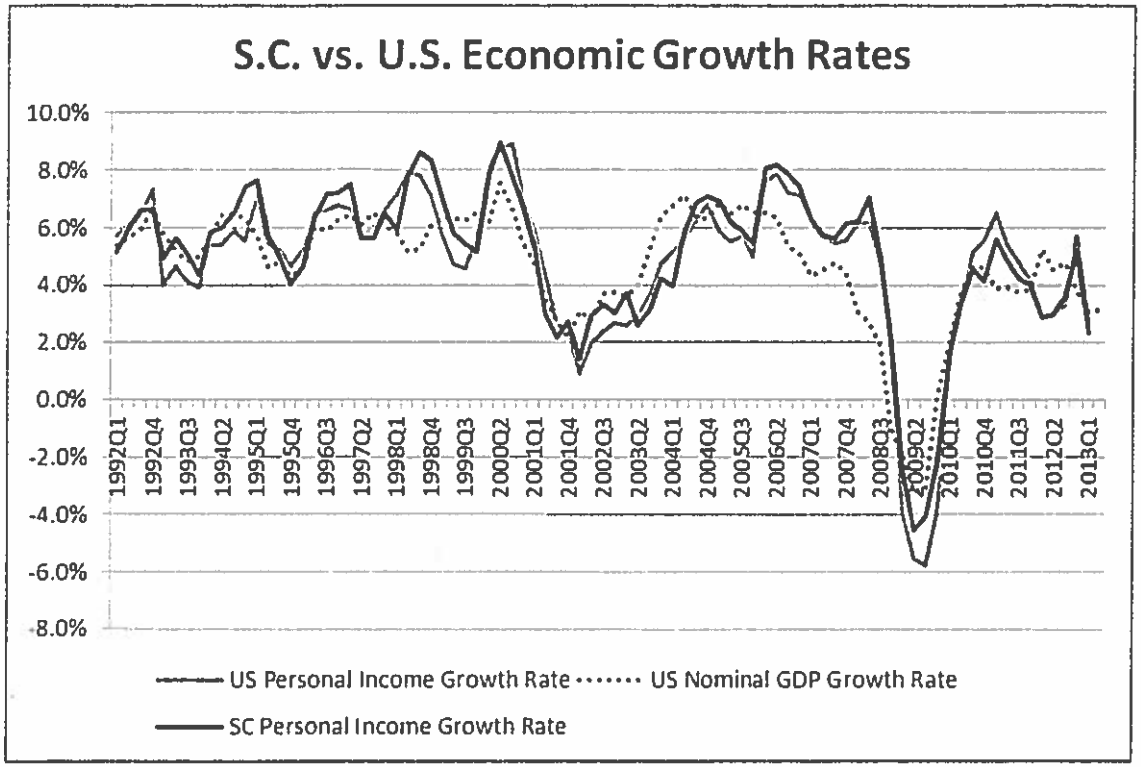
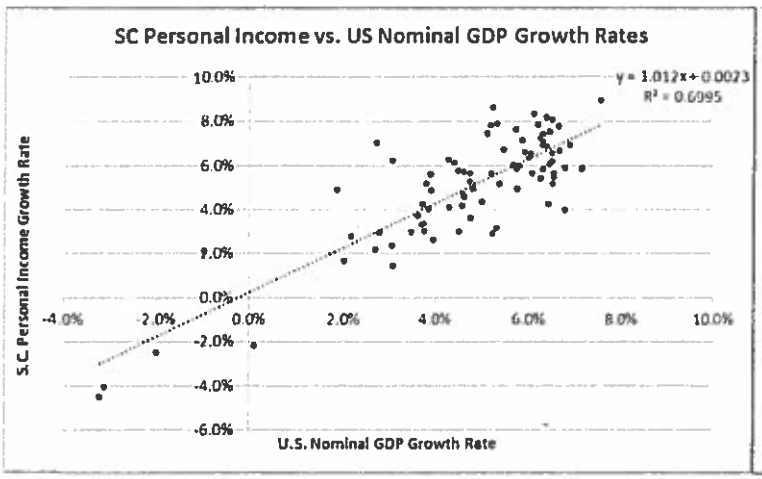
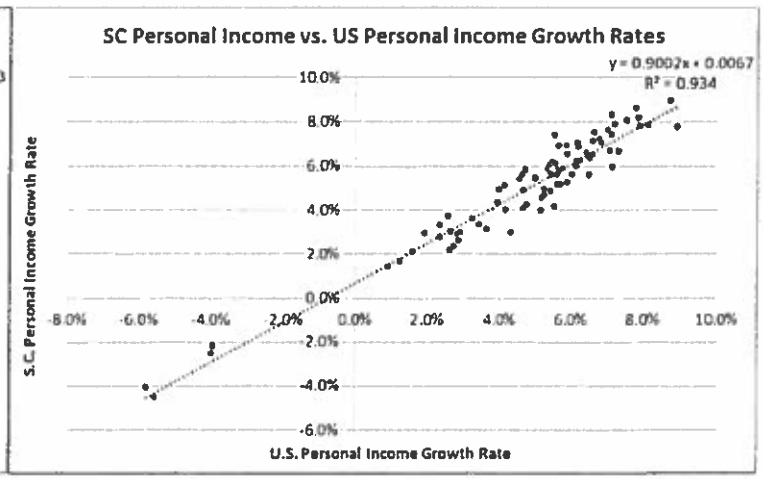
S.C. Personal Income Growth is Closely Tied to U.S. National Economy:







