Age at School Entry and Intergenerational Educational Mobility

PHILIPP C. BAUER REGINA T. RIPHAHN

CESIFO WORKING PAPER NO. 2541 CATEGORY 2: PUBLIC CHOICE FEBRUARY 2009

An electronic version of the paper may be downloaded • from the SSRN website: www.SSRN.com • from the RePEc website: www.RePEc.org • from the CESifo website: www.CESifo-group.org/wp

Age at School Entry and Intergenerational Educational Mobility

Abstract

We use Swiss data to test whether intergenerational educational mobility is affected by the age at which children first enter (primary) school. Early age at school entry significantly affects mobility and reduces the relative advantage of children of better educated parents.

JEL Code: I2, I21, J24, D30.

Keywords: age at entry, intergenerational transmission of education, educational mobility.

Philipp C. Bauer economiesuisse Hegibachstrasse 47 8032 Zurich Switzerland philipp.bauer@economiesuisse.ch Regina T. Riphahn University of Erlangen-Nuremberg Lange Gasse 20 90403 Nuremberg Germany regina.riphahn@wiso.uni-erlangen.de

January 27, 2009

"... early intervention to equalize allocation may be a more cost-effective way of promoting equity than compensating for unequal outcomes." J. Currie (2001, p.216)

1. Introduction

A high correlation between parent and child educational outcomes typically generates low intergenerational income mobility. While there is substantial scientific interest in comparing intergenerational mobility across societies we still know very little about its determinants.¹ Past research found institutional features such as a high age at school tracking to increase educational mobility (Bauer and Riphahn 2006, Hanushek and Wößmann 2006). Yet substantial mobility differences exist across institutional regimes with similar tracking ages. This study proposes the age at school entry as an additional determinant of educational mobility and measures its causal effect in the institutional framework of Switzerland.

Our research question differs from a literature which studies the effect of age at school entry on pupils' educational performance (e.g. Angrist and Krueger 1992, Currie 2001, Bedard and Dhuey 2006). These analyses do not consider the potential ramifications of the age at school entry for intergenerational education transmission. However, Currie (2001) points to the beneficial equity effect of an early start of general schooling which balances educational endowment differences across pupils more effectively than a system where public education starts later in a child's life. We test whether this equity advantage of early intervention is reflected in the extent of intergenerational educational mobility. – To our knowledge this is the first study to analyze the intergenerational mobility effect of the age at school entry.

We apply data on educational outcomes within a single country, i.e. Switzerland. This

¹ For a comparative study on income mobility see e.g. Solon 2002, for a comparison of education mobility see e.g. Chevalier et al. (2003) or Shavit and Blossfeld (1993).

avoids problems inherent in cross-national comparisons where more than one institutional feature differs across comparison groups and may determine the outcome of interest. We identify the causal effect of the age at school entry on educational mobility based on institutional differences across the Swiss federal cantons. The Swiss educational system is organized at the cantonal level. Probably for historical reasons the 26 cantons impose different regulations regarding age of school entry within otherwise comparable institutional frameworks.

2. Data and Empirical Approach

We apply cross-sectional data from the 2000 Swiss population census. The dependent variable indicates the type of secondary training a youth receives at age 17 in categories of high (college-bound), medium (advanced vocational), and low (only mandatory) levels of secondary schooling (for details see Bauer and Riphahn 2007). We similarly categorize parental education.² To measure the magnitude of intergenerational education transmission we evaluate the probability that children attend high level (i.e. college-bound) secondary schooling given their parents' education.

In our sample of 62,535 Swiss born youths we observe vast differences in the probability of attaining high level secondary education by parental educational background: among children of fathers with low education about ten percent attend high secondary education. Among the children of highly educated fathers this holds for more than sixty percent.

