

**ECONOMIC MODELS AVAILABLE TO THE
JOINT COMMITTEE ON TAXATION FOR
ANALYZING TAX REFORM PROPOSALS**

HEARING
BEFORE THE
COMMITTEE ON WAYS AND MEANS
U.S. HOUSE OF REPRESENTATIVES
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**ECONOMIC MODELS AVAILABLE TO THE
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WEDNESDAY, SEPTEMBER 21, 2011

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON WAYS AND MEANS,
Washington, DC.

The Committee met, pursuant to notice, at 10:06 a.m., in Room 1100, Longworth House Office Building, Hon. Dave Camp (Chairman of the Committee) presiding.

[The advisory announcing the hearing follows:]

ADVISORY

FROM THE COMMITTEE ON WAYS AND MEANS

Wednesday, September 21, 2011

Chairman Camp Announces Hearing on Economic Models Available to the Joint Committee on Taxation for Analyzing Tax Reform Proposals

Congressman Dave Camp (R-MI), Chairman of the Committee on Ways and Means, today announced that the Committee will hold a hearing to review and examine the variety of economic models used by the Joint Committee on Taxation (JCT) to analyze and score tax reform legislation. In particular, the Committee will review the tools available to the JCT that would enable it to measure the effect of proposals on economic growth and job creation as well as the effect on revenue levels. The Committee last reviewed this topic at a hearing in 2002, so this hearing will not only examine changes in economic thinking and the Joint Committee's capabilities since then, but also review the extent to which the current economic climate poses new challenges to this analysis. **The hearing will take place on Wednesday, September 21, 2011, in Room 1100 of the Longworth House Office Building, beginning at 10:00 a.m.**

In view of the limited time available to hear witnesses, oral testimony at this hearing will be from invited witnesses only. However, any individual or organization not scheduled for an oral appearance may submit a written statement for consideration by the Committee and for inclusion in the printed record of the hearing. A list of invited witnesses will follow.

BACKGROUND:

JCT serves a critical role in the legislative process by providing expert and impartial analysis of the potential effect of proposals to change U.S. tax policy. Under current practice, the analytical methods used by JCT do not take into account the potential effects of statutory tax changes on economic growth. For most of the proposals analyzed by JCT, this practice is appropriate because the proposed changes would not be large enough to have a material impact on an economy as large as that of the United States. However, JCT has worked to develop the capacity to conduct macroeconomic modeling of significant changes to U.S. tax policy. Comprehensive tax reform by its very nature constitutes a significant change in U.S. tax policy and has the potential to significantly boost economic growth and job creation. The hearing will review the current status and capabilities of JCT's macroeconomic analysis and how it can be used to measure accurately the impact of comprehensive reform on economic growth and job creation.

In announcing this hearing, Chairman Camp said, **"A wide array of economists and business leaders have testified before the Ways and Means Committee that comprehensive tax reform that lowers rates by broadening the tax base will promote economic growth and job creation. This hearing will examine the importance of ensuring that Congress can accurately measure the broad economic impact of comprehensive tax reform."**

FOCUS OF THE HEARING:

The hearing will review JCT's revenue estimating methodologies and its ability to analyze the impact on economic growth and job creation of comprehensive tax reform proposals.

DETAILS FOR SUBMISSION OF WRITTEN COMMENTS:

Please Note: Any person(s) and/or organization(s) wishing to submit written comments for the hearing record must follow the appropriate link on the hearing page of the Committee website and complete the informational forms. From the Committee homepage, <http://waysandmeans.house.gov>, select “Hearings.” Select the hearing for which you would like to submit, and click on the link entitled, “*Click here to provide a submission for the record.*” Once you have followed the online instructions, submit all requested information. **ATTACH** your submission as a Word document, in compliance with the formatting requirements listed below, **by the close of business on Wednesday, October 5, 2011.** Finally, please note that due to the change in House mail policy, the U.S. Capitol Police will refuse sealed-package deliveries to all House Office Buildings. For questions, or if you encounter technical problems, please call (202) 225–3625 or (202) 225–2610.

FORMATTING REQUIREMENTS:

The Committee relies on electronic submissions for printing the official hearing record. As always, submissions will be included in the record according to the discretion of the Committee. The Committee will not alter the content of your submission, but we reserve the right to format it according to our guidelines. Any submission provided to the Committee by a witness, any supplementary materials submitted for the printed record, and any written comments in response to a request for written comments must conform to the guidelines listed below. Any submission or supplementary item not in compliance with these guidelines will not be printed, but will be maintained in the Committee files for review and use by the Committee.

1. All submissions and supplementary materials must be provided in Word or WordPerfect format and **MUST NOT** exceed a total of 10 pages, including attachments. Witnesses and submitters are advised that the Committee relies on electronic submissions for printing the official hearing record.

2. Copies of whole documents submitted as exhibit material will not be accepted for printing. Instead, exhibit material should be referenced and quoted or paraphrased. All exhibit material not meeting these specifications will be maintained in the Committee files for review and use by the Committee.

3. All submissions must include a list of all clients, persons, and/or organizations on whose behalf the witness appears. A supplemental sheet must accompany each submission listing the name, company, address, telephone, and fax numbers of each witness.

Note: All Committee advisories and news releases are available on the World Wide Web at <http://www.waysandmeans.house.gov>.

The Committee seeks to make its facilities accessible to persons with disabilities. If you are in need of special accommodations, please call 202–225–1721 or 202–226–3411 TTD/TTY in advance of the event (four business days notice is requested). Questions with regard to special accommodation needs in general (including availability of Committee materials in alternative formats) may be directed to the Committee as noted above.

Chairman CAMP. Good morning. Thank you for joining us for the latest in our continued series of hearings on comprehensive tax reform.

Over the last several months, as we discussed the various facets and complexities associated with comprehensive tax reform, a wide array of economists and business leaders have testified before this Committee that comprehensive tax reform that lowers rates by broadening the tax base will promote economic health and job creation. But how much growth and how many jobs is what the American people want to know. Frankly, it is what I want to know, and I think most Members of Congress want to know as well.

Before we can even determine if a tax reform package is worthy of consideration, let alone be called a success, it is critical to understand the true impact it will have on economic growth, Federal revenues, and, most importantly, job creation; and that brings us to

the focus of the hearing today, both the capabilities and limitations of the Joint Committee on Taxation in estimating and analyzing comprehensive tax reform plans.

JCT serves a critical role in the legislative process by providing expert and impartial analysis of potential revenue effects of proposals to change U.S. tax policy. However, under current practice, the analytical methods used by JCT do not typically take into account the potential effects of statutory tax changes on economic growth.

For most of the proposals analyzed by JCT, this practice is appropriate, because the proposed changes would not be large enough to have a material impact on an economy as large as that of the United States. However, comprehensive tax reform, by its very nature, constitutes a significant change in U.S. tax policy and has the potential to significantly boost economic growth and job creation.

JCT has developed a suite of macroeconomic models that can be used to estimate the impact of tax policy changes on economic growth. Today's hearing will help us better understand which policies and decisions are most relevant to promoting economic growth. As our economy continues to struggle, this additional analysis and research will serve an important role in helping this Committee make the hard decisions that are necessary to craft comprehensive tax reform.

It is my hope that today's discussion will help to highlight how the work being done by the Joint Tax Committee will help us plan and develop solutions that create a Tax Code that works better for employers and families, instead of one that for far too long has worked against them.

I thank the witnesses for being here today, and I yield to Ranking Member Levin for his opening statement.

Mr. LEVIN. Thank you, Mr. Chairman. Welcome to all of you.

This is a hearing on, and I quote, "The economic models available to the Joint Committee on Taxation for analyzing tax reform proposals."

Let me first say that I hope that neither this hearing nor anything said here today is construed as a criticism of the Joint Committee, its work, or its staff. The dedicated team of economists, lawyers, and other professionals of the Joint Committee produce some of the very best economic analysis in the country and do so not in an academic or think-tank environment, but under the pressures and at the pace of the legislative process. This Committee could not function without them. I thank you, Mr. Barthold, and all your colleagues for your service.

The debate over so-called dynamic scoring has been going on for years. During the Bush administration, the Republican majority and leadership—and we remember their statements very well—and Ways and Means Members on the then-majority side argued that the Bush tax cuts would pay for themselves and create millions of jobs. Whether guided by this notion of so-called dynamic scoring or by none, the majority ruling this Committee never paid for anything. At the end of the Bush administration, we had a \$1.5 deficit and an economy that was losing 700,000 jobs a month. There were other factors, but there was nothing dynamic about the fiscal irresponsibility of the then Republican majority.

After reviewing today's testimony and grappling with all of its complexities, I urge that we not become embroiled in a theoretical debate at this particularly challenging time for our Nation's economy for two reasons.

First, in addition to there being no evidence that tax cuts pay for themselves—quite the contrary—even most who sound some positive notes about so-called dynamic scoring acknowledge problems that make such an approach unworkable as we confront today's challenges. The reality is that there is simply no consensus in the economics profession about how businesses and individuals will respond to changes in policy, how foresighted they are in their decisionmaking, or on a host of other questions that would have to be answered to conduct a so-called dynamic analysis of tax legislation.

Second, and most vitally, there is a crisis before us right now, before the Nation, and before the Committee; economic growth and jobs. The Committee, our Committee should be focused on jobs. The 14 million Americans who are looking for work need less theoretical discussion of estimating methodology and more practical action on job creation. One estimate, that of Mark Zandi, is that the President's proposed American Jobs Act would add 2 percentage points to GDP growth next year and 1.9 million jobs and cut the unemployment rate by a percentage point.

The Committee Democrats have asked the chairman—you, Mr. Chairman—to hold hearings on the President's American Jobs Act. We have not received an answer, and we renew that request today.

The President's proposal would jump-start our economy and create jobs for American workers. It would put more money in workers' pockets through a temporary payroll tax cut, saving the average family \$1,500 a year. It would also keep over 6 million workers from losing their unemployment benefits when they continue searching for work and provide new employers incentives to help get them hired.

These proposals—these jobs and tax proposals are in the jurisdiction of this proud Committee. It is our responsibility to consider them, and I hope this Committee will meet that responsibility here and now.

Thank you, Mr. Chairman.

Chairman CAMP. Thank you, Mr. Levin.

And, without objection, any other Member who wishes to have an opening statement included in the formal hearing record may submit one in writing.

We are fortunate to have a panel of witnesses this morning with a wealth of experience. Let me briefly introduce them.

First, I would like to welcome Tom Barthold, the chief of staff for the Joint Committee on Taxation. We thank you and your staff for your work and your efforts in preparing for today's hearing, and we look forward to your presentation.

Second, we will hear from Doug Holtz-Eakin, who is currently serving as president of the American Action Forum. Mr. Holtz-Eakin formerly served as chief economist of the President's Council of Economic Advisors and later as director for the Congressional Budget Office.

And, third, we will hear from John Buckley, who is well-known to this Committee, who is a visiting professor at the Georgetown

University Law Center. Mr. Buckley formerly served on the staffs of both the Committee on Ways and Means and the Joint Committee on Taxation.

And, finally, we will hear from William Beach, the director of the Heritage Foundation, Center for Data Analysis. Mr. Beach has been instrumental in developing the economic modeling capacity at the Heritage Foundation.

Thank you all again for being with us today. The Committee has received each of your written statements, and they will be made part of the formal hearing record.

Mr. Barthold you will be recognized for 10 minutes in order to adequately explain JCT's current modeling practices. Our other three witnesses will be given the customary 5 minutes to summarize their written testimony.

Mr. Barthold, you are recognized for 10 minutes. Welcome.

**STATEMENT OF THOMAS A. BARTHOLD, CHIEF OF STAFF,
JOINT COMMITTEE ON TAXATION**

Mr. BARTHOLD. Thank you very much, Chairman Camp and Mr. Levin. It is always a pleasure to be before this Committee.

Today, I will be describing for you the economic modeling that the Joint Committee staff uses to estimate the effects of Federal revenues from changes in tax policy as well as to provide supplemental economic information for the Members' consideration.

To make it clear I think perhaps the place to start is to ask the simple question of what is a revenue estimate. A revenue estimate is an estimate of the change in projected Federal baseline receipts that would result from a change in law.

Now the reference point for a revenue estimate prepared by the Joint Committee staff is the Congressional Budget Office's 10-year projection of Federal receipts, which is referred to as the receipts baseline. The receipts baseline assumes that present law remains unchanged during the 10-year period and thus asks what receipts will accrue to the Federal Treasury over the next 10-year period absent any statutory changes.

A common misunderstanding that arises when we report revenue estimates to policymakers is that we are sometimes presenting a receipts forecast. Generally, when the economy is growing, the Congressional Budget Office forecasts that baseline receipts are growing. So when the Joint Committee staff reports a revenue estimate with a negative in front of it that does not mean that the Joint Committee staff is predicting that receipts will fall, but rather that baseline receipts will generally grow more slowly if the proposal is enacted than they are projected to grow under present law in the baseline receipts forecast.

Just to emphasize this point, I would like to refer back to some work we did a number of years ago. Congress passed the Jobs and Growth Tax Relief Reconciliation Act of 2003, known by its clever acronym of JGTRRA. In figure 1 before you and on the screen, the red bars show CBO's January 2003, forecast of receipts. The Joint Committee staff estimated that the JGTRRA provisions, at least in the first couple of years, would have negative revenue effects. Now that did not mean that receipts would fall. On the figure, when we add the negative revenue effects to the CBO receipts, we get the

green bars, which is the combination of baseline receipts plus change in those receipts as estimated by the Joint Committee staff.

The one thing I want to emphasize is that, while lower, the green bars are still growing from year to year. So it was not a projection that receipts would fall. They would continue to grow but at a lower rate. And just to emphasize that point, the blue bars on the figure show the actual Federal receipts for those years. So, actually, in aggregate, our estimates did quite well that year. But the point I would like to make here is that the negative revenue estimate was still consistent with receipts growing overtime.

Another frequently expressed misconception about our conventional revenue estimating methodology is the notion that the Joint Committee staff assumes that taxpayers will not change their behavior in any way in response to tax policy changes. It is true that one of the conventions that is followed by the staff is that we hold fixed a forecast of aggregate economic activity. However, within that, the Joint Committee estimates are never static in the sense that our estimates always take into account a number of likely behavioral responses by taxpayers, such as shifts in the timing of transactions, changes in the form of income recognition, shifts between taxable and non-taxable income or more highly taxed to more lightly taxed income, shifts between business sectors in terms of investment and the site of economic activity, changes in consumption behavior, tax planning, and avoidance activities.

Beyond raising funds for the Federal Government, Members often intend that their proposed tax policy changes alter microeconomic behavior or the future growth prospect of the economy. Our conventional analysis generally addresses only the microeconomic behavior and does not account for possible changes in the underlying Congressional Budget Office macroeconomic assumptions.

Since 2003 and the implementation of House Rule 13, for any legislation that has been reported by the Ways and Means Committee, the Joint Committee staff has prepared a macroeconomic analysis. To undertake this analysis, the Joint Committee staff has used several different models to simulate macroeconomic effects in order to reflect the sensitivity to different assumptions and to emphasize different aspects of the macroeconomy.

The Joint Committee macroeconomic models that we currently use are the Joint Committee macroeconomic equilibrium growth model, which we cleverly call MEG, an overlapping generations model, and a dynamic stochastic general equilibrium growth model with infinitely lived agents.

I will highlight briefly the MEG model and the OLG model just to provide some distinctions in terms of the types of assumptions that underlie these models, and then I will try and present an example of how we use these models to provide information to the Members of Congress.

In the MEG model, the availability of labor and capital determines total national output. Prices adjust so that demand equals supply in the long run, but in the short run resources may be temporarily underemployed, or overemployed as people in businesses adjust to outside changes in the economy.

One important feature of the MEG model is that household consumption is determined by what is referred to in economics as the life-cycle theory. Labor supply respond to changes in after-tax wages are separately modeled for four different groups of taxpayers that vary by income and type of worker. Household saving and consumption respond to the after-tax return to saving and to after-tax income. Business production and the production of housing are modeled in separate sectors with business investment responding to changes in what economists refer to as the user cost of capital. The MEG model is an open economy model. There are cross-border capital flows and changes in net exports that can affect the domestic economic outcomes. Another important feature in the MEG model is individuals are myopic. They do not anticipate changes in the economy or in government policy.

By some contrast, the overlapping generations model assumes that prices adjust to any change in economic conditions so that supply always equals demand, period by period, and resources are fully utilized after accounting for adjustment costs that may occur as investment changes. There is no explicit modeling of international trading goods and services, but international capital flows are modeled through interest rate adjustments.

Economic decisions are modeled separately for 55 different cohorts. There are separate production sectors for business and housing. Again, there are labor supply responses, saving consumption responses, and responses of investment to the user cost of capital. And the OLG model, unlike the MEG model, is a perfect foresight model. The individuals in the model figure out what is going on.

Now how do we use these models? We take the detailed information that we produce in our conventional revenue estimates about how taxes affect individual taxpayers, individual businesses, and investments decisions, and we use those as inputs into the macroeconomic models.

To try and give an example, in December of this past year, the Congress passed the Tax Relief Unemployment Insurance Reauthorization and Job Creation Act of 2010; and table 1 in your hand-out and this figure on the board shows you our conventional revenue estimate. It produced, by our conventional estimates, substantial revenue losses in the first couple years, followed by very modest revenue increases. The revenue increases were—again, projected relative to baseline receipts. They are a consequence of substantial timing changes that result from the expensing provisions for capital cost recovery, which were enacted as part of that legislation.

Now concurrent with our conventional analysis, the Joint Committee staff undertook a macroeconomic analysis of the legislation using the MEG model and allowing varying different assumptions about how the Federal Reserve would respond. Would they aggressively fight future inflation or not? We also varied consumer and business responses to the tax changes in terms of labor supply response and investment response.

I am going to try and briefly talk about these results to give you an idea of the type of information that is added by our macroeconomic analysis.

What figure 2 shows is that the Joint Committee staff estimated under what we call our neutral Federal Reserve policy response measure—that the size of the economy as measured by GDP would increase by 0.6, to 1.7 percent during the extension period, primarily because of the extra demand that would be generated by the tax cuts.

The staff also estimated that lower marginal tax rates on labor and on income from capital would provide an incentive for temporarily increased supplies of labor and accelerated investment. However, these effects are expected to be reversed by the end of the budget period as the tax decreases expire and increased borrowing by the Federal Government crowds out some of the private investment. So that in the latter part of the period—you can see on the far right the negative bars—GDP would decrease by two-tenths to five-tenths percent relative to present law.

The second set of bars that I just flipped up shows an alternative Federal Reserve policy response, and it is important in analyzing macroeconomics to think about what else is going on and how the Federal Reserve monetary policy might affect outcomes.

Now the December legislation was not deficit neutral. To highlight how tax policy changes might have macroeconomic effects, the Joint Committee staff simulated the same policy but assuming that government transfer payments would be reduced by the amount of reduction in the revenues. We simulated two different timeframes for this, either reducing government transfer payments year by year so the revenue and spending changes were in balance every year, or attentively reducing the transfer payments in the second half of the period so that revenue and spending changes were in balance over the 10-year period.

My written testimony before you today has the details of that. What I will highlight here in my closing minute, where I have gone into overtime, is the revenue consequences that one might see from this. Because, remember, the key in macroeconomic analysis is, if the economy grows, there is a bigger taxable base, and so you might expect that there could be some additional revenue.

The first set of charts shows under one set of assumptions just our conventional estimates of the December bill, the second shows what happens when we layer on the macroeconomic effects of that bill, and the third shows projections for when we consider that it could have been done in a deficit neutral fashion and, again, depending upon the Fed response.

My colleagues and I always strive to update our models with the most recent possible data, looking at economic research. For example, we are currently exploring adding a more detailed international trade sector to the OLG model and additional business investment sectors to the MEG model. We always try to provide the Members with the best information we can.

I appreciate this opportunity to try and give you a very brief walk-through of some of the work and modeling that we do, and I look forward to answering the Committee's questions.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Barthold follows:]



JOINT COMMITTEE ON TAXATION
September 21, 2011
JCX-48-11

**TESTIMONY OF THE STAFF OF THE JOINT COMMITTEE ON TAXATION
BEFORE THE HOUSE COMMITTEE ON WAYS AND MEANS
REGARDING ECONOMIC MODELING**

SEPTEMBER 21, 2011

My name is Thomas A. Barthold. I am the Chief of Staff of the Joint Committee on Taxation. It is my pleasure this morning to describe some of the economic modeling that the Joint Committee staff uses to estimate the effects on Federal revenues from proposed changes in the nation's tax laws.

The Joint Committee staff is nonpartisan and serves the entire Congress. One of the Joint Committee staff's key responsibilities is to provide revenue estimates. These are estimates of the change in Federal receipts that would result from proposed tax legislation. The Joint Committee staff's objective is to produce accurate, consistent, and impartial revenue estimates that can be relied upon by Members of Congress in making legislative decisions.

A. Conventional Analysis

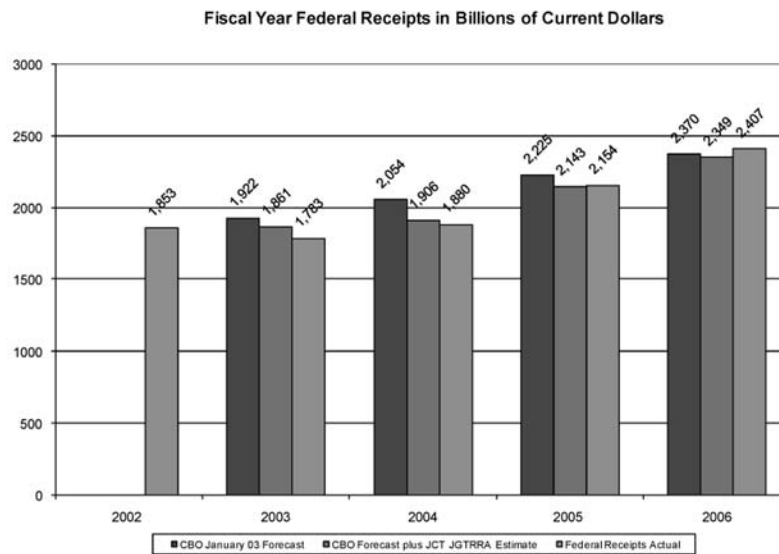
What is a revenue estimate?

What is a revenue estimate? A revenue estimate is an estimate of the change in projected Federal baseline receipts that would result from a change in law. The reference point for a revenue estimate prepared by the Joint Committee staff is the Congressional Budget Office ("CBO") 10-year projection of Federal receipts, referred to as the "receipts baseline." The receipts baseline serves as the benchmark for measuring the effects of proposed tax law changes. The baseline assumes that present law remains unchanged during the 10-year budget period. Thus, the receipts baseline is an estimate of the Federal receipts that would be collected over the next 10 years in the absence of statutory changes. The Joint Committee staff is required to estimate the revenue effects of proposals relative to the projected CBO receipts baseline.

A common misunderstanding that arises in reporting revenue estimates to policy makers is the distinction between a revenue estimate and receipts forecast. Generally, when the economy is growing, the CBO forecast of baseline receipts is growing. A negative revenue estimate of a tax proposal does not mean that the Joint Committee is predicting receipts will fall. It means that receipts are predicted to grow more slowly if the proposal is enacted than they are projected to grow under present law in the baseline receipts forecast. Receipts would only decline if the revenue estimate were for a loss in revenues that was greater than the underlying growth in baseline receipts.

For example, consider the Joint Committee staff's estimates of the overall revenue effects of the Jobs and Growth Tax Relief Reconciliation Act of 2003 ("JGTRRA"). Figure 1 provides a comparison of CBO's January 2003 forecast of receipts (the red bars), the CBO's forecasted receipts as modified by the Joint Committee staff's estimates for JGTRRA (the green bars), and actual receipts (the blue bars) for fiscal years 2002 through 2006. The green bars show that after adjusting the CBO's receipts forecast for the Joint Committee staff's estimate of JGTRRA, receipts were estimated to continue to increase. However, the estimated increase is slower than in the CBO's original baseline forecast (the red bars). In fact, actual receipts (the blue bars) for 2003 through 2006 totaled \$35 billion less than total receipts estimated by the Joint Committee staff (the green bars).

Figure 1.—Receipts Forecast versus Revenue Estimates



Enactment of legislation in 2004 makes comparison using 2005 and 2006 receipts problematic. However, Figure 1 shows that, while the combined CBO/Joint Committee estimates of receipts for 2005 and 2006 are slightly less than actual receipts, it reflects a projected overall increase in receipts for these years relative to receipts prior to enactment of the legislation.

Conventional analysis includes taxpayer behavior

Another frequently expressed misconception about conventional revenue estimates provided by Joint Committee staff is the notion that they assume taxpayers will not change their behavior in any way in response to tax policy changes.

One of the conventions that is followed for both revenue estimates prepared by the Joint Committee staff and expenditure estimates prepared by the Congressional Budget Office is that they are done against a fixed forecast of aggregate economic activity; the Joint Committee staff generally assumes that a proposal will not change total aggregate production and therefore holds forecasted Gross National Product ("GNP") fixed. However, conventional revenue estimates prepared by the Joint Committee staff should not be confused with "static" revenue estimates. Joint Committee staff revenue estimates always take into account many likely behavioral responses by taxpayers to proposed changes in tax law. Such behavioral effects include shifts in the timing of transactions and income recognition, shifts between business sectors and entity form, shifts in portfolio holdings, shifts in consumption, and tax planning and avoidance strategies.

To summarize Joint Committee staff's conventional revenue estimating methodology: the Joint Committee staff provide estimates relative to baseline receipts projected for future years under present law, not relative to receipts in years prior to the enactment of the proposal; the Joint Committee staff generally assumes a fixed GNP forecast; and the Joint Committee staff incorporates many types of microeconomic behavioral responses in Joint Committee staff revenue estimates.

A document our staff recently published, JCX-46-11, *Summary of Economic Models and Estimating Practices of the staff of the Joint Committee on Taxation*, provides an overview of the many microsimulation models and data sources that the Joint Committee staff employs in its conventional analysis.

B. Macroeconomic Analysis

As stated above, all Joint Committee estimates are measured relative to the CBO receipts baseline. The CBO develops its receipts baseline from its macroeconomic forecast. That macroeconomic forecast includes projections of GDP growth, investment, employment, and inflation for the 10-year Congressional budget planning period. Beyond raising funds for the Federal Government, Members often intend that their proposed tax policy changes alter microeconomic behavior or alter the future growth prospects of the economy. Conventional analysis generally addresses only microeconomic behavior. Conventional analysis does not account for possible changes in the underlying CBO macroeconomic projections.

Beginning in 2003, House Rule XIII(3)(h)(2) has required the Joint Committee staff to provide a macroeconomic impact analysis of all tax legislation reported by the Ways and Means

Committee.¹ For many tax bills, the expected macroeconomic effects are so small that a brief statement is all that is required. But some legislation requires more detailed analysis. In order to account for the sensitivity of the analysis to different modeling assumptions, and different modeling frameworks, the Joint Committee staff has used several different models to simulate the macroeconomic effects of changes to tax policy.² The Joint Committee staff has used three different general equilibrium models: the Joint Committee macroeconomic equilibrium growth model (“MEG”), an overlapping generations lifecycle model (“OLG”),³ and a dynamic, stochastic general equilibrium growth model with infinitely lived agents (“DSGE”).

I will highlight MEG and OLG and provide an example of this sort of analysis.

Macroeconomic Equilibrium Growth Model (MEG)

In the MEG model the availability of labor and capital determines total national output. Prices adjust so that demand equals supply in the long run. In the short run, resources may be temporarily under-employed or over-employed as people and businesses adjust to outside changes in the economy.

- MEG models household consumption by what is called the life-cycle theory.
- Labor supply responses to changes in after-tax wages (elasticities) are separately modeled for four different groups,
 - High-income primary earners;
 - High-income secondary earners;
 - Low-income primary earners; and
 - Low-income secondary earners.
- Household saving and consumption respond to the after-tax return to saving and after-tax income.
 - For ease of exposition, we refer to this response as the marginal propensity to consume (“MPC”)
- Business production and housing production are modeled separately.

¹ House Rules allowed the Chairman of the Ways and Means Committee to include a supplementary macroeconomic analysis in committee reports beginning in 1997; the analysis became a requirement under House Rules in 2003.

² The Joint Committee staff also contracts for the use of two econometric models to inform our analysis, in particular, of short-run economic responses: Macroeconomic Advisers and IHS Global Insight.

³ The Joint Committee staff currently leases a version of this model from Tax Policy Advisors, LLC.

- Business investment responds to changes in the user cost of capital.
- MEG is an open economy model, cross border capital flows and changes in net exports affect domestic economy outcomes.
- Individuals are myopic. They do not anticipate changes in the economy or government policy.

Overlapping Generations Lifecycle Model (OLG)

Unlike the MEG model, the OLG model assumes that prices adjust to any changes in economic conditions (such as a change in fiscal policy) so that supply equals demand in every period and resources are always fully utilized, after accounting for the cost of adjusting the capital stock. The OLG model is a perfect foresight model. The model does not allow for unemployment. There is no explicit modeling of international trade in goods and services, but international capital flows are modeled through interest rate adjustments.

- Economic decisions are modeled separately for each of 55 adult-age cohorts.
- OLG model has separate production sectors for business and housing.
- Key parameters (as in MEG)
 - Responsiveness of labor supply to changes in the after-tax wage rate.
 - Responsiveness of saving and consumption to the after-tax return to saving and after-tax income.
 - Responsiveness of investment to the user cost of capital.
- OLG is a perfect foresight model
 - Responsiveness of individuals to expected future changes in after-tax rates of return are important.

Summary

The Joint Committee staff uses our detailed microsimulation models, starting from the conventional estimates of a proposed tax change, to calculate changes in after-tax wages, after-tax rates of return to saving, and the user cost of capital. These calculated changes become inputs to the macroeconomic models to determine the possible effects that a proposed change in tax law may have on macroeconomic outcomes. Generally, if a tax policy significantly changes GNP, that change would affect the taxable base, and thus tax revenues. Taking these effects into account is what many commentators refer to as “dynamic analysis.”

C. Example: The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, (Public Law 110-312)

Conventional Estimate

In December of last year, the Joint Committee staff provided the Congress with conventional estimates of the pending legislation which became the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 ("TRUIRJA 2010"). As Committee members know, that legislation extended the tax rate structure created in 2001 (EGTRRA) and 2003 (JGTRRA) legislation for two additional years (through 2012), temporarily reduced the payroll tax rate and extended temporarily a number of the so-called expiring provisions. Table 1 provides the bottom line result.

Table 1.—Net Totals on the Estimated Budget Effects of the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010
(Millions of Dollars)

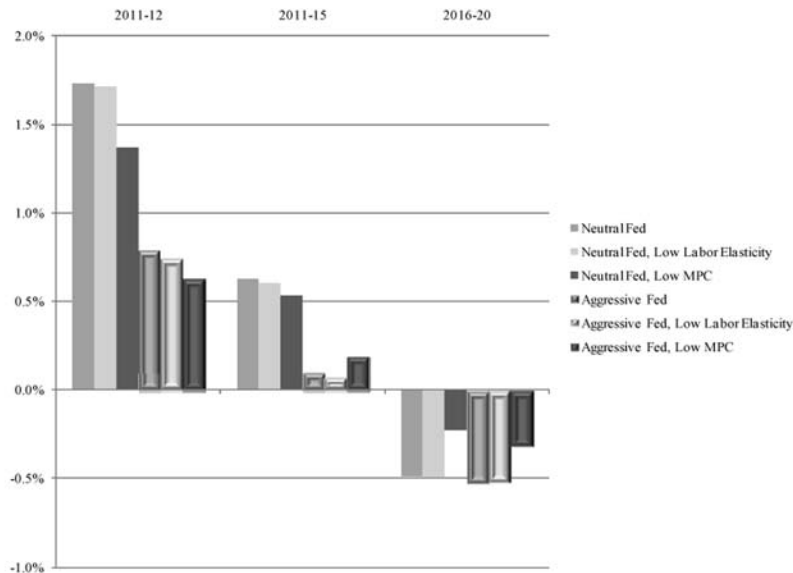
2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-15	2011-20
-374,154	-422,910	-119,751	6,551	17,410	13,461	10,070	6,282	3,371	1,859	-892,852	-857,806

Source: JCX-54-10. The entire table can be found in the appendix.