The elasticity of S.C. Personal Income with Respect to U.S. Nominal GDP is not significantly different from 1.0 using quarterly data (converted to annual changes vs. 4 quarters ago), from 1993 Q1 to present. I therefore assume that:

S.C. Personal Income Growth Rate ≈ U.S. Nominal GDP Growth Rate

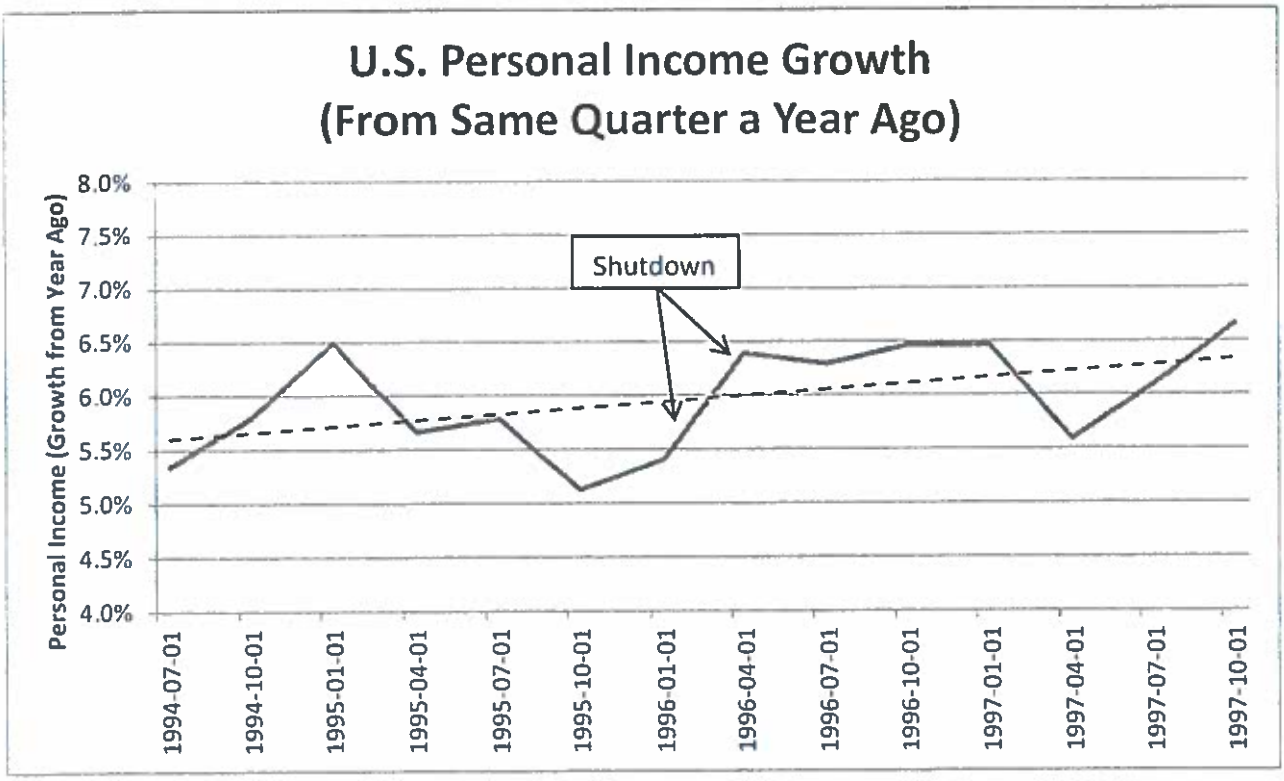
Addendum: Impact of Government Shutdown: *(October 1 - 17)*

"IHS, a global market research firm, estimates that its forecast for 2.2 percent annualized growth in the fourth quarter will be reduced 0.2 percentage point in a weeklong shutdown. A 21-day closing like the one in 1995-96 could cut growth by 0.9 to 1.4 percentage point, according to Guy LeBas, chief fixed income strategist at Janney Montgomery Scott LLC in Philadelphia."

