



UNIVERSITY OF AMSTERDAM

Amsterdam School of Economics

Annual Research Report 2012





Preface

The 2012 annual research report of the University of Amsterdam School of Economics (ASE) provides information on the organisation, activities and results of ASE-RI. With the funding of the institute, staff members publish in and edit international journals, attend and organise international conferences and workshops, and write and supervise dissertations.

The past year has been exceptionally good in terms of completed dissertations: in total 25 students supervised by ASE faculty members successfully defended their thesis. Furthermore, the ASE continues to attract a large number of new PhD students, not only from the MPhil programme of the Tinbergen Institute, but also from the European Doctorate in Economics program funded by Erasmus Mundus (EDEEM). Because this is a continuation of a trend, this implies that we may expect the number of completed dissertations to remain high in the years to come.

In the past two years, the number of publications in international A and B journals by ASE faculty members has decreased, after many years of steady increase. This may be explained by a decrease in research staff as a consequence of the recent faculty reorganisation, but also by the changing composition of the research staff, with an increasing proportion of PhD students.

2012 has been a successful year in terms of external funding, with a new Chair in Pension Economics sponsored by MN in the Macro and International Economics group, and a new Chair in Risk and Insurance sponsored by the Dutch Association of Insurers in the Actuarial Science group. Furthermore, researchers from the ASE continue to be highly visible in public debates on issues such as pension reform and the financial and sovereign debt crisis. Our research priority area on Behavioural Economics has continued to flourish, and various researchers continue to develop new initiatives to apply for large national and European research funds. I would like to end in thanking all research staff for their contributions.

Prof. dr. H. Peter Boswijk
Director of the Amsterdam School of Economics Research Institute
October 2013

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A

THE RESEARCH INSTITUTE

CHAPTER 1: INSTITUTIONAL OVERVIEW

1.1 MISSION STATEMENT

ASE-RI (Amsterdam School of Economics Research Institute) facilitates and promotes research at ASE to foster the academic ideal of intertwined university teaching and research. The institute aims for research results that significantly improve our understanding of the operation of economic systems, the behaviour of agents in the economy and the effects of economic policies. ASE-RI aims to appraise researcher performance and to provide a directive for further research with its standards for research. Research time is allocated to researchers based on their performance.

1.2 ORGANISATION

ASE-RI, the research institute of the Amsterdam School of Economics, is one of the two research institutes of the Faculty of Economics & Business (FEB); the other being the research institute of the Amsterdam Business School (ABS-RI). ASE-RI is the successor of RESAM (Research in EconomicS and econometrics AmsterdaM), which was established in 1998 after the MUB (Wet Modernisering Universitair Bestuur: law on the modernization of university management) came into effect. ASE-RI covers the wide area of economics and econometrics.

Research is organised in Research Programmes, which are directed by Programme leaders who are experts with core positions in the curriculum. Stimulating research that significantly improves our understanding of the economy is meant as a focus on fundamental research. In many cases, the inspiration for research questions derives from practical problems in business and society as well as from pressing problems for government policies, as is only natural for a social science. But the research results should primarily be reported to the international academic community and assessed against the quality standards that apply there. Such permanent quality assessment feeds back into the quality of teaching and of advise given to business and the government. Contributions to public debates should be a consequence of developing reliable knowledge about the economy rather than a primary goal.

ASE-RI closely co-operates with the Tinbergen Institute, where many of ASE-RI's researchers are appointed as fellow. The Tinbergen Institute also acts as the graduate school for ASE-RI students.

1.3 STRATEGY AND POLICY

ASE-RI aims to reach its goals by organising, stimulating and monitoring Research Programmes. Annually, programme performance is assessed. Means are allocated to programmes based on performance. Research coverage is not directed and controlled by the Faculty's management, but develops in an open competitive environment. General policy issues are discussed by the Council of Programme Directors.

Faculty members in the Amsterdam School of Economics are assigned time annually for research based on their publication records in the past three years. In this way ASE-RI provides incentives to increase the quality and quantity of output. Publications are graded by quality level of the outlet. For journals, ASE-RI distinguishes:

- *A: excellent, international top level.* Publications set directions for research, by approach and by method, select topics and set standards for analytical and methodological level.
- *B: good international level.* Publications meet high analytic and methodological standards but have far less influence on direction and standards for future research.
- *Other refereed and non-refereed journals.* Journals satisfy the minimum norm of aiming for an international or national audience, applying blind refereeing, and publish in an accessible language. Analytical and methodological standards satisfy a generally accepted minimum level.

ASE-RI has drawn up a list of rankings of publication outlets (journals, publishing houses, conference proceedings (see the ASE-RI website www.aseri.uva.nl). The minimum norm for adequate research performance is formulated as 100 points over the past three years. An A-level publication counts for 100 points and a B-level counts for 50 points. Other publications are worth no points. Individual authors of a publication with N authors each get a share of $2/(1+N)$ points of the publication. Research time assigned to individuals is related to publication points over the past three years as follows:

100 or more:	0.5 fte	1-49:	0.125 fte
50-99:	0.25 fte	0:	0 fte

For faculty members with part-time positions, norms and research time are adjusted proportionally. Fellows of the Tinbergen Institute, the graduate research school in which UvA, EUR and VU co-operate, are allotted the maximum research time for a period of three years, at 0.5 of their working hours. Admission as a TI Fellow is based on A- and B-level publications only (TI has its own grading of publications).

ASE-RI also stimulates concentration of the School's research in Research Programmes by other means (such as providing an annual budget for conference visits and other academic activities to the Research Programmes).

CHAPTER 2: INPUT

2.1 RESOURCES AND OTHER PERSONNEL

Personnel policy and human resource management are the domain of the department chairs and section heads. ASE-RI encourages the sections to hire good researchers and to stimulate faculty to increase the quality and quantity of academic publications, and has a vote in promotion and tenure decisions. Broader strategy issues concerning hiring and firing are discussed within the Amsterdam School of Economics management team and this has resulted in a document on personnel policies in which the requirements that current and new staff should meet are clearly defined. Tenured positions are only awarded to people who meet the admission requirements for fellowship of an accredited research school (preferably the Tinbergen Institute).

The tables below give information on ASE-RI faculty. Table I shows that the overall research capacity was increasing until 2011. Overall, the consequences of a major reorganisation of the Faculty of Economics and Business showed in 2011. A cut in numbers of scientific staff took place and the result was a decrease of 19% of total research staff. The total research staff slowly picked up again in 2012, due to inflow of staff hired in the second and third flows of funds and of PhD students.

Table I: Input research staff at institutional level (FTE)

\	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		24,94	25,83	21,31	18,83
WP 2 (second flow of funds, excl. Ph.D.'s)		5,82	6,87	6,32	7,83
WP 3 (third flow of funds, excl. Ph.D.'s)		35,00	36,36	23,78	33,76
Ph.D. students		19,14	18,45	18,91	22,13
Total Research staff		84,90	87,51	70,32	82,55
Support staff ASE-RI(bureau)		0,80	0,84	1,00	1,00
Total Staff		85,70	88,35	71,32	83,55

Table II: Input research staff at programme level (FTE)

<i>UvA-Econometrics</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		4,71	5,73	3,96	2,68
WP 2 (second flow of funds, excl. Ph.D.'s)		0,00	0,00	0,60	0,80
WP 3 (third flow of funds, excl. Ph.D.'s)		0,10	0,10	0,00	0,00
Ph.D. students		1,80	0,00	1,45	3,20
Total Research staff		6,61	5,83	6,01	6,68
<i>Operations Research & Management</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		2,62	2,45	0,41	-
WP 2 (second flow of funds, excl. Ph.D.'s)		0,00	0,00	0,00	-
WP 3 (third flow of funds, excl. Ph.D.'s)		0,00	0,00	0,00	-
Ph.D. students		0,30	0,00	0,00	-
Total Research staff		2,92	2,45	0,41	-

<i>Equilibrium, Expectations & Dynamics</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		4,21	2,86	2,91	2,64
WP 2 (second flow of funds, excl. Ph.D.'s)		0,00	0,80	0,60	1,67
WP 3 (third flow of funds, excl. Ph.D.'s)		0,36	1,11	0,08	0,80
Ph.D. students		2,60	2,55	3,83	2,73
Total Research staff		7,17	7,32	7,42	7,84
<i>Actuarial Science</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		1,79	1,75	0,96	0,75
WP 2 (second flow of funds, excl. Ph.D.'s)		0,50	0,00	0,60	1,82
WP 3 (third flow of funds, excl. Ph.D.'s)		0,61	0,51	0,77	0,66
Ph.D. students		1,10	0,70	0,47	0,99
Total Research staff		4,00	2,96	2,80	4,22
<i>Industrial Statistics</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		0,40	0,10	0,10	0,10
WP 2 (second flow of funds, excl. Ph.D.'s)		0,00	0,00	0,00	0,00
WP 3 (third flow of funds, excl. Ph.D.'s)		0,80	0,70	0,70	2,00
Ph.D. students		1,50	1,90	1,70	0,25
Total Research staff		2,40	2,70	2,50	2,35
<i>Mint</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		2,88	2,95	2,97	3,15
WP 2 (second flow of funds, excl. Ph.D.'s)		1,13	1,88	1,27	0,33
WP 3 (third flow of funds, excl. Ph.D.'s)		1,77	1,33	1,20	0,98
Ph.D. students		3,10	3,00	1,85	1,78
Total Research staff		8,88	9,16	7,29	6,24
<i>Human Capital</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		3,40	4,05	4,33	1,63
WP 2 (second flow of funds, excl. Ph.D.'s)		1,06	1,34	1,50	2,13
WP 3 (third flow of funds, excl. Ph.D.'s)		3,32	3,52	0,49	0,40
Ph.D. students		2,10	3,70	5,28	4,94
Total Research staff		9,88	12,61	11,60	9,10
<i>History & Methodology of Economics</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		1,67	1,71	0,93	-
WP 2 (second flow of funds, excl. Ph.D.'s)		0,40	0,00	0,00	-
WP 3 (third flow of funds, excl. Ph.D.'s)		0,10	0,11	0,11	-
Ph.D. students		1,20	1,20	0,20	-
Total Research staff		3,37	3,02	1,24	-
<i>Experimental & Political Economics</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		2,57	3,33	3,81	3,71
WP 2 (second flow of funds, excl. Ph.D.'s)		1,33	1,58	0,75	0,28
WP 3 (third flow of funds, excl. Ph.D.'s)		0,00	0,10	0,00	0,00
Ph.D. students		4,30	4,30	3,33	4,81
Total Research staff		8,20	8,20	7,89	8,80
<i>Industrial Org., Competition Pol. & Regulation</i>	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		0,69	0,90	0,93	4,17
WP 2 (second flow of funds, excl. Ph.D.'s)		1,40	1,27	1,00	0,80
WP 3 (third flow of funds, excl. Ph.D.'s)		0,00	0,00	0,00	0,00
Ph.D. students		1,14	1,10	0,80	3,43
Total Research staff		3,73	3,27	2,73	8,40

SEO	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		0,00	0,00	0,00	0,00
WP 2 (second flow of funds, excl. Ph.D.'s)		0,00	0,00	0,00	0,00
WP 3 (third flow of funds, excl. Ph.D.'s)		27,94	28,88	20,43	28,92
Ph.D. students		0,00	0,00	0,00	0,00
Total Research staff		27,94	28,88	20,43	28,92
AE OVO	fte	2009	2010	2011	2012
WP 1 (first flow of funds, excl. Ph.D.'s)		-	-	1,18	-
WP 2 (second flow of funds, excl. Ph.D.'s)		-	-	0,50	-
WP 3 (third flow of funds, excl. Ph.D.'s)		-	-	1,40	-
Ph.D. students		-	-	1,40	-
Total Research staff		-	-	3,08	-

Most faculty are in the ranks of professor and PhD student (the number of researcher (oz) fte is highest, but the majority are working at SEO Economic Research). Overall there seems to be a healthy mix of researchers in different stages of their career, although the numbers of Uhd's and Postdocs are low.

Table III Ranks at programme level

Research programme	Hgl		Uhd		Ud		Oz		Pdoc		Ph.D.		Guest		Total	
	#	fte	#	fte	#	fte	#	fte	#	fte	#	fte	#	fte	#	fte
UvA- Econometrics	5	0,63	3	1,30	4	1,55	0	0,00	0	0,00	4	3,20	2	0,00	18	6,68
Equilibrium, expectations & dynamics	3	1,54	2	0,50	2	0,44	0	0,00	4	2,63	5	2,73	3	0,00	19	7,84
Actuarial science	6	2,00	0	0,00	2	0,76	0	0,00	1	0,47	3	0,99	1	0,00	13	4,22
Industrial Statistics	2	0,80	0	0,00	0	0,00	3	1,30	0	0,00	2	0,25	1	0,00	8	2,35
MInt	8	1,84	1	0,50	5	0,94	0	0,00	3	1,18	9	1,78	3	0,00	29	6,24
Human Capital	5	2,29	0	0,00	4	0,00	3	1,87	0	0,00	9	4,94	7	0,00	28	9,10
Experimental & political economics	4	1,71	1	0,25	3	0,74	1	0,50	1	0,79	9	4,81	6	0,00	25	8,80
Industrial org., Competition pol. & Regulation	5	1,94	0	0,00	7	3,03	0	0,00	0	0,00	6	3,43	0	0,00	18	8,40
SEO economic research	2	1,28	0	0,00	0	0,00	31	27,64	0	0,00	0	0,00	0	0,00	33	28,92
Total	40	14,03	7	2,55	27	7,46	38	31,31	9	5,07	47	22,13	23	0,00	191	82,55

2.2 RESOURCES, FUNDING AND FACILITIES

A substantial part of the faculty's research budget is spent on the Tinbergen Institute, where it is used to cover the expenses of the MPhil programme, courses for students and the organisation of seminars. Another large part of the budget concerns funding of the research priority area 'Behavioural Economics'. Furthermore, the sections of ASE are allocated a budget for matching and a budget for its Research Programmes based on the size of the programme (fte) and on the numbers of PhD graduations. This budget can be used for the funding of research fte's and for any research related activities of programme members, such as visiting conferences, conducting experiments and collecting data.

CHAPTER 3: CURRENT STATE OF AFFAIRS

3.1 PROCESSES IN RESEARCH, INTERNAL AND EXTERNAL COLLABORATION

As explained in previous chapters, ASE-RI allocates resources based on past performance. ASE-RI stimulates and facilitates application for external funding (NWO, KNAW, EU). In general, the research institute tries to stimulate an active research environment, by organising a weekly general seminar, where participants from all Research Programmes meet, and it tries to assist programme members, when necessary, by providing them with information and administrative support. The overall quality of the various seminar series is good. Especially in the Tinbergen series foreign speakers are usually invited and the debates are lively.

Actual research management takes place within the Research Programmes. Decisions on research strategies, research topics, joint work, participation in international networks, publication outlets are all taken within these Programmes, sometimes by the Programme director, but mostly in an informal way by direct communication and interaction within these groups. Research groups are typically small and interaction is frequent, direct and effective.

Box I: Seminar series organised in co-operation with ASE-RI

Tinbergen Institute Economics Colloquia

Organisation: Marco van der Leij & Jo Seldeslachts

Tinbergen Institute / CREED Seminars series

Organisation: Jeroen van de Ven & Gönül Dogan

Tinbergen Institute Econometrics Seminars & Workshops series

Organisation: Michael Massmann en Simon Broda

Tinbergen Institute PhD Lunch Seminars Series

Organisation: Lydia Geijtenbeek en Mark Kagan

Tinbergen Institute Empirical Microeconomics Seminars

Organisation: Sander Onderstal en Jose L. Moraga-Gonzalez

Tinbergen Institute Macro Seminars

Organisation: Christian Stoltenberg en Björn Brügemann

KAFEE Lunch seminar

Organisation: Noemi Peter, Matthias Weber & Dávid Kopányi

CeNDEF Seminars

Organisation: Marco van der Leij

Another way in which ASE-RI creates a stimulating research environment is by participating in the Tinbergen Institute (TI). Two other Dutch universities (Erasmus University and VU University) participate in the TI. It is their joint graduate school and facilitates exchange amongst its fellows (top researchers of the three participating faculties) by hosting seminar series and publishing a discussion paper series.

As a graduate school, the Tinbergen Institute offers a two-year research master (Master of Philosophy in Economics). These two years are part of a five-year track. The advantage of

this system is that it offers students an excellent research-oriented two-year programme with good opportunities to meet top-level supervisors (TI-fellows).

Table IV: Inflow 2002-2012 (ASE-RI)

Cohort	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
1st flow of fund projects	18	2,75	6	1	4,5	4	7	5	4	3	10	5,8
2nd flow of fund projects	3	0	4	0	3	2	4	2	1	7	1	2,1
3rd flow of fund projects	0	0,25	0	2	1,5	2	0	1	2	2	3	1,1
Total projects started	21	3	10	3	9	8	11	8	7	12	14	9,0

The number of PhD students starting a PhD project within ASE-RI was uneven in previous years and stabilized around an annual inflow of around ten since 2006. The inflow increased to 14 in 2012. As can be seen from Table IV, there are major differences between the flows of fund.

The strong drop in 2003, 2004 and 2005 was a consequence of a financial shortage and, since all projects run at least four years, because of the high number of projects started in 2002 that were still weighing down on the budget. In recent years the outflow of PhD students from the Tinbergen Institute who completed their MPhil was sufficient to fill in all vacancies.

Table V: graduations by cohort (FEB)*

FEB	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total/Average
Projects started	13	4	28	7	13	8	17	14	19	123
Graduated/Total	9/13	4/4	20/28	5/7	9/13	4/8	15/17	12/14	12/19	90/123
Fraction graduated from total	69%	100%	71%	71%	69%	50%	88%	86%	75%	75%
Graduated within 60 months	4/9	1/4	11/20	2/5	5/9	3/4	7/15	5/12	12/12	50/90
Fraction grad. within 60 months	44%	25%	55%	40%	56%	75%	47%	42%	100%	54%
Av. duration to completion in m.	79	60	65	67	62	55	57	57	44	61

* Including all FEB students (also those now under the Amsterdam Business School Research Institute)

Table VI: graduations by cohort (ASE-RI)

ASE-RI	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total/Average
Cohort	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total/Average
Projects started	10	2	19	3	9	4	9	11	8	75
Graduated/Total	8/10	2/2	16/19	2/3	6/9	1/4	7/9	9/11	7/8	58/75
Fraction graduated from total	80%	100%	84%	67%	67%	25%	78%	88%	88%	75%
Graduated within 60 months	3/8	0/2	10/16	0/0	4/6	1/1	2/7	9/9	2/7	31/58
Fraction grad. within 60 months	38%	0%	63%	0%	67%	100%	29%	100%	29%	47%
Av. duration to completion in m.	81	64	63	79,0	64	54	60	43	62	63

As can be seen in Table V, on average, PhD students at the FEB needed 61 months from start of the contract to actual graduation. From Table VI, we see similar figures for the ASE-RI PhD students. It is expected that the percentage of graduations (75%) will rise in the near future, when a larger proportion of projects started are carried out by PhD students with a completed two-year research-training programme. Also, the average duration of these students to complete the PhD has been decreasing in recent years.

3.2 ACADEMIC REPUTATION

In 2012, CentER, the research institute in economics of Tilburg University, drew up the Top 100 Worldwide Economics Schools Research Ranking based on research contributions over the period 2008-2012¹. The University of Amsterdam ranked 2nd in the Netherlands, 5th in Europe, and 23rd worldwide. This differs from the results of the ESB Economies-top 40 of 2012, where UvA ranked 5th in the Netherlands². Furthermore, the 2012 QS World University Rankings by Subject puts FEB between ranks 51-100 for the discipline Economics and Econometrics (4th in the Netherlands).

Another measure to assess the quality of ASE-RI's academic reputation is to look at the editorial positions of its staff. Table VII indicates that many faculty members take up many positions as editors or associate editors of international journals. Membership of editorial boards is also frequent.

Table VII: Editorial positions in academic international journals

Name	Editorship	Journal	Ranking
Assenza, T.	Guest editor	REPLHA Special Issue of Journal of Economic Dynamics and Control	A
Baarsma, B.E.	Member editorial board	Tijdschrift voor Toezicht	
Beetsma, R.M.W.J.	Chairman editorial board	Netspar	
Burghouwt, G.	Member editorial board	Journal of Air Transport Management	
Diks, C.G.H.	Associate editor	Studies in Nonlinear Dynamics and Econometrics	B
Diks, C.G.H.	Associate editor	Studies in Nonlinear Dynamics in Econometrics	B
Does, R.J.M.M.	Member editorial advisory board	International Journal of Lean Six Sigma	
Does, R.J.M.M.	Member editorial board and member advisory board	Quality Engineering	
Does, R.J.M.M.	Column editor	Quality Engineering	
Does, R.J.M.M.	Member editorial board	Quality Technology and Quantitative Management	
Ewijk, C. van	Editor	De Economist	B
Goovaerts, M.J.	Editor	Insurance: Mathematics and Economics	A
Goovaerts, M.J.	Editor	Journal of Computational and Applied Mathematics	B
Guerriero, C.	Editor	International Review of Law and Economics	B
Hartog, J.	Member editorial board	Economics of Education Review	B
Hartog, J.	Member editorial board	International Journal of Happiness and Development	
Hartog, J.	Member editorial board	ISRN Education	
Hommes, C.	Member editorial board	Complexity Economics	
Hommes, C.	Associate editor	Computational Economics	B
Hommes, C.	Editor	Journal of Economic Dynamics and Control	A
Hommes, C.	Associate editor	Journal of Economic Interaction and Coordination	
Hommes, C.	Associate editor	Macroeconomic Dynamics	B
Kaas, R.	Managing editor	Insurance: Mathematics and Economics	A
Kiviet, J.F.	Member editorial board	Foundations and Trends in Econometrics	
Laeven, R.J.A.	Associate editor	Insurance: Mathematics and Economics	A
Leij, M. van der	Associate editor	Network Science	
Mast, J. de	Member editorial board	Quality Engineering	
Offerman, T.J.S.	Associate editor	Games and Economic Behavior	A
Offerman, T.J.S.	Member editorial board	Experimental Economics	B
Praag, C.M. van	Associate editor	IZA Journal of European Labor Studies	
Praag, C.M. van	Associate editor	Small Business Economics	B
Schram, A.	Advisory editor	Experimental Economics	B
Soetevenet, A.R.	Associate editor	De Economist	B
Sonnemans, J.	Associate editor	European Economic Review	A
Sonnemans, J.	Member editorial board	Journal of Economic Psychology	B
Sonnemans, J.	Member editorial board	Quantitative Finance	B
Tuinstra, J.	Associate editor	Journal of Economic Dynamics and Control	A
Ven, J. van de	Associate editor	International Review of Law and Economics	B
Winden, F.A.A.M. van	Member editorial board	Public Choice	B

¹ <https://econtop.uvt.nl/rankinglist.php>.

² <http://www.economie.nl/artikel/de-economentop-40-van-2012>.

3.3 OVERVIEW OF RESULTS

Figure I: Number of publications 2007-2012

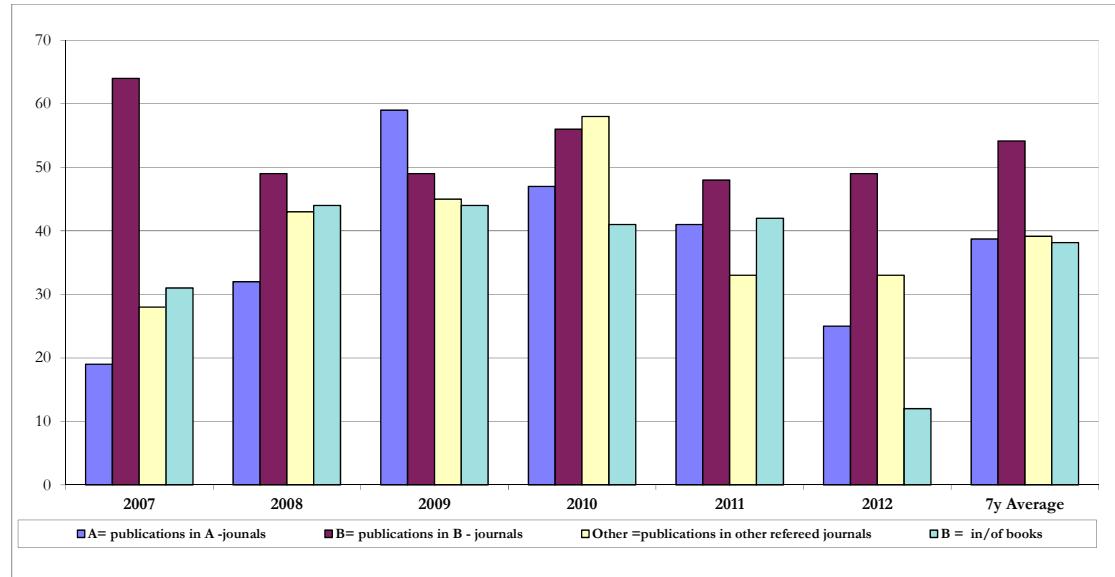


Table VIII: Publications 2007-2012

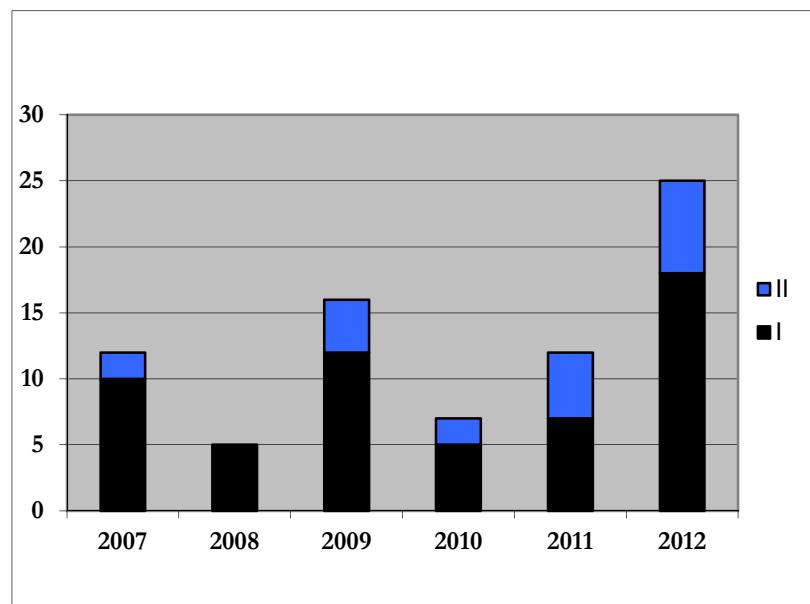
	2007	2008	2009	2010	2011	2012	7y Average
A= publications in A -journals	19	32	59	47	41	25	39
B= publications in B - journals	64	49	49	56	48	49	54
Other =publications in other refereed journals	28	43	45	58	33	33	39
B = in/of books	31	44	44	41	42	12	38
Total:	142	168	197	202	164	119	164

Figure I and Table VIII show an increasing total output between 2007 and 2010. In 2011 and 2012 the output decreased, which is partly due to a reorganisation in the Faculty of Economics and Business. This reorganisation led to a decrease in scientific staff. Furthermore, PhD students take up an increasing proportion of the research input (see Table I), and the corresponding substitution of senior research faculty for PhD students provides another reason for the decline.

Table IX: Aggregated results of the institute

Research programme	refereed journals			other journals			Book chapters			Proceedings	Books	Ph.D. theses	Prof. publ.	Pop. publ.	Working papers	Fte WP 1st-3rd FoF
	A	B	other	A	B	Other	A	B	Other							
UvA-Econometrics	3	4	0	0	0	1	0	0	0	0	0	5	0	0	3	6,68
Equilibrium, Expectations and Dynamics	3	7	3	0	0	2	1	0	0	0	0	3	1	3	13	7,84
Actuarial Science	3	0	4	0	0	0	0	0	0	0	0	0	7	3	11	4,37
Industrial Statistics (IBIS)	2	7	1	4	0	0	1	0	0	1	1	3	0	0	0	2,35
Mint	4	7	1	3	3	0	1	0	0	1	1	13	4	23	6,24	
Human Capital	3	4	2	1	0	0	0	0	0	0	0	4	1	0	9	9,10
Experimental & Political Economics	6	4	3	0	0	0	0	0	2	0	7	0	1	21	8,80	
Industrial Organization, Competition Policies & Regulation	3	6	3	0	0	0	0	0	0	0	1	11	12	12	8,40	
SEO-Amsterdam Economics	0	12	16	1	0	0	3	1	3	0	79	0	7	0	7	28,92
Total	27	51	33	9	3	3	6	3	5	24	112	23	99	82,70		
Aggregated total	111						12									

Figure II: ASE-RI Dissertations



*Category I: students who worked at FEB and graduated at FEB, II: external candidates who graduated at FEB.'

In comparison to 2010, which was not a very successful year in terms of dissertations, 2011 showed again a higher number of dissertations. The year 2012 showed a particular high increase of completed dissertations. It is expected that this number will continue to be around the same level in the years to come.

3.4 RELEVANCE TO SOCIETY

Although the main aim of ASE-RI is to let its research contribute to the international academic discourse, most research done within ASE-RI programmes contributes in several ways to society at large. Some examples are given here but more detailed information can be found in the programme sections in part B of this report.

The Human Capital Research Programme participates in TIER, an inter-university top Institute that conducts research in the field of evidence based education. The Top Institute wants to develop knowledge of 'evidence based education' that can be utilised by: 1) the Ministry of Education, Culture and Science in policy preparation and evaluation; 2) the educational practice – for example in educational institutions – in the allocation of resources and in the decision making process when choosing between educational theories; and 3) parents and students when choosing a school or training.

