

Institution: University of York
Unit of Assessment: 18, Economics and Econometrics
Title of case study: The ECuity Project: providing quantitative evidence on socioeconomic inequality in health and health care for health policy in Europe and beyond.
1. Summary of the impact <p>The ECuity Project was a European Union (EU) funded research network that provided rigorous quantitative evidence on the extent of socioeconomic inequalities in health and health care across countries and over time. The Project pioneered a set of measurement tools to help understand what drives international differences and trends in health inequality. The methods developed within the Project have had a direct impact on the way in which international organisations, such as the Organisation for Economic Cooperation and Development (OECD), World Bank (WB) and World Health Organisation (WHO), define and measure health inequality and inequity. The Project provided international agencies and governments with tools to develop and target policies to address inequity and the evidence generated by the Project has extended their understanding of the issue in developed and developing countries, informing and shaping their policy advice.</p>
2. Underpinning research <p>A team from York, led by Professor Andrew Jones, participated in the ECuity II project (1999-2002) and Professor Jones jointly co-ordinated the whole network for ECuity III project (2003-05) with Professor Eddy van Doorslaer (Erasmus University). As co-ordinator Jones provided research leadership to national research teams working across 15 countries (Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Spain, Sweden, Switzerland, UK, and USA). Professors Jones and Nigel Rice were employed at the University of York throughout the period of both projects, Dr Cristina Hernandez Quevedo was a Research Fellow for ECuity III, and Teresa Bago d’Uva and Silvia Balia were PhD students during the project. Key output and findings from the York team’s contribution to the ECuity II and III Projects include:-</p> <p>Socioeconomic inequality in health: To what extent do the better-off enjoy better health than the poor? How much do these inequalities vary across countries and what causes the differences? Answers to these questions require measures of health inequality applied to data that can be compared across countries. Jones and Lopéz Nicolás (2004) developed a method to compare indices of inequality in health that are based on short-run (within year) and long-run (across years) measures of health and income which was used by Hernández Quevedo, Jones and Rice (2006) to decompose the contributions of different factors associated with health inequalities using the European Community Household Panel (ECHP). This showed the existence of “pro-rich” inequality in health across EU member states, in both the short-term and the long-term, with health limitations concentrated among those individuals with lower incomes. For many countries, these inequalities in health were shown to be widening. How much of this socioeconomic inequality in health is explained by differences in lifestyles and by living conditions? Balia and Jones (2008, & 2010) provided evidence that lifestyles and unobservable individual heterogeneity strongly contribute to inequality in mortality, reducing the contribution of socioeconomic factors.</p> <p>Horizontal equity in health care: Are people in equal need of health care treated the same, irrespective of how well-off they are? Does the degree to which this is true vary from country to country and do the differences reflect features of the health care systems? Answering these questions requires measures of horizontal inequity in health care. ECuity II research by Van Doorslaer, Koolman and Jones (2004) showed how to decompose measures of horizontal inequity in health care based on nonlinear regression models for doctor visits. The analysis was taken further in ECuity III by Bago d’Uva and Jones (2009) who analysed the factors that determine utilisation of primary care across Europe using the ECHP and latent class hurdle models for panel data. The empirical analysis was extended to study health care inequity in Bago d’Uva, Jones and van Doorslaer (2009). Their findings confirm evidence of horizontal inequity in the use of specialist health care that favours the better-off across nearly all European countries.</p>

3. References to the research

Funding:

The dynamics of income, health and inequality over the life cycle (“ECuity III”), European Union (QLK6-CT-2002–02297), awarded to Prof E.A.K. van Doorslaer (Erasmus University), Prof A.M.Jones (University of York) and others, 2003-2005, €450,040.

Publications:

