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**Dynamic Scoring:**

**Challenges and Advantages of  
Macroeconomic Revenue  
Estimation and Scoring**

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INTRODUCTION.....	1
<b><u>I. BACKGROUND ON SCORING AND REVENUE ESTIMATION GENERALLY.....</u></b>	<b>2</b>
<b>A. SCORING AND REVENUE ESTIMATION: WHAT ARE THEY AND WHY ARE THEY</b>	
<b>IMPORTANT.....</b>	<b>2</b>
<b>B. SCORING AND THE CONGRESSIONAL BUDGET OFFICE.....</b>	<b>4</b>
<b>C. SCORING AND THE JOINT COMMITTEE ON TAXATION.....</b>	<b>6</b>
<b><u>II. THREE APPROACHES TO SCORING.....</u></b>	<b>8</b>
<b>A. STATIC SCORING.....</b>	<b>9</b>
<b>B. CONVENTIONAL SCORING.....</b>	<b>10</b>
<b>C. DYNAMIC SCORING.....</b>	<b>11</b>
<b><u>III. A HISTORY OF DYNAMIC SCORING.....</u></b>	<b>15</b>
<b>A. CONGRESSIONAL SCORING POLICY.....</b>	<b>15</b>
<b>B. INSTANCES OF DYNAMIC SCORING.....</b>	<b>19</b>
1. <i>Dynamic Scoring by the Congressional Budget Office.....</i>	<i>19</i>
2. <i>Dynamic Scoring by the Joint Committee on Taxation.....</i>	<i>22</i>
<b><u>IV. ARGUMENTS FOR AND AGAINST DYNAMIC SCORING.....</u></b>	<b>23</b>
<b>A. ARGUMENTS FOR THE USE OF DYNAMIC SCORING.....</b>	<b>24</b>
1. <i>DYNAMIC SCORING OFFERS MORE INFORMATION.....</i>	<i>24</i>
2. <i>CONVENTIONAL SCORING CREATES A BIAS AGAINST PRO-GROWTH LEGISLATION..</i>	<i>26</i>
3. <i>DYNAMIC SCORING REFLECTS DEVELOPMENTS IN TECHNOLOGY AND ECONOMICS.</i>	<i>27</i>
<b>B. ARGUMENTS AGAINST THE USE OF DYNAMIC SCORING.....</b>	<b>28</b>
1. <i>DYNAMIC SCORING INCREASES UNCERTAINTY.....</i>	<i>29</i>
2. <i>DYNAMIC SCORING REQUIRES ASSUMPTIONS.....</i>	<i>30</i>
3. <i>DYNAMIC SCORING MAY UNDERMINE THE CREDIBILITY OF KEY NON-PARTISAN</i>	
<i>GROUPS.....</i>	<i>32</i>
4. <i>DYNAMIC SCORING INCREASES THE WORKLOAD ON UNDERSTAFFED</i>	
<i>ORGANIZATIONS..</i>	<i>34</i>
<b><u>V. DYNAMIC SCORING IN PRACTICE.....</u></b>	<b>36</b>
<b>A. MOVING FORWARD WITH DYNAMIC SCORING.....</b>	<b>36</b>
1. <i>MACROECONOMIC PREDICTION MODELS.....</i>	<i>36</i>
2. <i>DYNAMIC SCORING IN THE STATES.....</i>	<i>40</i>
3. <i>NORMATIVE CONCERNS.....</i>	<i>42</i>
a. <i>CREDIBILITY.....</i>	<i>42</i>
b. <i>CLARITY.....</i>	<i>44</i>
c. <i>PRACTICALITY.....</i>	<i>45</i>
<b>B. BUDGETARY IMPACTS OF DYNAMIC SCORING.....</b>	<b>46</b>
<b>CONCLUSION.....</b>	<b>50</b>

## INTRODUCTION

Scoring and revenue estimation are two of the most important elements of the budget process. Underlying their importance, these tasks are assigned, respectively, to two groups famous for their non-partisan nature and expertise—the Congressional Budget Office (CBO) and the Joint Committee on Taxation (JCT). Though the Office of Management and Budget (OMB) performs much of the same functions for the executive branch, the CBO and JCT are where all scoring and revenue estimation is done within Congress. The estimates produced by these agencies provide front-end controls on the legislative process by informing debate on the fiscal impact of proposed legislation. Furthermore, they provide back-end controls as well, as their estimates play a key role in implementing statutory budgetary controls such as spending caps under sequestration and Pay-As-You-Go (PAYGO) requirements for taxing and mandatory spending.

These processes are not without their fair share of controversy. For two decades, a fierce debate over the merits of ‘dynamic’ scoring has waged in both economic and political circles. Dynamic scoring stresses the important of macroeconomic changes induced by legislation, predicting how the overall reaction of the economy may further influence the costs and benefits of said legislation. These advantages, however, are countered by concerns over the practicality, clarity, and credibility of dynamically scored estimates in practice. This paper aims to analyze the literature on dynamic scoring and evaluate the process as a tool for CBO and JCT to use in legislative estimating.

Part I will provide background information on scoring and revenue generally, including the roles that CBO and JCT play. Part II will offer an explanation on the different types of scoring, focusing primarily on the differences between the traditional

‘conventional’ scoring and dynamic scoring as its proponents call for it. Part III will give a brief history of dynamic scoring, including both congressional policy towards the procedure as well as instances of its use in the past. Part IV will delve into the merits and the drawbacks of dynamic scoring, presenting a straightforward assessment of this method of estimation. Finally, Part V will look at dynamic scoring in practice, particularly how the potential change may impact other aspects of the budget such as PAYGO.

## **I. BACKGROUND ON SCORING AND REVENUE ESTIMATION GENERALLY**

### **A. SCORING AND REVENUE ESTIMATION: WHAT ARE THEY AND WHY ARE THEY IMPORTANT?**

As described by OMB, the executive branch’s equivalent to the CBO, “[s]corekeeping means measuring the budget effects of legislation, generally in terms of budget authority, receipts, and outlays...”<sup>1</sup> This scoring is done against the baseline provided by the CBO. This “baseline” is a projection of the revenues and expenditures based on current law continuing unchanged.<sup>2</sup> Proposed legislation is then measured against this baseline, scored as it would change the predicted expenditures, revenues, and budget authority.<sup>3</sup> In short, scoring and revenue estimation combine to form the “process

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<sup>1</sup> OFFICE OF MANAGEMENT AND BUDGET, EXEC. OFFICE OF THE PRESIDENT, ANALYTICAL PERSPECTIVES 113 (2016).

<sup>2</sup> There are exceptions to the current law approach for certain mandatory spending programs of over \$50 million—the baseline predicts the extension of any such programs that would otherwise expire under current law. See Congressional Budget Office, *Processes*, available at <https://www.cbo.gov/about/processes>.

<sup>3</sup> Paul N. Van de Water, *Scoring Health Legislation*, NATIONAL INSTITUTE FOR HEALTH CARE MANAGEMENT FOUNDATION 1 (April 2009).

of estimating the federal budgetary cost or saving that would result from enacting a bill into law.”<sup>4</sup>

Scoring is the term used for when the CBO estimates the costs of discretionary and mandatory spending legislation. Estimating the cost of the former is relatively simple, as it requires little more than looking at the appropriation for whatever program is being scored.<sup>5</sup> Scoring the latter, however, forced the CBO to predict how a host of different factors may change, such as participation levels in a program and price changes in services or goods being provided.<sup>6</sup> Revenue estimation, on the other hand, is when the JCT predicts the amount of revenues that tax legislation will raise.

That being explained, the importance of scoring and revenue estimation is self-evident in the context of their purpose. The CBO and JCT “employ scoring and revenue estimation to calculate the effects that changes in fiscal policy will have on the federal budget.”<sup>7</sup> These predictions allow Congress to properly debate the merits of proposed legislation by providing information on their budgetary effects. In fact, “[t]he fate of legislative proposals in the U.S. Congress may hinge on how much they are estimated to increase or decrease the federal budget deficit.”<sup>8</sup>

Furthermore, scorekeeping increases democratic legitimacy by giving the public and the media a chance to scrutinize legislation.<sup>9</sup> Instead of poring through legislation to determine how it will impact the country’s finances themselves, members of the public

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<sup>4</sup> *Id.*

<sup>5</sup> Adam Fletcher & Trenton Hamilton, “Scoring and Revenue Estimation” (Updated March 16, 2008) (Briefing Paper No. 15).

<sup>6</sup> See Christopher J. Puckett, *Is the Experiment Over? The OMB’s Decision to Change the Game Through a Shortening of the Forecast*, GEO J., POVERTY LAW & POL’Y 169, 178 (2004).

<sup>7</sup> Briefing Paper, *supra* note 5.

<sup>8</sup> *Scoring Health Legislation*, *supra* note 3.

<sup>9</sup> Briefing Paper, *supra* note 5, at 13.

are able to rely on a non-partisan group of experts to tell them what this legislation will do to the deficit.

Finally, these processes offer the official score “for purposes of measuring adherence to the Budget or budget targets established by Congress,” such as PAYGO. Under PAYGO, mandatory spending legislation is prohibited from increasing the deficit either in the short-term (1 year) or the long-term (10 years), and must be offset.<sup>10</sup> The official score is used to ensure Congress is abiding by these rules when legislating.

## **B. SCORING AND THE CONGRESSIONAL BUDGET OFFICE**

Section 402 (attached as Exhibit A) of the Congressional Budget and Impoundment Control Act of 1974 “directs CBO to estimate the costs of bills and resolutions approved by Congressional committees...”<sup>11</sup> The CBO does so for all bills that effect both discretionary spending and mandatory spending, as well as “for legislation dealing with certain [non-tax] sources of revenue, such as receipts from customs duties, fees, and fines.”<sup>12</sup> Importantly, Section 402 excludes “appropriations bills, which do not receive formal cost estimates.”<sup>13</sup> While this distinction is largely irrelevant since the CBO provides estimates for the budgetary effects of these bills to the Appropriations Committees anyway, it will become important later in the context of dynamic scoring.<sup>14</sup> The CBO imposes both internal and external reviews on its work to

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<sup>10</sup> “Scoring Health Legislation,” *supra* note 3.

<sup>11</sup> Congressional Budget and Impoundment Control Act of 1974, 2 U.S.C. 653 (2005).

<sup>12</sup> Congressional Budget Office, *Frequently Asked Questions About CBO Cost Estimates*, available at <http://www.cbo.gov/about/products/ce-faq>.

<sup>13</sup> *Processes*, *supra* note 2.

<sup>14</sup> *Id.*

ensure the most accurate, non-partisan estimates.<sup>15</sup> It is unclear, however, how independent these external parties are, as many of them are formerly affiliated with the CBO (or another government body).<sup>16</sup>

The CBO has two jobs as it pertains to scoring. First, CBO is responsible for providing “formal cost estimates and analytic reports” that address public legislative proposals or broad policy issues.<sup>17</sup> This includes bills and amendments, the President’s budget, bills that are either being voted on or have been voted on, and proposals that have been widely discussed in the public domain.<sup>18</sup> These reports are released publicly and delivered to any interested members of Congress.<sup>19</sup>

Second, CBO is responsible for informal cost estimates that are produced in an effort to aid members of Congress in the development of legislation.<sup>20</sup> These informal estimates are preliminary, and do not undergo the same rigorous review as the formal cost estimates and analytic reports.<sup>21</sup> Furthermore, they are initially confidential, since they are meant for legislators who are still figuring out all of their options, and may not go forward with the legislation as scored.<sup>22</sup> Any public discussion or bill introduction, however, requires the release of all CBO estimates.<sup>23</sup>

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<sup>15</sup> The CBO claims that “[a]ll of CBO’s estimates and reports are reviewed internally for objectivity, analytical soundness, and clarity.” These internal reviews are done by “multiple people at different levels in the organization.” Furthermore, outside experts review all analytic reports. *Processes*, *supra* note 2.

<sup>16</sup> *See Processes*, *supra* note 2.

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> If the CBO doesn’t have time to turn an informal estimate into a formal estimate, they will often go public with the disclaimer that the estimates are not formal, but that more formal reports will be forthcoming. *Id.*

The CBO is also responsible for creating the baseline that all proposed legislation is scored against.<sup>24</sup> In this role, the CBO comes up with the baseline both for spending and for aggregate revenue estimates, including the baseline that the JCT uses for measuring proposed tax legislation.<sup>25</sup>

### C. SCORING AND THE JOINT COMMITTEE ON TAXATION

Section 201(g) (attached as Exhibit A) of the Congressional Budget and Impoundment Control Act of 1974 requires the JCT to provide revenue estimates for all tax legislation considered by either House or Senate.<sup>26</sup> The “[o]bjective of the estimating process is to produce accurate, consistent, fair, and impartial estimates that can be relied upon by Members of Congress in making legislative decisions.”<sup>27</sup> The JCT has internal quality control measures for ensuring accuracy (see Exhibit B).<sup>28</sup> As above, however, these outside economists and attorneys may not be entirely unbiased, and they may not provide much of an additional check on the already supposedly non-partisan, unbiased CBO.

JCT also has a two-fold approach to its role as estimator. First, they provide official estimates of all tax legislation that is being voted on or has been voted on.<sup>29</sup> Here, the JCT uses the revenue aggregate baselines provided by the CBO.<sup>30</sup> The JCT usually

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<sup>24</sup> *Id.*

<sup>25</sup> See Alan J. Auerbach, *Dynamic Revenue Estimation*, 10 JOURNAL OF ECONOMIC PERSPECTIVES 1, 144 (Winter 1996) [hereinafter *Dynamic Revenue Estimation*].

<sup>26</sup> Congressional Budget and Impoundment Control Act of 1974, 2 U.S.C. 601 (2005).

<sup>27</sup> Joint Committee on Taxation, *Joint Committee Revenue Estimation Process*, available at <https://www.jct.gov/about-us/revenue-estimating.html>.

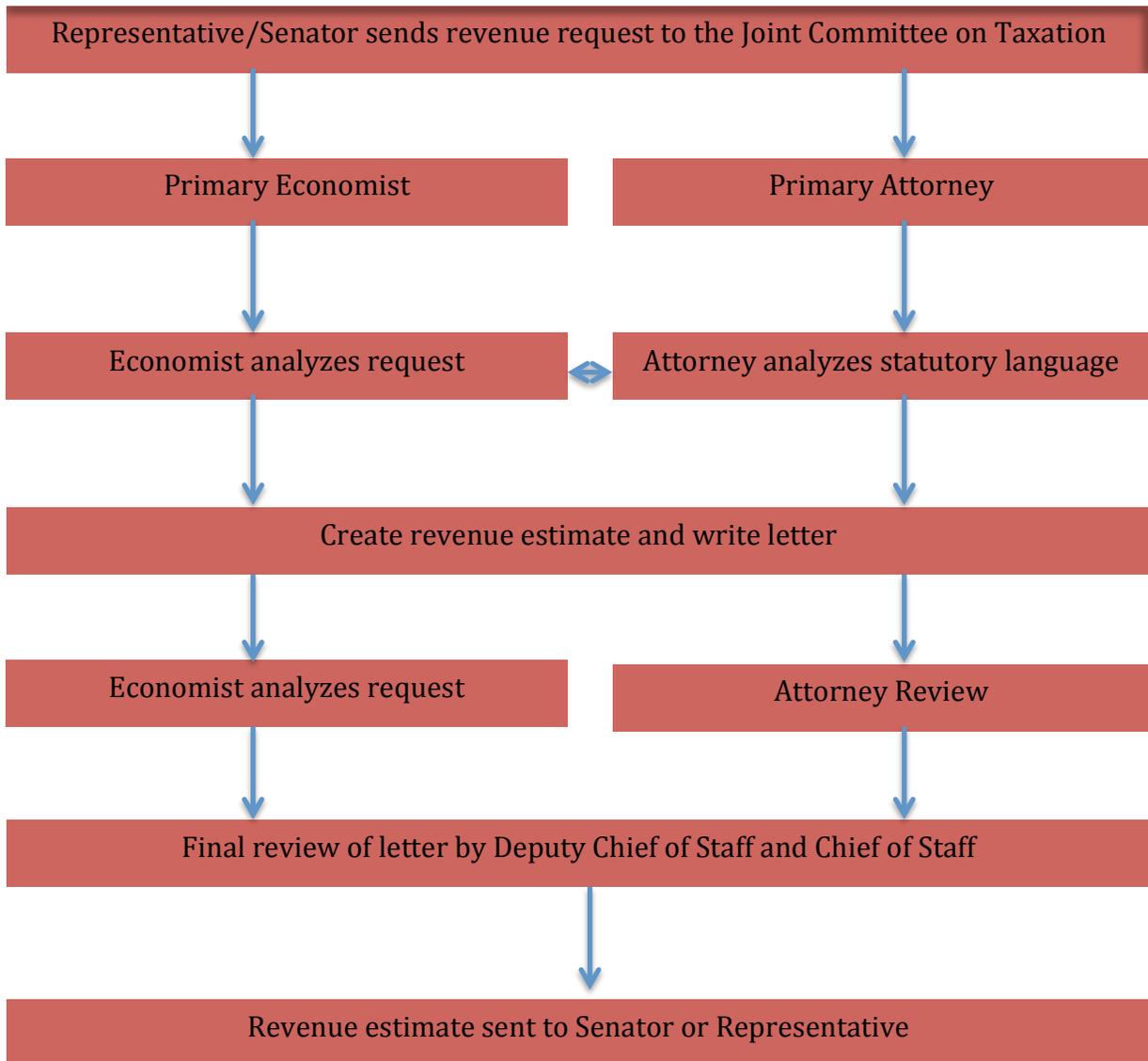
<sup>28</sup> Joint Committee on Taxation, *The JCT Revenue Estimating Process: Prepared by the Staff of the Joint Committee on Taxation, January 2013*, at 20 [hereinafter *JCT Slides*].

<sup>29</sup> *Joint Committee Revenue Estimation Process*, *supra* note 27.

<sup>30</sup> *Dynamic Revenue Estimation*, *supra* note 25, at 145.

provides year-by-year estimates of revenues over a 10-year window.<sup>31</sup> The estimates are given over a range of years but are considered “point estimates,” meaning that they do not provide a range of possibilities, but rather one specific estimate.<sup>32</sup> These reports are released publicly.<sup>33</sup>

### EXHIBIT B: JCT Internal Quality Control



<sup>31</sup> *JCT Slides*, *supra* note 28, at 6.

<sup>32</sup> *Joint Committee Revenue Estimation Process*, *supra* note 27.

<sup>33</sup> *Id.*

JCT also has a two-fold approach to its role as estimator. First, they provide official estimates of all tax legislation that is being voted on or has been voted on.<sup>34</sup> Here, the JCT uses the revenue aggregate baselines provided by the CBO.<sup>35</sup> The JCT usually provides year-by-year estimates of revenues over a 10 year window.<sup>36</sup> The estimates are given over a range of years but are considered “point estimates,” meaning that they do not provide a range of possibilities, but rather one specific estimate.<sup>37</sup> These reports are released publicly.<sup>38</sup>

Second, JCT provides support for crafting legislation. Any member of Congress may make a request for JCT analysis of potential tax legislation, and all requests remain confidential, while responses to those requests are released initially only to the requesting member.<sup>39</sup> If the bill comes up for a vote, or is otherwise made public in some way, the estimate is made public.<sup>40</sup>

## **II. THREE APPROACHES TO SCORING**

Controversy over the method of scoring is almost inevitable given the great importance that the process holds. This portion of the paper will explain three different types of scoring, providing examples to help elucidate how each type works. The vast majority of the section will focus on conventional scoring and dynamic scoring.

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<sup>34</sup> *Joint Committee Revenue Estimation Process*, *supra* note 27.

<sup>35</sup> *Dynamic Revenue Estimation*, *supra* note 25, at 145.

<sup>36</sup> *JCT Slides*, *supra* note 28, at 6.

<sup>37</sup> *Joint Committee Revenue Estimation Process*, *supra* note 27

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

## A. STATIC SCORING

Often, proponents of dynamic scoring refer to what the CBO and JCT have used for decades as ‘static scoring,’ in an attempt to characterize it as rigid, inflexible, and inaccurate. Static scoring, however, is not used by either agency when estimating costs or revenues.<sup>41</sup>

Static scoring is the process of estimating revenues and expenditures against the backdrop of a wholly unchanging economic situation.<sup>42</sup> The process ignores any economic impact that new legislation may have—both on the economy as a whole and on individuals within the economy.<sup>43</sup>

For example, if the government passed a bill to raise the excise tax on tobacco, static scoring would project increased revenues based solely on the tax hike combined with the previous estimate for the amount of tobacco purchasers. Scoring under this system would not take into account microeconomic factors, such as a projected decrease in tobacco purchasers, the tax base, as a response to the increase in the cost of a good. Furthermore, static scoring also would not take into account macroeconomic factors, such as the potential decrease in GDP following the drop in sales, or the possible increase in employment due to a reduction in health problems. Static scoring views the economy as fixed and unchanging when calculating estimates for revenues and expenditures.

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<sup>41</sup> Committee for a Responsible Federal Budget, *Understanding Dynamic Scoring*, 2-3.

<sup>42</sup> *Id.*

<sup>43</sup> *See id.*

## B. CONVENTIONAL SCORING

Conventional scoring is the process that the CBO and JCT have used for their official estimates since they began doing so in 1974.<sup>44</sup> Though often mistakenly referred to as static, conventional scoring considers microeconomic impacts of proposed legislation when estimating its costs.<sup>45</sup> Conventional scoring does not, however, consider macroeconomic impacts that proposed legislation might have.<sup>46</sup> Rather, this system of scoring treats the broad economic picture as unchanging, assuming that GDP will remain the same after the change in policy.

It is the case, however, that macroeconomic effects are partially included in conventional scoring through the use of a baseline. The bi-yearly calculation of a baseline includes expected changes to macroeconomic factors—GDP, employment rates, interest rates, etc.—based on legislation as a whole.<sup>47</sup> Thus if the baseline expects employment rates to rise, conventional scoring of an increase in income tax would incorporate that higher rate of employment in its estimation of revenues from the tax increase.<sup>48</sup> Conventional scoring does not, however, consider how the particular legislation it is scoring might change these macroeconomic factors in the future. The bi-yearly baseline will incorporate expected changes that all legislation has on macroeconomic factors, but by then the legislation has already been scored. Therefore, the biggest change to accompany a move from conventional to dynamic scoring would be the direct incorporation of how macroeconomic factors would impact a piece of legislation's cost

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<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

<sup>47</sup> Alan J. Auerbach, *Dynamic Scoring: An Introduction to the Issues*, AMERICAN ECONOMIC ASSOCIATION, 1 [hereinafter *An Introduction to the Issues*].

<sup>48</sup> See *Understanding Dynamic Scoring*, *supra* note 41, at 1-2.

**into its score.** The implications of a bill’s official score, discussed both previously and ahead in this paper, thus parallel the implications of this potential change.

As previously mentioned, however, conventional scoring does take into account how an individual piece of legislation might change microeconomic factors. For example, conventional scoring of a tax increase on tobacco products would take into account the expected reduction of tobacco purchasers when calculating the projected revenues of the tax increase.<sup>49</sup> This results in a revenue projection slightly lower, but more realistic, than in static scoring. Another example is that of a capital gains tax increase. Conventional scoring would assume a higher rate of realization of assets in the year before the tax hike, expecting individuals to respond to the tax increase in such a way as to maximize their gains.<sup>50</sup> When calculating the microeconomic impact of legislation, conventional scoring assumes that individuals act rationally.<sup>51</sup> The Organization for Economic Cooperation and Development (OECD) provides a list of what they call “First-round behavioural responses,” or potential microeconomic responses, to a change in income tax (attached as Exhibit C).<sup>52</sup>

### **C. DYNAMIC SCORING**

Dynamic scoring, though not used for official CBO or JCT estimates, has been used for two decades to provide additional, supplementary estimates alongside those

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<sup>49</sup> *JCT Slides*, *supra* note 28, at 16.

<sup>50</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 3.

<sup>51</sup> *JCT Slides*, *supra* note 28, at 13.

<sup>52</sup> The OECD describes these responses as “the direct response of an individual (or firm) to the incentives created by a policy change.” Stuart Adam and Antoine Bozio, *Dynamic Scoring*, OECD JOURNAL ON BUDGETING 2, 7 (2009) [hereinafter *OECD*].

using conventional scoring.<sup>53</sup> Like conventional scoring, this system includes projected microeconomic impacts of spending and tax legislation.<sup>54</sup> Unlike conventional scoring, however, dynamic scoring also includes projected macroeconomic effects of legislation, as well as the “feedback effect” that these macroeconomic changes will have on the cost of said legislation.<sup>55</sup>

Dynamic scoring treats microeconomic factors the same way that conventional scoring does, described above. For macroeconomic factors, dynamic scoring looks at how legislative changes impact “aggregate economic output.”<sup>56</sup> Previously, CBO and JCT have utilized three factors in determining the feedback effect of changes in the GDP, employment rates, interest rates, and other macroeconomic factors.<sup>57</sup>

First, dynamic scoring looks at the short-run demand side stimulus effect, under which tax decreases and stimulus spending are projected to increase demand and therefore output, which translates to a lower cost estimation.<sup>58</sup> Second, dynamic scoring looks at “the effect of deficits or surpluses on crowding out or crowding in investment due to government borrowing,” otherwise known as the ‘crowding out’ effect.<sup>59</sup> These macroeconomic changes manifest themselves over a relatively long term, where an increase in the deficit results in a corresponding increase in estimated cost under dynamic scoring.<sup>60</sup> Finally, this system of scoring examines the long-term supply side effects,

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<sup>53</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 4.

<sup>54</sup> *Id.* at 3.

<sup>55</sup> *Id.* at 3.

<sup>56</sup> Jane G. Gravelle, *Dynamic Scoring for Tax Legislation: A Review of Models*, CONGRESSIONAL RESEARCH SERVICE, 2 (2014), available at [http://graphics8.nytimes.com/packages/pdf/business/20140204\\_dynamic\\_scoring\\_report.pdf](http://graphics8.nytimes.com/packages/pdf/business/20140204_dynamic_scoring_report.pdf).

<sup>57</sup> *Id.*

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

<sup>60</sup> *See id.*

focusing on changes in labor, savings, and investment that may arise from the legislation, and therefore would change the potential cost.<sup>61</sup>

Providing examples of how dynamic scoring would work in practice provides the best insight into the process. First, this paper will examine a hypothetical spending bill that requires employers to provide their employees with health insurance. Healthcare spending bills have a great deal of potential macroeconomic impacts. First, increasing costs to employers might reduce both wages and the overall employment rate, two impacts that would have a negative feedback effect and might raise the estimated costs.<sup>62</sup> More long term, however, increased coverage may lead to a reduction in both disability and early mortality, both of which could increase employment, leading to a positive feedback effect.<sup>63</sup> Dynamic scoring would attempt to account for all of these potential macroeconomic changes when estimating the full cost of the bill.

It is also helpful to examine how a tax bill would be scored dynamically. Much of the discourse around dynamic scoring is centered on the idea of tax cuts paying for themselves over time.<sup>64</sup> Lowering individual income tax rates, for example, could have strong macroeconomic implications. Dynamic scoring would attempt to estimate the rate at which lower tax rates would increase the labor supply and thus grow the size of the economy, raising both employment and GDP.<sup>65</sup> These estimates would result in a decrease in total estimated cost under dynamic scoring. Exhibit D provides a simple breakdown of the factors that each type of scoring considers when calculating the costs of an excise tax on tobacco.

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<sup>61</sup> *Id.*

<sup>62</sup> *Scoring Health Legislation, supra* note 3.

<sup>63</sup> *Id.*

<sup>64</sup> *See generally Understanding Dynamic Scoring, supra* note 41.

<sup>65</sup> *See id.* at 3.

The primary difference, then, between conventional and dynamic scoring is the difference between the micro individual and the macro economy. Conventional scoring predicts the “direct response of an individual (or firm) to the incentives created by a policy change[,]” including the “sum of their individual responses.”<sup>66</sup> Dynamic scoring goes beyond the sum of these responses, as sometimes the result of many people changing their behavior has “an effect on the wider economy...by changing wages, interest rates and so on.”<sup>67</sup> Dynamic scoring measures these broader economic responses to policy initiatives.

Though dynamic scoring has been politicized recently, the process itself is entirely non-partisan. Both Republicans and Democrats have used it in the past, and both like this type of scoring for their own reasons.<sup>68</sup> Dynamic scoring can reduce the costs of both tax cuts and large government spending bills, therefore appealing to both sides of the aisle.

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<sup>66</sup> *OECD*, *supra* note 52, at 10.

<sup>67</sup> *Id.*

<sup>68</sup> “For Republicans, dynamic scoring represented a way to demonstrate the adverse impacts of higher taxes and the benefits of lower taxes. For Democrats, such estimates became particularly important when making the case for jobs measures and stimulus packages to help boost the economy during the economic downturn. *See id.* at 4.

## Exhibit D: How Each Method of Scoring Approaches an Excise Tax on

### Tobacco

	Revenue Increase from higher raw tax	Decrease in raw number of tobacco purchasers	Decrease in tobacco purchases among remaining purchasers	Decrease in estimates of new purchasers	Effects on GDP, Employment, Inflation, and Investment resulting from reduced purchases
Static Scoring	X				
Conventional Scoring	X	X	X	X	
Dynamic Scoring	X	X	X	X	X

### III. A HISTORY OF DYNAMIC SCORING

#### A. CONGRESSIONAL SCORING POLICY

Before 1995, dynamic scoring was rarely discussed or used.<sup>69</sup> Economic literature when the CBO and JCT began scoring in 1974 was less developed than it is today, and as more economists began writing about the idea of dynamic scoring, more politicians began talking about it.<sup>70</sup> In 1995, however, the Republican majority initiated a joint hearing to “evaluate the methods that government agencies use for estimating expected tax revenue.”<sup>71</sup> The “Review of Congressional Budget Cost Estimating,” as it was known, was aimed at introducing the idea of dynamic scoring.<sup>72</sup>

<sup>69</sup> *Id.*

<sup>70</sup> *Id.*

<sup>71</sup> *Dynamic Revenue Estimation*, *supra* note 25, at 148.

<sup>72</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 4.

Though this scoring was not adopted in 1995, just two years later the Ways and Means Committee, the committee responsible for taxes, adopted a rule stating that its Chair could request dynamic scoring estimates for informational purposes only.<sup>73</sup> Six years later, in 2003, the rule was replaced by a new one that required JCT to prepare a macroeconomic impact analysis “when possible” for legislation reported by Ways and Means.<sup>74</sup> These reports usually required only a brief statement, though more detailed analysis was expected for large policy changes.<sup>75</sup> Importantly, JCT staff provided a range of estimates due to “uncertainty with taxpayer responsiveness, fiscal and monetary policy, and general modeling frameworks.”<sup>76</sup>

These dynamic estimates were still not part of the official score, but they were being utilized more and more.<sup>77</sup> From 1997 until 2003, the JCT only 3 macroeconomic impact analyses.<sup>78</sup> From 2004-2010, however, they conducted 11.<sup>79</sup> In the years between 2007 and 2010, the majority Democrats adopted rules packages retaining the requirement outlined in the 2003 rule.<sup>80</sup>

Finally, in January of 2015, the House of Representatives adopted H.Res.5, which included a requirement that all “major” legislation to be scored on a dynamic basis (attached in part as Exhibit E).<sup>81</sup> Major legislation is defined in the rule as any legislation that includes gross budgetary changes (when scored conventionally) of .25 percent of the

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<sup>73</sup> *Id.*

<sup>74</sup> House Rule XIII(3)(h)(2); *see id.*

<sup>75</sup> *JCT Slides*, *supra* note 28, at 22.

<sup>76</sup> *Id.*

<sup>77</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 4.

<sup>78</sup> *See* Joint Committee on Taxation, *Revenue Estimating Methodology*, available at <https://www.jct.gov/publications.html?func=select&id=3> [hereinafter *Methodology*].

<sup>79</sup> *See id.*

<sup>80</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 4.

<sup>81</sup> H.Res.5, 2(c)(1)(a).

GDP or more.<sup>82</sup> Additionally, either the Chair of the House Budget Committee or the House Ways and Means Committee can designate a bill that doesn't meet the above criteria as "major," tripping the requirement for either CBO or JCT to do a dynamic analysis.<sup>83</sup> The rule requires that scoring give a single estimate, as opposed to the range of estimates provided for previously by JCT under the old rules.<sup>84</sup> Additionally, this rule now requires for the first time that this dynamic estimate be incorporated into the official estimate.<sup>85</sup>

This rule has several quirks that limit its application. First, the rule calls for dynamic scoring only for estimates provided "under Section 402 of the Congressional Budget Act of 1974."<sup>86</sup> Because that section excludes appropriations bills, this rule excludes appropriations bills from its dynamic scoring requirement.<sup>87</sup> Furthermore, the rule only applies to "major legislation" that has a budgetary effect (under conventional scoring) of at least .25% of the GDP, or "roughly \$500 billion over the standard 10-year scoring window."<sup>88</sup> Under this approach, only 3 bills considered by the House of Representatives in 2013-14 would have qualified for dynamic scoring.<sup>89</sup>

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<sup>82</sup> H.Res.5, 2(c)(1)(d)(1)(A).

<sup>83</sup> H.Res.5, 2(c)(1)(d)(1)(B).

<sup>84</sup> Chye-Ching Huang and Paul N. Van de Water, *House "Dynamic Scoring" Rule Likely Will Mean More Tax Cuts—Not More Information*, CENTER ON BUDGET AND POLICY PRIORITIES (2015) [hereinafter *More Tax Cuts—Not More Information*].

<sup>85</sup> *See id.*

<sup>86</sup> H.Res.5, 2(c)(1)(a)

<sup>87</sup> Impoundment Control Act, *supra* note 12; *see Processes*, *supra* note 2; *see* Alan Blinder, *The GOP's Political Budget Scorekeeping*, THE WALL STREET JOURNAL 2 (2015).

<sup>88</sup> Blinder, *supra* note 87, at 2-3.

<sup>89</sup> *More Tax Cuts—Not More Information*, *supra* note 84. "In the 113<sup>th</sup> Congress, the House considered three bills that would have crossed the threshold: The Jobs for America Act (H.R. 4), the Permanent Bonus Depreciation Act (H.R. 4718), and the Tax Increase Prevention Act of 2014 (H.R. 5771)." *Macroeconomic Scoring Q&A*. HOUSE OF REPRESENTATIVES, COMMITTEE ON THE BUDGET (2015).

While only the House has adopted this rule, it is unlikely that tension will arise from different rules in the two deliberative bodies. The Senate has 43 standing rules, none of which directly address budget scoring.<sup>90</sup> The rules do say, however, that the Budget Committee has jurisdiction over matters reported under Title II of the Congressional Budget Act, which provides the chairman of the Budget Committee with the authority to determine budget estimates.<sup>91</sup> In the past, the Budget Chair has almost always deferred to the CBO score.<sup>92</sup> Senate rules can only be changes with a two-thirds majority, and considering both houses of Congress are in the hands of the Republicans, the two Budget Committee Chairs are likely to agree on dynamic scoring.<sup>93</sup> If Democrats recover control of one house, however, things may become contentious.

While this new rule may not drastically increase the amount of dynamic estimates completed—CBO has admitted that they “can be produced only for a small number of major proposals, and only if time allows”—it does increase their importance.<sup>94</sup> By incorporating dynamic scoring into the official estimate, the implications associated with such estimates skyrockets. Dynamic scoring will now directly influence whether or not legislation is adopted, as well as whether or not statutory budget restrictions are followed. This sudden spotlight on dynamic scoring necessitates this paper’s exploration into the virtues and vices of its application.

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<sup>90</sup> *See id.*

<sup>91</sup> G. William Hoagland Shai Akabas, Alex Gold, *Is the Furor Over Dynamic Scoring Overblown?* BIPARTISAN POLICY CENTER.

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

<sup>94</sup> *Processes, supra* note 2.

## B. INSTANCES OF DYNAMIC SCORING

The JCT and CBO have provided dynamic analyses as supplemental estimates, though they have never used dynamic scoring in the official estimate. JCT and CBO performed most of these estimates on bills that either never passed or passed within the last few years, making it hard to judge the successes or failures of dynamic scoring. These instances do, however, provide some insight into how CBO and JCT conduct dynamic scoring analyses.

There are several takeaways from the following instances of dynamic estimation. First, both CBO and JCT appear to value delivering a range of estimates when utilizing dynamic scoring. Nearly every time this method is used, the agency offering the results announces all assumptions they made when calculating the score. Second, the changes in estimates from conventional to dynamic scoring appear to be “mostly modest (though certainly not insignificant).”<sup>95</sup>

### *1. Dynamic Scoring by the Congressional Budget Office*

Most of the dynamic estimates provided by the CBO are 5-10 year averages examining only the long term effects of the legislation. In 2011, however, the CBO provided a full, year-by-year analysis of a “generic \$2 trillion deficit reduction plan.”<sup>96</sup> This detailed report estimated the projected savings in each year from conventional scoring, as well as how that would change under dynamic scoring based on

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<sup>95</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 7.

<sup>96</sup> *Id.* at 8.

macroeconomic predictions regarding effects to the Gross National Product (GNP) and the interest rates (see Exhibit F).<sup>97</sup>

**EXHIBIT F: CBO 2011 Table Showing Effects of Dynamic Estimate of \$2 Trillion Reduction Plan**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ten-Year
Primary Savings	\$100	\$122	\$144	\$167	\$189	\$211	\$233	\$256	\$278	\$300	\$2,000
Interest Savings	\$1	\$5	\$10	\$18	\$28	\$40	\$54	\$70	\$87	\$106	\$419
<b>Conventional Savings</b>	<b>\$101</b>	<b>\$127</b>	<b>\$154</b>	<b>\$185</b>	<b>\$217</b>	<b>\$252</b>	<b>\$288</b>	<b>\$325</b>	<b>\$365</b>	<b>\$406</b>	<b>\$2,419</b>
GNP Effects	-\$10	-\$15	-\$12	-\$7	\$0	\$6	\$9	\$12	\$16	\$21	\$20
Interest Rate Effects	\$7	\$19	\$20	\$20	\$18	\$15	\$16	\$16	\$17	\$19	\$165
<b>Dynamic Savings</b>	<b>\$97</b>	<b>\$130</b>	<b>\$162</b>	<b>\$197</b>	<b>\$235</b>	<b>\$272</b>	<b>\$312</b>	<b>\$354</b>	<b>\$398</b>	<b>\$446</b>	<b>\$2,604</b>

CBO predicts that in the first four years, dynamic scoring will allow for an average savings of just under \$5 billion per year, which amounts to an approximate 3.5 percent increase in savings.<sup>98</sup> In the first four years, the dynamic estimates raise the cost due to decreases in GNP, while simultaneously decreasing the cost due to the impact on interest rates.<sup>99</sup> In the fifth year, however, dynamic scoring predicts the effect on GNP will be neutral, from which point the GNP begins increasing every year after.<sup>100</sup> Here is where dynamic scoring is demonstrating the initial hit to the economy from efforts to

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<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

reduce the deficit, followed by the long-term macroeconomic benefits of having a smaller national deficit. Overall, dynamic estimates predict an increase in 10-year savings from \$2.42 trillion to \$2.6 trillion, an approximate 7.6 percent decrease in cost over that time period.<sup>101</sup> That impact is likely smaller than many proponents of dynamic scoring would like, but certainly significant enough to highlight the differences between the two methods of scoring.

In making these estimates, CBO admitted that the dynamically predicted changes in GNP and interest rates depended “on the year, model, and length of bond maturity.”<sup>102</sup> Initial predictions estimated a first year reduction in GNP of somewhere between .3 and .6 percent, depending on the models used.<sup>103</sup> The study also predicted 10-year changes to the GNP to be between .6 and 1.4 percent depending on outside factors, with a similar range for projected changes in interest rates.<sup>104</sup> In order to create the table comparing savings under conventional and dynamic estimates, the CBO had to assume a “medium-sized effect on GNP,” and a “medium effect on interest rates.”<sup>105</sup>

This project serves as one of the most detailed forays that the CBO has taken into dynamic scoring. It illustrates the desire of the CBO to provide a range of possibilities based on potential deviations in monetary policy, changes in the economy, and different models and parameters. This study also demonstrates the likely effect of using dynamic scoring on a large deficit reduction plan—not large, but not insignificant.

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<sup>101</sup> *Id.*

<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

<sup>104</sup> *Id.*

<sup>105</sup> *Id.*

## 2. *Dynamic Scoring by the Joint Committee on Taxation*

Due to the focus of dynamic scoring proponents on the impact it would have on estimating the costs of a tax cut, the JCT has conducted more of these types of estimates than the CBO. In 2005, for example, the Committee used dynamic scoring to estimate the cost of a \$500 billion corporate tax rate cut.<sup>106</sup>

Once again, this analysis demonstrates the many assumptions that go into dynamic estimates. The proposal is simulated “assuming that Federal government spending will be contemporaneously reduced to offset the budget effects of the policy.”<sup>107</sup> Furthermore, the proposal used “[b]oth the Joint Committee Staff’s Macroeconomic Equilibrium Growth model and an overlapping generations life cycle model[.]”<sup>108</sup> The report begins with the disclaimer that the “exact magnitude of these effects is sensitive to a number of different modeling assumption, including Federal Reserve Board policy, Federal fiscal policy, the extent to which taxpayers accurately anticipate the economic effect of the policies, and the magnitude of assumed behavioral parameters.”<sup>109</sup>

In an effort to mitigate the uncertainty involved in such predictions, the JCT provides a range of estimates based on certain factors. For economic growth (measured by change in real GDP, for example, they provide a table with predictions depending on which model is used, whether or not there is a fiscal offset, and whether or not there is a

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<sup>106</sup> See Joint Committee on Taxation, *Macroeconomic Analysis of Various Proposals to Provide \$500 Billion in Tax Relief* [hereinafter *Various Proposals*].

<sup>107</sup> *Id.* at 2.

<sup>108</sup> *Id.*

<sup>109</sup> *Id.* at 3.

decrease in government spending.<sup>110</sup> These ranges of possibilities are provided through the study at every point.<sup>111</sup>

Also echoing the results of CBO studies, the JCT finds small, but not insignificant, predicted changes through dynamic scoring. Based on many factors, the JCT projects the corporate tax rate cut to increase the GDP in the first five years between .1 and .3 percent, with an additional increase in the second five years from .2 to .4 percent.<sup>112</sup> The JCT also estimates that the cut will increase employment from -.1 to .2 percent in the first five years, with a further change between -.2 and .2 percent in the second five years.<sup>113</sup>

The study done by the JCT depicts, once again, marginal, but still noteworthy, changes to the cost of legislation from conventional to dynamic scoring. It also accurately shows the range of results that dynamic scoring can produce, depending entirely on certain assumptions that economists have not come to agreement upon.<sup>114</sup>

The studies done by the CBO and JCT have shown both what types of effects dynamic scoring is likely to have, as well as how these estimates must be produced.

#### **IV. ARGUMENTS FOR AND AGAINST DYNAMIC SCORING**

Dynamic scoring is not innately political. The concept has become a contentious one in Congress due to its political implications, but the process itself is not inherently related to the goals of either Republicans or Democrats. Because of this, it is possible to

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<sup>110</sup> *Id.* at 44.

<sup>111</sup> *See generally id.*

<sup>112</sup> *Id.* at 44.

<sup>113</sup> *Id.* at 47.

<sup>114</sup> *See id.*

look past the partisan politics and closely examine the benefits and drawbacks to dynamic scoring. These arguments say nothing about the actual accuracy of dynamic revenue estimation. Due to several factors—including the long-term nature of these projections, the many factors that can change macroeconomic predictions, and the young age of dynamic scoring—data on the accuracy of these predictions are unavailable to this paper.

## **A. ARGUMENTS FOR THE USE OF DYNAMIC SCORING**

### *1. Dynamic scoring offers more information*

The strongest and most common argument in favor of dynamic scoring is the simple but immensely effective claim that this type of scoring incorporates more information into its calculations. Put simply by a former economist on the Joint Committee on Taxation, Alan Auerbach, “[u]nder current methods, the official score is not the expected impact on revenue.”<sup>115</sup>

This paper has discussed the importance of the official estimates for legislation ad nauseum, but suffice to say that the implications are far-reaching. For this reasons, having the most accurate estimations is crucial. Dynamic scoring provides the most information about what impacts a particular piece of legislation will have—and more information is normally a necessary condition for coming to the most accurate conclusion.

Furthermore, this argument bleeds into the fields of governmental efficiency, accountability, and legitimacy. Legislators should “have the best available information at

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<sup>115</sup> *An Introduction to the Issues*, *supra* note 47, at 2.

the fingertips” as they make decisions that affect their constituents.<sup>116</sup> Without dynamic scoring, however, legislators fail “to take macroeconomic effects into consideration...fall[ing] short of this goal.”<sup>117</sup>

For democratic legitimacy and government accountability, citizens also deserve to know exactly what the impact of bills will be before they go to the voting booth. When legislators can ignore the long-term macroeconomic consequences of their legislation, they can skew the impact of that legislation towards short-term gains, outwardly projecting false confidence and misleading their constituents. By including more information into the official scores, our legislative process becomes more transparent.

Finally, by offering more information, dynamic scoring allows both legislators and the public to examine bills within the context of one another, as opposed to in a vacuum. Dynamic scoring forces continuous updates to the baseline to which scorekeepers compare proposed legislation.<sup>118</sup> By doing this, all bills are being considered within the context of every piece of legislation that has been passed that year—not just those that are included in the new baseline that normally comes out every six months.

Providing more information through dynamic scoring increases the efficiency and efficacy of legislators, improves democratic accountability and legitimacy through transparency, and allows legislation to be considered within the proper context.

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<sup>116</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 7.

<sup>117</sup> *Id.*

<sup>118</sup> *Id.* at 5.

## 2. *Conventional scoring creates a bias against pro-growth legislation*

Proponents of dynamic scoring claim that both conventional and static scoring create a bias against pro-growth legislation. By not accounting for long-term macroeconomic changes in the economy, conventional scoring places more value on short-term gains than it does on true, long-term benefits to the economy.<sup>119</sup> Legislation aimed at improving the overall, long-term state of the economy will not be viewed favorably by conventional scoring, and therefore will receive a great deal of opposition for its budgetary effects. Furthermore, conventional scoring actually goes further by incentivizing legislation that slows growth. Legislation that can present short-term gains by pushing losses into the long-term will be viewed favorably by conventional scoring; this quirk in the process encourages legislation that results in long-term anti-growth policies.

Conventional estimates assume tax and behavioral changes do not change the size of the economy as measured by GDP.<sup>120</sup> By fixing the GNP when scoring legislation, conventional scoring results in labor supply, investment, and employment predictions that stay the same.<sup>121</sup> By keeping these factors stagnant, conventional scoring of a tax on labor income will not cause taxpayers to work less or retire early, but a wage credit “in certain industries will result in a shift of employment into the favored industry.”<sup>122</sup> This type of scoring biases legislators and the public in favor of the increased tax on labor, since the likely drop in employment is not reflected.

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<sup>119</sup> *See id.* at 5.

<sup>120</sup> *JCT Slides, supra* note 28, at 21.

<sup>121</sup> *Id.*

<sup>122</sup> *Id.*

As another example, conventional scoring projects virtually identical revenue from a three percent income tax increase on the top two brackets as from limiting the value of itemized deductions on income over \$250,000.<sup>123</sup> Dynamic scoring, on the other hand, tells us that raising personal income taxes would have large detrimental effects on employment, investment, and GDP levels, this vastly decreasing the amount of revenues projected from that tax change.<sup>124</sup> Once again, by prohibiting macroeconomic changes from being accounted for, conventional scoring implicitly creates a bias against pro-growth policies, and in favor of policies that will hurt this country's long-term economic outlook.

Once again, Alan Auerbach sums up this argument for dynamic scoring aptly, pointing out that “a cut in marginal tax rates that increases labor supply is treated as having no such impact, and so is viewed less favorably by the budget process than it should be.”<sup>125</sup>

### *3. Dynamic scoring reflects developments in technology and economics*

Finally, dynamic scoring best represents the technology and economic advancements that we have achieved over the past four decades. Current scoring procedures date all the way back to 1974, when the CBO and the JCT were first commissioned with these tasks.<sup>126</sup> Despite huge developments occurring in both economic thought and technological capacity, the majority of scoring is still conducted

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<sup>123</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 5.

<sup>124</sup> *Id.*

<sup>125</sup> *An Introduction to the Issues*, *supra* note 47, at 2.

<sup>126</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 5.

using the same calculations and factors as it did in 1974.<sup>127</sup> Both the CBO and the JCT have “devoted significant time and research to studying macroeconomic responses to government policy changes[,]” and scoring procedures “need to be updated to take advantage of the advancements that have been made.”<sup>128</sup>

Not only has significant progress been made in these fields, but efforts have been taken specifically towards analyzing macroeconomic impacts of legislation. There exists “growing evidence of the importance of taxpayers responses to government policy changes and the development of a new generation of sophisticated economic models capable of gauging the magnitudes of these responses.”<sup>129</sup>

Economists have spent time and money improving economic analysis and computing models, and by not incorporating that research into the official scorekeeping estimates, we are living in the past and relying on inaccurate estimations.

## **B. ARGUMENTS AGAINST THE USE OF DYNAMIC SCORING**

While many of the following arguments double as opposition to dynamic scoring on principle, this paper presents the arguments as they exist against the use of dynamic scoring in the official scoring process. Dynamic scoring, as has been described above, has been used in one form or another to help estimate the costs of legislation for over a decade.<sup>130</sup> Until January of 2015, there never existed a requirement for this type of scoring to be implemented into the official score reported by either the CBO or JCT.<sup>131</sup>

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<sup>127</sup> *Id.*

<sup>128</sup> *Id.*

<sup>129</sup> *An Introduction to the Issues, supra* note 47, at 3.

<sup>130</sup> *See Understanding Dynamic Scoring, supra* note 41, at 4, 7-8; *see Methodology, supra* note 78.

<sup>131</sup> H.Res.5, 2(c)(1)(a).

This necessitates the discussion not of the merits of dynamic scoring as a whole, but rather as it would be used under the rule.

*1. Dynamic scoring increases uncertainty*

Dynamic scoring increases uncertainty in the scoring process, making estimations more inaccurate and subject to external factors outside the control of those giving the predictions. This weakness to dynamic scoring begins with the difficulty in projecting how one piece of legislation will impact broad macroeconomic factors. GDP, inflation rates, employment rates, investment, and inflation are all the result of numerous, conflicting changes in both fiscal and monetary policy.<sup>132</sup> Beyond that, unrelated domestic and international factors can influence these macroeconomic factors in ways entirely outside the realm of prediction.<sup>133</sup>

The CBO and JCT, when conducting dynamic scoring analyses in the past, have stressed the fact that there are many factors that go into these macroeconomic changes.<sup>134</sup> On its website, the CBO acknowledges that “estimates of macroeconomic effects are highly uncertain.”<sup>135</sup>

Due to this uncertainty, “researchers would be forced to rely heavily on the predictions of economic theory.”<sup>136</sup> This reliance, however, “would not be rewarded with a clear picture of macroeconomic effects.”<sup>137</sup> The economic world has not come close to a consensus on which model is the best model, and thus any one of a number could

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<sup>132</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 6.

<sup>133</sup> *Id.*

<sup>134</sup> *See id.* at 8, *see Various Proposals*, *supra* note 106, at 2-3.

<sup>135</sup> *Processes*, *supra* note 2.

<sup>136</sup> *Dynamic Revenue Estimation*, *supra* note 25, at 151.

<sup>137</sup> *Id.*

reasonably be used.<sup>138</sup> The CBO cautions that “no single model can adequately explore the macroeconomic implications of fiscal policy[,]” while the JCT says that even when using multiple models, “we cannot account for all the possible effects that a proposal might have on the economy.”<sup>139</sup>

The problem with having an array of choices for models and parameters is exacerbated when dynamic scoring is used in the official estimates. For this reason, CBO recommends that “the best analysts can do is to combine the separate insights that they can glean from different models.”<sup>140</sup> Forcing the CBO and JCT to include dynamic scoring in their official estimates, however, forces them to choose one estimate, as a range cannot be included in the official score.<sup>141</sup> By doing this, the argument is that dynamic scoring actually provides less information rather than more.<sup>142</sup>

The uncertainty involved with predicting the effect that one piece of legislation has on macroeconomic factors makes dynamic scoring ill-suited for incorporation into the official scores reported by the CBO and JCT.

## *2. Dynamic scoring requires assumptions*

Beyond issues of uncertainty, dynamic scoring also requires firm assumptions due to budgetary constraints. Unlike the last argument, which focused on the potentially

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<sup>138</sup> Gregory Mankiw and Matthew Weinzierl, *Dynamic Scoring: A Back-of-the-Envelope Guide*, NATIONAL BUREAU OF ECONOMIC RESEARCH (2004); see Noah Smith, “Why Economic Policy Isn’t Dynamic,” *Bloomberg View* (March 2015), available at <http://www.bloombergvew.com/articles/2015-03-09/cbo-dynamic-scoring-creates-economic-policy-with-political-bias>.

<sup>139</sup> Paul N. Van de Water and Chye-Ching Huang, *Budget and Tax Plans Should Not Rely on “Dynamic Scoring,”* CENTER ON BUDGET AND POLICY PRIORITIES (2014).

<sup>140</sup> *Id.*

<sup>141</sup> See *More Tax Cuts—Not More Information*, *supra* note 84

<sup>142</sup> See *id.*

arbitrary choices that dynamic scoring forces estimators into, this argument criticizes the assumptions that this type of scoring requires of scorekeepers.

Macroeconomic models of prediction must assume the future enactment of either spending cuts or tax increases.<sup>143</sup> The predictors must assume that the debt will be financed, and that these expenditures will be offset.<sup>144</sup> These intertemporal assumptions require off-sets to short-term deficits from sources other than government borrowing—primarily spending cuts or tax increases.<sup>145</sup> It is also necessary for the estimators to specify how such offsets will take place, rather than just assuming in general that they will.<sup>146</sup>

These assumptions create a problem in that they do not always come true. By forcing estimators to make assumptions, you are including future actions into predictions that may not come true—thus reducing the accuracy of the predictions. In 1995, for example, the House used an example dynamic scoring of a bill for a general balanced budget in order to score their specific plan for a balanced budget.<sup>147</sup> This model calculated that there would be few rises in unemployment due to the assumption that future policy changes would counter these negative effects.<sup>148</sup> While this bill never passed—and the dynamic scoring was not part of the official score anyway—alternative

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<sup>143</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 6.

<sup>144</sup> *Id.*

<sup>145</sup> Neil Bruce and Stephen J. Turnovsky, *Budget Balance, Welfare, and the Growth Rate: “Dynamic Scoring” of the Long-Run Government Budget*, 31 *JOURNAL OF MONEY, CREDIT AND BANKING* 2, 164 (1999).

<sup>146</sup> *An Introduction to the Issues*, *supra* note 47, at 4.

<sup>147</sup> *Dynamic Revenue Estimation*, *supra* note 25, at 153

<sup>148</sup> *Id.*

actions concerning fiscal and monetary policy would have led to an entirely different result.<sup>149</sup>

Assumptions required by dynamic scoring reduce its accuracy.

### *3. Dynamic scoring may undermine the credibility of key non-partisan groups*

By injecting uncertainty and assumptions into the official scoring process, dynamic scoring risks undermining the credibility of the CBO and JCT. The CBO and JCT pride themselves on their expertise and their non-partisan nature—it is for this very reason that the scoring estimates of these two groups are treated with such importance. Dynamic scoring could reduce this credibility by placing outside pressure on these two groups. CBO demonstrates its self-awareness of this potential problem on its website, disclaiming dynamic scoring as “uncertain,” while also giving a long explanation about the difficulty in producing accurate results when forecasting in general.<sup>150</sup>

As described above, the uncertainty involved in predicting macroeconomic changes forces certain choices to be made regarding the approach taken in dynamic scoring. Because the official score asks for a single estimate, criticism could arise from favoring one model over another.<sup>151</sup> For example, there are a “range of estimates about the impact of capital gains taxes on...realizations in the short run and the long run [microeconomic effects]. But there are few if any actual estimates of the impact on the economy as a whole.”<sup>152</sup> Since there is no empirical evidence supporting one assumption

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<sup>149</sup> *Id.*

<sup>150</sup> *Processes, supra* note 2.

<sup>151</sup> *Understanding Dynamic Scoring, supra* note 41, at 7.

<sup>152</sup> *An Introduction to the Issues, supra* note 47, at 3.

over another, “it will be more difficult for choice to be made without being challenged by interest groups.”<sup>153</sup>

According to Alan Auerbach, “. . . in many instances, the uncertainty is so great that one honestly could report a number either twice or half the size of the estimate actually reported. Facing the threat of job loss and public criticism. . . do we really expect estimators to flip a coin when they’re unsure which number is more accurate?”<sup>154</sup> Though estimators may not be actively biasing results, the implicit pressures placed on them may be too strong to remain fully neutral.

Because there is no economic consensus on which model to use, however, the bias may not even need to occur for problems to arise. Former JCT chief of staff John Buckley pointed out that, “if there is even a perception of political interference in the budget scoring process, market analysis will question the accuracy of the estimate. The CBO and JCT may lose their hard-won credibility as scorekeepers.”<sup>155</sup> Because the issue has become so partisan, it is likely that any estimates made using dynamic scoring, even if those estimates are entirely unbiased and non-partisan, will be attacked by political groups. Problems with dynamic scoring open up the CBO and JCT to critique, which could undermine their credibility.

On the other hand, conventional scoring is not the perfect, flawless counter to dynamic scoring that its proponents may claim. When measuring individual responses to legislation, the CBO and JCT must account for the fact that “some groups are (on

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<sup>153</sup> *Id.*

<sup>154</sup> *Dynamic Revenue Estimates*, *supra* note 23, at 154.

<sup>155</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 7.

average) systematically different from others.”<sup>156</sup> Incorporating just these “first-round economic effect” into the conventional score, then, is “a formidable challenge.”<sup>157</sup> While “empirical economic research has risen to the admirable to this challenge,” there is still a great deal of disagreement stemming from the fact that “some policies [are] much better understood than others.”<sup>158</sup> In fact, part of the reason California abandoned their efforts at dynamic scoring, as this paper will describe in Part V.A.2, is that “there was uncertainty surrounding even the static effect of a proposal.”<sup>159</sup>

As models have improved, however, these problems have largely been confined to theoretical ones. In practice, most discord over scoring comes in the dynamic scoring debate.

#### *4. Dynamic scoring increases the workload on understaffed organizations*

Finally, incorporating dynamic scoring into the official estimates would present an unmanageable increase in workload on the CBO and JCT. The primary increase in time and resources would come from the additional work in continuously updating the baselines with every new piece of legislation.<sup>160</sup> The CBO and JCT would not have to put out more than bi-yearly official baselines under dynamic scoring. Rather, dynamic scores in themselves are essentially baseline calculations; they project the future of macroeconomic factors based on the changes in policy that a particular piece of legislation brings. While dynamic scoring might not require more than the current two

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<sup>156</sup> *OECD*, *supra* note 52, at 8.

<sup>157</sup> *Id.* at 10.

<sup>158</sup> *Id.*

<sup>159</sup> See Brad Williams, “Dynamic Scoring Forum: California’s Dynamic Revenue Estimating Experience,” *TaxVox* (Mar. 2015), available at <http://taxvox.taxpolicycenter.org/2015/03/02/californias-dynamic-revenue-estimating-experience/>; see Norton Francis, “Dynamic Scoring: Update and Recommendations,” *New Mexico Legislature* (Dec. 2007), available at <http://www.nmlegis.gov/lcs/lfc/lfcdocs/Dynamic%20Scoring.pdf>.

<sup>160</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 7.

official baselines per year, the scores themselves require a great deal of work similar to baseline calculation—work that would have to be done every time the CBO or JCT must score a piece of legislation dynamically.<sup>161</sup>

The process of updating the baseline increases the workload on the CBO and JCT in three ways. First, and most apparently, this would give the two groups more work to do. Updating a baseline takes time, and doing it with every piece of legislation inevitably takes a lot of time. Second, this requires “much closer integration of the activities of two distinct organizations.”<sup>162</sup> When the two groups are dealing with separate legislation simultaneously, the CBO cannot change the baseline halfway through the JCT’s calculations, only to have the JCT incorporate their updates to an already out-of-date baseline. These two groups historically have not worked hand-in-hand, and this would take an additional devotion of time and resources.

Finally, this would require a substantial change in the type of model that is used to create baselines.<sup>163</sup> The current model is not sufficient to consistently calculate baselines after each new piece of legislation, and thus would need to be updated.<sup>164</sup>

These increased costs might be worth it, if “the resulting dynamic estimates were orders of magnitude or directionally different from conventional scores, but according to many experts dynamic scoring tends to yield results which are not at all that different from current scoring practices.”<sup>165</sup> CBO admits on its website that, “[d]oing macroeconomic analysis of all proposed legislation would not be feasible; nearly all

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<sup>161</sup> *See id.*

<sup>162</sup> *An Introduction to the Issues*, *supra* note 47, at 3.

<sup>163</sup> *Id.*

<sup>164</sup> *Id.*

<sup>165</sup> *Understanding Dynamic Scoring*, *supra* note 41, at 7.

legislation analyzed by CBO would have negligible macroeconomic effects...”<sup>166</sup>

Instances where dynamic scoring have been done in the past show relatively small changes, the type that may not warrant the large increase in workload.