To investigate the role of the age at school entry we use information from a survey of cantonal education departments where we collected information on the typical age at school

 $^{^2}$ We consider five education indicators for each parent: high, middle, low, no information provided, parent missing (i.e. single parent household).

entry for the early 1990s. 18 of the 26 cantons clearly stated age 6 (11 cantons) or age 7 (7 cantons) as the regular age of school entry, the other 8 cantons provided age ranges.³ In order to illustrate the validity of our identifying assumption we compare the average characteristics of cantons with early and late age of school entry in **Table 1**. Only few characteristics differ significantly for the two groups of cantons. While some indicators suggest higher overall educational attainment in cantons with early school enrolment, cantons with late school enrolment spend a higher share of the public budget on education. Overall, these figures do not cast doubt on our identification strategy.

Table 2 describes the probability of high child secondary schooling given fathers' education in cantons with early (age 6) and late (age 7) school enrolment. The table separately considers age at entry based on interval midpoints (MID), the earliest (EARLY) and the latest (LATE) school entry ages. A comparison across columns yields that the probability of high (i.e. college-bound) child education increases when fathers are of high, rather than low education (cf. columns 1 and 2). A comparison across rows yields that this difference in the probability of high education varies depending on the age at which children enter school. The differences in the absolute probabilities are mostly insignificant and suggest that early school entry reduces mobility (cf. column 4). We find a significant increase in the relative difference across parental education if the separation is taking place later, rather than earlier, across all three indicators (cf. column 5).

We test whether educational mobility responds to age at entry when controlling for composition effects. We estimate flexible multinomial logit models which regress youth educational outcome (Y) on parental education (PE) and control for a large number of

³ In our baseline estimations we apply the given ages at school entry and use the midpoint (MID) where intervals were provided. In robustness tests we investigate whether our results are sensitive to the coding of the age at entry variable and distinguish results when using only the lower (EARLY) or upper (LATE) bound of the age at entry interval.

household, parental, regional, and individual characteristics (X), as well as for an indicator of the age at school entry (Entry).⁴ The model is completed by interaction terms of parental education and the age of school entry ($PE \cdot Entry$):

$$Y = a + b PE + c_0 X + c_1 Entry + d (PE \cdot Entry) + \epsilon,$$
(1)

$$\partial \mathbf{Y} / \partial \mathbf{PE} = \mathbf{b} + \mathbf{d} \text{ Entry}$$
 (2)

A jointly significant coefficient vector "d" suggests that the impact of parental education indeed varies depending on the age at school entry. In order to evaluate the age of entry effect we use the estimation results to predict the probability of college-bound (high) secondary schooling for children of parents with high and low education. A difference-in-differences type comparison of the probabilities in situations of early and late school entry then indicates the relevance of the age at entry for educational mobility.

3. Findings

The estimation results are not presented to save space (available from the authors upon request).⁵ **Table 3** describes the probabilities which are predicted based on estimated coefficients (see columns 1-3). For robustness checks the estimations were performed separately for indicators of the midpoint of the age range of school entry (Panel A: MID), the earliest age of school entry (Panel B: EARLY), and the latest possible age of school entry (Panel C: LATE). In all three cases the eight coefficients "d" of the interaction terms (PE \cdot Entry) (see equation 2) were jointly statistically significant at least at the five percent level.

⁴ The empirical model controls for a total of 8 indicators of paternal and maternal education, a total of 20 indicators of paternal and maternal occupational position, age of father and age of mother, 4 indicators of religion, 4 indicators of the number of siblings, 6 region indicators, population density in the area of residence, sex of the child, indicator of late school entry and 8 interaction terms of late school entry and parental education.

⁵ A Hausman test indicated that the IIA assumption of the multinomial logit estimator cannot be rejected in our data.

Thus the correlation between parent and child education appears to be significantly modified by the timing of tracking.