1. Bago d’Uva, T. and Jones, A.M., “Health care utilisation in Europe: new evidence from the ECHP”, *Journal of Health Economics* 28, 265-279, 2009. Scopus: **13 citations**. DOI: [10.1016/j.jhealeco.2008.11.002](https://doi.org/10.1016/j.jhealeco.2008.11.002)
2. Bago d’Uva, T., Jones, A.M. and van Doorslaer, E., “Measurement of horizontal inequity in health care utilisation using European panel data”, *Journal of Health Economics*, 28, 280-289, 2009. Scopus: **15 citations**. DOI: [10.1016/j.jhealeco.2008.09.008](https://doi.org/10.1016/j.jhealeco.2008.09.008)
3. Balia, S. and Jones, A.M., “Mortality, lifestyle and socio-economic status”, *Journal of Health Economics*, 27: 1-26, 2008. Scopus: **41 citations**. DOI: [10.1016/j.jhealeco.2007.03.001](https://doi.org/10.1016/j.jhealeco.2007.03.001)
4. Balia, S. and Jones, A.M., “Catching the habit: a study of inequality of opportunity in smoking-related mortality”, *Journal of the Royal Statistical Society Series A*, 174, 175-194, 2011. Scopus: **3 citations**. DOI: [10.1111/j.1467-985X.2010.00654.x](https://doi.org/10.1111/j.1467-985X.2010.00654.x)
5. Hernández Quevedo, C., Jones, A.M., López Nicolás, A. and Rice, N., “Socioeconomic inequalities in health: a comparative longitudinal analysis of the European Community Household Panel”, *Social Science and Medicine*, 63: 1246-1261, 2006. Scopus: **32 citations**. DOI: [10.1016/j.socscimed.2006.03.017](https://doi.org/10.1016/j.socscimed.2006.03.017)
6. Jones, A.M. and López-Nicolás, A., “Measurement and explanation of socioeconomic inequality in health with longitudinal data”, *Health Economics*, 13, 1015-1030, 2004. Scopus: **30 citations**. DOI: [10.1002/hec.904](https://doi.org/10.1002/hec.904)
7. Van Doorslaer, E. and Jones, A.M., “Inequalities in self-reported health: validation of a new approach to measurement”, *Journal of Health Economics*, 22, 61-87, 2003. Scopus: **109 citations**. DOI: [10.1016/S0167-6296\(02\)00080-2](https://doi.org/10.1016/S0167-6296(02)00080-2)
8. Van Doorslaer, E., Koolman, X. and Jones, A.M., “Explaining income-related inequalities in doctor utilisation in Europe: a decomposition analysis”, *Health Economics*, 13, 629-647, 2004. Scopus: **165 citations**. DOI: [10.1002/hec.919](https://doi.org/10.1002/hec.919)

Items 3, 6 and 7 were submitted to RAE2008 under UoA34 (Economics and Econometrics): 96.6% of York outputs in this UoA were rated 2* or above. Item 4 is submitted to REF2 under UoA18. Scopus citation data at 26/9/13.

4. Details of the impact

The research questions addressed by the ECuity Projects were shaped by the concerns of national policy-makers, health services professionals, and international organisations, all of whom have an interest in truly comparable findings across countries. The motivation for ECuity II responded to concerns that had been expressed in several European countries over the possible adverse consequences, in terms of both equity in health care utilisation and inequalities in health, of the continued growth of user charges, private insurance and of income inequality. ECuity III focused on the transmission of inequalities in health to old age, and the inequitable treatment of the elderly by health care systems, reflecting differences in insurance coverage and pension entitlement.

To engage with health policy-makers the ECuity Project communicated its findings through policy-oriented conferences and journals as well as in peer-reviewed academic journals. The ECuity II and III Projects held annual workshops that were attended by representatives from international organisations (OECD, WB, WHO). These were the most direct route through which the methods and findings reached a non-academic audience (ECuity III workshops were in Belgrade, 2003; Helsinki, 2004; IZA Bonn, 2005). Furthermore, the findings were presented and discussed at meetings with officials from several international organisations, including the EU, OECD, WB and WHO. The assimilation of the methods and the use of evidence by these international decision makers can be traced in their publications and official statistics: for the EU see for example

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Eurostat (2010a & 2010b); for the OECD see Devaux and Looper (2012), Marcial et al. (2008), and Verbist et al. (2011); for the WB see Smith and Nam (2013); and for the WHO Mladovsky et al. (2009).

Evidence of the assimilation of the research done at York at the international level is provided by factual statement [1] from the Director of the Health Systems and Financing Department at the World Health Organisation based in Geneva:

“Redressing inequalities in health has always been fundamental to the work of the World Health Organization. The ECuity Projects in their various forms were valuable in helping WHO think through many questions linked to how to do this. I refer to four areas as examples.

- 1. The fact that inequalities in health are linked to inequalities in income, as confirmed by the ECuity Project, was not itself surprising, but the fact that income related inequalities were growing in many countries was. Equally as important was the development by the Project of a way of rigorously comparing indices of inequality in health that allows the contribution of inequalities in income to be clearly identified.*
- 2. At the same time the Project, for example in the work of Silvia Balia and Andrew Jones, showed that individual choices about lifestyle influence mortality independently from social and economic factors. This is critical for identifying what can be done to reduce the risks of premature mortality.*
- 3. In papers by Eddy van Doorslaer and Andrew Jones, and by Cristina Hernandez, Andrew Jones and Nigel Rice, the Project explored the area of self-report bias and heterogeneity in self-assessed health responses, something that has long concerned the World Health Organization. Self-assessed health responses are simpler to undertake than measured tests, but the capacity to compare them over time or across settings is a concern. The finding that at least in the UK self-assessment did not seem to vary consistently with socio-economic characteristics of patients was somewhat reassuring.*
- 4. The Organization’s work on health financing strategies was helped by the ECuity Project’s analysis of the role health shocks play in the decision to retire, something that is also linked to the generosity of the country’s social security system – explored in papers by Andrew Jones, Nigel Rice and colleagues. This has implications for the sustainability of financing for health based on wage deductions, as well as for understanding the broader implications of poor health for overall social welfare.”*