Researchers from the programmes MInt and Actuarial Science have strong ties with NETSPAR (network for studies on pensions, aging and retirement) and their research results will strongly impact the ways in which government and society will deal with the problems in these areas. In 2012 the Chair in Pension Economics was established, sponsored by MN. In addition, MInt has PhD students financed by De Nederlandsche Bank.

SEO Economic Research carries out contract research for ministries and public organisations, private companies and non-profit institutions, nationally and internationally. SEO distinguishes itself from other research bureaus by its analytical approach. Modern economic analysis is applied to practical issues. Empirical questions are tackled with the econometrics toolkit.

CHAPTER 4: RESEARCH PRIORITY AREA: BEHAVIOURAL ECONOMICS

4.1 BACKGROUND

The Board of the University of Amsterdam set out a policy to create a number of Research Priority Areas ("onderzoekszaartepunten") to move already promising areas to further excellence. Behavioural Economics had been selected as one of them. Behavioural Economics is an important field within the Amsterdam School of Economics (ASE). The ASE has the advantage that it has already had a center for experimental economics performing laboratory experiments (CREED) for more than 15 years. Within the Amsterdam School of Economics, CREED is clearly the most successful research group in terms of publications in highly ranked international journals.

The Amsterdam School of Economics wants to keep its leading position in Behavioural Economics in the Netherlands and in Europe. Now that it is a Research Priority Area, additional resources are available. These resources are allocated wisely through a committee. Researchers who need money for running experiments can apply and the committee allocates resources to promising research proposals. Furthermore, some of the resources will be used to improve the research environment. Examples include visiting costs in case of joint projects with researchers abroad, the training of students and organising workshops.

4.2 FOCUS

The Research Priority Area Behavioural Economics started late 2008. The goal of the Priority Area is to promote research in the field of Behavioural Economics. Behavioural Economics focuses on economic decision-making and goes beyond traditional economic theories that assume rationality and narrow self-interest: social preferences, emotions and bounded rationality are taken seriously. Behavioural economists therefore make extensive use of insights and theories of adjacent disciplines like psychology, sociology and political science. However, it is a typical economic science by the choice of topics and the way data are analysed and models are developed.

4.3 ORGANISATION

Research in Behavioural Economics has a strong empirical foundation; data are gathered in laboratory or field experiments. The department already had a standing tradition in laboratory experiments (CREED was founded in 1991) and in recent years researchers from various fields in our department (e.g. industrial organisation, labour economics, non-linear dynamic systems, personnel economics, law and economics, finance) have found their way to the laboratory. Nevertheless, to start with experimental research is not that easy. One needs to acquire practical knowledge and abilities, and one needs funds (e.g. to pay participants of experiments). The Research Priority Area Behavioural Economics helps by providing funds and dissemination of knowledge. In internal seminars researchers comment on each other's plans (compulsory for funding), a workshop is organised annually and international visits from or to co-authors are financed.

In 2012, the committee dealing with the allocation of resources, consisting of Theo Offerman, Erik Plug, Adriaan Soetevent, Joep Sonnemans and Jan Tuinstra, funded 20 applications and the workshop ABEE Symposium 2012. In addition, the committee funded an exchange of students of the Research priority Area and students of NYU. Both the workshop in New York

where the Amsterdam-based students presented and the one in Amsterdam where the New York based students presented led to a fruitful exchange of ideas and were very successful.

The Research Priority Area Behavioural Economics has already produced quite a few top publications, amongst which publications in the *American Economic Review* (Abbink, et al., 2010; Kuhn et al., 2011), the *Journal of Economic Literature* (Holmlund et al., forthcoming), *Nature* (van Veelen et al., 2010), *Science* (Ule et al., 2009) and the *Review of Economic Studies* (Offerman et al., 2009).

The topic of the ABEE Symposium 2012 was ‘Behavioural Economics in Markets and Organizations’. Presentations were held by Bjorn Bartling, Anna Dreber, Uri Gneezy, Lorenz Goette, Hans Hvide, Pedro Rey Biel, Armin Schmutzler, Sigrid Suetens, Dirk Sliwka, Catherine Tucker, Roberto Weber and Daniel Zizzo. Also Amsterdam-based researchers presented their work.

B

THE RESEARCH PROGRAMMES

5. UvA-ECONOMETRICS

Programme director: Prof.dr. H.P. Boswijk & Dr. M.J.G. Bun
METIS-code: uva/feb/ase/uva-e
JEL-classification: C1, C2, C3, C4, C5
Starting date: 1997
Website: www.aseri.uva.nl/uva-econometrics
VSNU-scores 2001-2007: Quality: 4, Productivity: 4, Relevance: 3.5, Viability: 3.5

5.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Ariza Rojas, C.	msc	oz	0,50	-	-	-	1
Bethlehem, J.G	prof. dr.	hgl	0,11	0,11	0,07	-	1
Boswijk, H.P	prof. dr.	hgl	0,50	0,50	0,50	0,50	1
Boswijk, H.P	prof. dr.	hgl	0,10	0,10	-	-	3
Broda, S.A.	dr.	ud	0,17	0,50	0,50	0,50	1
Bun, M.	dr.	ud	0,50	-	-	-	1
Bun, M.	dr.	uhd	-	0,50	0,13	-	1
Bun, M.	dr.	uhd	-	-	0,60	0,80	2
Çakmaklı, C.	msc	ud	-	-	0,17	0,50	1
Cramer, J.S.	prof. dr.	hgl	0,00	0,00	0,00	0,00	1
Gao, Z.	msc	phd	0,60	0,40	-	-	1
Garderen, K.J. van	dr.	uhd	0,50	0,50	0,50	0,25	1
Giersbergen, N.P.A. van	dr.	ud	0,42	0,42	0,42	0,42	1
Gooijer, J.G. de	prof. dr.	hgl	0,50	0,50	0,42	0,00	1
Juodis, A.	msc	phd	-	-	0,05	0,80	2
Kiviet, J.F.	prof. dr.	hgl	0,50	0,50	0,25	0,13	1
Kleibergen, F.R.	dr.	uhd	0,00	-	-	-	1
Kleibergen, F.R.	prof. dr.	hgl	-	0,00	0,00	0,00	1
Klein, A.A.B.	dr.	ud	0,50	0,50	0,50	0,13	1
Oomen, R.C.A.	dr.	guest	0,00	0,00	0,00	0,00	1
Ophem, J.C.M. van	dr.	uhd	0,50	0,50	0,50	0,25	1
Pleus, M.	msc	phd	-	-	0,50	0,80	2
Poldermans, R.	msc	phd	-	-	0,30	0,80	2
Pua, A.	msc	guest	-	-	0,00	0,00	3
Stakėnas, P.	msc	phd	0,60	0,40	0,40	-	1
Wansbeek, T.J.	prof. dr.	hgl	0,01	-	-	-	1
Yang, X.	msc	phd	-	-	0,20	0,80	1
Zu, Y.	msc	phd	0,60	0,40	-	-	1
Total 1st flow of funds			6,51	5,73	4,56	3,48	
Total 2nd flow of funds			0,00	0,00	1,45	3,20	
Total 3rd flow of funds			0,10	0,10	0,00	0,00	
Total 1st f.o.f. exd. Ph.D.'s			4,71	5,73	3,96	2,68	
Total 1st-3rd flow of funds			6,61	5,83	6,01	6,68	
Ph.D. students			1,80	0,00	1,45	3,20	

5.2 PROGRAMME DESIGN

Objectives

The UvA-Econometrics programme aims at improving the accuracy, efficiency and robustness of econometric inference methods.

Motivation

Empirical economic data are usually not obtained from markets or agents in static equilibrium. Typically they give a random and disturbed indication at a certain moment in time, or over a relatively short period, of dynamic jointly dependent adjustment processes. Also they usually concern just a few aspects of the underlying complex (non-) linear economic system.

The various projects united in this programme all try to gear statistical techniques to the typical characteristics of empirical economic data. Main interest is the development of accurate and efficient econometric inference to test economic theory, to support decision making and for policy evaluation.

Techniques

Both analytic and experimental methods are used in this programme to improve understanding of the available statistical inference techniques, and to develop alternatives. The analytic aspects often involve the derivation of asymptotic distributions, the approximation of finite sample moments or distribution functions, the elimination of nuisance parameters etc. In computer simulations of completely specified systems the existing standard procedures and the newly developed techniques are then compared and evaluated experimentally. Occasionally the alternative techniques as such are of an experimental nature, because they involve computer-intensive methods (bootstrap resampling, randomization techniques, simulation-based inference). Actual data often serve to illustrate the empirical relevance and practical usefulness of the theoretical findings, but at times empirical issues are the prime motivation of the research projects engaged in.

Applications

The fundamental problems of econometrics indicated above are studied in interplay with actual applied econometric research. These applications come from economics, finance or business. We do not intend to give an exhaustive overview of specific applications, but UvA-Econometrics is active in labour economics (wage determination, job mobility and allocation, returns to schooling), development economics (exports and productivity, infant mortality), health economics (organization of health care, intelligence and mortality), finance (measurement and modelling of stock return volatility, option pricing, credit risk), international economics (effects of trade policy and economic integration), monetary economics (demand for money, term structure of interest rates) and business (marketing activities). The economic behaviour of individual agents is analysed on the basis of observational or experimental data of various dimensions (cross-section, time series or panel data).

Subprogrammes, themes

Within the general programme described above, the following sub-themes can be distinguished:

- *Econometric Theory.* Within this sub-theme, analytical finite sample approximations, simulation-based inference, inference based on IV/GMM with weak instruments, conditional inference, methods from differential geometry as well as semi- and non-parametric methods are studied for and applied in models that may be dynamic, simultaneous or non-linear.
- *Microeconomics.* Econometric analyses within this sub-theme often entail a quantitative assessment of the effectiveness of a policy intervention. Outside controlled experiments policies are usually

- endogenous. Unbiased assessment of effectiveness requires adequate modelling of the causality, handling of any unobserved heterogeneity and understanding of the identification issues. Applications within this sub-theme often include panel data, which calls for the development of accurate inference methods for dynamic panel data models.
- *Financial Econometrics.* Topics are ARCH and stochastic volatility models, the econometrics of the CAPM and factor models, econometric models of the term structure of interest rates, econometric analysis of credit risk, the analysis of option data and implied volatilities, and the analysis of high-frequency data and realized volatility. Applications within this sub-theme often include non-stationary data. This leads to the analysis of unit roots, cointegration and error correction models, the role of (weak) exogeneity in such models and structural change.

5.3 PROGRAMME EVALUATION

The (partial) early retirement of three full professors (Bethlehem, de Gooijer and Kiviet) has led to a decline in research time available to the programme in recent years. This decline is further amplified by the fact that not all members of the research programme have realised sufficient publications in recent years to qualify for a Tinbergen Institute research fellowship, or for the maximal research time awarded by the ASE-RI. Because of publication lags, this situation is not easy to remedy in the short run, and threatens the programme's viability. In 2012, the group has again exploited the possibility of taking a sabbatical, which is expected to increase research output. The appointment of a temporary assistant professor in September 2011 has offered some compensation. More importantly, plans to appoint a new full professor in econometrics have recently been developed, which will lead to a substantial increase in research input and output of the group.

Almost weekly, a Friday afternoon (mostly external) seminar is organised at (and funded by) the Tinbergen Institute, jointly with econometricians from VU University Amsterdam. This is a very lively seminar series, with high-quality international speakers. In addition, occasionally an internal informal workshop is held on Thursdays at lunch time, where research projects which are still in an early stage are discussed. These meetings stimulate the coherence of the research programme and should lead to more joint research projects; however, their frequency has recently declined, which is a point for concern. All activities and achievements of UvA-Econometrics are communicated via its web-site (<http://aseri.uva.nl/research-programmes/content/uva-econometrics/uva-econometrics.html>).

It is the ambition of UvA-Econometrics to find further international recognition as one of the major strongholds in theoretical econometrics worldwide. The activities and achievements over the last decade (number and quality of publications, presentations at and invitations for international meetings, responsibilities regarding journals and conferences, hosting of visiting scholars, exposure at peer institutions, etc.) have been substantial, but leave ample room for further qualitative and quantitative improvements. In particular, the continued high teaching loads in the group have had a negative impact on the research output of some of its members, and consequently on the research time available to the programme. Most individual members of UvA-Econometrics continue to operate in intensive formal and informal national and international networks. In 2012, Nikolaos Kourogenis (University of Piraeus) visited the UvA-Econometrics group on a sabbatical, and Maurice Bun was a visiting scholar at Monash University, which is an indicator of such networks. As part of a strategy for improvement of research output, UvA-Econometrics continues to aim at strengthening the ties with other faculty research programs, in the form of joint applied research projects in micro-econometrics and financial econometrics.

No new PhD student were appointed 2012, but given the fact that five new students started in 2011, this was to be expected. Furthermore, it is expected that the UvA-Econometrics programme will continue to attract graduates from the Tinbergen Institute's MPhil programme in Econometrics for a PhD position, as initial contacts have been made with two second-year MPhil students in the second half of 2012, which are expected to result in two new PhD positions in 2013.

The above evaluation can be summarized in the following SWOT analysis regarding the activities and current position of UvA-Econometrics:

Strengths: good reputation; a relatively steady stream of publications; quality of human capital; expertise in a broad range of cutting edge areas of econometric (and statistical) theory; recently improved prospects regarding external funding; coherence of and atmosphere within the group; active seminar and workshop series; exposure via own discussion paper series; tight but appropriate facilities regarding computing and travel.

Weaknesses: relatively few links with other units of the FEB outside the QE department; declining percentage of publications in A-journals.

Opportunities: recently developed MPhil programme and Fast Track in Econometrics within the Tinbergen Institute; developing a more applied profile within ASE and with the ABS; attracting a new full professor in econometrics.

Threats: decreased research input due to faculty members having reached (early) retirement age, and decreased research output (and hence eventually input) by some senior faculty members due to high teaching loads.

5.4 RESOURCES AND FUNDING

The current ASE-RI facilities allow the active researchers (and also first and second year Ph.D. students) to attend at least one international conference per year; in practice more is possible, so the research group does not experience binding constraints in this respect.

In recent years, UvA-Econometrics has been quite successful in obtaining external funding for research activities. Therefore, the 0.8 fte research time of one senior faculty member (Maurice Bun), and the appointments of three of the five currently active PhD students (Milan Pleus, Rutger Poldermans and Arturas Juodis) is funded by NWO grants. A fourth PhD student is funded by the EDEEM network.

5.5 OUTPUT

Key publications

- Boswijk, H.P. & Klaassen, F. (2012). Why frequency matters for unit root testing in financial time series. *Journal of Business & Economic Statistics* 30, 351–357. [A]
- Bun, M.J.G. & Windmeijer, F. (2010). The weak instrument problem of the system GMM estimator in dynamic panel data models. *Econometrics Journal* 13, 95-126. [B]
- Giersbergen, N.P.A. van (2009). Bartlett correction in the stable AR(1) model with intercept and trend. *Econometric Theory* 25, 857-872. [A]
- Guggenberger, P., Kleibergen, F., Mavroeidis, S. & Chen, L. (2012). On the asymptotic sizes of subset Anderson-Rubin and Lagrange multiplier tests in linear instrumental variables regression. *Econometrica* 80, 2649–2666. [A]
- Kiviet, J.F. & Phillips, G.D.A. (2012). Higher-order asymptotic expansions of the least-

- squares estimation bias in first-order dynamic regression models. *Computational Statistics & Data Analysis* 56, 3705–3729. [B]
- Kleibergen, F., Mavroeidis, S. (2009). Weak instrument robust tests in GMM and the new Keynesian Phillips curve. *Journal of Business & Economic Statistics* 27, 293-311. [A]
- Schluter, C., van Garderen, K.J. (2009). Edgeworth expansions and normalizing transforms for inequality measures. *Journal of Econometrics* 150, 16-29. [A]

Forthcoming

- Broda, S. A., Haas, M., Krause, J., Paolella, M. & Steude, S. (2013). A mix-stable GARCH model. Forthcoming in *Journal of Econometrics*.
- Gooijer, J.G. de & Yuan, A. (2013). Asymptotic informative prior for Bayesian analysis. Forthcoming in *Communications in Statistics: Theory and Methods*.
- Joustra, P., Meester R. & van Ophem, H. (2013). Can statisticians beat surgeons at the planning of operations? Forthcoming in *Empirical Economics*.
- Juodis, A. (2013). A note on bias-corrected estimation in dynamic panel data models. Forthcoming in *Economics Letters*.
- Kiviet, J.F. (2013). Identification and inference in a simultaneous equation under alternative information sets and sampling schemes. Forthcoming in *The Econometrics Journal*.

Publications in numbers

UvA-Econometrics				2012
1) Academic publications	a) in refereed journals	A	3	
		B	4	
		Other	0	7
	b) in other journals		0	0
	c) book chapters	A	0	
		B	1	
		Other	0	1
	d) in proceedings		0	0
Subtotal				8
2) Books		A	0	
		B	0	
		Other	0	0
3) Ph.D. theses			5	5
4) Professional publications			0	0
5) Popular publications			0	0
6) Working papers			3	3
Total				16

Article in journal – refereed

A

- Boswijk, H.P. & Klaassen, F. (2012). Why frequency matters for unit root testing in financial time series. *Journal of Business & Economic Statistics* 30, 351–357.
- Guggenberger, P., Kleibergen, F., Mavroeidis, S. & Chen, L. (2012). On the asymptotic sizes of subset Anderson-Rubin and Lagrange multiplier tests in linear instrumental variables regression. *Econometrica* 80, 2649–2666.
- Klein, A. & Spreij, P. (2012). Transformed statistical distance measures and the Fisher information matrix. *Linear Algebra and its Applications* 437, 692–712.

B

- Broda, S.A. (2012). The expected shortfall of quadratic portfolios with heavy-tailed risk factors. *Mathematical Finance* 22, 710–728.
- Gooijer, J.G. de, Brännäs, K., Lönnbark, C. & Soultanaeva, A. (2012). Simultaneity and asymmetry of returns and volatilities: The emerging Baltic states' stock exchanges. *Studies in Nonlinear Dynamics & Econometrics* 16, Article 4.
- Kiviet, J.F. & Niemczyk, J. (2012). Comparing the asymptotic and empirical (un)conditional distributions of OLS and IV in a linear static simultaneous equation. *Computational Statistics & Data Analysis* 56, 3567–3586.
- Kiviet, J.F. & Phillips, G.D.A. (2012). Higher-order asymptotic expansions of the least-squares estimation bias in first-order dynamic regression models. *Computational Statistics & Data Analysis* 56, 3705–3729.

Other

- Gooijer, J. de, Diks, C. and Gatarek, L. (2012). Information flows around the globe: Predicting Opening Gaps from Overnight Foreign Stock Price Patterns. *Central European Journal of Economic Modelling and Econometrics* 4, 23–44 .

Book / book chapter – refereed**B**

- Broda, S.A. & Paolella, M. (2012). Saddlepoint approximations: A review and some new applications, in: Gentle, J. E., Härdle, W. K. & Mori, Y. (eds.), *Handbook of Computational Statistics*, 2nd edition, Springer Verlag, Berlin, 953–983.

working- and discussion papers

- Boswijk, H.P., Jansson, M. & Nielsen, M.Ø. (2012). Improved likelihood ratio tests for cointegration rank in the VAR model. Tinbergen Institute Discussion Paper # 12-097/III.
- Cramer, J.S. (2012). Childhood intelligence and adult mortality, and the role of socio-economic status. Tinbergen Institute Discussion Paper # 12-070/4.
- Kiviet, J.F. (2012). Identification and inference in a simultaneous equation under alternative information sets and sampling schemes. Tinbergen Institute Discussion Paper # 12-128/III.

UvA Dissertation – internally prepared

- Gao, Z. (2012, 29 May). Essays on empirical likelihood in economics (promotor H.P. Boswijk, co-promotor K.J. van Garderen).
- Mazza, J. (2012, 23 March). On the uncertain nature of human capital investments (promotor J. Hartog, co-promotor H. van Ophem).
- Stakėnas, P. (2012, 21 November). Fractional integration and cointegration in financial time series (promotor H.P. Boswijk).
- Weide R. van der (2012, 8 March). The time-variation of volatility and the evolution of expectations (promotors C.H. Hommes and H.P. Boswijk).
- Zu, Y. (2012, 19 January). Essays on nonparametric econometrics of stochastic volatility (promotor H.P. Boswijk).

Recognition

- Çakmaklı, C. (2012). AXA post-doc research fund with 120,000 Euros for two years.
- Garderen, K.J. van (2012). European Doctorate in Economics Erasmus Mundus programme organized by a consortium of seven universities and coordinated by Universite Paris 1, Sorbonne Pantheon, was selected by the EU (EACEA) under Erasmus Mundus Action 1 Call for proposals (/29/09).

Conference organiser

- Bun, M.J.G. (2012). Member of the programme committee of the 18th International Conference on Panel Data, Paris, 2012.
- Bun, M.J.G. (2012). Member of the programme committee of the Econometric Society European Meetings (ESEM), Malaga, 2012.
- Çakmaklı, C. (2012). Workshop on Recent Theory and Applications of DSGE Models, Rotterdam, Netherlands, 8 June 2012.
- Garderen, K.J. van (2012). Co-ordinating Committee Member of the Netherlands Econometric Study Group (NESG).

Editorship

- Kiviet, J.F. (2012). Member of the Editorial Board of *Foundations and Trends in Econometrics*.
- Kleibergen, F. (2012). Associate editor of *Economic Letters*.

Keynote/invited talk

- Gooijer, J.G. de (2012, 22 March). “Nonparametric portmanteau tests for detecting nonlinearities in high dimensions”. Institute for Advanced Studies, Vienna.
- Kleibergen, F. (2012, 11 July), “Reality checks for and of factor pricing”, NBER Forecasting and Empirical Methods in Macroeconomics and Finance Workshop, Cambridge.

Other lectures

- Boswijk, H.P. (2012, 6 July). “Improved likelihood ratio tests for cointegration rank in the VAR model”, Quantitative Economics Colloquium, Freie Universität Berlin.
- Boswijk, H.P. (2012, 29 August). “Improved likelihood ratio tests for cointegration rank in the VAR model”. EEA-ESEM 2012, Málaga.
- Boswijk, H.P. (2012, 22 November). “Wild bootstrap with statistical leverage”, Bootstrap Workshop, University of Copenhagen.
- Boswijk, H.P. (2012, 15 December). “Improved likelihood ratio tests for cointegration rank in the VAR model”, 23rd (EC)² Conference on Hypothesis Testing, Maastricht.
- Broda, S.A. (2012, 27 August). “Tail probabilities and partial moments for quadratic forms in multivariate generalized hyperbolic random vectors”, 20th International Conference on Computational Statistics (COMPSTAT), Limassol, Cyprus.
- Broda, S.A. (2012, 16 November). “Tail probabilities and partial moments for quadratic forms in multivariate generalized hyperbolic random vectors”, Statistics Research Seminar, University of Geneva, Switzerland.
- Bun, M.J.G. (2012, 9 March). “Identification in linear dynamic panel data models”. Monash Econometrics and Business Statistics seminar, Monash University, Melbourne.
- Bun, M.J.G. (2012, 2 May). “Currency unions and international trade: causal inference with panel data”. Seminar study group in panel data, Monash University, Melbourne.
- Bun, M.J.G. (2012, 7 June). “Empirical trade models: causal inference with panel data”. Seminar Curtin Business School, Curtin University, Perth.
- Bun, M.J.G. (2012, 5 July). “Identification in linear dynamic panel data models”. Econometric Society Australasian Meeting (ESAM), Deakin University, Melbourne.
- Bun, M.J.G. (2012, 18 July). “Deterrence and crime: causal inference with panel data”. Division of Economics seminar, Nanyang Technological University, Singapore.
- Bun, M.J.G. (2012, 26 October). “Deterrence and crime: causal inference with panel data”. Workshop on recent developments in Econometrics, Universitat Rovira i Virgili, Reus.
- Bun, M.J.G. (2012, 1 November). “Mean stationarity in dynamic panel data models”. UvA-Econometrics workshop, University of Amsterdam, Amsterdam.

- Bun, M.J.G. (2012, 31 May). "Dynamic panel data models". Special Lectures in Econometrics, Monash University, Melbourne.
- Çakmaklı, C. (2012, 6 April). "Bayesian semiparametric dynamic Nelson-Siegel model", Society for Nonlinear Dynamics and Econometrics (SNDE) 20th Annual Symposium, Istanbul, Turkey, April 5–6, 2012.
- Çakmaklı, C. (2012, 8 June). "Inflation regimes, technological change and weak identification in an NKPC model with forward looking price behavior", Workshop on Recent Theory and Applications of DSGE Models, Rotterdam, Netherlands.
- Çakmaklı, C. (2012, 1 November). "Posterior-predictive evidence on US inflation using a New Keynesian Phillips curve with weak identification, regime shifts and technological change", European Seminar on Bayesian Econometrics, Vienna, Austria, 1–2 November 2012.
- Çakmaklı, C. (2012, 8 November). "Posterior-predictive evidence on US inflation patterns using alternative Phillips curve structures and non-filtered time series". ECARES, Brussels, Econometrics and Statistics seminars.
- Çakmaklı, C. (2012, 3 December). "Inflation regimes, technological change and weak identification in an NKPC model with forward looking price behavior", 6th CSDA International Conference on Computational and Financial Econometrics (CFE'11), Oviedo, Spain, 1–3 December 2012.
- Garderen, K.J. van (2012, 4 October). Seminar University of Southampton "Conditional Bimodality in a Simple Structural Equations Model".
- Giersbergen, N.P.A. van (2012, 8 June). "Bootstrapping subset test statistics in IV regression". Netherlands Econometrics Study Group, Groningen, The Netherlands.
- Giersbergen, N.P.A. van (2012, 1 December). "Bootstrapping subset test statistics in IV regression". Computational and Financial Econometrics, Oviedo, Spain.
- Kiviet, J.F. (2012, 23 February). Lunch seminar on "Exploiting strong instruments unduly neglected by standard GMM" at the University of Amsterdam.
- Kiviet, J.F. (2012, 21 March). Seminar on "Exploiting strong instruments unduly neglected by standard GMM" at the Department of Economics of Carlos III University Madrid (Spain).
- Kiviet, J.F. (2012, 30 March). Seminar on "Exploiting strong instruments unduly neglected by standard GMM" at the Department of Management, Technology and Economics, ETH, Zurich (Switzerland).
- Kiviet, J.F. (2012, 15 June). Seminar on "Exploiting strong instruments unduly neglected by standard GMM" at the Department of Econometrics and Business Statistics of Monash University, Melbourne (Australia).
- Kiviet, J.F. (2012, 21 June). Lunch time seminar organized by the Department of Economics of Melbourne University at the "La Spagetatta" restaurant on: "To IV or not to IV?: the answer to that question is KLS".
- Kiviet, J.F. (2012, 5 July). Presented the paper: "Exploiting strong instruments unduly neglected by standard GMM" at the Econometric Society Australasian Meeting 2012, Melbourne (Australia), July 4-6.
- Kiviet, J.F. (2012, 24 October). Presentation at the NTU-Yonsei joint workshop at NTU on the paper "Refraining from instrumental variables by exchanging orthogonality conditions for simultaneity assumptions".
- Kiviet, J.F. (2012, 21 November). Lunch seminar at the NTU Division of Economics on "Refraining from instrumental variables by exchanging orthogonality conditions for simultaneity assumptions".
- Kleibergen, F. (2012, 22 March). "Reality checks for and of factor pricing", Tilburg University.
- Kleibergen, F. (2012, 12 April). "Identification in linear dynamic panel data models", Columbia University, New York.
- Kleibergen, F. (2012, 20 April). "Identification in linear dynamic panel data models", Boston College, Boston.

- Kleibergen, F. (2012, 8 May). "Inference on subsets of parameters in linear IV without assuming identification", University of California San Diego, San Diego.
- Kleibergen, F. (2012, 10 May). "Reality checks for and of factor pricing", Federal Reserve of New York, New York.
- Klein, A. (2012, 21 June). "An algorithm for the exact Fisher information matrix of vector ARMAX time series processes", presented at SIAM Conference on Applied Linear Algebra. Universitat Politècnica de València, Valencia, Spain, June 18–22.
- Klein, A. (2012, 14 November). "Transformed statistical distance measures and the Fisher information matrix", presented at The 2012 Haifa Matrix Theory Conference, Technion Haifa, Israel, November 12–15.
- Ophem, H. van (2012, August 28). "Adverse selection and moral hazard in the choice of the deductible in health costs insurance", presented at ESEM 2012, Malaga, Spain.
- Ophem, H. van (2012, September 21). "Reservation wages and starting wages", presented at EALE 2012, Bonn, Germany.

Membership academies

- Boswijk, H.P. (2012). Fellow Tinbergen Institute.
- Boswijk, H.P. (2011). Member of European Time-Series Econometric Research Network (ETSERN).
- Boswijk, H.P. (2012). Member of PhD committee of Cem Çakmaklı (Erasmus University Rotterdam, 26 January 2012), and of Paweł Janus (VU University, 16 February 2012).
- Boswijk, H.P. (2012). Member of the international evaluation panel of the Graduate School Of Social Sciences, University Of Copenhagen (13–15 November 2012).
- Broda, S. A. (2012). Fellow Tinbergen Institute.
- Bun, M.J.G. (2012). Fellow Tinbergen Institute.
- Cramer, J.S. (2012). Fellow of the Econometric Society.
- Cramer, J.S. (2012). Resting member of the Royal Netherlands Academy of Arts and Sciences
- Cramer, J.S. (2012). Honorary research fellow Tinbergen Institute.
- Çakmaklı, C. (2012). Fellow of the Rimini Center for Economic Analysis (RCEA).
- Çakmaklı, C. (2012). Research Associate at Center for Economics and Econometrics, Bogazici University, Turkey.
- Garderen, K.J. van (2012). Member Doctoral Board of EDEEM (European Doctorate in Economics- Erasmus Mundus).
- Gooijer, J.G. de (2012). Honorary Fellow International Institute of Forecasters.
- Kiviet, J.F. (2012). Elected member of the Royal Netherlands Academy of Arts and Sciences
- Kiviet, J.F. (2012). Fellow of *Journal of Econometrics*.
- Kiviet, J.F. (2012). Fellow Tinbergen Institute.
- Kiviet, J.F. (2012). Member CESifo research network.
- Kleibergen, F. (2012). Fellow of *Journal of Econometrics*.
- Kleibergen, F. (2012). Associate research fellow Tinbergen Institute.