"Bank of America Merrill Corp. projects that a two-week closing would curb fourth-quarter growth by 0.5 percentage point, while closing for all of October would shave 2 percentage points from GDP, Ethan Harris, co-head of global economics research, wrote in a note to clients."

Source: "Shutdown Will Cost U.S. Economy $300 Million a Day, IHS Says," by Jeanna Smialek & Ian Katz, Bloomberg, Oct 1, 2013 [http://www.bloomberg.com/news/2013-10-01/shutdown-would-cost-u-s-economy-300-million-a-day-ihs-says.html], accessed October 4, 2013

BUT . . . WHERE'S THE EVIDENCE?



Shutdown: Nov 14, 1995 - Nov 19, 1995 and Dec 16, 1995 - Jan 6, 1996
(total shutdown over three weeks in Q4 1995 and Q1 1996)
Estimated $3.7 billion in federal spending impacted

I'm not adjusting my estimates (which were based on pre-shutdown forecasts).

Reasons for little to no impact of shutdowns on personal income growth:

Federal employees paid (retroactively) anyway (and consume leisure during shutdown, like golf)
Items like "fines not collected" aren't lost to the economy, just private instead of govt. spending

Summary of Major Economic Forecasts:

1. IMF World Economic Outlook (September 19, 2013 Update)[1]

	World Output Growth	*U.S. Real GDP Growth*	*U.S. Inflation*	*U.S. Nominal GDP*
2013:	3.1%	1.7%	1.8%	3.5%
2014:	3.8%	2.7%	1.7%	4.4%
Long Term (through 2018) for inflation only:			2.3%	

Averaging these two gives 1.75% for **FY2013-14**

Long term for **FY2014-15** between 1.7 and 2.3 |so 2.0%?)

Averaging these two gives 3.95% for **FY2013-14**, and implies 4.85% for end of 2014 (beginning of **FY2014-2015**)

2. Federal Reserve Bank of Philadelphia's Livingston Survey (June 2013)[2]

	U.S. Real GDP Growth Rate	*U.S. Nominal GDP Growth Rate*
2013Q2 to 2013Q4:	2.3%	4.2%
2013Q4 to 2014Q2:	2.8%	4.6%
Annual 2012 to 2013:	1.9%	3.4%
Annual 2013 to 2014:	2.6%	4.5%
Long Term (Next 10 Years):	2.6%	5.1%

2013Q3 to 2014Q2 is **FY2013-2014**, the average of these two is 4.4%

FY2014-2015, roughly in the range 4.5% to 5.1% (4.8%?)

Unemployment Rate

December 2013: 7.4%
June 2014: 7.2%
Annual 2013: 7.5%
Annual 2014: 7.1%

CPI Inflation Rate

June 2013 to Dec 2013: 2.1%
Dec 2013 to June 2014: 2.1%

June 2013 to June 2014 is roughly **FY2013-2014**, the average of these two is 2.1%

Annual 2012 to 2013: 1.5%
Annual 2013 to 2014: 2.0%
Long Term (Next 10 Years): 2.5%

Looking out into **FY2014-2015**, inflation average 2.25%

---

[1] See http://www.imf.org/external/pubs/ft/weo/2013/01/pdf/text.pdf and http://www.imf.org/external/country/USA/index.htm, accessed September 23, 2013.

[2] See http://www.phil.frb.org/research-and-data/real-time-center/livingston-survey/, accessed September 23, 2013.

3. Survey of Professional Forecasters (Third Quarter 2013 released August 16, 2013)[3]

	Real GDP%	*Nominal GDP%*	*Unemployment Rate*	*Employment Growth%*
Quarterly data:				
2013:Q3	2.2%	3.8%	7.4%	1.5%
2013:Q4	2.3%	4.2%	7.3%	1.6%
2014:Q1	2.7%	4.3%	7.2%	1.5%
2014:Q2	2.9%	4.5%	7.1%	1.6%
2014:Q3	2.9%	5.0%	7.0%	1.6%
Annual data (based on annual average levels):				
2013	1.5%	3.0%	7.5%	1.6%
2014	2.6%	4.3%	7.1%	1.6%
2015	2.9%	N.A.	6.6%	N.A.
2016	2.5%	N.A.	6.1%	N.A.