Macroeconomic Analysis

Concurrent with our conventional analysis, the Joint Committee staff undertook a macroeconomic analysis of the legislation, using the MEG model and varying several assumptions about the responsiveness of the Federal Reserve Board, consumers, and businesses to the tax change. I am going to talk about these results to give you an idea of the type of the information added by our macroeconomic analyses. Figure 2 illustrates key results from that analysis.

The Joint Committee staff estimated that the bill would increase the size of the economy (GDP) by between 0.6 and 1.7 percent during the extension period, primarily because of extra demand that would be generated by the tax cuts. The Joint Committee staff also estimated that lower marginal tax rates on labor and income from capital would provide an incentive for temporarily increased supply of labor and accelerated investment. These effects are expected to be reversed by the end of the budget period, as the tax decreases expire, and increased borrowing by the Federal government crowds out some private investment, with GDP decreasing by 0.2 to 0.5 percent relative to present law in the second half of the budget period.

Figure 2.—Percentage Change in Real GDP of TRUIRJCA 2010

Correspondingly, the Joint Committee staff estimated that there could be a 0.2 to 0.3 percent increase in receipts due to the increase in GDP in 2011-2012, and a 0.3 to 0.6 percent decrease in receipts due to the decrease in GDP in the second half of the budget window.

Macroeconomic Analysis of a Deficit Neutral Bill, as Measured by Conventional Analysis

The December legislation was not deficit neutral. To highlight how tax policy changes might have macroeconomic effects, Ways and Means Committee staff asked the Joint Committee staff if we could analyze the potential macroeconomic effects, if any, had the December legislation conventionally estimated revenue loss been fully offset by reductions in Federal spending. To analyze this alternative policy, the Joint Committee staff simulated the same tax policy assuming that Government transfer payments would be reduced by the amount of the reduction in revenues. We simulated two different time frames for this reduction in Federal spending - adjusting transfer payments to exactly offset revenue changes year-by-year, and reducing transfer payments in the second half of the budget period such that the policy would be deficit neutral over the budget period. Because the tax policy results in revenue increases in the second half of the budget period, the year-by-year offset includes a small increase in transfer payments in the second five years. Figures 3 and 4 illustrate key results from

this analysis. We again present the results of several simulations, this time focusing, in particular, on the range of results that occur under different assumptions about both Federal Reserve Board monetary policy responses and Congressional fiscal policy responses. Labor supply elasticities and marginal propensities to consume are not varied.

Reducing transfer payments to offset tax cuts in 2011 and 2012 decreases the amount of income available to be spent, and thus increases GDP for that period by less than in the non-offset tax rate reductions case, from 1.7 percent to 0.4 percent under the accommodating Federal Reserve Board assumption (0.8 percent to 0.3 percent under the aggressive Federal Reserve Board assumption). In the second half of the budget period, the deficit neutral version of the policy results in an increase in GDP, in contrast to the decrease produced by the non-offset tax reduction. This result is driven both by the increase in transfer payments (offsetting tax increases) providing some stimulus, and by the lack of crowding out of private investment.

In these MEG simulations, reducing transfer payments in the second half of the budget period to make the bill deficit neutral over the full ten-year period preserves the same growth effects as the bill as passed during the non-offset period. These simulations also result in less crowding out of private investment than the as-enacted policy. The reduction in transfer payments in the second five years also reverses the stimulus effects from the first two years, resulting in a larger decline in GDP than in the as-enacted estimate when the Federal Reserve policy response is neutral, and a smaller decline when the Federal Reserve policy response aggressively acts against the contractionary effects. These types of results would be somewhat different when simulated with a perfect foresight model such as OLG, in which people would anticipate the reduction in transfer payments, and adjust labor and consumption in the first five years accordingly.

Revenue feedback from these simulations follows the same patterns. During 2011-12 and 2011-15, in simulations where GDP is expected to be increased by the policy, the revenue loss incorporating macroeconomic effects is slightly less than the conventionally estimated loss. In simulations where GDP is expected to be reduced by the policy, (which occurs in some simulations in the second five years), the macroeconomic revenue estimate generally shows a reduction in the revenue effect relative to the conventional analysis.

Figure 3.—Percentage Change in Real GDP of TRUIRJCA 2010

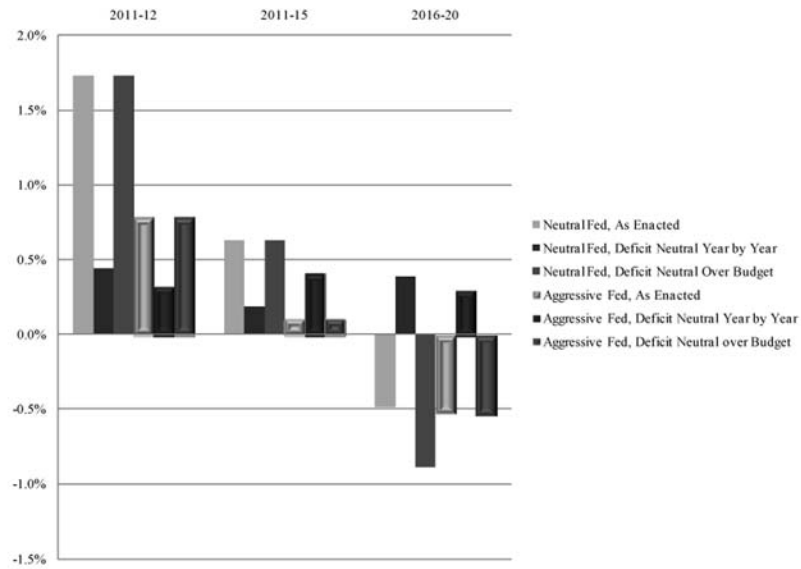
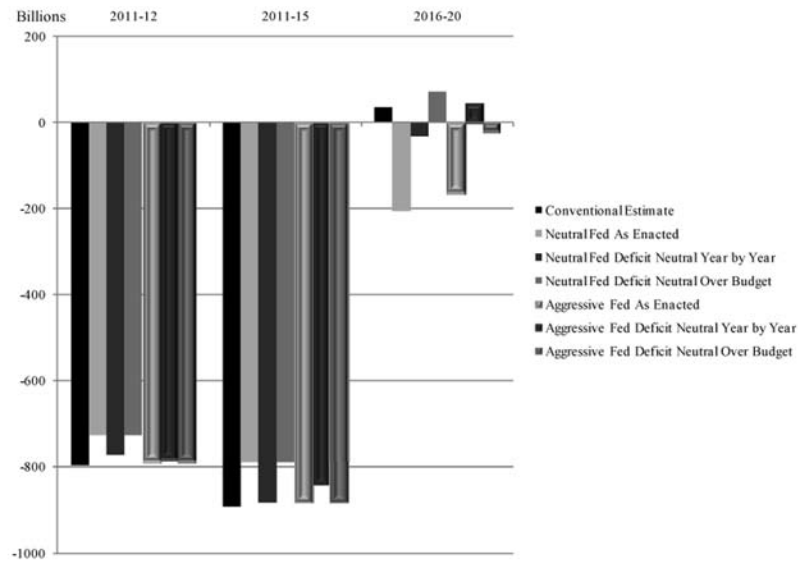


Figure 4.—Conventional and Macro-Economic Revenue Effects of TRUIRJCA 2010



Conclusion

The Joint Committee staff continuously works to make sure that our models reflect the most recent possible data and economic research. For example, we are exploring adding a more detailed international trade sector to the OLG model, and adding another business investment sector to the MEG model. I appreciate the opportunity to discuss our models with you, and look forward to answering your questions.

APPENDIX
Macroeconomic Effects of the "Tax Relief, Unemployment Insurance
Reauthorization Job Creation Act of 2010,"
Under Different Macroeconomic Modeling Assumptions

<u>Percent change in real GDP</u>	<u>percent change relative to present law</u>		
	<u>2011-12</u>	<u>2011-15</u>	<u>2016-20</u>
Neutral Fed	1.7%	0.6%	-0.5%
lower labor supply elasticity	1.7%	0.6%	-0.5%
lower marginal propensity to consume	1.4%	0.5%	-0.2%
Aggressive Fed	0.8%	0.1%	-0.5%
lower labor supply elasticity	0.7%	0.1%	-0.5%
lower marginal propensity to consume	0.6%	0.2%	-0.3%

<u>Percent change in employment</u>	<u>relative to present law</u>		
	<u>2011-12</u>	<u>2011-15</u>	<u>2016-20</u>
Neutral Fed	2.1%	0.8%	0.0%
lower labor supply elasticity	2.0%	0.8%	0.0%
lower marginal propensity to consume	1.6%	0.6%	0.1%
Aggressive Fed	0.9%	0.3%	0.1%
lower labor supply elasticity	0.8%	0.2%	0.1%
lower marginal propensity to consume	0.6%	0.3%	0.1%

<u>Percent change in labor force</u>	<u>relative to present law</u>		
	<u>2011-12</u>	<u>2011-15</u>	<u>2016-20</u>
Neutral Fed	0.4%	0.2%	0.0%
lower labor supply elasticity	0.3%	0.1%	0.0%
lower marginal propensity to consume	0.4%	0.2%	0.0%
Aggressive Fed	0.4%	0.2%	0.0%
lower labor supply elasticity	0.3%	0.1%	0.0%
lower marginal propensity to consume	0.4%	0.2%	0.0%

<u>Percent change in business capital</u>	<u>relative to present law</u>		
	<u>2011-12</u>	<u>2011-15</u>	<u>2016-20</u>
Neutral Fed	0.9%	0.3%	-1.7%
lower labor supply elasticity	0.9%	0.3%	-1.7%
lower marginal propensity to consume	1.1%	0.6%	-1.0%
Aggressive Fed	0.7%	-0.2%	-2.1%
lower labor supply elasticity	0.7%	-0.2%	-2.1%
lower marginal propensity to consume	0.9%	0.3%	-1.3%

<u>Percent change in consumption</u>	<u>relative to present law</u>		
	<u>2011-12</u>	<u>2011-15</u>	<u>2016-20</u>
Neutral Fed	2.5%	1.4%	-0.3%
lower labor supply elasticity	2.5%	1.4%	-0.3%
lower marginal propensity to consume	1.8%	1.1%	0.0%
Aggressive Fed	1.9%	1.0%	-0.3%
lower labor supply elasticity	1.8%	0.9%	-0.3%
lower marginal propensity to consume	1.3%	0.8%	-0.1%

<u>Percent change in receipts</u>	<u>relative to present law</u>		
	<u>2011-12</u>	<u>2011-15</u>	<u>2011-20</u>
Neutral Fed	1.3%	0.8%	0.0%
lower labor supply elasticity	1.3%	0.7%	0.0%
lower marginal propensity to consume	1.1%	0.6%	0.0%
Aggressive Fed	0.3%	0.2%	0.0%
lower labor supply elasticity	0.2%	0.2%	0.0%
lower marginal propensity to consume	0.3%	0.2%	0.0%

**Macroeconomic Effects of the
"Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010,"
(percent change from CBO baseline levels, except for revenue effect)**

	As enacted			Deficit neutral, year- by-year			Deficit neutral, over the Deficit horizon		
	2011-12	2011-15	2016-20	11-12	11-15	16-20	11-12	11-15	16-20
"Neutral Fed"									
Real GDP	1.7%	0.6%	-0.5%	0.4%	0.2%	0.4%	1.7%	0.6%	-0.9%
Real Producer's capital	0.9%	0.3%	-1.7%	1.4%	1.6%	1.2%	0.9%	0.3%	-1.2%
Real Residential capital	-1.1%	-1.6%	-1.8%	-0.9%	-1.0%	-0.4%	-1.1%	-1.6%	-1.6%
Real Consumption	2.5%	1.4%	-0.3%	-0.1%	0.0%	0.4%	2.5%	1.4%	-1.2%
Employment	2.1%	0.8%	0.0%	0.4%	-0.1%	0.2%	2.1%	0.8%	-0.7%
Labor force	0.4%	0.2%	0.0%	0.4%	0.2%	0.0%	0.4%	0.2%	0.0%
Nominal Revenue Effect									
Conventional	-797	-893	35	-797	-893	35	-797	-893	35
Macroeconomic	-727	-791	-205	-773	-884	-33	-727	-791	72
"Aggressive Fed"									
	As enacted			Deficit neutral, year- by-year \1			Deficit neutral, over the Deficit horizon \2		
	11-12	11-15	16-20	11-12	11-15	16-20	11-12	11-15	16-20
Real GDP	0.8%	0.1%	-0.5%	0.3%	0.4%	0.3%	0.8%	0.1%	-0.5%
Real Producer's capital	0.7%	-0.2%	-2.1%	1.3%	1.6%	1.3%	0.7%	-0.2%	-1.4%
Real Residential capital	-1.2%	-2.0%	-2.6%	-0.9%	-0.9%	-0.1%	-1.2%	-2.0%	-2.2%
Real Consumption	1.9%	1.0%	-0.3%	-0.2%	0.2%	0.3%	1.9%	1.0%	-0.8%
Employment	0.9%	0.3%	0.1%	0.2%	0.2%	0.0%	0.9%	0.3%	-0.1%
Labor force	0.4%	0.2%	0.0%	0.4%	0.2%	0.0%	0.4%	0.2%	0.0%
Nominal Revenue Effect									
Conventional	-797	-893	35	-797	-893	35	-797	-893	35
Macroeconomic	-786	-883	-164	-781	-842	46	-786	-883	-18

\1 Deficit neutral policy implemented cutting untaxed transfers to individuals. Reduction in transfers leave the baseline deficit unchanged in each year.

\2 Deficit neutral policy is implemented by cutting untaxed transfers to individuals. Reduction in transfers in the final five years leave the baseline deficit unchanged over the deficit horizon.

Following is our publication, JCX 54-10, *The Estimated Budget Effects of the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010*.

ESTIMATED BUDGET EFFECTS OF
THE "TAX RELIEF, UNEMPLOYMENT INSURANCE REAUTHORIZATION, AND JOB CREATION ACT OF 2010,"
SCHEDULED FOR CONSIDERATION BY THE UNITED STATES SENATE

Fiscal Years 2011 - 2020

[Millions of Dollars]

Provision	Effective	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-15	2011-20
I. Temporary Extension of Tax Relief													
A. Temporary Extension of 2001 Tax Relief													
1. Individual income tax rate relief													
a. Retain 10% income tax bracket (sunset 12/31/12) [1].....	tyba 12/31/10	-30,990	-44,807	-13,511	[2]	---	---	---	---	---	---	-89,308	-89,308
b. Retain the 25% and the 28% income tax brackets (sunset 12/31/12).....	tyba 12/31/10	-12,792	-18,376	-5,526	[2]	---	---	---	---	---	---	-36,693	-36,693
c. Retain the 33% and the 35% income tax brackets (sunset 12/31/12).....	tyba 12/31/10	-19,714	-31,276	-9,783	[2]	---	---	---	---	---	---	-60,774	-60,774
d. Repeal overall limitation on itemized deduction and the personal exemption phaseout (sunset 12/31/12).....	tyba 12/31/10	-4,862	-10,384	-5,489	[2]	---	---	---	---	---	---	-20,735	-20,735
2. Retain the child tax credit at \$1,000; refundable up to greater of 15% of earned income in excess of \$10,000 (indexed from 2001) or the taxpayer's social security tax liability to the extent that it exceeds the taxpayer's earned income credit; allow credit against the AMT; repeal AMT offset of refundable credits (sunset 12/31/12) [1].....	tyba 12/31/10	-7,075	-35,565	-29,056	---	---	---	---	---	---	---	-71,697	-71,697
3. Marriage penalty relief:													
a. Standard deduction and 15% rate bracket set at 2 times single for married filing jointly (sunset 12/31/12) [1].....	tyba 12/31/10	-6,287	-8,962	-2,686	[2]	---	---	---	---	---	---	-17,935	-17,935
b. EIC modification and simplification - increase in joint returns beginning and ending income level for phaseout by \$3,000 indexed after 2008; simplify definition of earned income; use AGI instead of modified AGI; simplify definition of qualifying child and tie-breaker rules; and allow math error procedure with Federal Case registry data beginning in 2004 (sunset 12/31/12) [1].....	tyba 12/31/10	-44	-4,424	-4,469	---	---	---	---	---	---	---	-8,937	-8,937

Provision	Effective	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021-20	2011-15	2011-20
4. Education Tax Relief:														
a. Coverdell Education Savings Accounts ("ESAs") - increase the annual contribution limit to \$2,000; allow ESA contributions for special needs beneficiaries above the age of 18, allow corporations and other entities to contribute to ESAs; allow contributions until April 15 of the following year; allow a taxpayer to exclude ESA distributions from gross income and claim the HOPE or Lifetime Learning credits as long as they are not used for the same expenses; repeal excise tax on contributions made to ESA when contribution made by anyone on behalf of same beneficiary to QTP; modify phasorant range for married taxpayers; allow tax-free expenditures for elementary and secondary school expenses; expand the definition of qualified expenses to include certain computers and related items (sunset 12/31/12).....	tybs 12/31/10	-11	-17	-5	---	---	---	---	---	---	---	-32	-32	-32
b. Employer provided educational assistance - extend the exclusion for undergraduate courses and graduate level courses (sunset 12/31/12) [3].....	cha 12/31/10	-707	-964	-243	---	---	---	---	---	---	---	-1,914	-1,914	-1,914
c. Student loan interest deduction - eliminate the 60-month rule and the disallowance for voluntary payments; increase phasorant ranges to \$50,000-\$65,000 single/ \$100,000-\$130,000 joint, indexed for inflation (sunset 12/31/12).....	ipa 12/31/10	-63	-631	-560	---	---	---	---	---	---	---	-1,254	-1,254	-1,254
d. Eliminate the tax on awards under the National Health Service Corps Scholarship program and Edward Hebert Armed Forces Health Professions Scholarship and Financial Assistance Program (sunset 12/31/12).....	tybs 12/31/10	-9	-35	-27	---	---	---	---	---	---	---	-70	-70	-70
e. Increase arbitrage rebate exception for governmental bonds used to finance qualified school construction from \$10 million to \$15 million (sunset 12/31/12).....	bua 12/31/10	[2]	-1	-2	-3	-3	-3	-3	-3	-3	-3	-9	-9	-24
f. Issuance of tax-exempt private activity bonds for qualified education facilities with annual State volume caps the greater of \$10 per resident or \$5 million (sunset 12/31/12).....	bua 12/31/10	[2]	-1	-3	-5	-5	-5	-5	-5	-5	-5	-14	-14	-39

Provision	Effective	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-15	2011-20
5. Dependent care tax credit - increase the credit rate to 35%, increase the eligible expenses to \$3,000 for one child and \$6,000 for two or more children (not indexed), and increase the start of the phase-out to \$15,000 of AGI (sunset 12/31/12) [1]	tyba 12/31/10	-76	-302	-222	---	---	---	---	---	---	---	-600	-600
6. Adoption credit - increase the expense limit and the exclusion to \$10,000 for both non-special needs and special needs adoptions, make the credit independent of expenses for special needs adoptions, extend the credit and the exclusion, increase the phase-out start point to \$150,000, index for inflation the expenses limit and the phase-out start point for both the credit and the exclusion, and allow the credit to apply to the AMT (sunset 12/31/12) [1]	tyba 12/31/10	---	-95	-221	---	---	---	---	---	---	---	-315	-315
7. Employer-provided child care credit of 25% for childcare expenditures and 10% for child care resource (sunset 12/31/12)	tyba 12/31/10	-11	-33	-15	---	---	---	---	---	---	---	-58	-58
8. Allow electing Alaska Native Settlement Trusts to tax income to the Trust not the beneficiaries (sunset 12/31/12)	tyba 12/31/10	-2	-5	-2	---	---	---	---	---	---	---	-9	-9
B. Temporary Extension of 2003 Tax Relief													
1. Tax capital gains with a 0%/15% rate structure (sunset 12/31/12)	tyba 12/31/10	-10,477	2,355	-1,915	-15,840	---	---	---	---	---	---	-25,877	-25,877
2. Tax dividends with a 0%/15% rate structure (sunset 12/31/12)	tyba 12/31/10	-4,677	-13,555	-9,042	---	---	---	---	---	---	---	-27,274	-27,274
C. Temporary Extension of 2009 Tax Relief													
1. Extension of American opportunity tax credit (sunset 12/31/12) [1]	tyba 12/31/10	-1,194	-7,094	-9,277	---	---	---	---	---	---	---	-17,566	-17,566
2. Reduce the earnings threshold for the refundable portion of the child tax credit to \$3,000 (sunset 12/31/12) [1]	tyba 12/31/10	---	-9,826	-9,917	---	---	---	---	---	---	---	-19,743	-19,743
3. Increase in earned income tax credit percentage (sunset 12/31/12) [1]	tyba 12/31/10	-18	-1,845	-1,822	---	---	---	---	---	---	---	-3,685	-3,685
4. EIC modification and simplification - increase in joint returns beginning and ending income level for phaseout by \$5,000 indexed after 2008 (sunset 12/31/12) [1]	tyba 12/31/10	-16	-1,553	-1,532	---	---	---	---	---	---	---	-3,101	-3,101
Total of Temporary Extension of Tax Relief		-99,025	-187,396	-105,325	-15,848	-8	-8	-8	-8	-8	-8	-407,600	-407,640

Provision	Effective	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-15	2011-20
II. Temporary Alternative Minimum Tax Relief - Set the AMT Exemption Amount at \$47,450 (\$72,450 Joint) in 2010 and \$48,450 (\$74,450 Joint) in 2011 and Allow Personal Credits against the AMT (sunset 12/31/11)...													
tyba 12/31/09	-85,833	-67,597	16,754	---	---	---	---	---	---	---	---	-136,676	-136,676
III. Temporary Estate and Gift Tax Relief - \$5 Million Unified and Indexed Exemption Amount; 35% Maximum Rate; Portability of Exemption Amount; and Decedents Dying in 2010 Can Elect into EGTERRA (sunset 12/31/12).....													
ddag/gta 12/31/09 & gma 12/31/10	-4,546	-28,080	-29,349	-3,483	-2,088	-981	-53	130	135	135	136	-67,515	-68,149
IV. Temporary Extension of Investment Incentives													
1. Increase additional first-year depreciation to 100 percent (sunset 12/31/11); extend 50 percent additional first-year depreciation for property placed in service after 12/31/11 (sunset 12/31/12)...	ppisa 9/8/10	-55,419	-54,422	2,687	25,519	19,778	15,671	11,161	7,071	4,297	2,775	-61,857	-20,883
2. Election to accelerate AMT credit in lieu of additional first-year depreciation (sunset 12/31/12).....	[4]	-11	-536	-212	37	29	19	13	9	7	6	-693	-639
3. Section 179 expensing amounts and threshold limits \$125,000/ \$500,000 (sunset 12/31/12).....	tyba 12/31/11	---	-3,266	-2,160	1,791	1,131	822	636	401	227	110	-2,504	-307
Total of Temporary Extension of Investment Incentives.....		-55,430	-58,224	315	27,347	20,938	16,512	11,810	7,481	4,531	2,891	-65,054	-21,829
V. Temporary Extension of Unemployment Insurance and Related Matters [1] [5].....													
various	-34,515	-21,642	-100	-102	-76	-41	-29	-4	---	---	---	-56,435	-56,510
VI. Temporary Payroll Tax Reduction (Employee Side of OASDI) by 2 Percentage Points (sunset 12/31/11) [6]...													
tyba 12/31/10	-67,239	-44,414	---	---	---	---	---	---	---	---	---	-111,653	-111,653
VII. Temporary Extension of Certain Expiring Provisions													
A. Energy													
1. Incentives for biodiesel and renewable diesel (sunset 12/31/11).....	fsoua 12/31/09	-1,677	-300	---	---	---	---	---	---	---	---	-1,977	-1,977
2. Placed-in-service date for facilities eligible to claim the refined coal production credit (excluding steel industry fuel) (sec. 45(d)) (sunset 12/31/11).....	ppisa 12/31/09	-15	-20	-23	-24	-24	-24	-25	-26	-26	-24	-105	-230
3. Credit for construction of energy efficient new homes (sunset 12/31/11).....	haa 12/31/09	-66	-25	-12	-11	-9	-8	-5	-1	---	---	-124	-138

Provision	Effective	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-15	2011-20
4. Incentives for alternative fuel and alternative fuel mixtures (modified to exclude black liquor) (sunset 12/31/11).....	fsua 12/31/09	-176	-26	---	---	---	---	---	---	---	---	-202	-202
5. Special rule to implement electric transmission restructuring (sunset 12/31/11).....	da 12/31/09	-232	-92	51	51	51	51	51	51	18	---	-171	---
6. Extension of suspension of 100 percent-of-net-income limitation on percentage depletion for oil and natural gas from marginal properties (sunset 12/31/11).....	tyba 12/31/09	-182	-42	---	---	---	---	---	---	---	---	-224	-224
7. Grants for specified energy property in lieu of tax credits (sunset 12/31/11) [1].....	ppisa DOE	-1,941	-1,045	---	---	---	---	---	---	---	---	-2,987	-2,987
8. Extension of provisions related to alcohol used as fuel (extension of present law):													
a. Extension of income tax credits for alcohol fuels; and extension of excise tax credits and outlay payments for alcohol fuel mixtures (sunset 12/31/11).....	pa 12/31/10 & saua 12/31/10	-3,558	-1,311	---	---	---	---	---	---	---	---	-4,869	-4,869
b. Extension of additional duties on ethanol (sunset 12/31/11) [5].....	1/1/11	8	3	---	---	---	---	---	---	---	---	10	10
9. Credit for energy efficient appliances (sunset 12/31/11).....	apa 12/31/10	-7	-17	-14	-9	-8	-6	-5	-4	-4	-3	-55	-78
10. Extension and modification of section 25C nonbusiness energy property (sunset 12/31/11).....	ppisa 12/31/10	-119	-477	---	---	---	---	---	---	---	---	-596	-596
11. Alternative fuel vehicle refueling property (non-hydrogen refueling property) (sunset 12/31/11).....	ppisa 12/31/10	-7	-6	-2	-1	-1	[7]	[7]	[7]	[7]	[7]	-17	-16
B. Individual Tax Relief													
1. Above-the-line deduction of up to \$250 for teacher classroom expenses (sunset 12/31/11).....	tyba 12/31/09	-39	-195	-156	---	---	---	---	---	---	---	-390	-390
2. Deduction of State and local general sales taxes (sunset 12/31/11).....	tyba 12/31/09	-2,829	-2,393	-314	---	---	---	---	---	---	---	-5,536	-5,536
3. Contributions of capital gain real property made for qualified conservation purposes (sunset 12/31/11).....	tyba 12/31/09	-63	-48	---	---	---	---	---	---	---	---	-111	-111
4. Deduction for qualified tuition and related expenses (sunset 12/31/11) [8].....	tyba 12/31/09	-711	-450	---	---	---	---	---	---	---	---	-1,161	-1,161
5. Tax-free distributions from IRAs to certain public charities for individuals age 70 1/2 or older, not to exceed \$100,000 per taxpayer per year, distributions made in January 2011 may count against the 2010 \$100,000 limit and satisfy the 2010 minimum distribution requirement (sunset 12/31/11).....	dmi tyba 12/31/09	-517	-197	-29	-30	-31	-32	-34	-35	-36	-38	-804	-979

Provision	Effective	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-15	2011-20
6. Estate tax look-through for certain RUC stock held by nonresidents (sunset 12/31/11).....	dda 12/31/09	-5	-5	---	---	---	---	---	---	---	---	-10	-10
7. Parity for exclusion for employer-provided mass transit and parking benefits (sunset 12/31/11)[9]....	ma 12/31/10	-102	-34	---	---	---	---	---	---	---	---	-136	-136
8. Refunds disregarded in the administration of Federal programs and federally assisted programs (sunset 12/31/12)[11][5].....	ara 12/31/09	-4	-4	---	---	---	---	---	---	---	---	-8	-8
C. Business Tax Relief													
1. Tax credit for research and experimentation expenses (sunset 12/31/11).....	apola 12/31/09	-5,984	-2,055	-923	-813	-715	-631	-575	-547	-530	-501	-10,490	-13,272
2. Indian employment tax credit (sunset 12/31/11).....	tyba 12/31/09	-59	-33	-9	-1	---	---	---	---	---	---	-102	-102
3. New markets tax credit (\$3.5 billion allocation for 2010 and \$3.5 billion allocation for 2011) (sunset 12/31/11).....	cyba 12/31/09	-5	-29	-94	-180	-221	-252	-279	-288	-267	-194	-530	-1,810
4. 50% tax credit for certain expenditures for maintaining railroad tracks (sunset 12/31/11).....	tyba 12/31/09	-232	-99	[2]	---	---	---	---	---	---	---	-331	-331
5. Mine rescue team training credit (sunset 12/31/11)....	tyba 12/31/09	-2	-1	-1	[2]	[2]	[2]	---	---	---	---	-4	-5
6. Employer wage credit for activated military reservists (sunset 12/31/11).....	pma 12/31/09	-2	-1	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	-3	-3
7. 15-year straight-line cost recovery for qualified leasehold, restaurant, and retail improvements and new restaurants (sunset 12/31/11).....	ppisa 12/31/09	-281	-359	-397	-395	-389	-385	-380	-369	-350	-324	-1,821	-3,629
8. 7-year recovery period for certain motorsports racing track facilities (sunset 12/31/11).....	ppisa 12/31/09	-40	-3	-1	---	---	-1	1	3	3	3	-45	-36
9. Accelerated depreciation for business property on Indian reservations (sunset 12/31/11).....	ppisa 12/31/09	-98	-23	5	17	27	22	12	1	-2	-1	-72	-41
10. Enhanced charitable deduction for contributions of food inventory (sunset 12/31/11).....	cma 12/31/09	-92	-42	---	---	---	---	---	---	---	---	-134	-134
11. Enhanced charitable deduction for contributions of book inventories to public schools (sunset 12/31/11).....	cma 12/31/09	-37	-16	---	---	---	---	---	---	---	---	-53	-53
12. Enhanced charitable deduction for corporate contributions of computer inventory for educational purposes (sunset 12/31/11).....	cma 12/31/09	-245	-105	---	---	---	---	---	---	---	---	-350	-350
13. Election to expense mine safety equipment (sunset 12/31/11).....	ppisa 12/31/09	-20	1	5	4	3	3	2	1	[7]	---	-7	-1
14. Special expensing rules for certain film and television productions (sunset 12/31/11).....	qlaipa 12/31/09	-162	-158	39	45	34	29	23	21	16	12	-202	-101
15. Expensing of "Brownfields" environmental remediation costs (sunset 12/31/11).....	epola 12/31/09	-493	-536	-66	83	91	86	77	67	57	50	-921	-583

Provision	Effective	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-20	2011-15	2011-20
16. Deduction allowable with respect to income attributable to domestic production activities in Puerto Rico (sunset 12/31/11).....	tyba 12/31/09	-229	-186	---	---	---	---	---	---	---	---	-415	-415	-415
17. Modify tax treatment of certain payments under existing arrangements to controlling exempt organizations (sunset 12/31/11).....	proaa 12/31/09	-34	-5	---	---	---	---	---	---	---	---	-40	-40	-40
18. Treatment of certain dividends of regulated investment companies ("RICs") (sunset 12/31/11)....	[10]	-108	-66	---	---	---	---	---	---	---	---	-174	-174	-174
19. Extend the treatment of RICs as "qualified investment entities" under section 897 (FIRPTA) (sunset 12/31/11).....	1/1/10	-23	-36	---	---	---	---	---	---	---	---	-59	-59	-59
20. Exception under subpart F for active financing income (sunset 12/31/11).....	tyba 12/31/09	-5,200	-3,957	---	---	---	---	---	---	---	---	-9,157	-9,157	-9,157
21. Look-through treatment of payments between related CFCs under foreign personal holding company income rules (sunset 12/31/11).....	tyba 2009	-814	-691	---	---	---	---	---	---	---	---	-1,505	-1,505	-1,505
22. Basis adjustment to stock of S corporations making charitable contributions of property (sunset 12/31/11).....	emi tyba 12/31/09	-19	-36	-6	-3	-3	-3	-3	-3	-3	-3	-67	-67	-67
23. Empowerment zone tax incentives (sunset 12/31/11).....	pa 12/31/09	-330	-46	3	1	---	-4	-1	-4	-4	-4	-371	-371	-371
24. Tax incentives for investment in the District of Columbia (sunset 12/31/11).....	pa 12/31/09	-88	-21	-2	-1	-4	-7	-4	-4	-4	-4	-116	-116	-116
25. Temporary increase in limit on cover over of rum excise tax revenues (from \$10.50 to \$13.25 per proof gallon) to Puerto Rico and the Virgin Islands (sunset 12/31/11).....	abi/USA 12/31/09	-235	-27	---	---	---	---	---	---	---	---	-262	-262	-262
26. Economic development credit for American Samoa (sunset 12/31/11).....	tyba 12/31/09	-15	-12	---	---	---	---	---	---	---	---	-27	-27	-27
27. Work opportunity tax credit (sunset 12/31/11).....	wpoifbwa 8/31/11	[2]	-131	-16	-8	-5	-2	---	---	---	---	-160	-160	-160
28. Qualified zone academy bonds (\$400 million allocation) (sunset 12/31/11).....	oia 12/31/10	[2]	-3	-8	-16	-21	-22	-22	-21	-19	-19	-48	-48	-48
29. Premiums for mortgage insurance deductible as interest that is qualified residence interest (sunset 12/31/11).....	apaaa 12/31/10	-261	-87	---	---	---	---	---	---	---	---	-348	-348	-348
30. Special rules applicable to qualified small business stock (sunset 12/31/11).....	saa 12/31/10	15	6	---	---	-62	-768	-420	-97	-74	-47	-40	-40	-40
D. Temporary Disaster Relief Provisions														
1. New York Liberty Zone - tax-exempt bond financing (sunset 12/31/11).....	bia 12/31/09	-8	-12	-12	-12	-12	-12	-12	-12	-11	-12	-56	-56	-116

Provision	Effective	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021-15	2011-20
2. GO Zone:													
a. Increase in rehabilitation credit (sunset 12/31/11).....	apota 12/31/09	-39	-21	[2]	1	1	1	2	2	2	1	-58	-50
b. Extend the placed-in-service deadline for GO Zone low-income housing credits (sunset 12/31/11).....	ppisa 12/31/10	-8	-34	-34	-34	-34	-34	-34	-34	-34	-34	-144	-314
c. Tax-exempt bond financing (sunset 12/31/11).....	DOE	-5	-18	-26	-26	-26	-26	-25	-25	-25	-25	-100	-226
d. Bonus depreciation for specified GO Zone extension property (sunset 12/31/11).....	ppisa 12/31/09	-171	-61	-4	-1	2	4	6	7	7	7	-234	-202
Total of Temporary Extension of Certain Expiring Provisions.....		-27,566	-15,887	-2,046	-1,363	-1,356	-2,021	-1,650	-1,317	-1,287	-1,160	-47,919	-55,349
NET TOTAL		374,154	-422,910	-119,751	6,551	17,410	13,461	10,070	6,282	3,371	1,859	-892,852	-857,806
Joint Committee on Taxation													
NOTE: Details may not add to totals due to rounding.													
Legend for "Effective" column:													
abil/Usa = articles brought into the United States after	dda = decedents dying after												
apa = appliances produced after	dda/gsta = decedents dying after and generation-skipping transfers after												
apota = amounts paid or incurred after	dmi = distributions made in												
aposa = amounts paid or accrued after	DOE = date of enactment												
ara = amounts received after	epota = expenses paid or incurred after												
bia = bonds issued after	epoid = expenses paid or incurred during												
cha = courses beginning after	fsoua = fuel sold or used after												
cma = contributions made after	grua = gifts made after												
cma = contributions made during	haa = homes acquired after												
cmi = contributions made in	ipa = interest paid after												
c/ba = calendar years beginning after	ma = months after												
da = dispositions after													
	oia = obligations issued after												
	pa = periods after												
	ppisa = property placed in service after												
	prosa = payments received or accrued after												
	qlatpca = qualified film and television productions commencing after												
	saa = stocks acquired after												
	saaa = sales and uses after												
	tyba = taxable years beginning after												
	wyotfbwa = wages paid or incurred for individuals beginning work after												

[Footnotes for JCCY-54-10 appear on the following page]

[illegible]

Chairman CAMP. Thank you very much, Mr. Barthold.
Mr. Holtz-Eakin, you are recognized for 5 minutes.