Relevant positions

- Boswijk, H.P. (2012). Member of the Board of the Tinbergen Institute.
- Boswijk, H.P. (2012). Referee for: *Journal of Applied Econometrics*, *Journal of Econometrics*, *Journal of Economic Dynamics and Control*, *Journal of Time Series Analysis*.
- Broda, S.A. (2012). Referee for: *Mathematical Finance*.
- Bun, M.J.G. (2012). Visiting scholar Monash University (February–July 2012).
- Bun, M.J.G. (2012). Visiting scholar Nanyang Technological University (15–21 July, 2012).
- Bun, M.J.G. (2012). Referee for: *Econometric Reviews*, *Econometric Theory*, *Economics and Human Biology*, *Economics Letters*, *Journal of Applied Econometrics*, *Journal of*

- Business & Economic Statistics, Journal of Econometrics, Journal of Statistical Planning and Inference, Journal of the Royal Statistical Society, Oxford Bulletin of Economics and Statistics, Spatial Economic Analysis, The World Economy.*
- Çakmaklı, C. (2012). Referee for: *Emerging Markets Finance and Trade, Journal of Applied Econometrics, Journal of Econometrics, International Journal of Forecasting*.
- Garderen, K.J. van (2012). Referee for: *Journal of Economic Dynamics and Control*.
- Giersbergen, N.P.A. van (2012). Referee for: *Computational Statistics & Data Analysis*.
- Kiviet, J.F. (2012). Visiting professor at the Department of Econometrics and Business Statistics of Monash University, Melbourne (Australia) from 11–22 June 2012 to give a short course on “Monte Carlo simulation for econometricians; methods, accuracy, methodology”.
- Kiviet, J.F. (2012). Visiting Professor at Nanyang Technological University, Singapore (1 July – 31 December 2012).
- Kiviet, J.F. (2012). Referee for: *Econometric Theory, Journal of Applied Econometrics, Computational Statistics and Data Analysis, Journal of Econometrics, The Econometrics Journal*.
- Kleibergen, F. (2012). Referee for: *Journal of Econometrics, Journal of Applied Econometrics, Econometric Theory, Econometrica, Journal of Business & Economic Statistics, Review of Economics and Statistics, The Econometrics Journal, Economics Letters*.

6. EQUILIBRIUM, EXPECTATIONS & DYNAMICS

Programme director: Prof.dr. C.H. Hommes & dr.ir. F.O.O. Wagener
Metis-code: uva/feb/ase/eed
JEL-Classification: C, D, E6
Starting date: 1998
Website: <http://cendef.uva.nl>
VSNU-Scores 2001-2007: Quality: 4,5, Productivity: 4,5, Relevance: 5, Viability:5

6.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Anufriev, M.	dr.	ud	0,50	0,50	0,50	0,02	1
Assenza, T.	dr.	postdoc	0,11	0,11	0,08	-	3
Assenza, T.	dr.	postdoc	-	-	-	0,16	1
Bao, T.	msc	phd	0,20	0,60	0,60	-	1
Bao, T.	dr.	postdoc	-	-	-	0,80	3
Bekiros, S.	dr.	guest	0,00	-	-	-	1
Cornea, A.	dr.	postdoc	0,25	0,00	0,00	-	3
Diks, C. (CeNDEF)	prof. dr.	hgl	0,50	0,50	0,50	0,50	1
Furth, D.	dr.	guest	0,00	-	-	-	1
Heemeijer, P. (CeNDEF)	dr.	guest	0,00	-	-	-	1
Heijnen, P.	dr.	ud	0,50	0,33	-	-	1
Hommes, C.H. (CeNDEF)	prof. dr.	hgl	0,50	0,50	0,50	0,47	1
Hommes, C.H. (CeNDEF)	prof. dr.	hgl	-	-	-	0,07	2
Kiseleva, T.	msc	phd	0,60	0,30	0,57	-	2
Kiseleva, T.	dr.	postdoc	-	-	-	0,07	1
Kopányi, D.	msc	phd	-	-	0,33	0,80	1
Koster, M.A.L.	dr.	ud	0,50	0,50	0,41	0,25	1
Leij, M. van der	dr.	postdoc	-	-	0,60	0,80	2
Leur, M. van de	msc	guest	-	-	0,00	0,00	3
Makarewicz, T.	msc	phd	-	-	0,33	-	1
Makarewicz, T.	msc	phd	-	-	-	0,80	2
Massaro, D.	msc	phd	0,60	0,60	0,47	-	1
Massaro, D.	dr.	postdoc	-	-	-	0,80	2
Mohammadian Moghayer, S.	msc	phd	0,60	0,45	0,40	-	1
Negriu, A.	msc	phd	-	-	-	0,20	1
Ochea, M.I.	msc	phd	0,00	-	-	-	1
Ochea, M.I.	dr.	ud	-	-	0,00	0,17	1
Ramer, R.	dr.	ud	0,08	0,03	0,00	0,00	1
Sniekers, F.	msc	phd	-	-	-	0,13	1
Tuinstra, J. (CeNDEF)	prof. dr.	hgl	0,50	0,50	0,50	0,50	1
Veld, D. in 't	msc	phd	-	-	0,80	0,80	2
Wagener, F. (CeNDEF)	dr.	uhd	0,80	0,80	0,50	0,50	1
Wang, J.	msc	guest	-	-	0,00	0,00	3
Weddepohl, H.N.	prof. dr.	guest	0,00	-	-	-	1
Weide, R. van der (CeNDEF)	drs.	phd	0,00	0,00	0,00	0,00	1
Wolski, M.	msc	guest	-	-	0,00	0,00	3

Name	Title	Function	Total	Total	Total	Total	Funding
			2009	2010	2011		
Wu, C.	msc	guest	-	-	0,00	-	1
Zeppini-Rossi, P.	dr.	guest	0,60	0,60	0,33	0,00	1
Zovko, I. (CeNDEF)	dr.	guest	0,00	0,00	0,00	0,00	1
Zhu, M.	dr.	guest	0,33	1,00	0,00	0,00	1
Total 1st flow of funds			6,21	5,11	5,37	3,77	
Total 2nd flow of funds			0,60	1,10	1,97	3,27	
Total 3rd flow of funds			0,36	1,11	0,08	0,80	
Total 1st f.o.f. exd. Ph.D.'s			4,81	2,86	2,91	2,64	
Total 1st-3rd flow of funds			7,17	7,32	7,42	7,84	
Ph.D. students			2,00	2,55	3,83	2,73	

6.2 PROGRAMME DESIGN

The objective of the programme is the development of (mathematical) economic theory, focussing on the understanding of economic processes. The programme aims at developing models of economic behaviour in different areas of economics, including microeconomics, macroeconomics and finance. Emphasis is given to behavioural models of dynamic market phenomena.

The research group employs a multi-disciplinary approach. The models are studied both from a theoretical and a computational perspective, and the validity of the models is tested in laboratory experiments with human subjects as well as empirically using real data. The NWO-Vernieuwingsimpuls Information Flows in Financial Markets, the EU STREP project Financial Markets and Complexity and the NWO-VIDI programme *Structural Stability in Economic Dynamics* are part of the research programme.

The programme can be subdivided into five closely related and interacting research themes:

Equilibrium theory: Individual optimising behaviour of economic agents generates aggregate supply and demand of commodities, as a function of prices and individual expectations. In equilibrium supply and demand are equal. Many types of equilibrium can be studied: partial versus general, competitive versus monopolistic, dynamic versus static, temporary equilibrium, single, representative agent as well as heterogeneous, interacting agents equilibria. The existence of equilibria is studied, as well as conditions for stability or instability of dynamic adjustment processes.

Game theory & Industrial organisation: This part of the programme focuses on modelling strategic behaviour of economic agents in markets with imperfect competition, such as duopoly and oligopoly. Equilibria in non-cooperative games (e.g. duopoly, oligopoly) as well as cooperative games (costs sharing, general equilibrium) are studied. Evolutionary games with heterogeneous, boundedly rational strategies competing against each other are also studied.

Expectations and learning: Bounded rationality models of expectation formation and learning schemes are becoming a serious alternative to rational expectations, which was the dominating paradigm until quite recently. The fully rational representative agent is replaced by a large *heterogeneous* population of boundedly rational interacting agents, who form expectations based upon time series observations and update their forecasting rules according to new observations and new information about market fundamentals. Conditions under which learning schemes converge to rational expectations or to a

boundedly rational expectations equilibrium with excess volatility are investigated. Formation of expectations is studied in theory, in laboratory experiments with human subjects and in real markets.

Nonlinear economic dynamics: This part of the programme focuses on nonlinear complexity models of dynamic market phenomena. Are market fluctuations mainly caused by random exogenous shocks, or can endogenous nonlinear economic laws of motion explain (a significant part of) the fluctuations? Various deterministic and stochastic economic models are studied theoretically, computationally as well as empirically, attempting to explain the most important stylised facts observed in real economic and financial time series. Emphasis is given to *complex adaptive systems* where markets consist of a large population of agents selecting simple strategies according to their relative success in the recent past. In these evolutionary adaptive systems endogenous variables such as prices and agents' beliefs co-evolve over time.

Dynamic optimisation: Emphasis is given to *dynamic optimisation problems in environmental economics, characterised by a conflict between economic benefits and ecological costs. Tools from nonlinear dynamics and bifurcation theory are employed to investigate non-convex dynamic optimisation problems.* The main thrust is a structural analysis, that is, investigation of the global solution structure of dynamic optimisation problems and dynamic games. The qualitative changes of these solutions are studied under changes of the parameters. Geometrical methods, like bifurcation theory, normal form theory and perturbation theory, as well as numerical methods yield insights that hold not just at isolated parameter values, but for the complete parameter set.

6.3 PROGRAMME EVALUATION

This program grew out of a mathematical economics program Equilibrium and Dynamics, led by Weddepohl, which was quite small until the mid nineties. The group was extended considerably at the end of 1998, thanks to an NWO-MaG Pionier grant awarded to Hommes, to set up the Center for Nonlinear Dynamics in Economics and Finance (CeNDEF). At that time the program changed from a small specialized mathematical economics program into a multi-disciplinary research program with an emphasis on economic theory, but also running laboratory experiments (in cooperation with Joep Sonnemans at CREED) to test behavioural theories and doing empirical work as well (in cooperation with Peter Boswijk at UvA-Econometrics), in particular nonlinear time series analysis, to test behavioural models empirically. Weddepohl retired in 2002 while Furth and Koster joined the group in the same year; at that point game theory has been included as one of the research themes of the program. At the end of 2003, the CeNDEF postdocs Diks, Tuinstra and Wagener obtained tenured positions, ensuring the continuation of the research program. In 2009 the research program was ranked as one of the three top programs at the FEB by the VSNU "Visitatiecommissie" (Quality 4.5, Productivity 4.5, Relevance 5, Viability 5). From the report of the committee: "The group (...) is developing very fruitful projects on highly topical current issues."

The publication record of the year 2012 is very good. The output was 10 articles in international refereed journals (of which 3 A and 7 B publications) and two B publications in books. Moreover, three PhD students, Te Bao, Domenico Massaro and Saeed Mohammadian Moghayer, defended their thesis successfully; Domenico Massaro was even awarded the doctorate cum laude.

The programme is internationally established, as is shown by excellent citation statistics (e.g. according to the Science Citation Index (SCI) in 2012 almost 400 citations of published work

by group members), many invited and several keynote lectures at international seminars, conferences and workshops by various members of the research group. In the IDEAS/RePEc ranking of Top 20% institutes (<http://ideas.repec.org/top/top.netherlands.html>), CeNDEF ranks as number 13, two positions up from last year. This ranking contains faculties of economics and departments; among the small institutes of the order of a research group (about 10 researchers) CeNDEF ranks 3rd on the list (after the UvA Finance Group and SCHOLAR, ex aequo with CREED).

In 2012, two of the group members were promoted to Full Professor, Cees Diks and Jan Tuinstra. Moreover, a former PhD student, Marius Ochea, joined the group as Assistant Professor, as well as two prospective PhD students: Anghel Negriu and Florian Sniekers.

The evaluation can be summarized in the following SWOT analysis of the CeNDEF activities.

Strengths: international reputation as an excellent research group on nonlinear dynamics and complexity applications in economics and finance, high scientific impact (e.g., with more than 400 citations, Brock and Hommes, *Econometrica* 1997, is one of the best cited journal articles co-authored by a Dutch economist), regular international visitors, active seminars and international workshops, own working paper series, frequently visited website, good facilities for computing and travel.

Weaknesses: relatively few publications in top mainstream journals, where multi-disciplinary work and non-mainstream approach such as agent-based modelling and complexity modelling are far from being well accepted; the number of links with practitioners and policy makers has been relatively low, but is now increasing.

Opportunities: development of UvA Graduate School in Economics; application of group-specific know-how to core economic problems, to demonstrate in this way the value of the programme's characteristic approach; developing more policy oriented research, e.g. through a new project on heterogeneous expectations in macro economics and monetary policy; for example, the NWO-complexity project is a research project jointly with researchers and policy makers at DNB.

Threats: A multidisciplinary group is likely to be handicapped when evaluated in a mono-disciplinary environment; and the complexity of the tools used may turn out to be an impediment at disseminating the research approach.

6.4 RESOURCES AND FUNDING

The budget received from ASE-RI every year (about 12.000 Euro) only covers on average one conference per researcher per year. In the last couple of years the remaining CeNDEF budget (from the NWO-Pionier grant 1998-2003) was able to cover additional conferences, workshops, etc., if desired. A budget of the Faculty covers some of the costs for the Economics Colloquia; another budget of the Tinbergen Institute covers the costs of joint research seminars Cooperative Behaviour, Strategic Interaction and Complex Systems - CSC together with the VU mathematical economics group.

The group has been quite successful in obtaining additional external funding. In July 2005 Wagener obtained a NWO-MaGW VIDI grant for the research proposal "Structural Stability in Economic Dynamics", which ended in December 2010. This project employs tools from nonlinear dynamics and bifurcation theory to investigate non-convex dynamic optimisation problems characterized by a conflict between economic benefits and environmental externalities. In September 2006 two PhD students (Kiseleva and Mohammadian Moghayer) started working on this project and a postdoc (Heijnen) started in December 2006.

CeNDEF is part of a consortium of six research groups who obtained an EU FP7 grant for the collaborative project Monetary, Fiscal and Structural Policies with Heterogeneous Agents (POLHIA), which started November 2008 and ended October 2011. Mei Zhu has been appointed as postdoc under this program. In 2010, Cees Diks and Cars Hommes have obtained a NWO-Complexity grant of K€ 440 for the research proposal “Understanding financial instability through complex systems”, jointly with DNB. Marco van der Leij and Daan in ‘t Veld are funded as post-doc and PhD student respectively through this grant.

In 2011 and 2012, CeNDEF has been part of several European consortia that obtained grants: the EU FP7-ICT project “Complexity Research Initiative for Systemic InstabilitieS” (CRISIS), the EU COST action IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”, and two newly funded INET projects, “Coordination of Expectations”, led by Roger Guesnerie and “Heterogeneous Expectations and Financial Crises”, led by Cars Hommes. A newly funded EU FP7 Collaborative project Macro-Risk Assessment and Stabilization Policies with New Early Warning Signals (RASTANEWS) will start in 2013.

6.5 OUTPUT

Key publications

- Anufriev, M. & Hommes, C.H. (2012). Evolutionary selection of individual expectations and aggregate outcomes. *American Economic Journal-Micro* 4 (4), 35-64.
- Brock, W.A., Hommes, C.H. & Wagener, F.O.O. (2009). More hedging instruments may destabilize markets. *Journal of Economic Dynamics & Control*, 33, (11), 1912-1928.
- Diks, C., Panchenko, V. & Dijk, D. van (2011). Likelihood-based scoring rules for comparing density forecastst in tails. *Journal of Econometrics*, 163, 215-230.
- Hommes, C.H. & Ochea, M.I. (2012). Multiple equilibria and limit cycles in evolutionary games with logit dynamics. *Games and Economic Behavior* 74, 434-441.
- Leij, M.J. van der (2011). Experimenting with buddies. *Science*, 334, (6060), 1220-1221.
- Polasky, S., Zeeuw, A. de & Wagener, F.O.O. (2011). Optimal management with potential regime shifts. *Journal of Environmental Economics and Management*, 62, 229-240.
- Schinkel, M.P., Tuinstra, J. & Rüggeberg, J. (2008). Illinois Walls: How barring indirect purchaser suits facilitates collusion, *RAND Journal of Economics* 39, 683-698.

Forthcoming

- Anufriev, M., Assenza, T., Hommes, C., Massaro, D. Interest rate rules and macroeconomic stability under heterogeneous expectations. *Macroeconomic Dynamics*.
- Anufriev, M., Hommes, C.H. and Philipse, R.H.S. Evolutionary selection of expectations in positive and negative feedback markets, *Journal of Evolutionary Economics*.
- Diks, C., Hommes, C., and Zeppini, P. More memory under evolutionary learning may lead to chaos. *Physica A* 392(4), 808-812.
- Hommes, C.H., Behavioral rationality and heterogeneous expectations in complex economic systems, *Cambridge University Press*.
- Hommes, C.H., Lux, T., Individual expectations and aggregate behavior in learning to forecast experiments, *Macroeconomic Dynamics* 17(2), March 2013.
- Hommes, C.H., Sorger, G. and Wagener, F.O.O. (2013), Consistency of linear forecasts in a nonlinear stochastic economy, In: Bischi, G.I., Chiarella, C. and Sushko, I. (Eds.), *Global Analysis of Dynamic Models in Economics and Finance. Essays in Honour of Laura Gardini*, Springer Verlag, Berlin, pp. 229-287.

- Massaro, D. Heterogeneous expectations in monetary DSGE models. *Journal of Economic Dynamics and Control*.
- Vrugt, J.A., Ter Braak, C.J., Diks, C.G.H., and Schoups, G. Hydrologic data assimilation using particle Markov chain Monte Carlo simulation: Theory, concepts and applications, *Advances in Water Resources*.
- Wagener, F.O.O. Regime Shifts: Early Warnings. *Encyclopedia of Energy, Natural Resource and Environmental Economics*. Elsevier.

Publications in numbers

<i>Equilibrium, Expectations & Dynamics</i>					2012
Academic		a) in refereed journals	A	3	
			B	7	
			Other	3	13
		b) in other journals			0
		c) book chapters	A		
			B	2	
			Other	1	3
		d) proceedings		0	0
<i>Subtotal</i>					16
2) Books				0	0
3) Ph.D.				3	3
4)				1	1
5) Popular				3	3
Working				13	13
Total					36

Article in journal - refereed

A

- Anufriev, M. & Hommes, C.H. (2012). Evolutionary selection of individual expectations and aggregate outcomes, *American Economic Journal–Microeconomics* 4 (4), 35-64.
- Bao, T., Hommes, C.H., Sonnemans, J. & Tuinstra, J. (2012). Individual expectations, limited rationality and aggregate outcomes. *Journal of Economic Dynamics and Control* 36, 1101-1120.
- Hommes, C.H. & Ochea, M.I. (2012). Multiple equilibria and limit cycles in evolutionary games with logit dynamics. *Games and Economic Behavior* 74, 434-441.

B

- Anufriev, M. and Hommes, C.H. (2012). Evolution of market heuristics. *The Knowledge Engineering Review*, 27(2), 255–271.
- Bao, Te and Yongqin Wang (2012). Incomplete contract, bargaining and optimal divisional structure. *Journal of Economics* 107(1), 81-96.
- Cincotti, S., Sornette, D., Treleaven, P., Battiston, S., Caldarelli, G., Hommes, C. and Kirman, A. (2012). An economic and financial exploratory, *European Physical Journal Special Topics* 214, 361-400.
- Farmer, J.D., Gallegati, M., Hommes, C., Kirman, A., Ormerod, P., Cincotti, S., Sanchez, A. and Helbing, D. (2012). A complex systems approach to constructing better models for managing financial markets and the economy, *European Physical Journal Special Topics* 214, 295-324.
- Heemeijer, P., Hommes, C.H., Sonnemans, J. & Tuinstra, J. (2012). An experimental study on expectations and learning in overlapping generations models. *Studies in Nonlinear Dynamics and Econometrics* 16, Issue 4, Article 1.

- Hommes, C.H., Kiseleva, T., Kuznetsov, Y. and Verbic, M. (2012). Is memory in evolutionary selection (de) stabilizing?, *Macroeconomic Dynamics* 16, 335-357.
- Koster, M. (2012). Consistent cost sharing. *Mathematical Methods of Operations Research* 75, 1-28.

Other

- Flores, R., Koster, M., Lindner, I., and Molina, E. (2012). Networks and collective action, *Social Networks* 34(2), 570-584.
- Gooijer, J. de, Diks, C. and Gatarek, L. (2012). Information flows around the globe: Predicting Opening Gaps from Overnight Foreign Stock Price Patterns. *Central European Journal of Economic Modelling and Econometrics* 4(1) 23-44.
- Negriu, A. and Piatecki, C. (2012). On the performance of voting systems in spatial voting simulations. *Journal of Economic Interaction and Coordination* 7, 63-77.

Article in journal – professional

- Ductor, L., Kucinskas, S., Leij, M. van der, Robalo, P. & Van Veldhuizen, R. (2012). The collaboration network of Tinbergen Institute. *Tinbergen Magazine*, Fall 2012, 32-37.

Article in magazine or newspaper – popular scientific

- Hommes, C.H. (2012). How expectations interact to create bubbles, interview for Institute of New Economic Thinking (INET), by Perry Mehrling (<http://inetconomics.org/>).
- Koster, M. (2012, 15 October). Interview tijdschrift *Kijk*.
- Veld, D. in 't (2012, 21 April). Crisisonderzoek. Interview for *Het Financiële Dagblad*.

Book / book chapter – refereed

B

- Diks, C.G.H. & Makarewicz, T. (2012). Initial Predictions in Learning-to-Forecast Experiment. In: Teglio, A., Alfarano, S., Camacho-Cuena, E., and Ginés-Vilar, M. (eds.). *Managing Market Complexity: The Approach of Artificial Economics*, Lecture Notes in Economics and Mathematical Systems, Volume 662, pp. 223-235. Springer.
- Kopányi, D. (2012). Heterogeneous Learning in Bertrand Competition with Differentiated Goods. In: Teglio, A., Alfarano, S., Camacho-Cuena, E., and Ginés-Vilar, M. (eds.). *Managing Market Complexity: The Approach of Artificial Economics*, Lecture Notes in Economics and Mathematical Systems, Volume 662, pp.155-166. Springer.

Book / book chapter – non-refereed

- Boswijk, H.P., Griffioen, G. and Hommes, C.H. (2012). Success and failure of technical analysis in the cocoa futures market, In: Kyrtsov, C and Vorlow, C. (Eds.), *Progress in Financial Markets Research*, Nova Publishers, pp. 25-70.

Report – working- and discussion papers

- Anufriev, M., Kopányi, D. & Tuinstra, J. (2012). Learning Cycles in Bertrand Competition with Differentiated Commodities and Competing Learning Rules. Amsterdam, University of Amsterdam, CeNDEF Working paper 12-05.
- Assenza, T., Brock, W.A. & Hommes, C.H. (2012). Animal Spirits, Heterogeneous Expectations and the Amplification and Duration of Crises. Amsterdam, University of Amsterdam, CeNDEF Working paper 12-07.
- Assenza, T. & Delli Gatti, D. (2012). E Pluribus Unum: Macroeconomic Modelling for Multi-agent Economies. Amsterdam, University of Amsterdam, CeNDEF Working Paper 12-08.
- Cornea, A., Hommes, C.H. & Massaro, D. (2012). Behavioral heterogeneity in U.S. inflation dynamics. Amsterdam, University of Amsterdam, CeNDEF Working Paper 12-03.

- Frenken, K., Izquierdo, L. & Zeppini, P. (2012). Recombinant innovations and endogenous technological transitions. Eindhoven, Eindhoven University of Technology, ECIS Working Paper.
- Hommes, C.H., Zhu, M. (2012). Behavioral Learning Equilibria. CeNDEF Working paper 12-09.
- Kovarik, J. & Leij, M.J. van der (2012). Risk aversion and social networks. Valencia, Ivie, Ivie Working paper WP-AD 2012-01.
- Lelyveld, I. van & Veld, D. in 't (2012). Finding the Core: Network Structure in Interbank Markets. Amsterdam, De Nederlandsche Bank, DNB Working Paper 348.
- Massaro, D. (2012). Heterogeneous expectations in monetary DSGE models. Amsterdam, University of Amsterdam, CeNDEF Working Paper 12-02.
- Ochea, M.I. (2012). Evolution of Repeated Prisoner's Dilemma Play under Logit Dynamics, University of Amsterdam, CeNDEF Working paper 12-10.
- Toomet, O., Leij, M.J. van der & Rolfe, M. (2012). Social networks and labor market inequality between ethnicities and races. Amsterdam-Rotterdam, Tinbergen Institute, TI Discussion paper TI 2012 – 120/II.
- Tuinstra, J. & Veld, D. in 't (2012). Market-Induced Rationalization and Welfare Enhancing Cartels. Amsterdam, University of Amsterdam, CeNDEF Working Paper 12-06.
- Wagener, F.O.O. (2012). Regime shifts: early warnings. Amsterdam, University of Amsterdam, CeNDEF Working paper 12-01.

UvA Dissertation – internally prepared

- Bao, T. (2012, 24 October). *Experiments on Heterogeneous Expectations and Switching Behavior*. Universiteit van Amsterdam. [promotor prof.dr. C.H. Hommes]
- Massaro, D. (2012, 27 March). *Bounded rationality and heterogeneous expectations in macroeconomics*. Universiteit van Amsterdam. [promotor prof.dr. C.H. Hommes]
- Mohammadian Moghayer, S. (2012, 7 February). *Bifurcations of indifference points in discrete time optimal control problems*. Universiteit van Amsterdam. [promotor prof.dr. C.H. Hommes; co-promotor dr.ir. F.O.O. Wagener]

Conference organiser

- Hommes, C.H. (2012, 5 March). KNAW Symposium *Understanding and Managing Complex Systems*, Amsterdam, 5 March, 2012.
- Veld, D. in 't (2012). Organizer of the CeNDEF reading group Networks in Markets, University of Amsterdam.
- Wagener, F.O.O. (2012). Member Scientific Committee of the 12th Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics, 30 May – 2 June, 2012.
- Wagener, F.O.O. (2012). Member Organisation Committee of the 16th Symposium of the International Society of Dynamic Games (Amsterdam, 2014).

Recognition

- Assenza, T. (2012). Unicredit Post-Doc grant for the project ‘Animal Spirits and Financial Crises’. Principal investigator.
- Hommes, C.H. (2012). National Coordinator EU FP7 Pilot Flagship *FuturICT*.
- Hommes, C.H. (2012). 3 papers in the 25 most cited papers list of the 25th anniversary Tinbergen Institute:
- A rational route to randomness (joint with W.A. Brock), *Econometrica* 65(5), 1059-95, 1997; 312 SSCI citations, best cited TI paper 1997-2001;
 - Heterogeneous beliefs and routes to chaos in a simple asset pricing model, (joint with W.A. Brock), *Journal of Economic Dynamics & Control* 22(8-9), 1235-74, 1998; 267 SSCI citations, second best cited TI paper 1997-2001;

- Behavioral heterogeneity in stock prices, (joint with H.P. Boswijk and S. Manzan), *Journal of Economic Dynamics & Control* 31(6), 1938-70; 31 SSCI citations 5th best cited TI paper 2007-2012.
- Hommes, C.H. and Bao, T. (2012), Institute New Economic Thinking (INET) grant *Heterogeneous expectations and financial crises* (HExFiCs).
- Hommes, C.H. and Makarewicz, T. (2012). NWO Talent grant *Learning to forecast with evolutionary models*.
- Hommes, C.H. and Massaro, D. (2012). FP7-SSH-2012-1.3-1 Collaborative project *Macro-Risk Assessment and Stabilization Policies with New Early Warning Signals* (RASTANEWS).
- Sloot, P. and Hommes, C.H. (2012). SIM-CITY, NWO e-Science Center grant.

Media appearance

Hommes, C.H. (2012, February 15). Economie en Schuld, VPRO Labyrint, Television Science Program.

Editorship

- Assenza, T. (2012). Guest editor *REPLHA Special Issue of Journal of Economic Dynamics and Control*.
- Diks, C. (2012). Associate editor for *Studies in Nonlinear Dynamics and Econometrics*.
- Hommes, C.H. (2012). Editor *Journal of Economic Dynamics & Control*.
- Hommes, C.H. (2012). Editorial Board *Complexity Economics*.
- Hommes, C.H. (2012). Associate Editor *Computational Economics*.
- Hommes, C.H. (2012). Associate Editor *Journal of Economic Interaction and Coordination*.
- Hommes, C.H. (2012). Associate Editor *Macroeconomic Dynamics*.
- Leij, M.J. van der (2012). Associate editor for *Network Science*.
- Tuinstra, J. (2012). Associate Editor for *Journal of Economic Dynamics & Control*.