In column 4 (7) **Table 3** provides the absolute difference in the predicted probabilities of children with high and low (middle) educated fathers to attain the highest secondary school degree. Column 10 (13) provides the relative differences. The subsequent columns provide p-values for tests of the hypotheses that these probability differences differ across age of school entry regimes. In all cases the probability difference increases with higher age at school entry. The relative differences are more often statistically significant than the absolute differences. The evidence does not allow us to reject the hypothesis that early age at entry yields higher intergenerational mobility.

In Bauer and Riphahn (2006) we showed, that the age of tracking pupils in abilitybased streams of secondary school significantly affects intergenerational mobility. As the tracking age constitutes another difference across Swiss federal cantons we need to determine whether the effect of age of school entry on intergenerational educational mobility is robust to controls for the age of tracking. In additional estimations we controlled for whether a canton follows an early or a late tracking regime and reevaluated the effect of the age at school entry. Our results are unchanged, early age at school entry has beneficial and robust effects on educational mobility even conditional on the age of tracking.

4. Conclusion

Based on a literature that investigates the educational attainment effects of age at school entry we hypothesize that early schooling contributes to reduce intergenerational educational transmission and to increase educational mobility. This positive effect of early entry is confirmed in our analysis which takes advantage of institutional differences across Swiss cantonal education systems. The approach is similar to a difference-in-difference estimation and identifies the causal effect of age at entry if there are no unobservable mobility differences between cantons that are correlated with age at entry.

This is the first test of the effect of age at school entry on educational mobility. It is particularly reliable, as it operates within a given national institutional framework and thus is unaffected by other institutional differences that hamper studies which apply international comparisons to identify the effect of interest.

References

- Angrist, Joshua D., and Alan B. Krueger, 1992, The Effect of Age at School Entry on Educational Attainment: An Application of Instrumental Variables with Moments from Two Samples, *Journal of the American Statistical Association* 87(418), 328-336.
- Bauer, Philipp and Regina T. Riphahn, 2006, Timing of school tracking as a determinant of intergenerational transmission of education, *Economics Letters* 91, 90-97.
- Bauer, Philipp and Regina T. Riphahn, 2007, Intergenerational Transmission of Educational Attainment: Evidence from Switzerland on Natives and Second Generation Immigrants, *Journal of Population Economics* 20(1), 121-148.
- Bedard, Kelly and Elizabeth Dhuey, 2006, The Persistence of Early Childhood Maturity: International Evidence of Long-Run Age Effects, *Quarterly Journal of Economics* 121(4), 1432-1472.
- Chevalier, Arnaud, Kenny Denny, and Dorren McMahon, 2003, A multi-country study of inter-generational educational mobility, *ISSC Discussion Paper* 2003/06, Dublin.
- Currie, Janet, 2001, Early Childhood Education Programs, *Journal of Economic Perspectives* 15(2), 213-238.
- Hanushek, E.A. and L. Wößmann, 2006, Does educational tracking affect performance and inequality? Differences-in-differences evidence across countries, *Economic Journal* 116 (510), C63-C76.
- Müller Kucera, Karin and Martin Stauffer, 2003, Wirkungsvolle Lehrkräfte rekrutieren, weiterbilden und halten. Grundlagenbericht Schweiz, Schweizerische Koordinationskonferenz Bildungsforschung, Aarau.
- Shavit, Yossi and Hans-Peter Blossfeld (eds.), 1993, Persistent Inequality. Changing Educational Attainment in Thirteen Countries, Westview Press: Boulder et al.
- Solon, Gary, 2002, Cross-Country Differences in Intergenerational Earnings Mobility, Journal of Economic Perspectives 16(3), 59-66.

