



## Special issue on health econometrics: Editors' introduction

This issue of *Economic Modelling* features a selection of papers presented at the Health Econometrics Workshop, held on December 4–6, 2008 at the University of Milan, Bicocca. The Workshop was sponsored by Interuniversity Research Centre on Public Services and the University of Bergamo. The purpose of this meeting was to provide a forum where policy makers, economists and econometricians could discuss the use of statistical and econometric methods to address issues in the field of health economics.

Carlo Lucchina, Director of Healthcare Council, Lombardy Region, opened the workshop, providing an overview of the importance of health economics in the allocation of public resources across territories. The scientific contributions to the workshop spanned a broad range of topics: ranging from applied health studies using observational data, to economic evaluation, to theoretical econometrics. This variety of papers offered an insight into the scope for innovative empirical analysis across different areas in the field of health economics.

In the spirit of initiatives such as the American Health Economics Conference and the European Workshops on Econometrics and Health Economics, the workshop was structured around a limited number of oral presentations, with the presence of five keynote speakers: Alberto Holly, Badi Baltagi, William Greene, Andrew Jones, and John Mullahy. The meeting was attended by 50 participants from around the world. All of the papers selected for this special issue have gone through the usual process of peer review for *Economic Modelling*, and we would like to thank all of the referees for their hard work. We are pleased to announce that a prize of £500, generously offered by Elsevier, for the best paper published in the special issue is awarded to: “Does quality influence choice of general practitioner? An analysis of matched doctor–patient panel data” by Geir Godager and Erik Biørn.

### 1. Summary of contributions

Albouy, Davezies and Debrand evaluate and compare five different model specifications that explain temporal and cross sectional variations in the logarithm of health expenditures. Particular attention is devoted to the treatment of unobserved heterogeneity and dynamic dependence. The authors show that panel data models highly improve the variability explained by the model in the time series dimension without damaging the fit in the cross section dimension.

Baltagi and Moscone reconsider the long-run economic relationship between health care expenditure and income in the OECD. They study the non-stationarity and cointegration properties between health care spending and income. Heterogeneity is handled through fixed effects in a panel homogeneous model and through a panel heterogeneous model. Their findings suggest that health care is a

necessity rather than a luxury, with an elasticity much smaller than that estimated in previous studies.

Berta, Callea, Martini and Vittadini estimate a production function for Italian hospitals with the aim of analysing the effect of upcoding, cream skimming and readmission, on technical efficiency. Their results show that the first two have a negative impact on hospitals' technical efficiency, while latter has a positive effect. Further, their results indicate that the private hospitals engage more in cream skimming than public and not-for-profit hospitals, while there are differences in upcoding by hospital ownership.

Eberth and Smith use a copula approach to model the decision-making process of individuals regarding participation, intensity, duration and multiplicity of physical activity in Scotland. The aim is to establish whether dependence exists between the decision of individuals to undertake sporting activities and, amongst those who participate, the duration of time spent in their chosen activities.

Florio and Siciliani study the influence of co-payment levels on the demand of pharmaceuticals in Italy at regional level. Adopting a differences-in-difference approach they find a negative relationship between co-payments and per-capita number of prescriptions as well as per-capita public pharmaceutical expenditure.

Godager and Biørn study consumers' choice of general practitioners in Norway, assuming patients are unable to observe the true quality of GP services. Their results indicate that GP quality has a clear positive effect on demand, even after controlling for heterogeneity across patients.

Gupta, Kristensen and Pozzoli evaluate the use of vignettes as a means to appropriately re-scale self-assessment and obtain cross-country comparisons of subjective assessments. They test the validity of the response consistency hypothesis, which assumes that vignettes and self-assessments are evaluated on the same scale. Their results indicate that response consistency is not an innocuous assumption, and that relaxing it may significantly improve the fit of models for country comparison.

Jones, Rice, and Roberts use discrete-time hazard models to study the impact of a set of measures of health status on retirement age in Great Britain, taking into account that anticipated retirement may influence reporting of health. They show that these variables have a strong influence on retirement age, when compared to the effect of other variables, and in particular the effect of private pensions.

Piacenza, Turati and Vannoni study factor substitutability in the production of hospital services, with the aim of determining the reasons behind the process of reduction in hospital beds availability, observed at world-wide level. Their results show a very limited degree of substitutability between factors in the production of hospital services, especially between beds and medical staff, which should be taken into account when implementing restructuring policy of the hospital industry.

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