Forecasting Pay Drift for the Department of Health

Executive summary
The project was a joint venture between the Department of Health (DH) and Lancaster University Management School. The project concerns with the pay drift for the non medical workforce. The main objective throughout the project was to provide a view as to what extent and to what degree of accuracy the pay drift can be forecasted. The project investigated four alternative forecasting methods. The available options have been offered to the Department of Health.

The Challenge (Problem)
The client for this project was the Workforce Directorate Analysis Team (WDAT) within the Department of Health. The WDAT provides analytical support for various concerns such as Modernizing Medical Careers and Regulation Policy. The Pay Review Body has the task of being an independent watchdog overseeing negotiation between the DH and other stakeholders such as NHS employers and Unions. In recent years, the DH has come under the increased criticism by the NOHPRB (Nurses and other Health Profession Pay Review Body) in particular, for its failure to provide accurate figure for the pay drift based on transparent and comprehensive analysis. Therefore the overall aim of the project was to investigate more robust/defendable forecast methodology for pay drift for the Department of health.

The Project (Solution)
To achieve the goal of the project, it was determined that the project would have to be structured to evaluate the forecasting of the pay drift using a variety of methods. Therefore the project was split into 5 different phases.

- Phase 1 – Qualitative Research
- Phase 2 – Quantitative Research
- Phase 3 – Time Series Forecasting
- Phase 4 – Explanatory Forecasting
- Phase 5 – Evaluation

During the phase 3 and 4, four different forecasting methodologies were identified and their weakness and strength has been thoroughly evaluated.

<table>
<thead>
<tr>
<th>Methods</th>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delphi</td>
<td>Delphi enables collective expert judgment</td>
<td>Difficult to find experts</td>
</tr>
<tr>
<td>Causal</td>
<td>Takes into account all influence upon pay drift</td>
<td>During the project, there was not enough data to achieve accurate results</td>
</tr>
<tr>
<td>Time Series</td>
<td>The methods are statistically proven to be more accurate in forecasting drift than the existing model</td>
<td>Does not account for the many plausible exogenous affects</td>
</tr>
<tr>
<td>Scenario Based Model</td>
<td>Simplifies the cause of pay drift down to the basic change in staff distribution across the pay scales</td>
<td>Many vague assumptions and no model validation method yet</td>
</tr>
</tbody>
</table>

Table 1 Strength and weakness of each forecasting methodology

Results and achievements
The project was undertaken with an open mind to look at the different forecasting techniques for the pay drift from all angles. The greatest trait DH will gain from the project is undoubtedly the scenario based model. The scenarios based model is particularly useful within the highly political environment such as the DH, as the model provide the clear view or story in regards to the debating matter.

www.lums.lancs.ac.uk  www.dh.gov.uk/