PROTOCOLS AND PROCEDURES
IMPLEMENTATION OF CHAPTER 2010-101, LAWS OF FLORIDA
TOOLS RELATED TO COST BENEFIT ANALYSIS, RETURN ON INVESTMENT, DYNAMIC SCORING AND OTHER ANALYSIS TECHNIQUES

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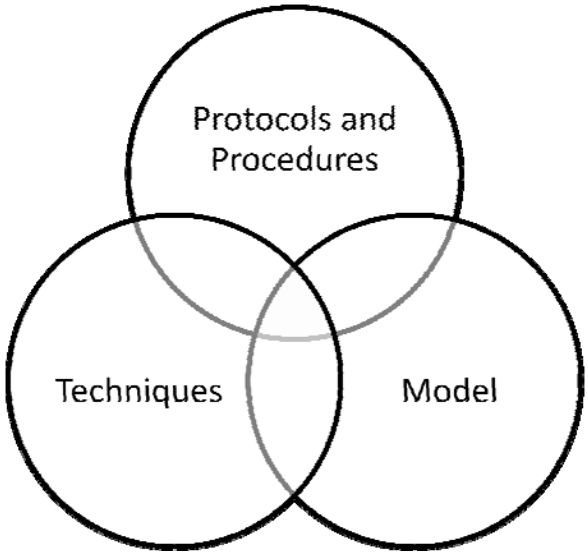
Table of Contents

OVERVIEW

Senate Bill 1178 was signed into law on May 26, 2010, creating section 216.138, Florida Statutes, (Chapter 2010-101, Laws of Florida). The bill allows the Senate President or the Speaker of the House of Representatives to request that special impact sessions of consensus estimating conferences evaluate specific proposed fiscal policy changes using cost-benefit, return on investment, dynamic scoring or other techniques, as appropriate. The Office of Economic and Demographic Research (EDR) is tasked with recommending protocols and procedures which, upon approval by the President and the Speaker, will govern the application of these techniques when requested by the President or the Speaker. The bill also requires EDR to submit a report of its findings and recommendations on the protocols and procedures to the President and the Speaker by December 1, 2010.

This document is the required report of the EDR findings and recommendations. It has been developed in consultation with the principals of the various consensus estimating conferences and after receipt of public input. The report contains the recommended protocols and procedures for evaluating specific proposals using analytic techniques not generally employed by the estimating conferences, including cost-benefit analysis, return-on-investment, and dynamic analysis/scoring. Among other things, the recommended protocols and procedures address the criteria for determining the analytic technique to employ, the format for reporting results, and the linkages to the appropriations and revenue forecasting processes, consistent with the constitutional requirement for a balanced budget. The report also includes recommended statutory changes needed to implement the recommendations (see Appendix B).

Policy Analysis Tools



Separate sections have been developed for the protocols, procedures and associated discussion items. In the context of this document, protocols and procedures have the following meanings:

- Protocol – a convention, code of correct conduct or set of guidelines, especially in regard to technology

- Procedure – a specified series of actions or operations which have to be executed in the same manner in order to always obtain the same result under the same circumstances

The discussion items identify common alternatives to a particular issue, as well as explain the approach adopted in the presented protocols and procedures. In this regard, the procedures have been written assuming all recommended statutory changes have been passed by the Legislature. Should this prove not to be the case, the procedures must be amended. To allow for legislative response, the new procedures are expected to take effect at the conclusion of the 2011 Regular Session. In the meantime, EDR will continue to process special requests as normal, informally following many of the practices specified in this report.

Finally, work on the statewide model for dynamic analysis is underway. However, the statewide model is not expected to be operational until Fiscal Year 2012-13. During the intervening period, requests for special analysis will be handled through return-on-investment, cost-benefit, REMI and simplified dynamic analyses. EDR is currently in discussions with REMI to develop new modules for tax and budget inputs and outputs that are Florida-specific. If these modules come to fruition, REMI will become a more robust tool during the period that the statewide model is under development.

Current Practices

Economic, demographic, resource-demand and revenue forecasts are essential for a variety of governmental planning and budgeting functions. Most importantly, revenue and resource-demand estimates are needed to ensure that the state meets the constitutional balanced budget requirement. In this regard, the various forecasts are primarily used in the development of the constitutionally required Long-Range Financial Outlook, the Governor's budget recommendations and the General Appropriations Act. Economic and demographic forecasts are also used to support estimates of revenues and demands for state services.

Florida's revenue forecasting system is founded on a base forecast which typically assumes a "current law, current administration" structure in which no changes are allowed to the legal setting and practices known at the time of the forecast. The multi-stage process begins with the adoption of a national economic forecast based on information from a private forecasting firm, and the subsequent development of a Florida-specific economic forecast based on the major elements of the national forecast. Key state economic variables are then used to model the likely paths of individual revenue sources. They are further adjusted by recent revenue collection trends and calibrated to current receipts.[1] This process determines the baseline forecasts, and proposed law changes are modeled as deviations from the projected base. In the next round of forecasts, the process begins again, and the baseline is updated to account for any new or changed information, such as data revisions and law changes. All revenue estimates are made on a "cash" basis where revenues are assigned to the fiscal year in which they are likely to be received. The resource-demand conferences follow a similar process, and most rely heavily on the shape of the Florida-specific economic forecast.

Rather than constitutional or statutory guidance, the classification of recurring and non-recurring revenues is based on institutional forecasting conventions developed over time by the principals of the Revenue Estimating Conference. Typically, the forecasted revenue level for each baseline year is deemed to be the "recurring" amount of funds for that year, regardless of the projected levels in subsequent years. Narrow exceptions are made for one-time events such as hurricanes and the receipt of special federal funds, as well as time-limited statutory provisions. Recent estimates have included at least three complete fiscal years in the forecast adopted at the conference. Moreover, the annual Long-Term Revenue Analysis (Book 2) adopted each Fall contains 10-year forecasts for revenues.

Consensus estimating administratively began in 1970 and was limited to forecasts of the General Revenue Fund. However, the law formally establishing the conference process in statute did not pass until 1985 (85-26, LOF). The use of consensus forecasting to support the planning and budgeting process has expanded in the years since, and there are now ten estimating conferences formally identified in statute:

1. Economic Estimating Conference
    a. Florida Economic
    b. National Economic
2. Florida Demographic Estimating Conference
3. Revenue Estimating Conference
    a. Abandoned Property/Principal State School Trust Fund
    b. Ad Valorem

[1] Designated principals also use independent (but informed) judgment to alter the forecast.

c. Article V Fees & Transfers
d. Documentary Stamp Tax
e. General Revenue
f. Gross Receipts/Communications Services Tax
g. Highway Safety Fees
h. Indian Gaming
i. Long Term Revenue Analysis
j. Lottery
k. Public Education Capital Outlay (PECO)
l. Slot Machines
m. Tobacco Settlement
n. Tobacco Tax and Surcharge
o. Transportation Revenue

4. Education Estimating Conference
    a. Public Schools Enrollment
    b. Florida College System Enrollment
    c. Post Secondary Financial Aid
5. Criminal Justice Estimating Conference
6. Social Services Estimating Conference
    a. TANF/WAGES
    b. Medicaid Caseloads
    c. Medicaid Expenditures
    d. Kidcare
7. Workforce Estimating Conference
8. Early Learning Programs Estimating Conference
    a. School Readiness Program
    b. Voluntary Prekindergarten Education Program
9. Self-Insurance Estimating Conference
    a. Risk Management Trust Fund
    b. State Employees Health Insurance
10. Florida Retirement System Actuarial Assumptions Estimating Conference
    a. Florida Retirement System
    b. Retiree Health Insurance Subsidy Benefit

While references to specific conferences exist in several places within the Florida Statutes, general statutory authority for the consensus process is provided in s. 216.133 through s. 216.138, F.S., which specifies the duties of each conference and designates the conference principals and participants. Conference principals can call conferences and are generally responsible for developing and choosing the forecasts. Participants may be requested to provide alternative forecasts and to generate supporting information. All conferences are open, public meetings.

The four principals for the Revenue Estimating Conference are designated professional staff. The staff members represent the Governor's Office, Senate, House of Representatives and Legislative Office of Economic and Demographic Research. Historically, the revenue representatives of the House and Senate

have been the staff directors of the tax committees, and the policy coordinator overseeing tax issues has represented the Governor's Office. In the other conferences, the principals represent the same offices, but they are specifically chosen for their subject-matter expertise in the area represented by the conference. An exception is made for the Coordinator of the Legislative Office of Economic and Demographic Research who – by law – sits as a principal on all conferences.

Consensus forecasting requires the conference principals to arrive at agreed-upon forecasts. The procedure is truly by consensus with each principal having a veto. Section 216.133(3), F.S., defines "consensus" as "the unanimous consent of all of the principals." All parties must agree on the forecasts before they are finalized. Each state agency and the judicial branch must use the official results of the conference in carrying out their duties under the state planning and budgeting process; however, the Legislature is not bound to use the official consensus forecasts. Nevertheless, since 1970, the Florida Legislature has consistently used the results of these conferences in its official duties.

The principals generally meet in a series of regularly scheduled Consensus Estimating Conferences to provide the forecasts needed to support the planning and budgeting process. Impact conferences are held when estimates are needed to determine the impact of changes or proposed changes to current law or current administration. Current law does not specify the methods, techniques, or approaches for developing estimates or forecasts; however, the impact conferences typically use static analyses with modest adjustments for likely behavioral changes when conditions warrant their inclusion.

A special case of the estimating conference process has been developed for evaluating the fiscal impact of petition initiatives. In 2004, a constitutional amendment passed that requires initiative petitions be filed with the Secretary of State by February 1st of each general election year in order to be eligible for ballot consideration. Section 15.21, Florida Statutes, requires the Secretary of State to "immediately submit an initiative petition to the Attorney General and to the Financial Impact Estimating Conference" once the certified forms "equal...10 percent of the number of electors statewide and in at least one-fourth of the congressional districts required by s. 3, Art XI of the State Constitution." At the point an initiative petition is received, the Financial Impact Estimating Conference (FIEC) has 45 days to complete an analysis and financial impact statement to be placed on the ballot (s.100.371, Florida Statutes). The statement must include the estimated increase or decrease in any revenues or costs to state or local governments resulting from the proposed initiative. The Financial Impact Estimating Conference consists of four principals: one person from the Executive Office of the Governor; the coordinator of the Office of Economic and Demographic Research, or his or her designee; one person from the professional staff of the Senate; and one person from the professional staff of the House of Representatives. Each principal must have appropriate fiscal expertise in the subject matter of the initiative. A separate Financial Impact Estimating Conference may be appointed for each initiative.

New Analytic Techniques

Section 216.138, F.S., provides the President and Speaker with the authority to "request special impact sessions of consensus estimating conferences to evaluate proposed legislation based on tools and models not generally employed by conferences, including cost-benefit, return-on-investment or dynamic scoring techniques" and "additional, appropriate economic techniques". Although these techniques are frequently used in policy analysis, they are not commonly used by the estimating conferences in Florida. Below are descriptions of the analytic techniques specifically mentioned in the bill.