	Mean in early school enrolment cantons	Mean in late school enrolment cantons	Test of equality of means (p-value)
Population share: tertiary degree	0.048	0.043	0.598
Population share: advanced school degree	0.095	0.086	0.584
Population share: no more than mandatory schooling	0.246	0.240	0.697
Advanced school graduations 2000 / 1000 inhabitants	2.338	1.923	0.071 +
University graduations 2000 (in 1000 inhabitants)	1.298	1.058	0.115
Education expenditures per capita (in Swiss Francs)	2602.8	2635.0	0.843
Share of education expenditures in public expenditures	0.271	0.288	0.366
Average teacher salary in primay schools	100.50	100.88	0.912
Average teacher salary in secondary schools	102.60	96.419	0.087 +
Performance based teacher pay (5=high, 1 = low)	2.154	3.385	0.016 *
Primary teacher probability of job change (in percent)	3.846	3.077	0.435
Secondary teacher probability of job change (in percent)	5.077	2.923	0.055 +

Table 1Mean characteristics of cantons with early and late age of school entry

Source: Own calculations based on population census 2000 and Müller Kucera and Stauffer (2003). **, * and + indicate significantly different means at the 1, 5 and 10 percent level.

	P(high low)	P (high high)	P (high high) Abs. Diff.			p-value	
	1	2	3	4	5	6	
(A) MID							
enrolment: 6	0,155 (0,007)	0,689 (0,010)	0,534	0,068	4,44	0,000	
enrolment: 7	0,067 (0,005)	0,575 (0,012)	0,508		8,53		
(B) EARLY							
enrolment: 6	0,130 (0,005)	0,652 (0,007)	0,522	0,177	5,03	0,000	
enrolment: 7	0,067 (0,005)	0,575 (0,012)	0,508		8,53		
			-				
(C) LATE							
enrolment: 6	0.175 (0.007)	0.698 (0.009)	0.523	0.266	3.99	0.000	
enrolment: 7	0.078 (0.004)	0.592 (0.008)	0.514	-,	7.63	-,	
	-,(-,)	-,(-,)	3,211		.,		

Table 2Observed probability of child high secondary education by paternal educationand cantonal age at school entry

Note: P (high | low) describes the probability that children of fathers with low education pursue the high secondary track, the other probabilities similarly condition on fathers' education. Standard errors are in parentheses, the p-values apply to one sided tests of the null hypotheses that the absolute and relative differences across school entry regimes are identical.

				Absolute Differences					Relative Differences						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	P(high	P (high	P (high	= 3 - 1	Diff. age 6-5	Diff. age	= 3 - 2	Diff. age 6-5	Diff. age	= 3 / 1	Diff. age 6-5	Diff. age	= 3 / 2	Diff. age 6-5	Diff. age
	low)	mid)	high)		and 7-6	7-5		and 7-6	7-5		and 7-6	7-5		and 7-6	7-5
					p-value	p-value		p-value	p-value		p-value	p-value		p-value	p-value
(A) MID															
enrolment: 5	0,202	0,359	0,646	0,443			0,287			3,193			1,801		
	(0,133)	(0,171)	(0,174)	(0,092)			(0,068)			(1,635)			(0,549)		
			. ,		0,169		,	0,047			0,062			0,052	
enrolment: 6	0,115	0,258	0,616	0,501		0,233	0,358		0,083	5,346		0,066	2,391		0,051
	(0,088)	(0,147)	(0,176)	(0,113)			(0,071)			(2,890)			(0,872)		
					0,333			0,138			0,071			0,052	
enrolment: 7	0,061	0,176	0,583	0,522			0,407			9,544			3,317		
	(0,052)	(0,118)	(0,180)	(0,141)			(0,091)			(5,461)			(1,388)		
(B) EARLY															
enrolment: 5	0,174	0,323	0,671	0,497			0,348			3,852			2,075		
	(0,125)	(0,169)	(0,170)	(0,095)			(0,071)			(2,256)			(0,779)		
					0,395			0,257			0,060			0,034	
enrolment: 6	0,105	0,241	0,618	0,513		0,487	0,377		0,328	5,895		0,061	2,561		0,030
	(0,084)	(0,146)	(0,179)	(0,119)			(0,075)			(3,383)			(0,999)		
					0,601			0,411			0,066			0,030	
enrolment: 7	0,060	0,174	0,560	0,500			0,387			9,339			3,225		
	(0,052)	(0,120)	(0,186)	(0,147)			(0,094)			(5,263)			(1,266)		
	0.400	0.004	0 575	0.440			0.070			2 550			4 000		
enroiment: 5	0,162	0,304	0,575	0,413			0,270			3,550			1,888		
	(0,087)	(0,147)	(0,179)	(0,126)	0.026		(0,087)	0.020		(4,675)	0.054		(1,245)	0.202	
anrolmonti C	0 1 1 2	0.249	0 501	0.470	0,026	0.001	0 2 4 2	0,029	0.000	E 202	0,254	0.024	0 070	0,202	0.010
enroiment. 6	(0, 112)	0,240	0,591	0,479		0,001	0,342		0,000	5,203		0,024	2,370		0,012
	(0,088)	(0,148)	(0,182)	(0,118)	0.000		(0,074)	0.000		(2,819)	0.000		(0,843)	0.000	
oprolmont: 7	0.075	0 100	0.607	0.522	0,032		0 409	0,006		0 1 1 6	0,099		2 0 4 0	0,069	
enronnent: 7	0,075	0,199	0,007	0,552			(0,400			0,110			3,049		
	(0,067)	(0,134)	(0,179)	(0,132)			(0,084)			(4,774)			(1,291)		

