

The Economic Impact of the American Recovery and Reinvestment Plan on the Florida Economy: A Preliminary Analysis

Executive Summary

On February 17, 2009, President Obama signed the American Recovery and Reinvestment Plan (known as the economic stimulus program) into law. The approximately \$787 billion program, one of the largest federal programs in history, is designed to stimulate economic growth via a combination of federal appropriations (such as infrastructure and energy spending), direct federal expenditures (including expanded unemployment benefits), and tax breaks (such as the Making Work Pay initiative). Federal appropriations are anticipated to account for roughly 39 percent of the \$787 billion program, while direct spending and tax reductions are planned to represent 34 percent and 27 percent, respectively, of the program's total dollar amount.

The economic concepts behind the stimulus program are relatively straightforward. Federal appropriations induce businesses to expand employment, as well as working capital spending and capital expenditures. These spending increases ripple throughout the economy, further boosting jobs and incomes. In a slightly different fashion, direct federal spending and tax breaks stimulate consumer spending and saving/debt reduction. So-called multiplier effects resulting in expanded jobs and incomes also derive from direct federal spending and tax reductions.

Critical questions pertain to the size, timing, and distribution of the economic impacts of the stimulus program. In part, answers to these questions are buried in the more than 1,000 pages of the legislation. As more detailed and accurate data and information become available, more precise estimates can be determined and will be forthcoming. However, preliminary estimates are available and are summarized below.

According to research directed by Drs. Christina Romer, Chair of the President's Council of Economic Advisors, and Jared Bernstein, Chief Economist in the Office of the Vice President, the economic stimulus package of slightly over \$775 billion would, by the end of 2010, increase national real GDP by 3.70 percent, and either create or save 3,675,000 jobs nationwide.¹ White House estimates based on Romer and Bernstein's memo indicate that 218,300 of these jobs

¹ Christina Romer and Jared Bernstein, "The Job Impact of the American Recovery and Reinvestment Plan." January 9, 2009. Available at http://otrans.3cdi.net/ee40602f9a7d8172b8_ozm6bt5oi.pdf. Romer and Bernstein clearly note on page 2 that "...all of the estimates presented in this memo are subject to significant margins." of error The CEA thanks Dr. David Denslow for bringing the document to its attention.

would be in Florida.² Florida would rank fourth, behind California, Texas, and New York in the number of jobs created or saved.³

The Romer – Bernstein Analysis

Romer and Bernstein's analysis was conducted prior to the final version of the legislation being signed into law. The assumptions in their analysis, however, appear to be quite close to the broad outlines of the enacted legislation and seem to provide a reasonable assessment of the program's economic effects. And, while a range of measures was assumed for the stimulus plan they modeled, specific dollar amounts were not reported for each of the plan's five key components. These five key components are:

1. Substantial investments in infrastructure, education, health and energy.
2. Temporary programs to protect the most vulnerable from the deep recession.
3. State fiscal relief designed to alleviate cuts in healthcare, education, and prevent increases in state and local taxes.
4. Business investment incentives.
5. A middle class tax cut along the lines of the Making Work Pay proposal.

The Romer – Bernstein analysis appears to proceed as follows:

- The goal of the program is to create or save at least 3 million jobs by the end of 2010.
- Combinations of government spending increases and temporary tax reductions likely to create or save at least 3 million jobs and totaling roughly \$775 billion were assessed.
- The multiplier (impact on Real GDP) for an increase in government purchases was assumed to average about 1.40 over the eight quarters following enactment, with the multiplier rising from 1.05 in the first quarter to 1.57 by the eighth quarter. In contrast, the multiplier (impact on Real GDP) for tax reductions was assumed to average 0.66 over the coming eight quarters with the multiplier increasing from 0.00 in the first quarter to 0.99 in the eighth quarter.⁴
- Given the \$775 billion stimulus, its breakdown between increases in government purchases and tax cuts, and the associated multipliers Real GDP is forecasted to be about \$433 billion or 3.68 percent larger than without the stimulus.
- A rule of thumb that a 1 percent increase in Real GDP corresponds to an increase in payroll employment of approximately 1 million jobs, or roughly three-quarters of one percent, is then used to estimate the stimulus effect of creating or saving 3,675,000 jobs.

² "American Recovery and Reinvestment Plan: The Impact for Florida." Available at http://www.whitehouse.gov/assets/documents/White_House_Releases_additional_State/.pdf

³ The White House Press Office/The Briefing Room, "State-by-State Employment Data on Impact of American Recovery and Reinvestment Plan." February 3, 2009 @ 8:59 PM. Available at http://www.whitehouse.gov/the_press_office/state_by_state_employment_impact.

⁴ See Romer and Bernstein, Appendix 1.

Effects of Components on National Jobs by 2010Q4

Romer and Bernstein present estimates of the program's components on job creation or saving. These estimates which include both direct and indirect or induced job creation, adapted from their Table 2, are as follows:

<u>Stimulus Component</u>	<u>Total Jobs Effect</u>
Tax Reductions	975,000
Making Work Pay	505,000
Business Tax Incentives	470,000
State Fiscal Relief	821,000
Protecting Vulnerable	549,000
Government Investments	1,330,000
Energy	459,000
Infrastructure	377,000
Education	250,000
Health Care	244,000
Total	3,675,000

In total, about 40 percent of jobs created or saved are associated with direct effects of the stimulus plan, that is, either the creation or saving of jobs owing to increases in government purchases. Direct job creation is concentrated in the Government Investments component of the stimulus plan and, to a lesser extent, in the State Fiscal Relief element. Roughly 60 percent of jobs created or saved are caused by indirect or induced effects (i.e., jobs either created or saved as newly employed workers boost their spending and this increase in spending stimulates other industries). Indirect job creation arises primarily from the Tax Reduction component of the stimulus plan.