Evidence of changes in practice within the World Bank is provided in factual statements [2] and [3]. A Senior Economist in the Health and Nutrition Unit, Eastern Europe and Central Asia at the World Bank describes the influence on practice at the Bank in factual statement [2]:

“The methods and tools initially developed in the context of the ECuity project are now frequently used to measure the performance of health systems, to inform policy dialogue, and to build capacity in client countries. The World Bank developed a module to automate health equity analyses in the free software platform ADePT and is promoting its use both within and outside the institution. Most recently (2012-2013), the Eastern Europe and Central Asia (ECA) Health, Nutrition and Population Unit of the World Bank used ECuity-inspired analyses to discuss financial protection in a forthcoming regional report and develop monographs on equity in outcomes, utilization and health financing in Tajikistan and Kyrgyzstan, the results of which were presented in national workshops.”

The impact on policy formulation in the Asia and Pacific region is described in factual statement [3] by a Senior Economist in the East Asia Human Development Group, World Bank:

“Providing evidence-based advice on inequalities in health and their determinants is very important to our clients and partners. ...The ECuity project, which the University of York has contributed to over several years, has had tremendous impact on research and analysis of health equity. The project has provided the methodological framework and tools to carry our research on health equity in low and middle-income countries, which is used regularly by the World Bank in formulating policy advice to our client governments.”

In summary: The methods developed in the ECuity Project have had a significant impact on the definition and measurement of health equity within international organisations with evidence of reach across developed and developing countries including the activities of the WHO and the World Bank in Eastern Europe and Central Asia and in East Asia.

5. Sources to corroborate the impact

Devaux M and de Loooper M. Income-related inequalities in health service utilisation in 19 OECD countries, 2008-09. OECD Health Working Paper No. 58. Paris: OECD; 2012. [cites Bago d'Uva et al, 2009, corroborating impact at OECD]

<http://dx.doi.org/10.1787/5k95xd6stnxt-en>

Eurostat. Analysing the socioeconomic determinants of health in Europe: new evidence from EU-SILC. Luxembourg: Publications Office of the European Union; 2010a. [cites Hernandez et al., 2006, corroborating impact at Eurostat]

http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-10-016/EN/KS-RA-10-016-EN.PDF

Eurostat. Methodological issues in the analysis of the socioeconomic determinants of health using EU-SILC data. Luxembourg: Publications Office of the European Union; 2010b. [cites Hernandez et al., 2006 and Jones and Lopez, 2004, corroborating impact at Eurostat]

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Marical F, d'Ercole MM, Vaalavuo M and Verbist G. Publicly provided services and the distribution of households' economic resources. OECD Economic Studies 44. Paris: OECD; 2008. [cites van Doorslaer et al., 2004 and Hernandez et al., 2006, corroborating impact at OECD]

<http://www.oecd.org/eco/42503533.pdf>

Mladovsky P, Allin S, Masseria C, Hernández-Quevedo C, McDaid D and Mossialos E. Health in the European Union: trends and analysis. Observatory Studies Series No 19. Geneva: World Health Organization; 2009. [cites Bago d'Uva et al., 2007 (working paper); Jones and Lopez, 2004 and van Doorslaer et al., 2004, corroborating impact at OECD]

ec.europa.eu/social/BlobServlet?docId=4742&langId=en

Smith O, Nam Nguyen S. Improving health system outcomes in Europe and Central Asia. Washington D.C.: World Bank; 2013. [cites van Doorslaer et al., 2004, corroborating impact at WB]

<http://www.worldbank.org/content/dam/Worldbank/document/eca/getting-better.pdf>

Verbist G, Förster M and Vaalavuo M. The impact of publicly provided services on the distribution of resources: review of new results and methods. OECD Social, Employment and Migration Working Papers No. 130. Paris: OECD; 2011. [cites Hernandez et al., 2006, corroborating impact at OECD]

<http://dx.doi.org/10.1787/5k9h363c5szq-en>

Factual Statements:

The following have provided factual statements and have agreed to their use in this document:

[1] Director Health Systems Financing, World Health Organisation, Geneva, Switzerland.

[2] Senior Economist, Health and Nutrition Unit, Eastern Europe and Central Asia, World Bank, Washington DC, USA.

[3] Senior Economist, East Asia Human Development, World Bank, Washington DC, USA.