Keynote/invited talk

- Assenza, T. (2012, 27-29 June 27-29). ‘Animal Spirits, Heterogeneous Expectations and the Amplification and Duration of Crises’. INEXC : International Network on Expectational Coordination Conference, Paris, France. Invited lecture.
- Diks, C. (2012, 30 May). ‘Phenomenological and ratio bifurcations of a class of discrete time stochastic processes’, 12th Viennese Workshop, Vienna, Austria. Invited talk.
- Diks, C. (2012, 16 June). ‘Nonparametric tests for serial independence and Granger non-causality: An overview’, 1st Conference of the International Society for NonParametric Statistics, Chalkidiki, Thessaloniki, Greece. Invited talk.
- Diks, C. (2012, July). PhD Course on Agent Based Modelling, Nanjing University, China. Invited lecture series.
- Diks, C. (2012, 10 September). ‘Complexity in Economics and Finance’, Rotary International Division Amsterdam. Invited lecture.
- Diks, C. (2012, 10 October). ‘Early Warning Signals for Critical Transitions in Economics and Finance?’, KNAW Colloquium Early Warnings, Amsterdam. Invited lecture.
- Diks, C. (2012, 18 December). ‘Complexity in Economics and Finance’, Social Physics Workshop, Technical University Eindhoven. Invited lecture.
- Hommes, C.H. (2012, 30 May). ‘Behavioral Rationality and Heterogeneous Expectations in Complex Economic Systems’, 12th Viennese Workshop, May 30-June 2, 2012, Vienna, Keynote Lecture.
- Hommes, C.H. (2012, 21 June). ‘Behavioral Rationality and Heterogeneous Expectations in Complex Economic Systems’, 17th Workshop on Heterogeneous Interacting Agents (WEHIA), June 21-23, 2012, Paris, Keynote Lecture.

- Hommes, C.H. (2012, 3 August). 'Behavioral Learning Equilibria, Expectations in Dynamic Macroeconomic Models Conference, Federal Reserve Board of St Louis, August 2-4, St. Louis, USA, Invited Lecture.
- Hommes, C.H. (2012, 3 September). 'Behavioral Rationality and Heterogeneous Expectations in Complex Economic Systems', European Conference on Complex Systems (ECCS), September 2-7, 2012, Brussel, Invited Plenary Lecture.
- Hommes, C.H. (2012, 6 September). 'Behavioral Rationality and Heterogeneous Expectations in Complex Economic Systems', Artificial Economics, September 6-7, 2012, Castellon, Spain, Keynote Lecture.
- Hommes, C.H. (2012, 6 November). 'The Heterogeneous Expectations Hypothesis Evidence from Laboratory Experiments', Dep. of Finance, Maastricht University, Invited Seminar.
- Hommes, C.H. (2012, 16 November). 'Behavioral Rationality and Heterogeneous Expectations in Complex Economic Systems', INET-CIGI Workshop on Agent-Based and Stock-Flow Modeling, November 15-17, 2012, Waterloo, Canada, Invited by Joe Stiglitz.
- Leij, M.J. van der (2012, 14 March). A social network analysis of occupational segregation. Workshop on segregation, schooling and social networks. CPB. The Hague, The Netherlands. Invited talk for workshop.
- Leij, M.J. van der (2012, 31 May). Social networks and research output. Eindhoven University of Technology. Eindhoven, The Netherlands. Invited seminar.
- Leij, M.J. van der (2012, 11 June). Social networks and research output. Tinbergen Institute Seminar: Networks in Economics. Tinbergen Institute. Amsterdam, The Netherlands. Invited talk for workshop.
- Leij, M.J. van der (2012, 1 July). Bounded rationality and incomplete information in network games. 12th SAET Conference. Brisbane, Australia. Invited talk for session on Public Economics and Networks.
- Leij, M.J. van der (2012, 9 July). Complex methods in economics: An example of behavioral heterogeneity in house prices. Massey University. Auckland, New Zealand. Invited seminar.
- Leij, M.J. van der (2012, 23 August). Complex methods in economics: An example of behavioral heterogeneity in house prices. Magyar Nemzeti Bank. Budapest, Hungary. Invited seminar.
- Leij, M.J. van der (2012, 20 December). Social networks and research output. Stockholm University. Stockholm, Sweden. Invited seminar.
- Leur, M. van de (2012, 22 May). The role of available information under Individual Evolutionary Learning in a Continuous Double Auction. BiGSEM Colloquium, Universität Bielefeld, Germany. Invited lecture.
- Leur, M. van de (2012, 12 July). The role of available information under Individual Evolutionary Learning in a Continuous Double Auction. EDE-EM Jamboree, Université Paris 1, Paris, France.
- Tuinstra, J. (2012, 19 September). Learning, heterogeneous agents and complexity. COST Action IS1104 Workgroup 4 meeting, Urbino, Italy.
- Tuinstra, J. (2012, 28 September). An experimental investigation of learning and expectations in economic models. Tinbergen Institute – 25th anniversary, Amsterdam, The Netherlands.
- Wagener, F.O.O. (2012, 29 May). Analysing Feedback Nash equilibria in R&D competition with PDE methods. Day-0 Workshop, Vienna, Austria. Invited talk.
- Wagener, F.O.O. (2012, 30 May). Analysing R&D cooperation with bifurcation theory. 12th Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics, Vienna, Austria. Invited talk.
- Wagener, F.O.O. (2012, 27 June). Experiments and Expectations. International Network on Expectational Coordination. Collège de France, Paris, France. Keynote lecture.

- Wagener, F.O.O. (2012, 17-21 September). Summer School of Mathematics for Economics and Social Sciences. Centro di Ricerca Matematica Ennio di Giorgi, San Miniato, Italy. Invited lecture series.
- Wagener, F.O.O. (2012, 25 October). Economic dynamics and bifurcation theory. Mathematisch Instituut. Utrecht. Invited lecture.
- Wagener, F.O.O. (2012, 13 November). Economic dynamics and bifurcation theory. Universität Bielefeld, Germany. Invited lecture.
- Wagener, F.O.O. (2012, 27 November). The lake game: Strategic decisions interacting with nonlinear dynamics. GERAD, Montréal, Canada. Invited seminar.
- Wagener, F.O.O. (2012, 29 November). Numerical methods to analyse feedback Nash equilibria in the lake pollution game. Fourth Workshop on Game Theory in Energy, Resources and Environment. Montréal, Canada. Invited talk.

Other lectures

- Assenza, T. (2012, February 2-4). Individual Expectations and Aggregate Macro Behavior. 3rd Southern Europe Experimentalists Meeting, Lanzarote, Spain.
- Bao, T. (2012). Learning, forecasting and optimizing: an experimental study. Royal Economic Society Annual Meeting, 26-28 March, Cambridge, UK.
- Bao, T. (2012). A simple experiment on fee structure and mutual fund choice. Seminar at Université Libre de Bruxelles, 4 May, Brussels, Belgium.
- Bao, T. (2012). Learning, forecasting and optimizing: an experimental study. LeeX International Conference on Theoretical and Experimental Macroeconomics, 11-15 June, Barcelona, Spain.
- Bao, T. (2012). Learning, forecasting and optimizing: an experimental study. 18th International Conference on Computing in Economics and Finance, 27-29 June, Prague, Czech Republic.
- Bao, T. (2012). Learning, forecasting and optimizing: an experimental study. European Economic Association Annual Meeting, 27-31 August, Malaga, Spain
- Diks, C. (2012, 27 June). Complex methods in economics: An example of behavioral heterogeneity in house prices, SCE Conference - Computing in Economics and Finance, Prague, Czech Republic.
- Hommes, C.H. (2012, 1 February). 'The Economy as a Complex Evolving System. Things to know for Policy Makers', *Lezingencyclus Duurzame Economie*, Utrecht, Invited Lecture.
- Hommes, C.H. (2012, 15 May). EU FP7 CRISIS project, Technical Review, Workpackage 4, Laboratory Experiments, Brussel.
- Hommes, C.H. (2012, 21 September). 'Consistency of Linear Forecasts in a Nonlinear Stochastic Economy' Modelli Dinamici in Economia e Finanza (MDEF), Urbino, Italy, September 20-22, 2012, Contributed Talk.
- Hommes, C.H. (2012, 15 October). EU FP7 meeting on Macro, Finance and Monetary Policy under Heterogeneous Expectations, 15-16 October 2012, Frankfurt.
- Hommes, C.H. (2012, 10 November). 'Chaos en Complexe Systemen in de Economie', UvA Docenten Dag Economie \& Bedrijfskunde, FEB, Amsterdam, Invited Lecture.
- Hommes, C.H. (2012, 16 November). Institute of New Economic Thinking (INET) Conference False Dichotomies: Economics and the Challenges of Our Time, November 16-17, 2012, Waterloo, Canada, Invited Discussant.
- Koster, M. (2012, 20 July). Conditional Prediction Values. SING-8 Conference, Budapest, Hungary.
- Makarewicz, T. (2012, 28 June). Learning-to-forecast with genetic algorithms. Computing in Economics and Finance 2012, Prague, Czech Republic.
- Makarewicz, T. (2012, 7 September). Initial predictions in learning-to-forecast experiment. Artificial Economics 2012, Castellón de la Plana, Spain.
- Makarewicz, T. (2012, 5 June). Learning-to-Forecast with genetic algorithms. TI PhD Lunch Seminar, Amsterdam.

- Makarewicz, T. (2012, 2 October). Initial predictions in learning-to-forecast experiment. TI PhD Lunch Seminar, Amsterdam.
- Makarewicz, T. (2012, 19 November). Learning-to-Forecast with genetic algorithms. CeNDEF PhD Lunch Seminar, Amsterdam.
- Leij, M.J. van der (2012, 23 January). Risk aversion and social networks. KAFEE Lunch seminar. University of Amsterdam. Netherlands. Internal seminar.
- Leij, M.J. van der (2012, 11 September). Complex methods in economics: An example of behavioral heterogeneity in house prices. Satellite Workshop of Latsis Symposium 2012: Economics on the Move. Zürich, Switzerland. Contributed talk.
- Leur, M. van de (2012, 22 November). Mean-reverting response to shocks in financial markets. CeNDEF PhD Lunch Seminar. Amsterdam.
- Leur, M. van de (2012, 4 December). The role of available information under Individual Evolutionary Learning in a Continuous Double Auction. CeNDEF PhD Lunch Seminar. Amsterdam.
- Ochea, M. (2012, 20-24 May). Evolution of reciprocity in n-person, asymmetric social dilemmas. Game Dynamics Workshop, May 20-24, 2012, Center for Rationality, Hebrew University, Jerusalem, Israel.
- Ochea, M. (2012, 9-10 June). Evolution of reciprocity in n-person, asymmetric social dilemmas. NORKLIMA Workshop, Oslo, Norway.
- Ochea, M. (2012, July). Competing Heuristics in Cournot Games. GAMES 2012, World Congress of the Game Theory Society, Istanbul, Turkey.
- Tuinstra, J. (2012, 20 September). Positive welfare effects of barriers to entry in a dynamic equilibrium model. Seventh MDEF Workshop, Urbino, Italy.
- Tuinstra, J. (2012, 28 June). On the stability of the Cournot solution under competing learning rules. The 18th International Conference on Computing in Economics and Finance, Prague, Czech Republic.
- Veld, D. in 't (2012, 31 January). Finding the core: Network structure in interbank markets. CeNDEF PhD Lunch Seminar. Amsterdam.
- Veld, D. in 't (2012, 4 February). Finding the core: Network structure in interbank markets. 17th Coalition Theory Network Workshop. Paris, France.
- Veld, D. in 't (2012, 5 March). Understanding financial instability through complex systems: First results. KNAW Symposium Understanding and managing complex systems. Amsterdam.
- Veld, D. in 't (2012, 20 March). Network models of markets with intermediaries. CeNDEF reading group Network in Markets Presentation. Amsterdam.
- Veld, D. in 't (2012, 5 May). On the possibility of welfare-enhancing cartels. QED Jamboree. Copenhagen, Denmark.
- Veld, D. in 't (2012, 23 June). Finding the core: Network structure in interbank markets. Scientific Conference Networks in the Global World: Structural Transformations in Europe, the US and Russia. St. Petersburg, Russia.
- Veld, D. in 't (2012, 27 June). Behavioural heterogeneity and the financial crisis. 18th International Conference Computing in Economics and Finance (CEF). Prague, Czech Republic.
- Veld, D. in 't (2012, 6 November). Behavioural heterogeneity and the financial crisis. Tinbergen Institute Lunch Seminar. Amsterdam.
- Veld, D. in 't (2012, 26 November). Behavioural heterogeneity and the financial crisis. CeNDEF PhD Lunch Seminar. Amsterdam.
- Veld, D. in 't (2012, 14 December). Network structure in interbank markets: Core periphery networks. NWO Complexity Winterschool, Zandvoort.
- Wagener, F.O.O. (2012, 19 July). Markov–Perfect Nash Equilibria in Models With a Single Capital Stock. 15th International Symposium on Dynamic Games and Applications. Liblice, Czech Republic.
- Wagener, F.O.O. (2012, 17 December). Economics of environmental regime shifts. KAFEE Lunch Seminar. Internal Seminar.

Membership academies

- Diks, C. (2012). Fellow Tinbergen Institute.
- Koster, M. (2012). Dutch representative in SING.
- Hommes, C.H. (2012). Fellow Tinbergen Institute.
- Hommes, C.H. (2012). NWO Complexity Program Committee.
- Hommes, C.H. (2012, 19 March). PhD committee Jakob Grazini, *Empirically Based Agent-based Models*, Universita Torino, Italy.
- Hommes, C.H. (2012, 11 December). PhD committee Isabelle Salle, *Heterogeneity, Learning and Monetary Policy: an Application to Inflation Targetting Regimes*, Université Bordeaux, France.
- Leij, M.J. van der (2012). Junior Fellow Tinbergen Institute.
- Tuinstra, J. (2012). Fellow Tinbergen Institute.
- Wagener, F.O.O. (2012). Fellow Tinbergen Institute. Member of Management Committee COST action IS1104.

Relevant position

- Assenza, T. (2012). Referee for: *Journal of Economic Dynamics and Control; Journal of Economic Interaction and Coordination*.
- Bao, T. (2012). Referee for: *Journal of Economic Dynamics and Control, and Journal of Economic Behavior and Organization*.
- Diks, C. (2012). Referee for: *Advances in Complex Systems, Chaos, Economic Letters, Communications in Statistics - Theory and Methods, Empirical Economics, Energy Economics, Journal of Approximate Reasoning, Journal of Economic Behavior and Organization, Journal of Economic Dynamics and Control, Journal of Economic Interaction and Coordination, Methodology and Computing in Applied Probability, METRON, Water Resources Research*.
- Hommes, C.H. (2012). Referee for: *American Economic Review, Journal of Money Credit and Banking, Proceedings National Academy of Sciences (PNAS)*.
- Koster, M. (2012). Referee for: *Mathematical Social Sciences, Mathematical Methods of Operations Research, Games and Economic Behavior*.
- Leij, M.J. van der (2012). Referee for: *Journal of Economic Dynamics and Control, Economic Journal*.
- Massaro, D. (2012). Referee for: *Journal of Economic Dynamics and Control*.
- Ochea, M. (2012). Referee for: *Games and Economic Behavior, Journal of Economic Dynamics and Control, Physica D, Applied Mathematics and Computation*.
- Tuinstra, J. (2012). Referee for: *Computational Economics, Decisions in Economics and Finance, Journal of Economic Behavior and Organization, Journal of Economic Dynamics and Control*.
- Veld, D. in 't (2012). Referee for: *Journal of Economic Dynamics & Control, Journal of Economics*.
- Wagener, F.O.O. (2012). Referee for: *Central European Journal for Operations Research, Journal of Dynamics and Differential Equations, Journal of Economic Dynamics and Control, Journal of Environmental Economics and Management, Mathematical Reviews, Resource and Energy Economics, Royal Society Interface, Strategic Behavior and the Environment*.

7. ACTUARIAL SCIENCE

<i>Programme director:</i>	<i>Prof.dr.ir. M.H. Vellekoop</i>
<i>METIS code:</i>	<i>uva/feb/ase/act</i>
<i>JEL-classification:</i>	<i>C, G2</i>
<i>Starting date:</i>	<i>1989</i>
<i>Website:</i>	<i>www.aseri.uva.nl/act</i>
<i>VSNU-scores 2001-2007:</i>	<i>Quality: 4, Productivity: 4, Relevance: 5, Viability: 3.5</i>

7.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Antonio, K.	dr.	ud	0,50	0,60	0,60	0,60	2
Berkum, F. van	msc	phd	-	-	0,18	0,32	3
Can, U.	dr.	postdoc	-	-	-	0,47	2
Cao, J.	msc	phd	0,3	-	-	-	3
Chen, A.	dr.	postdoc	-	-	-	-	3
Cui, J.	dr.	ud	0,05	0,20	0,16	0,00	1
Cui, J.	dr.	ud	-	-	0,15	0,16	3
Dhaene, J.	prof. dr.	hgl	0,00	0,00	-	-	3
Fan, Z.	msc	phd	-	-	-	0,27	1
Goovaerts, M.J.	prof. dr.	bijz. hgl	0,21	0,21	0,07	-	3
Haastrecht, A. van	drs.	phd	0,20	0,10	0,00	-	1
Janssen, M.J.J.	drs.	phd	0,20	0,20	0,02	-	3
Janssen, M.J.J.	drs.	guest	-	-	0,00	-	1
Joseph, A.S.	drs.	phd	0,20	0,20	0,02	-	3
Joseph, A.S.	drs.	guest	-	-	0,00	0,00	1
Kaas, R.	prof. dr.	hgl	0,50	0,40	0,50	0,50	1
Kaas, R.	prof. dr.	hgl	-	-	-	-	3
Kort, J. de	msc	phd	-	-	0,20	0,40	3
Kuné, J.B.	prof. dr.	hgl	0,15	0,00	0,05	0,00	1
Laeven, R.	prof. dr.	hgl	-	-	-	0,75	2
Pelsser, A.J.	prof. dr.	hgl	0,10	-	-	-	3
Pelsser, A.J.	prof. dr.	hgl	0,25	-	-	-	1
Plat, H.J.	drs.	phd	0,20	0,20	0,05	-	3
Plat, H.J.	drs.	guest	-	-	0,00	-	1
Ronner, A.E.	prof. dr.	bijz. hgl	0,10	0,10	0,20	0,10	3
Rijckevorsel, J.L.A.	prof. dr.	bijz. hgl	0,20	0,20	0,20	0,08	3
Tamerus, J.H.	drs.	oz	0,00	0,00	-	-	1
Vellekoop, M.	prof. dr.	hgl	0,13	0,40	0,25	0,25	1
Vellekoop, M.	prof. dr.	hgl	-	-	0,15	0,32	3
Willemse, W.J.	dr.	ud	0,21	0,15	-	-	1
Willemse, W.J.	dr.	guest	-	-	0,00	-	1
Total 1st flow of funds			1,99	1,85	0,96	1,02	
Total 2nd flow of funds			0,50	0,00	0,60	1,82	
Total 3rd flow of funds			1,51	1,11	1,24	1,38	
Total 1st f.o.f. exd. Ph.D.'s			1,79	1,75	0,96	0,75	
Total 1st-3rd flow of funds			4,00	2,96	2,80	4,22	
Ph.D. students			1,10	0,70	0,47	0,99	

7.2 PROGRAMME DESIGN

The programme concerns both fundamental and applied research in the field of financial institutions. It is mainly directed at insurance companies (for life, non-life, pension and social insurance), but also at banks and other financial intermediaries. Research is performed on the mathematical modeling, estimation, appraisal and control of financial risks of such financial institutions under complete and incomplete information and for complete and incomplete markets. For long term insurance contracts, especially pensions, saving by insurance is significant, which leads to the study of optimal investment and consumption problems. An increasingly important aspect is the influence of the "risk of longevity" on the policies of life insurance, social insurance and care insurance. Newly reported statistics show that life expectancy continues to rise faster than predicted both in the Netherlands and abroad, and the modeling of this effect and its consequences for life insurance policies and pension contracts therefore remains an important area of investigation. Present-day challenges for non-life insurance contracts include decreasing profit margins, increasing competition and selective behaviour of the insured and of insurance companies. In social insurance, there are specific problems that emerge from the privatisation of social insurance contracts. Apart from studying problems in the separate fields of life, non-life, pension and social insurance, work is also done on the theoretical research subject which concerns the unification of several distinct actuarial theories in these fields, and their connection with stochastic financial mathematics.

Supervision and regulation of insurance companies and pension funds form an important part of the field of actuarial research. Methods for risk measurement and the determination of solvency requirements have come under intensified scrutiny in the wake of the recent financial crisis. The new European regulatory framework Solvency II for insurers and the Dutch FTK regulation for pension funds lead to many important new research questions. The Actuarial Science group therefore works on the further development of actuarial risk theory, in particular the development of new mathematical and economic models in the fields of market-consistent valuation, market-consistent pricing and market-consistent embedded value for insurance portfolios.

Other significant fields of research are the interaction between credibility theory, models for the estimation of unreported claims (IBNR) and actuarial ordering of risks, and their consequences for the determination of insurance premiums (risk classification). Credibility models can be viewed as Generalized Linear Mixed Models, having both random (subject-specific) and fixed effects in the linear predictor. Generalized Linear Models and Generalized Linear Mixed Models can be used for a variety of actuarial statistical problems like survival modelling, graduation, multiple-state models, loss distributions, risk classification, premium rating and claims reserving in non-life-insurance. Other aspects are the homogeneity and heterogeneity of insurance portfolios, the probabilistic and subsidising solidarity imposed on the insured, the voluntary or compulsory character of the insurance, and the auto-selection and anti-selection of those insured.

7.3 PROGRAMME EVALUATION

The year 2012 saw the arrival of three new members of our group. PhD student Zhenzhen Fan will perform research which is partially funded by APG, Sami Umut Can joined us from Cornell on a postdoc position and Roger Laeven was appointed as full professor for the chair 'Verzekeringseconomie' which is sponsored by het Verbond van Verzekeraars (the Dutch Association of Insurers). Laeven's research interests, which include axiomatic characterization of risk measures, models for stochastic dependence and decision under uncertainty, concern fundamental theoretical questions but they are also of increasing importance for actuarial practice. This year's publications therefore included abstract results on entropy coherent and entropy convex risk measures in the Mathematics of Operations

Research, but also contributions on premium calculations and recursive computation methods in Insurance: Mathematics and Economics.

The interplay between finance and insurance remains one of the main research subjects of the group. This is witnessed, for example, in the Netspar Research Theme *Reconciliation of Short Term Risks and Long Term Goals for Retirement Provisions*. This project came to an end in 2012 but funding for a new Netspar theme was acquired for the period 2013-2016. This new project, called *Risk Management for Funded Pension Systems* aims to “quantify the effects of changes in pension contracts, in risk measurement procedures and in the regulatory framework for different stakeholders in both the second and third pillar, using models which take explicit account of uncertainties in financial and demographic parameters.” Research will be done in cooperation with the universities of Tilburg and Edinburgh and with industrial partners APG, AEGON and Cardano. Cardano also participated in a ICPM Research Project on the use of derivatives in pension funds; this project was completed in 2012 but mathematical models for derivatives will play a major role in the new Netspar project as well.

Contacts with other research groups and financial institutions have been organized both in an international setting and in the Netherlands. Examples of the first include an international conference on backward stochastic differential equations (organized by Laeven), a summer schools at the KU Leuven (Antonio and Vellekoop) and the appointment of Antonio as chairman of the ASTIN scientific committee. The group also contributed to the organisation of the international conference on Insurance Mathematics and Economics in Hong Kong and the AFMATH conference in Brussels. Closer to home, the effects of new regulatory regimes were discussed during a mini symposium on Risk, Regulation and Supervision for Insurers and Pension Funds at the Royal Netherlands Academy of Arts and Sciences (KNAW) and at a workshop hosted by the Dutch Central Bank (DNB) on Countercyclical Regulation (in cooperation with the Finance group of the FEB and other universities in the Netherlands). Regulation also formed one of the topics of a joint publication of the Amsterdam Center for Insurance Studies (ACIS) and the Dutch Association of Insurers, to which the group contributed with essays on longevity risk and on possible improvements for pension contracts in the Netherlands.

Strengths: New staff members have strengthened the position of the group with respect to its main research themes: stochastic loss reserving, mortality modeling, financial risk management, risk measures and dependence, regulatory design and pension reform. The group is therefore expected to continue to play an important role in the national and international research networks which study these issues.

Weaknesses: The group is small and it has become harder to attract new staff members, both for tenure tracks and for PhD positions. Many excellent students choose to pursue a professional career outside academia.

Opportunities: Research in the group comprises some traditional actuarial subjects but also looks at the interplay between finance and insurance which has received increased attention since the beginning of the financial crisis. This combination is very relevant for subjects such as pension reform and regulatory issues, which are expected to play an important role in the field the coming decade.

Threats: The group has been successful in attracting more Master students for both Executive and regular programmes but numbers are relatively small compared to other programmes in the faculty. This leads to further pressure on the time available for research.

7.4 RESOURCES AND FUNDING

Below are several Research grants awarded to members of the group:

10/2009 – 09/2012. Netspar theme grant: Reconciling Short Term Risks and Long Term Goals for Retirement Provisions, theme coordinator: prof. M.H. Vellekoop, €500.000.

11/2009 – 11/2012. VENI grant (NWO Vernieuwingsimpuls/Innovational Research Incentives Scheme) ‘Non-life: A Life Insurance Approach’, dr. K. Antonio, €250.000.

01/2010 – 01/2014. VIDI grant (NWO Vernieuwingsimpuls/Innovational Research Incentives Scheme) ‘Econometrics of Contagion in Insurance and Finance’, prof.dr.R.J.A. Laeven, €800.000.

01/2013 – 12/2015. Netspar theme grant: Risk Management for Funded Pension Schemes, theme coordinator: prof. M.H. Vellekoop, €500.000.

01/2012 – 01/2015 Chair ‘Verzekeringseconomie’ sponsored by Verbond van Verzekeraars (Dutch Association of Insurers), €400.000.

01/2012 – 01/2014 Sponsored PhD Research Grant, APG (Position of Zhenzhen Fan).

2013: Sponsored PhD Research Grant, Van Ameyde (Position to be filled).

7.5 OUTPUT

Key publications

- Antonio K. & Valdez E.A. (2012). Statistical concepts of a priori and a posteriori risk classification. *Advances in Statistical Analysis* 96(2), 187-224.
- Kaas, R., Goovaerts, M.J., Dhaene, J. & Denuit, M. (2008). Modern actuarial risk theory — Using R. 2nd edition. Springer.
- Goovaerts, Marc J., Rob Kaas & Roger J. A. Laeven (2011). Worst case risk measurement: Back to the future?, *Insurance: Mathematics and Economics* 49, 380-392.
- Chen, A., Pelsser, A. and Vellekoop, M.H. (2011). Modeling Non-Monotone Risk Aversion Using SAHARA Utility Functions, *Journal of Economic Theory* 146(5), pp. 2075-2092.
- Plat, R. (2009). On Stochastic Mortality Modeling, *Insurance: Mathematics and Economics* 45 (3), pp. 393-404.

Forthcoming

- Antonio K. & Plat R. (2013). Micro-level stochastic loss reserving in general insurance. *Scandinavian Actuarial Journal*. Accepted for publication.
- Cui, Jiajia, Bart Oldenkamp, and Michel Vellekoop (2013). When do derivatives add value in asset allocation problems for pension funds?, *Forthcoming in Rotman International Journal of Pension Management*, 6(1), Spring 2013.
- Tomas, J. (2012). Essays on boundaries effects and practical considerations for graduation of mortality by local likelihood models. *Insurance and Risk Management*, 80(2), forthcoming.

Publications in numbers

Actuarial Science				2012
1)	a) in refereed journals	A	3	
		B	0	
		Other	4	7
	b) in other journals		0	0
	c) book chapters	A	0	
		B	0	
		Other	0	0
	d) proceedings		0	0
<i>Subtotal</i>				7
2) Books			0	0
3) Ph.D.			0	0
4)			7	7
5) Popular			3	3
Working			11	11
Total				28

Article in journal – refereed

A

- Dhaene, J., Goovaerts, M., Vanmaele, M. & Van Weert, K. (2012). Convex Order Approximations in case of Cash Flows of Mixed Signs. *Insurance: Mathematics and Economics*, 51, p. 249-256.
- Goovaerts, M.J., Linders, D. Van Weert, K. & Tank, F. (2012). On the interplay between distortion-, mean value- and Haezendonck-Goovaerts risk measures. *Insurance: Mathematics and Economics*, 51 (3), 10-18.
- Kaluszka, M., Laeven, R.J.A. & Okolewski, A. (2012). A note on weighted premium calculation principles, *Insurance: Mathematics and Economics* 51, 379-381.

Other

- Antonio K. & Valdez E.A. (2012). Statistical concepts of a priori and a posteriori risk classification. *Advances in Statistical Analysis* 96(2), 187-224.
- Goovaerts, M.J., Laeven, R.J.A. & Shang, Z. (2012). Transform analysis and asset pricing for diffusion processes: A recursive approach, *Journal of Computational Finance* 16, 47-81.
- Van Weert, K. Dhaene, J. & Goovaerts, M.J. (2012). Comonotonic approximations for the probability of lifetime ruin, *Journal of Pension Economics and Finance*, 11 (2), p. 285–309.
- Tomas, J. (2012). Univariate graduation of mortality by local polynomial regression. *Bulletin Français d'Actuariat*, 12(23), 5-58.

