

**Evaluating Family Policy Reforms
Using Behavioral Microsimulation**

The Example of Childcare and Income Tax Reforms in Germany

D I S S E R T A T I O N

zur Erlangung des akademischen Grades

doctor rerum politicarum

(Doktor der Wirtschaftswissenschaft)

eingereicht am

Fachbereich Wirtschaftswissenschaft

der Freien Universität Berlin

von

Mag. rer. soc. oec. Katharina Anna Wrohlich

geboren am 9.7.1977 in Wien

Datum der Disputation: 22. Juni 2007

Erstgutachter: Prof. Viktor Steiner, FU Berlin und DIW Berlin

Zweitgutachter: Prof. Giacomo Corneo, FU Berlin

Preface

I had the opportunity to write this dissertation while being a research associate at the Public Economics department of the German Institute for Economic Research, DIW Berlin. I found this environment extremely motivating, inspiring and supportive. First and foremost, this is the merit of my principle supervisor Prof. Viktor Steiner, whom I would like to thank for his constant support and encouragement. I have benefited enormously from his supervision, the great amount of time he took to discuss my work with me and from our joint work. I am also very grateful to Prof. Giacomo Corneo who acted as my second supervisor.

Second, I would like to thank Peter Haan, who not only shared the office with me during the last four years but also many thoughts and ideas. He was a great source of motivation, inspiration and help, and his friendship made the work on this thesis fun (most of the time). This is also true for many other friends and colleagues at DIW Berlin, in particular Arne Uhlendorff, Marco Caliendo and Michal Myck who read and discussed large parts of my work. I would also like to thank Hermann Buslei, who helped me with my first steps in microsimulation and was always available for discussions, Stefan Bach, who - among many other topics - discussed the pros and cons of the German income tax splitting with me, Rainald Borck, Frank Fossen, Dirk Hofmann, Nadja Dwenger, Christian Schmitt, Erika Schulz, Nicole Scheremet, Dagmar Svindland, Gert Dreierberg and Reza Rassouli. Moreover, I would like to thank C. Katharina Spiess for advise and discussions of my work. I also thank many other friends for support and inspiration, in particular, Patricia Alvarez-Plata, Marton Csillag, Fabien Dell, Clemens Jobst, Martina Krebs, Christian Langer and Kristian Orsini. Thanks also go to the participants of the

BeNA (Berlin Network of Labour Market Researchers) seminar - in particular Silke Anger, Ronald Bachmann and Michael Kvangsicka - where I had the opportunity to present most of the material of my dissertation at an early stage. My work further profited from research on related fields with many different co-authors, in particular Miriam Beblo and Charlotte Lauer, Fabien Dell and Alexandre Baclet, Christine Lietz and the microsimulation team at IHS, C. Katharina Spiess and of course Viktor Steiner.

Thanks also go to my parents and my sister Kristina Wrohlich for very helpful support and their interest in my work. Most importantly, I want to thank Klemens Keindl. He was a great source of inspiration, not least by constantly challenging economic models of human behavior. Moreover, he provided incredibly patient and compassionate support, for which I am deeply grateful.

Berlin, April 10th 2007.

Contents

Preface	iii
1 Introduction	1
1.1 Motivation	1
1.2 Methodology	3
1.3 Contribution and Main Findings	5
2 Institutions and Stylized Facts	9
2.1 Family Policy in Germany	9
2.1.1 Joint Taxation with Income Splitting for Married Spouses	11
2.1.2 Tax Allowances for Single Parents	13
2.1.3 Child Benefit and Child Tax Allowance	14
2.1.4 Other Transfers	16
2.1.5 Childcare Institutions	17
2.2 Mothers' Employment and Childcare Utilization	21
2.3 Recent Reforms	27
2.3.1 Childcare Policy Reforms	27
2.3.2 Reform Proposals of Family Taxation	29

3	Labor Supply and the Demand for Child Care	33
3.1	What is Microsimulation?	33
3.2	Data	36
3.3	The Tax Benefit Model	40
3.4	Childcare Costs in the Presence of Rationing	41
3.4.1	The Probability of Being Rationed with Respect to Subsidized Child- care	43
3.4.2	Estimating Parents' Fees to Subsidized Childcare	52
3.4.3	“Expected” Costs of Childcare	54
3.5	Work Incentives for Secondary Earners	55
3.6	The Behavioral Model	64
3.6.1	Previous Research	64
3.6.2	The Mother’s Choice Set	65
3.6.3	Theoretical Background	67
3.7	Econometric Specification	71
3.8	Estimation Results	73
3.9	Conclusion	78
4	Policy Simulations	83
4.1	Introduction	83
4.2	Four Reform Scenarios	84
4.2.1	Two Childcare Policy Reforms	85
4.2.2	Introducing Family Tax Splitting	85
4.2.3	Shifting from Joint to Individual Taxation	87
4.2.4	Modeling Revenue Neutrality	90
4.3	Simulation Results	91

<i>CONTENTS</i>	vii
4.3.1 New Incentives and Behavioral Adjustment	91
4.3.2 Fiscal Effects	98
4.3.3 Second-Round Behavioral Effects	100
4.3.4 Changes in the Distribution of Household Income	105
4.3.5 Changes in Household Welfare	111
4.4 Conclusion	118
5 Conclusion	123
5.1 Main Findings	123
5.2 Policy Implications	125
5.3 The Next Step	129
Appendix	132
List of Tables	137
List of Figures	137
Bibliography	139
German Summary	154

