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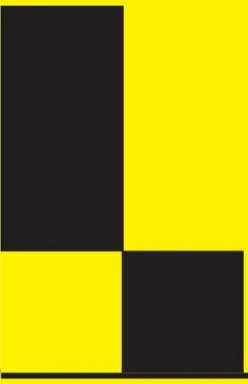

Salvatore Barbaro

Equity and Efficiency Considerations of Public Higher Education

Lecture Notes in Economics
and Mathematical Systems 557

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Equity and Efficiency Considerations of Public Higher Education

Springer

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To Yvonne

Preface

The present book has been accepted as my PhD–thesis at the University of Göttingen on November 19, 2004. It was accomplished during the time period starting in January 2001, when I got the much-appreciated opportunity to work as a research assistant at the Institute of Public Economics.

I am particularly indebted to Prof. Dr. Helga Pollak, the former chair of the Institute of Public Economics, for her advice and the opportunity she gave me to work at the Institute. In March 2003, Professor Dr. Robert Schwager became her successor and also became my PhD advisor. I am grateful for his advice in many helpful discussions. I would also like to thank Professor Dr. Martin Kolmar from the Johannes-Gutenberg University, Mainz, who was the second member of my thesis committee. I benefit immensely from the fruitful and inspiring discussions with him.

I also want to thank Professor Dr. Walter Zucchini from the Institute of Statistics and Econometrics at the University of Göttingen. We shared many helpful conversations. In particular I had insightful discussion on the resampling methods used in the present work. Professor Zucchini was the third member of my thesis committee.

Some parts of this thesis were in circulation in several papers and were discussed by several people face-to-face and at international conferences. The three members of my thesis committee, Helga Pollak, Meta Brown (Madison/Wisc.), Elena Del Rey (Gironda), Andreas Haufler (Munich), Robert Haveman (Madison/Wisc.), Álvaro M. Pina (Lisabon), Panu Poutvaara (Copenhagen), Tara M. Sinclair (St. Lois), Jens Südekum (Konstanz), and Martin Teuber (Göttingen) were especially persistent in questioning my basic premises, challenging my conclusions, and forcing me to rethink and reformulate. The Deutsche Forschungsgemeinschaft, Universitätsbund Göttingen, Georg-August University of Göttingen, the German Central Bank, and the Johannes-Gutenberg University of Mainz provided financial support for attendance at very helpful conferences abroad. The HIS in Hannover helped me locate difficult–to–find data for the empirical part of this book. I also thank

Christian Bruns, Carolin Dobler, Brian Frizelle, Marie Waller and Janina Pahmeier for excellent research assistance.

I am particularly indebted to Bob Haveman for the invitation to the La Follette School of Public Affairs at the University of Wisconsin-Madison, where Chapter 6 was written and reworked to a remarkable extent.

My good friend and witness to my marriage Daniel Schüle, who worked for different institutions in the field of higher education as a non-economist, often disregarded my ideas and conclusions for an alternative higher-education funding. His skepticism against model-based examinations helped me to see the political and social role of higher education through a different lens. I do not want to forget all of the disputes that I had with him.

I wish to express my gratitude with special emphasis to my good friend, former study mate and co-author, Jens Südekum. We discussed and developed our ideas, projects, and dreams for a just and better world for many years. I would not want to have missed this experience for anything.

In writing a thesis, one accumulates a long list of debts. I apologize to anyone who has been inadvertently left out of these acknowledgments.

Last, but certainly not least, I want to thank my beloved wife Yvonne. She made sure that no days were devoted solely to work on this thesis or any other project, even though much of the time for this project came at her expense. For her constant injection of wise perspective and exceptional companionship always, there are no adequate words. This book is dedicated to her with my heartfelt pledge: *You'll never walk alone!*

Mainz, May 2005 *Salvatore Barbaro*

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Outline of the Book

It has become part of the conventional wisdom in the economics of education that subsidies to higher education have a regressive distributional effect. Given that relatively more children from wealthier families enroll in higher education, many economists assume that these subsidies to higher education have an unwanted distributional impact. *The nurse is being taxed to support the higher education of the dentist's son*, as it is sometimes bluntly put.