**STATEMENT OF DOUGLAS HOLTZ-EAKIN, PRESIDENT,
AMERICAN ACTION FORUM**

Mr. HOLTZ-EAKIN. Thank you, Chairman Camp, Ranking Member Levin, and Members of the Committee for the chance to be here today. You have my written testimony, and I look forward to the questions. I will be brief in my opening remarks.

I think there are three major points to be made. The first is that dynamic scoring is good science, and that is simply the case because the Committee should be interested in all of the responses in the economy to changes in tax policy, including the overall level of economic growth, and to exclude that arbitrarily is not good science. So the principles of dynamic scoring really should not be in debate.

The second point I would like to make is that the Committee needs to make some decisions in order for dynamic scoring to become operational and to achieve one of the chief objectives of scoring which is to be able to rank proposals in a consistent fashion, and I think that is where some very tough but not insurmountable decisions would have to be made.

In particular, I have considerable sympathy to the difficulties that Tom Barthold and his staff would have in executing this on a regular basis. So the Committee would have to include in its process enough time to do this analysis on a regular basis. There is no way around that.

Next is the Committee would have to decide on a single approach. You have seen three alternative macroeconomic approaches to doing the modeling. In order to get consistent ranking proposals, you are going to have to settle on a single approach so that when you look at two different tax reforms you can compare them in a consistent fashion. That would require settling at least on a year-by-year basis some of the tough questions about how forward looking people are and the degree to which you are going to recognize the business responses.

I think that is especially important in the debate over tax reform. There is no question that, at the moment, we would benefit from pro-growth tax reform where we were providing better incentives for the accumulation of human capital, technological skills, and fiscal capital. But it is also the case that we have woefully underutilized labor and capital resources in the economy right now. And to adopt good policies that both bring us back to full employment and raise the capacity at full employment to grow more rapidly I think is the objective. You are going to have to get both into the analysis in one way or another, and deciding the rules for doing that is crucial.

Third point in this regard is this issue of other policies that are going on in the economy. You will have to simply decide two important rules of thumb by which the Committee will operate. One would be what will you assume on a regular basis about the Federal Reserve so that each and every tax reform is accompanied by a comparable Federal Reserve response and you can get the ranking of them correct? The second, and I think the harder one, will

be deciding how you will provide for budgetary offsets when a tax reform loses money or gains money at certain points in time.

At the moment, we have two difficulties in this modeling. I want to emphasize this. The first is actually quite remarkable, and that is for some of these models, particularly for ones where there is tremendous foresight, those models simply cannot be calculated, meaning the computer algorithms will not run if the Federal Government's budget is on an unsustainable trajectory.

Our Federal budget is on an unsustainable trajectory. So in order to actually do the analysis you have to make some assumption about how to get the debt stabilized relative to GDP, and that is even before you can do the analysis of the tax reform.

The second piece is that when you do the tax reform analysis you have to have a regular and predictable offset for any budgetary gains or losses. Will it be spending cuts? Will it be tax increases out further in the future? The economy will react very differently depending upon how you do it. You have to decide upon a set of procedures which may seem arbitrary but which allow you to do the business on a regular fashion.

So the short message is that there will be a whole series of things that the Committee will have to decide in order to make this operational. They may be better or worse from a predictive point of view. I want to emphasize what Tom said about the difference between the forecast and the scoring. They may be better or worse from the prediction point of view, but they will allow you to rank things.

I will close with simply the reminder that this will not be a panacea. You will not find yourself dramatically changing the Federal budgetary outlook over especially the first 5 years on the basis of dynamic scoring. You will, however, probably adopt better tax policies from the perspective of jobs and growth. I think that should be the focus of the Committee's deliberations.

Thank you.

[The prepared statement of Mr. Holtz-Eakin follows:]

Economic Models Available for Analyzing Tax Reform Proposals

Testimony to the U.S. House of Representatives
Committee on Ways and Means

Douglas Holtz-Eakin, President
American Action Forum*

September 21, 2011

* The opinions expressed herein are mine alone and do not represent the position of the American Action Forum. I am grateful to Beth Robinson and Cameron Smith for assistance.

Introduction

Chairman Camp, Ranking Member Levin and members of the Committee, I am pleased to have the opportunity to appear today. In this testimony, I wish to make three major points:

- The economic impacts of tax reforms are extremely important. The principle of dynamic scoring is a good one that would potentially bring into the process greater information regarding beneficial tax policies,
- Dynamic scoring models are difficult to operationalize and would require difficult (but not impossible) “budget process-like” decisions to be implemented as the Ways and Means Committee considers tax reform, and
- For many reasons, dynamic scoring will not provide a panacea for the policy decisions regarding the U.S. fiscal outlook, the most important of which is that the dynamic impact over 10 years can be relatively small.

I will pursue each in additional detail.

Dynamic Scoring is Good Science

Budget “scores” are estimates of the change in the federal unified budget that would result from the passage of specific statutory language. Under current practice, the budgetary effects of all proposals are measured relative to a single, fixed baseline outlook for the budget, which is, in turn, built upon a projection for the United States economy. A key feature of scoring is that in evaluating legislation, the aggregate amount of economic activity – total production and income – is assumed to be unchanged from its baseline values. That is, the proposed legislation is assumed to have no effect on the macro economy and hence there is no accounting for potential feedback from changes in the macro economy to the budget.

It is this feature that has led some observers to refer to current scoring procedures as “static.” Unfortunately, this label has caused certain critics to mistakenly conclude that current procedures do not recognize any of the incentive effects of legislation; i.e., that firms, workers, investors, and households continue their economic lives as if nothing had changed. Nothing could be further from the truth.

For example, during my tenure at the Congressional Budget Office (CBO) the CBO scored the impact of the Medicare Modernization Act (MMA). To do so, the staff necessarily had to incorporate the decision of firms to offer insurance contracts for the cost of outpatient pharmaceuticals and bid for customers, the willingness of seniors to purchase such insurance, changes in the amount of drugs prescribed and

purchased, take-up of low-income subsidies, and a myriad other decisions by households, firms, and governments. However, in keeping with current practice, the overall level of gross domestic product and national income was assumed to be unchanged.

Dynamic scoring for tax reform proposals by the Ways and Means Committee (“the Committee”) would expand the range of economic impacts to include the pace of economic growth – that is, it would involve explicitly estimating the change in the aggregate level of economic output and income, and incorporating estimates of any second-round effects of these changes on budget aggregates. This has some desirable features. In estimating the impact of the legislation, analysts would (a) consider the direct impacts on program costs and tax receipts; (b) evaluate the effects on incentives to work, save, invest, legally or illegally avoid paying taxes, and generally conduct economic affairs; (c) estimate the resulting change in the overall level of economic activity; (d) compute the impact of this higher or lower level of economic activity on program costs and tax receipts; and (e) calculate the net impact of the legislation on the unified budget. The key difference is step (d), which is in turn built upon (c).

A virtue of dynamic scoring is that it extends analysis of tax policy to include economic policy dimensions. Specifically, dynamic scoring requires that analysts incorporate into their evaluation of legislation all of the economic feedbacks at the individual, household, firm, and national level. For this reason, it has the potential to distinguish between those policies that are equal in their budget cost, but very different in their overall economic incentives. Indeed, one of the most attractive aspects of dynamic scoring is its promise of allowing policymakers to distinguish between economically efficient tax policies that promote growth, and those that work to reduce the living standards of future generations.

The federal government has only dipped its toe into the waters of dynamic scoring. The CBO has undertaken dynamic scoring as part of its analysis of the President’s annual budget submission since 2003, and the Joint Committee on Taxation did a study of the dividend and capital gains tax reduction in 2003. Nevertheless, for many years private research groups and think tanks have performed such analyses. Private consulting firms, such as Macroeconomic Advisers, and think tanks, such as the Heritage Foundation, have performed macroeconomic evaluations of proposed policy changes. However, those analyses typically focused more on the economic effects than the budgetary implications. In this sense we have seen dynamic scoring of major policy proposals already, but on a somewhat *ad hoc* basis.

For purposes of the Committee, and more systematic approach is desirable. While dynamic scoring is better suited to evaluate pro-growth tax reforms, it is still *scoring*. That is, the basic mission remains to rank competing proposals in a systematic fashion so that policymakers can identify which proposals are better or worse from a growth and budget perspective. Accordingly, it would be useful for

the Committee to make the decisions necessary to implement dynamic scoring as a regular part of its deliberations.

Difficult Decisions Need for Dynamic Scoring

To be consistent and effective, the Committee will have to address four important areas.

Time. The scale of the analysis involved in preparing baseline budget projections points to the first problem with wholesale adoption of dynamic scoring: time. It is inevitable that statutory language continues to evolve throughout the legislative process: committee deliberation and reporting, floor amendments and votes, and conference committee negotiations. Often there is a need for very quick and timely scoring information. The scale of a dynamic scoring effort may be in conflict with this need.

Adopting a Single Approach for Estimates. A practical difficulty with dynamic scoring has been the absence of a single, consensus approach to the estimates. The attraction of dynamic scoring is its ability to reveal the impact of legislation on economic growth. However, this impact depends crucially on the overall foresightedness of U.S. households and firms. To take an extreme case, imagine legislation that cuts all marginal tax rates by five percentage points, with the cut to take effect five years from now, but sunset ten years in the future. If people are extremely myopic, this policy has no impact on incentives to work, save or invest and there is no dynamic feedback. If they are moderately forward-looking, they may anticipate lower taxes and respond to these incentives. If they are even more forward-looking, they will recognize both the tax reduction and the subsequent rise. As a result, they will work especially hard during the intervening years – yielding a larger increase in output, incomes, and taxes – with a sharper decline when taxes rise again.

One approach to this problem, exemplified by the CBO's macroeconomic analysis of the president's budget proposals, is to provide a variety of estimates, each corresponding to a different degree of foresight. However, the Committee scoring process requires a single set of estimates. Thus, at the outset of its work it is necessary that agreement be reached on the approach to be employed regarding foresightedness, the pace of international capital flows, saving responses of households and firms, and so forth. Choosing a single approach would require resolution of some very knotty technical and philosophical issues.

Balancing the Budget. The example sketched above highlights another issue in the conduct of dynamic scoring: the need for an "offsetting policy." Over the long-term, if individuals have foresight, then government debt (relative to the economy) must stabilize. Legislative proposals that upset this requirement by increasing spending or reducing taxes (at least relative to their impact on economic growth) will produce

debt that will grow explosively. Similarly, spending cuts or tax increases (relative to their impact on the economy) will cause debt to spiral down. Since the government can neither borrow nor save unboundedly large amounts, it is necessary to put a stop to either spiral by introducing an offsetting budget policy at some point in the future.

The choice of offsetting policy – spending increases or decreases and the pace at which they take place, tax reductions or increases and their timing, or some combination of these – will have differential effects on the behavior of individuals and firms and influence the score. Since a primary objective of scoring is to treat all legislative proposals equally, it will be necessary to pick a single type of offsetting policy and use it for all proposals.

An equally important – but often overlooked – aspect of this problem is getting the debt stabilized to begin the analysis. Some approaches to dynamic scoring, particularly forward-looking growth approaches, simply will not work (i.e., the computer algorithms will not function) when the government budget is on an explosive debt trajectory. The federal budget *is* on such a trajectory. Thus, even to begin the work of analyzing tax reform it would be necessary to assume an answer to the basic task facing the Committee: how can the debt be stabilized?

Supply-side versus Demand-side Dynamics. Another challenge in implementing dynamic scoring is the degree to which the score reflects only supply-side growth, or also includes demand-side cyclical influences. Broadly speaking, economies grow in one of two ways. Supply-side growth occurs when there is an increase in the capacity to produce goods and services through the addition of greater labor supply (labor force participation, hours worked, higher effort per hour, greater skills per worker, better efficiency in the use of labor effort and skills, and so forth), greater physical capital (more or better equipment, software, buildings, and so forth) and improved technical prowess (new technologies or superior organization and management). These responses are at the heart of pro-growth tax policies.

Demand-side growth (or contraction) reflects business cycle fluctuations in the extent to which existing labor supply, capital, and technical prowess are utilized. Obviously, these are also at the center of attention for the Committee in the current economic setting. The attention paid to monetary and other stabilization policies is clear tribute to the fact that recessions are costly and faster recoveries are desirable.

As noted above, the Committee will need to settle on a single way of conducting its dynamic scoring. In light of the need for growth of both types to be incorporated into the analysis, it will require adding business-cycle considerations to growth-style modeling approaches. Conventional approaches to these problems have kept these responses separate, so the staffs will be forced to develop a feasible, if *ad hoc*, manner of merging the two approaches. This work should begin immediately.

Finally, the ultimate size, direction, and character of demand-side effects of fiscal policy changes depend as well upon the assumed path of monetary policy. In a manner similar to offsetting budget policies, it would be necessary to make assumptions regarding the response of monetary policy to the legislative changes.

Dynamic Scoring Will Not Be a Panacea

One occasionally hears that dynamic scoring is desirable because it will be more accurate. While dynamic scoring will more fully incorporate a wider range of behavioral responses, it is not likely to improve accuracy. First, the mechanical nature of scoring – evaluating different policy proposals using a baseline fixed at the beginning of the legislative process – is necessary for even-handed evaluation of alternative proposals, but hardly a recipe for improved accuracy in an ever-changing economy. That is, adopting dynamic scoring does not mean that the baseline should or would be updated. Accordingly, it will continue to be “out of date” and estimates based on it will suffer inaccuracy.

Further, as noted earlier, the same level, legislative playing field necessarily entails identical and “unrealistic” assumptions regarding offsetting budget policies and monetary policy.

Similarly, any move to dynamic scoring would not eliminate the need for analysts making judgment calls in the course of the analysis. Quite the contrary, as noted above, in addition to the plethora of issues that already exist (e.g., how fast will legislation become law; how quickly will administrative rule-making be completed; how fast will awareness spread?) additional decisions will be needed on the model of economic growth policies’ ability to influence that growth.

Neither the failure to improve accuracy or the expanded need for judgment is bad. The combination of baseline projections and budget scores is intended to support the legislative process, not forecast the economy. There are far more parsimonious and accurate forecasting procedures available. Evaluating innovative legislative proposals necessarily requires analytic judgment because there is literally no policy track record on which to rely. Dynamic scoring may reflect a change in the desired content of the budget process; it does not change the fact that scoring supports that process.

Finally, the greatest reason that dynamic scoring is not a panacea is that it is unlikely to change the bottom line very much over the budget window. Most legislative proposals don’t have enough overall “bang” to generate much dynamics. Of course, some have superior incentive effects – a big “bang for the buck.” But even the dynamics of these proposals are not likely to look very large. Over the period from 1820 to 1998, output per capita in the United States grew an average of 0.4 percentage points faster than in the United Kingdom (1.74 versus 1.35 percent per

year). Thus, 0.4 percentage points per year if maintained long enough is a big supply-side growth-effect. Big enough to transform the global economic order! But a superior tax policy that generates such a permanent increase in growth will have only modest impacts over the first 10 years.

Conclusions

I believe the Committee will benefit from the use of dynamic scoring in its deliberations regarding tax reform. However, to do so, it must move quickly to make important decisions regarding the process by which the scoring will be done.

Thank you for the opportunity to appear today. I look forward to answering any questions the Committee may have.



Chairman CAMP. Thank you very much, Mr. Holtz-Eakin.
Mr. Buckley, you are recognized for 5 minutes.

**STATEMENT OF JOHN L. BUCKLEY, VISITING PROFESSOR,
GEORGETOWN UNIVERSITY LAW CENTER**

Mr. BUCKLEY. Thank you, Mr. Chairman and Mr. Levin, for the opportunity to speak to you today.

I will echo Mr. Levin's remarks about the amount of work and the skill that has been brought to this task by the Joint Committee staff. However, they, like every other economist, are faced with the fact that it is virtually impossible to model—for any economic model to accurately reflect our complex economy with global flows of capital goods and services. Therefore, these models, by necessity, use simplifying assumptions, and those simplifying assumptions often bear little relationship to reality.

They are also, as both Tom and Doug pointed out, very dependent on assumptions of what other governmental agencies will do, including both the Federal Reserve and foreign governments, how will they respond to the tax policy.

The impact on important sectors like health care, housing, or manufacturing are not measured by these models or measured only in very partial ways. Tax reform could easily remove long-standing tax benefits for these important sectors with consequences that this Committee needs to understand. The models do not provide that insight at this time.

I would suggest before this Committee places a greater importance on these models, this macroeconomic analysis, there are important questions for which they should seek answers.

The Reagan tax cut in 1981 promised large economic benefits because of its rate reductions. Why did a study by Martin Feldstein on the impact of the 1981 Tax Act conclude that it had no net impact on economic activity?

The 1986 Tax Reform Act is very similar in structure to what people are talking about today, rate reductions coupled with a broadening of the tax base. Under standard economic theory, you would have seen a labor response and a capital response. Yet a study conducted by the University of Michigan found no measurable impacts on the real-world factors that economists care about.

In 1993, opponents of the Clinton tax increases could rightfully say that virtually every economic model in the country projected that that Act would reduce economic growth and reduce jobs. The response in the economy was totally different. The economic projections that accompanied the 2001, the 2003, and for that matter the 2009 tax reductions have not been reflected in the real world. The job growth and economic growth following those Acts was far less than what was predicted. I would suggest the Committee needs to explore why those projections were wrong before they place greater impact on this analysis.

I also agree in many respects with what Doug has said. The question to me is whether you use these models for analysis or scoring. They can provide important insights in designing tax policy, and you can fix the assumptions so all tax policies are judged the same. But the real question is whether they will be used for

scoring of {budget estimates}, and that is where I think there is real risk of doing damage.

These are very uncertain economic projections, even the best of the models. If you base your budget estimates on these models and those budget estimates do not have credibility in the financial markets, you risk serious adverse consequences. The models have to be both understandable and credible to the financial markets before they can be used in making budget estimates or I think you risk great harm. They also have to be based on assumptions that the financial markets find credible, and many of the assumptions today do not reflect our economy.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Buckley follows:]

WRITTEN TESTIMONY OF
JOHN L. BUCKLEY
VISITING PROFESSOR
GEORGETOWN UNIVERSITY LAW CENTER
COMMITTEE ON WAYS AND MEANS
SEPTEMBER 21, 2011

Chairman Camp and Ranking Member Levin, I want to thank you for the opportunity to appear before you today. It is a pleasure to be back in a very familiar room, but in an unaccustomed role. I appear today in my personal capacity, and my remarks represent my personal opinions.

I strongly support the idea that the tax legislative process would benefit from more information on the macroeconomic impact of major tax legislation. The current House Rule requiring the inclusion of macroeconomic effects of tax legislation in the Committee Report may have been well intentioned, but it is ineffectual. It provides relevant information but only after this Committee has made the critical decisions on the substance of legislation. Reviewing the methodology used by the staff of the Joint Committee on Taxation in analyzing the macroeconomic effects of changes in tax policy is certainly appropriate. But, I believe that this Committee should do more than that to ensure that it is aware of the potential impact of tax reform on our economy.

JCT MACROECONOMIC MODELS

It is impossible for any economic model to fully reflect the complex economy that we have today with global flows of goods, services and capital. All macroeconomic models have simplifying assumptions and therefore limitations for analyzing the impact of tax changes on our economy. The JCT staff appropriately presents multiple models "when analyzing tax

proposals because no one model framework can provide complete information about the broad array of anticipated effects of tax policy on the economy.”¹

The models used by the JCT staff differ in basic assumptions. Two of the models assume full utilization of labor and capital (i.e., no unemployment). One model assumes that we have a closed economy with no international flows of capital, goods, or services. Another assumes an open economy and the third is somewhere between those assumptions. In one model, individuals are assumed to have “perfect foresight” about economic conditions over their lifetimes. In other models, individuals do not have that level of clairvoyance.

The impact of tax policy changes that could change the distribution of the tax burden among important sectors like housing, health care, insurance, financial services, retail, and manufacturing is either not modeled at all or in a way that does not completely address all the possible effects. Winners and losers are not identified as such.

None of this is intended to be critical of the JCT staff’s work in this area. Their work represents some of the best economic analysis in the country. But, they cannot overcome a simple fact: it is impossible to develop an economic model that accurately reflects our complex economy, or accurately measures the impact of a comprehensive tax reform on that economy.

The JCT analysis provides important, theoretical insights as to how our economy works. It provides useful supplemental information to inform Members on the potential impact of tax policy changes. But, it should not be the only economic information that this Committee uses in developing a tax reform plan.

Based on economic studies and simple observations of economic performance after the enactment of major revenue legislation, I would also note that the economic projections based on these models have consistently overstated both the positive and negative impacts of the legislation involved.

EXAMINATION OF ECONOMIC IMPACT OF TAX REFORM ACT OF 1986

If you believe, as I do, that the economic models are imperfect guides for tax reform, the question remains: what should the Committee do to prepare for tax reform? I would suggest an examination of the real world impacts of the Tax Reform Act of 1986, the last time that the Congress enacted a tax reform that substantially reduced rates and broadened the tax base.

¹ Macroeconomic Analysis of a Proposal to Broaden the Individual Income Tax Base and Lower Individual Income Tax Rates, JCX-53-06, December 14, 2006, page 7

Many economists predicted that the Tax Reform Act of 1986 would increase economic efficiency and contribute to increased economic growth. Those predictions seemed especially warranted since most of the base broadening was accomplished through eliminating clearly distortive, nonproductive, tax-shelter activities. Others warned that the removal of investment incentives, like the investment tax credit, would lead to the deindustrialization of America.

The University of Michigan commissioned a study of the economic impact of the 1986 reforms by a group of prominent economists, which included both proponents and opponents of the 1986 reforms. The published results of that study reflect an almost unanimous consensus that the real world effects of the 1986 reforms, both good and bad, were substantially less than predicted. "Most of the papers presented at this conference reinforce casual observation that TRA86 has had little effect on the broad measures of real economic activity in which most economists are interested."²

The fact that the Tax Reform Act of 1986 may have produced little real economic benefit does not detract from its merits. It eliminated abusive and nonproductive tax shelters, and the elimination of such tax shelters did not impose large costs on the economy. The widespread use of individual tax shelters has been eliminated. Any future tax reform will involve the elimination of "long-term features of our system embedded in the fabric of our society."³ Elimination of those benefits will result in dislocations in important sectors like housing and healthcare. The Committee should carefully examine the benefits of broad-based reform before imposing those costs.

DETAILS MATTER

Details matter when it comes to the economic impact of major tax policy like comprehensive tax reform. A meaningful discussion of the economic impact of tax reform can only occur in the context of a detailed proposal. Mr. Chairman, earlier this year you laid out an ambitious agenda on tax reform. Like you, I strongly believe that our tax laws need reform. I also believe that more than abstract discussions of reform are necessary to start the tax reform process.

Most economists asserting the economic benefits of tax reform are modeling their vision of an ideal tax system. Most often, it is a vision that would have little political viability and unrealistically low rates because of the omission of items like transition relief. They cannot analyze the impact of reform without a specific plan, nor can this Committee.

² Do Taxes Matter?, edited by Joel Slemrod, MIT Press, 1990, page 322.

³ Testimony of Jonathan Talisman before the Senate Finance Committee, March 1, 2011.

The tax reform process in the 1980's began with the introduction of legislation by Senator Bradley and Congressman Gephardt. The introduction moved the process from abstract discussions of reform to the more important task of analyzing the impacts of specific approaches. I will use two examples to show why I believe that a detailed proposal is required.

The first example is tax benefits for owner-occupied housing: the mortgage interest deduction and the real property tax deduction. A tax reform plan with low rates and a broad base probably would eliminate or sharply restrict both of those deductions. I, along with many economists, believe that the value of those benefits is capitalized in the price of homes. Therefore, reducing or eliminating those benefits could threaten further reductions in home prices.

The second example is what many people see as the outline of a potential corporate tax reform plan. Such a plan would include a significant reduction in the overall corporate tax rate and a tightly constructed, revenue neutral, territorial system overseas. The rate reduction would be funded by repeal of tax benefits such as accelerated depreciation and the section 199 deduction for domestic manufacturers. A plan of this type could easily result in a net tax increase on the domestic manufacturing sector. A territorial system by itself repeals current law benefits for exports from the United States and for royalties for the product of research conducted in the United States. Accelerated depreciation and the section 199 deduction also are large benefits for domestic manufacturers.

In principle, I can see the arguments for a neutral tax system with an even playing field. But, many other countries take a different approach. As a result, I tend to favor an even playing field that tilts in favor of promoting jobs in the United States.

An economic analysis of the impact of tax reform on the housing sector or manufacturing sector can be analyzed only in the context of a comprehensive, detailed tax reform proposal with transition relief. These are only two examples of many such issues.

SHOULD MACROECONOMIC ANALYSIS AFFECT BUDGET ESTIMATES?

Finally, Mr. Chairman, I want to urge you and other Members to resist the temptation to use these uncertain economic models to determine the budgetary effects of tax legislation. Today, we have a serious budget problem, but our estimates of the costs (whether foregone revenues or direct government spending) of policy changes have credibility in the markets because they are based on generally accepted cost accounting rules.

Businesses, like governments, incur costs with the expectation that those costs will yield a positive return. In the case of businesses, those costs can come in the form of investments in plant and equipment, research and employee training. Businesses are required to reflect the full cost of those investments on their books without any reduction for their potential benefits. The anticipated benefits are recognized if and when they occur.

Currently, our budget score-keeping rules roughly conform to business practice. The costs are recognized up-front and the benefits are recognized if and when they occur. I know from personal experience that those rules frustrate Members from both sides of the aisle. But, I think that a departure from those rules would threaten the credibility of our budget numbers and create the unavoidable perception that political considerations affect budget numbers. The loss of that credibility could have serious consequences.

Testimony Embargoed Until 9.21.2011 at 10am.



Chairman CAMP. Thank you, Mr. Buckley.
Mr. Beach, you are recognized for 5 minutes.

**STATEMENT OF WILLIAM W. BEACH, DIRECTOR, CENTER FOR
DATA ANALYSIS, THE HERITAGE FOUNDATION**

Mr. BEACH. Thank you very much, Mr. Chairman, Congressman Levin.

It is difficult to find economists who would argue that the Federal Government's tax and spending policies just make absolutely no difference to U.S. economic performance. In this age of massive and growing Federal debt, it is even more difficult to find a politically engaged citizen who fails to see the connection between Federal fiscal policy and economic performance. Indeed, all across the political spectrum and throughout the leading schools of economic thought a broad consensus exists that what governments do with tax dollars and their outlays as well and how they raise revenues matters in the larger dynamic economic world.

Thus, it is crucial that economic models that organize complex theory and data be available and used by policymakers to chart the most beneficial course for the country, given the policy options available to us. I agree very much analysis is hugely important. Some observers, however, would warn policymakers away from the use of economic models entirely, even to analyze the likely outcomes of policy change. But the usefulness of the policy tools far outweighs the known disadvantages. Indeed, the absence of dynamic economic analysis in major policy debate should be enough to stop such a debate until it is informed by such analysis.

Today's economic policy models carefully sort through the fundamental requirement that behavioral changes be prominent drivers of economic estimates. Likewise, today's complex and nuanced models nevertheless perform with the speed that policymakers require. It is in fact unacceptable to deliver estimates of how policy change will likely affect economic activity after the policy change has been adopted.

To be frank, there is also the view that dynamic scoring and analysis—and those are two different processes—is a part of the legislative process advanced by advocates only of tax reductions and limited government. This misimpression has done much to keep this useful tool out of the policymakers' hands. Let me illustrate.

Heritage used a model of the U.S. economy in 2007 to estimate the economic effects of the tax bill advanced by then-Chairman Charles Rangel—Congressman Rangel, who is before us today—when he chaired the Ways and Means Committee. Chairman Rangel's reduction of the corporate income tax rate from 35 to 33 percent in fact drew Heritage's praise, and our model indicated that this rate reduction alone would support the creation of as many as 220,000 jobs. Other provisions of Chairman Rangel's plan, however, we thought neutralized that very good effect.