Table 3Predicted probability of child high secondary education by parental education and cantonal enrolment regime

Note: P (high | low) describes the probability that children of fathers with low education pursue the high secondary track, the other probabilities similarly condition on fathers' education. In parentheses are bootstrapped standard errors, the p-values apply to one-sided tests of the null hypotheses that the absolute and relative differences (presented in columns 4, 7, 10 and 13) in the early enrolment regime are smaller than in the late enrolment regimes. Source: Own calculations based on Census 2000 and on a survey of cantonal education departments.

CESifo Working Paper Series

for full list see www.cesifo-group.org/wp (address: Poschingerstr. 5, 81679 Munich, Germany, office@cesifo.de)

- 2477 Gaëtan Nicodème, Corporate Income Tax and Economic Distortions, November 2008
- 2478 Martin Jacob, Rainer Niemann and Martin Weiss, The Rich Demystified A Reply to Bach, Corneo, and Steiner (2008), November 2008
- 2479 Scott Alan Carson, Demographic, Residential, and Socioeconomic Effects on the Distribution of 19th Century African-American Stature, November 2008
- 2480 Burkhard Heer and Andreas Irmen, Population, Pensions, and Endogenous Economic Growth, November 2008
- 2481 Thomas Aronsson and Erkki Koskela, Optimal Redistributive Taxation and Provision of Public Input Goods in an Economy with Outsourcing and Unemployment, December 2008
- 2482 Stanley L. Winer, George Tridimas and Walter Hettich, Social Welfare and Coercion in Public Finance, December 2008
- 2483 Bruno S. Frey and Benno Torgler, Politicians: Be Killed or Survive, December 2008
- 2484 Thiess Buettner, Nadine Riedel and Marco Runkel, Strategic Consolidation under Formula Apportionment, December 2008
- 2485 Irani Arraiz, David M. Drukker, Harry H. Kelejian and Ingmar R. Prucha, A Spatial Cliff-Ord-type Model with Heteroskedastic Innovations: Small and Large Sample Results, December 2008
- 2486 Oliver Falck, Michael Fritsch and Stephan Heblich, The Apple doesn't Fall far from the Tree: Location of Start-Ups Relative to Incumbents, December 2008
- 2487 Cary Deck and Harris Schlesinger, Exploring Higher-Order Risk Effects, December 2008
- 2488 Michael Kaganovich and Volker Meier, Social Security Systems, Human Capital, and Growth in a Small Open Economy, December 2008
- 2489 Mikael Elinder, Henrik Jordahl and Panu Poutvaara, Selfish and Prospective: Theory and Evidence of Pocketbook Voting, December 2008
- 2490 Maarten Bosker and Harry Garretsen, Economic Geography and Economic Development in Sub-Saharan Africa, December 2008
- 2491 Urs Fischbacher and Simon Gächter, Social Preferences, Beliefs, and the Dynamics of Free Riding in Public Good Experiments, December 2008

