Collaborating Efforts in Revenue Forecasting

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Background

- Governor Rod Blagojevich elected in November 2002. First Democratic Governor in over 30 years.
- Early retirement option offered by Governor Ryan before leaving office. Tremendous response from state employees.
- 100 percent turnover in the Budget Office
2004 Budget

- Revenue estimates developed using primarily trend analysis

2005 Budget

- DOR’s research office given responsibility for forecasting revenue in September 2003.
- Contractual relationship between Budget Office and Economy.com instituted. Contract was for provision of revenue forecasts for major revenue sources.
- Economy.com selected because economic forecast reflected internal thinking on future direction of economy.
2005 Budget Cont’d

- Revenue forecasts provided by Economy.com second week of January. Budget due mid February.
- Meeting with DOR and GOMB staff along with Governor’s Council of Economic Advisors.
- Global Insight economists presented economic overview. This was followed by Economy.com economists presenting economic and revenue forecasts.

2005 Budget Cont’d

- CEA and staff asked questions, provided feedback etc
- Based on feedback, when appropriate, Economy.com refined their models
- Final product provided by the end of January contained forecasts using low, medium and high growth scenarios.
2006 Budget

- Economy.com contract transitioned during the year to DOR. This facilitated correspondence and feedback from DOR staff with Economy.com staff.
- Economy.com provided estimates in early January. Results presented to CEA in mid January.

2006 Budget Cont’d

- Weekly meetings with CEA.
- DOR provided recommendations on final estimates, based on their internal forecasts and Economy.com forecasts.
- Budget submitted mid-February.
2006 Budget Submitted Versus Budget Passed

<table>
<thead>
<tr>
<th>FY 2006 Comparative Revenue Information ($ Million)</th>
<th>January-05 Economy FY '06</th>
<th>February-05 Budget FY06</th>
<th>January-06 Economy FY '06</th>
<th>February-06 Budget FY06</th>
<th>Actual FY '06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Income Taxes</td>
<td>9,210</td>
<td>8,997</td>
<td>9,344</td>
<td>9,375</td>
<td>9,568</td>
</tr>
<tr>
<td>General Sales Taxes</td>
<td>6,839</td>
<td>6,778</td>
<td>7,007</td>
<td>6,950</td>
<td>7,091</td>
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<tr>
<td>Corporate Income Taxes</td>
<td>1,421</td>
<td>1,451</td>
<td>1,592</td>
<td>1,860</td>
<td>1,784</td>
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<tr>
<td>Telecommunications</td>
<td>590</td>
<td>555</td>
<td>573</td>
<td>532</td>
<td>525</td>
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<tr>
<td>Electricity</td>
<td>369</td>
<td>360</td>
<td>378</td>
<td>380</td>
<td>372</td>
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<tr>
<td>Gas</td>
<td>193</td>
<td>181</td>
<td>176</td>
<td>169</td>
<td>155</td>
</tr>
<tr>
<td>Total</td>
<td>18,623</td>
<td>18,322</td>
<td>19,068</td>
<td>19,266</td>
<td>19,494</td>
</tr>
</tbody>
</table>

2007 Budget

- Similar process to previous years. Moody’s Economy.com forecasts received in January.
- Meetings with CEA.
- DOR takes on increasing responsibility.
- Based on feedback from CEA, DOR produces estimates based on this feedback, Economy.com forecasts, and internal forecasts.
- These forecasts remain unchanged in the adopted budget.
Outlook for 2008 Budget Revenue Forecasting

- DOR has hired three economists, with plans to hire two more.
- DOR is in the process of developing internal sophisticated forecasting models for sales tax, personal income tax and corporate income tax.
- Plan is to work with Moody’s Economy.com in early January to compare model results.

Conclusion

- Relationship started as one of complete dependence
- Evolved into more of a partnership
- Anticipate that the relationship will continue
  - Prevents us from becoming too bogged down in the details
  - Ensures that Moody’s Economy.com do not forget about the details
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Econometric Approaches to Revenue Forecasting

- Simulation/Accounting models.
- IO-based models.
- Reduced-form time series models.
- Cross-sectional models.
Withholdings and Underlying Labor Income

% change year ago

![Chart showing % change in wages & salaries, personal income tax withholdings, and employment from 1998 to 2008.]

Personal Income Tax Withholdings

$ bil, January 2004 Forecast

![Bar chart showing actual, low growth scenario, and baseline scenario for FY 2005 and FY 2006.]
Personal Income Tax Withholdings

$ bil, January 2005 Forecast

Retail Sales and Tax Revenue

% change year ago, 4 qtr MA
General Sales Taxes

$ bil, January 2004 Forecast

FY 2005

Actual
Low Growth Scenario
Baseline Scenario

FY 2006

General Sales Taxes

$ bil, January 2005 Forecast

FY 2005

Actual
Low Growth Scenario
Baseline Scenario

FY 2006
Corporate and Nonwithheld Income Taxes

% change year ago, 4 qtr sum

Nonwithheld Personal Income Taxes

$ bil, January 2004 Forecast

Moody's Economy.com
Nonwithheld Personal Income Taxes

$ bil, January 2005 Forecast

- Actual
- Low Growth Scenario
- Baseline Scenario

Corporate Income Taxes

$ bil, January 2004 Forecast

- Actual
- Low Growth Scenario
- Baseline Scenario
Corporate Income Taxes

$ bil, January 2005 Forecast

FY 2005

- Actual
- Low Growth Scenario
- Baseline Scenario

FY 2006

Moody's Economy.com