It may surprise some on this Committee to learn that Heritage's Center for Data Analysis has published the only dynamic analysis and score of the justly famous tax reform proposal of Senators Ron Wyden and Dan Coats, which previously that bill was cosponsored, as you know, by Senator Judd Gregg. Our analysis showed policy-

makers that this bipartisan reform effort could potentially mean that the Federal deficit would be \$61 billion lower per year; the Nation's debt-to-GDP ratio would be 3.9 percentage points lower in 2020; there would be 2.3 million more jobs created on average in each of the years in which the tax reform had full effect.

No one knows, of course, what policymakers will do, even when they possess the very best analytical tools. This we do know, however: The standard conventional or static tax models used today by the official revenue estimators at the Joint Committee in the absence of their dynamic analysis could produce highly inaccurate revenue estimates and estimates of economic effects. It is this record of inaccuracy and, thus, of bad policy advice that has fueled the interest in dynamic analysis over the past 20 years in which I have been working on this issue.

In the real world, we know that businesses and consumers will respond to both tax cuts and tax hikes, and they will do so in fairly predictable fashions. Tax cuts often, but not always, spur investment, which spurs hiring and increases payroll taxes; and they lead to a positive feedback effect for government treasuries. Yet it is exactly this kind of feedback effect that static analysis misses.

Advocates of dynamic scoring must be careful not to oversell its capabilities or benefits. There are legitimate disagreements about which economic model best captures the economic effects of tax policy changes. Even so, we get better, more transparent government by encouraging the introduction of more economics into the evaluation of tax policy choices and the occasional use of dynamic scoring models to advise policymakers on really big tax bills. Better government and better tax policy is, I believe, a winning combination of benefits that assures the widespread adoption of dynamic analysis in the process of creating tax policy.

Thank you very much.

[The prepared statement of Mr. Beach follows:]



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CONGRESSIONAL TESTIMONY

**It is Time to Include
Dynamic Economic Analysis
in the Process of Changing
Tax Policy**

**Testimony before
Committee on Ways and Means
United States House of Representatives**

September 21, 2011

**William W. Beach
Director, Center for Data Analysis
The Heritage Foundation**

My name is William Beach. I am the Director of the Center for Data Analysis at The Heritage Foundation. The views I express in this testimony are my own, and should not be construed as representing any official position of The Heritage Foundation.

It is difficult to find any serious economist who would argue that the federal government's tax and spending policies make no difference to U.S. economic performance. In this age of massive and growing federal debt, it is even more difficult to find a politically engaged citizen who fails to see the connection between federal fiscal policy and economic performance.

Indeed, all across the political spectrum and throughout the leading schools of economic thought, a broad consensus exists that what governments do with tax dollars and how they raise those revenues matters in the larger, dynamic, economic world.

Thus, it is crucial that economic models that organize complex theory and data be available and used by policymakers to chart the most beneficial course for the country given the policy options available to us. Some observers, however, warn policymakers away from the use of economic models, even to analyze the likely outcomes of policy change. Certainly economic models used to make decisions can be faulty, wrongly constructed, and manipulated by individuals with their own political or financial agenda; but the usefulness of this policy tool far outweighs these known disadvantages. Indeed, the absence of dynamic economic analysis in major policy debates should be enough to stop such a debate until it is informed by such analysis.

Why? Let me offer three reasons.

First, only the most trivial policy decisions likely escape the requirement that policymakers weigh the alternatives of various courses of action. The central mission of a policymaker is to design a path to a certain policy goal without wasting the public's resources. Almost by definition, this design exercise reduces itself to a series of mental experiments supported by data and projections about the costs and benefits of competing paths to the same goal.

It should be readily apparent that urging an evaluation of competing paths hardly needs to be argued; and, for most decisions by Members of Congress, such a careful evaluation is made. For most: but not for all. The practice of including projections of how policy change and economic activity interact is not employed routinely in evaluating competing policy paths. The tools for doing so exist in relative abundance; we can find them in the offices of the Joint Committee on Taxation, at the Congressional Budget Office, at the Energy Information Agency, and at Treasury.

However, their use has not been instituted formally into the policy evaluation process. While critics of these models raise concerns about model accuracy and the time

it takes to create economic estimates, the most likely reason for their disuse stems from how few tax and regulatory increases would be enacted if Members were required to publicly debate the economic as well as the fiscal costs of policy changes.

Second, evaluating the economic effects from policy change absolutely matters to policy decisions. The ability of governments to extract resources from the private sector, either through taxes, spending, or regulations, alters the path of private output. That change need not be negative, since the provision of public goods usually affects the growth path positively. Most change, however, moves the economy below its potential, largely because not all private resources used by the public sector go for the creation of goods and services that complement private output. The point is that the path is changed.

Changes to economic activity directly affect the base for revenues and the costs of public debt, among other effects. Given such direct influences on fundamental parts of government finance, alternative paths to the same policy goal will produce different “feedbacks” from the private economy. Each feedback may affect the efficiency of attaining a policy end. All of this means that decision making must include the evaluation of how the economy is affected by policy change.

Third and finally, model builders bear a large responsibility to make substantial improvements to the accuracy, suitability, and cycle time of their policy models. Not all of the stories about the dangers of dynamic models are baseless. Models that rely solely on historical data can produce false signals about how policy change will likely affect future economic behavior. Likewise, models that assume that the economy settles down to a stable growth path even after accounting for behavioral changes can deceive policymakers into thinking that policy change will likewise always produce the same, stable policy results.

Model builders, however, are acutely aware of these design and theoretical issues. Today’s economic policy models carefully sort through the fundamental requirement that behavioral changes be prominent drivers to economic estimates. Likewise, today’s complex and nuanced economic models nevertheless perform with the speed that policymakers require. It is unacceptable to deliver estimates of how policy changes will likely affect future economic activity after the policy change has been adopted. Given the suite of models currently available, this “cycle time” concern of policymakers can be laid firmly to rest.¹

To be frank, there is also the view that dynamic scoring and analysis is a part of the legislative process advanced by advocates of tax reductions and limited government.

¹A review of improvements to macro models and modeling technique is found at Narayana Kocherlakota, “Modern Macroeconomic Models as Tools for Economic Policy,” Federal Reserve Bank of Minneapolis, *Annual Report*, October 5, 2009, at http://www.minneapolisfed.org/pubs/region/10-05/2009_mplsfd_annualreport_essay.pdf (October 10, 2010).

This misimpression has done much to keep this useful tool out of policymakers' hands. Let me illustrate.

Heritage used a model of the U.S. economy in 2007 to estimate the economic effects of a relatively modest tax bill by Congressman Charles Rangel when he chaired the Ways and Means Committee.² Chairman Rangel's reduction of the corporate income tax rate from a top rate of 35 percent to 33 percent drew Heritage's praise, and our model indicated that this rate reduction alone would support the creation of as many as an additional 220,000 jobs. Other provisions of Chairman Rangel's plan, however, neutralized this good effect.

It may surprise some on this Committee to learn that Heritage's Center for Data Analysis has published the only dynamic analysis and score of the justly famous tax reform proposal by Senators Ron Wyden (D-OR) and Dan Coats (R-IN), which previously was co-sponsored by Senator Judd Gregg (R-NH).³ Our analysis showed policymakers that this bipartisan reform effort could mean that:

- The federal deficit would be an average of \$61 billion (nominal) lower per year;
- The nation's debt-to-GDP ratio would be 3.9 percentage points lower by the end of 2020, indicating a significant reduction in publicly held debt;
- An average family of four would have about \$4,095 more disposable income every year;
- Foreign investment in the U.S. would be an average of \$292 billion (nominal) higher each year, and U.S. multinational corporations would repatriate and invest an average of \$19 billion (nominal) more in the U.S. per year;
- 2.3 million more jobs would be created on average each year;
- The aggregate net wealth (assets minus liabilities) of U.S. households would be \$643 billion higher by the end of 2020; and
- Real GDP would be an average of \$298 billion higher per year.

No one knows, of course, what policymakers will do, even when they possess the very best analytical tools. This we do know, however: The standard, conventional, or static tax models that are used today by the official revenue estimators in Congress's Joint Committee on Taxation (JCT) and the Congressional Budget Office are highly inaccurate because they do not include the economic effects of tax policy changes. It is this record of inaccuracy and, thus, bad policy advice that has fueled the interest in dynamic analysis and scoring.

²William Beach and Guinevere Nell, "The End of Pro-Growth Tax Policy: How the Rangel Tax Bill Could Affect the U.S. Economy," The Heritage Foundation *Backgrounder* No. 1697, November 7, 2007, at http://s3.amazonaws.com/thf_media/2007/pdf/wm1697.pdf.

³Karen Campbell and Guinevere Nell, "How the Wyden-Gregg Tax Reform Proposal Affects Taxpayers and the Economy," Heritage Foundation *Center for Data Analysis Report* No. 10-04, May 19, 2010, at http://thf_media.s3.amazonaws.com/2010/pdf/CDA_10-04.pdf.

In the real world, we know that businesses and consumers will respond to both tax cuts and tax hikes, and they do so in fairly predictable ways. Tax cuts often spur investment, which spurs hiring and increases payroll taxes—and they lead to a positive feedback effect for government treasuries. Yet it is exactly this kind of feedback effect that static analyses miss.

It happened in the early 1960s, when President Kennedy's plan to reduce the top marginal tax rate from 91 percent to 70 percent took effect. Total tax revenues actually climbed 4 percent, despite predictions that the cuts would plunge the country deeply into debt. It happened again when President Reagan reduced the top rate from 70 to 50 percent in 1981. Economists employing the static models now in use at key government agencies predicted federal revenues would fall by \$330 billion over 5 years. Instead, they fell by \$79 billion, and the economy boomed.

Even more interesting is the recent revenue growth from capital gains. The JCT forecast revenue declines following the 2003 tax rate reduction. That is exactly what many in official Washington expected, too. However, revenues from capital gains taxes exploded.

In these cases, taxpayers got higher post-tax incomes, expanded economic opportunities, and better financial security. The government got a fast-growing economy, more people working, more taxable earnings per worker and, thus, more revenue than "static" estimates had predicted.

Advocates of dynamic scoring must be careful not to oversell its capabilities or benefits. There are legitimate disagreements about which economic model best captures the economic effects of tax policy changes. There is also little reason to believe that tax cuts, even the best ones, will pay for themselves right away through super-nova revenue reflows from a stronger economy. Finally, the technical difficulties of economic modeling mean that this technique should be reserved for only the most important tax issues.

Even so, we get better, more transparent government by encouraging the introduction of more economics into the evaluation of tax policy choices and the occasional use of dynamic scoring models to advise policymakers on the really big tax bills. Better government and better tax policy is, I believe, a winning combination of benefits that assures the widespread adoption of dynamic analysis and scoring.

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Chairman CAMP. Thank you very much.

Thank you all for your testimony.

Mr. Holtz-Eakin, the Committee has heard from a number of witnesses this year that comprehensive tax reform that broadens the base and lowers rates will help spur economic growth and job creation. Can you walk us through the economics of why this is the case and how that might manifest itself in economic models that analyze any proposal. And what is it about that type of reform that would promote growth?

Mr. HOLTZ-EAKIN. Economies grow in two ways. The first is by increasing their capacity to produce; and that comes from giving up something in the present and investing in either physical capital, factories, equipment; skills and human capital, better, more productive workers; or new technologies and a higher level of innovation.

The tax system influences that in deep and fundamental ways because individuals have to give up something now for a return in the future, and taxes affect those returns. As a result, a tax system that is fundamentally reformed to lower marginal tax rates and take less of that return will incentivize people to undertake those activities. If it is a reform that is durable and predictable, it will also give them greater confidence in those future returns and, by removing that uncertainty, incentivize activities. So it is not really complicated. It is at the core of the nature of economic growth.

It is also true at the moment that the economy can grow by utilizing the existing resources. We have millions of workers out of work, we have lots of factories not in use, and if we were to undertake fundamental tax reform right now we could spur immediate activity on top of these long-run impacts.

I think, for example, a corporate rate cut would right now change the valuation of our existing capital. So we would see equity values go up. That would make household balance sheets better. They would spend more. It would change the incentives for business to invest right now and thus lead to the kinds of feedbacks on to hiring and payroll taxes that Bill Beach mentioned. It would also change international location decisions, which happen quickly, where you could get capital flows into the economy.

So, in both ways, fundamental tax reform can spur immediate growth and long-run growth.

Chairman CAMP. Thank you.

Both for you and Mr. Barthold, as Mr. Holtz-Eakin just said in sort of response to this question, I understand a dynamic analysis would analyze the impact that reform could have on the supply of labor and capital. As he mentioned, idle factories, workers out of work. So, given our current economic conditions, with high unemployment and large amounts of capital sitting on the sidelines, do you think the benefits of reform could be even larger than historical assumptions? Or, put another way, do the current group of economic models sufficiently recognize the excess capacity that I have just mentioned?

And if each of you would like to respond or, Mr. Barthold, if you would like to go first.

Mr. BARTHOLD. As Doug noted, macroeconomic growth occurs both from increases in aggregate demand and increases in aggre-

gate supply. Generally, people tend to think of the aggregate demand effect as more of a short-term effect. The point that you were just raising, Mr. Chairman, with the excess capacity means if there were an increase in demand then we could put resources to work even without expanding the economy's future capacity.

In terms of models and what they show, actually, our MEG model is structured to attempt to analyze what economists would generally think of as disequilibrium outcomes. In other words, our current relatively high unemployment can be reflected in short periods of time in our MEG model while over the long run it provides more equilibrium outcomes. Is that model perfect? No.

Another factor that I think your question also raised is are we reflecting the range of outcomes you could see. One thing that I tried to emphasize a little bit was the difference between—and Doug mentioned this, also—the difference in Fed responses. You would expect with current high unemployment that the Fed would be more neutral and would let the aggregate demand incentives, the improved cash flow aspects of the tax reduction, for example, flow through to consumers without trying to fight inflation by raising interest rates in the short term, with interest rates being increased. So that would provide some short-run and some of the longer-run crowding-out effects.

As whether there are facets that the models try to capture perfectly and across all sectors obviously, I have to say the answer to that is no and we are still working on it.

Mr. HOLTZ-EAKIN. So I think the key for this Committee is that if you were to go forward with an approach that encompassed, as the MEG model does, both the near-term business cycle impacts and the longer-term supply side growth you could do that in a way that was rigorously comparable both over time and at any point in time across proposals. You would always be starting from a baseline.

That baseline at the moment reveals enormous unemployment—we are starting from a very low level of economic activity—and, as a result, could show quite potentially large business cycle gains. At other points in time, the baseline perhaps right at full employment, the same modeling approach would not give you any business cycle gains because you are already at full employment. It would only have the supply side approaches.

So I don't think there is any disqualifying problem with having that kind of approach. The baseline would capture the starting point and the degree to which you could get the near-term gains.

In the same way, having a consistent rule for how the Fed reacts, the Fed is unlikely with large amounts of unemployment to be raising rates at a rapid rate, and a rule for how the Fed behaves would capture that. So I don't see any overwhelming obstacle to instituting a set of procedures that were consistent at any point in time and captured what is going on in the economy over time.

Chairman CAMP. All right. Thank you.

Mr. Levin is recognized.

Mr. LEVIN. Mr. Chairman, I want to state clearly why I think this hearing is perplexing and potentially counterproductive. We need analysis. We also have a crisis facing this country and its families. A jobs crisis. A growth crisis. We have proposals pre-

sented by the President of the United States relating to economic growth and jobs. Most of those proposals are in the jurisdiction of this Committee. We should have an analysis of those. We should have hearings on those.

We have one analysis—I don't know if you call it dynamic, but let it not misshape what the challenge is before us. So one analysis, as I mentioned in my opening statement, Mark Zandi's, is that the President's Jobs Act would add 2 percentage points to GDP growth next year and 1.9 million jobs.

Mr. Holtz-Eakin, you say in your testimony we should not overestimate, that we should have little reason to believe tax cuts, even the best, will pay for themselves, and that over 10 years, no matter what scoring, it is unlikely that there will be a major impact, whatever model you use. And here we have a jobs crisis, and we need to hold hearings on that.

So, look, I remember the fight over the proposal in 1993. There was some macroanalysis that said, as mentioned here in the testimony, it would lose jobs, et cetera. It would ruin the economy. And it helped lead to a major series of years characterized by economic growth and jobs. So that is why it is perplexing.

So let me just ask Mr. Buckley a question, if I might, because the chairman asked about tax reform. Lowering the rate and widening the base theoretically has something going for it. But you have to discuss what it takes to do that. You have to discuss that. I took economics 101 at Columbia. My professor later won a Nobel prize for economics. I don't think that helped me very much. I tried.

So I want to ask you, Mr. Buckley, if as part of widening the base and lowering the rate, you eliminate all of the deduction for mortgage interest, the deduction for State and local income tax, if you include in income the cost of employer-provided health care, if you eliminate the charitable deduction and the exclusion of interest paid on State and local bonds, if all those are eliminated, what is the analysis?

Mr. BUCKLEY. Mr. Levin—

Mr. LEVIN. Macro or micro?

Mr. BUCKLEY. However you do it, I do believe that the details of a tax reform matter dramatically. The economists who claim there are large economic efficiency benefits from tax reform are modeling a specific proposal. Essentially, their vision of what should be an ideal tax system, probably not a vision that this Committee would adopt. They cannot analyze tax reform without a specific proposal. This Committee cannot, either. Some types of tax reform could result in a net tax increase on U.S. manufacturing by repealing large benefits for the manufacturing sector.

Mr. LEVIN. Is it your proposal today to pay for—

Mr. BUCKLEY. For the rate reduction.

Mr. LEVIN. By eliminating the remaining money in 136, which I think is mindless.

Chairman CAMP. It does not eliminate the remaining money in 136. There is a reduction in the 136 dollars. It does not eliminate.

Mr. LEVIN. The remaining money.

Chairman CAMP. It is a big distinction. It is 1.5. I think there is 7 billion left.

Mr. LEVIN. But that is all spoken for. That is all spoken for. If you look at what is in the hopper now, it eliminates what isn't spoken for.

Mr. BUCKLEY. That is what I think—the one thing the models do not do very well is analyze the impact on sectors. If you repeal current law benefits for owner-occupied housing, I believe you will see a reduction in home prices. I believe that those benefits are capitalized in the current value of our homes.

Now that may be desirable economic policy, but you need to know what impact that would have on the economy and whether you can mitigate those effects through transition rules. Until you have those details—and that is really what this debate is lacking, is a detailed proposal—you do not know what the consequences of the tax reform will be.

Chairman CAMP. All right, thank you.

Mr. Herger is recognized.

Mr. HERGER. Thank you, Chairman Camp.

I would like to ask Mr. Barthold about how the scoring process considers administrative and compliance costs. In 2006, Congress passed a 3 percent withholding tax on government agencies' payments for goods and services. Joint tax scored this provision as raising Federal revenues by \$7 billion. Subsequently, however, the Department of Defense released a study finding that, for DoD alone, the cost to implement this new tax would be over \$17 billion. This means the government would be spending far more to collect this tax than it raises in revenue.

Another independent study estimated that the cost of businesses to comply with this withholding requirement could be over \$40 billion. In general, the high cost of tax compliance means less money is available for small business to invest in job creation, and many of us are hopeful that simplifying the Tax Code would reduce this burden and thus spur economic growth.

Mr. Barthold, does the current scoring process incorporate the cost to the IRS and other Federal agencies to administer specific tax provisions?

Mr. BARTHOLD. Thank you, Mr. Herger.

What we are estimating for the Committee Members are the receipts' effect to the IRS. We try to bring into the process at the staff level issues of what it will take for different agencies or different taxpayers to comply. But the estimates themselves do not include direct estimates of compliance costs except to the effect that compliance and complexity affect taxpayer behavior.

If I could—I know I am on your time, but if I could make one note about the \$7 billion estimate that was done for the 3 percent withholding at the time that TIPRA was enacted, I think it is important for the Members to recognize that estimate has two components. Because it is a withholding provision, it has the effect of accelerating tax payments within the fiscal budget period. And that was the bulk of the \$7 billion estimate, was an acceleration of payments into the Treasury.

There was a second component which was smaller, but not insignificant, of ongoing compliance gains. Because as I know the Committee was aware because they had heard testimony, there was some substantial noncompliance by government contractors in

terms of paying their legally due income and payroll tax liabilities, and that is what had motivated the enactment of that proposal.

I hope that addresses your question, Mr. Herger.

Mr. HERGER. Well, Mr. Barthold, it would seem to me again where just one department, the Department of Defense, estimated that its costs would be more than double the revenues coming in, it would seem that we are getting an incomplete picture of how tax changes affect a budget. And if tax policy creates new administrative costs for the government, then we have to either increase total appropriations or agencies have to sacrifice other priorities. Conversely, if tax reform reduces administrative costs, that should generate savings in the discretionary budget.

Mr. Holtz-Eakin, from your experience at CBO, do you have any thoughts on this topic?

Mr. HOLTZ-EAKIN. I am certainly not familiar with the specifics of that proposal. I do know that when CBO undertakes to score proposals it has to make some judgement about the likely implementation of the rulemaking, the time it will take for that rulemaking, and, as a result, when the Federal budget is affected. And it also has to make some judgment about overall discretionary funds that will be necessary to implement it. So I think this is part and parcel of doing estimates—impacts on the Federal budget.

Mr. HERGER. Thank you, Mr. Chairman.

Chairman CAMP. Thank you.

Mr. Johnson is recognized.

Mr. JOHNSON. Thank you, Mr. Chairman.

I am asking that—Mr. Barthold, I want to ask you about the revenue impact analysis for the 2003 tax cuts and in particular the capital gains tax cut. I am sure you're familiar with the July 24th *Wall Street Journal* edition on tax oracles. This is it.

Mr. Chairman, I would like to get this introduced into the record, if I could.

Chairman CAMP. Without objection.

[The information follows:]

July 21, 2010

WSJ: Washington's Tax Oracles and Revenue Estimates
by, Paul L. Caron

Wall Street Journal editorial, Washington's Tax Oracles: How to Think About Revenue Estimates:

Reality Check I

Total federal revenue, forecast and actual, in billions

	Forecast*	Actual	Underestimate
2003	\$1,770	\$1,782	\$12
2004	1,825	1,880	55
2005	2,064	2,153	89
2006	2,276	2,407	131
2007	2,421	2,568	147
Total			434

The director of the Joint Committee on Taxation, Thomas Barthold, takes us to task in a [nearby letter](#) for exaggerating the revenue impact and economic benefits of the investment tax cuts of 2003. (See [The Obama Tax Trap](#), July 2.) This is a debate we're delighted to have, and Members of Congress should want to have it too if they ever want to cut taxes again.

Because Mr. Barthold and his revenue oracles are among the most powerful people in Washington on tax policy, it's worth reviewing whether Joint Tax estimates are accurate. This is especially important now, because President Obama and Democrats in Congress want to allow the 2003 tax cuts to expire on January 1 for individuals earning more than \$200,000. The JCT calculates that increasing the tax rates on capital gains, dividends and personal income will raise nearly \$100 billion a year.

Mr. Barthold scolds us for saying the JCT assumes "no" change in economic behavior in estimating future revenues from tax rate changes, and he has us there. We should have used "little" instead of "no." On capital gains, for example, Joint Tax did change its methodology a few years back to take into account that more people will sell stocks when the tax rate falls. Here and there, it takes account of other narrow behavioral effects of tax changes.

Reality Check II

Capital gains revenue, forecast and actual, in billions

	Forecast ²	Actual	Underestimate
2003	\$42	\$51	9
2004	46	73	27
2005	52	102	50
2006	57	117	60
2007	62	137	75
Total	259	480	221

But Mr. Barthold is also giving his gnomes far too much credit for dynamic scoring, and thinking. What they don't do is assume much if any macroeconomic effect from lower tax rates, and they often underestimate the real world behavioral responses by businesses, investors and workers. Consider a few examples: ...

Estimating future federal tax revenues is an inexact science to be sure. Our complaint is that Joint Tax typically overestimates the revenue gains from raising tax rates, while overestimating the revenue losses from tax rate cuts. This leads to a policy bias in favor of higher tax rates, which is precisely what liberal Democrats wanted when they created the Joint Tax Committee. One of the GOP's biggest mistakes the last time it controlled Congress was not doing more to take intellectual control over both Joint Tax and CBO.

Joint Tax now says that rescinding the Bush investment tax cuts will raise about \$500 billion in revenue over the next five years. So on January 1 we will enact one of the largest tax increases in history, coming out of one of the deepest recessions in a century, because computer models that we know are wrong are telling Congress that this will raise far more revenue than the increases will raise in reality.

If Members of Congress are going to buy this, they should simply cut out the 535 middlemen and let Mr. Barthold write the tax laws.

Mr. JOHNSON. Thank you.

The editorial points out there was a surge in tax revenue following the 2003 tax cuts. The surge simply was missed by the budget scorekeepers. In particular, with respect to the capital gains tax cut, the *Wall Street Journal* points out the behavioral model that Mr. Barthold celebrates predicted that the capital gains cuts would cost the government just under \$10 billion from 2003 to 2007 when the actual capital gains revenues over 5 years were \$221 billion higher than JCT predicted.

Mr. Chairman, I think I would like to ask Mr. Barthold, why was the analysis so wrong with respect to the revenue impact of the capital gains tax cut?

Mr. BARTHOLD. Thank you, Mr. Johnson. As our staff pointed out in some of the background material that we prepared in our overview, we tried to account for taxpayer behavioral responses, including capital gains realizations. Because it is entirely discretionary, it is a very difficult area. In the document that we published in advance of this hearing, JCX 46-11, we noted in particular that compared to baseline projections of capital gains and a simple static sort of analysis of saying if you change the rate of tax on those gains, what would happen to receipts, that our modeling at the time of 2003 had over 70 percent of the static effect offset by behavioral change. So we had a substantial behavioral component to that particular estimate.

The *Wall Street Journal's* discussion I think makes some—without knowing completely what they are trying to compare—I think they have some confusion in what they take as the baseline projections for capital gains as opposed to overall receipts. In part of this particular editorial and the editorial that they had prior to this editorial, they seem to display some confusion about the point I made earlier regarding whether our estimates are about receipts or a change from the baseline of receipts.

But that said, as I noted in my testimony, we always strive to try to update and present to the Committee information based on the best estimates possible. Because of the importance of the capital gains in the tax policy debate, it is one area that we are reviewing. We have a research project underway right now. In fact, we have just submitted to a small professional conference of academic economists a proposal to present some preliminary results from this research that we would use to change our modeling.

So all I can say is we do our best overall on—

Mr. JOHNSON. Well, I recognize it is not a simple thing. But in light of the revenue figures, do you not believe that cutting the capital gains tax rate, as Congress did in 2003, can have a positive macroeconomic impact? In other words, do you not believe a tax cut such as the 2003 capital gains tax cut can lead to greater investment, job growth, and perhaps higher tax revenues?

Mr. BARTHOLD. Mr. Johnson, on that point you actually enter sort of a different realm about what is the macroeconomic transmission mechanism of particular policy changes. Reducing the tax on capital gains increases after-tax returns to individuals' savings, particularly in the form of equity investment. The way we would analyze that is that is one component of how people save. Other considerations: Do we shift out of dividend-paying stocks into

stocks that accrue more gains; do we alter portfolios that have less debt, more equity? That all goes into the type of analysis that I tried to present to you briefly this morning.

So by increasing the after-tax return to savings, there should be some positive effects on savings.

Mr. JOHNSON. Thank you, Mr. Chairman.

Chairman CAMP. Mr. Rangel is recognized.

Mr. RANGEL. Thank you, Mr. Chairman. Thank you for this enlightening hearing that we are having. I gather from the Joint Committee that the purpose that this panel is here is to share with us the resources that you have available to us as tax writers, if and when we move forward with tax reform. And my question to you: Does anyone here have any reason to believe that we will be using this information in order to reform the tax system?

I guess not.

Mr. BEACH. The answer is yes.

Mr. RANGEL. Then could you share with me what allows you to believe that this Congress will be reforming the tax system? What have you heard; what indications? Because I have been on this Committee longer than anyone else and I received no signal that my Committee will be moving into tax reform in this session. Because, as you pointed out, I have been a strong advocate of tax reform, I think it increases revenue. It is fair. It is more equitable. So share it with me, Mr. Beach.

Mr. BEACH. I don't know what the Committee will do, obviously. I am not sitting where you are sitting. And I hope that you do tax reform, and do it very soon, and you follow some of the principles that you laid out when you were chairman of this Committee.

I will tell you that as a long-time person whose group helps Members of Congress shape their bills and does some analysis of their bills to help them understand better, I am getting a lot of business. I think as a market indication, there is a strong interest among Members of this Committee and Members outside of this Committee in reforming the taxes. But I think also a lot of Members understand that there is a dance that has to be held here. And one partner is tax reform and the other partner is overall fiscal reform. And it is the difficulty of finding how you in fact dance with those two partners.

Mr. RANGEL. What you are saying, Mr. Beach, is that it is a complex and sensitive subject politically. I don't see how you think we can overcome that problem this year. And I know you are not talking about having this Committee move into a tax reform mode next year.

I guess my real question to you, based on your experience, when the President has a tax proposal of any kind, as he recently reported, you don't believe that you can really be for or against it until the Committee of jurisdiction reviews it and has hearings on it. Would you agree with that statement?

Mr. BEACH. That is a matter for the Committee to take up. I know there is tremendous interest in this outside.

Mr. RANGEL. You pay taxes. You are going to be affected by what happens here. Now, you have a 12-Member Committee. You know what the Ways and Means and the Finance Committee's responsibility is. You know about deadlines that we have. I hope you

are not suggesting that you think that we can do tax reform between now within the deadlines that the Congress has. Is that what you are telling me?

Mr. BEACH. You shouldn't do it. If you are not started right now—you should take your time to do tax reform.

Mr. RANGEL. That means that you agree with me. You don't think it is the right thing to do to start tax reform now, with all of the congressional restrictions that we have on timetable.

Mr. BEACH. You have already started tax reform. There are so many discussions going on. But this Committee and the Congress has a duty which is even greater than that, and that is to plot a course through the most difficult financial challenge that this country has faced perhaps in the last 100 years. And tax reform is part of that. But also major changes to our spending priorities is part of that as well.

Mr. RANGEL. Thank you, Mr. Chairman.

I assume that means that you don't expect us to do tax reform this session.

Chairman CAMP. All right. Mr. Tiberi is recognized for 5 minutes.

Mr. TIBERI. Thank you, Mr. Chairman. Mr. Barthold, I want to follow up on the line of questioning from Mr. Levin regarding the President's Jobs Act and how you model that Jobs Act.

Let me give you a real-life example and tell me how your process applies to this. I had a discussion Monday with a constituent who is part of a family-owned business. They are an S Corp. He and his wife were looking at making an investment decision, and they were down the road of making this decision. The President's proposal has an impact on that investment decision, and thus he and his wife now have put a hold on that investment decision and—an investment decision that theoretically would create jobs and opportunity. And so based upon the President's proposal, that is stopped. And it is going to stop for maybe forever, based upon the President's proposal and what happens to it.

How do you and your folks at Joint Tax figure that out and apply it to real life?

Mr. BARTHOLD. Mr. Tiberi, you raised a really important issue in economic modeling, and that is how to account for individuals' or businesses' expectations. As you have described your constituents, they apparently feel pretty strongly about the uncertainty that is created by introduced legislation. We try to account for, as I noted, taxpayer behavior in all the estimates that we do. What is particularly difficult, I think, in what you proposed is what does that do to the baseline? We make these estimates relative to baseline receipts. And the baseline receipts projections aren't assuming that there is any change in law. So our baseline receipts projections assume that a lot of investments would have gone on as projected under the macroeconomic projections of the Congressional Budget Office.

The situation you posed is you think that legislative uncertainty may change the course or timing of those investments. Now, when that gets picked up is when the Congressional Budget Office redoes its macroeconomic forecast. If they redo the macroeconomic forecast, that will then be reflected in what we think about the course

of the economy, the course of receipts from business income. But as you posited this particular situation, that is sort of missed in the economic modeling right now because your constituents had something they were thinking of doing in, let's say, the next 6 months, and now they are not because of legislative uncertainty.

We have recently had a revision in the CBO macro forecast. We are not picking up in anything that we are doing on Capitol Hill, in our modeling, really, that reflects that kind of uncertainty and changed decision because of current legislative uncertainty.

Mr. TIBERI. Since CBO is mentioned, Mr. Holtz Eakin, can you comment from your perspective when you sat at CBO?

Mr. HOLTZ-EAKIN. I would concur that incorporating explicitly policy uncertainty is one of the real weak points of the current state of economic science. In that regard, if I could, I think it is important to distinguish between scoring and forecasting. Think about football. For reasons that I don't know, if you get a touch-down, you get six points. If you kick the extra point, you get one. If you run or throw it across, you get two. I have no idea why. Because those scoring rules allow you to compare two teams, they allow you to compare games across the country and over time.

And that is what you want out of good rules to evaluation legislation. You want to be able to score them consistently. You would also like to be right. But the Committee operates in areas where, quite frankly, often it is impossible to be sure you are right. We passed the Medicare Modernization Act when I was at CBO. There had never before been a product which was insurance for the cost of outpatient prescription drugs offered by the Federal Government. We developed scoring rules so that there are more and less expensive ones. We had no idea if we were right. It turned out we were way too high. Probably 30, 40 percent too high. Over time now, I think scores of prescription drug estimates will get better.

I think the same will be true for the Joint Committee. If you go down this route, you will bring into the scoring additional information—growth consequences—and they won't be right the first time. But they will get better and better. And at every point in time, you will be playing fair across the proposals. That is the key.

Mr. TIBERI. My time is expired. Thank you, Mr. Chairman.

Chairman CAMP. Mr. Davis is recognized.

Mr. DAVIS. Thank you, Mr. Chairman. I would like to continue in that line of questioning, Mr. Eakin.

In your testimony you suggested coming up with a new single approach to estimating that provides uniformity of scoring while taking aspects of both static and dynamic scoring into account. How does the current regime produce scoring estimates that result in qualitative differences, in your opinion?

Following on that, how do you think a new system would treat, comparatively, a reduction in marginal rates versus, say, the credit from State and local sales taxes? I am not looking so much for a specific answer on the second, but trying to get to a more realistic aspect.

Mr. HOLTZ-EAKIN. I think that it is important if you are worried about economic growth, particularly over the long term, longer horizons. You want to have a system that reflects the fact that there is a big difference between a revenue-neutral tax reform that

cuts marginal rates, broadens the base, and one that might, say, jack rates up on every taxpayer in America and then provide a refundable credit to exactly the same people. It would be revenue neutral. Some people might take that cash and spend it. It might look like a good idea in the near term. But over the long term, those are terrible incentives for labor and capital and growth. And you want the process to reflect those incentives. Static models will not capture the longer-term index.

Mr. DAVIS. Anybody else like to comment on that? Mr. Buckley.

Mr. BUCKLEY. The only thing I would say is, there is a sharp difference between analysis and scoring. I think a lot of these models may be useful in analyzing different proposals and the comparative benefits. When you are doing that, the Committee can specify assumptions that they want the Joint Committee to follow. I don't think you can do that for the actual scoring of the legislation. Do exactly what Doug has suggested. Put the assumptions in there and you can compare different proposals across the board. But if you use that for determining the budget score, what you reflect as the budget cost of the bill, the perception of political interference, if this Committee sets the assumptions—and somebody has to do that—those estimates then have no credibility. And I think you run a real risk in the financial markets if you use that type of estimate in determining the ultimate cost of the bill.

I think that is the real question here for the Committee. Analysis is fine and good. You want more information. But you should be very careful before you take that final step and say that the actual official score of the legislation is determined with regard to these models and with regard to the assumptions that the Committee specifies.

Mr. DAVIS. Thank you. Mr. Eakin, you wanted to add an additional point.

Mr. HOLTZ-EAKIN. I think this is the right discussion. I think I come down at a different place. Point number one is that I see no qualitative difference between the kinds of uncertainty that surround these growth effects and the different models that capture them and the kinds of uncertainty that surround the conventional micro uncertainty around a lot of scores. We did scores for terrorism risk insurance. I hope we never find out how accurate they are. There are fundamental questions of uncertainty that pervade the scoring process. There is nothing new about that here.

I also come down on a different place on the financial markets. They use these models every day in order to evaluate exactly what you are doing. So I don't think they are going to be at all phased by the fact that you use them to make your decisions better. They are using them right now.

The third thing I would say is there will be some arbitrary decisions. And the goal to make them appear to be done in an even-handed, nonpolitical fashion is an important one. Transparency would do a lot to solve that.

So I think there is a route forward.

Mr. DAVIS. Mr. Beach.

Mr. BEACH. There is one thing I would want to remind the Committee, is that when they take a score of an important bill from the good people at the Joint Committee on Taxation, it is not

based on an economic model. Be under no misimpression. You have used an economic model to get to that score. What you are assuming is the economy does not have an effect. So any way, shape, or form, when your scores come in there is an economic set of assumptions behind that.

What we are saying on this panel—I think we are all agreed—is that you need to have the best information, the best advice possible to plot that good course to a better economy. And that is why dynamic analysis is so crucial and it should be part of the routine pieces of information that come to this Committee.

So when you get a static score, the assumption is the economy is not working there. There might be microeconomic behavioral assumptions built in, but the general economy is not responding. That is the assumption made by the static score.

Mr. DAVIS. Thank you, Mr. Chairman. I yield back.

Chairman CAMP. Mr. McDermott is recognized.

Mr. MCDERMOTT. Thank you, Mr. Chairman. Mr. Chairman, I have spent 40 years sitting in Ways and Means Committee, 17 years in the State legislature, and 23 years here. And these mind-numbing discussions always remind me of Henry Jackson, our Senator, who once said what he was looking for was a one-armed economist so he wouldn't hear any more of this "on the one hand this" and "on the other hand that."

And in the State of Washington I hired a guy in 1979, after we lost our bond rating and whatnot, to do our revenue estimates, because we always had a fight between the Governor's office and the legislature as to what the revenue was going to be. We finally said, let's get one guy and he would give us a high, a medium, and a low, and then we would pick one, and the Governor had to live with it and we had to live with it.

Now, up here we keep playing this game of OMB and CBO and the Joint Committee on Tax and everybody else. It is all for political reasons. Groucho Marx probably said it best when he said, "When you go into politics, the first thing you have to learn to do is to have a straight face." And we sit here and have these sober-faced discussions. But we know that we are never going to get a balanced budget because one group is going to say, if we do this, if we cut taxes, the revenue will go up. And another group will say, no, if you cut taxes, the revenue will go down. And we never agree on the baseline. And we fight. And we are going to come to a showdown here on the weekend, because people say we are in so much debt that we can't—what can we do? Well, it depends.

But we don't have one definition of being in debt because we don't talk about the investment in infrastructure. We don't talk about a lot of things in some kind of unified system.

My belief is that these discussions—the majority will decide what they think the estimate is. I think this hearing is probably about let's use some dynamic scoring so we can make things look better going into some kind of a tax reform discussion.

I read, Mr. Buckley, your statement that if we accept some of these assumptions, we may have a negative effect on the market. Could you expand on that? We are sitting here today with the Republican leadership saying that we don't want Bernanke fiddling

with the interest rates because it is going to—they don't want things to get better, that is pretty clear.

Mr. BUCKLEY. Let me slightly respond to what Doug said. Businesses do use macroeconomic models in making business decisions. And that is exactly what I think this Committee should do. That is perfectly appropriate. But when they report to their shareholders, they record the cost without reduction for the potential gains that may result from the investment. If any business reflected in its current statements the prospective but uncertain benefits from its current investments, it would probably violate every securities law.

So to say that business used these assumptions, that is correct, they do, in making business decisions. They do not use these assumptions when they report to shareholders. If the profits from the investment actually are realized, the business takes those profits and they will count in the year which they are realized. If you score using these estimates, you are saying that the Federal Government will take into account uncertain benefits before they are realized. I think that is pretty dangerous. I think it is dangerous as far as the acceptance of the market for cost assumptions.

Mr. MCDERMOTT. What difference would it make to the market if you started taking those—

Mr. BUCKLEY. If the markets suggested that you could pass big tax reductions and pretend that they had no cost because of uncertain projections of future macroeconomic benefits, they would not respect those decisions. There is a point where you need credibility in your budget assumptions. Those budget assumptions have credibility now because they are consistent with the cost accounting standards that businesses have to follow in their everyday life.

Mr. MCDERMOTT. Can we have that as long as we have OMB and CBO fighting?

Mr. BUCKLEY. But they are not making assumptions about the wisdom of the change in law. They are making microeconomic decisions about the effects on revenues.

Chairman CAMP. The time is expired. Mr. Buchanan is recognized for 5 minutes.

Mr. BUCHANAN. Thank you, Mr. Chairman, for holding this important hearing. I also want to thank all of our witnesses today.

Mr. Eakin, I was curious. I want to talk about taxes and small business in a minute, but I was very interested to read your comment the other day on the Federal Reserve. I believe we need to audit the Fed. I have talked to a lot of people in Florida who are concerned about the Fed and their active involvement. What are your thoughts on whether the Fed should be more active or less active in terms of our policies?

Mr. HOLTZ-EAKIN. I have no idea what I said. I talk too much, evidently.

Mr. BUCHANAN. I heard your comments. I think it was along the lines that the Fed was too active. I just hear that comment a lot.

Mr. HOLTZ-EAKIN. I don't think—there are multiple discussions about the Fed. Number one, I do not believe that there is much the Fed can do to enhance near-term economic growth at this point in time, and that doing nothing is essentially the right near-

term situation in my view. They still have capacity to help us if, God forbid, European financial shocks or something get transmitted to the U.S. They can step in and help us on the downside. And I believe that I would prefer to have the Congress of the United States do appropriate oversight in hearing settings and make sure that the books are square. But I do not want the Congress of the United States running U.S. monetary policy. I have seen how the Congress produced fiscal policy, and I am not overwhelmed.

Mr. BUCHANAN. The other thing I wanted to get on is small business. I know we all believe it is the backbone of our economy. It creates 70 percent of the jobs. And I see it in our communities that are concerned about taxes and where that is going. There is also the lack of credit out there.

Mr. Barthold, in terms of your modeling, what have you taken into account in terms of pass-through entities? How do you look at that in terms of your modeling?

Mr. BARTHOLD. Pass-through entities are part of our conventional modeling. And to the extent that the conventional modeling feeds into the macroeconomic analysis that we provide from time to time, pass-throughs are included. On the macro side, as I noted in the testimony and overview document, we don't divide the business sector into small businesses, medium businesses, and large businesses. We use a much more crude aggregation. Most of the time we are looking just at business investment and investment in housing.

But in our conventional modeling, as I know you know from some material that we went through earlier in the year, we have a substantial amount of background data on the types and numbers and distribution of different entities—sole proprietorships, S Corporations, partnerships—by industry. And we use that data to analyze all the different proposals that Members such as yourself bring to us.

Mr. BUCHANAN. A lot gets thrown around. I have been in business for myself for 30 years and been active with a lot of small businesses. I am concerned because a lot of times it gets thrown around about the idea that only 2 percent of small businesses are affected by the tax increases. But yet when you look at the income of these pass-through entities, 50 percent of the income is impacted.

And when you look at the environment, especially in Florida, but I am sure other States, where you have a lack of credit, the growth and whatever success I had because I had strong banks that were able to back cheap capital, but when you take into account a lot of pass-through entities looking at their taxes are going to go up, along with a lack of capital, then we try to figure out why we don't have the job creation. That is what I am getting feedback on every day back in Florida. Do you have any thoughts about that?

Mr. BARTHOLD. I think the issue that you are raising is very similar to the issue that Mr. Tiberi raised earlier, and that is; to what extent does current legislative uncertainty affect current business decisions, and then how is that reflected in the modeling? I noted that short-term uncertainty that is not picked up in the peri-

odic updates of baseline projections of investment, macroeconomic activity, on business income, is missed in the process.

Mr. BUCHANAN. Mr. Beach, do you have anything you want to add to that?

Mr. BEACH. It is very important to do the pass-through entities correctly. In models that we use, we take a lot of time to take a look at which ones are most likely to be benefited by drops in capital cost because of the capital-intensive nature of some of those pass-throughs, labor costs, because of that, and so forth. You need to have very detailed information.

Fortunately, I can tell you that the Joint Committee does a pretty good job of sorting through that. I will also tell you that I think the Joint Committee would benefit tremendously by having more active participation of advisory panels, outside groups, that would come in and not oversee their work, but be at a place where they could try out new ideas and get suggestions. There are a lot of people in this town and around the country that are handling questions just like you have asked that are outside the Joint Committee.

Mr. BUCHANAN. Thank you, Mr. Beach.

I yield back.

Chairman CAMP. Mr. Smith is recognized.

Mr. SMITH. Thank you, Mr. Chairman, and thank you to the experts on the panel here today. I certainly want to be sensitive to the fact that there are a lot of moving parts in the economy. And I think I hear you saying that it is hard to predict everything. I am certainly sensitive to that. We are forced to—and I think it is healthy—to look even beyond the 10-year window.

Mr. Holtz-Eakin, do you think that we could use dynamic analysis perhaps to even look beyond the 10-year window?

Mr. HOLTZ-EAKIN. I think it would be incredibly desirable to do that. You certainly want to always use all the information you can about the long-run consequences of both the tax and the spending policies of the government, there is no question. We have enormous long-run problems that the 10-year window doesn't capture right now. The only real issue is the degree to which you bring those into the formal scoring process. And that is the place where the Holtz-Eakin-Buckley feud shall continue.

Can I respond to what he said? I think what he said is wrong. Can I respond?

Under current procedures, the CBO and the OMB will put out a baseline projection in January. And those will be budget projections for the U.S. This Committee could then, in the middle of the year, pass a tax reform, under current procedures. When the next January came around, CBO and OMB would have to create new budget projections and they would have to look at the new current law and decide whether that tax reform helped growth or didn't.

All we are talking about is whether during the year you actually use that information to decide among tax reforms. It is not going to change the integrity of the budget projections. The financial markets are not even going to notice.

Mr. SMITH. Thank you.

Mr. BUCKLEY. If I could have an opportunity. I am sorry; on your time, too.

You are right, you keep doing changes in estimates. There is no way that the CBO estimate next year is going to be dramatically different by reason of a tax reform enacted this year. I don't think it is going to change the projections all that much. The real question is how you score it. If you score it in a way that hides the budget cost, I think you run into trouble. And particularly if you score it under assumptions that this Committee selects—and that is what Doug says you have to do—then I think you have real problems.

I think it is different if CBO has a new baseline. I think it is a quite different thing from this Committee saying we shall assume that the Federal Reserve is going to accommodate this in this way; we shall assume this and we shall assume that. And therefore you would determine the score by the actions of this Committee. That is a political judgment that I think you are perfectly appropriate to make. I don't think it should affect the budget score.

Mr. SMITH. Pardon me while I shift gears a little bit. I know that tax policy does have consequences in the economy. And I know that different States have different tax policies among themselves. And so I have seen where tax policy affects behavior. I think we can all agree on that to a certain point.

Take, for example, section 1031 exchange policies that oftentimes encourage some behavior that impacts market values. And then a high property tax State like Nebraska sets property taxes according to market value, and all of a sudden tax policy can effectively influence and affect local tax policy—even the most local of taxes, being property tax. Is that taken into account in an analysis of any form right now?

Mr. Barthold.

Mr. BARTHOLD. Yes, Mr. Smith. There are a couple different avenues in which some of the State and local effects are taken into account. What we don't do is we don't project that there will be a change in the budgetary receipts in the State of Nebraska or in the State of Missouri. But we do as part of our individual modeling, for example, assign individuals to States. We have upgraded from time to time—in fact, just this last year, we added a State tax calculator—so that when we look at behavioral effects, we will be able to take into account the combined marginal tax rates of the Federal and State level. We also use that State tax calculator to look at possible itemized deductions for real estate property taxes and State and local income and/or sales taxes.

So we do try to account for some of the interaction that is in the Federal system. But it doesn't go down to projecting budgetary outcomes for specific States.

Mr. SMITH. And then how that might come back around and affect tax.

Chairman CAMP. The time has expired. Mr. Neal is recognized for 5 minutes.

Mr. NEAL. Mr. Chairman, thanks for holding this hearing. I often think that this is a part of congressional life that the public does not get to see, where there really is an exchange, and you listen to people who do this every day and there is good give-and-take, and the people that are at the witness table are not only sea-

soned but, just as importantly, I think, pretty honest about the arithmetic that is put in front of them. I appreciate it very much.

I tortured Mr. Holtz-Eakin over the year with this question. And I see no reason that I should leave him alone today, on that basis. He knows where I am going with this. He already knows the answer and I know the answer to the question that I am going to raise with him. But I appreciated his candor.

I was driving along one night listening to a lengthy NPR piece, and Mr. Holtz-Eakin was the subject of the interview. I thought the candor he expressed on the campaign trail was very helpful to the dialogue as well.

Do you think tax cuts pay for themselves?

Mr. HOLTZ-EAKIN. On average, no.

Mr. NEAL. Thank you. Now I am going to come back to you for a second here, because I also want to question Mr. Buckley for a moment here.

You were around during the Tax Reform Act of 1986. How do you realistically think that we can get to that 25 percent rate that is being shopped by many in this town at the moment?

I want to give Mr. Holtz-Eakin a chance to speak to that as well.

Mr. BUCKLEY. Unless you are willing to sustain a large net tax reduction—and that is clearly a question here—I doubt that you can get to 25 percent if you follow your normal practice of providing transition relief for people who have made investment decisions based on current law. For example, you can raise a lot of money by repealing the mortgage interest deduction. However, if you decide it is unfair to raise that—repeal that deduction for people with existing mortgages, the amount of money you raise disappears rapidly.

A lot of the numbers that are being used for tax reform debates so far are not revenue estimates. They are static tax expenditure estimates. If we are talking about purely static, tax expenditures estimates are static. So a lot of the estimates that people are using are static estimates. It will be estimated with behavioral responses; not macroeconomic responses, but behavioral responses.

So I think it is very difficult to do, without being pretty rough, and not properly taking into account the investment decisions that people have made based on current law.

Mr. NEAL. Mr. Holtz-Eakin.

Mr. HOLTZ-EAKIN. I think qualitatively the key is that the Tax Code now subsidizes to a tremendous extent consumption items. The mortgage interest deduction is the consumption of debt to finance owner-occupied housing. The employer-sponsored insurance exclusion is the subsidization of the consumption of insurance and health products that it pays for. If you go through the list, by and large what we do with the Tax Code are things that subsidize what is the opposite to growth policy. It is consume now, forget about the future. So if you want to get rates down and you are serious about growth effects, you have to reform the Tax Code to reward saving and investment and to stop subsidizing consumption. And that is the only way you will get rates down. That points to the reason why it is very often the case that tax cuts don't pay for themselves and that analyses of tax policies don't show big growth effects, is

because often it is not very good growth policy. Because a lot of tax policy simply is not.

Mr. NEAL. Mr. Barthold, he just teed-up the question that I want to raise with you. Mr. Beach disagrees with the economic models you use as it relates to static estimates. Would you like to expound upon the testimony you offered based upon the models that you have offered today?

Mr. BARTHOLD. Well, I just wanted to take issue with the word "static," as I noted in my testimony and we noted in our background material, and as came up in the discussion of capital gains tax policy changes. We incorporate at the microeconomic level a substantial amount of behavioral response. We try to account for compliance behavior, portfolio changes, shifts between investment sectors, all in response to tax proposals that the Members offer to us for economic analysis.

What we pointed out some today is that in macroeconomic work that we have tried to do for the Committee, we are presenting further economic analysis on how some policies might have broad effects on the economy in terms of labor supply and capital investment, how they could matter to future economic growth.

Chairman CAMP. Thank you. Mr. Schock is recognized.

Mr. SCHOCK. Thank you, Mr. Chairman. First, I would like your permission to submit questions in writing to these panelists so that they can respond in writing if I run out of time.

Chairman CAMP. Without objection.

Mr. SCHOCK. First, Mr. Holtz-Eakin, your response to tax cuts don't pay for themselves. I am curious, by my friends on the other side who keep pointing this out, I am wondering whether or not government spending to spur economic growth pays for itself.

Mr. HOLTZ-EAKIN. Not in my view, no.

Mr. SCHOCK. So when you said earlier that oftentimes cutting taxes is not an effective way of spurring economic growth, obviously we have tried to spend a lot of money here in Washington, D.C. to spur economic growth. Which of those two paths do you think is a better one to spur economic growth, if you can; and if not one of those two paths is better, is there a third that we are not seeing?

Mr. HOLTZ-EAKIN. I think if you look at long-run growth, ignoring business cycles, unquestionably the preferred package, pro-growth tax reform, has the bigger impacts. I have little doubt about that. The debate over what happens in the short run—throw money at the economy, get Keynesian effects; cut taxes, get Keynesian effects—I think both have proven to be relatively inefficient and not something that we ought to get too high hopes of.

I guess the biggest thing is have a discussion where how you cut taxes matters, not just do you cut taxes. How you spend money matters, not just do you spend money. There is a big difference between providing high-quality infrastructure over the long term and passing out cash benefits to American citizens.

Mr. SCHOCK. Do you think that infrastructure spending matters if it is more long term and sustained? For example, a highway bill over 6 years versus a 1- or 2-year stimulus bill?

Mr. HOLTZ-EAKIN. I have little faith in so-called infrastructure stimulus spending. This for decades has been a phantom that Con-

gresses have tasted. It never arrives in time. It is often spent on bad projects. It is not good policy. There is no question that we need better infrastructure programs where we spend the money wisely. And I recommend to you a private sector commission report that I can get to you on reforming transportation infrastructure programs.

Mr. SCHOCK. I would like that. Thank you.

Mr. Barthold, we had a panel of company CEOs and CFOs before us on the issue of tax reform and I specifically asked them—many of them received different types of credits, deductions in our current Tax Code—whether or not, in fact, eliminating all those tax deductions and going to a straight, for example, 25 percent rate would be better for them. They unequivocally—all of them said yes. I then asked them whether or not, in fact, their business models would stay static or whether or not they would in fact invest more money in the United States. Most of these were multinational companies. Again, went down the line, Republican and Democrat witnesses alike, all uniformly said they would in fact invest more in the United States if we got rid of deductions and could get the rate close to 25 percent.

That leads me to ask you specifically a question. And I will put it in writing so you can respond in writing, but maybe you can take a jab at it with the time that you have:

First, whether the Joint Committee revenue estimating methodology would assume one or more of the following: First, that U.S. multinationals would increase the amount of their U.S. domestic investing by investing capital inside the U.S. that, under current law, would have been invested outside the U.S.

Second, that the amount of foreign investment inside the U.S. would increase above what is expected under current law.

Third, that less earnings stripping would occur with respect to foreign investment in the U.S. than occurs under current law.

And fourth, would U.S. companies engage in less income shifting than occurs under current law?

Mr. BARTHOLD. Well, I think I can give at least a short answer on that and I will be happy to give you a more detailed response in writing.

You asked really about both sides of U.S. domestic investment in response to a corporate rate. First of all, we think, off course, it depends on what other tax policy changes are made. But if we are just saying lower corporate rate, that gives incentives for corporations to expand their business activities in the United States. So, yes, part of our modeling would show—particularly if we are talking about macroeconomic effects—we would show that U.S. investment by U.S.-based multinationals should increase.

Similarly, it does make any investment by anyone in the United States more attractive. So we should expect also that the incentives would be for foreign-based multinational corporations also to expand their business activities in the United States.

You asked about two aspects of income shifting for inbound investment by foreign persons. There is some evidence—it is mixed—of what is called earnings stripping. That is because of the ability to deduct at a relatively high statutory tax rate against the U.S.

base and report that income abroad with a lower statutory tax rate. Again, the incentive would be for less earnings stripping.

On the flip side, for outbound investment or activities to try to locate U.S. multinational income abroad rather than in the United States, the incentive would also be to retain more of that income in the United States.

Chairman CAMP. Thank you. Mr. Becerra is recognized.

Mr. BECERRA. Thank you, Mr. Chairman. Thank you, gentlemen, for your testimony.

Mr. Barthold, from what I can gather, trying to work through all the economic-speak, this is like trying to ride a bucking bronco when you are trying to come up with a good score. In the modeling that is done and that has been traditionally done, have you all developed a sense of the variables that you can include in this equation to give you your score that you have the most confidence in helping you come out with a result that reflects reality?

Mr. BARTHOLD. Mr. Becerra, the interesting question that you raise, it is really about the level of uncertainty that there would be to different aspects of our modeling—different aspects in proposals that Members might create for us to think about. As Doug had mentioned before, there are some areas that are well known and well tried and relatively well understood. There are other areas also where there is lots of good data and the outcomes seem quite clear. And then there are some where we are really in very much the realm of the brand new and the unknown.

As an example of something that is well known, well understood, good data, one policy that has been changed from time to time by this Committee has been to adjust the value of the standard deduction and the personal exemption. We feel really, really good about our estimates on that; one, because there are not huge behavioral responses from those sorts of changes. The numbers are quite clear. It is a well-understood area, with lots of good data.

Mr. BECERRA. So have you a higher degree of confidence with some of the variables that you have in this equation than others?

Mr. BARTHOLD. That is definitely the case.

Mr. BECERRA. I assume as we move forward, the more data you collect, the greater your ability to know if you feel confident about tweaking a particular variable or adding or subtracting a variable.

Mr. BARTHOLD. I will just leave it as that is so.

Mr. BECERRA. To the degree that economics is a science and to the degree that your modeling and CBO's modeling to come up with a score, an assessment, can be characterized as a science, we are essentially making some very good educated guesses about what we think the very fluid and dynamic economy will do if we tweak it here or there, based on a policy change in law.

Mr. BARTHOLD. To the extent that estimates are guesses, what you say is correct. Our models are empirically-based models. So where there is better data, where there has been more testing of the data, more similar sorts of policy changes in the past, we have better confidence about the estimates that we make for those policies than when we are starting with something brand new and where there is limited data.

Mr. BECERRA. Let's put aside for a moment this unresolved question of whether tax changes can produce measurable macro-economic effects.

Mr. Buckley, let me ask you a question. Is there a constant relationship between GDP growth and jobs?

Mr. BUCKLEY. You probably are asking the wrong person on the panel. My guess is there is; that the greater economic growth, the greater job growth, since labor is such a large part of our economy.

Mr. BECERRA. And, Tom, maybe that should have been directed first to you, and then let me go back to Mr. Buckley, because I wanted to ask Mr. Buckley a question. But to the degree you think there is an answer, is there a constant relationship between GDP growth and jobs?

Mr. BARTHOLD. There is a positive relationship. If you mean constant, if I could say for every \$50,000 increase in GDP, that that represents half of a job or one job, there is going to be variability because it depends on what sector is growing and what sector is producing the GDP. But as a general matter, real economic growth means greater job opportunities. In particular, it means greater income for individuals.

Mr. BECERRA. And different economic growth policies could have different job consequences.

Mr. BARTHOLD. That is certainly the case.

Mr. BECERRA. So, Mr. Buckley, looking at it from the other end, would a budget score in and of itself tell policymakers about the loss of jobs?

Chairman CAMP. I am afraid time is expired, Mr. Buckley. If you want to respond in writing, that would be fine.

[Information not provided.]

Chairman CAMP. Ms. Jenkins is recognized.

Ms. JENKINS. Thank you, Mr. Chairman. Thank you all for being here.

I would like to follow up where Congressman Schock left off on the international front, maybe for each of you to comment, because we all know the U.S. economy is a whole lot more global today and many experts tell us that our Tax Code hasn't kept pace with the globalization. And one option would be to move American companies toward a more territorial style tax system.

So, a couple of questions. If we would make that change, are the models available and capable of accurately estimating the impact of this change on economic growth and investment decisions? If not, do they need to be updated to estimate the impact on the economy of bringing our international rules more in line with that of the rest of the world?

Mr. BARTHOLD. Thank you, Ms. Jenkins. Within our conventional estimates I had noted in my testimony that we use a fixed GNP as opposed to GDP as the baseline assumption, GNP being the measure of income which can be earned by U.S. people either abroad or in the United States. So within our conventional estimates we model some cross-border investment flows of U.S. taxpayers.

Now, what we don't do in the conventional estimates is then incorporate possible effects from those flows on domestic productivity

and ultimately domestic employment and second-round macroeconomic income growth. I pointed out in my testimony that our MEG model actually does incorporate cross-border flows from foreign and U.S. investors, and that as investment flows, that has effects on productivity, and ultimately increased employment. The MEG model assumes that domestic and foreign investment responds to after-tax returns. So in assessing a proposal that might involve territorial concepts—more territorial concepts as opposed to worldwide concepts, that would be part of how we analyze that for macroeconomic purposes.

Some things that are not in our modeling, one feature that would be important ultimately, is if the United States does something, what does the rest of the world do? We do not model what the rest of the world does. That is a hard one to guess in any event.

And I should note that—one of the work projects that I noted is we are trying to upgrade our overlapping generations model, which gives some alternative sensitivity for Members. We are trying to upgrade that to more explicitly model cross-border flows. Right now the cross-border features are only reflected in net interest rate changes.

Ms. JENKINS. Okay. Thank you.

Any thoughts, comments?

Mr. HOLTZ-EAKIN. I would defer to Mr. Beach, who actually has a model, and ask how he does it.

Mr. BEACH. Congresswoman, thanks for that question. I would refer you and the Members of the Committee to the analysis that we did of the Wyden-Gregg/Coats bill, where a much lower corporate rate was introduced, down to 25 percent. We had territoriality. We had major economic effects coming from the rest of the world. You can look at that. I am very impressed. I was part of the team that helped build the MEG model. The MEG model has great capabilities for doing these things. The research program you just heard of was very good.

With respect to how we handle the rest of the world, when our tax rate goes down, as you well know, the rest of the world tries to follow. And we use Ray Fair's model out of Yale University, which is available at no cost on the Internet. It is a very fine model. And it has a well-articulated set of 57 countries that interact with whatever policy changes you introduce.

Ms. JENKINS. Thank you all. I yield back.

Chairman CAMP. Thank you. Mr. Paulsen is recognized.

Mr. PAULSEN. Thank you, Mr. Chairman.

Let me just start out, because several of you have commented or made comments regarding how the economic models handle budget deficits and how that debt is a very important factor in determining or understanding the model's result. If the Committee really wants to get an accurate picture, an accurate understanding of the potential benefits of tax reform, as accurate a picture as possible, how do you recommend that we address this issue overall?

Mr. Barthold.

Mr. BARTHOLD. I think that is probably more of a question for my colleagues on the panel. Our modeling does reflect the fact that increased budget deficits can crowd out private capital formation. But how to address the policy issues are the Members' call.

Mr. PAULSEN. Mr. Holtz-Eakin.

Mr. HOLTZ-EAKIN. Mechanically, what I would do is isolate the impact of current tax policy versus the reform policy. And to do that, first go to the spending side and at least in a computer, if not in the real world, fix Social Security, fix Medicare, fix Medicaid. Do the big transfer programs on the spending side that are the budget problem, so that over the long term the debt to GDP ratio is stabilized, not exploding. Now you have a stable spending policy, and enact a tax reform and look at the difference between those two scenarios. That is the benefits of tax reform, isolated.

Mr. BUCKLEY. I would slightly disagree. We have increasing debt not just simply because of the spending side. We have one of the lowest tax burdens of any developed country in the world. Our taxes now are approximately 15 percent of GDP—our Federal taxes—which are really very low, historically. It is hard to run a government with a large defense budget and other needs like that with a revenue base that low. Sustained deficits do affect, I believe, long-term economic growth. And they have to be handled. I do think you can't get there only on the spending side. You have to adjust revenues as well.

Mr. BEACH. The first thing I would do is avail yourself of the good work that the CBO and Congressional Research Service is saying in illustrating how crowding out works. Crowding out is kind of a ham-fisted approach to understanding the deficit, because ultimately it is the composition of the deficit and the drivers that you need to understand best. Many of you probably sit on the Subcommittee dealing with health care, and of course health care is driving so much of this deficit. So ask for analysis that decomposes the drivers of the deficit. And then as we reform those drivers, you will see that that has a positive effect on the economy through prices and through competition and through the better allocation of resources, particularly capital resources.

And in our modeling—and I would be happy to share this with you—we have done that kind of work, got in, looked at the compositional things, reformed those; and then from the spending side, absent a tax change, we see greater efficiencies in the economy just because resources are better used.

Mr. PAULSEN. I think one thing that is very interesting is I talked to several corporations—and this has not been in testimony here—but how do you use your own projections for your own company and allocation of capital? And a good number of them use dynamic scoring or macroeconomic policy as well themselves as they look to moving forward.

Let me just ask this, Mr. Beach. I will just start with you. When choosing between different tax reform options—we kind of laid into this a little bit—which types of policies are going to be the most effective or the most likely to produce the dynamic long-term growth that everyone is sort of looking for or hungering for or wanting right now? Are they the policies that kind of give the one-term benefit for a jump start, or is it more the policies that provide the long-term sustainable low tax rates, rates for taxpayers for a long time?

Mr. BEACH. Well, as fiduciaries of the revenues of the fiscal situation of the United States, you are going to want to look at the

long term. And that also is the right answer for the economy as well. So keeping tax rates low, low relative to other countries, making sure that you are raising enough revenue for your needed services or government, that is the basic thing, make sure there are as little as possible expenditures, subsidies, going through the Tax Code. That is better done on the spending side. And then that just releases the private sector to lead the economy to higher levels of growth.

Mr. PAULSEN. Thank you, Mr. Chair, I yield back.

Chairman CAMP. Thank you. Mr. Stark is recognized.

Mr. STARK. Thank you, Mr. Chairman. Thank you for your patience.

We will hear from our colleagues across the aisle that cutting taxes and cutting spending and shrinking the role of government leads to growth. I guess that leads to the conclusion that our economy would be better off if we eliminated all regulation, and the safety nets, and the military, and sort of end up looking like Somalia.

But assuming that we won't go that far, I wonder, Mr. Buckley, if you could tell me—and I am somewhat confused by this issue of dynamic analysis and static analysis. If the Republicans were successful in following their plan to eliminate Social Security and eliminate Medicare, what would be the difference if you scored that dynamically or statically?

Mr. BUCKLEY. Well, if you eliminated those programs, you would see large nominal reductions in spending.

Mr. STARK. Nominal.

Mr. BUCKLEY. Nominal. I would guess that dislocations would be so severe that you would see real economic effects that would be negative. Medicare is a large part of the health care sector in the economy. Social Security is the primary income support for the elderly. Eliminating those two things, which I am fairly confident nobody is talking about—

Mr. STARK. Oh, yes, they are.

Mr. BUCKLEY. Well, let me put it this way. I would hope no one is talking about it, because it would have very serious consequences, put the economy and the safety net back to pre-Depression times where things were not as good as they are today.

Mr. STARK. Wouldn't make a difference if you scored that dynamically or statically, we would still be in deep trouble?

Mr. BUCKLEY. This is where I don't think the models are very good—they would probably treat that as positive because it removes these government distortions from the economy. It would create really serious economic consequences. I mean, homelessness and hunger are pretty stark economic incentives. I am not so certain if you follow some of these models you wouldn't get a projection of a positive impact here. And that is why I think so many of these models are just at their base wrong, and they have not proved to be very accurate.

Mr. STARK. Thank you very much. I yield back, Mr. Chairman.

Chairman CAMP. All right. Mr. Marchant is recognized.

Mr. MARCHANT. Thank you, Mr. Chairman.

So far we have heard from you how macroeconomic models have seen some limited use by the Joint Committee on Taxation and

CBO. I am interested in hearing from you about the extent to which other Federal Government agencies, or even other governments such as the States, have used dynamic models to evaluate policy options.

Mr. Holtz-Eakin and Mr. Beach, how have they overcome some of the concerns that we have heard about today about dynamic scoring?

Mr. HOLTZ-EAKIN. Well, I know from personal experience that the U.S. Treasury and the White House Council of Economic Advisors have at times used these kinds of modeling efforts to understand the impacts of policies and ultimately the budgetary impacts. Some of those are in the public domain and you could look at them.

When I was at Syracuse University, I was on the Tax Study Commission for the State of New York, and I was on the Ways and Means Advisory Board for revenue forecasting purposes. And we regularly used models of this sort which at the State level included a fairly serious scrub of cross-State influences; could New York State influence what was then largely the outbound exodus of businesses, slow it down? And also these tough issues on capital gains and bonuses, because an enormous part of the New York State revenue was driven by the taxation of Wall Street incomes.

So I think there is a wealth of experience. I couldn't pretend to summarize all the other States, but this is not new territory. There are places that have undertaken to do this both for purposes of accuracy and because their revenue streams sort of demand that they understand it better.

Mr. MARCHANT. Mr. Beach.

Mr. BEACH. Yes, it is the case that macroeconomic models play a prominent role in many of the Federal agencies as matter of their routine work. For example, the Energy Department, through the Energy Information Agency, on a quarterly basis runs the global insight macroeconomic model, which is the big one, that is the one Heritage uses and the one most of the Fortune 500 companies use to develop their quarterly forecast of energy use in this country, and also it is important for the budgeting of the Energy Department and a lot of the programs that you run through the Tax Code. The Treasury does that. Doug has mentioned it.

I also mention the CBO, under Doug Holtz-Eakin, has vastly increased the number of models which were used. They use eight, nine models right now, and that is wonderful.

The Agriculture Department is famous for its use of macro modeling and has been using those models now for almost 30 years to look at ag programs at the local level.

I wrote an article not too long ago in which I called every State in the country to find out what their modeling practices were, and found 11 States—the big ones, California, New York, and others—using macroeconomic models to advise the legislature on spending programs and on tax policy changes. And in the case of about half of those States required when doing the revenue estimate—I was chief economist for the Sprint Corporation, and I would like to echo, just to say we used macroeconomic models all the time to look at the various ways in which public policy would affect our company. And we were a large enough company that sometimes we would actually affect the outcomes for certain parts of the economy.

So it is in widespread use. I tell you, I will say this in just a second or two, I have been working, giving dynamic modeling up here at the Federal level for a long time, and you folks are moving way closer to the goal than you may even sense. Since it is now in such widespread use, we need to get the Joint Committee actively engaged in it to the extent that these other agencies are as well.

Mr. MARCHANT. I have one more question to Mr. Barthold. Are there studies that the Joint Committee on Taxation have on hand that show what effect a consumption tax versus an income tax would have on the gross domestic product?

Mr. BARTHOLD. In the mid-1990s we started doing some macroeconomic analysis and studying how to incorporate our detailed conventional modeling, the results of that that I described, into larger macroeconomics models. The first part of that was to look at broad tax reform of replacing income taxes with consumption taxes.

So one place to look is on our Web site. There are the results of the symposium that we held with a number of outside modelers who looked precisely at replacing income tax with a consumption tax. But more generally, there are a large number of academics who have published work on that subject.

Chairman CAMP. Mr. Berg is recognized.

Mr. BERG. Thank you, Mr. Chairman. I really enjoy this hearing. And in North Dakota, we have dynamic analysis but we call it something different in our tax policy; we call it common sense. We have lowered our income tax, our corporate income tax and property tax this last year. Some of those, it is the third time we have lowered them in the last 10 years. We have seen the exact reality of that. We have a little over 3 percent unemployment rate, we have a substantial amount of our State's budget in cash, we are short on workers, we have a lot of jobs that are unfilled.

When I was back home on Sunday, there were eight pages in our local newspaper of employers looking for employees. So again, I just think when we talk about the dynamic analysis, the more information that we can have, I mean just the better decisions it will make.

So as I was sitting here I was thinking, looking back—maybe this was for the Joint Tax, Mr. Barthold—were there some periods in the last 20 years that we just looked at tax policy totally statically, and even though we knew it would have different effects we didn't put that into the scoring? Is there a thing we can look at, again in the past, that says if we used dynamic modeling we would have been much more accurate than we were? Any examples that stand out?

Mr. BARTHOLD. Let me try and answer that in a slightly different direction, Mr. Berg. I hope this is responsive. We reevaluate estimates in our models all the time in the course of upgrading to try to improve the information that we provide to the Members. And so as the models incorporate empirically-based outcomes from the 1990s, we use that as information for how we analyze things now—recognizing that the 1990s were a different time from now. But in terms of looking at a behavioral response by taxpayers, looking at shifting of investments across sectors and responsiveness by businesses, that is important data for us.

If you are asking are there important big estimates that we got wrong, I am sure there are. But I would like to think about them and maybe respond at another time. I don't want to admit to any, offhand in a public hearing, if that is fair.

Mr. BERG. That is very fair. In fact, we may follow up on that in writing.

Mr. BARTHOLD. I would be happy to, Mr. Berg.

Mr. HOLTZ-EAKIN. Briefly, I think there are some lessons, and I want to first of all emphasize there has never been static analysis, not at the Joint Committee, not at the CBO. The question is whether you take macrogrowth effects into account or not. There are all sorts of behavioral responses that are modeled.

In 2003 when I was at CBO, we did an analysis of the President's budget proposals, a comprehensive macroeconomic impact, and that included the 2003 tax cuts, the JGTRRA that came up earlier, and it also included the Medicare Modernization Act, \$400 billion of subsidized consumption. And when we did the analysis, what we saw was overall modest impacts of both those things.

My conclusion was that if you undertake a radical policy of subsidized consumption, it offsets the beneficial growth effects of tax policy, and that is the lesson. Everyone else's conclusion was I did the analysis wrong.

The point of this is that we would have been wrong if we just looked at the tax cuts in isolation, because other policy negated the impact. That happens a lot with the Joint Committee. There is a lot going on out there. It is not just macroeconomic uncertainty in other countries. There are also other policies that go on that impact ultimately receipts. And getting it wrong isn't really the metric of whether the analysis was done right. There is a lot going on that makes these estimates uncertain.

Mr. BERG. Thank you. As long as you are all here, one last question I had is on the capital gains tax. It seems like that is getting a lot of press today at 15 percent. Just quickly: Will increasing that capital gains tax—again, it is on capital that already in my opinion has been taxed once—is there any model that would show that would encourage growth if that number goes up?

Mr. BARTHOLD. Well, Mr. Berg, I think we touched upon this a little bit before. As you know, under the baseline, the maximum rate on capital gains will increase to 20 percent after 2012. That is already accounted for in terms of baseline receipts.

Your question about growth is what is the overall effect of taxing the return to saving and of the increased rate on capital gains and changes in tax rate on dividends, other—the ordinary tax rates on interest income all go into our modeling when we do macroanalysis of what would be the effect on the macroeconomy.

Mr. BERG. I yield back, Mr. Chairman.

Chairman CAMP. Mr. Pascrell is recognized.

Mr. PASCRELL. Thank you, Mr. Chairman, and to our distinguished panelists. I am very, very hesitant to listen to people who were part of waltzing us through the last 10 years of economic issues. Mort Kondracke, certainly no liberal by any extent, said in discussing the tax cuts in February 2003, after the tax cut in 2001, that this is a wild ride Mr. Bush has set in motion. When it is over, we will know a lot, a lot about economics. We will either be a lot

richer as a country, or in disastrous shape. The credit or blame will belong to the President. Now that is what he said in 2003.

Followed by what Mr. Tom DeLay said: The jobs and growth package will not only grow the national economy—whatever models we are talking about, Mr. Chairman—but through that growth, it will help us support and fund the war on terror and other priorities for years to come. The American people understand the relationship between the war on terror and economic recovery, et cetera, et cetera. And here we are.

Now in the last 18 months, we have seen the addition of about 2.2, 2.4 million private jobs that have been added to the economy. Yet we go back over the 8 years, and this is not pointing blame, because both parties—neither party is privy to virtue on the subject of where we are economically. So please know where I am coming from.

It seems to me we need a more eclectic view when we talk about models, that no one model suits this, particularly because of what you said, Mr. Eakin, there are other factors involved. You cannot just cut taxes and think jobs are going to be created. That certainly did not happen in the 2001 and 2003 tax cut, until 2005 when we had a little bit more private sector jobs. There are a lot of factors involved.

So people who say all we need to do is cut taxes or all you need to do is cut social programs and we will have Nirvana, that is certainly no model that we could adhere to at this particular point. I don't think anybody on the panel would support that.

So these are a lot more complex than we think, and you folks have been pointing that out very nicely.

I have a question for you, Mr. Eakin, and then I would like to turn to Mr. Buckley on the same question. In your opinion, how does a statutory rate influence—because we have been talking a lot about this—influence a company's decision to create jobs versus an effective tax rate?

Mr. HOLTZ-EAKIN. Well, certainly companies are going to operate on effective marginal tax rates at the margin. They are going to look at the overall consequences of the Tax Code for their net gain from adding a worker. That is the key. Statutory will be embedded in there, but it might not summarize it entirely.

Mr. PASCRELL. Will they think of other things besides the tax rate that would go into their decision in determining how they would grow, how they would hire people, how they would not hire people?

Mr. HOLTZ-EAKIN. Certainly. As this Committee is well aware, the Tax Code is an exceedingly complex animal with statutory rates, all sorts of deviations from the base—

Mr. PASCRELL. Mr. Beach.

Mr. HOLTZ-EAKIN. Deductions, depreciation, the whole thing.

Mr. PASCRELL. Thank you. Mr. Beach.

Mr. BEACH. Yes. The marginal tax rate is one of a spectrum of issues which go into determining the hurdle rate. Every chief financial officer has a hurdle rate in place in their mind, the Committee does as well, for making an investment. So you have a lot of things that go into that.

I will point out that the marginal tax rate, the effective marginal tax rate is one of the major ones because it varies, it goes up and down and it is very large. So doing that is important.

Mr. PASCARELL. Mr. Buckley.

Mr. BUCKLEY. I believe it is the effective corporate tax rate that is important. Our statutory rates are relatively high compared to other countries. Our effective tax rates are not, because we provide more generous depreciation benefits.

Mr. PASCARELL. It has to be part of the discussion.

Mr. BUCKLEY. That is correct. That is one of the real questions on tax reform. If you do eliminate accelerated depreciation, you do kind of shift the tax burden onto those sectors that rely on that for their major incentive.

Mr. PASCARELL. That is absolutely true.

Chairman CAMP. Mr. Reed is recognized.

Mr. PASCARELL. Is that it?

Chairman CAMP. Time is expired, yes. Mr. Reed.

Mr. REED. Thank you, Mr. Chairman. I enjoyed the testimony today. It is very enlightening trying to get an understanding, not being familiar with the world that you live in in macroeconomic forecasting.

From a historical point of view in judging it from forecast and then as a result of actual numbers that were produced, is there any one model that stands out as one that has been very—more accurate than other ones? If anyone would care to—you have a slew of them here in your testimony as different models. Is there one that stands out amongst you as scholars in this area?

Mr. BEACH. Let me take a quick stab at that, because the field of models that are commercially provided is a good field to look at. After all, the Fortune 500 companies are kind of picky, they want to make sure the models they pick are the ones that are the most accurate and have been over the course of time.

And without doing an advertisement for my company, I very much like the global insight model. It is a combination of all of the old models put back together into one. It is the one that is sitting out there in almost everybody's portfolio of models. And then I must say, then you must go on to develop the models that are best suited for your companies, a standard off-the-shelf one. That is why the MEG model was such a breakthrough for the Joint Committee on Taxation because it is a great model. John Diamond's overlapping generations model that you heard about today—you haven't heard John's name, but it is in widespread use throughout this town. It is getting a lot of attention and a lot of auditing. That is another one that is rising to the top as one of the best models. It isn't rocket science to pick these models. There are only a few out there that are any good.

Mr. REED. Okay. Mr. Barthold, anything you want to add to that from your opinion?

Mr. BARTHOLD. I just wanted to make one point. The Joint Committee staff does not make macroeconomic forecasts per se. We do modeling to provide information to the Members about possible outcomes from the policies that they are exploring. I wouldn't really be in a good position to endorse private sector enterprises.

Mr. BEACH. One other thing, Mr. Reed. I forgot to mention this. The macroeconomic advisor's model out of Saint Louis is also an extraordinarily good model, and it was that model that was the basis for the MEG model. So you already have a well-respected commercial model. It is not identical to MEG by any means, but it is kind of the architecture.

Mr. REED. A good source, okay.

And then other countries that are dealing with these issues and trying to forecast out their tax policy implications, is there any one country we could look to in our office as kind of a benchmark to identify and maybe learn something from what they do differently from what we do?

Mr. Beach.

Mr. BEACH. Good science is being done by the OECD more and more. You can go down the block to the World Bank and they are making significant advances in here. A lot of countries have very poor practices actually with respect to modeling. And so there aren't a lot that you can look to. The Germans have done a decent job, but I would look rather to the international organizations and to practices of the States that we have mentioned here today.

Mr. REED. That we talked about earlier.

Thank you, Mr. Chairman, I don't have anything further.

Chairman CAMP. Thank you. Dr. Boustany is recognized.

Mr. BOUSTANY. Thank you, Mr. Chairman. I would like to explore the limitations of models using a specific example. Over the past 3 years and now in the President's current proposal, he has repeal of certain expensing measures for oil and gas companies that would hit predominantly independent companies, smaller companies, not the integrated, large ExxonMobils or Chevrans or those types of companies.

The most prominent of these is the repeal of the intangible drilling costs. And again, these are measures in a capital-intensive endeavor where you can expense where the return—if you get a return, it is on the back end. And in talking to a lot of companies they are telling me that if these things are repealed, we will end up seeing a lot less of this type of activity by these companies. Consistently, the scoring of these measures as a package yields about 45 billion in revenue.

I want to question that figure based on the modeling, and here is why. If you reduce independent companies' production of oil and gas, you are going to—it seems to me you are actually going to lead to a decrease—well, certainly a decrease in activity and decrease in revenue emanating from it.

And so I guess my question is: How did that \$45 billion come into—how was it derived? Were certain behavioral considerations taken into effect based on interviews or discussion from what would really happen here? And was there a consideration that we now have a delinkage between the price of oil and the price of natural gas in this country—well globally, for that matter, but predominantly in this country because it is more pronounced here than it is globally?

Given the natural gas production, 97 percent of it is done domestically. It is done by small, independent companies. I have heard anecdotal information that suggested a company that might drill

15 wells perhaps would only drill two, or one, if the expensing provisions were repealed. So I want to explore some of these aspects and how they fit into the limitations that these models predict.

Mr. Barthold, if you would start.

Mr. BARTHOLD. Thank you, Mr. Boustany. The question that rises is obviously an important one to that particular sector of the economy. The oil and gas industry is a big component of the economy, and that is the main factor behind the scale of the estimate that we produced.

But as I noted in my testimony we assume—we take into account—I shouldn't say we assume—we take into account that if we change the tax treatment of one sector, that there will be less economic activity in that sector. Now that economic activity, though, isn't necessarily lost to the economy as a whole.

Now, unfortunately, I assume there are some of your constituents that you have talked to, the independent drillers of gas, they would go out and seek their funding from Doug Holtz-Eakin or John Buckley. And a Doug and a John would look and say, "Gee, because of this tax change, the returns don't look so good; I don't want to finance your gas venture." They may turn to the film industry or they may turn to the micro-processor industry and invest their funds there.

So the investment isn't necessarily a loss to the economy. And our conventional modeling always tries to account for some shifting across sectors. So the model, yes, does recognize there will be less investment in oil and gas. We have done work to recognize the point that you made that oil and gas are different. They are different in international trade, and that can be an important factor in terms of displacement of domestic activity, and for foreign activity, the ability or inability to transport gas across the ocean. It is growing, but it is much more limited than the oil industry. All those factors we do try and take into account, sir.

Mr. BOUSTANY. Thank you. Mr. Holtz-Eakin would you like to comment, or Mr. Beach?

Mr. BEACH. I would add one thing, and that is even though it is true that investment dollars may flow to another sector and thus benefit that sector, there are sectors of the economy, once you degrade the capital structure, that are very difficult to rebuild. The transmission system, the production system, and the refining system associated with natural gas and petroleum must be continuously revitalized in order to keep them at their highest level of productivity and return.

So changes in tax policy that you make for an industry must be taken with great care to think about the long-term consequences of that act. For example, in a model of the economy, we would have to treat it that way.

Mr. BOUSTANY. Thank you.

Chairman CAMP. Ms. Black is recognized.

Mrs. BLACK. Thank you, Mr. Chairman, and thank you, panel, for being here today with this really complicated issue.

I want to return to the issue of the corporate taxes and ask if there are any models out there that assume the burden of the corporate tax where they assume in the economy? Did they assume it

on the company, the shareholder, or the consumer? And does this impact the model's results? Each one of you address that, please.

Mr. BARTHOLD. Ms. Black, that is another important question. The most basic answer is we always assume that taxes are borne by individuals. The question you are asking is what is the incidence of the corporate tax or, more generally, what is the incidence of all the taxes that we have on capital? In the case of the corporate tax, is it borne by domestic shareholders, is it borne by domestic labor or a combination of the two?

Economics literature is divided on this. There has been change through time. The ability of capital to flow across borders leads a number of people to conclude that there can be substantial shifting onto labor. There is not uniform consensus on that. The corporate tax affects the after-tax rate of return ultimately to investors. That is a factor that goes into our modeling, and our modeling is ultimately about individuals.

Mrs. BLACK. Others want to address that?

Mr. HOLTZ-EAKIN. I simply want to concur with what Mr. Barthold just said. This is how the economics professional handles this. There has been evolution over time in their perception of who ultimately bears the burden of this tax, with it shifting more and more toward labor as opposed to owners of domestic capital.

Mr. BUCKLEY. I would say there is a sharp distinction between the corporate executives and economic models as to who bears the incidence of the tax. The executives believe that they and their shareholder bear the burden. So there is a difference of opinion here between the more technical economic analysis where it may be assumed to be borne by different factors, and what I have seen, just from the basic reaction of the corporate executives, where they are quite confident it is borne by their shareholders.

Mrs. BLACK. Mr. Holtz-Eakin.

Mr. HOLTZ-EAKIN. I think there is unanimity that corporations respond to the corporate tax. I mean, they will rearrange their financial policies and they will alter their capital investment decisions. They will change the location of expansions. All of that is part of the transmission mechanism by which the tax gets shifted somewhere in the economy. And if they turn out to be less productive and less able to pay high wages, labor ends up bearing that burden. That is the mechanism.

Mr. BEACH. Well, the corporate tax is borne by labor. That is the way we handle it in our model. That is the bearing of the tax. It goes to an individual. The effect of the tax, of course, is widespread. So depending upon the corporate strategies that are changed by the change in your tax policy here, you can see wages, standard of living for a lot of people who are affected in the private sector, the revenues of State and local governments. So it permeates throughout the whole economy. There are the effects and then there is the economically, theoretically-driven notion of bearing.

So for your deliberations I would always think about the taxes borne by labor and the taxes borne by capital, and then think about the corporate tax and which of those does it really affect most? In our view, it mostly affects the amount and the compensation of labor.

Mrs. BLACK. Well, it seems ultimately it will be borne by individuals as they purchase the product or the service, but that is not really considered in the model. So in the model, is it?

Mr. BEACH. Yes, it is. It is like the discussion we had about eliminating Social Security. If we reduce the Social Security in the models that I use, there would be a definite effect in the reduction in transfers to individuals. And so consumption expenditures would fall, and you would see a change in relative prices, and we would all have an effect. So nothing happens in isolation inside these models at all.

Mrs. BLACK. Thank you. I yield back.

Chairman CAMP. Well, thank you. And I want to thank our witnesses for their testimony and time today. And with that, this hearing is adjourned.

[Whereupon, at 12:36 p.m., the Committee was adjourned.]

[Questions for the Record follow:]

112TH CONGRESS, 1ST SESSION

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NOV 17 2011.

Honorable Dave Camp
U.S. House of Representatives
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Washington, D.C. 20515

Dear Chairman Camp:

This memorandum is a response to your request for a written response to a question asked by Mr. Schock during the September 21, 2011, hearing on the economic models used by the staff of the Joint Committee on Taxation to evaluate broad tax reform.

Mr. Schock asked:

In analyzing a corporate tax reform proposal that lowers the corporate tax rate significantly, e.g., to 25 percent, would the Joint Committee revenue estimating methodology assume one or more of the following: first, that U.S. multinationals would increase the amount of their U.S. domestic investment by investing capital inside the U.S. that under current law would have been invested outside the U.S.; second, that the amount of foreign investment inside the U.S. would increase above what is expected under current law; third, that less "earnings stripping" would occur with respect to foreign investment in the U.S. than occurs under current law; and fourth, would U.S. companies engage in less income "shifting" than occurs under current law. With respect to the same corporate reform proposal would the Joint Committee estimating methodology assume an increase in either or both GDP and GNP as compared to current law?

The response to these questions depends upon how the lower U.S. corporate tax rate is achieved. For the sake of answering your question, we will assume that this lower rate is achieved by various base broadening reforms that result in a net permanent decrease in the cost of capital invested in the United States, although not all base broadening proposals would achieve this result. A lower cost of capital influences the decisions of multinational corporations, especially those concerning new investment.

With this assumption about the path to a lower corporate tax rate, the answer to your first two questions is a qualified "Yes." This requires that we discuss both our conventional revenue estimates and the supplemental information that we provide based on our macroeconomic models.

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Honorable Dave Camp
 U.S. House of Representatives

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Within the fixed GNP assumption that is used for conventional estimates, we model cross-border investment flows of U.S. taxpayers, so our conventional estimates likely would show an increase in U.S. investment by U.S. multinationals if the cost of capital for investment in the United States falls (in contrast, a fixed GDP assumption would not allow this).¹ A qualification is that to the extent U.S. multinationals might be able to allocate income to even lower-tax jurisdictions, either by shifting economic activity to such jurisdictions, or through allocations that do not involve significant shifts of economic activity from present locations, such ability might reduce the net effect. The conventional estimate would take account of that possibility under present law.

When our conventional estimates are supplemented by our macroeconomic models, these macroeconomic models incorporate cross-border capital flows from both foreign and U.S. investors, and include effects of changes in those flows on productivity, employment, and output.² Our macroeconomic models endogenously do not incorporate taxable income changes that are unrelated to actual economic activity but which are "allocated" to different locations on paper in order to minimize tax liability.³ Our macroeconomic models also do not incorporate international policy response considerations, such as possible changes in foreign tax rates in response to changes in U.S. tax rates. We are unaware of other macroeconomic models that include both significant detail on tax structure and a more fully elaborated international sector, but we are continuing to research this.

¹ These conventional estimates generally do not incorporate possible effects of those flows on productivity and employment.

² We generally use two macroeconomic models. The MEG model assumes that domestic and foreign investment respond to after-tax returns on capital, and is constrained by purchasing power parity and balance of payment constraints. In the MEG model, there is a "rest of the world" economy and import and export flows are determined endogenously by domestic demand and exchange rate adjustments. In the OLG model, foreign investment responds to changes in pre-tax interest rates.

³ Our conventional estimates attempt to account for taxable income changes that are not connected to actual economic activity.

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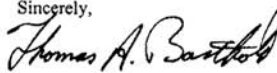
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With respect to your third question about the effect of a lower U.S. corporate rate on earnings stripping by foreign-owned domestic corporations in the United States, a conventional estimate will reflect a reduced potential for earnings stripping. By making deductible debt finance somewhat less attractive, our conventional estimate would reflect that foreign investors may report more U.S. taxable income. A reduction in earnings stripping also could be reflected in our macroeconomic analysis to the extent that comparative tax differences that encourage earnings stripping are reduced as cross-border investment changes. Consistent with our assumption of fixed GNP, we would be able to reflect in our conventional estimates the income shifting you refer to in your fourth question.⁴

Finally, you asked about the total GDP and GNP effects of a reform that reduces the U.S. corporate tax rate. Using our macroeconomic models, we have analyzed generic proposals that reduce the U.S. corporate tax rate and have found that GDP and GNP would increase were those proposals enacted. The extent and time pattern of such increases would again depend on how the lower U.S. corporate tax rate is achieved.⁵

I hope this information is helpful to you. If we can be of further assistance in this matter, please let me know.

Sincerely,



Thomas A. Barthold

Enclosure

⁴ The same caveats discussed above in connection with your first two questions, regarding the effect of possible taxpayer ability to achieve even lower rates through earnings stripping or income shifting to countries with lower rates than the reduced U.S. rate, and the potential for foreign country law changes in response to US lower rates, would apply to these third and fourth questions.

⁵ Nicholas Bull, Tim Dowd, and Pamela Moomau, "Corporate Tax Reform: A Macroeconomic Perspective," *National Tax Journal*, December 2011, 64(4), 923-42. Our three economists presented this analysis of a policy experiment to obtain feedback from other economists on our modeling approach. I enclose a copy of this paper.

CORPORATE TAX REFORM: A MACROECONOMIC PERSPECTIVE

Nicholas Bull, Tim Dowd, and Pamela Moomau

There has been considerable recent interest in reducing the corporate tax rate. As a first step toward analyzing the macroeconomic consequences of such a reform, we consider a rate reduction from the current statutory rate of 35 to 30 percent. We present the results under differing assumptions about how the rate cut is paid for, as well as some sensitivity analysis of the impact of differing assumptions about Federal Reserve policy and differing assumptions about corporate finance.

Keywords: corporate tax reform, tax expenditures, fiscal policy

JEL Codes: E27, E32, H25, H32

1. INTRODUCTION

Economists have for many years argued that the corporate tax system is ripe for reform, in part because of the various economic distortions caused by the interaction of the corporate and individual income tax systems. Among these distortions are asymmetric tax treatments of debt versus equity, capital-intensive versus non-capital-intensive firms, domestic versus foreign income, and pass-through entities versus those in corporate form.¹

Interest in reducing the federal corporate tax rate from its current statutory level of 35 percent for most corporations has been building for several years. In 2007, House Ways and Means Committee Chairman Charles Rangel introduced the Tax Reduction and Reform Act of 2007 which reduced the top statutory tax rate on corporate income

¹ A detailed discussion of these issues is beyond the scope of this paper, but is provided by Gravelle (1994) and Auerbach (2002).

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to 30.5 percent and paid for that change with the repeal of the domestic manufacturing deduction, changes in the treatment of foreign source income, and modifications of inventory accounting rules including elimination of last-in, first-out accounting. In 2010, several proposals to overhaul the corporate income tax were put forward, including: (1) a proposal by Senator Ron Wyden and Senator Judd Gregg to establish a single corporate tax rate of 24 percent; (2) a proposal by co-chairs Erskine Bowles and former Senator Alan Simpson of the National Commission on Fiscal Responsibility and Reform to reduce the corporate rate to between 23 and 29 percent and eliminate all other corporate tax expenditures; and (3) a proposal by former Senator Peter Domenici and Alice Rivlin to reduce the corporate rate to 27 percent. In 2011, Ways and Means Committee Chairman Dave Camp, House Budget Committee Chairman Paul Ryan, and President Barack Obama have expressed an interest in reducing the corporate tax rate. President Obama announced his desire for a lower tax rate on January 25, 2011 in his State of Union address, in which he argued legislation should be enacted to, "Get rid of the loopholes. Level the playing field. And use the savings to lower the corporate tax rate for the first time in 25 years — without adding to our deficit."

As indicated by President Obama in the quote above, a key component of most of these corporate reform plans is that they would reform corporate taxation on a revenue-neutral basis. Most of the plans argue that this should be done by eliminating provisions in the corporate income tax that provide special tax treatment for specific industries or types of corporate activity. Essentially the idea is to lower corporate statutory tax rates and broaden the corporate tax base, ideally reducing marginal tax rates on corporations, in order to increase incentives for investment in U.S.-based corporations by increasing their after-tax rate of return on investment.

The staff of the Joint Committee on Taxation (JCT) and the Office of Tax Analysis of the U.S. Department of Treasury prepare annual lists of estimates of corporate tax expenditures, pursuant to the Congressional Budget and Impoundment Control Act of 1974. Tax expenditures are defined in that act as "revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability."² These tax expenditures provide a logical starting place for identifying base broadening opportunities. However, most of the largest corporate tax expenditures affect marginal incentives, either by affecting the corporate effective marginal tax rate or by affecting the cost of capital through accelerated depreciation and expensing provisions. Only a few of the largest corporate tax expenditures can be categorized as infra-marginal and thus possible base broadeners, and these provisions have their own limitations as reform measures. The economic incentives posed by the largest corporate tax expenditures are discussed in more detail in section II.B. below.

² Congressional Budget and Impoundment Control Act of 1974 (Public Law No. 93-344, section 3(3)).

We analyze the macroeconomic effects of reducing the corporate rate to 30 percent.³ We consider three ways of paying for such a corporate rate cut. First, we consider the macroeconomic effects of a rate reduction that is paid for by increased borrowing. Second, we consider a rate reduction that is paid for by "idealized" base broadening. We do not specify any particular policy, but assume that tax expenditures can be eliminated in such a way as to completely pay for the marginal rate cut on a year-by-year basis, without affecting marginal investment incentives. Third, taking account of the possibility that idealized base broadening may be difficult to achieve, we consider a reform that is paid for by eliminating a tax expenditure that affects marginal incentives, a partial repeal of the Modified Accelerated Cost Recovery System (MACRS).⁴ By partial repeal of MACRS, we assume that MACRS depreciation lives are lengthened proportionately such that the revenue raised over the budget horizon equals the revenue lost from the corporate rate cut. Before presenting the results of our modeling, we first provide some context by examining briefly corporate taxes, corporate tax expenditures, and their incentive effects on growth.

II. A (SIMPLIFIED) THEORY OF CORPORATE INVESTMENT

Long-term economic growth is determined by an economy's ability to increase its productive capacity by adding to its supply of labor, capital, and technology. The effects of corporate reform on the economy will be determined by how the reform influences decisions to add to the stock of capital, that is, to increase investment. Investment decisions are based on the investor's expected after-tax return on investment. In calculating the after-tax expected rate of return on a corporate investment, the investor will take into account not only the individual income taxes he expects to pay directly on his income from the corporation (capital gains taxes and dividend taxes), but also how the corporate tax system will impact net corporate profits, which impact his own future wealth and receipts from his investment. In addition to considering the expected gross return on assets purchased by the corporation, the investor takes into account such things as the corporate tax rate, the tax treatment of depreciation, and any applicable tax credits associated with the investment.

The theoretical framework that describes this decision-making process is often referred to as "user cost of capital" analysis, and has been the subject of an extensive literature.⁵ A key feature of this framework is that it takes into account the net present

³ We assume the corporate AMT is unchanged. We deliberately model a fairly small rate change. In the face of a large rate change, there would be many potential behavioral effects, such as incentives to shift from pass-through form to corporate, incentives to shift from debt-financing to equity financing, and incentives to operate firms in the U.S. versus abroad. By considering only a small rate change, it is reasonable to treat these incentives as small enough to be ignored.

⁴ Repeal of MACRS is also considered in the Wyden-Gregg and Domenici-Rivlin tax reform proposals.

⁵ Jorgenson (1963) formalized this framework in a way that still provides a starting point for economic modeling purposes. Hall and Jorgenson (1967) added taxation to the analysis.

value of the streams of costs and revenues associated with the use of capital throughout its economic life. The tax depreciation of capital is an important component of this calculation. Because partial repeal of MACRS is one of the methods for financing the corporate tax cut analyzed in this paper, we provide a brief discussion of recent evidence about the influence of changes in tax depreciation on investment decisions.

Changes to federal tax law on the deductibility of capital investment have provided economists with several natural experiments to measure the responsiveness of capital investment to taxation. In 2002, "bonus depreciation" was first enacted. In general, it allowed current year expensing for 30 percent of expenditures on qualified capital with a MACRS life of 20 years or less. This provision was temporary — to be in effect for three years starting on September 11, 2001 and ending on September 10, 2004. In 2003, the expensing portion was increased to 50 percent, and the eligible period was extended through the end of 2004.⁶ House and Shapiro (2008) found a very high level of responsiveness to these policies.

Bond and Xing (2010) analyzed the effects of changes in corporate taxation on corporate investment using panel data for the United States, Japan, Australia, and 10 European Union countries from 1982–2007. Employing a user cost of capital framework, they find a very strong influence of taxation on investment, particularly investment in equipment.

Edgerton (2011) took a slightly different approach to analyzing the effects of tax incentives on investment. He hypothesized that corporate investment may be less sensitive to changes in tax depreciation than would be implied by the user cost framework because investors have more information about the financial accounting treatment of the cost of capital than the timing of tax payments. He compared the effects of tax incentives for a policy where tax treatment and accounting treatment are the same (investment tax credits) to policies where they differ (bonus depreciation). He found that while both policies resulted in increased investment, there was a larger response to investment tax credits than to bonus depreciation.

One special topic in this literature is the role of dividends. For corporations for which the amount of dividend issuance is not affected by after-tax profits, the dividend tax rate would not be included in the user cost of capital; this is referred to as "new view" analysis of the cost of capital. In contrast, the traditional, or "old view," analysis incorporates dividends in the user cost, implicitly assuming that firms base dividend issuance on after-tax profits.⁷ Empirical evidence on how firms determine dividend issuance has generally shown about half to be traditional and about half to be "new view," so our baseline assumptions assume that firms are evenly split between these two types.⁸ There is some recent evidence that firms are more likely to be in the "new view" camp (Hassett and Newmark, 2008). Thus, we show how some of our results are affected by varying the share of traditional and new view firms.

⁶ Bonus depreciation also was enacted in 2008, and has been extended through 2012. But there has been limited empirical examination of these more recent effects.

⁷ Auerbach (2002) provides an overview of the corporate finance literature.

⁸ Auerbach and Hassett (2003) present evidence supporting this assumption.

A. Corporate Taxes

In 2007, corporations paid a total of \$370.2 billion in federal taxes, representing approximately 14.4 percent of total tax receipts.⁹ The Federal corporate income tax has four statutory rates that apply to corporate taxable income: a 15 percent rate on the first \$50,000; a 25 percent rate on the next \$25,000 of income; a 34 percent rate on income in excess of \$75,000 and less than \$10 million; and finally a 35 percent rate on income in excess of \$10 million. The three lower rates are phased out for corporations in higher income ranges. While the statutory rate for most corporations is 35 percent, the average rate paid by active corporations in 2007 was approximately 26 percent.¹⁰

Corporate receipts have varied quite a bit over time and are smaller relative to gross domestic product (GDP) than they have been in the past. Figure 1 shows corporate profits and tax receipts as a percentage of GDP from 1946–2008. Corporate receipts peaked in 1952 at 5.9 percent of GDP. Since 1978 corporate receipts as a percentage of GDP have varied between 1 and 2.6 percent. Corporate profits as a share of GDP peaked in 1950 at 14.7 percent, and reached their lowest level in 1986 at 5.7 percent. Recently, corporate profits as a share of GDP surged to 13.6 percent in 2006.

Figure 2 compares corporate income taxes among the Organisation for Economic Co-operation and Development (OECD) countries in 2007. The left hand vertical axis shows corporate income tax receipts as a percentage of GDP. The right hand vertical axis shows the top statutory federal corporate tax rates adjusted for local tax deductions. In 2007, the United States collected slightly less than the unweighted average amount collected by OECD countries of 3.8 percent of GDP. However, the United States had one of the highest top statutory rates. Many have interpreted information such as that provided in Figure 2 as suggesting that compared to other OECD countries, the United States could potentially broaden its tax base and lower statutory corporate rates without sacrificing significant revenues.

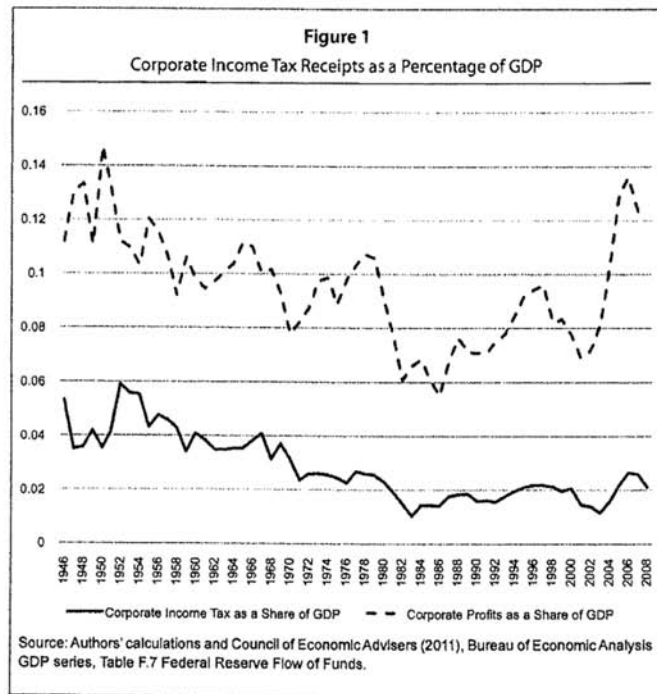
B. Corporate Tax Expenditures

As noted above, corporate tax expenditures are a convenient place to start in identifying ways to broaden the tax base to cover the cost of any rate reduction.

There are a number of deductions and credits that corporations can take advantage of to reduce their tax liability. JCT (2010) lists 146 tax expenditures that benefit corporations. Many of these tax expenditures are tiny; for instance the tax credit for the cost of carrying tax-paid distilled spirits in wholesale inventories has a tax expenditure totaling \$0.1 billion over 5 years. Table 1 shows the 10 largest corporate tax expenditures. These

⁹ See Table B-80 in Council of Economic Advisers (2011).

¹⁰ In 2007, returns of active non-pass through corporations had approximately \$1.2 trillion in taxable income after carry-forward of net operating losses and \$330 billion in tax liability as shown in Table 12 of Internal Revenue Service (2010). Total income tax before credits was \$436 billion.



10 tax expenditures represent over two-thirds of total corporate tax expenditures.¹¹ In order for repeal of a corporate tax expenditure to increase tax revenues without affecting the effective marginal tax rate on corporations, the tax expenditure must be infra-marginal — that is, it would not change if corporate profits increased.

The largest corporate tax expenditure is the deferral of active income of controlled foreign corporations. There is substantial uncertainty about the effects of the tax provi-

¹¹ The Section 41 research credit which has an estimated corporate tax expenditure of \$12.0 billion would be ranked as the 13th largest tax expenditure. Notwithstanding that the Section 41 credit was in fact extended at the end of 2010, with a revenue cost of \$13.3 billion for the one year extension through 2011, the 2010 tax expenditure estimate assumed expiration at the end of 2010.

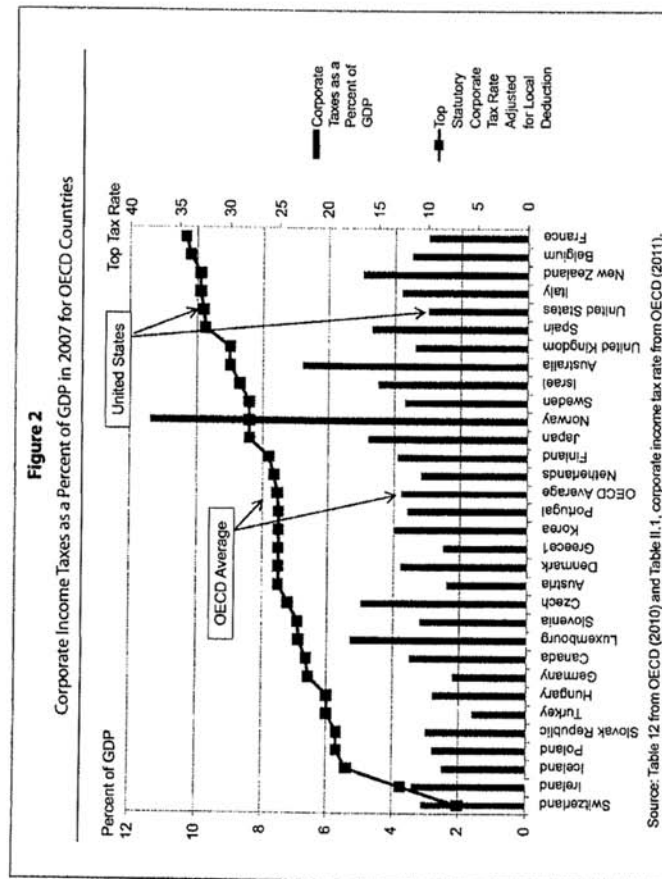


Table 1
10 Largest Corporate Tax Expenditures
(\$Billions)

Corporate Tax Expenditure and Function	2010	2011	2012	2013	2014	Total 2010–2014
Deferral of active income of controlled foreign corporation	12.5	13.3	14.1	14.9	15.8	70.6
Exclusion of interest on public purpose State and local government bonds	7.5	8.5	9.0	9.9	10.4	45.3
Deduction for income attributable to domestic production activities	7.0	8.4	8.8	9.2	9.8	43.2
Inventory property sales source rule exception	7.2	7.4	7.6	7.8	8.0	38.0
Depreciation of equipment in excess of the alternative depreciation system	24.1	6.5	−5.0	0.8	10.7	37.1
Inclusion of income arising from business indebtedness discharged by the reacquisition of a debt instrument	21.1	6.9	0.5	0.3	(1)	28.8
Credit for low-income housing	4.9	5.1	5.3	5.6	6.1	27.0
Expensing of research and experimental expenditures	4.3	4.2	4.4	5.8	6.9	25.6
Inventory methods and valuation: Last in first out	3.6	3.8	4.0	4.2	4.4	20.0
Reduced rates on first \$10,000,000 of corporate taxable income	3.2	3.2	3.2	3.1	3.1	15.9

Note: (1) Indicates a positive tax expenditure of less than \$50 million
Source: JCT (2010)

sions affecting foreign source income on U.S. corporate tax revenues and incentives to invest in the United States. Some suggest that repeal of deferral would effectively increase the worldwide corporate rate (both average and marginal) for U.S. multinational corporations.¹² The extent to which this would increase U.S. tax revenues depends on the ability of firms to avoid the tax consequences, which will depend in part on the extent to which they can relocate their tax address without disrupting their operations. Depending on how repeal of deferral is combined with repeal of other tax expenditures affecting multinational corporations, the increase in effective tax rates on U.S. corporations could provide an incentive for relocation of actual economic activities.

The second largest corporate tax expenditure is the exclusion of interest on public purpose state and local government bonds. Despite the fact that this tax expenditure is likely to be infra-marginal and is the second largest, repeal of the exclusion for corporations is unlikely to result in a significant increase in total tax receipts. Corporations hold a small portion of tax-exempt bonds, and reducing after-tax returns for corporate holders of these bonds would likely induce a shift in the ownership of these bonds to high-tax individuals, with little effect on revenue.

The sixth largest corporate tax expenditure, inclusion of income arising from business indebtedness discharged by the reacquisition of a debt instrument, has already expired, eliminating it as a potential revenue source.

The remaining seven large corporate tax expenditures are marginal in nature on an on-going basis. The third largest tax expenditure is the domestic production activities deduction in Sec. 199 of the Internal Revenue Code (hereafter, the section 199 deduction). The section 199 deduction is essentially a marginal rate reduction of 9 percent for qualifying manufacturers.¹³ Accelerated depreciation is the fifth largest expenditure and acts to reduce the marginal cost of capital.¹⁴ Repeal of the low income housing tax credit would increase the cost of capital in the housing sector. Similar to accelerated depreciation, expensing of research and experimental expenditures affects the marginal cost of investment. As of the writing of this paper, it is set to expire after December 31, 2011. And finally, because the reduced rates for smaller corporations are mostly phased out for larger corporations, repeal of the reduced rates would directly increase marginal rates for smaller corporations.

The two tax expenditures affecting deductions for inventory, the inventory property sales source rule exception and the last in, first out inventory method could be structured to raise significant revenues in the short-run without affecting investment incentives. These rules currently permit taxpayers to value inventory for deduction purposes as if the inventory were purchased/created at an earlier date when costs were much lower than the current acquisition price. Reversal of these rules, if applied to existing inven-

¹² For example, Grubert and Altshuler (2008) provide a discussion of the effects of their proposal to repeal deferral.

¹³ The effect of the section 199 deduction is only a 6 percent rate reduction for large oil producers.

¹⁴ The tax expenditure estimate for MACRS has historically varied substantially because of various temporary "bonus depreciation" provisions. In a steady state, it would be much larger.

tory, would amount to a lump-sum tax on existing inventories, generating revenues in the first year or two that would not be associated with a change in effective marginal tax rates. However, as the new rule is applied to inventory investment going forward, there are likely small marginal effects assuming inflation is correctly anticipated by businesses.

In summary, of the 10 largest corporate tax expenditures, only two can be characterized as potentially base broadening in that their repeal would increase the overall average corporate rate without affecting marginal tax rates in the short-run. Moreover, because these two are not particularly large they will not be able to pay for much of a statutory rate reduction. In order to expand the taxable corporate base without sacrificing the marginal incentive effects of most current corporate tax expenditures, it would be necessary to reform some or all of these tax expenditures to preserve their effects on after-tax returns, rather than simply to repeal them. For the purposes of the following analysis, in one of the simulations we assume that such a reform is possible. But the details of how to implement such reforms are beyond the scope of this paper.

III. MACROECONOMIC SIMULATION OF A CORPORATE RATE REDUCTION

A. MEG Model

To simulate corporate tax reform, we use the JCT staff's Macroeconomic Equilibrium Growth (MEG) model.¹⁵ The MEG model has several defining characteristics: (1) long-run equilibrium output is determined by the supply of capital and labor to the economy; (2) the economy is allowed to be out of equilibrium in the short term (though it is always converging back to equilibrium); (3) economic agents only react to current and past policy changes and do not react to future policy changes; and (4) it is possible to model different assumptions about the Federal Reserve's monetary policy response to fiscal policy changes. Incentives to work and invest are explicitly modeled as depending on after-tax returns to capital and labor; thus the MEG model allows us to simulate the long-run growth effects due to changes in marginal and average tax rates.

Changes in the corporate income tax are expected to affect economic output by changing incentives for investment. Specifically, in the MEG model, the amount of domestic capital available for investment is determined by the response of domestic savings and investment demand to changes in the after-tax rate of return on investment and the amount of federal government borrowing. The amount of international capital available for investment in the United States is responsive to changes in the U.S. demand for imports relative to foreign demand for U.S. exports, and to changes in interest rates, exchange rates, tax rates, and the global allocation of wealth.

¹⁵ A detailed description of the MEG model is provided in JCT (2003, 2005b).

In calculating the user cost of capital we include the net present value of tax depreciation.¹⁶ Under present law, tax depreciation schedules that are faster than economic depreciation reduce the after-tax cost of capital, increasing the after-tax rate of return on investment. Effective marginal tax rates on corporate income, dividend income, and capital gains are also components of this calculation. We use the JCT staff's microsimulation models for the individual and corporate income taxes to determine average and effective marginal tax rates on the following sources of income: wages, dividends, interest, rents, capital gains, and corporate income under both present law and proposed policy changes.¹⁷

MEG simulations are run for each policy using two extreme assumptions about Federal Reserve Board behavior. In one variation (referred to as "MEG aggressive Fed response") it is assumed that the Federal Reserve Board acts aggressively by changing interest rates to counteract any demand effects provided by the simulated policy in each period. These simulations model Federal Reserve Board policy as if the Federal Reserve Board were omniscient and able to counteract fiscal policy demand effects almost completely with interest rate adjustments. In the other variation (referred to as "MEG neutral Fed response"), it is assumed that the Federal Reserve Board remains neutral with respect to any changes in fiscal policy, maintaining a fixed growth rate in the money supply, and thereby allowing temporary changes in demand to affect levels of employment and output. Neither of these simulations is an empirical prediction of actual Federal Reserve Board policy; rather, they are both stylized representations of different approaches to monetary policy.

In the current economic environment, with relatively high unemployment and slow growth, it seems reasonable to assume a more neutral policy response by the Federal Reserve Board. At the same time, with U.S. federal budget deficits expanding rapidly, from about 1 percent of GDP in fiscal year 2007 to more than 10 percent in fiscal year 2010, Federal Reserve policy might be expected to be more "aggressive" in response to the stimulative effects of deficit finance over time.¹⁸ By presenting the results of both simulations, we provide a sense of the range of possible effects. It seems likely that the "neutral" simulations would be more relevant for the short-run and the "aggressive" simulations would be more appropriate for the longer term.

There are limitations on the MEG model's ability to simulate all of the likely economic effects of corporate tax reform. The model does not include sectoral detail that could be of significance. For instance, the MEG model cannot capture the effects of

¹⁶ Hall and Jorgenson (1967) introduced inclusion of tax depreciation in cost of capital calculations. The actual tax depreciation calculations used in the MEG model are based on depreciation schedules in present law and in the policy proposal.

¹⁷ JCT (2005a) provides a brief description of these microsimulation models.

¹⁸ According to Congressional Budget Office (2011), in fiscal year 2010 the deficit was \$1.3 trillion — 8.9 percent of GDP. It is predicted to fall to \$551 billion, 3.0 percent of GDP in fiscal year 2015, and then begin growing again in both nominal value and as a percentage of GDP.

possible shifting between firms that are capital-intensive and those that are not capital-intensive, or between sectors that tend to be more internationally oriented and those that are not. Thus, while the simulations described below provide a “big picture” analysis of the results of the growth effects of corporate rate reductions under different financing assumptions, they may understate the positive benefits of corporate tax reform — particularly to the extent that there are economic efficiency gains that result from reducing sectoral or international distortions.

B. Reduce the Corporate Income Tax Rate to 30 Percent

The staff of the JCT estimates that reducing the top U.S. corporate tax rate to 30 percent starting in 2012 would result in a \$478 billion reduction in tax receipts over the 10-year budget window. Over the period 2012–2021, this would be a 12 percent reduction in corporate income tax receipts.¹⁹ Table 2 shows the growth effects of reducing the top statutory corporate rate from 35 to 30 percent without any other changes to corporate taxation. This debt-financed decrease in the corporate income tax rate primarily affects the economy by increasing the after-tax rate of return on corporate capital, and therefore the incentive to invest in this capital. The producers' capital stock is projected to increase by 0.3 to 0.4 percent in the first five years, and 0.8 to 1.0 percent over 10 years. The build-up of the capital stock leads to an increase in labor productivity, and thus higher wages. These effects lead to an increase in total output, with real GDP projected to increase between 0.1 and 0.2 percent. In the short run, the effect on consumption is smaller than on output in general, as increased returns to investment result in an increase in savings. In the longer run, the accumulated capital stock supports higher employment and consumption, maintaining a 0.2 percent increase in GDP. But increasing interest rates due to increased government borrowing slows the build-up of the capital stock, reducing saving; as a result, the fiscal picture begins to deteriorate.

Comparing model results for the simulations that assume neutral and aggressive monetary policy responses shows that the aggressive monetary policy response dampens the effect of the tax policy changes. This is particularly true in the first five years because the monetary policy response acts to counter the fiscal stimulus that results from decreased tax payments.

C. Reduce the Rate to 30 Percent and Finance with Infra-marginal Tax Expenditures

A popular approach to tax reform is to eliminate deductions, credits, and other tax expenditures in order to broaden the taxable base, and lower statutory tax rates enough to hold revenues constant.²⁰ A large share of corporate tax expenditures appears to have

¹⁹ Congressional Budget Office (2011) estimates that total corporate tax receipts for the period 2012–2021 would be \$3.923 billion.

²⁰ This is the approach taken, for example, by the reform of the individual income tax in 1986. Many of the current calls for corporate tax reform have invoked such a goal.

Table 2 Macroeconomic Effects of Reducing the Corporate Rate to 30 Percent (Percentage Change in Levels Relative to Present Law)			
Macroeconomic Variable	2011–2016	2017–2021	Long Run
Neutral Monetary Policy:			
Real GDP	0.2	0.2	0.2
Total Capital Stock	0.2	0.4	–0.0
Producers' Capital	0.4	1.0	0.7
Residential Capital	–0.1	–0.4	–1.2
Real Consumption	0.0	0.1	0.4
Employment	0.2	0.0	0.1
Corporate Interest Rate (Change in percentage points)	0.2	0.2	0.4
Aggressive Monetary Policy:			
Real GDP	0.1	0.1	0.2
Total Capital Stock	0.1	0.2	–0.2
Producers' Capital	0.3	0.8	0.5
Residential Capital	–0.2	–0.7	–1.3
Real Consumption	–0.1	0.0	0.4
Employment	0.0	0.0	0.1
Corporate Interest Rate (Change in percentage points)	0.1	0.2	0.6

effects on marginal investment incentives, either by directly affecting the effective marginal corporate tax rate or by affecting the cost of capital through changes in depreciation and expensing rules. However, to provide information on the effects of the classic approach, we present the results of simulations in which we assume that the corporate tax rate cut is fully offset, year-by-year, by unspecified provisions that increase corporate revenues without affecting marginal incentives. The results are shown in Table 3.

While overall effects on GDP are very similar between the debt-financed and the base-broadening simulations in the short and medium run, producers' capital increases more under the base broadening simulation — by 0.9 to 1.1 percent in the medium run, and 1.3 to 1.4 percent in the long run, reflecting the lack of government debt crowding out private capital. In the long run, GDP is 0.3 to 0.4 percent — higher than in the debt-financed simulation, while interest rates are significantly lower than in the first simulation.

Table 3 Macroeconomic Effects of Reducing the Corporate Rate to 30 Percent and Broadening the Corporate Taxable Base (Percentage Change in Levels Relative to Present Law)			
Macroeconomic Variable	2011–2016	2017–2021	Long Run
Neutral Monetary Policy:			
Real GDP	0.2	0.2	0.4
Total Capital Stock	0.2	0.5	0.6
Producers' Capital	0.4	1.1	1.4
Residential Capital	–0.1	–0.4	–0.8
Real Consumption	0.0	–0.0	0.4
Employment	0.2	–0.1	0.1
Corporate Interest Rate (Change in percentage points)	0.2	0.2	0.2
Aggressive Monetary Policy:			
Real GDP	0.1	0.2	0.3
Total Capital Stock	0.1	0.3	0.6
Producers' Capital	0.3	0.9	1.3
Residential Capital	–0.2	–0.6	–0.7
Real Consumption	–0.1	–0.0	0.4
Employment	0.0	0.0	0.1
Corporate Interest Rate (Change in percentage points)	0.1	0.2	0.3

D. Reduce the Corporate Rate to 30 Percent with Partial Repeal of Accelerated Depreciation

As noted in the discussion of corporate tax expenditures above, a simple repeal of existing tax expenditures may not necessarily result in a pure revenue-neutral rate reduction that would improve, or even preserve, existing effective marginal incentives to invest. It seems likely that some of the policies that might be chosen to offset the cost of a rate cut will have marginal effects. To the extent that these policies result in no change in the effective marginal corporate rate (the rate after accounting for the marginal effects of removing deductions or credits on taxable income) relative to current law,

Table 4
 Macroeconomic Effects of Reducing the
 Corporate Rate to 30 Percent and Partial Repeal of MACRS
 (Percentage Change in Levels Relative to Present Law)

Macroeconomic Variable	2011–2016	2017–2021	Long Run
Neutral Monetary Policy:			
Real GDP	0.1	–0.1	0.1
Total Capital Stock	0.0	0.0	–0.3
Producers' Capital	0.2	0.3	–0.3
Residential Capital	–0.1	–0.3	–0.4
Real Consumption	0.1	–0.0	0.2
Employment	0.2	–0.1	0.0
Corporate Interest Rate (Change in percentage points)	0.1	0.1	0.1
Aggressive Monetary Policy:			
Real GDP	0.0	–0.1	0.1
Total Capital Stock	0.0	–0.1	–0.3
Producers' Capital	0.1	0.1	–0.3
Residential Capital	–0.2	–0.5	–0.3
Real Consumption	–0.0	–0.0	0.2
Employment	0.0	–0.0	0.0
Corporate Interest Rate (Change in percentage points)	0.1	0.1	0.1

then there is likely to be little overall macroeconomic effect from the change, although the specific implementation could be one that increases efficiency by reducing distortions. Next we consider a revenue offset that would affect marginal incentives, but not directly affect the effective corporate marginal rate — specifically, a partial repeal of the MACRS. Because a full repeal of MACRS would raise more revenue than is needed to pay for the 5 percentage-point rate cut, we assume that the parameters of MACRS are modified so that the system is less generous, and the conventional estimate of revenue raised over the budget horizon (not taking into account macroeconomic effects) exactly matches the conventionally estimated revenue loss from the rate cut during the 10-year

Table 5 Sensitivity Analysis of Macroeconomic Effects of Reducing the Corporate Rate to 30 Percent and Partial Repeal of MACRS Under Different Assumptions about Corporate Finance (Percentage Change in Levels Relative to Present Law)			
Macroeconomic Variable	2011–2016	2017–2021	Long Run
Aggressive Monetary Policy, 95 Percent of Firms "Traditional View"			
Real GDP	–0.0	–0.1	0.1
Total Capital Stock	0.0	–0.2	–0.4
Producers' Capital	0.0	0.0	–0.5
Residential Capital	–0.2	–0.5	–0.4
Real Consumption	0.0	–0.0	0.1
Employment	0.0	–0.0	0.0
Corporate Interest Rate (Change in percentage points)	0.1	0.1	0.1
Aggressive Monetary Policy, 5 Percent of Firms "Traditional View"			
Real GDP	0.0	–0.0	0.1
Total Capital Stock	–0.0	–0.1	–0.2
Producers' Capital	0.1	0.2	–0.2
Residential Capital	–0.2	–0.5	–0.3
Real Consumption	–0.0	–0.0	0.2
Employment	0.0	–0.0	0.0
Corporate Interest Rate (Change in percentage points)	0.1	0.1	0.1

federal budget period.²¹ The corporate rate reduction with partial repeal of MACRS is not revenue neutral year-by-year. Partial repeal of MACRS raises substantially more revenue in the early years, as the depreciation pattern of new vintages of capital no longer matches the old vintages. But in the steady state when all vintages are equally affected, the revenue effect is smaller. Thus, in the long run, the combination of the two policies results in revenue losses.

²¹ MACRS applies to both corporate and non-corporate business. The partial repeal is assumed to apply across-the-board to both types of businesses. MEG aggregates all types of business entities into one "business" sector. And each type of business capital — producer's durables, producer's structures, and multi-family housing — is also treated at an aggregate level, with each having its own depreciation rate adjusted pro-rata for partial repeal of MACRS.

Table 4 shows the effect of combining a 5 percentage-point rate reduction with a revenue-neutral, partial repeal of MACRS. The positive effects of the rate cut on producers' capital are largely offset by the increased cost of capital when MACRS is partially repealed — producers' capital is still increased within the short and medium run, but by 0.1 to 0.3 percent — not by as much as in the other simulations. In the long run, producers' capital stock declines by 0.3 percent. Overall, real GDP is also little changed as a result of the policy, by between -0.01 percent and 0.1 percent, supported by a modest increase in consumption as incentives to save are reduced by the effects of the MACRS change on the cost of capital.

Table 5 shows two additional aggressive monetary policy simulations that vary the percentage of firms that finance new investment out of new equity issuance. Our baseline assumption is that 50 percent of firms finance new investment out of new share issuance (traditional view firms), and 50 percent finance new investment out of retained earnings (new view firms). As mentioned above, the investment decisions made by firms following the new view are not affected by the dividend tax rate. Thus, the corporate rate cut is a larger cut in the overall tax on capital income for new view firms than for firms that follow the traditional view. Therefore we expect that simulations with more firms following the traditional view should result in a smaller capital stock over time. Table 5 shows that if most firms follow the traditional view, cutting the corporate rate to 30 percent combined with a partial repeal of MACRS will reduce GDP and the capital stock more than if the bulk of firms follow the new view.

IV. CONCLUSION

For good reasons, interest in reforming the U.S. corporate income tax has been increasing recently. The U.S. corporate income tax has high statutory rates relative to other OECD countries, and both modest and declining collections. These high statutory rates introduce distortions, and reduce the competitiveness of U.S. corporations. It appears that the corporate income tax is ripe for reform that would broaden the taxable base, thus reducing distortions and allowing for a lower statutory tax rate. However, most of the likely tax expenditure candidates for broadening the base in a substantial way either increase the effective marginal tax rate or increase the user cost of capital.