- 2492 Michael Hoel, Bush Meets Hotelling: Effects of Improved Renewable Energy Technology on Greenhouse Gas Emissions, December 2008
- 2493 Christian Bruns and Oliver Himmler, It's the Media, Stupid How Media Activity Shapes Public Spending, December 2008
- 2494 Andreas Knabe and Ronnie Schöb, Minimum Wages and their Alternatives: A Critical Assessment, December 2008
- 2495 Sascha O. Becker, Peter H. Egger, Maximilian von Ehrlich and Robert Fenge, Going NUTS: The Effect of EU Structural Funds on Regional Performance, December 2008
- 2496 Robert Dur, Gift Exchange in the Workplace: Money or Attention?, December 2008
- 2497 Scott Alan Carson, Nineteenth Century Black and White US Statures: The Primary Sources of Vitamin D and their Relationship with Height, December 2008
- 2498 Thomas Crossley and Mario Jametti, Pension Benefit Insurance and Pension Plan Portfolio Choice, December 2008
- 2499 Sebastian Hauptmeier, Ferdinand Mittermaier and Johannes Rincke, Fiscal Competition over Taxes and Public Inputs: Theory and Evidence, December 2008
- 2500 Dirk Niepelt, Debt Maturity without Commitment, December 2008
- 2501 Andrew Clark, Andreas Knabe and Steffen Rätzel, Boon or Bane? Others' Unemployment, Well-being and Job Insecurity, December 2008
- 2502 Lukas Menkhoff, Rafael R. Rebitzky and Michael Schröder, Heterogeneity in Exchange Rate Expectations: Evidence on the Chartist-Fundamentalist Approach, December 2008
- 2503 Salvador Barrios, Harry Huizinga, Luc Laeven and Gaëtan Nicodème, International Taxation and Multinational Firm Location Decisions, December 2008
- 2504 Andreas Irmen, Cross-Country Income Differences and Technology Diffusion in a Competitive World, December 2008
- 2505 Wenan Fei, Claude Fluet and Harris Schlesinger, Uncertain Bequest Needs and Long-Term Insurance Contracts, December 2008
- 2506 Wido Geis, Silke Uebelmesser and Martin Werding, How do Migrants Choose their Destination Country? An Analysis of Institutional Determinants, December 2008
- 2507 Hiroyuki Kasahara and Katsumi Shimotsu, Sequential Estimation of Structural Models with a Fixed Point Constraint, December 2008
- 2508 Barbara Hofmann, Work Incentives? Ex Post Effects of Unemployment Insurance Sanctions – Evidence from West Germany, December 2008