2013Q3 to 2014Q2 is **FY2013-2014**, the average of these four is 4.2%, **FY2014-15** begins 5.0% for 2014Q3

2013Q3 to 2014Q2 is **FY2013-2014**, the average of these four is 1.55%, and then 1.6% beginning **FY2014-15**

Probability of Negative Real GDP Growth by Quarter:

2013:Q3	10.5%
2013:Q4	11.2%
2014:Q1	11.7%
2014:Q2	11.5%
2014:Q3	11.8%

The chance of a negative quarter of GDP growth during FY2013-14 (2013Q3 to 2014Q2) averages 11.225%, and looks pretty similar starting the first quarter of FY2014-15 *(note these are half of last year's 21% chance)*

U.S. Inflation Rate (CPI):

Quarterly Data

2013:Q3	2.0%
2013:Q4	1.7%
2014:Q1	1.8%
2014:Q2	1.9%
2014:Q3	2.1%

2013Q3 to 2014Q2 is **FY2013-2014**, the average of these four is 1.75%

Q4/Q4 Annual Averages

2013	1.4%
2014	2.0%
2015	2.2%

2014Q3 into 2015 is **FY2014-2015**, the average of these two is 2.15%

Long-Term Annual Averages

2013–17	2.1%
2013–22	2.2%

[3] See: http://www.phil.frb.org/research-and-data/real-time-center/survey-of-professional-forecasters/, accessed September 23, 2013.

Summary of Forecast Data:

Economic Estimates:

	FY 2013-2014			FY 2014-2015		
	SC Personal Income Growth (=US Nominal GDP Growth)	CPI Inflation Rate	Employment Growth	SC Personal Income Growth (=US Nominal GDP Growth)	CPI Inflation Rate	Employment Growth
International Monetary Fund	3.95%	1.75%		4.85%	2.0% (1.7-2.3%?)	
Livingston Survey	4.4%	2.1%		4.8% (4.5-5.1%?)	2.25%	
Survey of Professional Forecasters	4.2%	1.75%	1.55%	5.0%	2.15%	1.6%
Average	4.18%	1.87%	1.55%	4.88% (4.78-4.98%?)	2.13% (2.03-2.23%?)	1.6%

Revenue Estimates:

	FY2013-2014	FY2014-2015
Sales Tax Revenue	3.7% (3.0%-4.4%?)	4.2% (3.6%-4.8%?)
Individual Income Tax Revenue	2.8%	4.0%
General Revenue	5.1% (4.7%-5.5%?)	5.55% (5.4%-5.7%?)
Using estimated elasticities per Sobel & Holcombe (1996) method. Some estimates were very sensitive to a few outliers, so estimated with and without them is what caused the range of estimates for some revenue variables (number above parenthesis is average of range).		

Caveats: Given the uncertainty present in the current economy (implementation of the Affordable Care Act, budget battles, Fed policy), the high level of federal government debt, increased size of government as a share of the economy, and the large stock of bank reserves from previous Fed monetary expansions, I personally remain more pessimistic about the economic future than these prevailing estimates. ***I think a significant economic slowdown accompanied by high inflation is in our economic future—a repeat of the 1970s—the only question is when it will occur.*** Clearly the forecasters whose estimates I have compiled, summarized, and merged into a single forecast are more optimistic than I remain. ***I strongly urge S.C. state government to continue to build & maintain sufficient reserves to handle such an event.***

Russell Sobel

South Carolina Board of Economic Advisors
Regional Advisory Committee
Economic Forecast Assumptions

What is your forecast growth rate for the following variables:

Variable	Actual FY2012-13	Most Recent	Current 2/ Forecast Rates FY2013-14	Forecast FY2013-14	Forecast FY2014-15
S.C. Personal Income 1/	2.7%	2.1%	3.0%	4.18	4.88
S.C. Employment	1.5%	1.7%	1.5%	1.55	1.60
Inflation Rate (CPI-U)	1.7%	1.5%	2.0%	1.87	2.13
Sales Tax	4.0%	4.4%	2.6%	3.7	4.2
Individual Income Tax 1/	8.4%	3.6%	0.7%	2.8	4.0

Notes: 1/ Growth rate affected by income accelerated from January 2013 into December 2012 ahead of "fiscal cliff" negotiations.
2/ Current forecast rates as of February 15, 2013.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis
U.S. Department of Labor, Bureau of Labor Statistics
S.C. Board of Economic Advisors

BEA/RWM/10/15/13

Issues to Consider

What are the significant/specific factors/sectors affecting personal income?
What are the significant/specific factors/sectors affecting employment?
What are the key risks you see over the next 20 months?
Are there any other key points that should be considered?