Article in journal – professional

- Antonio K. & Plat R. (2012). Schadereservering anders?: van driehoeken naar micro-data. *De Actuaris* Juli 2012, 32-34.
- Laeven, R.J.A. (2012). Verzekeraars en pensioenen: Aantrekkelijke alternatieven voor het StAr RAM-contract, ACIS/Verbond van Verzekeraars bundel, juni 2012.
- Ayadi, R., Danielsson, J., Laeven, R.J.A., Pelsser, A.A.J., Perotti, E.C. & Wüthrich, M.V. (2012). Countercyclical regulation in Solvency II: Merits and flaws, VOXEU. [7,000 downloads in 2012].
- Tamerus, J.H. (2012). Defined Ambition, *De Actuaris* 19 (3), pp 16-17, interview.
- Vellekoop, M.H. (2012). Langlevenrisico bij Verzekeraars, ACIS/Verbond van Verzekeraars bundel, juni 2012.

Article in magazine or newspaper – popular scientific

- Tamerus, J.H. (2012, January). Pensioenen zijn al langer broos, De Financiele Telegraaf, interview.
- Tamerus, J.H. (2012, March). Pensioenfondsen verzwakt door indexatiestreven/ Kritiek op pensioenplan pijnlijk, Het Financieele Dagblad, interview.
- Tamerus, J.H. (2012, April). Zijn we nog op tijd?, Het Financieele Dagblad.

Inaugural Lecture

- Laeven, R.J.A. (2012). Contagion: Challenges in Risk and Insurance, Inaugural Lecture, Amsterdam: AUP Press.

Report – professional

- Antonio, K. (2012). Sluiten van de periodetafel GBM/V 2005-2010. Rapport uitgegeven door het Actuarieel Genootschap – Actuarieel Instituut, bijlage bij het rapport ‘Prognosetafel AG 2012-2062’, 28 pagina’s.
- Antonio, K., Vellekoop, M.H. et. al. (2012). Prognosetafel AG 2012-2062. Rapport uitgegeven door het Actuarieel Genootschap – Actuarieel Instituut, 25 pagina’s.

Report – working- and discussion papers

- Antonio, K. & Zhang Y. (2012). Mixed models for predictive modeling in actuarial science. AFI Research Report, KU Leuven, Belgium.
- Antonio, K. & Plat, R. (2012). Micro-level stochastic loss reserving in general insurance. AFI Research Report, 12_70, KU Leuven, Belgium. (Accepted for Scandinavian Actuarial Journal)
- Aït-Sahalia, Y., Cacho-Diaz, J.A. & Laeven, R.J.A. (2012). Modeling financial contagion using mutually exciting jump processes, Mimeo, Princeton University and University of Amsterdam.
- Cui, J. & Ponds, E. (2012). From intergenerational risk sharing to intergenerational risk trading, working paper, University of Amsterdam.
- Cui, J. & Van den Goorbergh, R. (2012). Investing in illiquid assets: implications for long term institutional investors, working paper, University of Amsterdam.
- Laeven, R.J.A. & Stadje, M.A. (2012). Robust portfolio choice and indifference valuation, Mimeo, University of Amsterdam and Tilburg University.
- Pigeon, M., Antonio, K. & Denuit, M. (2012). Individual claims reserving with the multivariate skew normal model. AFI Research Report, 12_61, KU Leuven, Belgium.
- Tomas, J. & Planchet, F. (2012 a). Multidimensional smoothing by adaptive local kernel-weighted log-likelihood with application to long-term care insurance. ISFA – Laboratoire SAF Working paper – n. 2012.8 (Submitted to Insurance Mathematics & Economics).
- Tomas, J. & Planchet, F. (2012b). Essays on the construction and validation of specific prospective mortality tables. ISFA – Laboratoire SAF Working paper.
- van Berkum, F. (2012, September). Structural breaks in mortality trends, joint work with Michel Vellekoop and Katrien Antonio,
<http://www.netspar.nl/events/admin/file.aspx?lid=1&id=1756>.
- Vercruyse W., Dhaene J., Denuit M., Pitacco E. & Antonio K. (2012). Premium indexing in lifelong health insurance. AFI Research Report 12_74, KU Leuven, Belgium.

Conference organiser

- Antonio, K. (September 20-21, 2012). Organizer of the IA|BE Summer School on ‘Valuation of contingent claims’, KU Leuven.
- Antonio, K. (2012). Chair of the scientific committee of ASTIN 2013: The Hague.

- Laeven, R.J.A. (September 6, 2012). Organizer of a Mini Symposium on Risk, Regulation and Supervision for Insurers and Pension Funds, Royal Netherlands Academy of Arts and Sciences (KNAW).
- Laeven, R.J.A. (April 27, 2012). Academic Co-Organizer of a Workshop on Countercyclical Regulation at the Dutch Central Bank.
- Laeven, R.J.A. (January 18, 2012). Co-Chair of the Organizing Committee of the CWI-Eurandom International Workshop on Backward Stochastic Differential Equations.
- Kaas, R. (June 28-30, 2012). Member Scientific Committee, IME Conference 2012; Hong Kong.
- Vellekoop, M.H. (2012). Member Scientific Committee, AFMath Conference 2012, Brussels.

Recognition

- Antonio, K. Supervisor of the MSc paper of Laurence Verheyen and Siska Depril, ‘Een analyse van het AG-AI sterftemodel’, Master in de verzekeringen, KU Leuven. Awarded the AFI thesis award (1,000 euro) for the best MSc thesis in insurance (June 2012).
- Antonio, K. Supervisor of the MSc thesis of Hok-Kwan Kan, ‘A Bayesian mortality forecasting framework for population and portfolio mortality’, Master in Actuarial Science and Financial Mathematics, University of Amsterdam. Awarded 2nd place, Johan de Witt thesis prize by the Dutch Actuarial Association (AG-AI) (March 2012).
- Antonio, K. Supervisor of the MSc thesis of Frederik Borgers, ‘Micro-level stochastic loss reserving’, Master in Actuarial and Financial Engineering, KU Leuven. Awarded the IA|BE thesis prize (1,000 euro) for the best MSc thesis in actuarial science.
- Antonio, K. Co-chairholder of the AG Insurance Research Chair on health insurance, KU Leuven, with prof. J. Dhaene and prof. M. Denuit, 12.2011-09.2015.
- Laeven, R.J.A. Best EMAS Teacher 2012 awarded by TIAS NIMBAS Business School to the teacher with the highest student evaluations in the Executive Master of Actuarial Science (EMAS).
- Laeven, R.J.A. Van Ameyde PhD Research Grant 2012.
- Laeven, R.J.A. APG PhD Research Grant 2012.
- Laeven, R.J.A. Sponsorship Chair of Risk and Insurance by the Dutch Association of Insurers.
- Laeven, R.J.A. Netspar Theme Grant 2012 (one of eight participants).
- Laeven, R.J.A. VIDI Research Grant 2009 awarded by the Netherlands Organization for Scientific Research (NWO).
- Ronner, A.J. (2012). Editor of Book “Risico en Risicomanagement in Nederland” Wolters Kluwer 2012, ISBN 978 90 13 10011 2.
- Vellekoop, M.H. (2012). Project leader Netspar Research Theme 2013-2016 ‘Risk management for funded pension schemes’ (500.000 euro total).

Media appearance

- Laeven, R.J.A. (Februari 2012). Interview en Profielbeschrijving (3 pagina’s) in De Onderlinge, Een uitgave van de Federatie van Onderlinge Verzekeringmaatschappijen in Nederland, Jaargang 22, Nummer 2.
- Laeven, R.J.A. (September 2012). Interview en Profielbeschrijving (2 pagina’s) in Infoplus, Uitgave voor leden van het Verbond van Verzekeraars, Nummer 8.
- Laeven, R.J.A. (6 augustus 2012). Interview in De Telegraaf.

Editorship

- Goovaerts, M.J. *Insurance: Mathematics and Economics*, Editor.
- Goovaerts, M.J. *Journal of Computational and Applied Mathematics*, Editor.
- Laeven, R.J.A. *Insurance Markets and Companies: Analyses and Actuarial Computations*, Associate Editor.

Laeven, R.J.A. *Insurance: Mathematics and Economics*, Associate Editor.
Kaas, R. *Insurance: Mathematics and Economics*, Managing Editor.

Keynote/invited talk

- Antonio K. (October 24, 2012). Micro-level stochastic loss reserving. Cass Business School, City University (London, UK).
- Antonio K. (October 18, 2012). Micro-level stochastic loss reserving. Statistics Seminar, Department of mathematics, KU Leuven.
- Goovaerts, M.J. (May 11, 2012). Solvency Capital: The Challenge between Theory and Practice- University of Piraeus.
- Goovaerts, M.J. (May 18, 2012). Decision Principles, University of Lausanne.
- Goovaerts, M.J. (June 24, 2012). Decision Principles, Conference Xiamen.
- Goovaerts, M.J. (June 28, 2012). On the interplay between distortion, mean value and Haezendonck-Goovaerts Risk Measures, IME conference ,Hong Kong.
- Goovaerts, M.J. (October 3, 2012). The mean value principle revisited, ICACCM, Ankara.
- Laeven, R.J.A. (October 31, 2012). Countercyclical regulation in Solvency II: Merits and flaws, Invited Speaker, AC Program, University of Leuven, Belgium.
- Laeven, R.J.A. (October 2, 2012). Actuaris maakt garanties waar?!, Invited Speaker, Actuarisdag, Nieuwegein, The Netherlands.
- Laeven, R.J.A. (September 11, 2012). Measuring systemic risk, Invited Speaker, Academic Advisory Board, APG, Amsterdam, The Netherlands.
- Laeven, R.J.A. (June 18, 2012). Measuring systemic risk, Invited Speaker, Universita Ca' Foscari Venezia, Venice, Italy.
- Laeven, R.J.A. (May 30, 2012). Measuring systemic risk, Invited Speaker, 20th Anniversary ISBA, the Quantitative Methods in Statistics, Biostatistics and Actuarial Sciences Conference, Louvain-la-Neuve, Belgium.
- Laeven, R.J.A. (April 27, 2012). Countercyclical premium in Solvency II, Invited Speaker, Workshop on Countercyclical Regulation, Dutch Central Bank, Amsterdam, The Netherlands.
- Laeven, R.J.A. (April 16, 2012). Measuring systemic risk, Invited Speaker, Tinbergen Institute, Amsterdam, The Netherlands.
- Janssen, M. (2012). 'Optimal Allocation of Diversification Benefits' Invited speaker at CEMAPRE seminar at ISEG, Universidade Tecnica de Lisboa (Lisbon, Portugal).
- Janssen, M. (2012). 'Optimal Allocation of Diversification Benefits' Invited speaker at DSA Seminar at Université de Lausanne (Lausanne, Switzerland).
- Tomas, J. (23 March 2012). Essays on graduation of mortality by adaptive local kernel-weighted log-likelihood. Invited paper, Séminaire L2 – Lyon-Lausanne, Lausanne, Switzerland.
- Tomas, J. (24 May 2012). Essays on graduation of mortality by adaptive local kernel-weighted log-likelihood. Invited paper, 44ème Journée de Statistique, Société Française de Statistique (SFdS), Université Libre de Bruxelles, Brussels, Belgium.
- Tomas, J. (June 28, 2012). Essays on graduation of mortality by adaptive local kernel-weighted log-likelihood. Invited talk, 16th International Congress on Insurance Mathematics & Economics (IME), University of Hong-Kong, Hong-Kong, China.
- Vellekoop, M.H. (December 6, 2012). Optimal consumption and investment under Randomly Terminating Income. Invited Talk, University of Ulm.
- Vellekoop, M.H. (September 28, 2012). Nonlinear Filtering in stock price models. Keynote Speaker at Symposium in honor of prof. Arun Bagchi, University of Twente, Enschede.
- Vellekoop, M.H. (April 3, 2012). Non-monotone Risk Aversion and Optimal Investment: SAHARA Utility Functions. Invited talk, Korteweg De Vries Institute, Amsterdam.
- Vellekoop, M.H. (May 9, 2012). Eerlijk delen en eerlijk vermenigvuldigen. Invited talk, Actuariaatcongres, Felix Meritis, Amsterdam.

Other lectures

- Antonio K. (December 20, November 14 and May, 2012). Stochastisch modelleren van sterfte-risico. Lecture for IIR (Institute for International Research, Amsterdam).
- Antonio K. (May 14, 2012). Stochastic loss reserving in non-life insurance. Lecture in the framework of the KU Leuven Actuarial Contact Program (ACP).
- Antonio K. (May 11, 2012). Statistical techniques for ratemaking and reserving in non-life insurance. Continuous Professional Development (CPD) for the Belgian Institute of Actuaries (IA|BE).
- Antonio K. (March 14 and 21, 2012). Regressietechnieken voor schade- en levenactuariaat. Continuous Professional Development (CPD) for the Dutch Actuarial Association (AG-AI).
- Berkum, F. (November 9, 2012). Structural breaks in mortality rates, Netspar Pension Day (joint work with Michel Vellekoop and Katrien Antonio).
- Cui, J. (June 29, 2012). IME annual conference presentation on “When do derivatives add value in asset allocation problems for pension funds?”, Hong Kong.
- Cui, J. (January 25, 2012). International Pension Workshop presentation on “When do derivatives add value in asset allocation problems for pension funds?”, Amsterdam.
- Cui, J. (November 23, 2012). Netspar Working Group presentation on “Investing in illiquid assets: implications for long term institutional investors”.
- Cui, J. (September 11, 2012). Netspar Pension Day presentation on “From intergenerational risk sharing to intergenerational risk trading”, Amsterdam.
- De Kort, J. (November 9, 2012). Portfolio Selection under Uncertain Lifetime, Netspar Pension Day.
- Janssen, M. (2012). Contributed Talk: ‘Optimal Allocation of Diversification Benefits’ 1st European Actuarial Journal Conference (Lausanne, Switzerland).
- Laeven, R.J.A. (September 6, 2012). Contagion: Challenges in Risk and Insurance, Inaugural Lecture, University of Amsterdam, The Netherlands.
- Tamerus, J.H. (2012, March). Aan de slag met het pensioenakkoord Een draaiboek voor uw nieuwe pensioencontract. IIR ALM-Conference.
- Tamerus, J.H. (2012, April). In het verleden ligt het heden, in het nu wat komen gaat. Een draaiboek voor uw nieuwe pensioencontract. Belangengroep Pensioengerechtigden PFZW, Annual Congress.
- Tamerus, J.H. (2012, May). Aan de slag met het pensioenakkoord. Bent u er klaar voor? Een draaiboek voor uw nieuwe pensioencontract. Boardmembers pensionfund SPOV, studymeting.
- Tamerus, J.H. (2012, May). Aan de slag met het pensioenakkoord. Een draaiboek voor uw nieuwe pensioencontract. Servicekantoor AGH, study meeting for boardmembers of trustees.
- Tamerus, J.H. (2012, September). Bestuurlijke dilemma’s in het pensioencontract. Comenius, studymeting.
- Tamerus, J.H. (2012, September). Solidariteit in het arbeidspensioen: sterkmaker of splijtzwam? TIASNIMBAS, Masterclass.
- Tamerus, J.H. (2012, September). Toen gekozen, nu beoordeeld. De ontwikkeling van ons pensioencontract, bezien met de inzichten van nu. Masterclass Vakbondsbestuurders in spé FNV/CNV/MHP-Jong.
- Tomas, J. (November 30, 2012). Introduction aux méthodes de lissage par vraisemblance locale. Applications à l’assurance dépendance. 3h lecture in french to 2nd year master. Modèles de durée et applications actuarielles – ISFA, Université Claude Bernard Lyon 1 – Lyon, France.
- Vellekoop, M.H. (December 21, November 15 and May 7, 2012). Afdekken van langlevensrisico. Lecture series for IIR (Institute for International Research, Amsterdam).
- Vellekoop, M.H. (June 12, 2012). An actuarial look at the crisis. Invited lecture, Rijksuniversiteit Groningen, Groningen.

Membership academies

- Laeven, R.J.A. (2012). PhD Committee of Bowen Zhang, Delft University. (Promotor: prof.dr. Cornelis Oosterlee).
- Laeven, R.J.A. (2012). PhD Committee of Juan Juan Cai, Tilburg University. (Promotors: prof.dr. John Einmahl en prof.dr. Laurens de Haan).
- Laeven, R.J.A. (2012). PhD Committee of Amit Kothiyal, Erasmus University Rotterdam. (Promotors: prof.dr. Han Bleichrodt en prof.dr. Peter Wakker).

Relevant positions

- Antonio, K. (April 15-May 5, 2012). Research stay at University of Lyon (France), ISFA.
- Antonio, K. (2012). Referee for *North American Actuarial Journal*, *ASTIN Bulletin*, *Insurance: Mathematics and Economics*, *Scandinavian Actuarial Journal*.
- Antonio, K. (2012). Member of the AG-AI Werkgroep Prognosetafel en Ervaringssterfte.
- Cui, J. (2012). Referee for *Economica*, *ASTIN Bulletin*, *The Quarterly Review of Economics and Finance*
- Laeven, R.J.A. (2012). Visiting Professor at the Bendheim Center for Finance, Princeton University, US.
- Laeven, R.J.A. (2012). Advisor and Co-Director of the Multivariate Risk Modeling Group, Eurandom, the European Institute for Statistics, Probability, Stochastic Operations Research and Its Applications, Eindhoven, The Netherlands.
- Laeven, R.J.A. (2012). Fellow and Director of the Insurance Supervision Research Program of the Amsterdam Center for Insurance Studies (ACIS).
- Laeven, R.J.A. (2012). Extramural Fellow of CentER.
- Laeven, R.J.A. (2012). Fellow of the cluster Stochastics --- Theoretical and Applied Research (STAR).
- Laeven, R.J.A. (2012). Fellow of the Network for Studies on Pensions, Aging and Retirement (Netspar).
- Tamerus, J.H. (1992-). Member of the Pension Committee of the Dutch Labour Foundation on behalf of the Union for Middelclass and Higher Employees (MHP)
- Vellekoop, M.H. F(2012). fellow of the Network for Studies on Pensions, Aging and Retirement (Netspar).
- Vellekoop, M.H. (2012). Director of Research for the Derivatives Technology Foundation, Amsterdam
- Vellekoop, M.H. (2012). Member of Commissie Sterfte Onderzoek (CSO) of the Actuarial Association (AG).

8. INDUSTRIAL STATISTICS

<i>Programme director:</i>	<i>Prof.dr. R.J.M.M. Does</i>
<i>METIS-code:</i>	<i>uva/feb/ase/ibis</i>
<i>JEL-Classification:</i>	<i>C1 (Econometric and Statistical Methods and Methodology: General)</i>
<i>Starting date:</i>	<i>1994</i>
<i>Website:</i>	<i>www.aseri.uva.nl/is</i>
<i>VSNU-scores 2003-2008:</i>	<i>(Mathematics): Quality: 4, Productivity: 4, Relevance: 5, Viability: 4</i>

8.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
IBIS							
Akkerhuis, T.S.	drs.	phd	-	-	-	0,17	3
Bisgaard, S.	prof. dr.	hgl	0,10	-	-	-	3
Does, R.J.M.M.	prof. dr.	hgl	0,30	0,30	0,30	0,30	3
Does, R.J.M.M.	prof. dr.	hgl	0,10	0,10	0,10	0,10	1
Erdmann, T.P.	drs./dr.	oz	0,50	0,50	0,50	0,50	3
Lokkerbol, J.	drs.	phd	-	0,40	0,20	-	3
Mast, J. de	dr.	hgl	0,40	0,40	0,40	0,40	3
Kemper, B.P.H.	dr.	oz	0,50	0,50	0,50	0,40	3
Schoonhoven, M.	dr.	oz	0,50	0,50	0,50	0,40	3
Steiner, S.H.	prof. dr.	guest	-	-	-	0,00	N/A
Zwetsloot, I.M.	drs.	phd	-	-	-	0,08	3
Total 1st flow of funds			0,10	0,10	0,10	0,10	
Total 2nd flow of funds			0,00	0,00	0,00	0,00	
Total 3rd flow of funds			2,30	2,60	2,40	2,25	
Total 1st f.o.f. exd. Ph.D.'s			1,90	0,10	0,10	0,10	
Total 1st-3rd flow of funds			2,40	2,70	2,50	2,35	
Ph.D. students			0,00	1,90	1,70	0,25	

8.2 PROGRAMME DESIGN

The research is tightly associated to the commercial activities of IBIS, which is an independent consulting firm owned by the UvA. The interaction of scientific research on the one hand, and its application in the service of IBIS UvA's clients on the other, is seen as the crux of the institute.

Industrial statistics aims to develop techniques and methods, and build methodological knowledge in support of their effective application, for the pursuit of operational effectiveness in businesses and industry. Industrial statistics has strong ties with statistics, operations research, management science and industrial engineering.

Research focuses on four themes, elaborated as 1.2.1 through 1.2.4 below.

8.2.1 Statistical process control and control charting methodology

Statistical process control (SPC) offers methods for detecting when a system transits from a normal state to a disturbed state (named out-of-control). Methodology for SPC in the manufacturing industry has, in the previous two decades, reached a mature stage. Attention is now shifting to control chart methods for robust monitoring and for detecting small shifts in the parameters. Such applications require an integration of SPC with robust statistics and adding additional runs rules to the control charts.

8.2.2 Methodologies for improvement of operational effectiveness, especially in healthcare

Industry and consulting firms develop methodologies for process, quality and efficiency improvement, some of which are applied on an extremely wide scale. Examples include Six Sigma, Lean Manufacturing, Business Process Reengineering, and Statistical Process Control. A critical and scientific study of these commercially offered methodologies aims to assess their merits, and where possible suggest improvements.

In recent years, the research has focused on improvement of operational effectiveness in healthcare institutions in particular. Pressure on healthcare to improve quality, efficiency and safety is high. The consultancy activities of IBIS UvA, as well as the excellent network of contacts in healthcare, provide a good empirical basis for the research, and ample opportunities to test methods in practice.

Another special focus is on methodologies for diagnostic problem solving, including frameworks and prescriptions for exploratory data analysis, and the identification and specification of strategies for efficient diagnosis.

8.2.3 Measurement system analysis

The precision of measurement devices, as well as the reliability of diagnostic tests and quality inspections, can be established by means of a statistical evaluation. Especially the evaluation of measurements and tests that produce results on binary and categorical scales struggles with fundamental and practical hiatuses in insight, for which it is plausible that industrial statistics can make contributions and possibly even induce breakthroughs. Among the objectives for the next 10 years, is the challenge to improve the industrial standard for measurement systems analysis (as laid down in AIAG, 2002), and to improve the international legal standard for modeling measurement precision (as specified in ISO, 1995).

8.2.4 Stochastic scheduling in services and healthcare

Efficient scheduling of hearings in a court house, of patients in a dental practice, or in general: of customers waiting for a service, must deal with random variation in arrival times and availability of the servers. Research aims to expand and apply the theory of stochastic scheduling to improve efficiency, optimizing and improving the balance between utilization of the resources, and waiting time for the customers. The research aims to advance the mathematical treatment, stochastic analysis of queues, and the practical usefulness in service and healthcare systems.

8.3 PROGRAMME EVALUATION

8.3.1 Group, formation and activities

There are two chairs in IBIS: Industrial Statistics (prof. Does) and Methods & Statistics for Operations Management (prof. De Mast). Further, since 2012 the group has three senior researchers (dr. Erdmann, dr. Kemper, dr. Schoonhoven), and two junior researchers (drs. Akkerhuis, drs. Zwetsloot) have accepted a position in IBIS. One junior researcher (dhr. Kuiper) is expected to accept a position in IBIS in 2013. Prof.dr. Mandjes, professor of Applied Probability at the Faculty of Science of the UvA, has accepted a 0.1 FTE position at IBIS starting January 1st, 2013.

In addition, prof.dr. Steiner has joined the group for a period of 11 months (Sept 2012 through June 2013) as visiting professor. Stefan Steiner is professor in the Dept. of Statistics & Actuarial Sciences in Waterloo University, Canada. Stefan collaborates with junior and senior researchers of IBIS in research projects.

The group has collaborated extensively with researchers from other institutions, most notably: the University Medical Center in Groningen; the Faculty of Economics and Business, University of Groningen; the King Fahad University of Petroleum and Minerals, Dhahran, Saudi Arabia; the Quaid-i-Azam University Islamabad, Pakistan; University of Sargodha, Sargodha, Pakistan. Waterloo University, Canada; and the Institute of Psychology, Leiden University. Also, the group has benefited from close collaborations with several hospitals and companies that allowed researchers of IBIS to do field tests and collect data for their research, and professionals from these organizations have co-authored several case studies with IBIS researchers.

SWOT:

- Compared to previous years, we think the research group has managed to build sufficient critical mass to allow us to aim for high impact research projects.
- All senior and junior researchers of IBIS combine their academic work with a position as consultant in IBIS's commercial activities; this combination represents a unique strength of the group, as research is inspired by and thoroughly grounded in its application context in the field, and consulting services provide an effective channel for research output to be of benefit for society.
- But the combination of highly professional work in consultancy and academic work represents a challenge for time management.

8.3.2 Achievements in 2012

Among the best achievements of 2012, the group considers:

- 6 refereed papers (2xA, 3xB), 4 non-refereed papers, 1 book, 1 book-chapter
- Inaugural address by prof.dr. Jeroen de Mast.
- 3 successful PhD defenses: dr. Nasir Abbas, dr. Gerard Niemeijer, and dr. Tashi Erdmann.
- 3 MSc theses: drs. Thomas Akkerhuis, Alex Kuiper, drs. Inez Zwetsloot.
- 9 forthcoming papers (5xB)

SWOT:

- The research output of the group is good considered the limited size of the group, and it is impressive considered that the group is almost entirely funded (directly or indirectly) by revenues generated by group members themselves.
- The output is again high like previous years (2011: 9 refereed papers, 2 dissertations and 7 forthcoming papers). This is remarkable because prof. Does is highly involved in the Executive Programmes, and prof. De Mast has substantial teaching activities.

8.3.3 External evaluations

Most recent evaluation (note that the group was part of the KdV Institute for Mathematics in the period that was evaluated):

VSNU-scores 2003-2008 (Mathematics): Quality: 4, Productivity: 4, Relevance: 5, Viability: 4

8.3.4 Relevance for society and valorization

The research is aimed at developing effective methods and techniques for various ambitions in operations improvement in commercial firms and nonprofit organizations:

- Quality control and improvement;
- Operational effectiveness and productivity;

- Safety and reliability of processes;
- Product development.

SWOT:

- The consulting activities of IBIS offer opportunities for cross-fertilization that are recognized internationally as unique.
- Much research is directly inspired by problems encountered in our consulting activities. These activities and the courses that we teach offer an effective outlet for the results of research.
- In its publication policy, IBIS aims to strike a balance between prestigious academic journal, and applied and professional journals.

8.4 RESOURCES AND FUNDING

Prof.dr. Does's full professor position at the FEB is partially (0.2 fte) paid for by funds of the 1st flow and by funds of the 3rd flow of IBIS (0.2 fte). All other positions are paid for by funds of the 3rd flow. Prof.dr. De Mast has a 0.2 fte position as full professor, which is paid for from the dividend of IBIS. Prof.dr. Steiner's visiting professorship is paid by Waterloo University. The other personnel costs are directly paid by IBIS.

8.5 OUTPUT

Key publications

- Kemper, B.P.H. & Mandjes, M.R.H. (2012). Mean sojourn times in two-queue fork-join systems: bounds and approximations. *OR Spectrum* 34(3), 723-742. [B]
- Mast, J. De (2011). The tactical use of constraints and structure in diagnostic problem solving. *Omega* 39(6), 702–709. [B]
- Mast, J. De, Erdmann, T.P. & Wieringen, W.N. van (2011). Measurement system analysis for binary inspection: Continuous versus dichotomous measurands. *Journal of Quality Technology* 43(2), 99–112. [A]
- Mast, J. De & Lokkerbol, J. (2012). An Analysis of the Six Sigma DMAIC Method from the Perspective of Problem Solving. *International Journal of Production Economics* 139(2), 604–614. [A]
- Schoonhoven, M., Riaz, M. & Does, R.J.M.M. (2011). Design and analysis of control charts for standard deviation with estimated parameters. *Journal of Quality Technology* 43(4), 307–333. [A]
- Schoonhoven, M. & Does, R.J.M.M. (2012). A robust standard deviation control chart. *Technometrics* 54(1), 73–82. [A]

Forthcoming

- Abbas, N., Riaz, M. & Does, R.J.M.M. (in press). Mixed EWMA-CUSUM charts for process monitoring. *Quality and Reliability Engineering International* (DOI: 10.1002/qre.1385). [B]
- Erdmann, T.P., Mast J. De & Warrens M. (in press). Some common errors of experimental design, interpretation and inference in agreement studies. *Statistical Methods in Medical Research* (DOI: 10.1177/0962280211433597).
- Heuvel J. van den, Niemeijer G.C. & Does, R.J.M.M. (in press). Measuring health care quality – the challenges. *International Journal of Health Care Quality Assurance*.

