Forecasting health expenditure

by

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OECD/WHO MEETING ON FINANCIAL SUSTAINABILITY OF HEALTH SYSTEMS IN CENTRAL, EASTERN, AND SOUTH-EASTERN EUROPE

Tallinn, Estonia

28-29, June, 2012
Projecting revenues

- Sustainability is balancing revenues and expenditures
- Projecting revenues is country-specific, but there has been little international collaboration on projecting overall government revenues and specifically health revenues
- Revenue projections are done by MOF;
- Health expenditure projections often done by MOH
Review

Informing policy makers about future health spending: A comparative analysis of forecasting methods in OECD countries

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*Organisation for Economic Co-operation and Development, 2, Rue André Pascal, 75775 Paris Cedex 16, France
### Health expenditure forecasting models

#### Address policy questions

<table>
<thead>
<tr>
<th>No action</th>
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<tbody>
<tr>
<td>Brake on public spending growth</td>
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<td>Sustainability</td>
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<td>Spending drivers</td>
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<td>Sector costs rising the most</td>
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<td>Impact of new technologies</td>
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<td>Impact on the rest of the economy</td>
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<td>“What if” policy scenarios</td>
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Policy questions determine models’ features

- **Time horizon**
  - Short, medium or long run

- **Forecasted variables**
  - Total, public, hospital expenditure

- **Units of measurement**
  - Current/constant prices, share to GDP

- **Class of forecasting model**

- **Drivers**
Classes of forecasting models

Unit of analysis

Population of interest (as a whole)
Groups of individuals
Individuals

Section of health expenditure
Total health expenditure

Macro-level models
CGE

Component-based models

Cohort-based models

Micro-simulation models
## Microsimulation

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
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<tbody>
<tr>
<td>Test detailed “what if” scenarios</td>
<td>Data &amp; computing intensive</td>
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<tr>
<td>Disaggregated projections</td>
<td></td>
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<tr>
<td>Project the health status of the population</td>
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## Component-based

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<th>PROS</th>
<th>CONS</th>
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<tr>
<td>Overall guidance on medium &amp; long-term</td>
<td>Could be too aggregate for certain analysis</td>
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<tr>
<td>Identify the importance of high-level drivers</td>
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<td>Not data intensive</td>
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## Macro Models

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<th>PROS</th>
<th>CONS</th>
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<tr>
<td>Effective for short-run forecasts</td>
<td>Past shocks</td>
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<tr>
<td>Require little data</td>
<td>Limited use to assess the impact of policy change</td>
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<td>(GE) Connect health spending to its impact on the overall economy</td>
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Growth drivers in Australia

Source: Goss, J. (2008)
Be Aware of Assumptions

Projected health expenditures (as a share of GDP)

Source: Ministry of Health and Social Affairs, Sweden (2010).
Conclusions

• Projections are not predictions
  – Like maps provide information, don’t drive

• Models address policy questions
  – Determine model selection & specifications

• Room for improvement
  – New opportunities
    New forecasting techniques, new data and improved computing power
    – Greater ability to test policies before they are introduced
    – Opportunity to combine techniques to maximize relative strengths
  – New challenges
    i.e. cross-border movement of patients, human resources, services and capital

• Opportunity for international collaboration
  – Build from existing strengths in international model development
  – Address known deficiencies in existing approaches
  – Standardize specifications, assumptions and data
  – Compare relative impacts of policy reforms across countries
Next steps at the OECD

Revision of the OECD 2006 paper

– Income elasticity
  • Values below 1 are now considered

– Residual
  • Influence f health specific prices
  • The role of technological progress

– Preliminary results expected by mid October

Organise meeting for modellers/forecasters