In this paper, we analyze three different policies: (1) a corporate rate cut of 5 percentage points financed with increased debt; (2) a corporate rate cut of 5 percentage points financed with reductions in hypothetical infra-marginal base broadening tax expenditures; and (3) a corporate rate cut of 5 percentage points financed with a partial repeal of MACRS.

We show that financing a corporate rate reduction with reductions in infra-marginal tax expenditures would dominate each of the other two policies in terms of increasing economic growth. In particular, real GDP under this policy is projected to be between 0.1 and 0.2 percent higher in the long run than it would be under the deficit-financed policy. Long-term productive capacity is significantly larger in the base broadening simulations with the producers' capital stock between 0.7 percent and 1.2 percent higher in the long run. Compared to the third policy simulation, financing the corporate rate cut

with a partial repeal of MACRS, real GDP and the producers' capital stock are higher by 0.2 percent and 1.5 percent respectively. We also explore whether corporate finance assumptions play any role in the results, and find that the more firms finance out of new share issuance, the more steeply the producers' capital declines.

We find that financing a corporate rate reduction with partial repeal of MACRS results in a macroeconomic outlook that is worse by several measures than the current law baseline, with potentially lower consumption, employment, real GDP, and capital stock — particularly in the 2017–2021 period. If corporate reform can be financed with reductions in infra-marginal tax expenditures, then there are real macroeconomic benefits to revenue neutral corporate income tax reform. Thus, in designing a corporate tax reform strategy, it is important to take into consideration whether a tax expenditure targeted for repeal is marginal or infra-marginal. Moreover, if a tax expenditure is targeted for reform and it is currently marginal in nature, then there could be real benefits to designing the repeal in such a way that the marginal incentives remain unchanged but the infra-marginal tax expenditure is repealed. For instance, the Internal Revenue Code: Sec. 41 research credit was designed to be incremental and only give a credit for research above a certain base level, thereby creating marginal incentives while reducing the infra-marginal effects. However, there are potential tax administration issues, as well as potential difficulties for taxpayers in complying with complicated tax regimes.

ACKNOWLEDGEMENTS

We wish to thank Bill Sutton, Patrick Driessen, Thomas Barthold, Rosanne Altshuler, and William Randolph for helpful discussions and suggestions. All remaining errors are our own. The views and statements are our own and do not represent those of any member of Congress or the JCT.

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[Submissions for the Record follow:]

**Comments for the Record
House Ways and Means Committee**

**Hearing on Economic Models Available to the Joint Committee on Taxation
for Analyzing Tax Reform Proposals**

Wednesday, September 21, 2011, 10:00 AM
1100 Longworth House Office Building

By Michael G. Bindner
Center for Fiscal Equity

Chairman Camp and Ranking Member Levin, thank you for the opportunity to submit comments on these issues. The Center for Fiscal Equity feels three types of models merit attention.

The first type of model needed is a robust model for the estimation of both revenue and the impact on the economy of consumption taxes, which include the FairTax, Value Added Taxes and a VAT-like Net Business Receipts Tax. The Center for Fiscal Equity bases its estimates for VAT and NBRT revenues on estimates developed by the Brookings-Urban Tax Policy Center, which estimate that a 5% broad based VAT would raise \$259 Billion after reductions in other types of revenue are factored in.

We suggest that the JCT validate this model and its sensitivity range. For example, do these estimates imply that a 10% VAT would yield \$518 Billion in net revenue? Would a 25% broad based NBRT yield \$1.285 Trillion? A robust set of estimates by the JTC would keep everyone on the same page in proposing various revenue options.

The second type of model needed for tax reform and deficit reduction is an estimate of the economic effects of various spending and tax benefit programs. The following questions come to mind:

- What is the impact of defense contracting versus Medicare provider payments versus the Child Tax Credit versus lower dividend tax rates?
- Do lower tax rates on the wealthy cause growth or do they provide an incentive to firms to pursue productivity gains, including off-shoring jobs, union busting and holding wages in line?
- What is the impact of these policies on the middle class?
- What is the impact of these policies on inflation?
- How do tax policies relate to the creation of asset bubbles, especially when capital gains taxes are cut, as they were in 1997, when the Technology Boom was fueled, only to be followed by the Tech Bubble popping and the 2001 recession?
- On all of these models, is there a lag effect between outlays of various types and their full impact on the economy?

- How does each type of spending effect consumption, savings and investment?
- What are the secondary effects as households and firms then spend the money they receive, including the effect on federal and state revenues?
- Is aerospace procurement more likely to stimulate spending the, for example, a tax cut to aerospace executives?
- How does each affect investment in both plant and equipment and in the secondary markets?

The third type of model relates to how deficit financing effects economic growth rates in the aggregate. With a large debt, are deficits partly offset by outlays for net interest, with the size of the deficit being offset by such outlays when they are approximately equal? How do these effects relate to tax policy? When tax policy is more progressive, yielding more revenue from wealthier taxpayers, is budget balancing stimulative? When tax rates are cut and revenue falls, are deficits required to keep money in circulation?

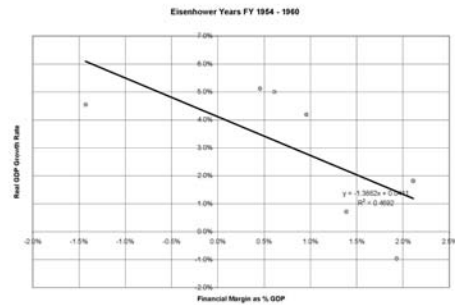
The Center for Fiscal Equity has developed figures relating to the third model, which we call the financial margin, where the financial margin is the deficit/surplus added to outlays for net interest, all expressed as a percentage of Gross Domestic Product (GDP) and regressed onto growth in real GDP in the next year, removing inflation from the analysis. See the following table for the data set used in these analyses.

Fiscal Year	Surplus or Deficit (-) Billions CYS	Net Interest (Billions CYS)	Financial Margin Raw (Billions CYS)	Financial Margin as % of GDP (Independent Variable)	GDP (in billions of dollars)	GDP (Chained) Price Index	Real GDP (Billions of 2005 Dollars)	GDP Growth Rate Next FY (Dependent Variable)
1954	-1.2	4.8	3.6	1.0%	377.0	0.1641	2,297.4	4.2%
1955	-3.0	4.8	1.8	0.5%	395.9	0.1654	2,393.6	5.1%
1956	3.9	5.1	9.0	2.1%	427.0	0.1697	2,516.2	1.8%
1957	3.4	5.3	8.7	1.9%	450.9	0.1760	2,561.9	-1.0%
1958	-2.8	5.6	2.8	0.6%	460.0	0.1813	2,537.2	5.0%
1959	-12.8	5.8	-7.0	-1.4%	490.2	0.1840	2,664.1	4.5%
1960	0.3	6.9	7.2	1.4%	518.9	0.1863	2,785.3	0.7%
1961	-3.3	6.7	3.4	0.6%	529.9	0.1889	2,805.2	6.0%
1962	-7.1	6.9	-0.2	0.0%	567.8	0.1910	2,972.8	4.2%
1963	-4.8	7.7	2.9	0.5%	599.2	0.1934	3,098.2	5.8%
1964	-5.9	8.2	2.3	0.4%	641.5	0.1957	3,278.0	5.3%
1965	-1.4	8.6	7.2	1.0%	687.5	0.1992	3,451.3	7.7%
1966	-3.7	9.4	5.7	0.8%	755.8	0.2034	3,715.8	3.9%
1967	-8.6	10.3	1.7	0.2%	810.0	0.2099	3,859.0	3.6%
1968	-25.2	11.1	-14.1	-1.6%	868.4	0.2173	3,996.3	4.4%
1969	3.2	12.7	15.9	1.7%	948.1	0.2273	4,171.1	1.4%
1970	-2.8	14.4	11.6	1.1%	1,012.7	0.2395	4,228.4	1.6%
1971	-23.0	14.8	-8.2	-0.8%	1,080.0	0.2515	4,294.2	4.0%
1972	-23.4	15.5	-7.9	-0.7%	1,176.5	0.2634	4,466.6	6.7%
1973	-14.9	17.3	2.4	0.2%	1,310.6	0.2749	4,767.6	2.4%

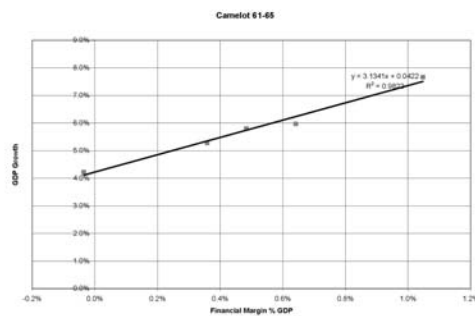
Fiscal Year	Surplus or Deficit (-) Billions CYS	Net Interest (Billions CYS)	Financial Margin Raw	Financial Margin as % of GDP	GDP (in billions of dollars)	GDP (Chained) Price Index	Real GDP (Billions of 2005	GDP Growth Rate Next
1974	-6.1	21.4	15.3	1.1%	1,438.5	0.2946	4,882.9	-1.8%
1975	-53.2	23.2	-30.0	-1.9%	1,560.2	0.3255	4,793.2	3.9%
1976	-73.7	26.7	-47.0	-2.7%	1,738.1	0.3489	4,981.7	5.6%
1977	-53.7	29.9	-23.8	-1.2%	1,973.5	0.3750	5,262.7	5.3%
1978	-59.2	35.5	-23.7	-1.1%	2,217.5	0.4003	5,539.6	4.4%
1979	-40.7	42.6	1.9	0.1%	2,501.4	0.4325	5,783.6	0.1%
1980	-73.8	52.5	-21.3	-0.8%	2,724.2	0.4707	5,787.6	2.1%
1981	-79.0	68.8	-10.2	-0.3%	3,057.0	0.5171	5,911.8	-1.3%
1982	-128.0	85.0	-43.0	-1.3%	3,223.7	0.5525	5,834.8	2.2%
1983	-207.8	89.8	-118.0	-3.4%	3,440.7	0.5768	5,965.2	7.8%
1984	-185.4	111.1	-74.3	-1.9%	3,844.4	0.5981	6,427.7	4.5%
1985	-212.3	129.5	-82.8	-2.0%	4,146.3	0.6175	6,714.7	3.8%
1986	-221.2	136.0	-85.2	-1.9%	4,403.9	0.6318	6,970.4	2.9%
1987	-149.7	138.6	-11.1	-0.2%	4,651.4	0.6486	7,171.4	4.3%
1988	-155.2	151.8	-3.4	-0.1%	5,008.5	0.6694	7,482.1	3.8%
1989	-152.6	169.0	16.4	0.3%	5,399.5	0.6954	7,764.6	2.4%
1990	-221.0	184.3	-36.7	-0.6%	5,734.5	0.7210	7,953.5	-0.4%
1991	-269.2	194.4	-74.8	-1.3%	5,930.5	0.7483	7,925.3	2.6%
1992	-290.3	199.3	-91.0	-1.5%	6,242.0	0.7678	8,129.7	3.2%
1993	-255.1	198.7	-56.4	-0.9%	6,587.3	0.7848	8,393.6	3.7%
1994	-203.2	202.9	-0.3	0.0%	6,976.6	0.8014	8,705.5	3.0%
1995	-164.0	232.1	68.1	0.9%	7,341.1	0.8184	8,970.1	3.1%
1996	-107.4	241.1	133.7	1.7%	7,718.3	0.8342	9,252.3	4.5%
1997	-21.9	244.0	222.1	2.7%	8,211.7	0.8495	9,666.5	4.2%
1998	69.3	241.1	310.4	3.6%	8,663.0	0.8603	10,069.7	4.9%
1999	125.6	229.8	355.4	3.9%	9,208.4	0.8717	10,563.7	4.6%
2000	236.2	222.9	459.1	4.7%	9,821.0	0.8889	11,048.5	1.7%
2001	128.2	206.2	334.4	3.3%	10,225.3	0.9099	11,237.8	1.4%
2002	-157.8	170.9	13.1	0.1%	10,543.9	0.9249	11,400.0	2.0%
2003	-377.6	153.1	-224.5	-2.0%	10,979.8	0.9442	11,628.7	3.8%
2004	-412.7	160.2	-252.5	-2.2%	11,685.6	0.9684	12,066.9	3.1%
2005	-318.3	184.0	-134.3	-1.1%	12,445.7	1.0000	12,445.7	2.7%
2006	-248.2	226.6	-21.6	-0.2%	13,224.9	1.0342	12,787.6	2.0%
2007	-160.7	237.1	76.4	0.5%	13,891.8	1.0654	13,039.0	1.3%
2008	-458.6	252.8	-205.8	-1.4%	14,394.1	1.0898	13,208.0	-3.3%
2009	-1,412.7	186.9	-1,225.8	-8.7%	14,097.5	1.1043	12,766.0	2.1%
2010	-1,293.5	196.2	-1,097.3	-7.6%	14,508.2	1.1127	13,038.7	

Note: Transitional Quarter Omitted

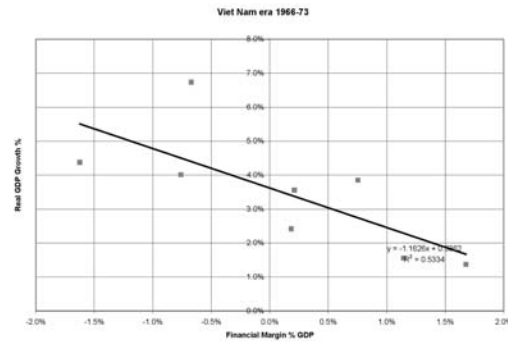
This repeats a study we performed but did not publish in 1987, which showed that Republican administrations generally must run bigger deficits to yield economic growth, but Democratic administrations generally did not. Indeed, these administrations had better economic performance by raising marginal tax rates on wealthier households.



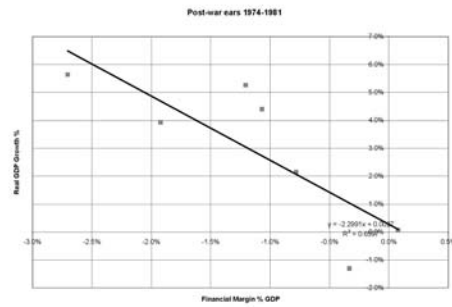
For the Eisenhower years, roughly fiscal year 1954 – 1960, budget results predict growth in 1955-1961. The model explains 47% of the variation of the data and predicts a base growth rate of 4.1% with a 1.38% less growth for every 1% of GDP decrease in the financial margin – meaning that deficits were necessary to keep growing the economy. While tax rates were high, these rates were not designed to raise revenue, but to assure that middle class jobs were preserved.



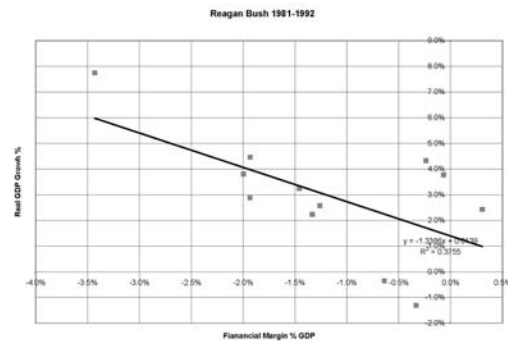
The Kennedy and pre-war Johnson years show a much different picture. In a model which explains 98% of the variation, 3.13% of growth results from every 1% increase in the financial margin, with a base growth rate of 4.2%. In other words, paying back debt led to more growth.



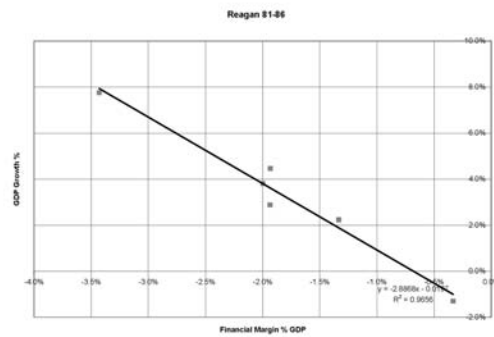
The Viet Nam era results explain 53% of the variation, with a base growth rate of 3.6% and 1.16% of additional growth for every 1% of GDP reduction in the financial margin. Deficit spending is again required for increased growth.

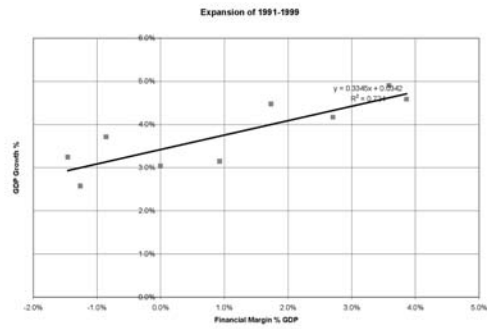


The postwar model explains 66% of the variation, with a base growth rate of 0.2% and 2.3% of growth resulting from every 1% decrease in the financial margin, showing deficit spending was necessary to yield growth in the economy.

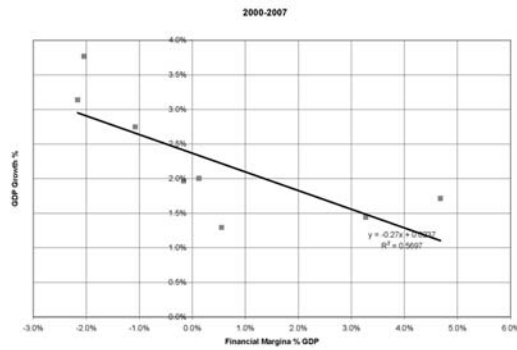


For the Reagan-Bush years as a whole, the model explains 37% of variation for the period 1981-1992, with a base growth rate of 1.4% and 1.3% of additional growth resulting from every percent GDP of deficit spending net of net interest. Isolating 1981-1986 yields a model which explains 96% of the variation. With a base growth rate of -2.0 %, 2.9% of growth is produced for every one percent of GDP decline in the financial margin – meaning budget balancing hurt the economy and deficits were necessary to grow it.





When George H.W. Bush and Bill Clinton raised taxes and controlled spending, more growth resulted, with 0.33% of growth resulting from each additional percentage of debt reduction, in a model that explains 72 percent of the variation, with a base growth rate of 3.4%.



The curve changes to negative once fiscal policy changed direction. In a model that explains 57% of the variation and a base growth rate of 2.4%, achieving a 1% growth rate requires an additional 0.27 percent of GDP loss in the financial margin – meaning the anemic growth of the last decade was fueled by deficits.

We believe that a Keynesian relationship explains these findings. When fiscal policy in the aggregate takes more money out of the bond markets after taxes have been cut, the running of deficits (net of interest payments) reduces savings and increases consumption by both the government and households.

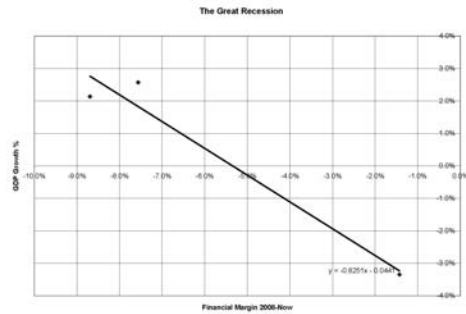
When budget balancing using tax increases aimed at lower wage workers occurs, such as an increase in the payroll tax or “sin taxes” or through cuts to spending, such as Gramm-Rudman-Hollings, and deficits are smaller compared to net interest, the economy contracts as the savings sector on average increases at the expense of both government and household spending.

When budget balancing occurs because of higher marginal tax rates, however, money is removed from the savings sector in comparison to the consumption sector, making more credit available as well as higher government and household consumption.

This is essentially what happened when Presidents Bush and Clinton raised taxes in the 90s. Even though the budget neared and achieved balance, consumption continued in both the government and household sectors, although there were cuts, both absolute and programmatic, in the defense sector, while credit was widely available. When capital gains tax rates were cut in 1997, however, the savings sector received a greater share of output, resulting in an investment boom which we now know exceeded the availability of high value investment opportunities, driving up both asset prices and allowing junk investments to enter the market, which could not provide adequate returns in most cases, causing the 2001 recession.

The tax cuts of 2001 and 2003 reduced revenue and increased deficits to record levels in the post-war era, with further asset inflation leading to the current economic depression, especially in the housing market.

This brings us to the current economic situation. The Great Recession as obviously shifted the Financial Margin curve. While the current curve has few data points, these observations are consistent with both theory and economic data in the post-war era.



Assuming that projections in the President's budget are accurate for 2011, it is possible to compute an estimate for FY2012 growth using FY2011 data and the current model. If the 2011 growth is estimated using the model rather than Administration projections, growth will be lower by half a percentage point. Using the model, 2012 growth based on current fiscal year spending is projected at 3.5%, provided that spending is not cut too much. In this model, lower spending results in a more anemic recover.

The Joint Committee on Taxation is urged to examine this model, as it has major implications for the road forward. Cutting the budget too aggressively could result in disaster, however allowing the Clinton tax rates to expire may allow the economy to return to the curves experienced in the early 1960s or the 1990s.

Our comments raise serious issues that must be dealt with in determining fiscal policy in the near term. Further adherence to current tax policy may lock us into a model where unsustainable debt is necessary to sustain the economy. Finding a way out of this debt by reverting to a more rational tax policy, based on these data, is essential.

Thank you again for the opportunity to present our comments. We are always available to members, staff and the general public to discuss these issues.

Contact Sheet

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**Hearing on Economic Models Available to the Joint Committee on Taxation
for Analyzing Tax Reform Proposals
Wednesday, September 21, 2011, 10:00 AM**

All submissions must include a list of all clients, persons and/or organizations on whose behalf the witness appears:

This testimony is not submitted on behalf of any client, person or organization other than the Center itself, which is so far unfunded by any donations.

Tax Reform Recommendations for the USA

My qualifications to comment on tax reform for the United States of America [USA] include: Ph.D. degree in Accounting, Certified Public Accounting certificate, and 50 years experience teaching accounting at leading universities.

There are three basic ways the USA can secure tax revenues: (1) income taxes, (2) property taxes, and (3) sales taxes. The comments in this paper relate only to income taxes.

The current tax code is a hodgepodge because most politicians include items that help their contributors reduce their income tax obligations. The interpretations of the current tax code by the Internal Revenue Service [IRS] make the current tax code confusing and convoluting.

Congress should create a tax code that is effective and efficient. It should be simple enough for an average high school graduate to prepare his or her own income tax return. It should not include any social items. This would require the removal of all deductions, exemptions, and special opportunities for taxpayers. It should have a zero tax rate for those citizens who are at the poverty level, and progressive tax rates based upon the levels of income above the poverty level.

The tax code recommended would be simple to prepare and simpler to audit. Therefore, there could be a significant reduction in the number of IRS employees. Thus, there could be a significant tax savings for the USA.

Grover L. Porter, Ph.D., CPA,
Professor of Accounting (Retired)





TESTIMONY OF TODD MCCRACKEN
PRESIDENT OF
THE NATIONAL SMALL BUSINESS ASSOCIATION

“Joint Committee on Taxation Scoring of Tax Reform Legislation”

Before the House Committee on Ways and Means

September 21, 2011

My name is Todd McCracken and I am the president of the National Small Business Association (NSBA), America's oldest small-business advocacy organization.¹ The NSBA is pleased to provide its perspective on marginal tax rates, capital gains and dividends in the context of tax reform.

The NSBA strongly believes that the present tax system is irretrievably broken and constitutes a major impediment to the economic health and international competitiveness of American businesses of all sizes. To promote economic growth, job creation, capital formation, and international competitiveness, fundamental tax reform is required. Until fundamental tax reform is undertaken, reducing marginal tax rates and broadening the tax base in ways that do not exacerbate the tax bias against savings and investment is highly desirable.

A major impediment to either incremental or fundamental tax reform is the current manner in which the Joint Committee on Taxation (JCT) estimates, or "scores" in Washington parlance, proposed legislation that would reform the tax system.² JCT staff ignore the well established "macroeconomic" impact that fundamental tax reform or other major tax changes would have.³ In order for a tax reform proposal to be revenue neutral, JCT staff estimates therefore require higher marginal tax rates than would actually be necessary in the real world. To be scored as "revenue neutral" by the JCT staff, a proposal must actually raise tax revenue in the real world and it becomes much more difficult to achieve the support necessary to overcome the entrenched interests that defend the current tax system.

People modify their behavior in response to major changes in tax policy. Revenue estimates should take these effects into account.⁴ Yet JCT revenue estimators continue to refuse to consider the impact of major tax changes on work, savings, investment and output. In their estimates, they assume that GDP will not change.⁵

Critics of taking these effects in account emphasize that doing so would require JCT to make judgments as to the effects' magnitude. But JCT routinely does that today with respect to so-called behavioral or microeconomic effects that can be quite large with respect to the revenue estimate. In the final analysis, it is better that JCT estimates be approximately correct than precisely wrong.

¹ 1156 15th St., NW, Washington, DC 20005. (202) 293-8830.

² For a comprehensive discussion of the tax policy making process, including scoring issues, transparency, distributional analyses and the history of the Joint Committee on Taxation and the Treasury Office of Tax Analysis, see Dan R. Mastroianni, David R. Burton and William W. Beach, "The Secret Chamber or the Public Square? What Can Be Done to Make Revenue Estimation More Transparent and Accurate," Heritage Foundation, 2005.

³ Revenue estimates that ignore macroeconomic effects are often referred to as "static."

⁴ Revenue estimates that take macroeconomic effects into account are often referred to as "dynamic."

⁵ Joint Committee on Taxation, "Overview of Revenue Estimating Procedures and Methodologies Used by the Staff of the Joint Committee on Taxation," (JCX-1-05), February 2, 2005.

High marginal tax rates discourage work, savings and investment. They reduce productivity and real wages. Conversely, reducing marginal tax rates encourages work, savings and investment and will enhance productivity and real wages. Reducing marginal tax rates also increases entrepreneurial risk-taking because less of the potential reward from the risk-taking will be taken by government. Furthermore, lower marginal tax rates reduce the cost of capital and increase productivity-increasing investment. These effects are well established. There may be differences among economists about their magnitude but there is no doubt as to their sign and existence.

The economic loss associated with higher tax rates increases with the square of the tax rate increase.⁶ Thus, doubling the tax rate will result in a four-fold increase in the adverse economic effect of the tax system. This effect is equally true in reverse. Lowering marginal tax rates has a disproportionately positive impact on the economy. The deadweight loss (or excess burden) to the economy has been estimated to be as low as 17 cents to as high as \$2.75 per dollar of taxes raised.⁷ Part of the difference is attributable to the difference between average and marginal excess burden, with the latter, as expected, a higher figure. It is also the most economically relevant when scoring proposed changes.

The impact of replacing the current tax system with a consumption tax like the FairTax, for example, has been estimated to increase the overall economy over the baseline by something approaching 10 to 20 percent of GDP within 5 to 10 years.⁸ That means that marginal tax rates could be reduced by 9 to 17 percent and raise the same amount of revenue.

⁶ Alan Auerbach, "The Theory of Excess Burden and Optimal Taxation," in the Handbook of Public Economics, Alan Auerbach and Martin Feldstein, Editors, 1985; Harry Watson, "Excess Burden," Encyclopedia of Taxation and Tax Policy, Joseph J. Cordes, Robert D. Ebel, and Jane G. Gravelle, Editors, 2005; John Creedy, "The Excess Burden of Taxation and Why It (Approximately) Quadruples When the Tax Rate Doubles," New Zealand Treasury Working Paper 3/29, December 2003.

⁷ See, e.g., Robert Carroll, "The Excess Burden of Taxes and the Economic Cost of High Tax Rates," Tax Foundation, Special report No. 170, August 2009; William A. Niskanen, "The Economic Burden of Taxation," Proceedings, Federal Reserve Bank of Dallas, October 2003, pages 93-98; Don Fullerton, "Reconciling Recent Estimates of the Marginal Welfare Cost of Taxation," The American Economic Review, March 1991, p. 302-308; Charles L. Ballard, John B. Shoven and John Whalley, "General Equilibrium Computations of the Marginal Welfare Costs of Taxes in the United States," The American Economic Review, March 1985, p. 128-138.

⁸ David G. Tuerck, Jonathan Haughton, Keshab Bhattarai, Phuong Viet Ngo, Alfonso Sanchez-Penalver, "The Economic Effects of the FairTax: Results from the Beacon Hill Institute CGE Model," The Beacon Hill Institute at Suffolk University, February 2007; Kotlikoff, Laurence J. and Sabine Jokisch, "Simulating the Dynamic Macroeconomic and Microeconomic Effects of the FairTax," National Bureau of Economic Research, Working Paper No. 11858, December, 2005; Arduin, Laffer & Moore Econometrics, "A Macroeconomic Analysis of the FairTax Proposal, Americans For Fair Taxation Research Monograph, December, 2005; Dale W. Jorgenson and P. J. Wilcoxon "The Long-Run Dynamics of Fundamental Tax Reform," American Economic Review, Vol. 87, No. 2, May 1997, pp. 126-132; Dale W. Jorgenson, "The Economic Impact of Taxing Consumption," in Committee on Ways and Means, United States House of Representatives, Replacing the Federal Income Tax, Vol. II, One Hundred Fourth Congress, Second Session, 1996, pp. 105-113; reprinted in Joint Economic Committee, Congress of the United States, Roundtable Discussion on Tax Reform and Economic Growth, One Hundred Fourth Congress, First Session, 1996, pp. 79-97; Jorgenson, Dale W., "The Economic Impact of the National Retail Sales Tax," November, 1996.

Raising marginal tax rates will also increase the user cost of capital, reduce productivity-enhancing investment and reduce economic growth and real wages. Reducing marginal tax rates will have the opposite effect. Lower marginal tax rates will reduce the user cost of capital, increase productivity-enhancing investment, economic growth and real wages.⁹

Although the tax base should be broadened and marginal tax rates on business reduced, the tax base should only be broadened to the extent that can be accomplished without imposing multiple levels of taxation on savings and investment. Lower tax rates should either be undertaken for their own sake or by reducing tax preferences that do not exacerbate the tax system's bias against savings and investment.

Lowering tax rates and replacing the lost revenue by repealing loopholes that do not raise the cost of capital and tend to eliminate discrimination among types of investment is pro-growth. Lowering tax rates and replacing the lost revenue by changing provisions such that the cost of capital is increased has a much more ambiguous impact and may actually harm the economy. The revenue estimates should reflect this very different economic effect and the fact that pro growth proposals will not require as high a marginal tax rate because of the positive impact on the economy and the magnitude of the taxable base.

We urge the Committee to move towards so-called dynamic or reality based scoring. This will have a salutary impact on tax policy and ease the road toward badly needed tax reform.

Also see, Bachman, Paul, Jonathan Haughton, Laurence J. Kotlikoff, Alfonso Sanchez-Penalver, and David G. Tuerck. "Taxing Sales Under the Fair Tax: What Rate Works?" NBER Working Paper No. 12732. Cambridge, MA: National Bureau of Economic Research, 2006; Kotlikoff, Laurence J., and David Rapson. "Would the FairTax Raise or Lower Marginal and Average Taxes?" NBER Working Paper No. 11831. Cambridge, MA: National Bureau of Economic Research, 2005; Marco Fantini, "Macroeconomic Effects of a Shift from Direct to Indirect Taxation: A Simulation For 15 EU Member States, presented at the 72nd meeting of the OECD Working Party No. 2 on Tax Policy Analysis and Tax Statistics, Paris, 14-16 November 2006. See also, Joint Committee on Taxation, "Tax Modeling Project and 1997 Tax Symposium Papers," JCS-21-97, November 20, 1997. Symposium participants: Alan J. Auerbach, Charles L. Ballard, Michael J. Boskin, Roger E. Brinner, Eric Engen, William Gale, Jane G. Gravelle, Dale W. Jorgenson, Laurence J. Kotlikoff, Joel L. Prakken, David Reifschneider, Robert D. Reischauer, Aldona Robbins, Gary Robbins, Diane Lim Rogers, Harvey S. Rosen, Joel Slemrod, Kent Smetters, Jan Walliser, Peter J. Wilcoxon, John G. Wilkins.

⁹ See Hall, Robert E., and Dale Jorgenson (1967): "Tax Policy and Investment Behavior," *American Economic Review*, vol. 57, No. 3 (June), pp. 391-414 for the basic user cost of capital analysis with taxes.