- Mehmood, R., Riaz, M. & Does, R.J.M.M. Does (in press). Control charts for location based on different sampling schemes. *Journal of Applied Statistics* (DOI:10.1080/02664763.2012.740624). [B]
- Niemeijer, G.C., Flikweert, E., Trip, A., Does, R.J.M.M., Ahaus, K.T.B., Boot, A. & Wendt, K.W. (in press). The usefulness of Lean Six Sigma to the development of a clinical pathway for hip fractures. *Journal of Evaluation in Clinical Practice* (DOI:10.1111/j.1365-753.2012.01875.x).
- Mehmood, R., Riaz, M. & Does, R.J.M.M. (in press). Efficient power computation for r out of m runs rules schemes. *Computational Statistics* (DOI 10.1007/s00180-012-0322-4). [B]
- Schoonhoven, M. & Does, R.J.M.M. (in press). A robust Xbar control chart. *Quality and Reliability Engineering International* (DOI:10.1002/qre.1447). [B]
- Schoonhoven, M., Lubbers, C. & Does R.J.M.M. (2013). Shortening the throughput time of a hospital's billing process, *Quality Engineering* 25(2). [B]
- Erdmann, T.P., Boessenkool, H., Hogewoning, L. & Does, R.J.M.M. (2013). Reducing work in process at an emergency assistance center, *Quality Engineering* 25(1). [B]

Publications in numbers

Industrial Statistics				2012
1) Academic publications	a) in refereed journals	A	2	
		B	7	
		Other	1	10
	b) in other journals		4	4
	c) book chapters		1	1
	d) proceedings		0	0
<i>Subtotal</i>				15
2) Books			1	1
3) Ph.D. theses			3	3
4) Professional publications			0	0
5) Popular publications			0	0
				19

Article in journal - refereed

A

- Mast, J. De & Lokkerbol, J. (2012). An Analysis of the Six Sigma DMAIC Method from the Perspective of Problem Solving., *International Journal of Production Economics* 139(2), 604–614.
- Schoonhoven, M. & Does, R.J.M.M. (2012). A robust standard deviation control chart. *Technometrics* 54(1), 73-82.

B

- Erdmann, T.P. & Mast, J. De (2012). Assessment of Binary Inspection with a Hybrid Measurand. *Quality and Reliability Engineering International* 28(1), 47–57.
- Kemper, B.P.H. & Mandjes, M.R.H. (2012). Mean sojourn times in two-queue fork-join systems: bounds and approximations. *OR Spectrum* 34(3), 723-742.
- Lokkerbol, J., Does, R.J.M.M., Mast, J. De & Schoonhoven, M. (2012). Improving processes in financial service organizations: where to begin? *International Journal of Quality and Reliability Management* 29(9), 981-999.
- Lokkerbol, J., Molenaar, M.A.F. & Does, R.J.M.M. (2012). An efficient public sector. *Quality Engineering* 24(3), 431-435.
- Lokkerbol, J., Schotman, M.A.M. & Does, R.J.M.M. (2012). Personal injuries: a case study. *Quality Engineering* 24(1), 102-106.

- Mooren, J., Mast, J. De & Does, R.J.M.M. (2012). The Case of Premature Drill Wear-out. *Quality Engineering* 24(2), 354–359.
- Niemeijer, G.C., Trip, A., Ahaus, K.T.B., Wendt, K.W. & Does, R.J.M.M. (2012). Reducing overuse of diagnostic tests for trauma patients. *Quality Engineering* 24(4), 558-563.

Other

- Niemeijer, G.C., Trip, Wendt, K.W., Jong, L.J. de & Does, R.J.M.M (2012). Impact of five years Lean Six Sigma in a university medical center. *Quality Management in Health Care* 21(4), 262-268.

Book / book chapter – popular scientific

- Kemper, B.P.H. (2012). Capaciteitenmodel - ORE-model. In: Webers, Engelen, L. van & Luijben T. (eds), *Het Groot Verbeterboek*, Den Haag Academic Service, pp. 72-73.
- Mast, J. de , Does, R.J.M.M., Koning, H. de & Lokkerbol, L. (2012). *Lean Six Sigma for Services and Healthcare*. Alphen aan den Rijn: Beaumont Quality Publications, ISBN-978-90-79452-00-2, 170 pages.

UvA dissertation – externally prepared

- Abbas N. (2012, 6 September). Memory-type control charts in statistical process control. Universiteit van Amsterdam. [promotor prof. dr. R.J.M.M. Does; co-promotor: dr. M. Riaz]
- Erdmann T.P. (2012, 21 November). Statistical Evaluation of Binary Measurement Systems. Universiteit van Amsterdam. [promotor prof. dr. J de Mast]
- Niemeijer G.C. (2012, 3 July). Process improvement in healthcare. Universiteit van Amsterdam. [promotores: prof. dr. R.J.M.M. Does, prof.dr.ir. C.T.B. Ahaus; co-promotores: dr. A. Trip, dr. K.W. Wendt]

Editorship

- De Mast, J. (2012). Member Editorial Board, *Quality Engineering*.
- Does, RJMM (2012). Member Editorial Board, and Member Advisory Board, *Quality Engineering*.
- Does, RJMM (2012). Column Editor, *Quality Engineering*.
- Does, RJMM (2012). Member Editorial Board, *Quality Technology and Quantitative Management*.
- Does, RJMM (2012). Member Editorial Advisory Board, *International Journal of Lean Six Sigma*.
- Does, RJMM (2012). Member Publication Management Board American Society for Quality.

Keynote/invited talk

- De Mast, J. (2012). “Industriële statistiek als technologie voor het oplossen van problemen.” Inaugural address, University of Amsterdam (2012).
- De Mast, J. (2012). “Diagnostic problem solving for quality and reliability problems.” Invited presentation, International Symposium on Business and Industrial Statistics, Bangkok (ISBIS-2012).
- Does, RJMM (2012, 27 March). “Management of Processes”. Invited presentation, University of Nijenrode, Breukelen.
- Does, RJMM (2012, 12 September). “Process improvement in Healthcare”. Invited presentation, European Network for Business and Industrial Statistics, University of Ljubljana, Slovenia.

- Erdmann, T.P. (2012). "Measurement system analysis for binary inspection." Invited presentation, International Symposium on Business and Industrial Statistics, Bangkok (ISBIS-2012).
- Kemper, B.P.H. (2012). "Streamline the Path to Optimal Care for Cardiovascular Patients." ASQ World Conference on Quality Improvement, Anaheim.

Other lectures

- De Mast, J. (2012). "Kwaliteitskunde: Verder in isolement, of aansluiting vinden bij bedrijfskunde en economie?" Read before the Dutch Academy for Quality, 19 March 2012.
- De Mast, J. (2012). "Operationele effectiviteit ... in de zorg." Symposium in the University Medical Center of Utrecht, 7 November 2012.
- Kemper, B.P.H. (2012). "Zorg op afspraak verbeteren met Lean Six Sigma." PICA, Kenniscentrum patiëntelogistiek, 17 September 2012.

Membership academies

- De Mast, J. (2012). Associate Member, International Academy for Quality.
- De Mast, J. (2012). Senior Member, American Society for Quality (ASQ).
- De Mast, J. (2012). External Examiner, PhD Defense of Oana Danila, University of Waterloo.
- Does, RJMM (2012). Academician, International Academy for Quality.
- Does, RJMM (2012). Board member, Dutch Academy for Quality.
- Does, RJMM (2012). Fellow, American Society for Quality (ASQ).
- Does, RJMM (2012). Elected member, International Statistical Institute (ISI).
- Does, RJMM (2012). Member of the ASQ Shewhart Medal Nomination Committee.
- Does, RJMM (2012). Member of the ASQ Statistics Division Hunter Award Nomination Committee.
- Does, RJMM (2012). Council Member, European Network for Business and Industrial Statistics (ENBIS).
- Does, RJMM (2012). Vice President Projects, International Academy for Quality.

Relevant position

- De Mast, J. (2012). Referee for *Int. J. of Production Economics*, *Technometrics*, *J. of Quality Technology*, *Advances in Data Analysis and Classification*, *Applied Stochastic Models in Business and Industry*, *J. of Applied Statistics*.
- Does, RJMM (2012). Referee for *Quality Engineering*, *Communications in Statistics – Theory and Methods*, *Int. J. of Lean Six Sigma*, *Quality Technology and Quantitative Management*, *Quality and Reliability Engineering Int.*, *Int. J. of Production Research*, *J. of Applied Statistics*, Sage Publications.
- Kemper, B.P.H. (2012). Referee for *Int. J. for Lean Six Sigma*, *Quality Engineering*, *J. of the Operational Research Society*.
- Schoonhoven, M. (2012). Referee for *Quality and Reliability Engineering Int.*, *Technometrics*, *Applied Stochastic Models in Business and Industry*, *Quality Technology and Quantitative Management*.

9. MINT - MACRO AND INTERNATIONAL ECONOMICS

<i>Programme director:</i>	<i>Prof.dr. F.J.G.M. Klaassen</i>
<i>METIS-code:</i>	<i>uva/feb/ase/mint</i>
<i>JEL-classification:</i>	<i>E, F, H</i>
<i>Starting date:</i>	<i>2001</i>
<i>Website:</i>	<i>www.aseri.uva.nl/mint</i>
<i>VSNU-scores 2001-2007:</i>	<i>Quality: 4, Productivity: 4, Relevance: 5, Viability: 4.5</i>

9.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Beetsma, R.	prof. dr.	hgl	0,50	0,50	0,50	0,50	1
Bonthuis, B.	msc	phd	-	-	-	0,23	3
Buiter, W.	prof. dr.	guest	0,00	0,00	-	-	1
Bucciol, A.	dr.	postdoc	0,86	0,42	0,11	-	3
Ceyhan, P.	drs.	guest	-	0,00	0,00	-	1
Chen, D.	msc	phd	-	-	-	0,27	3
Ewijk, C. van	prof. dr.	hgl	0,11	0,00	0,11	0,11	1
Giuliodori, M.	dr.	uhd	0,50	0,50	0,50	0,50	1
Gornicka, L.	msc	phd	-	-	-	0,27	2
Haan, W.J. den	prof. dr.	hgl	0,80	0,80	0,47	0,00	2
Hoogduin, L.	prof. dr.	hgl	0,02	0,05	0,05	0,00	1
Jager, H.	prof. dr.	hgl	0,19	0,13	0,18	0,18	1
Klaassen, F.J.G.M.	dr.	uhd	0,50	0,50	0,50	-	1
Klaassen, F.J.G.M.	prof. dr.	hgl	-	-	-	0,50	1
Knaap, T.	dr.	guest	0,00	0,00	0,00	-	1
Kirchner, M.	msc	phd	0,60	0,60	0,40	-	1
Kriwoluzky, D.	dr.	postdoc	0,33	0,66	-	-	2
Kwaak, C. van der	msc	phd	-	-	-	0,27	1
Leefmans, N.	drs.	docent	0,00	0,00	0,00	0,00	1
Lekniute, Z.	msc	phd	-	-	-	0,00	1
Lorié, J.A.	dr.	guest	0,00	0,00	0,00	0,00	1
Lozej, M.	msc	phd	0,60	0,60	-	-	2
Mavromatis, K.	dr.	ud	-	-	-	0,21	1
Omeno Sanchez, A.I.	dr.	postdoc	0,00	0,42	0,80	0,33	2
Ploeg, F. van der	prof. dr.	guest	0,10	0,10	-	-	1
Ribeiro-Poplawska, M.	dr.	guest	0,00	-	-	-	1
Romp, W.E.	dr.	postdoc	0,80	0,80	0,68	0,27	3
Romp, W.E.	dr.	ud	-	-	-	0,13	3
Romp, W.E.	dr.	ud	-	-	-	0,10	1
Rusinova, D.	msc	phd	0,10	-	-	-	1
Schabert, A.	dr.	guest	0,00	0,00	-	-	1
Sedláček, P.	msc	phd	0,60	0,60	0,40	-	2
Sedláček, P.	dr.	postdoc	-	-	0,27	0,58	3
Sterk, V.	drs.	phd	0,00	0,00	0,00	-	1
Stoltenberg, C.A.	dr.	ud	0,50	0,50	0,50	0,50	1

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Teulings, C.N.	prof dr	hgl	0,00	0,10	0,10	0,10	1
Veestraeten, D.	dr.	ud	0,35	0,25	0,18	0,00	1
Vermeylen, K.	dr.	ud	-	-	-	0,00	1
Vos, S.J.	drs.	guest	0,60	0,60	0,45	0,00	3
Westerhout, E.	dr.	guest	-	-	-	0,00	1
Wijnbergen, S.J.G.	prof dr	hgl	0,11	0,11	0,14	-	3
Wijnbergen, S.J.G.	prof dr	hgl	0,11	0,32	0,35	0,45	1
Willem's, T.	drs.	phd	0,60	0,60	0,60	0,47	1
Wind, J. de	drs.	phd	0,00	0,00	0,00	0,00	1
Zaheer, S.	drs.	phd	0,00	0,00	0,00	0,00	1
Zhao, L.	msc	phd	-	-	-	0,27	3
Total 1st flow of funds			4,18	4,15	3,97	3,89	
Total 2nd flow of funds			2,33	3,08	1,67	0,60	
Total 3rd flow of funds			2,37	1,93	1,65	1,75	
Total 1st f.o.f. exd. Ph.D.'s			3,48	2,95	2,97	3,15	
Total 1st-3rd flow of funds			8,88	9,16	7,29	6,24	
Ph.D. students			2,50	3,00	1,85	1,78	

9.2 PROGRAMME DESIGN

Objective

The programme uses empirical and theoretical methods to analyse important economic issues in the areas of macroeconomics and international economics. Special emphasis is given to the evaluation of existing fiscal and monetary policies and the question how these policies can be improved upon. Dissemination of the results takes place mainly via international, refereed scientific journals, but also via more policy-oriented outlets.

Motivation

The growth that a country experiences not only has direct effects on the available resources, it can also have important indirect effects through, for example, the stability of the social and political environment. Similarly, the business cycle fluctuations countries face can have far-reaching consequences to many, especially if these fluctuations mainly fall on subgroups within the population. It is therefore crucial to thoroughly understand the characteristics of economic developments, the factors that are behind them, and to what extent and how governments can affect these developments. The current international sovereign debt crisis and discussions on the sustainability of pension systems exemplify this.

Themes

Major international economic developments and policy debates generate a constant stream of research ideas for our group. The resulting projects are often intertwined, but we choose to categorize them into the following (interrelated) themes.

Monetary economics and policy

Monetary policy is used throughout the world to accomplish important macroeconomic objectives such as price stability, exchange rate stability, and/or full employment. In one project Christian Stoltenberg has studied monetary policy in the United States. Since the mid-1980s the interest-rate policy of the Federal Reserve System has been more aggressive in fighting inflation than in the past. He explains this with a decreasing role of cash in transactions. Sajjad Zaheer focuses on Islamic banking, a fast-growing part of the financial sector. He compares the transmission of a monetary contraction through Islamic and

conventional banks and finds that the former cut their lending less, weakening the monetary policy transmission. He also finds that for dual banks, which have both Islamic and conventional banking branches, Islamic branches are financially more stable and better capitalized but also less efficient than conventional ones.

Fiscal policy and sovereign debt

Fiscal policy is a crucial aspect of macroeconomics. Given that government expenditures are a substantial fraction of GDP, they play an important role in welfare redistribution, and financing these expenditures through debt and taxes is likely to have important effects on, for example, financial markets, labour force participation, and investment. Christiaan van der Kwaak and Sweder van Wijnbergen study fiscal policy and address the issue that macroeconomic models have ignored financial fragility and sovereign risk, which is problematic given the policy questions we are facing today. Early results indicate the severe limits on fiscal policy when banks are in distress and expansion is debt financed in a high-debt environment. Fiscal policy may even become counterproductive. Roel Beetsma and Massimo Giuliodori focus on the interest rates that governments have to pay on public debt, with particular emphasis on the GIIPS countries (Greece, Ireland, Italy, Portugal, Spain). They show how news from the daily newsflash of Eurointelligence, an independent internet-based news service, affects interest rate spreads on public debt. Bad news on one country not only drives up the spread for that country, but also for other countries, and this propagation is stronger for the so-called GIIPS countries.

Financial fragility and macroeconomics

This theme was also stimulated by the recent crises, showing the interaction between banking distress, fiscal policy to mitigate financial crisis, public debt, sovereign risk, international spill overs, and banking supervision. Regarding the latter, there is widespread agreement that banks need tighter supervision and control, but there is an equally widespread concern that implementing higher capital requirements will abort the recovery before it has even started. Yet we know very little about the macroeconomic effects of bank regulation. Lucyna Gornicka and Sweder van Wijnbergen focus on a key element: how do banks adjust to more stringent regulation? Early results show that stronger requirements lead to less leverage. Lex Hoogduin, in his capacity as adviser to the International Monetary Fund (IMF), works on the relation between micro and macroprudential policies to maintain financial stability. Of particular interest is the macro part, which concerns the financial system as a whole instead of only individual institutions, because that part is empirically very relevant, yet seriously under researched.

Foreign exchange market

The foreign exchange market is the largest financial market in the world. Many countries have managed or fixed exchange rates, and these are our research focus. Speculative attacks on them can have serious economic and societal consequences. Franc Klaassen has improved the measurement of pressure in the foreign exchange market, that is, the pressure on a currency to depreciate, and how to estimate the effectiveness of monetary policy to ward off pressure. Konstantinos Mavromatis has examined the real appreciation of currencies of transition economies, with particular focus on the composition of capital inflows: the larger inward foreign direct investment relative to portfolio investment, the more productivity increases and the stronger the real appreciation. Dirk Veestraeten has studied the effect of switches in the dynamic process of financial prices, for instance due to fixing the price by adopting a fixed exchange rate or a common currency. Such switching generates strong effects on expectations and thus the dynamics of prices in forward-looking markets. Deeper understanding of these effects is of vital importance.

Pensions and macroeconomic developments

Research projects of Roel Beetsma, Boele Bonthuis, Damiaan Chen, Casper van Ewijk, Ward Romp, and Siert Jan Vos focus on the sustainability of pension systems and the consequences

of changing them, and on the optimal design of pensions systems, as is heavily debated at present. One project stems from the fact that calls for abolishing mandatory participation are becoming louder, as young generations see their contribution payments rise and doubts about their own future pensions are getting stronger. Is a funded pension system with intergenerational risk sharing feasible when participation in the system is no longer mandatory? For many plausible parameter combinations the answer is negative: mandatory participation is a necessity, because otherwise the young would leave the system.

Business cycles and macroeconomic models

Several projects mentioned above deal with business cycles and macro models. Here we mention some additional projects. Petr Sedláček has a framework with heterogeneous firms that face inefficiencies and shows that in such a model aggregate fluctuations can have serious negative welfare consequences. Sweder van Wijnbergen and Tim Willems explain why in recent times employment takes so long to reach pre-recession levels during the recovery. Roel Beetsma and Franc Klaassen study the asymmetry of business cycles, with particular reference to the effectiveness of policy in downturns.

9.3 PROGRAMME EVALUATION

In 2012 MInt published 12 articles in international refereed journals and there are 10 of such publications forthcoming. The students of the group have also done well. Siert Jan Vos (supervised by Roel Beetsma) graduated and took up a position at MN. He remains affiliated with MInt. Tim Willems (supervisor Sweder van Wijnbergen) graduated and started as a postdoc at the University of Oxford. From the many invitations Petr Sedláček received at the international job market, he decided to accept the job offer from the University of Bonn. His has recently received the Joop Hartog Award for best FEB dissertation over 2010 and 2011. That was his third award this year, after winning the first prize at a congress hosted by the Society for Computational Economics and the 2nd place in the Young Economist of the Year of the Czech Economic Society. For MInt these prizes came on top of the second and third prizes that Christian Stoltenberg and Dirk Veestraeten, respectively, won in the Van der Schroeoff Contest 2012 for the best teacher of the FEB as a whole.

During 2012 some researchers left, but the group as a whole grew substantially. Arturo Ormeno Sanchez decided to move to Credit Suisse after his postdoc position expired. Henk Jager retired but is still affiliated with MInt. We were successful in recruiting several promising young researchers. From the international job market Konstantinos Mavromatis decided to move from the University of Warwick to MInt after his graduation. Ward Romp came back from APG to MInt on a full-time basis. Several new students started their PhD research: Boele Bonthuis and Damiaan Chen funded by MN, Lucyna Gornicka and Christiaan van der Kwaak from the Tinbergen Institute MPhil program, Zina Lekniute as an employee of APG and supported by a grant from ICPM, and Lin Zhao funded externally and by the Duisenberg School of Finance. MInt members are also in contact with interested external partners to attract additional external funds to further strengthen the group. We continue to stimulate the coherence of the group by seminars, joint lunches, drinks, and other activities.

The visibility of the group and the interaction with the academic community have been further enhanced through numerous external presentations, conference participations, and participation in networks such as Netspar. We have a seminar series with renowned speakers, which is organised jointly with the VU University Amsterdam and funded by the Tinbergen Institute. The programme is being noticed by the outside world, for instance reflected by invitations for presentations, contributions to research volumes, referee activities, the high quality of applicants in the latest international recruitment rounds

There are intensive contacts with policy institutions via visitorships and joint research papers (European Commission, ECB, IMF, BIS, OECD, WTO, Dutch Finance Minister, among others), joint appointments (Coen Teulings as director and Casper van Ewijk as deputy director at CPB Netherlands Bureau of Economic Policy Analysis), joint positions (Joris de Wind and Ed Westerhout working at the CPB), via seminars and teaching (by employees of the Dutch Central Bank), and memberships of several advisory committees for the Dutch government. There are also collaborations with the business sector, such as APG, Atradius, MN, and Rabobank. And we take part in public debates on issues such as pension reform and the financial and sovereign debt crises. Particularly Roel Beetsma, Lex Hoogduin, and Sweder van Wijnbergen are frequently asked by radio and television channels to comment on such topics, and they regularly write for opinion pages of quality newspapers. Another sign of the societal relevance is that many undergraduate students take our courses and write their theses at MInt. Those students also offer ways to disseminate insights from research on key (inter)national events and debates to society.

The 2009 QANU Research Review assessed the program over the 2001-2007 period (under its previous name “The Transformation of Europe”). The results of this research visitation were: Quality 4, Productivity 4, Relevance 5, and Viability 4.5. All productivity indicators were found to be highly satisfactory, with the possible exception of student numbers which had declined somewhat, despite a high number of theses defended. We can now say that after the review period we have continued in line with our strong points, and our efforts to recruit students through the Tinbergen Institute as well as external funding have paid off.

Strengths: Good and relevant productivity and good (inter)national reputation. Numerous contacts with policy makers, businesses, media, and so on. Solid funding base, not only because we serve many undergraduate students, but also because of our connections to the non-academic world. Coherent group. Good seminar series, jointly with the VU.

Weaknesses: We experience severe competition in the job market, especially from financial and policy institutions. Because of good outside options it is easy to lose good researchers and not always easy to convince excellent undergraduate students to pursue a PhD.

Opportunities: We are trying to raise external funding so as to enlarge the group. Our expanding contacts with the financial industry generate opportunities in this regard. The new hire on the international job market will hopefully provide a further boost. We have contacts with many undergraduate students, creating opportunities for the research group, both directly and indirectly through the students’ contacts at policy institutions and businesses. We wish to further exploit our international contacts.

Threats: Financial distress at FEB and the resulting faculty reorganisation with vacancy stop have substantially increased the teaching load and administrative duties for MInt researchers. This is particularly relevant due to the number of undergraduate students that we serve. To avoid a negative impact on research output, this situation needs to be improved.

9.4 RESOURCES AND FUNDING

To finance our conferences, traveling, seminars, visitors, and so on, we use first-stream resources from the government, funds from the research institute, the Tinbergen Institute, and the following other sources. A major success was the cooperation between Roel Beetsma and MN, one of the largest pension administrators and pension wealth managers in the Netherlands. The company sponsors the MN Chair in Pension Economics and two PhD students. Moreover, Roel Beetsma and Casper van Ewijk have a grant from Netspar for their pension research. The former has also obtained a grant from the International Centre for Pension Management at the Rotman School of Management, Toronto. Casper van Ewijk

succeeded in obtaining a grant for a postdoc from the NWO Open Research Area Plus as of 2013. Sweder van Wijnbergen has used funds for research on credit crisis consequences from the Gieskes-Strijbis Foundation, and he has grants for a student from EBN, a Dutch holding company for national gas interests of the Dutch state, and the Duisenberg School of Finance. In addition, one student was financed by the Dutch Central Bank, one by the Pakistan government, and one by Rabobank. It was unfortunate that the proposal for the big research project FuturICT, an EU Future and Emerging Technologies (FET) flagship in which the UvA-FEB including MInt participated, was rejected in the final round.

9.5 OUTPUT

Key publications

- Covas, F. & Den Haan, W.J. (2011). The cyclical behavior of debt and equity finance. *American Economic Review* 101, 877-899.
- Beetsma, R.M.W.J. & Giuliodori, M. (2010). The Macroeconomic Costs and Benefits of the EMU and other Monetary Unions: An Overview of Recent Research, *Journal of Economic Literature* 48, 603-641.
- Beetsma, R.M.W.J. & Giuliodori, M. (2011). The Effects of Government Spending Shocks: Review and Estimates for the EU. *Economic Journal* 121, F4-32.
- Daniëls, T.R., Jager, H. & Klaassen, F.J.G.M. (2011). Currency Crises with the Threat of an Interest Rate Defence. *Journal of International Economics* 85, 14-24.
- Klaassen, F.J.G.M. & Magnus, J.R. (2009). The Efficiency of Top Agents: An Analysis through Service Strategy in Tennis. *Journal of Econometrics* 148, 72-85.
- Sterk, V. (2010). Credit Frictions and the Comovement between Durable and Non-durable Consumption. *Journal of Monetary Economics* 57, 217-225.

Forthcoming

- Beetsma, R.M.W.J., Bluhm, B., Giuliodori, M. & Wierts, P. (2013). From first-release to ex-post fiscal data: exploring the evolution of fiscal forecast errors in the EU. *Contemporary Economic Policy*. [B]
- Beetsma, R.M.W.J., Giuliodori, M., Jong, F. de & Widjianto, D. (2013). Spread the News: the Impact of News on the European Sovereign Bond Markets during the Crisis. *Journal of International Money and Finance*. [B]
- Beetsma, R.M.W.J., Romp, W.E. & Vos, S.J. (2013). Intergenerational risk sharing, pensions and endogenous labour supply in general equilibrium. *Scandinavian Journal of Economics*. [B]
- Bonenkamp, J. & Westerhout, E. (2013). Intergenerational risk sharing and endogenous labour supply within funded pension schemes. *Economica*. [B]
- Guerriero C. (2012). The Political Economy of Incentive Regulation: Theory and Evidence from US States. *Journal of Comparative Economics*. [A]
- Lammers, J., Wijnbergen, S.J.G. van & Willebrands, D. (2013). Condom use, risk perception and HIV knowledge: a comparison across sexes in Nigeria. *Journal of HIV/AIDS- Research and Palliative Care*.
- Lepetyuk, V. & Stoltenberg, C.A. (2013). Policy Announcements and Welfare. *Economic Journal*, forthcoming. [A]
- Mishkin F., Giuliodori, M. & Matthews, K. (2013). The Economics of Money, Banking and Financial Markets. European Edition (First Edition), Pearson Education.
- Veestraeten, D.J.M. (2013). Erratum to “An alternative approach to modelling relapse in cancer with an application to adenocarcinoma of the prostate” [Mathematical Biosciences, 199 (2006) 38-54]. *Mathematical Biosciences*.

- Westerhout, E. (2013). Population Ageing and Health Care Expenditure Growth. In: Hamblin, K. & Harper, S. (eds.), *International Handbook on Ageing and Public Policy*, Edward Elgar. [B]
- Wijnbergen, S.J.G. van & Willems, T. (2013). Imperfect information, lagged labour adjustment, and the Great Moderation. *Oxford Economic Papers*. [B]

Publications in numbers

Mint		2012		
1) Academic publications	a) in refereed journals	A	4	
		B	7	
		Other	1	12
	b) in other journals		3	3
	c) book chapters	A	3	
		B	0	
		Other	1	4
	d) proceedings		0	0
Subtotal				19
2) Books		A	1	
		B	0	
		Other	0	1
3) Ph.D. theses			1	1
4) Professional publications			13	13
5) Popular publications			4	4
6) Working papers			23	23
Total				61

Article in journal – refereed

A

- Beetsma, R.M.W.J., Romp, W.E. & Vos, S.J. (2012). Voluntary Participation and Intergenerational Risk Sharing in a Funded Pension System. *European Economic Review* 56, 1310-1324.
- Boswijk, H.P. & Klaassen, F.J.G.M. (2012). Why frequency matters for unit root testing in financial time series. *Journal of Business and Economic Statistics* 30, 351-357.
- Covas, F. & Haan, W.J. den (2012). The Role of Debt and Equity Finance Over the Business Cycle. *Economic Journal* 122, 1262-1286.
- Haan, W.J. den & Wind, J. de (2012). Nonlinear and stable perturbation-based approximations. *Journal of Economic Dynamics and Control* 36, 1477-1497.

B

- Beetsma, R.M.W.J. & Giuliodori, M. (2012). The changing macroeconomic response to stock market volatility shocks. *Journal of Macroeconomics* 34, 281-293.
- Beetsma, R.M.W.J., Giuliodori, M. & Hanson, J. (2012). Budgetary Consolidation under Different Exchange Rate Regimes. *Economics Letters* 117, 912-916.
- Ewijk, C. van, Groot, H. de & Santing, C. (2012). Meta analysis of the equity premium. *Journal of Empirical Finance* 19, 819-830.
- Ewijk, C. van & Volkerink, M. (2012). Will ageing lead to a higher real exchange rate for the Netherlands? *De Economist* 160, 59-80.
- Stoltenberg, C.A. (2012). Real Balance Effects, Timing and Equilibrium Determination. *Journal of Money, Credit and Banking* 44, 981-994.
- Veestraeten, D.J.M. (2012). Transition probabilities in a problem of stochastic process switching. *Economics Letters* 114, 201-204.