- 2509 Louis Hotte and Stanley L. Winer, The Demands for Environmental Regulation and for Trade in the Presence of Private Mitigation, December 2008
- 2510 Konstantinos Angelopoulos, Jim Malley and Apostolis Philippopoulos, Welfare Implications of Public Education Spending Rules, December 2008
- 2511 Robert Orlowski and Regina T. Riphahn, The East German Wage Structure after Transition, December 2008
- 2512 Michel Beine, Frédéric Docquier and Maurice Schiff, International Migration, Transfers of Norms and Home Country Fertility, December 2008
- 2513 Dirk Schindler and Benjamin Weigert, Educational and Wage Risk: Social Insurance vs. Quality of Education, December 2008
- 2514 Bernd Hayo and Stefan Voigt, The Relevance of Judicial Procedure for Economic Growth, December 2008
- 2515 Bruno S. Frey and Susanne Neckermann, Awards in Economics Towards a New Field of Inquiry, January 2009
- 2516 Gregory Gilpin and Michael Kaganovich, The Quantity and Quality of Teachers: A Dynamic Trade-off, January 2009
- 2517 Sascha O. Becker, Peter H. Egger and Valeria Merlo, How Low Business Tax Rates Attract Multinational Headquarters: Municipality-Level Evidence from Germany, January 2009
- 2518 Geir H. Bjønnes, Steinar Holden, Dagfinn Rime and Haakon O.Aa. Solheim, ,Large' vs. ,Small' Players: A Closer Look at the Dynamics of Speculative Attacks, January 2009
- 2519 Jesus Crespo Cuaresma, Gernot Doppelhofer and Martin Feldkircher, The Determinants of Economic Growth in European Regions, January 2009
- 2520 Salvador Valdés-Prieto, The 2008 Chilean Reform to First-Pillar Pensions, January 2009
- 2521 Geir B. Asheim and Tapan Mitra, Sustainability and Discounted Utilitarianism in Models of Economic Growth, January 2009
- 2522 Etienne Farvaque and Gaël Lagadec, Electoral Control when Policies are for Sale, January 2009
- 2523 Nicholas Barr and Peter Diamond, Reforming Pensions, January 2009
- 2524 Eric A. Hanushek and Ludger Woessmann, Do Better Schools Lead to More Growth? Cognitive Skills, Economic Outcomes, and Causation, January 2009
- 2525 Richard Arnott and Eren Inci, The Stability of Downtown Parking and Traffic Congestion, January 2009

- 2526 John Whalley, Jun Yu and Shunming Zhang, Trade Retaliation in a Monetary-Trade Model, January 2009
- 2527 Mathias Hoffmann and Thomas Nitschka, Securitization of Mortgage Debt, Asset Prices and International Risk Sharing, January 2009
- 2528 Steven Brakman and Harry Garretsen, Trade and Geography: Paul Krugman and the 2008 Nobel Prize in Economics, January 2009
- 2529 Bas Jacobs, Dirk Schindler and Hongyan Yang, Optimal Taxation of Risky Human Capital, January 2009
- 2530 Annette Alstadsæter and Erik Fjærli, Neutral Taxation of Shareholder Income? Corporate Responses to an Announced Dividend Tax, January 2009
- 2531 Bruno S. Frey and Susanne Neckermann, Academics Appreciate Awards A New Aspect of Incentives in Research, January 2009
- 2532 Nannette Lindenberg and Frank Westermann, Common Trends and Common Cycles among Interest Rates of the G7-Countries, January 2009
- 2533 Erkki Koskela and Jan König, The Role of Profit Sharing in a Dual Labour Market with Flexible Outsourcing, January 2009
- 2534 Tomasz Michalak, Jacob Engwerda and Joseph Plasmans, Strategic Interactions between Fiscal and Monetary Authorities in a Multi-Country New-Keynesian Model of a Monetary Union, January 2009
- 2535 Michael Overesch and Johannes Rincke, What Drives Corporate Tax Rates Down? A Reassessment of Globalization, Tax Competition, and Dynamic Adjustment to Shocks, February 2009
- 2536 Xenia Matschke and Anja Schöttner, Antidumping as Strategic Trade Policy Under Asymmetric Information, February 2009
- 2537 John Whalley, Weimin Zhou and Xiaopeng An, Chinese Experience with Global 3G Standard-Setting, February 2009
- 2538 Claus Thustrup Kreiner and Nicolaj Verdelin, Optimal Provision of Public Goods: A Synthesis, February 2009
- 2539 Jerome L. Stein, Application of Stochastic Optimal Control to Financial Market Debt Crises, February 2009
- 2540 Lars P. Feld and Jost H. Heckemeyer, FDI and Taxation: A Meta-Study, February 2009
- 2541 Philipp C. Bauer and Regina T. Riphahn, Age at School Entry and Intergenerational Educational Mobility, February 2009