In Germany and possibly elsewhere, this reproach concerning fiscal activity in higher education is as old as the proposal to subsidize tuition fees. In 1875, the German Social Democratic Party (SPD) for the first time expressed in its *Gotha Program* the demand for "free instruction." Karl Marx and Friedrich Engels were the first to question this in their *Critique of the Gotha Program*: Free instruction "only means in fact defraying the cost of education of the upper classes from the general tax receipts" ((Marx and Engels, 1875[1962], p. 30); own translation).

Over a century later, the critique did not only come from the Marxists' side. The most popular economist who expressed the claim noted above was Milton Friedman. He asserted that public higher education produced a "perverse distribution of income" (Friedman, 1962, p. 105). For this reason, that thesis is henceforth referred to as the Friedman-thesis. The intuition of the Friedman-thesis is concerned with the processes of selection and allocation of students to the higher-education system. Given that children from upper-income families are more likely to obtain higher education than children from lower-income ones, it seems reasonable to assume that wealthier households gain the most from subsidies. In their book *Free to Choose* Milton and Rose Friedman express their opinion as follows:

> We know of no government program that seems to us so inequitable in its effects, so clear an example of Director's Law, as the financing of higher education. In this area those of us who are in the middle– and upper–income classes have conned the poor into subsidizing us on the grand scale—yet we not only have no decent shame, we boast

> to the treetops of our selflessness and public–spiritedness. (Friedman and Friedman, 1979, p. 183)

In fact, many textbook writers still refer to this thesis, even though empirical work on this issue is at best inconclusive. Moreover, the literature often confuses a cross–sectional analysis and a long–run view. It is interesting to note that almost all empirical studies are cross-sectional analyses. As such an analysis provides a snapshot of distributional impact at particular points in time, the studies can be criticized for ignoring the longitudinal dimension of the point at issue. This critique also applies to the distributional effect of higher-education subsidies (see e.g. McGuire, 1976; Bowman et al., 1986; Pechman, 1972; Beckmann, 2003). In analyzing that effect, we have to distinguish between an analysis of children from various household types, and an analysis of educated and non-educated individuals throughout their lives. For the former, a cross–sectional examination is the only alternative; for the latter, the related literature uses a long-run analysis.[1]

The huge empirical literature on that issue, however, provides at most only scant evidence for this thesis. The debate started with the work of Pechman (1970), which contradicted the results provided by Hansen and Weisbrod (1969a). This disputation provoked a debate on the distributional effect that lasted nearly ten years, the "Hansen-Weisbrod-Pechman" debate (see Hansen and Weisbrod (1969a,b, 1971, 1978), Pechman (1970); Hartmann (1970); McGuire (1976); Conlisk (1977); Cohn et al. (1970)). Since then, a large number of studies are published. In Chapter 2 we present and review several examinations. Empirical evidence using GSOEP-data is provided in Chapter 3.

The literature covering the longitudinal approach is inconclusive. For example, building on Grüske (1994), García-Peñalosa and Wälde (2000) argue that "[i]f the average tax payer has a lower lifetime income than the average university graduate [...], a subsidy to higher education financed from general taxation implies reverse lifetime redistribution, i.e. redistribution from the poor to the rich." Although the paper provides several very enlightening results, this approach can be critically assessed with respect to two aspects. First, it does not distinguish sufficiently between the change of distribution between *rich* and *poor*, and that between graduates and non-graduates throughout their lives. Second, Pareto-improving subsidies can also be identified as *regressive* using this approach,[2] as shown in Sturn and Wohlfahrt (1999, 2000).

[1] See e.g. (Atkinson and Stiglitz, 1985, p. 263) who argue that "[i]n empirical work, the unit of analysis is typically taken as the nuclear family or household, and the distribution based on all such units in existence at a particular date. On the other hand, the lifetime approach seems more relevant to *individuals*. A person may belong to several different families during his life, and it makes little sense to regard him as changing identity on leaving or entering a nuclear family."

[2] In a subsection, García-Peñalosa and Wälde (2000) also ask whether a particular individual is better or worse off if education is subsidized. They point out that