Wijnbergen, S.J.G. van & France, A. (2012). Assessing Debt Sustainability in a Stochastic Environment: 200 Years of Dutch Debt and Deficit Management. *De Economist* 160, 219-236.

Other

Teulings, C.N. (2012). The financing and economy for an aging society, *Gerontechnology* 11, 99.

Article in journal - non-refereed

Beetsma, R.M.W.J. & Gradus, R. (2012). A Discussion of the Changes to Europe's Macro-Fiscal Framework in Response to the Crisis. *CESifo Forum* 13, 1.

Eijffinger, S. & Hoogduin, L. (2012). The European Central Bank in (the) crisis. *CESifo Dice Report, Journal for Institutional Comparisons* 10, 32-38.

Hoogduin, L. & Wiertz, P. (2012). Thoughts on Policies and the Policy Framework after a Financial Crisis, in: *Threat of Fiscal Dominance?*, BIS papers No. 65, 83-90.

Article in journal – professional

Beetsma, R.M.W.J. (2012, 1 November). Bouw sociale huursector geleidelijk af, *Mequidice*.

Beetsma, R.M.W.J. (2012, 10 October). Berichtgeving over kosten pensioenfondsen misleidend, *Mequidice*.

Beetsma, R.M.W.J. (2012, 26 September). Houd Griekenland binnen de euro, maar draai geldkraan dicht, *Mequidice*.

Beetsma, R.M.W.J. (2012, 10 July). Overheid maakt zichzelf onbetrouwbaar met flip-flop tandartstarieven, *Mequidice*.

Eijffinger, S., Haan, J. de & Hoogduin, L. (2012). Canon deel 2: monetaire economie. *Economisch Statistische Berichten* 97, 149-153.

Ewijk, C. van & Lever, M. (2012). Wonen in je pensioen; reactive. *Economisch Statistische Berichten* 97, 662-663.

Haan, J. de, Joseph, A., Vos, S.J. & Wijckmans, J. (2012). De impact van Solvency II regels voor pensioenfondsen. *Economisch Statistische Berichten* 97.

Hoogduin, L. (2012). Is het afsplitsen van de risicovolle activiteiten van banken een goed idee? Vraag van de week. *Economisch Statistische Berichten* 97, 128.

Lorié, J.A., Nordman, N. & Willebrands, D. (2012). Griekse staatsschuld onhoudbaar. *Economisch Statistische Berichten* 97, 422-425.

Lorié, J.A., Nordman, N. & Willebrands, D. (2012). Aantal faillissementen terug op niveau 2009, *Economisch Statistische Berichten* 97.

Lorié, J.A. & Willebrands, D. (2012, 17 augustus). Grexit blijft spelen met vuur, *Mequidice*.

Article in journal – popular scientific

Haan, J. de, Joseph, A., Vos, S.J. & Wijckmans, J. (2012, April). The impact of Solvency II rules, *Investment & Pensions Europe*.

Article in magazine or newspaper – popular scientific

Beetsma, R.M.W.J. (2012, 10 October). Pensioenkosten, *Financieel Dagblad*.

Beetsma, R.M.W.J. & Gradus, R. (2012, 16 February). Loonstijging is geen panacee, *Financieel Dagblad*.

Gradus, R., Beetsma, R.M.W.J., Bovenberg, A.L., Caminada, K., Dijkgraaf, E. & Eijffinger, S. (2012, January 24). Sociale vlaktaks is goed voor iedereen, *De Volkskrant*.

Book / book chapter – refereed

A

- Beetsma, R.M.W.J. & Bucciol, A. (2012). The consequences of indexed debt for welfare and funding ratios in the Dutch pension system. In: Bovenberg, A.L., Ewijk, C. van & Westerhout, E. (eds.), *The Future of Multi-Pillar Pensions*, Cambridge University Press.
- Bovenberg, A.L., Ewijk, C. van & Westerhout, E. (eds.). *The Future of Multi-Pillar Pensions*, Cambridge University Press.
- Ewijk, C. van & Bovenberg, L.A. (2012). Designing the pension system: Conceptual framework. In: Bovenberg, A.L., Ewijk, C. van & Westerhout, E. (eds.), *The Future of Multi-Pillar Pensions*, Cambridge University Press.
- Ewijk, C. van & Bovenberg, L.A (2012). The future of multi-pillar pension systems, In: Bovenberg, A.L., Ewijk, C. van & Westerhout, E. (eds.), *The Future of Multi-Pillar Pensions*, Cambridge University Press.

Book / book chapter – non-refereed

- Ewijk, C. Van (2012). Langdurige zorg: vooral een verzekeringsprobleem. In: Schut, E. & Varkevisser, M. (eds.), *Een economisch gezonde gezondheidszorg*, Preadviezen van de KVS, Sdu, Den Haag, 217-243.

Report – professional

- Ewijk, C. van, Lever, M. & Mehlkopf, R. (2012). CPB Notitie, 30 mei 2012, Generatie-effecten Pensioenakkoord, CPB, Den Haag.
- Lorié, J.A., Kastelein, M., Nordman, N. & Willebrands, D. (2012). Sticking together: the future of the Eurozone, Amsterdam: Atradius Economic Research.

Working- and discussion papers

- Beetsma, R.M.W.J., Cukierman, A. & Giuliodori, M. (2012). The Political Economy of Redistribution in the US in the Aftermath of World War II and the Delayed Impacts of the Great Depression - Evidence and Theory. University of Amsterdam, http://www1.fee.uva.nl/mint/content/people/content/giuliodori/downloadablepapers/beetsma_cukierman_giuliodori2.pdf.
- Beetsma, R.M.W.J., Giuliodori, M., Walschot, M. & Wierts, P. (2012). Fifty Years of Fiscal Planning and Implementation in the Netherlands. University of Amsterdam, http://www1.fee.uva.nl/mint/content/people/content/giuliodori/downloadablepapers/EJPE_2012.pdf.
- Beetsma, R.M.W.J. & Mavromatis, K. (2012). An Analysis of Eurobonds. CEPR Discussion Paper No. 9244.
- Boero, G., Mavromatis, K. & Taylor, M.P. (2012). Asymmetries, productivity and capital account effects in the determination of the real exchange rate: The case of transition economies.
- Boranbay, S. & Guerriero, C. (2012). Endogenous (In)Formal Institutions. ACLE Working Paper, 2012-04.
- Bos, F. & Teulings, C.N. (2012). The world's oldest fiscal watchdog: CPB's analyses foster consensus on economic policy. CEPR Discussion Paper No. 8902.
- Dari-Mattiacci, G., Guerriero, C., & Zhenxing H. (2012). Property Versus Contract. ACLE Working Paper, 2012-01.
- Hertrich, M. & Veestraeten, D.J.M. (2012). Valuing stock options when prices are subject to a lower boundary: A correction. University of Amsterdam.
- Kirchner, M. & Wijnbergen, S.J.G. van (2012). Fiscal Deficits, Financial Fragility and the Effectiveness of Government policies. Tinbergen Institute WP 12-044/2.

- Koudstaal, M. & Wijnbergen, S.J.G. van (2012). On Risk, Leverage and Banks: do Highly Leveraged banks take on Excessive Risk? Tinbergen Institute WP 12-022/2/DSF-31.
- Kriwoluzky, A. & Stoltenberg, C.A. (2012). Monetary Policy and the Transaction Role of Money in the United States. University of Amsterdam.
- Lepetyuk, V. & Stoltenberg, C.A. (2012). Reconciling Consumption Inequality with Income Inequality. University of Amsterdam.
- Mavromatis, K. (2012). Markov Switching Monetary Policy in a two-country DSGE Model. The Warwick Economics Research Paper Series (TWERPS) No. 982, University of Warwick.
- Onghena, S., Wijnbergen, S.J.G. van & Zaheer, S. (2012). The Transmission of Monetary Policy Through Conventional and Islamic Banks, Tinbergen Institute WP 12-048/2.
- Ormeno, A. (2012). Using survey data in the estimation of learning and rational expectations models. Central Bank of Peru Working Paper 2012-07.
- Veestraeten, D.J.M. (2012). The relationship between put and call option prices: A remark. University of Amsterdam.
- Veestraeten, D.J.M. (2012). On transition and first hitting time densities of the Ornstein-Uhlenbeck process. University of Amsterdam.
- Veestraeten, D.J.M. (2012). Currency option pricing in a credible exchange rate target zone. University of Amsterdam.
- Vermeylen, K. (2012). Decreasing Returns to Capital, the Willingness to Pay and the Willingness to Accept Compensation, and the Limits of Cost-Benefit Analysis. University of Amsterdam.
- Vermeylen, K. & Arkel, R. van (2012). The Interest Rate and Capital Durability, and the Importance of Methodological Pluralism. University of Amsterdam.
- Wijnbergen, S.J.G. van & Willems, T. (2012). Optimal learning on climate change: Why climate skeptics should reduce emissions. Tinbergen Institute WP 12-085/2.
- Wijnbergen, S.J.G. van & Willems, T. (2012). Learning dynamics and support for economic reforms: Why good news can be bad. Tinbergen Institute WP 12-043/2.
- Willems, T. (2012). Political accountability and policy experimentation: Why to elect left-handed politicians? University of Oxford.

UvA Dissertation – internally prepared

- Vos, S.J. (2012, 7 November). Essays in Pension Economics and Intergenerational Risk Sharing, University of Amsterdam. [promotor prof. dr. R.M.W.J. Beetsma].

Conference organiser

- Stoltenberg, C.A. (2012). Tinbergen Macro Seminar Series.

Recognition

- Beetsma, R.M.W.J. (2012). Netspar theme grant for the program *Multi-pillar pension schemes and macroeconomic performance* (2010-2013).
- Beetsma, R.M.W.J. (2012). *MN Chair in Pension Economics* – sponsoring of Chair and two AIO research projects.
- Ewijk, C. van (2012). Open Research Area in Europe of the Social Sciences (ORA)/ NWO grant on research proposal *The Impact of Social Security Contributions on Earnings* (0.25 mln euro, post-doc for 3 years).
- Sedlacek, P. (2012). Student prize CEF 2012.

Media appearance

- Beetsma, R.M.W.J. (2012, 19 November). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 24 October). *BNR Nieuwsradio*.

- Beetsma, R.M.W.J. (2012, 24 September). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 18 September). *Radio 1*.
- Beetsma, R.M.W.J. (2012, 31 August). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 20 August). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 2 August). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 5 July). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 21 June). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 15 May). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 10 May). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 29 March). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 1 March). *Omrop Fryslan*.
- Beetsma, R.M.W.J. (2012, 1 March). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 31 January). *Radio 1*.
- Beetsma, R.M.W.J. (2012, 24 January). *BNR Nieuwsradio*.
- Beetsma, R.M.W.J. (2012, 18 January). *BNR Nieuwsradio*.
- Ewijk, C. van (2012, 17 September). Casper van Ewijk over de koninklijke weg in pensioen, *Video interview Me Justice*.
- Ewijk, C. van (2012, 25 July). Het Interview - Casper van Ewijk, door Anke Claassen, *NPN (Nederlands Pensioen & Beleggingsnieuws)*.
- Ewijk, C. van (2012, April). Terug naar ziekenfonds en particuliere verzekering? Differentieer de zorgkosten, Interview in *Headline*, Uitgave van HEAD, van en voor zorgfinancials.
- Hoogduin, L. (2012, 26 November). Video interview: wat nu?, *Mejudice*.
- Hoogduin, L. (2012, 13 October). Tros in bedrijf, *Radio 1*.
- Hoogduin, L. (2012, 10 October). Interview, *BNR Radio*.
- Hoogduin, L. (2012, 13 September). Interview, *BNR Radio*.
- Hoogduin, L. (2012, 3 September). Interview, *BNR Radio*.
- Hoogduin, L. (2012, 7 July). Interview, *BNR Radio*.
- Hoogduin, L. (2012, 31 May). Interview, *BNR Radio*.
- Hoogduin, L. (2012, 24 May). Villa VPRO, Klinkende munt, *Radio 1*.
- Hoogduin, L. (2012, 3 May). Interview, *BNR Radio*.
- Hoogduin, L. (2012, 15 March). Villa VPRO, Klinkende munt, *Radio 1*.
- Hoogduin, L. (2012, 12 January). Villa VPRO, Klinkende munt, *Radio 1*.
- Hoogduin, L. (2012, 1 January). Nieuwjaarsreceptie, *Radio 1*.
- Hoogduin, L. (2012). Interview, *Nieuwsuur*.
- Hoogduin, L. (2012). Interview, *Nieuwsuur*.
- Hoogduin, L. (2012). Discussion with Leen Meijaart, *Room for Discussion*.
- Hoogduin, L. (2012). Discussion with Ewald Engelen, *Room for Discussion*.
- Hoogduin, L. (2012). Interview, *Prospect*.
- Hoogduin, L. (2012). Interview, *Nederlands Pensioennieuws*.
- Hoogduin, L. (2012). Interview, *NRC Handelsblad*.
- Hoogduin, L. (2012). Interview, *NVM Magazine*.
- Hoogduin, L. (2012). Interview, *De Volkskrant*.
- Hoogduin, L. (2012). Interview, *HP/de Tijd*.
- Hoogduin, L. (2012). Interview, *AM*.

Editorship

- Beetsma, R.M.W.J. (2012). Chairman Editorial Board *Netspar*.
- Ewijk, C. van (2012). Editor *De Economist*.
- Guerriero, C. (2012). Associate Editor *International Review of Law and Economics*.

Keynote/invited talk

- Beetsma, R.M.W.J. (2012, 25 January). Risk sharing in defined-contribution funded pension systems. Netspar Pension Workshop, Amsterdam.
- Beetsma, R.M.W.J. (2012, 17 March). Discussant of *How do Laffer curves differ across countries?* (by Mathias Trabandt and Harald Uhlig). Seventh Conference of the International Research Forum on Monetary Policy, organised by the ECB, Federal Reserve Board, Georgetown University and Center for Financial Studies of the University of Frankfurt, Frankfurt.
- Beetsma, R.M.W.J. (2012, 13 April). Co-movements of European interest spreads before and after the start of the debt crisis. International Conference on the European Sovereign Debt Crisis: Background and Perspectives, organised by the Copenhagen Business School, Danmarks Nationalbank and the Santa Cruz Institute of International Economics (SCIIE), Copenhagen.
- Beetsma, R.M.W.J. (2012, 7 May). Chairman of panel *Country Experience with Fiscal Consolidation*. Conference on Medium-Term Budgetary Frameworks and Fiscal Consolidation Programs, organised by IMF and Swedish Ministry of Finance, Stockholm.
- Beetsma, R.M.W.J. (2012, 8 May). From Budgetary Forecasts to Ex-Post Fiscal Data: Exploring the Evolution of Fiscal Forecast Errors in the EU, Conference on Medium-Term Budgetary Frameworks and Fiscal Consolidation Programs. Conference organised by IMF and Swedish Ministry of Finance, Stockholm.
- Beetsma, R.M.W.J. (2012, 22 May). The Political Economy of Redistribution in the U.S. in the Aftermath of World War II and the Delayed Impacts of the Great Depression - Evidence and Theory. European Symposium in Macroeconomics, organised by CEPR, Tarragona.
- Beetsma, R.M.W.J. (2012, 4 June). Panel discussant of *Corporate Taxation of Headquarter Services in Europe*. ZIFO Congress Hoofdkantoren en Fiscaal Vestigingsklimaat, organised by the Free University, Amsterdam.
- Beetsma, R.M.W.J. (2012, 12 September). Short- and Long-Run Challenges for European Public Finances. MN Services, The Hague.
- Beetsma, R.M.W.J. (2012, 20 September). Sovereign Risk, the Future of the Euro & the Impact for Investors. SPS Conference *Fixed Income Investment Strategies for Pension funds*, Amsterdam.
- Beetsma, R.M.W.J. (2012, 26 September). Short- and Long-Run Challenges for European Public Finances. DNB Expertmeeting *Handhaving begrotingsregels in het eurogebied*, Amsterdam.
- Beetsma, R.M.W.J. (2012, 5 October). Pensioenakkoord: wat wilden we en wat is ervan terechtgekomen? Netspar/APG Workshop *Stand van zaken pensioenakkoord en hoofdlijnennotitie*, Amsterdam.
- Beetsma, R.M.W.J. (2012, 10 October). Discussant of *Bezuinigen, Hervormen en Investeren* (by Taco van Hoek). CDA symposium *De Woningmarkt in Beweging*, Utrecht.
- Beetsma, R.M.W.J. (2012, 15 November). Macroeconomic effects of funded pensions and consequences for supervision. World Pension Summit, Amsterdam.
- Beetsma, R.M.W.J. (2012, 14 December). Discussant of *The Design of Fiscal Adjustments* (by Alberto Alesina and Silvia Ardagna) and *Fiscal Consolidation in a Currency Union: Spending Cuts Vs. Tax Hikes* (by Christopher J. Erceg and Jesper Lindé). ECB-IMF Conference Reforming EU Fiscal Governance, Frankfurt.
- Chen, D.H.J. (2012, 9 November). Optimal Intergenerational Risk-Sharing via Pension Fund and Government Debt and the Welfare Loss of the Dutch Pension System Redesign. Netspar Pension Day.
- Chen, D.H.J. (2012, 18 December). Optimal Intergenerational Risk-Sharing via Pension Fund and Government Debt and the Welfare Loss of the Dutch Pension System Redesign. CPB.
- Ewijk, C. van (2012, 20 January). Krimpende Economie, Groeiende Zorg. Zorginnovatie reis, München.

- Ewijk, C. van (2012, 21 March). Pensioenen en de economie. 19e Jaarcongres Pensioenactualiteiten, Amsterdam.
- Ewijk, C. van (2012, 22 June). Generatie-effecten pensioenakkoord. Netspar.
- Ewijk, C. van (2012, 19 September). Prinsjesdaglezing 2012. Wassenaar.
- Ewijk, C. van (2012, 15 November). Intergenerational risk sharing in Dutch pensions. World Pension Summit, Amsterdam.
- Ewijk, C. van (2012, 22 November). Vraagsturing in zorg: het gaat om vraag èn aanbod. Workshop voor bestuurders in de zorg op Kasteel Vanenburg, Putten.
- Giuliodori, M. (2012, 26-28 March). [The Changing Macroeconomic Response to Stock Market Volatility Shocks](#). Royal Economic Society Conference, Cambridge, UK.
- Giuliodori, M. (2012, 23-24 August). Spread the News: the Impact of News on the European Sovereign Bond Markets during the Crisis. European Central Bank, Frankfurt, Germany.
- Giuliodori, M. (2012, October). Spread the News: the Impact of News on the European Sovereign Bond Markets during the Crisis. Trinity College Dublin, Ireland.
- Guerriero, C. (2012) Endogenous (In)Formal Institutions. "Conference in honour of Oliver Williamson," Paris, University Paris-Dauphine, 2012.
- Hoogduin, L. (2012, 30 January). The Euro Crisis. University of Amsterdam.
- Hoogduin, L. (2012, 27 February). The Euro and Economic Developments. Invited Talk at IGC, Amsterdam.
- Hoogduin, L. (2012, 22 March). The Eurocrisis. Invited Talk at the Law Faculty, University of Leiden.
- Hoogduin, L. (2012, 16 April). Hayek. Invited talk at Studium Generale, University of Groningen.
- Hoogduin, L. (2012, 2 May). Investments by Pension Funds in Sustainable Energy. Invited Talk and Panel Discussion, Sustainable Finance Lab, University of Utrecht.
- Hoogduin, L. (2012, 18 June). What makes the Euro Crisis Different? Invited Talk and Panel Discussion organised by SUERF, Vienna.
- Hoogduin, L. (2012, 22 August). Keynote Speech at first PhD-day. University of Groningen.
- Hoogduin, L. (2012, 28 August). The Future of the Dutch Pension System. Invited Talk and Panel Discussion at a Meeting Organised by Political Youth Organisation, Rotterdam.
- Hoogduin, L. (2012, 16 November). The New Cabinet Agreement (Regeerakkoord) in the Netherlands. Invited Talk at Dreesseminar, The Hague.
- Hoogduin, L. (2012, 21-22 November). Panellist and Discussant at a Conference on Risk and Uncertainty in a Changing Society, University of Antwerpen.
- Hoogduin, L. (2012, 23 November). The Role of the ECB in the Crisis. Invited Talk, Brussels.
- Hoogduin, L. (2012, 29 November). The Future of Europe and the Euro. Introduction and Debate with Thierry Baudet at Hillegondedebat, Rotterdam.
- Klaassen, F.J.G.M. (2012, August). Identifying the weights in exchange market pressure. Invited paper, Econometric Society European Meeting, Malaga, Spain.
- Klaassen, F.J.G.M. (2012, 30 March). MInt Research Group overview and presentation on exchange market pressure. Economics Seminar. Tinbergen Institute.
- Klaassen, F.J.G.M. (2012, 10 December). Identifying the weights in exchange market pressure. Economics Seminar, Einaudi Institute for Economics and Finance, Rome.
- Lorié, J.A. (2012, 17 September). Global Economic Outlook: Some Light in the Tunnel. ICISA Annual Meeting, The Hague.
- Sedlacek, P. (2012, 16 January). Firm age, business cycles and aggregate labour market dynamics. Economics School of Louvain, Universite Catolique de Louvain, Louvain la Neuve, Belgium.
- Sedlacek, P. (2012, 17 January). Firm age, business cycles and aggregate labour market dynamics. Department of Economics, Carlos III, Madrid, Spain.
- Sedlacek, P. (2012, 19 January). Firm age, business cycles and aggregate labour market dynamics. Department of Economics, University of Bonn, Bonn, Germany.

- Sedlacek, P. (2012, 23 January). Firm age, business cycles and aggregate labour market dynamics. School of Economics, University of Edinburgh, Edinburgh, UK.
- Sedlacek, P. (2012, 25 January). Firm age, business cycles and aggregate labour market dynamics. Directorate General Research, Monetary Policy Research, European Central Bank, Frankfurt, Germany.
- Sedlacek, P. (2012, 30 January). Firm age, business cycles and aggregate labour market dynamics. Department of Economics and Economic History, Universitat Autònoma de Barcelona, Barcelona, Spain.
- Sedlacek, P. (2012, 31 January). Firm age, business cycles and aggregate labour market dynamics. Department of Economics and Business, Universitat Pompeu Fabra, Barcelona, Spain.
- Sedlacek, P. (2012, 22 February). Firm age, business cycles and aggregate labour market dynamics. Research Department, Hungarian National Bank, Budapest, Hungary.
- Sedlacek, P. (2012, 24 May). Firm age, business cycles and aggregate labour market dynamics. Research Department, Central Bank of Slovenia, Ljubljana, Slovenia.
- Sedlacek, P. (2012, 27 June). Firm age, business cycles and aggregate labour market dynamics. Conference on Computating in Economics and Finance, Prague, Czech Republic.
- Vermeylen, K. (2012, March). How Unfounded Microfoundations Pollute our Thinking and Possibly also the World. Royal Economic Society Annual Conference, Cambridge, UK.
- Vermeylen, K. (2012, June). Decreasing Returns to Capital, the Willingness to Pay and the Willingness to Accept Compensation, and the Limits of Cost-Benefit Analysis. 19th Annual Conference of the European Association of Environmental and Resource Economists, Prague, Czech Republic.
- Vermeylen, K. (2012, June). Discussion of *The Control of Nonpoint Pollution When Damages are Heterogeneous* (by Albiac, J. & Esteban, E.). 19th Annual Conference of the European Association of Environmental and Resource Economists, Prague, Czech Republic.
- Vermeylen, K. (2012, July). How Unfounded Microfoundations Pollute our Thinking and Possibly also the World. International Network for Economic Research Conference on Non-standard Monetary Approaches in Macroeconomics, Münster, Germany.

Other lectures

- Beetsma, R.M.W.J. (2012, 19 December). Lecture for SPO, The Hague.
- Guerriero, C. (2012). Co-organizer and chair of the session "Endogenous Legal and Regulatory Institutions: Theory and Evidence." AEA meeting, Chicago.
- Guerriero, C. (2012). Invited seminars: Maastricht University; Universite de Paris II; TILEC at Tilburg University.
- Stoltenberg, C.A. (2012). Macroeconomics II, Tinbergen Research Institute Amsterdam, 7 lectures.

Membership academies

- Beetsma, R.M.W.J. (2012, 19 September). Member of Ph.D. committee of Igor Fedotenvov, Tilburg University, Tilburg.
- Beetsma, R.M.W.J. (2012). Research Fellow CEPR.
- Beetsma, R.M.W.J. (2012). Research Fellow CESifo.
- Beetsma, R.M.W.J. (2012). Fellow Tinbergen Institute.
- Beetsma, R.M.W.J. (2012). International Research Fellow of Kiel Institute of World Economics.
- Beetsma, R.M.W.J. (2012). Senior Research Fellow of Netspar.
- Ewijk, C. van (2012, 27 September). Ph.D. committee Igor Fedentov, University of Tilburg.

- Ewijk, C. van (2012). Member Visitatie commissie Economische Wetenschappen, Vlaamse Universiteiten.
- Ewijk, C. van (2012). Review committee, D-MTEC, ETH, Zurich.
- Ewijk, C. van (2012). Member board of advisors, NZA (Dutch Healthcare Authority).
- Ewijk, C. van (2012). Member Social Economic Council (plaatsvervangend kroonlid SER).
- Ewijk, C. van (2012). Member steering committee, ENEPRI (European Network of Economic Policy Research Institutes).
- Ewijk, C. van (2012). Member of Committee on discounting rules for pensions (UFR), Ministry of Social Affairs.
- Giuliodori, M. (2012). Fellow Tinbergen Institute.
- Klaassen, F.J.G.M. (2012). Fellow Tinbergen Institute.
- Romp, W.E. (2012). Fellow Tinbergen Institute.
- Romp, W.E. (2012). Research Fellow Netspar.

Relevant position

- Beetsma, R.M.W.J. (2012). Referee for: *Economics Letters, Oxford Economic Papers*.
- Beetsma, R.M.W.J. (2012). Member of Supervisory Board of BNG Vermogensbeheer.
- Giuliodori, M. (2012). Referee for: *Journal of the European Economic Association, International Journal of Central Banking, Journal of International Money and Finance, Fiscal Studies, Contemporary Economic Policy*.
- Guerriero, C. (2012). Referee for: *Economic Journal, Economics of Governance, Journal of Comparative Economics, International Review of Law and Economics*.
- Klaassen, F.J.G.M. (2012). Referee for: *Journal of Macroeconomics, Journal of International Economics*.
- Mavromatis, K. (2012). Referee for: *Journal of Macroeconomics, International Journal of Finance and Economics*.
- Romp, W.E. (2012). Referee for: *The Journal of Pension Economics and Finance, Economic Modelling*.
- Sedlacek, P. (2012). Referee for: *American Economic Journal: Macroeconomics, Economic Journal*.
- Stoltenberg, C.A. (2012). Referee for: *Economic Journal, European Economic Review, Econometrica*.
- Vermeylen, K. (2012). Referee for *Jones, Macroeconomics (2nd edition)*.