> Cost-Benefit Analysis (CBA) is an analytical technique that compares the total expected costs to the total expected benefits of a project. In this regard, CBAs usually include both monetary and non-monetary costs and benefits. Non-monetary items are features for which there is no readily available market price, like pollution and good health. In order to include non-monetary items in the analysis, they must be converted into dollars by determining their relative monetary value. CBAs may also include the indirect and induced effects of a project beyond the direct effects. A CBA is generally used when a project is expected to have externalities and social benefits and costs which are to be included in the evaluation of the project. In most cases the costs and benefits are incurred over time. Because the value of money changes over time, the amounts are usually adjusted by a discount rate to reflect the time value of money.[2]
>
> Return-on-Investment (ROI) is an analytical technique that compares the most tangible financial gains or benefits that can be expected from a project to the costs of implementation. ROI is generally expressed as a percentage derived by summing the revenues, less the expenditures, and dividing that calculation by the expenditures. ROI is most often used when a project is to be evaluated strictly on a monetary basis and externalities and social benefits and costs – to the extent they exist – are to be excluded from the evaluation. In many cases the expenditures are incurred early in a project and the revenues are received over time. Because the value of money changes over time, the amounts are usually adjusted by a discount rate to reflect the time value of money.[3]
>
> Dynamic Analysis/Scoring is an analytical technique generally used to estimate the impacts of significant fiscal policy changes. Often this technique is used to estimate only the monetary impacts of fiscal (spending and tax) policy changes and does not include the non-monetary items; however, adjustments can be made to take these items into account. Dynamic analyses estimate not only the direct, indirect and induced effects of a fiscal policy change, they also estimate the behavioral changes of the general public, which in turn affect macroeconomic variables. Many of the effects are not realized for several years after the fiscal policy change is enacted so the technique must include the analysis of an ample number of years. Use of this technique is also generally limited to policy changes which will have a relatively large fiscal impact capable of affecting economic variables.[4,5]

The recommended protocols and procedures for using these analytic techniques will also provide a standard for other analyses performed using more traditional analytical techniques. Similarly, this

[2] Congressional Budget Office (1998), "The Economic Effects of Federal Spending on Infrastructure and Other Investments," http://www.cbo.gov/ftpdocs/6xx/doc601/fedspend.pdf, June 1998.

[3] Ibid.

[4] Bean, Mitchell E., Jay Wortley, Mark P. Haas (1997), "Dynamic Revenue Estimating – Will It Work for Michigan?" Michigan House and Senate Fiscal Agencies and Michigan Department of Treasury, March 1997.

[5] Vashe, J. (2006), "Whatever Happened to Dynamic Revenue Analysis in California?", presentation to the Annual Revenue Estimation & Tax Research Conference Federation of Tax Administrators, September 17-20, 2006.

standard should also apply to analyses provided from outside sources to ensure consistency in evaluating proposed legislation and appropriations.

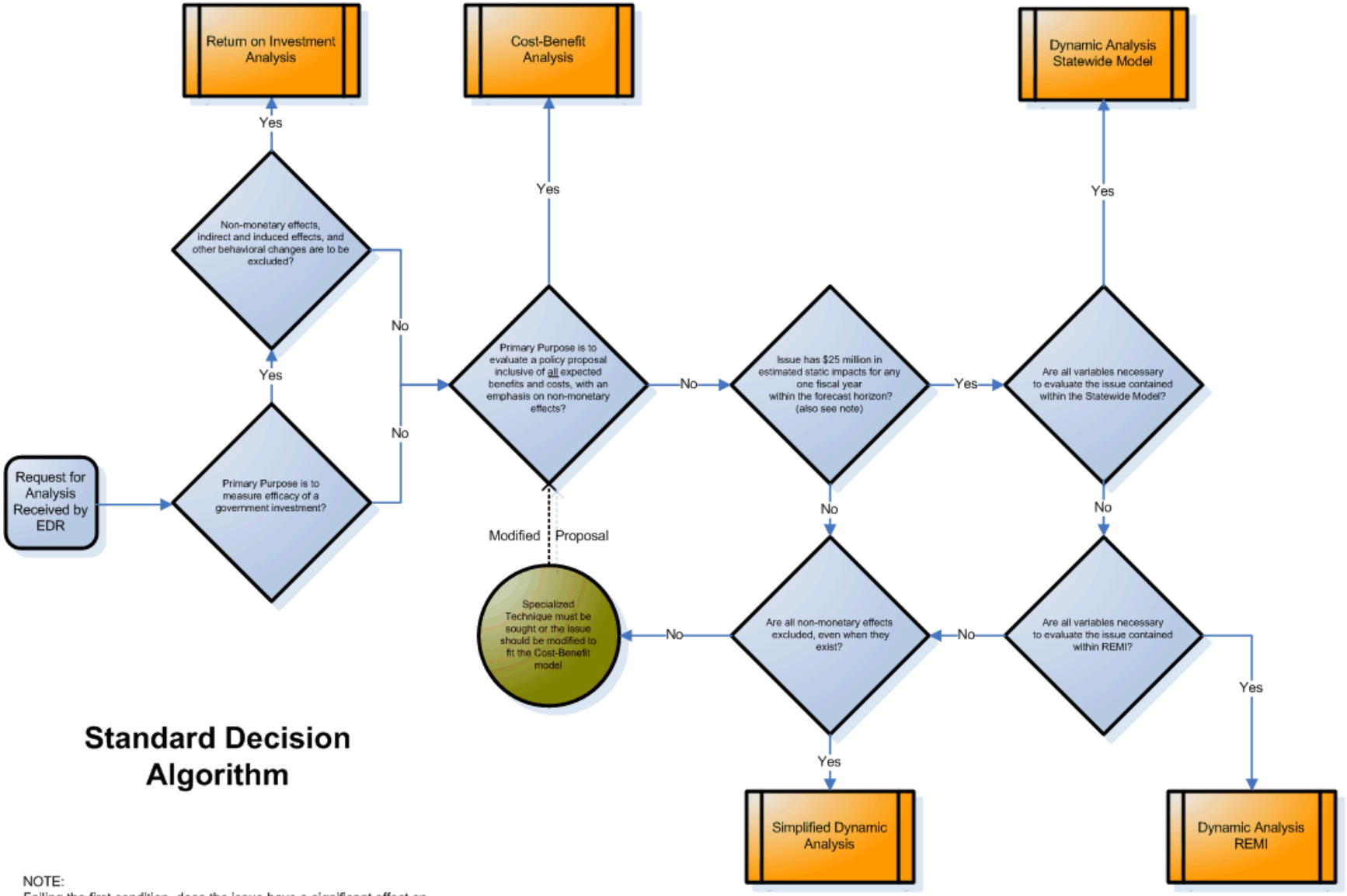
Policy Analysis Techniques Matrix

Effects	Return on Investment	Cost Benefit	Dynamic Analysis (Statewide Model)
Monetary	✓	✓	✓
Non-Monetary		✓	Limited
Indirect / Induced		Limited	✓
Behavioral Changes		Social Welfare	Economic
Size of Proposal	Any Size	Any Size	Initially: $25M or more Later: $10M or more

Return on Investment should primarily be used when the proposal relates to strictly monetary effects (increased revenues or savings to the state). In this regard, externalities and social benefits and costs are excluded from the analysis. Potential Best Usage: Discrete investments with subsequent payoffs where societal benefits are of negligible concern (e.g., Toll Roads).

Cost-Benefit can be used for evaluating strictly monetary effects; however, this technique is more often used for proposals that include non-monetary benefits and costs (such as the investment of resources to achieve a desired social result) or externalities. The focus is on monetizing (converting to dollars) social costs and benefits. This technique should also be used when the key metric involves the use of a variable that is not included in the dynamic scoring model. Potential Best Usage: Appropriations or discrete tax changes which may have a significant societal cost or benefit (e.g., Everglades Restoration).

Dynamic Analysis (Statewide Model, REMI) should be used to measure proposals that are likely to result in indirect and/or induced impacts resulting from changes in the economic behavior of the general public (e.g. stimulate increased savings). This technique should be used when the impact of the proposed fiscal policy change affects macroeconomic variables. Non-market based benefits or costs are not to be taken into account unless monetized via some other technique prior to use. Potential Best Usage: Larger initiatives that will likely have significant statewide economic impacts and will likely change the behavior of the general public (e.g., significant tax change or elimination of a core state program).



Standard Decision Algorithm

NOTE:
Failing the first condition, does the issue have a significant effect on macroeconomic variables from within a particular segment of the economy?

PROTOCOLS

Key Assumptions

The statewide dynamic model must simulate the behaviors of economic agents in order to calculate the estimated impacts of specific proposals. In order to perform this simulation certain assumptions must be made about the behaviors of the economic agents and their interactions with one another. The assumptions listed below are based upon analyses performed by California[6], Oregon[7] and Pennsylvania[8] to develop their dynamic models.

Household behavior – Consumers are assumed to maximize their utility or sense of well-being, subject to the constraint that they do not spend more money than they have.

Producer behavior – Producers are assumed to maximize profits or minimize costs and operate in competitive markets.

Trade – The state is assumed to trade with the "rest of the world", which would be other states and other countries. Goods produced outside of Florida are assumed to be imperfect substitutes for goods produced in the state. There is little data available for state level import demand and export supply, so most state level models assume that state level trade mimics U.S. trade.

Investment – The amount of investment by firms is dependent upon the rate of return in Florida versus the rest of the world.

Labor supply – The amount of time individuals are willing to work is dependent upon the level of pay, the level of taxation and the amount of transfer payments (for not working).

Migration – The amount of movement of households in and out of the state is determined by multiple factors. Migration is impacted by tax rates, unemployment rates, wage levels and education spending. Household responses to changes in these areas vary by income level.

These assumptions manifest themselves through the choice of various elasticities (e.g., price elasticity of demand, price elasticity of supply, elasticity of substitution between factors, etc.). The choice of these various elasticities falls under the rubric "model calibration".[9] These assumptions are "key" because they have significant influence on the results of any counterfactual policy simulation performed using the model. Among these are assumptions about the functional form of the objective functions of households and producers, and the underlying parameter values for these functions. Models with identical structures can differ significantly in their results for a particular policy simulation because of differences in their parameterization.[10]

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[6] Berck, P., E. Golan, B. Smith, J. Barnhart and A. Dabalen (1996), "Dynamic Revenue Analysis for California", California Department of Finance.

[7] Legislative Revenue Office (2001), "Oregon Tax Incidence Model (OTIM)", Research Report Number 2-01, Oregon Legislature, March 16, 2001.

[8] Tuerck, David G., Haughton, J. and Sanchez-Penalver, A. (2009), "PA STAMP (State Tax Analysis Modeling Program) A Complete Tax Model for Pennsylvania State," The Beacon Hill Institute at Suffolk University.

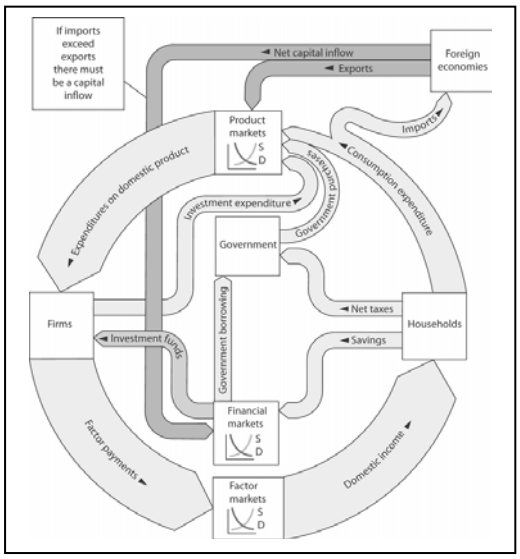
[9] "Calibration" is the process whereby values are assigned to parameters within the model so that the model replicates the benchmark data. These parameters typically take one of two forms: share parameters (e.g., labor's share of income); or elasticities (e.g., own price elasticity of demand). The share parameters can usually be calculated from the benchmark data, while the elasticities will typically be either taken from the literature or estimated. For a discussion of calibration see either Dawkins, C., Srinivasan, T.N. & Whalley, J. (2001), "Chapter 58 Calibration," Handbook of Econometrics, Volume 5, pp. 3653-3703, or Hansen, L.P. and Heckman, J.J. (1996), "The Empirical Foundations of Calibration," Journal of Economic Perspectives, 10(1), Winter 1996, pp. 87-104.

[10] For a recent survey of parameter selection in various general equilibrium models see, Gunning, T.S., J.W. Diamond, and G.W. Zodrow (2008), "Selecting Parameter Values for General Equilibrium Model Simulations," The James A. Baker III Institute for Public Policy, Rice University, mimeo, March 28, 2008.

EDR plans to use these assumptions in developing the elasticities deployed in the statewide model to project the behavioral changes of the public resulting from proposed fiscal policy changes. Where outside estimates of elasticities are necessary a literature search of peer-reviewed economic articles will be employed to find the range of reasonable values for these elasticities.

Core Variables

The reported core variables will generally depend on the type of analysis being performed. The core variables for return on investment (ROI) and cost-benefit analysis (CBA) are the costs and benefits of the proposal. If the analysis is conducted using some out-of-the-box commercial product, such as REMI, the variables will be dictated by the structure of such models. In addition, any inputs will have to conform to the variable structure of the chosen model. Outputs may have to be augmented by the analyst to capture potential revenues and expenditures that the commercial models do not include in sufficient detail. The core variables should follow as closely as possible the circular flow of income and products in the economy shown in the graphic depicted. This representation of the macro economy traces the interactions between economic agents. The core variables start with institutional transactions. An alternative way of presenting these interactions is through a social accounting matrix (SAM). A SAM is an arrangement of all transactions in an economic system. Its central core is an input-output table containing the intermediate transactions between firms producing goods and services; it extends to capturing income and expenditure flows between households, government, and the rest of the world. The typical categories measured in this framework would include the following variables, measured in dollars and prices of the benchmark year for the SAM.



- Personal income (labor income, capital income, transfer payments)
- Household consumption (by sector)
- Government consumption (by sector)
- Investment/Saving
- Rest-of-world net exports
- Government revenues (including transfers to businesses and households)
- Gross output (by sector)—composed of intermediate purchases plus value added[11] where value added is composed of labor income, capital income and indirect business taxes

Other variables to be included are population and jobs. With the integration of growth in population, particularly the net migration component of growth, into the model there are feedback effects to labor supply and jobs. Most state models have both variables as part of their core set of variables.[12,13]

EDR plans to initially design the statewide model to report the impact on these variables coming from proposed tax policy changes. After experience has been gained with the model additional variables will

[11] Value added is essentially gross domestic product (GDP) for the state. For an explanation of the alternative ways in which GDP can be measured see http://www.bea.gov/scb/pdf/2010/02%20February/0210_gdp_indy.pdf, especially the box on page 26 entitled "Three Approaches to Measuring Gross Domestic Product".

[12] See for example Berck, P., E. Golan and B. Smith (1996), "Dynamic Revenue Analysis for California," California Department of Finance, 1996.

[13] Given that relative price changes play an important role in eliciting changes in economic behavior, the model will also provide information on the price changes by sector resulting from any policy analysis simulation.

be added, particularly those in fiscal expenditure areas (e.g., school enrollment, social services caseloads, prison beds).

Geographic Level

The geographic level (e.g., world-wide, national, regional (state level) and multi-region) of a dynamic model determines the types of dynamic analyses that can be performed, as well as the amount of resources required to perform analyses and maintain the model. A single region or a multi-region model can be used to perform dynamic analyses for a single state. However, the level of geographic detail should reflect the region for which one wishes to measure estimated impacts.[14] "…[D]epending on how the geographic area of study is defined, certain economic effects will either be internal or external to the area, and the distribution of gainers and losers will differ."[15] Boardman, et. al. (2006)[16] discuss the concept of "jurisdictional definition of society" and "jurisdictional membership" when measuring benefits and costs in a cost-benefit analysis. From the state's perspective, the relevant area is the whole state. Disaggregation of regions within the state model could be undertaken if subsequently deemed desirable; however, increased geographic detail comes with a cost.

A single region statewide model can be used to analyze the impacts of proposed fiscal policy changes at a state level. This level of analysis provides estimates of changes in state revenues and expenditures resulting from proposed fiscal policy changes.

A multi-region state model can also be used to analyze the impacts of proposed fiscal policy changes at a state level. In addition, a multi-region model provides the ability to compare the impact of implementing the change in one region of the state versus another region. However, a multi-region model dramatically increases the number of variables that must be solved and requires more computational time. A bigger concern is the availability, cost, and quality of the data necessary to construct a multi-regional model.

EDR plans to develop a single region statewide model. This approach is consistent with the approach taken by other states[17,18,19] and would produce a working model sooner than a multi-region approach. At a future date, the state can evaluate the efficacy of developing a multi-region statewide model. This evaluation should take place after the state has gained experience performing dynamic analyses and the need for this type of analysis with the current planning and budgeting process has been determined.

[14] For a discussion of this point, see U.S. Department of Commerce (1997), **Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)**, 3rd edition, March 1997, p.7; or MIG, Inc. (2004), **IMPLAN Professional Version 2**, 3rd edition, February 2004, pp. 115-116.

[15] Weisbrod, Glen and Burton Weisbrod (1997), "Assessing the Economic Impact of Transportation Projects: How to Choose the Appropriate Technique for Your Project". **Transportation Research Circular Number 477**, October 1997, p. 12.

[16] Anthony E. Boardman, D.H. Greenberg, A.R. Vining, and D.L. Weimer (2006), **Cost-Benefit Analysis: Concepts and Practice**, 3rd edition, pp. 36-38.

[17] Berck, P., E. Golan, B. Smith, J. Barnhart and A. Dabalen (1996), "Dynamic Revenue Analysis for California", California Department of Finance.

[18] Legislative Revenue Office (2001), "Oregon Tax Incidence Model (OTIM)", Research Report Number 2-01, Oregon Legislature, March 16, 2001.

[19] Tuerck, David G., Haughton, J. and Sanchez-Penalver, A. (2009), "PA STAMP (State Tax Analysis Modeling Program) A Complete Tax Model for Pennsylvania State," The Beacon Hill Institute at Suffolk University.

Balanced Budget

All multi-year analyses performed for Florida must account for the state constitutional requirement that sufficient revenue be raised to defray the expenses of the state for each fiscal period (Article VII, Section 1(d), Florida Constitution). The requirement for "each fiscal period" to be balanced is significant for multi-year analyses because some proposed fiscal policy changes may be self funding over a multi-year period but not for each fiscal year. To meet the constitutional requirement, multi-year analyses for Florida must separately identify and address each fiscal year to determine its discrete impact. There are other implications arising from the constitutional requirement. While proposals that generate savings or increase revenues over expected levels would not violate the constitutional requirement, per se, this information is still important to legislative decision-making and the overall balancing of the budget. Obviously, proposals that increase the budget or reduce revenues present even more direct issues.

The implication for dynamic analyses of proposed fiscal policy changes with projected fiscal year losses is that the loss must be recognized in each year that it occurs. Assuming a perfectly balanced budget prior to the proposal, the state budget will need to be reduced to maintain a balanced budget unless the proposal identifies an alternative funding source. Further, if the proposed fiscal policy change does not specify how the state budget is to be reduced, then the analysis will need to assume an across-the-board reduction. This is consistent with the approach taken by California[20] and Massachusetts[21] to address the balanced budget requirement in their dynamic models.

The issue of revenue losses or expenditure increases is particularly important in dynamic analysis because dynamic analyses address the entire economy (public and private revenues and expenditures). If state expenditures must be reduced in order to maintain a balanced budget, then the dynamic impacts can be expected to result in additional reductions in expenditures throughout the rest of the economy because of the indirect and induced affects resulting from the state budget reductions. In some cases, these effects will be partially or completely offset by increased private activity, but they must still be taken into account.

The commonly used analytical practice is to distribute gains and losses to households in a lump sum manner.[22] However, this approach would not be consistent with the analysis of other proposals which explicitly increase or decrease government spending. For the purposes of analyzing a proposal and comparing the results to other proposals, the assumption that the state budget will be reduced to address any projected losses provides for the best basis of comparison. Similarly, revenue gains or expenditure savings must be addressed in a consistent manner.

EDR plans to design the statewide model to alter state expenditures for losses or gains resulting from proposed fiscal policy changes. While this assumption does not change the fact that the Legislature ultimately decides how to address the impact resulting from a fiscal policy change, it does provide treatment consistent with the current budget outlook. At the point, the Long-Range Financial Outlook no longer shows immediate budget shortfalls, this assumption will be revisited. In the meantime, all techniques will have a balanced budget requirement.

Finally, dynamic analyses will not assume bonding to address projected losses.

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[20] Vashe, J. (2006), "Whatever Happened to Dynamic Revenue Analysis in California?", presentation to the Annual Revenue Estimation & Tax Research Conference Federation of Tax Administrators, September 17-20, 2006.

[21] Merkowitz, H. (2008), "Estimating the Impact of the Massachusetts Film Production Tax Incentives – A Preliminary Analysis", Massachusetts Department of Revenue.

[22] Auerbach, Alan J. and Kotlikoff, Laurence J. (1987), **Dynamic Fiscal Policy**. Cambridge: Cambridge University Press, pp. 61-64.

Baseline and Data Maintenance

In order to perform dynamic analyses, a baseline projection of future economic activity must be developed. The baseline projection assumes that current law will remain in effect for the entire analytical timeframe.[23,24] The results of the dynamic analyses will be compared to the baseline projection to determine the effects of proposed fiscal policy changes on economic activity.[25] This baseline will also be used within the other analytical techniques. Below are the assumptions, available data and options for developing and maintaining a baseline projection for Florida.

Assumptions:

1. Comparability between analyses should be maintained by using the same baseline for each analysis
2. Analyses will be performed between August and February of the following year for the results to be available during that legislative session

Cycle for the Availability of Data:

- Early July – Final revenue figures for the previous fiscal year are available
- Early August – Summer Estimating Conference season produces a Long-Range Financial Outlook with 3 year projections of revenues and resource demands
- September 30 – Final certified forward expenditures and total expenditures for the previous fiscal year are available
- October to Early December
    - Fall Estimating Conference season for the Governor's Recommended Budget
    - Retrospective (close-out) review of key funds to analyze prior fiscal year revenues and expenditures
        - General Revenue
        - Tobacco Settlement Trust Fund
        - Educational Enhancement Trust Fund
        - Principal State School Trust Fund
- December – Revised Financial Outlook statements for key funds
- January – Long-Term Revenue Analysis (also known as the Red Book) is released containing 10 year revenue projections for all funds based upon Fall data and available forecasts
- February to March – Spring Estimating Conference season for use during the Legislative Session
- May to June – "Measures Affecting Revenue" is finalized for issues that became law during the Legislative Session
- Late June – Update of Outlook Statements for appropriations, bills with appropriations, budget amendments and measures affecting revenues

[23] Congressional Budget Office, "What Is a Current-Law Economic Baseline?", **Economic and Budget Issue Brief,** June 2, 2005.

[24] Bean, Mitchell E., Jay Wortley, Mark P. Haas (1997), "Dynamic Revenue Estimating – Will It Work for Michigan?" Michigan House and Senate Fiscal Agencies and Michigan Department of Treasury, March 1997.

[25] Kleinbard, E. (2008), "Inside the Joint Committee on Taxation Revenue Estimating Process" presentation.

Based on this cycle, there are several options for developing the baseline:

1. Use the Red Book without any updates and grow the budget by revenue growth;
2. Use the Red Book with adjustments for the Summer Estimating Conference season projections, assuming Red Book growth rates for the years beyond the projections, and grow the budget by revenue growth;
3. Obtain source specific 10-year updates from every estimating conference (requires change in current estimating conference practice); or
4. Use the Red Book with adjustments for the Summer Estimating Conference season projections and obtain specific 10-year updates from resource-demand conferences upon request.

In order to use the latest data possible, EDR plans to implement Option 4 for developing and maintaining the baseline. Option 4 uses the Summer Estimating Conference results and applies the revenue growth rates from the Red Book for the years beyond the adopted estimates. For budget-related proposals, the appropriate resource-demand conferences will be requested to develop 10-year forecasts that meet the needs of the requests. This option will allow the first three years of the baseline to be consistent with the Long-Range Financial Outlook. In addition, the revenue growth rates for the subsequent years will be consistent with the growth rates used in the Red Book for those same funds.

Data Aggregation

Data aggregation refers to the process of collecting and expressing information in a summary form for easier analysis. In this regard, most empirical economic models use aggregates of economic agents rather than individual agents. This is done both to provide focus for the analysis and to contain the number of variables in the model. A correct aggregation of economic agents into sectors is important because it determines which flows will be able to be explicitly traced. State dynamic analysis models generally include separate sectors for firms, households, government (state, federal and local), investment, factors (such as, labor and capital) and the rest of the world. [26,27,28]

Aggregates should be constructed in such a way that the model "captures and isolates most major taxpayers and government agencies while still providing a reasonably parsimonious model."[29] However, care needs to be taken in the level of aggregation. While a greater degree of aggregation is useful for summarizing data for presentations and can greatly speed the model-building and model-solving process, impact analysis using aggregated data is susceptible to aggregation bias.

The aggregation or sectoring used by other states in developing their dynamic models is fairly consistent.[30,31,32] While additional research will be required to determine the appropriate sectoring of Florida's economy, below is a summary of the general guidelines used by other states in sectoring their economies.

The sectors for industries in a state are generally determined based upon four criteria:

- first, major industries defined in terms of employment, production, exports and corporate revenue;
- second, industries that are identified as major taxpayers;
- third, industries that have been the subject of government taxation and industrial-development policy; and,
- fourth, standard industry sectors as defined by the North American Industry Classification System (NAICS).

Based upon these criteria, firms within the state are grouped into industrial sectors of firms making similar, though not identical, products.

Household sectors are generally determined by income levels. The data shows that households differ in their behavioral responses to changes in policy/economic conditions based on their own socio-economic

[26] Berck, P., E. Golan, B. Smith, J. Barnhart and A. Dabalen (1996), "Dynamic Revenue Analysis for California", California Department of Finance.
[27] Legislative Revenue Office (2001), "Oregon Tax Incidence Model (OTIM)", Research Report Number 2-01, Oregon Legislature, March 16, 2001.
[28] Tuerck, David G., Haughton, J. and Sanchez-Penalver, A. (2009), "PA STAMP (State Tax Analysis Modeling Program) A Complete Tax Model for Pennsylvania State," The Beacon Hill Institute at Suffolk University.
[29] Berck, P., E. Golan, B. Smith, J. Barnhart and A. Dabalen (1996), "Dynamic Revenue Analysis for California", California Department of Finance.
[30] Ibid.
[31] Legislative Revenue Office (2001), "Oregon Tax Incidence Model (OTIM)", Research Report Number 2-01, Oregon Legislature, March 16, 2001.
[32] Tuerck, David G., Haughton, J. and Sanchez-Penalver, A. (2009), "PA STAMP (State Tax Analysis Modeling Program) A Complete Tax Model for Pennsylvania State," The Beacon Hill Institute at Suffolk University.

factors.[33,34] The sectoring of households allows the model to trace the impact of legislative policy changes on household behaviors. Additionally, allowing for households differentiated by income and/or age provides the opportunity to look at the distributional impacts of changes in tax and fiscal policies.

Government sectors generally include both major revenues and expenditures. Government sectors also differentiate between state, federal and local government revenues and expenditures related to the state's economy.

The investment sector represents industry demand for capital assets. The model should account for investments by the industrial sectors segregated by net additions to capital stock and purchases to replace and maintain depleted capital.

A factor of production is a stock that generates a flow of services used in the production of goods and services. Most state models group the factors of production into a labor sector and a capital sector. [35]

The rest of the world sector represents all economies outside of Florida, including other states and other countries. This sector is used to account for the imports and exports of goods and services between Florida and all entities outside of the state.

EDR plans to use aggregated sectors to represent the state's economy in the statewide model.

[33] This can be seen in looking at the consumer expenditure data published by the U.S. Bureau of Labor Statistics. The data show differing consumption patterns based on age and income (see Table 1. "Quintiles of income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2009" or Table 3. "Age of reference person: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2009" which can be found at http://www.bls.gov/cex/#tables.

[34] For a theoretical discussion of the impact of heterogeneity on consumption see, Orazio P. Attanasio (1999), "Consumption," **Handbook of Macroeconomics, Volume 1, Part 2**, 1999, Chapter 11, John B. Taylor and Michael Woodford, eds., pp. 741-812.

[35] Some models, particularly those addressing either environmental or agricultural issues, will also include energy, water and/or land as additional factors of production. For an interesting application that includes land as well as detailed capital, see Plassman, F. and T.N. Tideman, "A Dynamic Regional Applied General Equilibrium Model With Five Factors of Production," mimeograph, July 16, 1999.

Discount Rates

The analytic techniques specified in section 216.138, F.S., are multi-year analyses. Because the value of a dollar today is worth more than a dollar received tomorrow,[36] the projected amounts for future years must be adjusted for the time value of money so that the amounts are comparable across years. The adjustment factor used to accomplish this is usually referred to as the "discount rate".

Determining the appropriate discount rate is critical for any Return on Investment (ROI) study or Cost-Benefit Analysis (CBA). The choice of a "high" or "low" discount rate has implications for ranking among projects that have different flows of benefits over time. Projects with front-end loaded benefits will be favored by a higher discount rate, whereas those that are back-end loaded will be favored by a lower discount rate.

The literature is rife with discussions as to what the appropriate rate should be. For example, Arnold Harberger argues for using the marginal rate of return on private-sector investments under the economic philosophy that public sector investment "crowds out" private sector investment.[37]

It is generally agreed that the shadow price of capital approach is the theoretically preferred method of choosing a discount rate. However, it is rarely used in practice for five basic reasons.[38] The shadow price of capital:

- Is difficult to calculate;
- Generally differs from one project to another;
- May differ over time;
- Requires judgment to determine the proportion of investment that comes at the expense of current investment versus current consumption; and,
- Lacks agreement regarding the value of the social marginal rate of time preference.

Generally, there are two major alternatives that the U.S. government uses for choosing a discount rate: the borrowing rate of the Treasury and the rate of return on private investment. The Office of Management and Budget (OMB) adopts the shadow price of capital approach to capture the effects of government projects on resource allocation in the private sector.[39] Other federal agencies use differing discount rates that vary according to type of project/analysis.[40] In the United Kingdom Her Majesty's Treasury specifies the rate that analysts should use. In Canada the Treasury Board is responsible for specifying the rate.

In its guidelines the OMB suggests agencies use a real discount rate of 7 percent in public investments and regulations under the assumption that these types of activities displace both private investment and

[36] Discounting reflects the idea that, through investment, a given amount of resources that is available today can be transformed into a greater amount of resources in the future.

[37] Arnold C. Harberger, "The Discount Rate in Public Investment Evaluation," Conference Proceedings of the Committee on the Economics of Water Resource Development (Denver, CO: Western Agricultural Economics Research Council, Report No. 17, 1969).

[38] Anthony Boardman and David Greenberg, "Discounting and the Social Discount Rate," in Fred Thompson and Mark T. Green, eds., **Handbook of Public Finance** (New York: Marcel Dekker, 1998), p. 315.

[39] OMB, Circular No. A-94, "Guidelines and Discount Rates for Benefit-Cost analysis of Federal Programs," http://www.whitehouse.gov/sites/default/files/omb/assets/a94/a094.pdf.

[40] For an overview of different federal approaches see Hiroyuki Kohyama, "Selecting Discount Rates for Budgetary Purposes," Briefing Paper No. 29, Harvard Law School Federal Budget Policy Seminar, May 2006, http://www.law.harvard.edu/faculty/hjackson/DiscountRates_29.pdf.

public consumption.[41] For "lease-purchase" analysis OMB suggests using a nominal Treasury borrowing rate of comparable maturity to the analysis.[42] For "internal government investments" where "Federal investments provide 'internal' benefits which take the form of increased Federal revenues or decreased Federal costs"[43] OMB also suggests using a nominal Treasury borrowing rate of comparable maturity. Given that any proposal that EDR is asked to analyze is not expected to compete directly with private investment or consumption for the funds, the most appropriate discount rate would seem to be a nominal Treasury borrowing rate of comparable maturity. EDR plans to use the Treasury rates adopted as part of the latest National Economic Estimating Conference's official forecast.

[41] OMB, Circular No. A-94, "Guidelines and Discount Rates for Benefit-Cost analysis of Federal Programs," http://www.whitehouse.gov/sites/default/files/omb/assets/a94/a094.pdf, pp. 8-9.
[42] Ibid., p.10.
[43] Ibid., p.10.

Use of Results

A dynamic model will provide a more complete picture of the effects of proposed fiscal policy changes on revenues and expenditures by incorporating the macroeconomic effects of the fiscal policy change.[44] The results of a dynamic model can be used in several ways. First, the results could be used to provide supplemental information on the possible economic effects of proposed fiscal policy changes (dynamic analysis).[45] Second, the results of the effects on revenues and expenditures could be incorporated into the official estimates of the state if the proposed fiscal policy change were adopted (dynamic scoring). Or third, the results could be used to rank competing legislative proposals.

Dynamic modeling of proposed fiscal policy changes is new to the state of Florida. Unlike other states, EDR proposes that the model be designed to produce results on a fiscal year basis. This is a significant programming and structural challenge, but should ultimately prove beneficial to integrating the results within the state's planning and budgeting framework. Even after the model has been developed and system tested, the results must be analyzed over time to verify that the model is correctly predicting the impacts of the fiscal policy changes by year.

During this initial phase, the model results should be treated as supplemental information that runs parallel to the more traditional, static analyses. The dynamic analyses will indicate the magnitude of the direct, indirect and induced impacts of the proposed changes, but should not be exclusively relied upon.

The actual results of proposed fiscal policy changes that become law should be tracked over time and compared to the model estimates. The model should be adjusted as appropriate to account for unanticipated economic dynamics.

After several years of model use, a formal evaluation should be conducted of the model estimates in comparison to the actual results of fiscal policy changes that were adopted. Once the evaluation of the model's performance has been completed, the Legislature will have the necessary information to decide whether model results should be fully incorporated into the official estimates of the state. If the model appears to be sufficiently robust for this purpose, legislation may be needed to set out the specifics of how this will be accomplished.

[44] Kobes, D. and Rohaly, J. (2002), Dynamic Scoring and Budget Estimates.
[45] Adams, S. and A. Bozio (2009), "Dynamic Scoring", **OECD Journal on Budgeting**, Vol. 2009/2, pp. 1-26.

Peer Review

Peer review is a process of having outside experts review a work product for accuracy and soundness. The purpose of the review is for the outside experts to determine whether the work product is based upon sound methods and practices and to allow them to provide feedback to the team that created the work product.[46] The team then reviews the feedback from the reviewers and determines what modifications should be made to the work product. The Congressional Budget Office[47], the Joint Committee on Taxation[48] and the state of California[49,50] have used the peer review process to evaluate their economic forecasting practices and dynamic models.

A peer review of economic forecasting practices and dynamic models should:

- Assess the theoretical basis of the practices or models;
- Assess the appropriateness and validity of key data;
- Assess the validity and practicality of assumptions;
- Assess key variables;
- Provide comments on the reasonableness of results and their interpretation;
- Provide comments on additional analysis which could be performed; and,
- Provide comments on additional approaches.[51]

EDR plans to use a rigorous peer review process to evaluate the protocols, procedures and statewide model developed for the analytic techniques specified in section 216.138, F.S. This process will involve members of the academic community and other outside experts as appropriate. The peer review process should result in a better work product and increase confidence in the use of the analytic techniques.

[46] California Air Resources Board (2008), "Climate Change Proposed Scoping Plan Appendices – Volume II: Analysis and Documentation," October 2008.
[47] Congressional Budget Office (2005), "CBO's Policies for Preparing and Distributing Its Estimates and Analyses", April 2005.
[48] Kleinbard, E. (2008), "Inside the Joint Committee on Taxation Revenue Estimating Process" presentation.
[49] Berck, P., E. Golan, B. Smith, J. Barnhart and A. Dabalen (1996), "Dynamic Revenue Analysis for California", California Department of Finance.
[50] California Air Resources Board (2008), "Climate Change Proposed Scoping Plan Appendices – Volume II: Analysis and Documentation," October 2008.
[51] Ibid.

Run Time; Optimal Number of Concurrent Analyses

Most of the literature indicates that dynamic scoring and dynamic analysis of proposed fiscal policy changes take more time to perform than more traditional, static analyses.[52,53] The additional time is required because of the amount of data and degree of examination that are required to perform these analyses.[54]

The experience of other states indicates that the amount of time required to perform dynamic analyses depends upon the nature of the proposed change and the design of the model. For proposed changes requiring minor alterations to the data or model, the estimated time required ranges from two days to two weeks. For proposed changes that require major alterations or additions to the data or the model, the estimated time required is several months.[55]

The experience of other states also indicates that a mature model and experienced staff reduce the time required to perform dynamic analyses. The other states indicate that over time they have developed scenarios and modules that can be employed to save time and effort in performing analyses of similar proposals.[56]

In addition, cost benefit analyses (CBA) may take even longer to perform than dynamic analyses. This is due to the lack of good market pricing information for many social costs and benefits. In these situations, it is particularly difficult to estimate policy impacts. Typically, determining a monetary value to assign to the social costs and benefits requires extensive research, using a variety of techniques; e.g., hedonic pricing method, travel cost method, contingent valuation methods. These methods can require the purchase of additional datasets or the use of surveys to obtain the information necessary to monetize the social costs and benefits.[57]

If the proposed procedure for using the special analytical techniques is adopted, EDR estimates that, on average, each request will take a total of two months to complete during the first few years of operation. The two month estimate includes the time required to determine the appropriate technique to employ, hold public meetings, reach consensus on the model inputs, perform the analysis, write a report on the analysis and achieve consensus among the conference principles on the final report.

EDR also estimates that up to four analyses may be undertaken concurrently using current staff resources. If the estimates on the length of time and the number of concurrent analyses are correct, then 12 analyses may be performed between August and February of the next year in accordance with the procedures. The number of analyses performed each year should increase as the staff gains experience with the techniques and the model matures.

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[52] Penner, R. (2003), "Despite – The Dynamics of Scoring – A Congressional Tale", **The Milken Institute Review,** Third Quarter 2003, pp. 27-33.

[53] Kleinbard, E. (2008), "Inside the Joint Committee on Taxation Revenue Estimating Process" presentation.

[54] Bean, Mitchell E., Jay Wortley, Mark P. Haas (1997), "Dynamic Revenue Estimating – Will It Work for Michigan?" Michigan House and Senate Fiscal Agencies and Michigan Department of Treasury, March 1997.

[55] Information provided during conversations with staff in Arizona, California, New York and Oregon.

[56] Ibid.

[57] See Boardman, A.E., D.H. Greenberg, A.R. Vining and D.L.Weiner (2006), **Cost-Benefit Analysis: Concepts and Practice**, Third edition, particularly chapters 11-15.

PROCEDURES

Procedure

A. Request Procedure

1. At any time, either the President of the Senate or the Speaker of the House of Representatives may request a special impact estimating conference for a proposed fiscal policy change by notifying the Office of Economic and Demographic Research (EDR).

2. To assist in the identification of proposals, either presiding officer may accept and forward a member request for a special impact estimating conference.

   a. To identify a proposal for consideration by the President of the Senate or Speaker of the House of Representatives, a legislative member shall send a written request to his or her presiding officer no later than November 15th of each year. At a minimum, the request must include the following information:

      1) A brief description of the proposal to be analyzed;

      2) Identification of any similar legislation or appropriation line items from prior legislative sessions; and

      3) Identification of an individual who may be contacted in the event that staff requires further clarification of the request.

   b. The presiding officer will determine at his or her discretion whether a member request should be evaluated using the statewide policy analysis tools. If so, the presiding officer will forward the request to EDR.

B. Start-Up Procedure

1. Upon notification by the President of the Senate or the Speaker of the House of Representatives that a special impact estimating conference has been requested, EDR must analyze the request and determine which analytical technique should be used to evaluate the proposal. To make this determination, the following criteria shall be used:

   a. Return On Investment

      1) The primary purpose of the analysis is to evaluate the efficacy of a government investment. As used herein, a government investment is an expenditure of funds or a tax preference for a targeted purpose.

      2) The analysis involves strictly monetary effects to the state (e.g. increased revenues or savings). In this regard, any non-monetary effects resulting from the proposal (externalities and social benefits and costs) are excluded from the analysis.

      3) The analysis is to measure direct effects relating to the proposal. In this regard, the analysis excludes indirect and induced effects and other behavioral changes resulting from the proposal.

      4) Use of this technique is not limited by a dollar threshold.

b. Cost-Benefit Analysis

1) The primary purpose of the analysis is to evaluate a policy proposal inclusive of all expected benefits and costs, regardless of whether the proposal relates to an appropriation or a tax change.

2) The proposal may have monetary effects, but the emphasis is on the inclusion of non-monetary effects. Non-monetary effects (externalities and social benefits and costs) are included in the analysis only after monetization (conversion to dollars).

3) The analysis is to measure direct effects, behavioral changes, and/or indirect and induced effects relating to the proposal to the extent feasible.

4) Use of this technique is not limited by a dollar threshold.

5) This technique is an alternative to dynamic analysis when all expected benefits and costs are taken into consideration, and:

   a) The proposal has an estimated static impact of less than the threshold for dynamic analysis in all fiscal years; or

   b) The statewide model and REMI do not include the appropriate variables to evaluate the proposal.

c. Dynamic Analysis / Scoring

1) The primary purpose of the analysis is to evaluate proposed changes that are likely to result in indirect and/or induced effects in addition to the direct effects. These effects frequently occur when a proposal changes the economic behavior of the general public which in turn affects macroeconomic variables (e.g. stimulate increased savings).

2) The proposal primarily relates to monetary effects, but may also have – to a lesser extent – non-monetary effects. Limited non-monetary effects (externalities and social benefits and costs) are included in the analysis only after monetization (conversion to dollars) and when strictly necessary.

3) Use of this technique is restricted to proposals with a certain minimum estimated static impact. Prior to the post-implementation evaluation of the statewide model by EDR, the threshold for consideration under dynamic analysis is $25 million in estimated static impacts for any one fiscal year within the forecast period. The limit is based on the model's inability to accurately detect movements in the economy caused by smaller changes. However, EDR has the discretion to conduct dynamic analysis on smaller proposals whose effect on macroeconomic variables is significant, but limited to a particular segment of the economy.

4) The proposal only affects variables that are contained within the current production version of the statewide model or REMI. Because of the phased schedule for the statewide model, it shall be used only for tax proposals during the first twenty-four months after it becomes operational; thereafter it may also be used for budget proposals.

d. All Other Specialized Techniques

1) Simplified Dynamic Analysis --- this is a modified cost-benefit technique used when all non-monetary effects are excluded, even when they exist.

a) The primary purpose of the analysis is to evaluate proposed changes that are likely to result in indirect and/or induced effects in addition to the direct effects. These effects frequently occur when a proposal changes the economic behavior of the general public which in turn affects macroeconomic variables (e.g. stimulate increased savings).

b) The proposal primarily relates to monetary effects, but may also have – to a lesser extent – non-monetary effects. Limited non-monetary effects (externalities and social benefits and costs) are included in the analysis only after monetization (conversion to dollars) and when strictly necessary.

c) Use of this technique is limited. Prior to the post-implementation evaluation of the statewide model by EDR, the simplified dynamic analysis is used when either:

i. The estimated static impacts are less than $25 million for all fiscal years, or

ii. The variables required for the analysis are not contained within the current production version of the statewide model or REMI.

2) Additional Techniques

a) The primary purpose of the analysis is to evaluate proposed changes that are unique in nature and do not meet the requirements for any of the other techniques described above.

b) To determine if an additional technique exists, EDR shall conduct an academic survey after the distinctive characteristics of the proposal have been identified. If an appropriate technique is found and the resources exist to use it, the analysis will be conducted and a detailed description of the technique will be included in the final report.

c) If a feasible technique is not found, the proposal shall be modified to fit within a Cost-Benefit analysis.

2. EDR shall transmit to the President of the Senate, Speaker of the House of Representatives, and the Executive Office of the Governor:

a. A brief description of the proposal,

b. The determination of a specific analytical technique,

c. A request for designation of principals, and

d. The identification of any extraordinary time and/or cost requirements in those instances where EDR anticipates they will be necessary for a thorough analysis (e.g. the need to purchase additional data related to the proposal).

3. The four principals for each special impact conference shall be comprised of professional staff of the Executive Office of the Governor designated by the Governor, the coordinator of the Office of Economic and Demographic Research, professional staff of the Senate designated by the President of the Senate, and professional staff of the House of Representatives designated by the Speaker of the House of Representatives. The coordinator of the Office of Economic and Demographic Research may designate other professional staff within that office to act as principals on the conferences.

C. Meeting Procedure for Special Impact Estimating Conference

1. Upon designation of an estimating conference and principals, EDR shall schedule and coordinate a minimum of three meetings for each special impact session in accordance with the procedures identified for the specific analytical technique being deployed.

   a. Return on Investment Procedure

      1) During the first scheduled meeting, the Conference shall receive public input and identify participants and other affected parties that may have information relevant to the analysis of the proposal.

      2) Prior to the second scheduled meeting, EDR shall prepare a list of potential returns and investment costs for consideration by the Conference.

      3) During the second scheduled meeting, the Conference shall receive public input and conduct a public discussion of the potential returns and investment costs associated with the proposal. After the discussion, the Conference shall reach agreement on which returns and investment costs are probable, as well as adopt key assumptions.

      4) Prior to the third scheduled meeting, EDR shall collect the necessary data; conduct the analysis; and, prepare a draft report for consideration by the Conference.

      5) During the third or final meeting (whichever is later), the Conference shall receive public input and adopt a final report according to the procedure specified herein.

   b. Cost-Benefit Procedure

      1) Prior to the first scheduled meeting, EDR shall develop a list of externalities and social costs and benefits that are potentially associated with the proposal under consideration.

      2) During the first scheduled meeting, the Conference shall receive public input and identify participants and other affected parties that may have information relevant to the analysis of the proposal. EDR will present the list of externalities and social costs and benefits associated with the proposal. After discussion, the Conference shall finalize the list.

      3) Prior to the second scheduled meeting, EDR shall further investigate the externalities and social costs and benefits associated with the proposal. EDR shall also develop initial estimates to monetize the social costs and benefits.

4) During the second scheduled meeting, the Conference shall receive public input and conduct a public discussion of the externalities and social costs and benefits associated with the proposal and their monetization. After the discussion, the Conference shall reach agreement on which externalities and social costs and benefits are probable, as well as adopt key assumptions.

5) Prior to the third scheduled meeting, EDR shall collect the necessary data; conduct the analysis; and, prepare a draft report for consideration by the Conference.

6) During the third or final meeting (whichever is later), the Conference shall receive public input and adopt a final report according to the procedure specified herein.

c. Dynamic Analysis / Scoring Procedure

1) Prior to the first scheduled meeting, EDR shall develop a list of model input assumptions that are potentially associated with the proposal under consideration.

2) During the first scheduled meeting, the Conference shall receive public input and identify participants and other affected parties that may have information relevant to the analysis of the proposal. EDR will present the list of potential model input assumptions associated with the proposal. After discussion, the Conference shall finalize the list.

3) Prior to the second scheduled meeting, EDR shall further investigate the model input assumptions associated with the proposal.

4) During the second scheduled meeting, the Conference shall receive public input and conduct a public discussion of the model input assumptions associated with the proposal. After the discussion, the Conference shall reach agreement on which model input assumptions are probable, as well as adopt key assumptions.

5) Prior to the third scheduled meeting, EDR shall:

a) Collect the necessary data;

b) Conduct the analysis;

c) Produce both static and dynamic results;

d) Produce concurrent results from REMI whenever the statewide model is used; and

e) Prepare a draft report for consideration by the Conference.

6) During the third or final meeting (whichever is later), the Conference shall receive public input and adopt a final report according to the procedure specified herein.

d. All Other Specialized Techniques Procedure

1) Prior to the start of the first scheduled meeting, EDR shall develop any information that is necessary for consideration by the principles.

2) During the first scheduled meeting, the Conference shall receive public input and identify participants and other affected parties that may have information relevant to the analysis of the proposal.

3) During the second scheduled meeting, the Conference shall receive public input and conduct a public discussion of the key assumptions associated with the proposal. The Conference shall reach agreement on those assumptions.

4) Prior to the third scheduled meeting, EDR shall collect the necessary data, conduct the analysis, and prepare a draft report for consideration by the Conference.

5) During the third or final meeting (whichever is later), the Conference shall receive public input and adopt a final report according to the procedure specified herein.

2. The principals of the special impact conferences shall abide by the state public records requirements.

D. Reporting Procedure

1. No session shall conclude until a final report has been adopted by the Conference.

2. At a minimum, the final report shall contain the following information:

   a. Executive summary;

   b. List of principals and participants;

   c. Description of the proposal;

   d. Identification of the policy analysis technique deployed;

   e. Description of key data and sources;

   f. Explanation of assumptions;

   g. Explanation of the results, including key drivers;

   h. Presentation of numerical results in the form of a point estimate:

      1) To accompany dynamic analysis/scoring using the statewide model, point estimates will also be provided for the static impact and the dynamic impact from REMI;

      2) To accompany dynamic analysis/scoring using REMI or the simple one-sector dynamic general equilibrium model, point estimates will also be provided for the static impact;

   i. Estimated impacts by fiscal year; and

   j. Discussion of the risks to the estimates, including identification of differences in pivotal assumptions and drivers that could result in different estimates. A range of estimates may be provided to substantiate the discussion of risks.

3. Draft versions of the final report shall be prepared by EDR and modified as necessary by the Conference prior to adoption.

E. Adoption Procedure

1. All actions taken by and the final report adopted by the Conference shall be agreed upon by consensus.
2. For the purpose of this procedure, "consensus" means the unanimous consent of all of the principals of a consensus estimating conference.

F. Transmission Procedure

1. After adoption by the Conference, EDR shall transmit the final report to the presiding officers.
2. After transmission, the final report shall be posted on the EDR website along with any other documents deemed to be official information of the conference.

G. Use of Results Procedure

1. Prior to the post-implementation evaluation by EDR and legislative action regarding the full integration of Conference results into the budget development and revenue estimating processes, all final reports shall be used as supplemental information for the state planning and budgeting system.
2. Prior to the post-implementation evaluation by EDR and legislative action regarding the full integration of Conference results into the budget development and revenue estimating processes, the results shall not be used to modify the state's official Financial Outlook Statement of funds available and estimated expenditures, nor shall they be used as the sole basis for an adjustment to any official forecast adopted by a consensus estimating conference established pursuant to ss. 216.133-216.137, Florida Statutes.

H. Revision Procedure

1. EDR may amend these procedures by submitting written notification of the proposed change to the President of the Senate and Speaker of the House of Representatives. If after two weeks from the date of notification, neither presiding officer has objected, the change will take effect.
2. EDR may amend any protocols or other documents related to these procedures by posting a red-line version on its website for two weeks prior to the effective date.

DISCUSSION ITEMS

Number of Years Projected

The policy analysis techniques specified in section 216.138, F.S., are generally multi-year techniques. Multi-year policy analysis techniques are beneficial for analyzing fiscal policy changes with impacts that are not fully realized immediately. [58]

The timeframes considered for the multi-year policy analysis techniques were 3, 5, 10 and 20 year periods.

- Three year timeframe is consistent with the state's Long-Range Financial Outlook which projects state revenues and expenditures over a 3 year period. This provides policy makers a reasonable timeframe for making appropriations decisions, however, the economic effects of most fiscal policy changes are not fully realized for 5 years or more. [59]
- Five year timeframe would provide sufficient time for the economic effects of the majority of fiscal policy changes to be fully realized. However, many of the long term annual state economic reports already project more than 5 years.
- Ten year timeframe is consistent with the Florida Long-Term Revenue Analysis produced annually, as well as, with the statutory expectations of long-term forecasts. Ten years is typically enough time for the economic effects of most fiscal policy changes to be realized. Ten years is also the timeframe used for revenue estimation by the Congressional Joint Committee on Taxation. [60]
- Twenty year timeframe would provide sufficient time for the economic effects of almost all fiscal policy changes to be fully realized. However, there are very few, if any, annual state economic reports which project 20 years. The level of uncertainty would be great for the later years of the period.

EDR recommends that the policy analysis techniques specified in section 216.138, F.S., be designed to project 10 years into the future. This time period should be sufficient to demonstrate the economic impacts of the proposed fiscal policy changes. The time period is also consistent with other long-term estimates produced by the state which can be used for comparison purposes.

[58] Bean, Mitchell E., Jay Wortley, Mark P. Haas (1997), "Dynamic Revenue Estimating – Will It Work for Michigan?" Michigan House and Senate Fiscal Agencies and Michigan Department of Treasury, March 1997.

[59] Ibid.

[60] Joint Committee on Taxation (2003), "Overview of the Work of the Staff of the Joint Committee on Taxation to Model the Macroeconomic Effects of Proposed Tax Legislation to Comply with House Rule XIII.h.2," December 22, 2003.

Use of Generated Gains (Government Savings vs. Government Expenditures)

All multi-year analyses must account for the state constitutional requirement that sufficient revenue be raised to defray the expenses of the state for each fiscal period (Article VII, Section 1(d), Florida Constitution). The requirement for "each fiscal period" to be balanced is significant for multi-year analyses because some proposed fiscal policy changes may be self funding over a multi-year period but not for each fiscal year. To meet the constitutional requirement, multi-year analyses for Florida must separately identify and address each fiscal year to determine its discrete impact.

Conversely, the multi-year funding analysis may identify fiscal years with projected gains over the expected levels. Unless the proposed fiscal policy change specifies how gains are to be addressed, then the analysis must make an assumption on the disposition of the gains.

The three options for addressing fiscal year gains were to place the amount into "Government Savings", increase the budget by the amount of the gain, or provide one-time rebates to taxpayers equal to the amount of the gain.

- Government Savings – Placing excess revenues resulting from a proposed fiscal policy change into government savings acknowledges the fact that before the excess revenues may be expended, the Legislature must provide appropriate budget authority. The final report adopted by the conference would indicate the amount of revenues placed into government savings and any investment earnings that might accrue from it. However, there would be virtually no indirect or induced economic benefit from using the funds in this manner.
- Increased Budget – Assuming that the Legislature would appropriate the full amount of the excess revenues resulting from the proposed fiscal policy change would generate indirect and induced economic activity which would further increase the number of jobs and tax revenues collected. However, the Legislature may determine that there is no need for additional government spending and the funds may go to other uses, such as reducing the overall tax burden.
- One-time Rebates – Assuming that the Legislature would rebate back to the taxpayers the full amount of the excess revenues resulting from the proposed fiscal policy change would generate indirect and induced economic activity which would further increase the number of jobs and tax revenues collected. This approach conforms with the common practice for economic policy analysis of distributing gains and losses to households in a lump sum manner.[61] The purpose of the practice is to offer a use of the funds that introduces no further distortions into economic decision making. However, in practice a lump sum rebate is very difficult to accomplish and is an unlikely outcome. Further, given the state's current financial outlook, any gains in revenues could reasonably be expected to be used to defray projected shortfalls.

EDR proposes adoption of the increased, state budget option. This option treats the funds in a similar manner as other proposals which either increase or decrease government spending. For the purposes of analyzing the proposal and comparing the proposal to other legislative proposals, the assumption that the excess funds will be expended provides for the best comparison. While this assumption does not alter the fact that the Legislature will ultimately decide how to use any excess revenues that may result from a fiscal policy change, it does recognize the current financial outlook for the state. Should this outlook significantly change in the future, this assumption can be revisited.

[61] Auerbach, Alan J. and Laurence J. Kotlikoff (1987). **Dynamic Fiscal Policy**. Cambridge: Cambridge University Press, pp. 61-64.

Conferences for Special Impact Studies

Section 216.138, F.S., provides that "the President of the Senate or the Speaker of the House of Representatives may request special impact sessions of consensus estimating conferences to evaluate proposed legislation based on tools and models not generally employed by the conferences". The requests for special impact sessions will likely address every area of state operations; therefore, the staffing of the special impact sessions must be dynamic enough to address the breadth of the state economy.

The three options for staffing the special impact sessions were the use of the existing consensus estimating conference structure (s. 216.133, F.S.), creation of a new standing estimating conference, and the use of ad hoc estimating conferences similar to the "financial impact estimating conferences" (s. 100.371, F.S.).

- The existing consensus estimating conferences are each comprised of 4 principals representing the Senate, the House of Representatives, the Executive Office of the Governor and the Office of Economic and Demographic Research. Each conference has been established to address specific aspects of state government, and the principals for each conference are professional staff having expertise in the conference area. This structure would work for proposed changes that fall within the scope of only one conference. A separate mechanism would need to be developed to address proposed changes affecting multiple conferences or changes outside the purview of any of the existing conferences.
- Creating a new standing estimating conference would require appointing 4 permanent principals. In all likelihood none of the principals would possess the expertise required for each special impact session. The principals could recruit participants possessing the needed expertise; however, this would not relieve the principals of their involvement in every special impact session.
- Using ad hoc estimating conferences would require the appointment of 4 principals each time a special impact session is requested. This would allow for the appointment of individuals possessing the necessary expertise for the proposed fiscal policy change. For proposed changes affecting multiple areas of state government, the principals could recruit participants to expand the knowledge base. The same principals would probably not be appointed as conferees for every special impact session.

EDR proposes adoption of the ad hoc estimating conferences option. This option gives the greatest flexibility in providing the expertise needed to address proposals requiring a special impact session. In this regard, a further benefit is that the ad hoc estimating conferences would not be limited by the current consensus estimating conference structure. This option also allows different individuals to be involved in the special impact sessions. Each conference would function similarly to the already existing financial impact estimating conferences.

Legislation to amend statute would be required to implement this recommendation (see Appendix B).

Dollar Criteria for the Use of Dynamic Analysis / Dynamic Scoring

There are two primary reasons for establishing a dollar threshold for employing dynamic analysis or dynamic scoring. First, dynamic analyses take more time to perform than more traditional, static analyses because of the amount of data and analysis required. [62] The number of dynamic analyses that may be performed in any given year will be limited by the amount of staff resources available; therefore, this technique should be employed selectively. Second, the value of this technique comes from its ability to evaluate the effects of major changes in fiscal policy (taxing and spending) economy-wide—the central idea underlying dynamic analysis.[63] Any changes in taxes or spending that are of significant magnitude to affect economic behavior beyond small isolated markets are better analyzed in this framework. If the policy change will not result in sufficient impacts to produce measureable changes in economic behaviors, then there are other estimating techniques which can be employed which will produce comparable or better results.

The dollar thresholds considered were $10 million, $15 million, $25 million and $100 million in estimated static impacts for any one fiscal year.

- $10 million was the threshold established in California statutes in 1994,[64] and it was the threshold chosen by Oregon[65] for employing their dynamic models. A threshold of $10 million in estimated static impacts for any one fiscal year would limit the number of proposed policy changes which would qualify for using this analysis technique.
- $15 million is the threshold established by EDR for employing the Regional Economic Models, Inc. (REMI) model. A threshold of $15 million in estimated static impacts for any one fiscal year would limit the number of proposed policy changes which would qualify for using this analysis technique.
- $25 million is a threshold that would limit the number of proposed policy changes which would qualify for using this analysis technique and also ensure a change sufficiently large enough to impact economic behavior on a statewide basis.
- $100 million was the initial threshold established by the California development team[66] to further limit the number of qualifying policy proposals during the initial deployment of the model. A threshold of $100 million in estimated static impacts for any one fiscal year would exclude almost all proposed policy changes from qualifying for this analysis technique.

The EDR proposes an initial threshold of $25 million in estimated static impacts for any one fiscal year, but would allow discretion for lower thresholds under certain conditions. The $25 million threshold will limit the number of proposed policy changes that qualify for using the dynamic analysis technique; however, this is an important criteria since significant staff resources are required to run such analyses. Allowing for lower thresholds under certain conditions will provide the flexibility of employing the technique for policy proposals which could impact economic behavior because of the nature of the proposed policy change even though the annual impact is below $25 million.

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[62] Bean, Mitchell E., Jay Wortley, Mark P. Haas (1997), "Dynamic Revenue Estimating – Will It Work for Michigan?" Michigan House and Senate Fiscal Agencies and Michigan Department of Treasury, March 1997.

[63] Piggot, J. and Whalley, J. (1985). **UK Tax Policy and Applied General Equilibrium**.

[64] Berck, P., E. Golan, B. Smith, J. Barnhart and A. Dabalen (1996), "Dynamic Revenue Analysis for California", California Department of Finance.

[65] Legislative Revenue Office (2001), "Oregon Tax Incidence Model (OTIM)", Research Report Number 2-01, Oregon Legislature, March 16, 2001.

[66] Berck, P., E. Golan, B. Smith, J. Barnhart and A. Dabalen (1996), "Dynamic Revenue Analysis for California", California Department of Finance.

During the initial period of implementing dynamic analysis, REMI will be run concurrently for comparison purposes. Once the state has gained experience in using the technique and has completed an extensive evaluation of the model's performance over a period of time, the threshold can be changed to the $10 million or $15 million level.

Either a simplified dynamic analysis or a cost benefit analysis will be performed instead of a dynamic analysis using the statewide model or REMI if the dollar threshold is not met.

Presentation of Estimates

The objective of the analytical process is to produce accurate, consistent, fair and impartial estimates that can be relied upon by policy makers in evaluating proposed fiscal policy changes. To this end, the results of the analyses should be clear and concise communicating, to the extent possible, the estimated impact of the proposed fiscal policy changes on the state's gross domestic product, jobs, population, personal income, investment and savings, and state revenues and expenditures.

Each final report resulting from the use of a statewide policy analysis technique shall, at a minimum, include the following information:

- Executive summary
- List of principals and participants
- Description of the proposed fiscal policy change
- Description of the analysis technique used to evaluate the proposed fiscal policy change
- Description of key data and sources
- Explanation of any assumptions unique to the evaluation
- Explanation of the results, including key drivers
- Estimated impacts by fiscal year
- Recommendations for technical adjustments to the proposed fiscal policy change

Additional information included in the final report will be determined by the specific policy analysis technique used to evaluate the proposed fiscal policy change.

- Return on Investment
    - Monetary effects – returns and investment costs
    - Direct effects – traditionally excludes indirect, induced and other behavioral changes
    - Final result takes the form of a summary percentage, but year-by-year information is also included
- Cost Benefit Analysis
    - Monetary and non-monetary effects (externalities and social benefits and costs)
    - Monetization of non-monetary effects (conversion to dollars)
    - Direct, indirect, induced effects and other behavioral changes
    - Results adjusted for a discount rate may be presented in the following forms:
        - "present value" – a weighted sum of a project's annual benefits net of costs, giving decreasing weight to effects that occur farther in the future. The weights are obtained by compounding an annual discount rate, which should be chosen to reflect the opportunity cost of foregoing investments elsewhere in the economy or of delaying consumer gratification
        - "benefit-cost ratio" – the discounted sum (present value) of all present and future benefits of a project, divided by the discounted sum of all of its costs
        - "internal rate of return" – a rate that equates the present value of a project's benefits and costs
- Dynamic Analysis / Scoring
    - Primarily monetary effects
    - Direct, indirect, induced effects and changes in behavior

- Other analytical techniques
    - Results will depend upon the specific technique used in the analysis

The numerical results of the analyses can be presented in several forms, such as, a range of low to high estimates, a pinpoint estimate or a fan chart.[67] EDR has researched the use of results in multiple studies,[68] and with a rare exception, the results were presented as point estimates with the appropriate caveats on the uncertainty of the estimate discussed in the narrative of the study. In preliminary discussions with the estimating conference principals, some expressed a desire to see a range of results to communicate the uncertainty of the estimate. EDR intends to address this uncertainty in the narrative. To remain consistent with the practices of other states and the Joint Committee on Taxation, EDR recommends using a point estimate for presenting the results of all analyses performed using the statewide policy analysis techniques. In addition, for dynamic analyses using the statewide model, EDR recommends providing point estimates for the static impact and the dynamic impacts from both the statewide model and REMI.

[67] Adams, S. and A. Bozio (2009), "Dynamic Scoring", **OECD Journal on Budgeting**, Vol. 2009/2, pp. 1-26.
[68] Appendix A

APPENDIX A – MATRIX OF STUDIES

Organization	Study	Issue	Type of Estimate Presented	Variables Included in Results	Notes
Joint Committee on Taxation (JCT)	OVERVIEW OF REVENUE ESTIMATING PROCEDURES AND METHODOLOGIES USED BY THE STAFF OF THE JOINT COMMITTEE ON TAXATION		**n/a**	n/a	The JCT is required by budget resolutions to present revenue estimates as point estimates in nominal $ over a fixed period.
Ernst & Young	Iowa Reports Estimates Impacts of Reducing Iowa Life/Health Insurance Tax - February 11, 2002	Reducing insurance premium tax rate from 2% to 1%	**POINT**	Static Revenue Loss New jobs in life/health insurance industry New jobs in Iowa economy State personal income Change in state and local taxes due to higher employment and income	Also ran a model to calculate a phase-in approach and their dynamic feedback. Factored in company anticipation of the reduced rate in adding additional jobs.
Nebraska's Legislative Fiscal Office	Nebraska Legislature Tries Out New Economic Model - January 17, 2002	Report describing new CGE model that calculates year-to-year changes an the new	**POINT**	Household disposable income State revenues Employment Capital stock	Hope to be used by the Legislature to estimate the impacts of competing strategies.
Massachusetts Joint Committee on Taxation - analysis - Massachusetts DOR	Massachusetts Tax Panel Recommends Five-Year Extension of Investment Tax Credit - September 1, 1997	Report on investment tax credit, recommends 3% investment tax credit be extended 5 years.	**POINT and RANGE**	**Static revenue cost - range** **Dynamic revenue increase - range ($25m-$30m)**	Range is based on a model that assumes a range for growth rate (5% to 8%) in the value of the tax credit. This assumed growth rate was used because no data was available . Requests a new dynamic analysis that includes
California Budget Project- December 11, 1995	Will a Dynamic Model Improve California's Ability To Estimate The Impact Of Changes In Tax Laws? - **REPORT**	Massachusetts Model - measure change in disposable income and capital investment and then fed into REMI.	**POINT**	**REMI model measures:** Changes in employment and output in different industries Income Population Capital stock Amount of tax paid	Report that lists issues with dynamic modeling.
CONGRESSIONAL RESEARCH SERVICE	CRS Releases Report On 'Dynamic' Revenue Estimating - December 14, 1994	Congressional Research Service - discusses revenue estimating methods - **REPORT**	**cyclical (demand-side multiplier) and output (permanent effects)**	**Macroeconomic:** Levels of output Employment Interest rates Investment Prices **Microeconomic:** Allocation of consumption Allocation of investment Form of receipt of income	Dynamic revenue estimates take into account chagnes in the tax base as a result of tax revisions classfied as: microeconomic and macroeconomic effects

Organization	Study	Issue	Type of Estimate Presented	Variables Included in Results	Notes
Legislative Revenue Office - State of Oregon	THE OREGON TAX INCIDENCE MODEL (OTIM)	Effects of tax increases and reduction by tax	**POINT**	**Revenue Impact by Tax Type** Static Impact after feedbacks Feedback effect (%) **Economic Impact (%)** Personal Income Return to capital Employment Investment Consumer prices	Feedback effects are the revenue impacts after the model has solved for a new equilibrium incorporating feedback effects on state and local tax revenues.
The Heritage Foundation	THE 2001 AND 2003 BUSH TAX CUTS: ECONOMIC EFFECTS OF PERMANENT EXTENSION- February 15, 2007	Extending the 2001 and 2003 tax acts.	**POINT**	**Compared to 2006 Baseline - 2011 through 2016 and avg for 2011-2016** REAL GDP TOTAL EMPLOYMENT UNEMPLOYMENT RATE REAL DISPOSABLE PERSONAL INCOME PERSONAL SAVING RATE REAL GROSS PRIVATE DOMESTIC INVESTMENT FULL-EMPLOYMENT CAPITAL STOCK CPI INFLATION TREASURY BILL, 3 MONTH TREASURY BILL, 10 YEAR **Revenue Feedback** Federal revenue compared to baseline over 10 years Revenue loss when including dynamic effects	Federal level - broken out by key provisions of tax act
California Legislative Analyst's Office	Whatever Happened to Dynamic Revenue Analysis in California? - September 2006	California's experience with dynamic estimating - REPORT	**POINT**	**Selected Outcomes** *Corp tax, income tax and sales tax increases* Offsetting revenue - approx. %, $ State Jobs Business Investment expenditures	Dynamic revenue estimates have been used for reporting and discussion and were generally not incorporated into the budget.
Ernst & Young	The Economic and Fiscal Effects of the Massachusetts Research Credit-August 2003	Effects of 10% corporate tax credit for research expenses	**POINT**	Annual impact on employment and personal income State and local tax impacts of credit, annually, netted against static impact	Used an economic model of the Massachusetts economy developed by REMI.

APPENDIX B – PROPOSED LEGISLATION

Proposed law change for special impact estimating conferences

216.138 Authority to request additional analysis of legislative proposals ~~legislation~~. —

(1) The President of the Senate or the Speaker of the House of Representatives may request special impact ~~sessions of consensus~~ estimating conferences to evaluate legislative proposals ~~proposed legislation~~ based on tools and models not generally employed by the conferences, including cost-benefit, return-on-investment, or dynamic scoring techniques, when suitable and appropriate for the legislative proposal ~~legislation~~ being evaluated.

(2) Unless exempt from s. 119.07(1), information used to develop the analyses shall be available to the public. In addition, all meetings of the special impact estimating conference shall be open to the public. The President of the Senate and the Speaker of the House of Representatives, jointly, shall be the sole judge for the interpretation, implementation, and enforcement of this subsection.

(3) The special impact estimating conference shall consist of four principals: one person from the Executive Office of the Governor; the coordinator of the Office of Economic and Demographic Research, or his or her designee; one person from the professional staff of the Senate; and one person from the professional staff of the House of Representatives. Each principal shall have appropriate fiscal expertise in the subject matter of the legislative proposal. A separate special impact estimating conference may be appointed for each proposal.

(4) After the designation of the four principals, the special impact estimating conference shall convene to adopt official information relating to the proposal.

(a) A principal may invite any person to participate in the special impact estimating conference. Such person shall be designated as a participant. A participant shall, at the request of any principal before or during any meeting of the conference, collect and supply data, perform analyses, or provide other information needed by the conference.

(b) The principal from the Office of Economic and Demographic Research may convene any of the conferences established in s. 216.136, F.S., to consense on supplemental information required for the analysis of the proposed legislation.

(c) All official information of the special impact estimating conference shall be adopted by consensus of all of the principals of the conference. For the purposes herein, the terms “official information” and “consensus” shall have the same meanings as provided in s. 216.133.

APPENDIX C – CHAPTER 2010-101, LAWS OF FLORIDA

CHAPTER 2010-101

Committee Substitute for Senate Bill No. 1178

An act relating to cost-benefit, return-on-investment, and dynamic scoring techniques; creating s. 216.138, F.S.; authorizing the President of the Senate or the Speaker of the House of Representatives to request special impact sessions of consensus estimating conferences to evaluate proposed legislation based on specified techniques; providing for the information used in the evaluations to be available to the public unless otherwise exempt from disclosure; requiring the Office of Economic and Demographic Research to develop protocols and procedures to be used by the consensus estimating conferences when evaluating proposed legislation; establishing minimum requirements; requiring submission of a report; requiring the use of the protocols and procedures until the approval is affirmatively revoked; amending s. 216.133, F.S.; conforming a cross-reference to changes made by the act; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Section 216.138, Florida Statutes, is created to read:

216.138 Authority to request additional analysis of legislation.—The President of the Senate or the Speaker of the House of Representatives may request special impact sessions of consensus estimating conferences to evaluate proposed legislation based on tools and models not generally employed by the conferences, including cost-benefit, return-on-investment, or dynamic scoring techniques, when suitable and appropriate for the legislation being evaluated. Unless exempt from s. 119.07(1), information used to develop the analyses shall be available to the public.

Section 2. The Office of Economic and Demographic Research, acting in consultation with the principals of the consensus estimating conferences and after receiving public input, shall develop protocols and procedures necessary to implement the provisions of s. 216.138, Florida Statutes. At a minimum, the protocols and procedures to be used for evaluating specific proposed legislation shall include cost-benefit, return-on-investment, and dynamic scoring techniques, and may include additional, appropriate economic techniques. Additionally, the protocols and procedures must address the format for reporting results and provide proposed linkages to the appropriations and revenue forecasting processes, including any statutory changes that may be needed. The linkages must be consistent with the constitutional requirement for a balanced budget. The office shall submit a report of its findings and recommendations to the President of the Senate and the Speaker of the House of Representatives by December 1, 2010. Subject to approval by the President of the Senate and the Speaker of the House of Representatives following the submission of the report, the protocols and procedures shall be used to the extent feasible for the analysis of specific proposed legislation by consensus estimating conferences as provided in s. 216.138, Florida Statutes, unless and until such approval is subsequently affirmatively revoked.

Section 3. Section 216.133, Florida Statutes, is amended to read:

216.133 Definitions; ss. 216.133-216.138 ~~216.133-216.137~~.—As used in ss. 216.133-216.138 ~~216.133-216.137~~:

(1) "Consensus estimating conference" includes the Economic Estimating Conference, the Demographic Estimating Conference, the Revenue Estimating Conference, the Education Estimating Conference, the Criminal Justice Estimating Conference, the Occupational Forecasting Conference, the Early Learning Programs Estimating Conference, the Self-Insurance Estimating Conference, the Florida Retirement System Actuarial Assumption Conference, and the Social Services Estimating Conference.

(2) "Official information" means the data, forecasts, estimates, analyses, studies, and other information which the principals of a consensus estimating conference unanimously adopt for purposes of the state planning and budgeting system.

(3) "Consensus" means the unanimous consent of all of the principals of a consensus estimating conference.

Section 4. This act shall take effect upon becoming a law.

Approved by the Governor May 26, 2010.

Filed in Office Secretary of State May 26, 2010.

APPENDIX D – GLOSSARY

Glossary

behavioral changes – In economics, behavioral changes refer to the changes in the behavior of economic agents in response to changes in the incentives they face.

elasticity – A measure of responsiveness of one economic variable to another. Usually, the responsiveness of quantity to price along a supply or demand curve by comparing the percentage changes.

externality – Is either: (a) a cost or benefit not transmitted through prices in the market; or (b) a benefit or cost associated with an economic transaction, that is not taken into account by those directly involved in making it.

indirect effects – In input-output multiplier analysis, indirect effects represent the additional purchases by all local industries necessary to produce the output required from a change in final demand in a given industry.

induced effects – In input-output multiplier analysis, induced effects represent the response by all local industries caused by the expenditures of new household income generated by the direct and indirect effects of a change in final demand for a given industry.

monetary – Costs or benefits denominated in coinage or currency of a country. When used in the context of economic impact analysis monetary costs and benefits are those which have a market price.

non-monetary – Costs or benefits for which no market exists; hence, there is no observable price which can be used for evaluations.

protocol – A convention, code of correct conduct or set of guidelines, especially in regard to technology

procedure – A specified series of actions or operations which have to be executed in the same manner in order to always obtain the same result under the same circumstances

REMI – REMI stands for **R**egional **E**conomic **M**odels, **I**nc., a private group that is a leader in the construction of economic-forecasting and policy-analysis model development. A REMI model is an integrated input-output structural econometric model. It incorporates inter-industry transactions and endogenous final demand feedbacks. In addition, it allows for substitution among factors of production in response to changes in relative factor costs, migration in response to changes in expected income, and wage responses to changes in labor market conditions.

social benefit – Is either: (a) the real benefits to all individuals in society, regardless of whether the beneficiaries decide how much benefit will be produced; or (b) the real benefit to society of having a good or service produced, that may be greater than the private benefit captured by the producer in its market price.

social cost – Is either: (a) the sum total of all costs to individuals in society, regardless of whether the costs are paid by the person who decides whether they will be incurred; or (b) the real cost to society of having a good or service produced, that may be greater than the private cost incorporated by the producer in its market price.

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