Note should also be taken of the program's State Relief component. Romer and Bernstein assume that 60 percent of transfers or grants to states will be used to prevent spending reductions; 30 percent will be used to avoid tax increases; and the remaining 10 percent will mitigate states dipping into rainy day funds.

National Job Creation by Industry

Romer and Bernstein note that estimates of job creation by industry are even more difficult than economy-wide ones. Their industry estimates are derived not only from their own calculations, but also from those of Moody's Economy.com Chief Economist Mark Zandi as reported in his November 28, 2008 analysis "the Economic Impact of a \$600 Billion Fiscal Stimulus Package." These estimates, adapted from Romer and Bernstein's Table 4, are presented below:

<u>Industry</u>	<u>Jobs Created in 2010Q4</u>	<u>Percent of Total</u>
Construction	678,000	18.45
Retail Trade	604,000	16.44
Leisure and Hospitality	499,000	13.58
Manufacturing – Total	408,000	11.10
Professional & Business Services	345,000	9.39
Government – Total	244,000	6.63
Education & Health Services	240,000	6.53
Financial Activities	214,000	5.82
Wholesale Trade	158,000	4.30
Other Services	99,000	2.69
Transportation & Warehousing	98,000	2.67
Information	50,000	1.36
Mining	26,000	0.71
Utilities	11,000	0.03
Total	3,675,000	100.00

Almost 60 percent of jobs expected to either be created or saved are in four industries: Construction, Retail Trade, Leisure, and Hospitality, and Manufacturing. The first three of these industries are, or were, especially large employers in Florida.

Economic Stimulus and the Florida Economy

A. Florida's Stimulus Estimated to be approximately \$27 Billion; Raise Real GDP by 2.09 percent; and Create 218,300 jobs

As noted above, the \$775 billion national stimulus program is estimated to either create or save 218,300 jobs in Florida by the fourth quarter of 2010. However, none of the reports or memos cited in this document provides any detail on either the derivation of this estimate or the size of the stimulus Florida is likely to receive. The best we can do at this time is some 'back-of-the-envelope' calculations and inferences based on the cited documents. These are as follows:

- 218,300 jobs represent an increase of 2.79 percent from the total nonagricultural employment of 7,805,600 as of November, 2008.
- Using the Romer – Bernstein rule of thumb that a 1 percent increase in Real GDP corresponds to about $\frac{3}{4}$ of one percent increase in employment, the stimulus plan will boost Florida's Real GDP (based on 2007 RGDP of \$609.899 billion) by 2.09 percent or \$12.80 billion.

- Using the Romer –Bernstein national estimate that \$775 billion of stimulus translates to a \$433 billion increase in Real GDP, the stimulus to Florida (in real/inflation adjusted 2000 dollars) will be roughly \$22.32 billion. In nominal – current dollars this implies Florida will receive roughly \$27 Billion in stimulus, or about 3.50 percent of the total.

B. Components of the Stimulus Plan for Florida

Again, in the absence of specific, detailed information, precise estimates of the stimulus plan's components for Florida cannot be made. However, insights can be obtained from the *American Recovery and Reinvestment Plan: The Impact for Florida* document. They are as follows:

- \$27.00 Billion: Total Stimulus for Florida.
- \$ 6.90 Billion: \$1,000 Make Work Pay tax cut for 6,890,000 Florida workers.
- \$ 5.00 Billion: Florida State Fiscal Relief (2008-09 & 2009-10 budget shortfalls).
- \$ 1.12 Billion: Additional and extended unemployment insurance benefits.
- \$14.00 Billion: Federal government investments/purchases for energy, infrastructure, health care, education.

C. Industry Job Creation for Florida

Florida's industry composition differs from the national one, and the recession in Florida is, in the aggregate, more severe. For example, the downturn in residential construction has been considerably more severe in Florida than in most of the rest of the nation, while the falloff in manufacturing has been less severe. Moreover, the estimated \$14 billion of Federal government investments may be allocated differently in Florida than the rest of the nation. Industry job creation estimates for Florida are, therefore, subject to especially wide margins of error. If the percentage increase in jobs created in Florida by industry is roughly the same as nationally, then by the end of 2010 Florida job increases by industry should be as follows:

<u>Industry</u>	<u>Jobs Created in 2010Q4</u>	<u>Percent Increase</u>
Construction	40,000	8.23
Retail Trade	36,000	3.73
Leisure and Hospitality	30,000	3.29
Manufacturing – Total	24,000	6.74
Professional & Business Services	20,500	1.61
Government – Total	14,500	1.27
Education & Health Services	14,000	1.34
Financial Activities	12,700	2.43
Wholesale Trade	9,400	2.63
Other Services	5,900	1.72
Transportation/Warehousing & Utilities	5,900	2.50
Information	3,000	1.95
Mining	NA	NA
Total	218,300	

This Florida TaxWatch *Special Report* was written by **Stephen Morrell, Ph.D.**, Chair of the ***Florida Council of Economic Advisors at Florida TaxWatch*** and Executive Director of the Center for Competitive Florida, with input from the members of the ***Florida Council of Economic Advisors at Florida TaxWatch***, under the direction of **Dominic M. Calabro, President and CEO.**

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