10. HUMAN CAPITAL

Subprogrammes: ACE, TIER & AIID
Programme director: Prof.dr. E. Plug
METIS code: uva/feb/ase/hum
JEL-classification: I, J, L
Starting date: 2001
Website: www.aseri.uva.nl/hum
VSNU-scores 2001-2007: Quality: 4,5, Productivity: 4, Relevance: 5, Viability: 4,5

10.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Buser, T.	msc	phd	0,20	0,60	0,60	0,53	1
Buser, T.	dr.	oz	-	-	-	0,27	1
Chevalier, A.	dr.	guest	0,00	0,00	-	-	1
Dominguez Martinez, S	dr.	ud	0,50	0,50	0,50	-	1
Drange, N.E.	msc	guest	-	0,00	0,00	-	1
Geijtenbeek, L.	msc	phd	-	-	-	0,22	1
Hartog, J.	prof. dr.	guest	0,50	0,50	0,25	0,00	1
Hoogendoorn, S.	msc	phd	-	-	0,60	-	3
Hsieh, C.	dr.	ud	-	0,48	0,50	-	1
Kastoryano, S.P.	msc	phd	0,10	0,30	0,30	0,53	1
Kastoryano, S.P.	dr.	guest	-	-	-	0,00	1
Ketel, N.	msc	phd	-	-	0,10	0,80	1
Mazza, J.	msc	phd	0,60	0,60	0,10	-	2
Mazza, J.	msc	guest	-	-	0,00	0,00	1
Oosterbeek, H.	prof. dr.	hgl	0,50	0,50	0,50	0,56	1
Peter, N.	msc	phd	-	-	0,60	0,60	1
Plug, E.J.S.	dr.	hgl	-	0,27	-	-	2
Plug, E.J.S.	dr.	hgl	0,50	0,67	0,80	0,65	1
Praag, B.M.S. van	prof. dr.	guest	0,00	0,00	0,00	0,00	1
Praag, C.M. van	prof. dr.	hgl	0,25	0,25	0,25	-	1
Rosendahl Huber	msc	phd	-	0,20	0,60	-	3
Rosero Moncayo, J.A.	msc	phd	0,60	0,60	0,60	0,53	1
Rosero Moncayo, J.A.	dr.	guest	-	-	-	0,00	1
Siemens, F.A von	dr.	ud	0,50	0,50	0,50	-	1
Sloof, R.	prof. dr.	hgl	0,50	0,50	0,50	-	1
Sol, J.	dr.	ud	-	-	0,38	-	1
Sol, J.	dr.	ud	-	-	0,12	-	3
Stel, A.J. van	dr.	oz	0,42	0,42	-	-	3
Welie, E.A.A.M. van	dr.	guest	0,00	0,00	0,00	0,00	1

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
<u>Subprogramme TIER</u>							
Balvers, M.P.J.M.	MSc	guest	0,00	0,00	-	-	1
Booij, A.S.	dr	guest	0,00	-	-	-	1
Booij, A.S.	dr	oz	-	1,00	0,80	0,80	2
Coonen, M.H.E.		guest	-	0,00	-	-	1
Ewijk, R.J.G.	drs	phd	0,00	-	-	-	1
Ewijk, R.J.G.	dr	postdoc	0,50	0,17	-	-	3
Groot, W.	prof dr	guest	0,00	0,00	0,00	-	3
Haan, M. de	msc	phd	-	0,80	0,80	0,53	2
Haan, M. de	dr	oz	0,80	-	-	-	3
Heerden, A. van	MSc	oz	0,00	0,00	0,00	-	1
Hidalgo, D.	drs	phd	0,20	0,60	0,38	0,80	2
Huang, J.	msc	phd	0,40	-	-	-	2
Huang, J.	msc	oz	0,33	0,67	-	-	2
Huang, J.	msc	guest	-	0,00	0,00	0,00	2
Linde, J.	dr	oz	-	-	0,17	0,80	2
Klaveren, C.P.B.J. van	drs	guest	0,00	-	-	-	1
Maassen van den Brink, H.	prof dr	hgl	0,53	0,53	0,53	0,53	2
Ruijs, N.	msc	phd	-	-	0,60	0,40	2
Schoot, D. van der	msc	guest	-	-	0,00	-	1
Webbink, D.	dr	guest	0,00	0,00	0,00	-	1
Witte, K. de	dr	guest	-	0,00	0,00	-	1
Wolf, I.F. de	dr	guest	0,00	0,00	0,00	-	1
<u>Subprogramme AIID</u>							
Gaag, J. van der	prof dr	hgl	0,80	0,80	0,37	0,40	3
Lammers, J.	dr	oz	1,00	1,00	-	-	3
Pradhan, M.P.	prof dr	hgl	0,15	0,15	0,15	0,15	1
Total 1st flow of funds			4,30	5,55	7,13	4,84	
Total 2nd flow of funds			2,06	3,34	2,78	3,86	
Total 3rd flow of funds			3,52	3,72	1,69	0,40	
Total 1st f.o.f. exd. Ph.D.'s			3,40	4,05	4,33	1,63	
Total all flows of funds			9,88	12,61	11,60	9,10	
Ph.D. students			2,10	3,70	5,28	4,54	

10.2 PROGRAMME DESIGN

Objective

The program is an empirically driven research program which relies on microeconometric techniques to study important microeconomic issues in the areas of labour economics, economics of education, family economics and development economics. Particular emphasis is paid to the identification of causal mechanisms, the analysis of existing policies and policy changes on a variety of microeconomic outcomes, and the design and implementation of experiments to carefully evaluate policy interventions and their microeconomic consequences.

Motivation

Microeconomic models play an important role in understanding individual behavior in many economic areas; that is, predictions taken from microeconomic theories are often used to explain and understand individual economic circumstances, how differences between individuals can possibly account for differences in economic outcomes, and to what extent

policies can influence individual economic circumstances. But predictions are not easily verified and possibly false, with huge consequences for (the development of) microeconomic theory, policy and policy design. It is therefore crucial to test predictions of individual economic behavior with careful empirical work, using the most rigorous methods in applied microeconomics.

Themes

Economics of Education

The economics of education program is the most active and prominent research area. In it, we study a variety of aspects of the intersection between economics and education: human capital formation, human capital returns, school choice, education and markets, inputs and education production, evaluations of education reforms.

Recent educational topics analyzed in the human capital group include the long-term consequences of class size (Hessel Oosterbeek), the role of school size and school competition (Hessel Oosterbeek, Monique de Haan), peers and the education production function (Hessel Oosterbeek, Adam Booij), sunk costs and study effort (Nadine Ketel, Jona Linde, Hessel Oosterbeek), returns to medical school (Nadine Ketel, Hessel Oosterbeek), matching primary school students to secondary schools (Hessel Oosterbeek, Nienke Ruijsch), the influence of previous test taking on current test scores (Jona Linde), information, overconfidence and student achievement (Adam Booij), immigrants in primary and secondary education (Liesbeth van Wely), teacher quality and student achievement (Erik Plug), the effectiveness of excellent programs in secondary education (Adam Booij, Ferry Haan and Erik Plug), the consequences of Montessorie education (Nienke Ruijsch), competitiveness and school choice (Thomas Buser, Hessel Oosterbeek), drop outs in lower secondary education (Henriette Maassen van den Brink), student compensation, school resources and student achievement (Monique de Haan, Hessel Oosterbeek, Noemi Peter).

Labour economics

The human capital group is originally a labour orientated economics program which investigates various aspects of labour economics, including the determinants of labour supply and demand, personnel economics, distribution of income, labour market policies, the intersection between labour markets and demographics. Over the years, however, the labour economics program has expanded and today it is less clear what is exactly covered by labour economics and what is not. There is substantial overlap with the other themes in the human capital group.

The labour economic topics that are currently addressed in the human capital group include the genetic and environmental origins of economic inequality (Erik Plug), tax evasion (Stephen Kastaryano), labour market returns to uncertainty and risk (Joop Hartog), immigrants and labour market outcomes (Joop Hartog), labour market discrimination against sexual minorities (Erik Plug), the labour market of medical specialists (Nadine Ketel, Hessel Oosterbeek), fertility and labour supply (Erik Plug).

Family economics

The family economics program covers empirical research on the economic behaviour of families, including labour supply and other related sources of time use, family formation and dissolution, fertility and child investment decisions, and intergenerational mobility of economic outcomes. The recent availability of large administrative data sources combined with family driven identification strategies (relying on twins, siblings and adoptees) has spurred family research considerably.

Current examples include the nature and nurture of economic outcomes (Thomas Buser, Erik Plug), the origins of gender differences in education (Thomas Buser, Ferry Haan, Hessel Oosterbeek), gender roles in twins (Noemi Peter), time allocation within families (Henriette

Maassen van den Brink), the economics of sexual orientation (Lydia Geijtenbeek, Erik Plug), fertility, labour supply and marital stability (Erik Plug), parental investments and children (Thomas Buser, Monique de Haan, Hessel Oosterbeek, Erik Plug, Jose Rosero) and the heritability of cancer (Erik Plug).

Development economics

The development economics program focuses on microeconomic issues in low income countries. In particular, the program tries to uncover the micro-economic causes of poverty and to provide the means and tools to eradicate it.

Recent issues addressed include the evaluation of a variety of school interventions on student outcomes including the allocation of free school uniforms, the introduction of child care centers (Diana Hidalgo, Hessel Oosterbeek, Jose Rosero), birth order effects on child schooling and child labour (Monique de Haan, Erik Plug and Jose Rosero), the consequences of a cash transfer program change on a variety of child and adult outcomes (Thomas Buser, Hessel Oosterbeek, Erik Plug and Jose Rosero), the impact of public health spending (Menno Pradhan), utility and price dependence in equivalence scales (Menno Pradhan), the evaluation of a preschool intervention in Indonesia (Menno Pradhan), targeting micro-credit to poor family enterprise (Diana Hidalgo and Hessel Oosterbeek).

Organization

As already mentioned, we are an applied microeconomics group, covering various themes of research, with scope for individual research projects, internal and external joint work and cooperation and more formal cooperations.

There are currently two more formally defined research groups. The education and labour economists in the human capital group were integrated into TIER (Top Institute for Evidence Based Education Research) in 2008. Henriette Maassen van den Brink, director of TIER Amsterdam, saw the successful blend of scientific quality with policy relevance recognized through a large grant from NWO. TIER is now funded by the Ministry of Education (and matching by participating universities), but the grant is fully administered by NWO. The Institute is joint with RU Groningen and RU Maastricht. Research focuses on the effectiveness of policy interventions in education. At the end of 2012 the grant will expire.

TIER has ambitious goals: it wants to contribute to the improvement of the quality of education in the Netherlands by promoting the evidence based approach as a guiding principle in education policy and practice. It intends to accomplish this by developing (cost) effective education interventions that are grounded in scientific research and scientific insights. The research is funded through the NWO and must comply with the NWO formulated rules of evaluation.

The aim of the institute is to conduct excellent scientific research, to operationalise the results of this research and to put the results at the disposal of education policy and practice. The institute wants to develop knowledge of evidence based education that can be applied by: 1) the Ministry of Education, Culture and Science, in policy preparation and evaluation; 2) the educational practice - such as teachers and educational institutions - in the allocation of means and when making educational choices; 3) parents and students, when choosing a school or training. TIER aims to be an element that binds research, practice and policy in the field of education.

AIID (Amsterdam Institute for International Development) is a joint initiative of the University of Amsterdam and the VU University Amsterdam. AIID is a multidisciplinary research network with a strong focus on generating evidence to improve the design of policies to reduce poverty. Menno Pradhan and Jacques van der Gaag are AIID researchers who with

their research on human capital and health and with impact evaluation of sector-wide programmes.

The two institutes, TIER and AIID, share the same ambition to perform research at the highest academic standards on issues with high societal relevance: education, labour, economic development of poor nations.

10.3 PROGRAMME EVALUATION

In 2012 the human capital group has turned into a small-scale research programme. All human capital members of ACE have left and moved to the IO group, which offers a research profile better suited to their methods and interests. Monique de Haan, a talented and successful postdoc at TIER, faced an expiring contract and left us to take up the position of associate professor at University of Oslo. Four PhD students faced the end of their PhD terms. Three of them left the group to take up positions elsewhere; Jacopo Mazza has a tenured track position at University of Manchester, Stephen Kastoryano has a tenured track position at University of Mannheim, and Jose Rosero has left academia and is now working as the director of Statistics Ecuador. Thomas Buser has been offered a postdoc at TIER and stays member of the human capital group. Lydia Geijtenbeek has also joined as a first year PhD student.

Despite the large reduction in size, the group keeps on delivering high quality research; that is, 2012 has been a good year in terms of scientific output. The human capital group has published 8 articles in international refereed journals and has 8 articles accepted for publication. Of the 8 published articles, 3 articles were published in A level journals. Of the 8 forthcoming articles, 4 of them will end up in A level journals. Highlights include the exceptional performance of Thomas Buser and high quality publications (either published this year or forthcoming) in world leading economics journals. Thomas Buser has defended his thesis successfully with the distinction cum laude and got three paper published in highly esteemed journals. In addition, Hessel Oosterbeek, together with Peter Fredriksson and Bjorn Ockert, has a paper forthcoming in the *Quarterly Journal of Economics*, which is an AA-level journal on the Tinbergen list. Erik Plug, together with Dinand Webbink and Nick Martin, has a forthcoming publication the *Journal of Labor Economics*, which is one of the most esteemed field journals with a top-10 article influence score among all economics journals.

The human capital group provides a stimulating research environment. This environment is partially shaped through national and international connections, external seminar series, internal work-in-progress meetings, and international visitors. Human capital members have close research contacts with researchers at ASE, Free University Amsterdam and Tinbergen Institute, work together with researchers from Europe and US, and are regularly invited to give seminars and (keynote) speeches throughout the world. Members of the human capital group organize a successful weekly seminar series at Tinbergen Institute. The seminar series is internationally renowned, and, in 2012, included presentations of Luigi Pistaferri (Stanford), Fabian Lange (Yale), Dan Black (Chicago) and Henrik Kleven (London LSE). Members of the human capital group (including senior researchers, PhD students and visitors) also come together weekly to discuss their work in various stages. The human capital group has been attractive to visiting professors, post-doc researchers and PhD students. In 2012 the human capital group has welcomed Rune Borgan Leigan.

The human capital group attracts and delivers many PhD students. This year Lydia Geijtenbeek has joined us. This year Jacopo Mazza, Stephen Kastoryano and Jose Rosero left us and are placed successfully elsewhere. This year Thomas Buser also graduated but stays on working as a postdoc at the human capital group. PhD students are doing well in terms of performance and placements. Noemi Peter, a PhD student of Hessel Oosterbeek, has already a

paper published in Empirical Economics, which is a B level journal. Jacopo Mazza and Stephen Kastoryano are currently employed in tenured track position at the University of Manchester and Mannheim, respectively. There are currently 7 PhD students working at the human capital group.

Apart from scientific relevance, the work of human capital members addresses practical policy issues with societal relevance. In addition, most research is empirically orientated and can be formulated such that it is relatively easy to comprehend for policy makers. Members of the human capital group are in close contact with the Ministry of Education, Culture and Science and regularly come together to communicate their scientific work with insights and recommendations. Members are also frequently invited to consult on a variety of governmental policy issues. Henriëtte Maasen van den Brink is member of the higher education committee of the KNAW which focuses on trends and developments in higher education that are relevant for science and society. Henriëtte Maasen van den Brink also chairs the division of social sciences (MaGW) at the Dutch science foundation (NWO). Hessel Oosterbeek has been a member of a committee to advise the education minister Marja van Bijsterveldt on the effects of performance pay for teachers.

In sum, the human capital group experienced a good year in terms of academic output. In addition, the large change in group composition has improved the internal coherency and visibility of the research programme; that is, the human capital research programme covers mainstream topics in applied microeconomics (including the economics of education, family and demographic economics, health economics, labor economics and development economics) with a strong focus on microeometrics.

But at the same time there are serious concerns about group size and structure. In particular, the large reduction in group size has led to an unbalanced research group with only PhD students, postdocs and full professors; a viable and serious research programme requires at least one or two tenured assistant/associate professor positions.

To maintain the high level of research in future years, our aim is to resolve the unbalancedness in staff. One way is to find additional funding. Resources to finance extra staff should come from internal and external sources. Internal funds come largely from teaching core courses, which are currently not allocated to the human capital group. External funds are uncertain. The human capital group therefore faces the challenge to raise extra funds through teaching core courses (such as for example statistics and/or econometrics) in bachelor curriculum or through targeted research grant applications. Another way is collaborate (more) with closely related research programmes. The human capital group will therefore intensify its collaboration with the labour economics group at Free University.

This evaluation can be summarized in the following SWOT analysis:

Strengths: high quality research addressing issues of *societal relevance*; stimulating research environment; good reputation; healthy inflow and outflow of PhD students; substantial external funding; internal coherent and visible research theme.

Weaknesses: unbalanced research staff; largely dependent on external funding.

Opportunities: to raise extra funds either through teaching core courses in bachelor curriculum or through research grant applications; seek closer collaboration with labour economics group at Free University Amsterdam.

Threats: human capital group has turned into small-scale and unbalanced research programme.

10.4 RESOURCES AND FUNDING

TIER-research is funded through NWO and must comply with NWO formulated rules of evaluation. Over a period of 5 years (2008-2013) TIER will receive €5.3 million. All researchers at TIER are (in part) financed by TIER. Erik Plug has received a 3-year grant for research on gifted students in secondary education by PROO-NWO. In this project one PhD student and one postdoc are partly financed. Two PhD students are/have been cofinanced with Free University Amsterdam (VU). Several visiting researchers participate in the program, without financial compensation. AIID also receives substantial external funding.

10.5 OUTPUT

- Haan, M. de (2011). The effect of parents' schooling on child's schooling; A nonparametric bounds analysis. *Journal of Labor Economics*, 29, 859-892.
- Holmlund, H., Lindahl, M. & Plug, E. (2011). The causal effect of parents' schooling on children's schooling: A comparison of estimation methods. *Journal of Economic Literature*, 49, 615-651.
- Leuven, E., Oosterbeek, H. & Klaauw, B. van der (2010). The effect of financial rewards on students achievement: Evidence from a randomized experiment. *Journal of the European Economic Association* 8(6), 1243–1265.
- Leuven, E., Oosterbeek, H., Sonnemans, J. & Klaauw, B. van der (2011). Incentives versus sorting in tournaments: Evidence from a field experiment. *Journal of Labor Economics* 29, 637-658.

Forthcoming

- Budria,S., L. Diaz Serrano, A. Ferrer i Carbonell and J. Hartog, Risk Attitude and Wage Growth, Replicating Shaw (1996), *Empirical Economics*. [B]
- Fredriksson, P. Öckert. B. & Oosterbeek, H. Long-term effects of class size. *Quarterly Journal of Economics*. [A]
- Hartog, J. Ding, X. & Juan, J. Is earnings uncertainty relevant for educational choice? An empirical analysis for China. *Education Economics*.
- Hoogendoorn, S., Oosterbeek, H. & Praag, M. van. The impact of gender diversity on the performance of business teams: Evidence from a field experiment. *Management Science*. [A]
- Klaveren, C. van, Maassen van den Brink, H. & Praag, B.M.S. van. Intra-Household Work Timing: The Effect on Joint Activities and the Demand for Child Care. *European Sociological Review*.
Plug, E., Webbink, D. & Martin, N. Sexual orientation, prejudice and segregation. *Journal of Labor Economics*. [A]
- Ree, J. de, Alessie, R. & Pradhan, M. The price and utility dependence of equivalence scales: evidence from Indonesia. *Journal of Public Economics*. [A]
- Witte, K. de, Groot, W. & Maassen van den Brink, H. The efficiency of education in generating literacy: a stochastic frontier approach. *Review of Economics & Finance*.

Publications in numbers

Human Capital				2012
1) Academic publications	a) in refereed journals	A	3	
		B	4	
		Other	2	9
	b) in other journals		1	1
	c) book chapters	A	0	
		B	0	
		Other	0	0
	d) in proceedings		0	0
<i>Subtotal</i>				10
2) Books			0	0
3) Ph.D. theses			4	4
4) Professional publications			1	1
5) Popular publications			0	0
6) Working papers			9	9
Total				24

Article in journal - refereed

A

- Buser, T. (2012). Digit ratios, the menstrual cycle and social preferences. *Games and Economic Behavior* 76(2). 457–470.
- Kruse, I., Pradhan, M. & Sparrow, R. (2012). Marginal benefit incidence of public health spending: Evidence from Indonesian sub-national data', *Journal of Health Economics* 31(1), 147-157.
- Linde, J. & Sonnemans, J. (2012). Social comparison and risky choices. *Journal of Risk and Uncertainty* 44, 45-72.

B

- Booij, A., Leuven, E. & Oosterbeek, H. (2012). The role of information in the take-up of student loans. *Economics of Education Review* 31. (2012). 33–44.
- Buser, T. (2012). The impact of the menstrual cycle and hormonal contraceptives on competitiveness. *Journal of Economic Behavior & Organization* 83(1). 1-10.
- Buser, T. and Peter, N. (2012). Multitasking. *Experimental Economics*, 15 (4) 641-655.
- Lammers, J., D. Willebrands and J. Hartog (2012). A successful businessman is not a gambler; Risk attitude and business performance among small enterprises in Nigeria, *Journal of Economic Psychology*, 22(2), 342-354.

Other

- Hartog, J. (2012). Is de maat nou echt vol? *TPE Digitaal*, 5 (4), 1-16.
- Zorlu, A. and J. Hartog (2012). Employment assimilation of immigrants in the Netherlands: dip-and-catch- up by source country, *International Journal of Population Research* Volume 2012, Article ID 634276, 23 pages.

Article in journal – non-refereed

- Zorlu, A. en J. Hartog (2012). Ethnische segregatie op buurtniveau, *Rooilijn*, 45 (4), 295-301.

Article in journal – professional

- Linde, J. (2012). Promotie. *Economisch Statistische Berichten* 97(4634), 286.

Report – working- and discussion papers

- Cabus, S.J., De Witte, K., Groot, W., & Maassen van den Brink, H. (2012). On School Dropout Prevention from an Economic Perspective.
- Coonen, M., Klaveren, van C., Groot, W., & Maassen van den Brink, H. (2012). Teacher Characteristics and their Effects on Student Test Scores: A Best-Evidence Review.
- Ebens, M., van Elk, R. , Webbink, D. & Booij, A.S. (2012). The effect of the supplementary grant on parental contribution An empirical analysis for the Netherlands. <http://booij.economists.nl/>
- Haan, M. de, Plug, E. & Rosero, J. (2012). Birth order and human capital development: Evidence from Ecuador. IZA working paper series IZA DP 6706, Bonn Germany.
- Haelermans, C., Groot, W., & Maassen van den Brink, H. (2012). Productivity and efficiency of Education, a meta analysis.
- Heers, M., Klaveren, van C., Groot, W. & Maassen van den Brink, H. (2012). The Impact of Community Schools on Student Dropout in Pre-vocational Education. TIER working paper series TIER WP 12/08.
- Ketel, N., Leuven, E. Oosterbeek, H. & Klaauw, B. van der (2012).The returns to medical school in a regulated labor market: Evidence from admission lotteries.
- Rud, I., Klaveren, van C., Groot, W. & Maassen van den Brink, H. (2012).The externalities of crime: The effect of criminal involvement of parents on the educational attainment of their children. TIER working paper series TIER WP 12/10.
- Rud, I., Klaveren, van C., Groot, W. & Maassen van den Brink, H. (2012). The Effect of a Dutch Alternative Punishment Program on Future Educational Outcomes.

UvA Dissertation – internally prepared

- Buser, T. (2012). Essays in behavioural economics (*cum laude*), September.
- Linde, J. (2012). Experimenting with new combinations of old ideas, March.
- Mazza, J. (2012). On the uncertain nature of human capital investments, March.
- Rosero, J. (2012). On the importance of families andpublic policies for child development outcomes, September.

Recognition

- Plug, E: PROO - Excellence in education grant. Estimating the impact of an enrichment program on educational achievement of excellent students using two experiments. The Netherlands Organisation for Scientific Research (NWO). 220,000: 2011-13. The Netherlands Organisation for Scientific Research (NWO). (PI Erik Plug; participants Adam Booij and Ferry Haan).

Media appearance

- Haan, F, 'Het docententekort is weg, leve het overschot', Volkskrant, November 22.
- Haan, F, ' Leraar verraden door oppositie', Volkskrant. September 7.
- Haan, F, 'Trek jongens voor in het onderwijs', Volkskrant. Juni 16.
- Haan, F, 'De tragiek van de eindexamens, is vergelijkbaar met de tragiek op het spoor', Volkskrant, Juni 1.
- Haan, F. 'Laat puber huiswerk maken op school', Volkskrant, April 18.
- Haan, F. 'Maak van Wikiwijs echte wiki', Column OnderwijsInnovatie, Juni.
- Haan, F. 'It's the teacher stupid', Column OnderwijsInnovatie, April.
- Haan, F. ' Langere Schooldag', Schooljournaal CNV-Onderwijs, April 14.
- Haan, F. Regular appearance on Radio 1, DiDD.
- Maassen van den Brink, H. 'Solidariteit vereist economische groei', Het Financieele Dagblad 9 januari 2012.
- Maassen van den Brink, H. 'Arts en regels', Het Financieele Dagblad 23 januari 2012.

- Maassen van den Brink, H. ‘Met de mond vol tanden staan’, Het Financieele Dagblad 6 februari 2012.
- Maassen van den Brink, H. ‘Een onomkeerbare stap voor de ziekenhuiswereld’, Het Financieele Dagblad 20 januari 2012.
- Maassen van den Brink, H. ‘Bezuinigen nu ook bij zorg noodzakelijk’, Het Financieele Dagblad 5 maart 2012.
- Maassen van den Brink, H. ‘Het sprookje van de apotheker en de drie wensen’, Het Financieele Dagblad 2 april 2012.
- Maassen van den Brink, H. ‘Links af en de weg kwijt’, Het Financieele Dagblad 16 april 2012.
- Maassen van den Brink, H. ‘Op lange termijn zijn we niet dood, maar hulpbehoevend’, Het Financieele Dagblad 30 april 2012.
- Maassen van den Brink, H. ‘Bezuinigen op zorg is niet moeilijk’, Het Financieele Dagblad 14 mei 2012.
- Maassen van den Brink, H. De miljarden van Klink komen er niet, Opinie & Debat/ de Volkskrant, augustus 2012.
- Maassen van den Brink, H. Wij subsidiëren de buitenlandse student, Opinie & Debat/ de Volkskrant, mei 2012.
- Maassen van den Brink, H. Nederland wordt rijp voor antibelastingpartij, Opinie & Debat/de Volkskrant, 7 november 2012.

Keynote/invited talk

- Booij, A. (2012). *Invited talk*, Oslo (May), Mannheim (October).
- Buser, T. (2012). *Invited talk*, Castellon (March), Trier (May), Maastricht (June), New York (June), Stockholm (August), Stanford University (September).
- Hartog, J. (2012). *Invited talk*, The Hague (January), Beijing (September), The Hague (October), Reus (December).
- Linde, J. (2012). *Invited talks*, New York (June).
- Oosterbeek, H. (2012). *Keynote*, Helsinki (August).
- Oosterbeek, H. (2012). *Invited talk*, Lausanne (April), CPB (April), Munich (August).
- Plug, E. (2012). *Invited talk*, Barcelona (December), Bern (June), Paris (June), Oslo (May), Essex (May), Mannheim (March), Wageningen (February).
- Pradhan, M. (2012). *Invited talk*, Chicago (January), Bangkok (August).

Other lectures

- Lundborg, P & Peter, N & Webbink, D & Martin, N (August 2012). Family or career? The effect of sibling sex composition on education and timing of family formation. Summer Workshop of the Institute of Economics, Hungarian Academy of Sciences, Budapest, Hungary.
- Ophem, J.C. van , J. Hartog and P. Berkhout (2012). Reservation wages and starting wages, EALE Conference, Bonn.
- Pradhan,, M & D. Suryadarma & A. Beatty & M. Wong & A. Alishjabana & A. Gaduh & R. Artha (January 2012). Improving educational quality through enhancing community participation: Results from a randomized field experiment in Indonesia,’ presented at the American Economic Association meetings in Chicago.

Membership academies

- Booij, A. (2012). Junior Fellow Tinbergen Instituut.
- Buser, T. (2012). *Invited talk*, Castellon (March), Trier (May), Maastricht (June), New York (June), Stockholm (August), Stanford University (September).
- Haan, M. de. (2012). *Fellowship*: Tinbergen Instituut.

- Hartog, J. (2012). *Fellowships* Tinbergen Institute, IZA, AIAS, CESifo, CrEAM, Member KNAW Royal Dutch Academy of Sciences.
- Hartog, J. (2012). *PhD committee* R.Gerards (UM).
- Kastoryano, S. (2012). *Fellowship*, Research Affiliate Institute for the Study of Labor (IZA).
- Maassen van den Brink, H. (2012). *PhD committee* Carla Haerlemans (UM).
- Oosterbeek, H. (2012). *Fellowships* Tinbergen Instituut, Cesifo Munich.
- Oosterbeek, H. (2012). *PhD committees*: Thomas de Hoop (RU), Ron Diris (UM).
- Plug, E. (2012). *Fellowships* Tinbergen Institute; Institute for Labour Studies, IZA, Bonn, Germany; Uppsala Center for Labor Studies, UCLS, Uppsala, Sweden; Expert member Expert Network of Economics of Education ENEE; Board member European Association of Labour Economics.
- Plug, E. (2012). *PhD committees* J Mazza (UvA), J Rosero (UvA), I Solli (University of Stavanger, Norway).

Relevant position

- Booij, A. (2012). Referee for *Contemporary Economic Policy*; *Journal of the Royal Statistical Society; Economics of Education Review*.
- Hartog, J. (2012). Visiting Professor at Institute on Economics of Education, Peking University, Beijing, China, Rondetafel gesprek Groenboek Gezinshereniging, Algemene Commissie Immigratie en Asiel, Eerste en Tweede Kamer (discussion on family reunion, Dutch Parliamentary commission).
- Hartog, J. (2012). Committee member of Nederlands-Vlaamse Accreditatie Commissie, Clustercommissie EW, Vlaamse Interuniversitaire Raad (visitatie Vlaamse faculteiten economie).
- Hartog, J. (2012). Member Editorial Board of *Economics of Education Review*, *International Journal of Happiness and Development*, *ISRN Education*.
- Linde, J. (2012). Referee for *Journal of Risk and Uncertainty*.
- Maassen van den Brink, H. (2012). Committee member of: Chair NWO MagW, OECD AHELO committee as national Expert for the Netherlands, OECD expert committee Economics (ETS), Paris, KNAW committee Higher Education, KNAW committee Impact and Valorisation, Chair ERIC (NWO) Evaluating Research in Context, Review Committee Higher Education, Board Rathenau Institute (KNAW Institute) , the Hague.
- Maassen van den Brink, H. (2012). Other activities: Amsterdam Economic Board, Amsterdam, Columnist Financiële dagblad, Member Board of Governors Leids Universitair Medisch Centrum, Scientific co-ordinator Institute for Evidence Based Education Research (TIER), Lead partner NICIS Institute, Urban Research and Practice, Board of Governors HAN Hogeschool Arnhem en Nijmegen, NVAO committee VLIR Economics and 3 subcommittees (Vlaanderen).
- Oosterbeek, H (2012). Member Editorial Boards of *Economics of Education Review*; *Effective Education*.
- Plug, E (2012). Organizer of Tinbergen Labour Economics Seminar,
- Plug, E (2012): Referee for *American Economic Review*, *Economic Journal*, *Health Economics*, *Labour Economics*, *Industrial Relations*, *Journal of Human Resources*, *Journal of Policy Analysis and Management*, *Journal of Political Economy*, *Journal of Public Economics*, *Review of Economic Studies*, *Review of Economics and Statistics*, *Review of Economics of the Household*, *World Development*.
- Peter, N. (2012). Organizer of KAFFE seminar series at UvA.
- Peter, N. (2012). Referee for *Labour Economics*.

11. EXPERIMENTAL & POLITICAL ECONOMICS (CREED)

<i>Programme Director</i>	<i>Prof.dr. A.J.H.C. