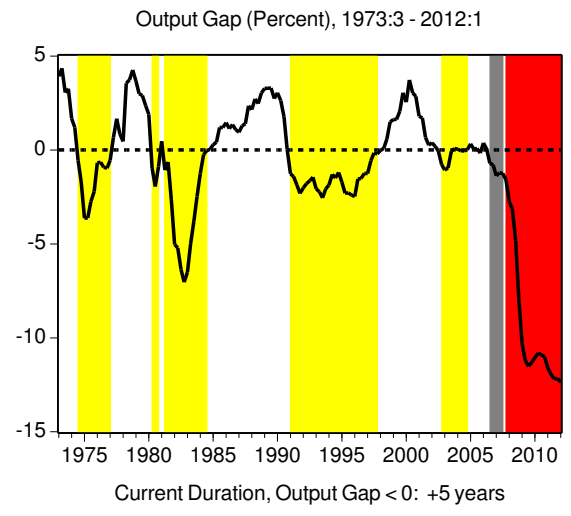


Since 1973, output has been below trend in 4 year periods

The Great Recession: 2007:Q4 - 2009:Q2

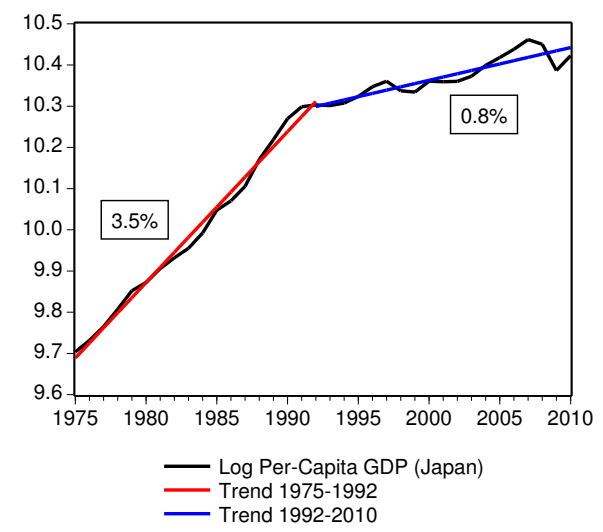


If trend has not changed ...

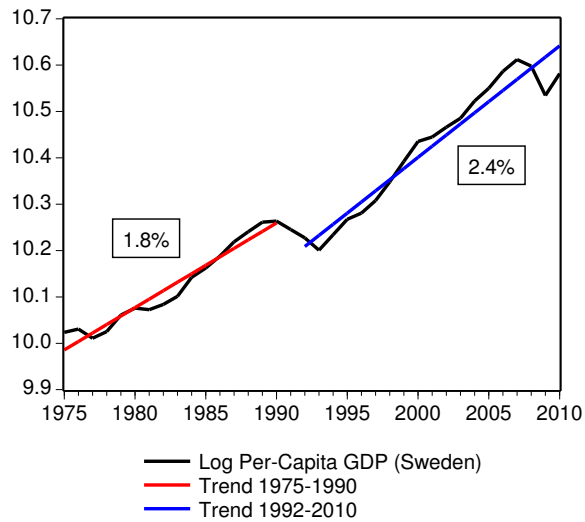


Then output has been below trend for 5 years and counting

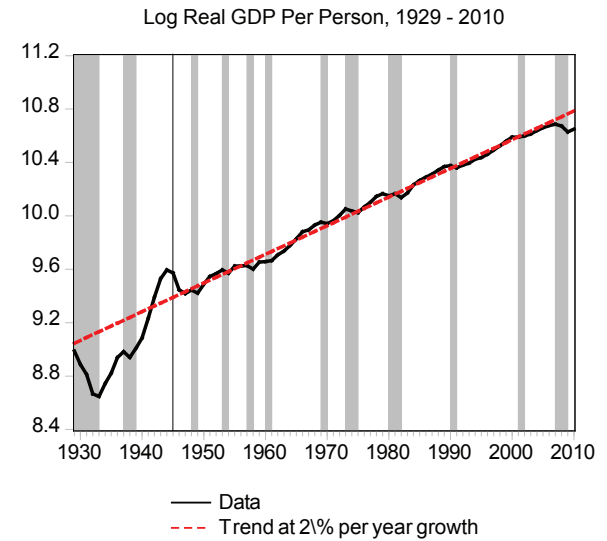
Does trend output change after a financial crisis?



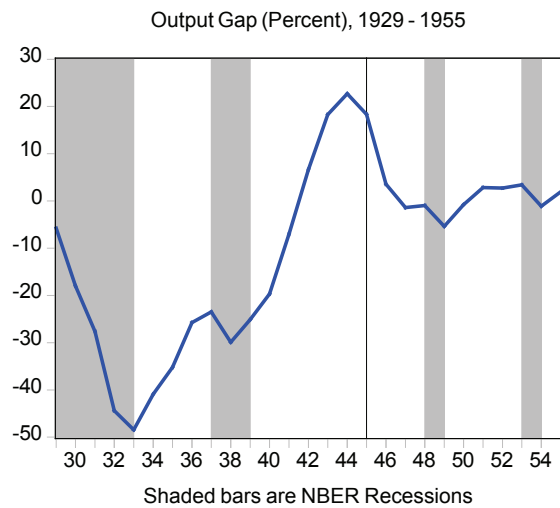
Japan 1990: No change in level, change in growth



Sweden 1990: Change in level, possible uptick in growth



US 1929: No change in level or trend



But output gap took 13 years to fully close

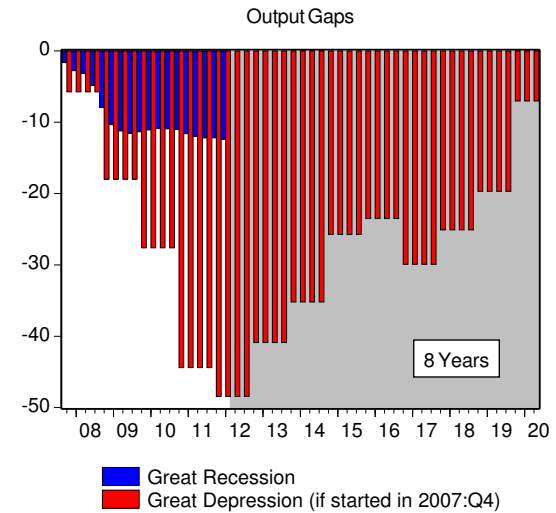
Is the output gap larger than 10 percent?
 Are we sure we are not the next Sweden?

No

The big debate is whether we are Sweden 1990 or US 1929

Suppose trend did not change and the output gap is > 10 percent

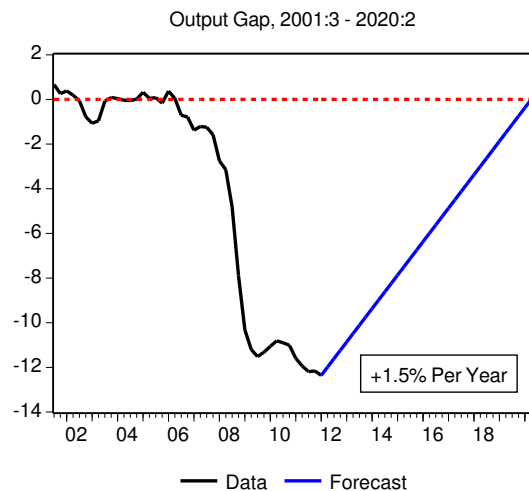
What will the recovery in GDP look like
If we repeat the recovery from the Great Depression?



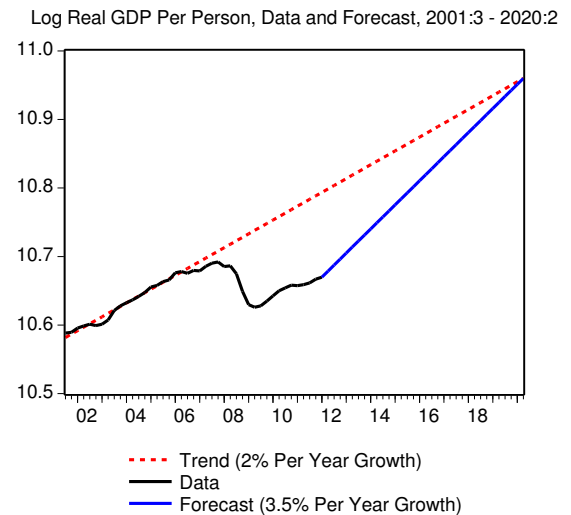
Notice output gap bottoms out right about now
Suggests a recovery period of 8-9 years (to mid-2020)

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How the output gap will behave if it closes in 8 years



Forecasted per capita real GDP if the output gap closes in 8 years

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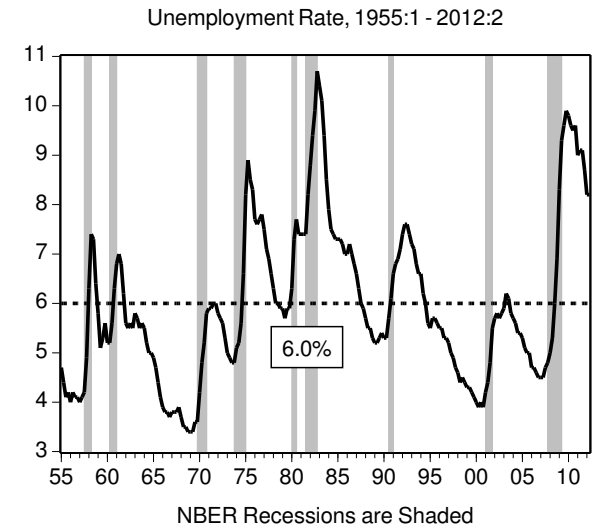
What are the implications for the unemployment rate and the number of people employed?

Some basic accounting

Start with	Census Population
subtract	Children under 16 and those in institutions
equals	BLS Population
subtract	People not working and not looking for work
equals	Labor Force
	= Unemployed + Employed

Unemployment Rate = Unemployed / Labor Force

Participation Rate = Labor Force / BLS Population



The average rate of unemployment has been 6%
No reason to think that has fundamentally changed



Not clear where the participation rate will wind up.

Consider two scenarios

1. 66% participation rate, 1% population growth
About 200K net new jobs per month for 8 years
2. 64% participation rate, 0.5% population growth
About 100K net new jobs per month for 8 years

Forecast 1: 66% Part Rate, 1% Pop growth

Year (Q4 except 2020)	2012	2013	2014	2015
Participation Rate	63.9	64.2	64.5	64.7
Unemployment Rate	8.1	7.8	7.5	7.2
Population (Mil.)	244	247	249	252
Labor Force (Mil.)	156	158	161	163
Unemployed (Mil.)	13	12	12	12
Employed (Mil.)	143	146	148	151
Monthly Net New Jobs (000s)		209	212	216

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Forecast 1: 66% Part Rate, 1% Pop growth

Year (Q4 except 2020)	2016	2017	2018	2019	2020
Participation Rate	65.0	65.3	65.6	65.9	66.0
Unemployment Rate	7.0	6.7	6.4	6.1	6.0
Population (Mil.)	254	257	259	262	263
Labor Force (Mil.)	165	168	170	172	174
Unemployed (Mil.)	12	11	11	11	10
Employed (Mil.)	154	156	159	162	163
Monthly Net New Jobs (000s)	219	223	226	230	

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Forecast 2: 64% Part Rate, 0.5% Pop growth

Year (Q4 except 2020)	2012	2013	2014	2015
Participation Rate	63.8	63.8	63.8	63.9
Unemployment Rate	8.1	7.8	7.5	7.2
Population (Mil.)	244	245	246	247
Labor Force (Mil.)	155	156	157	158
Unemployed (Mil.)	13	12	12	11
Employed (Mil.)	143	144	145	146
Monthly Net New Jobs (000s)		101	102	103

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Forecast 2: 64% Part Rate, 0.5% Pop growth

Year (Q4 except 2020)	2016	2017	2018	2019	2020
Participation Rate	63.9	63.9	64.0	64.0	64.0
Unemployment Rate	7.0	6.7	6.4	6.1	6.0
Population (Mil.)	248	250	251	252	253
Labor Force (Mil.)	159	160	161	161	162
Unemployed (Mil.)	11	11	10	10	10
Employed (Mil.)	148	149	150	151	152
Monthly Net New Jobs(000s)	104	104	105	106	

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Wisconsin MSAs

The next slides show some Wisconsin details.

	Average Unemp. Rate Dec-07 to May-12	Ratio of College Grad to HS Grad or Less
Madison	5.21	1.37
La Crosse	5.86	0.64
Oshkosh-Neenah	6.47	0.47
Eau Claire	6.48	0.48
Appleton	6.77	0.47
Green Bay	6.91	0.47
Fond du Lac	7.26	
Wausau	7.43	0.35
Sheboygan	7.46	0.35
Milwaukee	7.61	0.61
Racine	8.72	0.42
Janesville	9.74	0.30

Correlation of MSA-level unemployment and education: -70%

Employment Forecast 2012 - 2020

Year (Avg)	05-08	09-11	2012
Census Part. Rate	55.0	54.3	53.2
Unemp. Rate	4.8	8.2	6.8
Census Population (000s)	5594	5691	5753
Labor Force (000s)	3075	3087	3063
Unemployed (000s)	147	254	208
Employed (000s)	2928	2833	2854
Annual Net New Jobs (000s)	18	-35	21

Year (Avg)	2013	2014	2015	2016
Census Part. Rate	53.5	53.7	53.9	54.1
Unemp. Rate	6.6	6.4	6.1	5.9
Census Population (000s)	5794	5834	5875	5916
Labor Force (000s)	3097	3132	3167	3202
Unemployed (000s)	204	199	194	190
Employed (000s)	2893	2932	2972	3012
Annual Net New Jobs (000s)	39	39	40	40

Year (Avg)	2017	2018	2019	2020
Census Part. Rate	54.3	54.6	54.8	55.0
Unemp. Rate	5.7	5.5	5.3	5.0
Census Population (000s)	5958	5999	6041	6084
Labor Force (000s)	3238	3274	3310	3347
Unemployed (000s)	185	179	174	169
Employed (000s)	3053	3094	3136	3178
Annual Net New Jobs (000s)	41	41	42	42