## **V. DYNAMIC SCORING IN PRACTICE**

### **A. MOVING FORWARD WITH DYNAMIC SCORING**

#### *1. Macroeconomic Prediction Models*

The JCT provides numerous ways forward for implementing dynamic scoring. In previous studies, the Committee has utilized three models in particular for measuring the macroeconomic effects of legislation.<sup>167</sup> JCT has emphasized that it “generally tries to provide a range of estimates in [their] macroeconomic analyses.” The CBO has stated similar goals based on concerns with the uncertainty of dynamic scoring.<sup>168</sup>

The first model utilized in dynamic scoring is the Macroeconomic Equilibrium Growth Model (MEG). This model adjusts prices in order to have long run supply equal long run demand, though the two do not always meet in the short-term.<sup>169</sup> Labor supply changes to taxes are modeled separately for high-income primary earners, high-income secondary earners, low-income primary earners, and low-income secondary earners.<sup>170</sup> MEG also operates as an open economy model, meaning “cross border capital flows and changes in net exports affect domestic economy outcomes.”<sup>171</sup> It considers individuals to

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<sup>166</sup> *Processes, supra* note 2.

<sup>167</sup> *See JCT Slides, supra* note 28, at 23.

<sup>168</sup> *See processes, supra* note 2.

<sup>169</sup> *JCT Slides, supra* note 28, at 24.

<sup>170</sup> *Id.*

<sup>171</sup> *Id.*

be shortsighted, however, and assumes that they cannot and do not predict changes in the economy or policy.<sup>172</sup>

This model is the most widely used. California and New Mexico both used general equilibrium models in their brief endeavors into dynamic scoring.<sup>173</sup> Under the MEG model, short-term stimulus effects tend to be much larger than under other models.<sup>174</sup> These large effects, however, can be negated if the Federal Reserve changes its own policies to offset a potential stimulus.<sup>175</sup> The MEG model, for example, would provide for large short-run stimulus effects of a tax cut.<sup>176</sup> In the case of a deficit-neutral tax reform plan without the large short-term stimulus effects, however, the MEG model would yield only de minimis changes in long-term, supply-side changes in labor and capital.<sup>177</sup>

Next, dynamic scoring can be done using the Overlapping Generations Model (OLG). This model, as opposed to the MEG model, will adjust prices under the assumption that supply will equal demand in both the short-term and the long run.<sup>178</sup> Similar to MEG, on the other hand, OLG includes the responsiveness of labor supply to changes in the after-tax wage rate based on four categories of earners, and also incorporates the “responsiveness of investment to the user cost of capital.”<sup>179</sup> Another difference from the MEG model, however, is that the OLG model assumes that

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<sup>172</sup> *Id.*

<sup>173</sup> See Brad Williams, *supra* note 159.

<sup>174</sup> See Jane Gravelle, *Dynamic Scoring: Lessons from the Study of the Camp Tax Reform*, BROOKINGS INSTITUTE (2015), available at [http://www.brookings.edu/~media/Events/2015/01/26-dynamic-scoring/Dynamic\\_Scoring\\_Gravelle.pdf?la=en](http://www.brookings.edu/~media/Events/2015/01/26-dynamic-scoring/Dynamic_Scoring_Gravelle.pdf?la=en).

<sup>175</sup> Jane Gravelle, “Dynamic Scoring Forum: Inside the Black Box,” *TaxVox* (Mar. 2015), available at <http://taxvox.taxpolicycenter.org/2015/03/17/dynamic-scoring-forum-inside-black-box/>.

<sup>176</sup> *Lessons from the Study of the Camp Tax Reform*, *supra* note 174, at 2.

<sup>177</sup> See *id.* at 3; see “Inside the Black Box,” *supra* note 175.

<sup>178</sup> *JCT Slides*, *supra* note 28, at 25.

<sup>179</sup> *Id.*

individuals have “perfect foresight,” and will respond accordingly to economic changes that arise from new policy.<sup>180</sup>

Under the OLG model, because deficits are not allowed, the short-term stimulus effects of a tax cut would be small. Long-term, supply-side impacts on labor and capital, on the other hand, would be much larger than under the MEG model.<sup>181</sup> The OLG not only measures the effect on labor supply differently, but also assumes that individuals will respond with perfect foresight of the economy, an approach that maximizes the long-term supply-side effects.<sup>182</sup>

The MEG and OLG are the two most commonly used models by the JCT and CBO, and thus their differences are most important. While the MEG may increase short-term stimulus effects of a tax cut, the OLG will have higher long-term, supply-side effects arising from either a tax cut or more comprehensive tax reform. The latter has come under fire for its naïve assumptions of “perfect information and perfect foresight,” especially after it predicted a long-term 1.5% in response to the tax reform proposal from Representative Dave Camp (the MEG predicted a modest .2% rise in GDP).<sup>183</sup> While there is limited data to go on, an analysis of the Tax Reform Act of 1986, one of the most analogous pieces of legislation to Representative Camp’s proposal, shows that “estimated behavioral responses suggest that the overall efficiency effects of changes in marginal tax

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<sup>180</sup> *Id.*

<sup>181</sup> “Inside the Black Box,” *supra* note 175.

<sup>182</sup> *Id.* Labor supply effects are measured using the substitution effect (in which labor goes up with a decline in marginal tax rates) and the income effect (in which the substitution effect is offset when “workers reduce hours in response to higher incomes.”). The OLG model increases the substitution effect while decreasing the income effect, resulting in much larger increases in supply-side over time. *Id.*

<sup>183</sup> Thomas L. Hungerford, “Still Not Ready for Prime Time: Tax Reform and Dynamic Scoring,” *Economic Policy Institute: Working Economics Blog* (Mar. 2014), available at <http://www.epi.org/blog/ready-prime-time-tax-reform-dynamic-scoring/>.

rates facing labor supply and savings were small.”<sup>184</sup> Based on limited data, the more modest long-term impacts calculated by the MEG model are more accurate.

Finally, macroeconomic predictions can and have, though rarely, been made using the Dynamic Stochastic General Equilibrium Model (DSGE). Similar to the OLG model, but not the MEG model, the DSGE model assumes that supply will equal demand in both the short and long term, and adjusts prices accordingly.<sup>185</sup> Unique to the DSGE model, however, are adjustment costs that cause output to be “more sensitive to demand.”<sup>186</sup> This model also departs from the previous two in that it accounts for uncertainty and randomness (stochastic factors), and it assumes agents look at “all possible states of the future economy,” therefore giving “implications that OLG and MEG will not.”<sup>187</sup> This model operates as a closed-economy model, and doesn’t incorporate predicted international capital flows.<sup>188</sup>

It would take a much longer paper to delve into the merits of each model of macroeconomic forecasting, but short descriptions of these important three models does a great deal to illuminate what the future landscape may be for dynamic scoring. The OLG, MEG, and DSGE models have distinct differences, not small in degree, which result in vastly different predictions.

Proponents of include dynamic scoring into the official estimate argue that though no one model is perfect, keeping these predictions out of the official score—even if they are provided as supplemental analysis—limits their efficacy. The official budget score is

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<sup>184</sup> Alan J. Auerbach and Joel Slemrod, *The Economic Effects of the Tax Reform Act of 1986*, 35 JOURNAL OF ECONOMIC LITERATURE 589, 599 (JUNE 1997); *see id.*

<sup>185</sup> *JCT Slides*, *supra* note 28, at 26.

<sup>186</sup> *Id.*

<sup>187</sup> *Id.*

<sup>188</sup> *Id.*

widely reported during the legislative debate process, and the official score is used to implement back-end budgetary controls such as statutory PAYGO rules. While providing ancillary dynamic estimates may help some legislators understand macroeconomic effects of legislation, the scores will carry little weight and will exert little legislative influence—the uncertainty inherent in selecting one model, then, is but a necessary evil.

Opponents, on the other hand, focus on these models and their difference as evidence that a dynamic scoring regime would inevitable result in not only uncertain predictions, but in political pressure on non-partisan experts at the CBO and JCT.

## *2. Dynamic Scoring in the States*

The federal government can look to the states to see examples of dynamic scoring in practice. Several states have instituted some form of dynamic scoring into their legislative estimation process. This paper will discuss two of the most prominent instances in California and New Mexico.

In 1994, California passed legislation requiring the Department of Finance to “prepare dynamic revenue estimates for proposals with a more-than-\$10 million static effect.”<sup>189</sup> Contrary to several of the concerns of many critics of dynamic scoring, California had no problems finding general acceptance of a single model for these estimates, contracting with economists at the University of California at Berkeley to develop a model that gained widespread approval.<sup>190</sup> While it would be more difficult to select a model at the national level, California’s experience in this regard is a positive sign for the federal government.

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<sup>189</sup> Brad Williams, *supra* note 159.

<sup>190</sup> *Id.*

Despite these partial successes, California neglected to renew the dynamic scoring requirement in 2000, and even chose not to use dynamic scoring in several situations during the 19990s that met the threshold.<sup>191</sup> The CGE model used, similar to the MEG model described above, led to only modest changes in long-term factors for most legislation.<sup>192</sup> With one side claiming that tax cuts would “pay for themselves,” and the other side positing that tax policies had no impact on “economic competitiveness,” neither party had incentive to use a process that scored small, but not insignificant, changes.<sup>193</sup> Though not a normative argument against the use of dynamic scoring, this does present a strong practical case against its use, especially considering the resources necessary for the federal government to engage in this type of scoring consistently.

While California found no use for dynamic scoring despite their successes in developing a model, New Mexico had trouble crafting such a model in the first place. During a two-year pilot program beginning in 2003, New Mexico contracted with an economic modeling group to develop an appropriate model for dynamic scoring of legislation.<sup>194</sup> New Mexico’s model was unable to produce credible and timely results.<sup>195</sup> The model’s results differed only very slightly from the original, static scoring that New Mexico normally conducted, and though it was capable of forecasting *economic* changes such as increases or decreases in employment and inflation, it had difficulty predicting the feedback *fiscal* changes that such macroeconomic factors might then have.<sup>196</sup>

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<sup>191</sup> *Id.*

<sup>192</sup> *Id.*

<sup>193</sup> *See id.*

<sup>194</sup> Norton Francis, *supra* note 159.

<sup>195</sup> *Id.*

<sup>196</sup> *See id.*

The federal government can use the experiences of California and New Mexico when moving forward with dynamic scoring. First, while California's foray into dynamic scoring demonstrates that developing a single model is possible, both states' experiments emphasize the importance and difficulty in creating a model that will be both universally accepted and effective. Second, the CBO and JCT should be aware that small changes from conventional to dynamic scoring might not be enough for legislators to justify the additional workload, especially considering the processes used in conventional scoring are not even perfect.<sup>197</sup> Considering the marked differences between potential models, the CBO and JCT face the tall task of maintaining their non-partisan reputation, even when selecting a model that may justify or undermine the use of dynamic scoring.

### *3. Normative Concerns*

Normative concerns can also help guide the implementation of dynamic scoring. Economists and political scientists have considered the normative impacts of the realization of this process, and a series of concerns continue to crop up. Dynamic scoring must be applied in a way that takes into account the credibility of scoring, the clarity of official estimates, and the practicality of the process.

#### a. Credibility

Credibility of the scoring process remains a central goal regardless of the method used. This paper has already touched upon the credibility concerns associated with dynamic scoring, but that is not to say they cannot be addressed. Assuring credibility requires focusing on accuracy, neutrality, and transparency.<sup>198</sup>

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<sup>197</sup> See Brad Williams, *supra* note 159.

<sup>198</sup> See *OECD*, *supra* note 52, at 19-23.

Implementing dynamic scoring both increases and decreases accuracy. While this method increases the accuracy of a score in that it incorporates more factors, it decreases the ‘accuracy’ in that it becomes far less precise, and can vary depending on many internal and external factors.<sup>199</sup> The dueling heads of accuracy concerns “suggest a role for acknowledging uncertainty,” while still including as many important factors as possible.<sup>200</sup> Considering dynamic scoring’s accuracy in predicting macroeconomic factors isn’t itself established, these concerns are by no means trivial. This factor would suggest utilizing a type of dynamic scoring that either provides multiple estimates using multiple models, provides supplementary macroeconomic estimates to the official one, or at the very least, disclaims the potential inaccuracies associated with picking one model.

Neutrality is another concern with dynamic scoring that this paper has already touched upon. Dynamic scoring increases the complexity of calculations, which, in term, raises both “the degree of uncertainty,” and the “amount of judgment and guesswork requires.”<sup>201</sup> Considering “dynamic scoring is usually called for where there is a lack of political consensus,” there is often political debate surrounding these bills, and that will inevitable raise questions of scorer neutrality.<sup>202</sup> Both actual and perceived bias will reduce the credibility of the CBO and JCT.<sup>203</sup> Although the CBO and JCT have review processes, utilizing economists and attorneys affiliated with but not on the staff of the CBO, it is not clear how disconnected these parties truly are from the agencies they are checking. This factor, once again, points towards somehow either producing multiple

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<sup>199</sup> See *Understanding Dynamic Scoring*, *supra* note 41, at 6-7; see *An Introduction to the Issues*, *supra* note 47, at 2-3.

<sup>200</sup> *OECD*, *supra* note 52, at 20.

<sup>201</sup> *Id.*

<sup>202</sup> *Id.*

<sup>203</sup> *Id.*

estimates through model models, or, at the very least, admitting the faults of the model used. As OECD describes it, requiring a “single number for the scoring of proposals means that the scorer is asked to make a best guess.”<sup>204</sup> This best guess results in “more pressure...[and] more accusations,” which make it “harder to maintain neutrality.”<sup>205</sup>

Transparency, as a matter of maintaining the credibility of the scoring process, is a necessary tool for “building trust in the accuracy and impartiality of scoring.”<sup>206</sup> If the process is clear and available for public scrutiny, there will be increased trust, and the image of impartiality will be combatted, even if the process is not perfect.<sup>207</sup> On this note, the most important step is to allow access to the “relevance, plausibility[,] and significance of the results.”<sup>208</sup> Detailed descriptions of the process should be available for public consumption, including, importantly, an explanation of the different models available and the reasoning behind the selection of the final model (if only one model is used).<sup>209</sup> If dynamic scoring is incorporated into the official score, transparency is the best way to counter many of the inherent disadvantages of this method.

#### b. Clarity

Though credible scoring is important, even credible “estimates are of little use if nobody understands them.”<sup>210</sup> Here, including dynamic scoring as a supplemental estimate to the official score may encourage individuals to make their own analysis of

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<sup>204</sup> *Id.*

<sup>205</sup> *Id.*

<sup>206</sup> *Id.*

<sup>207</sup> *See Id.* at 20-21.

<sup>208</sup> *Id.* at 21.

<sup>209</sup> *Id.* at 21.

<sup>210</sup> *Id.*

how likely those macroeconomic effects are, but it may lead to others simply looking at the official score and ignoring the additional reports. In this way, providing a series of estimates may reduce clarity, but it may increase it as well.<sup>211</sup>

While specific scoring methods may not inherently lend themselves to clarity, there is one way to ensure any method is the clearest possible—consistency. If dynamic scoring is used for some proposals and not others, or if it is implemented differently for some proposals compared to others, comparing the costs legislation across the board becomes impossible. Furthermore, this encourages the use of dynamic scoring in a more non-partisan way. If the same methodology must be used for scoring both large tax bill and large spending bills, dynamic scoring becomes less of a political tool.<sup>212</sup>

### c. Practicality

Finally, considerations of practicality, another topic this paper has discussed, must be taken into account when scoring dynamically. On balance, dynamic scoring should be implemented in such a way that the benefits outweigh the costs.<sup>213</sup> This may sometimes be in tension with other normative factors on this list, such as consistency. Producing dynamic estimates for every piece of legislation would dramatically increase the cost to both the CBO and the JCT, but would also increase consistency and encourage clarity.<sup>214</sup> While these concerns are difficult to reconcile, it is possible to focus on the benefit side of dynamic scoring. Improving the quality of analysis and economic forecasting would

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<sup>211</sup> *See id.* at 21-22.

<sup>212</sup> *See id.* at 22.

<sup>213</sup> *See id.*

<sup>214</sup> *See id.* at 20-22.

correspondingly increase the benefits of dynamic scoring, making the method more politically feasible and economically practicable.

## **B. PRACTICAL BUDGETARY IMPACTS OF DYNAMIC SCORING**

This paper has alluded to many of the direct impacts that scoring has on the budget, and therefore that the switch to dynamic scoring might influence. It is worth, however, briefly outlining these effects in one place. This paper will demonstrate these effects through the framework of the recent House Rule for dynamic scoring.

First, dynamic scoring under H.Res.5 could have a disproportionate effect on tax proposals in comparison to spending proposals. As explained in section III.A, H.Res.5 excludes all appropriations bills from dynamic scoring requirements. Furthermore, according to Alan Blinder, “many tax bills are” large enough to meet the .25% of GDP threshold, but “hardly any individual appropriation bills are.”<sup>215</sup> John Delaney, a self-proclaimed pro-growth, pro-dynamic scoring, Democratic member of the House of Representatives, opposes this particular rule because “only comprehensive tax reform bills would meet that threshold.”<sup>216</sup> By excluding appropriations bills and setting the threshold too high, H.Res.5 applies dynamic scoring in a way that will primarily benefit those in favor of tax cuts but not spending increases—usually Republicans.

Furthermore, the resolution allows the Chair of the Budget Committee or the Chair of the Ways & Means Committee to designate a piece of legislation as major

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<sup>215</sup> Blinder, *supra* note 87, at 3.

<sup>216</sup> John K. Delaney, “The House should keep ‘dynamic scoring’ honest,” *Washington Post* (Jan. 7, 2015), available at [http://www.washingtonpost.com/opinions/the-house-should-keep-dynamic-scoring-honest/2015/01/07/48912eae-94fb-11e4-927a-4fa2638cd1b0\\_story.html](http://www.washingtonpost.com/opinions/the-house-should-keep-dynamic-scoring-honest/2015/01/07/48912eae-94fb-11e4-927a-4fa2638cd1b0_story.html).

legislation subject to the dynamic scoring requirements.<sup>217</sup> When a bill does not meet the threshold, then, “it could be deployed whenever House leaders find it politically useful.” This could benefit Republicans now, but inasmuch as this represents a long-term scoring strategy, would benefit whichever party is in charge of the House. This approach immediately raises concerns regarding the credibility of the CBO and JCT, as mentioned in sections IV.B.3 and V.A.2.a.

Next, the official scoring process plays a role in front-end controls on the legislative process. Though scores by both the CBO and JCT are initially confidential, both groups require the release of score reports once a bill becomes public, either through an official proposal, announcement, vote, or informal public debate.<sup>218</sup> For other members of Congress, these reports become fodder for political debate. Official scores are used to either endorse or oppose legislation both in Congress and to the public, and therefore influence the eventual fate of that legislation.<sup>219</sup>

The switch to dynamic scoring has a direct influence on these front-end legislative controls. Because dynamic scoring incorporates long-term macroeconomic impacts of legislation, it changes the costs for many pieces of legislation, specifically by reducing estimate losses from tax cuts and some major spending bills, and vice versa for tax rate increases.<sup>220</sup> By doing so, dynamic scoring changes the debate on these pieces of legislation. Proponents of the former type will stand on firmer ground when arguing in

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<sup>217</sup> H.Res.5(c)(1)(d)(1)(b).

<sup>218</sup> See *Processes*, *supra* note 2; see *Joint Committee Revenue Estimation Process*, *supra* note 27.

<sup>219</sup> See *Scoring Health Legislation*, *supra* note 3.

<sup>220</sup> See *Understanding Dynamic Scoring*, *supra* note 41, at 2-3.

favor of tax cuts or omnibus spending bills, as dynamic estimates will allow them to argue that the legislation comes close to “paying for [itself].”<sup>221</sup>

The scoring process also plays an important role in back-end budgetary controls, such as the PAYGO rules instituted for mandatory spending. Pay-As-You-Go was initially instituted under the Budget Enforcement Act of 1990, requiring all increases in mandatory spending or revenue decreases to be deficit neutral.<sup>222</sup> These PAYGO rules require offsets to these types of deficits to come from corresponding spending decreases or revenue increases.<sup>223</sup> PAYGO rules expired in 2002, after which Congress passed the tax cuts under the Jobs and Growth Tax Relief Reconciliation Act of 2003, neglecting to offset reductions in revenue from taxes with corresponding tax increases or spending decreases.<sup>224</sup> PAYGO has since been re-introduced, first as a rule of the House of Representatives, and subsequently as legislation in the form of the Statutory Pay-As-You-Go Act of 2010.<sup>225</sup> Under the statutory PAYGO Act, a scorecard is kept through each fiscal year. If mandatory spending exceeds mandatory saving at the end of the year, the “President is required to issue a sequester order that uniformly cuts non-exempt mandatory spending.”<sup>226</sup>

These budgetary constraints provide a back-end means to limit spending by requiring offsets to any deficit increases that arise from tax cuts or mandatory spending

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<sup>221</sup> See Zachary Karabell, “A Dynamic World Demands Dynamic Scoring,” *Politico Magazine* (2015), available at <http://www.politico.com/magazine/story/2015/01/dynamic-scoring-114237.html#.VRsC-RajTww>.

<sup>222</sup> 2. U.S.C.A 900 (1990).

<sup>223</sup> *Id.*

<sup>224</sup> See HiMMS Fact Sheet, *Federal Budget and Pay-As-You-Go Rules (“PAYGO”)*, 1 (2012).

<sup>225</sup> See Public Law 111-139 (2010).

<sup>226</sup> *PAYGO or No-Go: An Easy Way for Congress to Improve the SGR Bill*. COMMITTEE FOR A RESPONSIBLE BUDGET (APRIL 2015). Available at <http://crfb.org/blogs/paygo-or-no-go-easy-way-congress-improve-sgr-bill>

increases. In doing so, PAYGO uses the official scoring estimate from the JCT and CBO. Dynamic scoring then will play a large role in enforcing these budgetary constraints. Large spending bills and tax cuts have traditionally large costs under conventional scoring, thus requiring offsets under statutory PAYGO. These bills will receive lower costs through macroeconomic forecasts, however, and therefore will require fewer offsets. Because of the uncertainty associated with dynamic estimates, however, these lower costs may never come to fruition, and the offset may not be enough to keep legislation deficit-neutral. Under PAYGO, “there is no restriction at all concerning what actually happens to the deficit[,]” which can be “a problem if projections turn out to have been overly optimistic.”<sup>227</sup>

The recent passage of a Sustainable Growth Rate (SGR) for Medicare payments to physicians, for example, contains a provision exempting the increases to mandatory spending under the bill from PAYGO requirements.<sup>228</sup> Widespread use of dynamic scoring, however, not only might reduce the official cost of the SGR bill, but also would make it easier for future legislation to offset this cost by improving the long-term macroeconomic outlook. This additional tool for balancing mandatory spending could be used as an incentive to keep PAYGO requirements for all legislation.

The influence of dynamic scoring is clear upon budgetary control mechanisms in place to control spending. To the extent that dynamic scoring reduces long-term costs, it may reduce enforcement through overly optimistic predictions. On the other hand, dynamic scoring may predict lower revenues for tax increases based on macroeconomic factors that never come to fruition, thus leading to over-enforcement of these budgetary

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<sup>227</sup> *Dynamic Revenue Estimation*, *supra* note 25, at 146.

<sup>228</sup> *See PAYGO or No-Go*, *supra* note 226.

restrictions. Finally, the presence of an additional tool for budgetary gimmicks may dissuade Congress from completely exempting legislation from PAYGO requirements. Either way, the uncertainty of long-term macroeconomic forecasts that are made under dynamic scoring may alter the consistency of the application of these restrictions.

## **VI. CONCLUSION**

Dynamic scoring aims to incorporate macroeconomic predictions into the costs of legislation. For all the political controversy and argument surrounding dynamic scoring, the process is surprisingly non-partisan. The CBO and JCT, two strongly non-partisan groups, have conducted the scoring of all legislation for Congress for four decades. Both Republicans and Democrats have utilized dynamic scoring, and process lends itself to the traditional goals of both parties. Macroeconomic impacts of both large spending bills and tax cuts would likely reduce the costs of such bills. Indeed, dynamic scoring has been conducted for more or less a decade, used to provide supplemental estimates to legislators.

Despite the non-partisan nature of this process, there are still compelling reasons for and against adoption of such techniques into the official estimates. Including macroeconomic forecasts into a legislative score enables both legislators and the public to truly understand the implications of a bill. This furthers democratic legitimacy, accountability, and transparency. Technological and economic developments since scoring began have revolutionized the idea of cost predictions, and ignoring this progress biases the legislative process against pro-growth policies.

On the other hand, macroeconomic predictions introduce a level of uncertainty—in regards to both model selection and the difference influences on macroeconomic factors—that might undermine the scoring process. Granting supposedly neutral experts a great deal of discretion in selecting the models and parameters to use opens the process up to outside political influence, potentially undermining the credibility that the CBO and JCT have so impressively built up. Furthermore, these uncertainties reduce the accuracy and reliability of scores. Finally, the additional resources required to perform these estimates may not be outweighed by the benefits, especially considering previous estimates have demonstrated that changes may not be as large as many think under this system.

The numerous budgetary impacts of the official score report enhance the importance of examining these benefits and drawbacks. The official score serves to inform both front-end legislative controls (i.e., debate) and back-end budgetary restrictions (i.e., PAYGO). If dynamic scoring is to be used, then, in the official score estimate, the CBO and JCT must take into account important normative factors when deciding how to implement the process.

## BIBLIOGRAPHY

2. U.S.C.A 900 (1990).

Adam Fletcher & Trenton Hamilton, “Scoring and Revenue Estimation” (Updated March 16, 2008)

(Briefing Paper No. 15).

Alan Blinder, *The GOP’s Political Budget Scorekeeping*, THE WALL STREET JOURNAL (2015)

Alan J. Auerbach, *Dynamic Revenue Estimation*, 10 JOURNAL OF ECONOMIC PERSPECTIVES 1, 144 (Winter 1996).

Alan J. Auerbach, *Dynamic Scoring: An Introduction to the Issues*, AMERICAN ECONOMIC ASSOCIATION.

Alan J. Auerbach and Joel Slemrod, *The Economic Effects of the Tax Reform Act of 1986*, 35 JOURNAL OF ECONOMIC LITERATURE 589, 599 (JUNE 1997)

Brad Williams, “Dynamic Scoring Forum: California’s Dynamic Revenue Estimating Experience,”

*TaxVox* (Mar. 2015), available at <http://taxvox.taxpolicycenter.org/2015/03/02/californias-dynamic-revenue-estimating-experience/>

Christopher J. Puckett, *Is the Experiment Over? The OMB’s Decision to Change the Game Through a Shortening of the Forecast*, GEO J, POVERTY LAW & POL’Y 169, 178 (2004).

Chye-Ching Huang and Paul N. Van de Water, *House “Dynamic Scoring” Rule Likely Will Mean More Tax Cuts—Not More Information*, CENTER ON BUDGET AND POLICY PRIORITIES (2015)

Committee for a Responsible Federal Budget, *Understanding Dynamic Scoring*, 2-3.

Congressional Budget and Impoundment Control Act of 1974, 2 U.S.C. 601 (2005).

Congressional Budget and Impoundment Control Act of 1974, 2 U.S.C. 653 (2005).

Congressional Budget Office, *Frequently Asked Questions About CBO Cost Estimates*, available at <http://www.cbo.gov/about/products/ce-faq>.

Congressional Budget Office, *Processes*, available at <https://www.cbo.gov/about/processes>.

G. William Hoagland Shai Akabas, Alex Gold, *Is the Furor Over Dynamic Scoring Overblown?*

BIPARTISAN POLICY CENTER.

Gregory Mankiw and Matthew Weinzierl, *Dynamic Scoring: A Back-of-the-Envelope Guide*, NATIONAL BUREAU OF ECONOMIC RESEARCH (2004)

HiMMS Fact Sheet, *Federal Budget and Pay-As-You-Go Rules (“PAYGO”)*, 1 (2012).

Jane G. Gravelle, *Dynamic Scoring for Tax Legislation: A Review of Models*, CONGRESSIONAL RESEARCH SERVICE, 2 (2014), available at

[http://graphics8.nytimes.com/packages/pdf/business/20140204\\_dynamic\\_scoring\\_report.pdf](http://graphics8.nytimes.com/packages/pdf/business/20140204_dynamic_scoring_report.pdf).

Jane Gravelle, “Dynamic Scoring Forum: Inside the Black Box,” *TaxVox* (Mar. 2015), available at

<http://taxvox.taxpolicycenter.org/2015/03/17/dynamic-scoring-forum-inside-black-box/>.

Jane Gravelle, *Dynamic Scoring: Lessons from the Study of the Camp Tax Reform*, BROOKINGS INSTITUTE

(2015), available at [http://www.brookings.edu/~media/Events/2015/01/26-dynamic-scoring/Dynamic\\_Scoring\\_Gravelle.pdf?la=en](http://www.brookings.edu/~media/Events/2015/01/26-dynamic-scoring/Dynamic_Scoring_Gravelle.pdf?la=en).

John K. Delaney, “The House should keep ‘dynamic scoring’ honest,” *Washington Post* (Jan. 7, 2015),

available at [http://www.washingtonpost.com/opinions/the-house-should-keep-dynamic-scoring-honest/2015/01/07/48912eae-94fb-11e4-927a-4fa2638cd1b0\\_story.html](http://www.washingtonpost.com/opinions/the-house-should-keep-dynamic-scoring-honest/2015/01/07/48912eae-94fb-11e4-927a-4fa2638cd1b0_story.html).

Joint Committee on Taxation, *Joint Committee Revenue Estimation Process*, available at

<https://www.jct.gov/about-us/revenue-estimating.html>.

See Joint Committee on Taxation, *Macroeconomic Analysis of Various Proposals to Provide \$500 Billion in Tax Relief*

Joint Committee on Taxation, *Revenue Estimating Methodology*, available at

<https://www.jct.gov/publications.html?func=select&id=3>

Joint Committee on Taxation, *The JCT Revenue Estimating Process: Prepared by the Staff of the Joint Committee on Taxation, January 2013*.

H.Res.5, 2(c)(1)(a).

House Rule XIII(3)(h)(2)

Noah Smith, “Why Economic Policy Isn’t Dynamic,” *Bloomberg View* (March 2015), available at

<http://www.bloombergview.com/articles/2015-03-09/cbo-dynamic-scoring-creates-economic-policy-with-political-bias>.

Neil Bruce and Stephen J. Turnovsky, *Budget Balance, Welfare, and the Growth Rate: “Dynamic*

*Scoring” of the Long-Run Government Budget*,” 31 JOURNAL OF MONEY, CREDIT AND BANKING 2, 164 (1999).

OFFICE OF MANAGEMENT AND BUDGET, EXEC. OFFICE OF THE PRESIDENT, ANALYTICAL

- PERSPECTIVES 113 (2016).
- Noah Smith, "Why Economic Policy Isn't Dynamic," *Bloomberg View* (March 2015), available at <http://www.bloombergtview.com/articles/2015-03-09/cbo-dynamic-scoring-creates-economic-policy-with-political-bias>.
- Neil Bruce and Stephen J. Turnovsky, *Budget Balance, Welfare, and the Growth Rate: "Dynamic Scoring" of the Long-Run Government Budget*, 31 JOURNAL OF MONEY, CREDIT AND BANKING 2, 164 (1999).
- Norton Francis, "Dynamic Scoring: Update and Recommendations," *New Mexico Legislature* (Dec. 2007), available at <http://www.nmlegis.gov/lcs/lfc/lfcdocs/Dynamic%20Scoring.pdf>.
- Paul N. Van de Water and Chye-Ching Huang, *Budget and Tax Plans Should Not Rely on "Dynamic Scoring"*, CENTER ON BUDGET AND POLICY PRIORITIES (2014).
- Paul N. Van de Water, *Scoring Health Legislation*, NATIONAL INSTITUTE FOR HEALTH CARE MANAGEMENT FOUNDATION 1 (April 2009).
- PAYGO or No-Go: An Easy Way for Congress to Improve the SGR Bill*. COMMITTEE FOR A RESPONSIBLE BUDGET (APRIL 2015). Available at <http://crfb.org/blogs/paygo-or-no-go-easy-way-congress-improve-sgr-bill>
- Public Law 111-139 (2010).
- Stuart Adam and Antoine Bozio, *Dynamic Scoring*, OECD JOURNAL ON BUDGETING 2, 7 (2009)
- Thomas L. Hungerford , "Still Not Ready for Prime Time: Tax Reform and Dynamic Scoring," *Economic Policy Institute: Working Economics Blog* (Mar. 2014), available at <http://www.epi.org/blog/ready-prime-time-tax-reform-dynamic-scoring/>.
- Zachary Karabell, "A Dynamic World Demands Dynamic Scoring," *Politico Magazine* (2015), available at <http://www.politico.com/magazine/story/2015/01/dynamic-scoring-114237.html#.VRsC-RajTww>.

## **EXHIBIT A: Relevant Provisions of the Congressional Budget and Impoundment Control Act of 1974**

**SEC. 402. [2 U.S.C. 653]** The Director of the Congressional Budget Office shall, to the extent practicable, prepare for each bill or resolution of a public character reported by any committee of the House of Representatives or the Senate (except the Committee on Appropriations of each House), and submit to such committee—

- (1) an estimate of the costs which would be incurred in carrying out such bill or resolution in the fiscal year in which it is to become effective and in each of the 4 fiscal years following such fiscal year, together with the basis for each such estimate;
- (2) a comparison of the estimates of costs described in paragraph (1), with any available estimates of costs made by such committee or by any Federal agency; and
- (3) a description of each method for establishing a Federal financial commitment contained in such bill or resolution.

The estimates, comparison, and description so submitted shall be included in the report accompanying such bill or resolution if timely submitted to such committee before such report is filed

### **SEC. 201. [2 U.S.C. 601]**

(f) **REVENUE ESTIMATES.**—For the purposes of revenue legislation which is income, estate and gift, excise, and payroll taxes (i.e., Social Security), considered or enacted in any session of Congress, the Congressional Budget Office shall use exclusively during that session of Congress revenue estimates provided to it by the Joint Committee on Taxation. During that session of Congress, such revenue estimates shall be transmitted by the Congressional Budget Office to any committee of the House of Representatives or the Senate requesting such estimates, and shall be used by such Committees in determining such estimates. The budget Committees of the Senate and House shall determine all estimates with respect to scoring points of order and with respect to the execution of the purposes of this Act.

### **EXHIBIT C: OECD First-Round Behavioral Responses to a Change in Income Tax Rate**

- How many hours per year individuals work
- How much effort individuals put into earning commissions/bonuses, achieving promotions, etc.
- Whether individuals choose a better-paid (but perhaps less enjoyable) job
- Whether and how soon individuals return to work after having children
- When individuals retire
- How much current income individuals sacrifice in order to undertake education and training and increase future earnings
- How much of an individual's remuneration is simple salary and how much is in the form of (possibly tax-privileged) fringe benefits
- How much individuals save and in what form (pensions, housing, bank accounts, and shares may all be taxed differently)
- Whether individuals set up a business, or take more risks with their business, or change the legal form of their business so that it is subject to corporate instead of personal income tax, or change how much they pay themselves in salary, how much in dividends, and how much they retain in the company
- How much time and money individuals invest in tax planning and avoidance
- How much income individuals illegally hide from the tax authorities
- In which country individuals live

**EXHIBIT E: H.Res.5 in Relevant Part**

(c) Cost Estimates For Major Legislation To Incorporate Macroeconomic Effects.—

(1) Amend rule XIII by adding the following: **“Estimates of major legislation**

“8.(a) An estimate provided by the Congressional Budget Office under section 402 of the Congressional Budget Act of 1974 for any major legislation shall, to the extent practicable, incorporate the budgetary effects of changes in economic output, employment, capital stock, and other macroeconomic variables resulting from such legislation.

“(b) An estimate provided by the Joint Committee on Taxation to the Director of the Congressional Budget Office under section 201(f) of the Congressional Budget Act of 1974 for any major legislation shall, to the extent practicable, incorporate the budgetary effects of changes in economic output, employment, capital stock, and other macroeconomic variables resulting from such legislation.

“(c) An estimate referred to in this clause shall, to the extent practicable, include—  
“(1)“a qualitative assessment of the budgetary effects (including macroeconomic variables described in paragraphs (a) and (b)) of such legislation in the 20-fiscal year period beginning after the last fiscal year of the most recently agreed to concurrent resolution on the budget that set forth appropriate levels required by section 301 of the Congressional Budget Act of 1974; and

“(2) an identification of the critical assumptions and the source of data underlying that estimate.

“(d)As used in this clause—

“(1) the term ‘major legislation’ means any bill or joint resolution—

“(A) for which an estimate is required to be prepared pursuant to section 402 of the Congressional Budget Act of 1974 and that causes a gross budgetary effect (before incorporating macroeconomic effects) in any fiscal year over the years of the most recently agreed to concurrent resolution on the budget equal to or greater than 0.25 percent of the current projected gross domestic product of the United States for that fiscal year; or

“(B)“designated as such by the chair of the Committee on the Budget for all direct spending legislation other than revenue legislation or the Member who is chair or vice chair, as applicable, of the Joint Committee on Taxation for revenue legislation; and

“(2)“the term ‘budgetary effects’ means changes in revenues, outlays, and deficits.”.