

or parental choice and the point is, in any case, insufficiently explored. Also ignored is the fact that the choice programmes discussed are almost always cited within a context of differential provision. If all parents within a school district were to be given access to choice – an aspiration Walberg claims to support – the focus of the discussion shifts to how pupils are to be selected in oversubscribed schools. Neither of these issues can be dismissed as merely abstract questions for the eccentrics of the education establishment, since they present practical and logistical problems which the neo-cons have consistently failed to address. Walberg unwittingly acknowledges this when he writes that ‘even if private schools did not yield superior achievement gains, it seems likely that many parents would like to have their children exposed to peer groups bound for prestigious institutions’ (63). In the choice mechanisms Walberg outlines, it is only because choice is, and can only be, unavailable to all that a small proportion of parents and their children are able to take advantage of such opportunities.

References

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Universities and strategic knowledge creation: specialization and performance in Europe, edited by Andrea Bonaccorsi and Cinzia Daraio, Cheltenham, Edward Elgar Publishing, 2007, 462 pp., £95.00 (hardback), ISBN 1-84-720110-5

This wide-ranging edited volume arising out of two empirical transnational Euro-studies should be in the library of any university where research or teaching is undertaken in higher education policy, economics or strategic management. It provides some useful background reading for doctoral students starting their theses on these aspects of European higher education. However, few will want, or be able, to read it from cover to cover. The book will please most of its readers some of the time and few of them all the time.

The two Euro-studies are AQUAMETH (advanced quantitative methods for the evaluation of public research systems) and CHINC (Changes in University Incomes: Their Impact on University-Based Research and Innovation). The former comprises detailed quantitative case studies of the inputs to and outputs from university research in six countries: Italy, Norway, Portugal, Spain, Switzerland and the UK. These provide the empirical material for a large part of the book. CHINC provided supplementary data from the same six countries plus another six: the Czech Republic, Denmark, France, Germany, Hungary and the Netherlands.

At the most basic level, this book is a useful source of information about higher education institutions and systems in the six AQUAMETH countries at the beginning of the twenty-first century, and university-level quantitative data across a wide range of European countries. One problem with the descriptive material, as the authors themselves acknowledge, is that higher education policy is evolving rapidly in all the countries and several details are already out of date. For example, in the UK study EU undergraduate fees are said to be £1000 per year (307), but the rise in the maximum to £3000 is acknowledged on the following page.

However, the main intention of the book is to use these data to undertake institution-level cross-national econometric analyses of the efficiency of universities in research and, to a lesser extent, in teaching. The conclusions here will be of some general interest though few are very robust; they are very dependent on the way certain variables are treated, particularly research students, which are in part an output of teaching and in part an input into research. The use of various kinds of publication and citation indices as the principal outputs of university research is also a limiting factor. A third limitation is that the use of the university as the unit of observation means that only limited account can be taken of subject differences, though it is acknowledged that these do have an big influence on the results. Economies of scale that may well exist in medicine may be wide of the mark in history. Despite these limitations, some of the results will be of interest to university managers and policy makers, though the furthest the editors themselves are prepared to go is to say that the results suggest areas where further research is likely to be useful. One finding is that there is some evidence of substitution effects between research and teaching, in that universities with high research outputs tend to score rather lower on the teaching measures used (which are mainly undergraduate student numbers). There are also some hints that academic research is competitive with technology transfer activities, in that universities that receive larger proportions of their income from industry and commerce score less well on citation indices. There is also some evidence of economies of scale in research, in that larger institutions have a higher density of research citations.

The third level at which *Universities and Strategic Knowledge Creation* will be read – and this is the main intention of the editors – is as an exercise in econometric methodology of the study of efficiency in higher education. Their analyses will almost certainly be beyond the mathematical reach of many higher education researchers, but if the chapters by Bonnaccorsi and Daraio (1, 2, 5, 12) serve the purpose of showing serious mathematical economists in Europe that their higher education systems are potentially a fruitful subject of study and are beginning to produce data that are worth serious analytical attention, then this book will have served its most useful purpose. Their main tool is non-parametric statistical analysis; in practice a version of data envelopment analysis in which ‘parametric approximations of robust nonparametric frontiers’ are possible. For those with a more practical interest in current higher education policy, the devil lies in the little word ‘robust’. At present, despite the impressive efforts of the national AQUAMETH teams, there remain problems about the precise meanings of the main variables used. What exactly is a research student? What do citation indices really measure? There are serious problems of data comparability between institutions as well as between countries, exacerbated by the rapid changes in size, structure and mission of recent decades. The fact that the editors acknowledge the problems does not lessen them. It does mean that readers who are tempted to use the results such as those quoted in the previous paragraph to draw conclusions about higher education strategy should use them with extreme caution.

The analyses are valuable but, empirically as well as methodologically, they are pilot studies that need to be supplemented by a huge amount of further development before they will be of much value to practical university strategists. Meanwhile this book and the AQUAMETH studies that underpin it can serve an important proselytising function. It deserves to be widely read by serious higher education researchers.

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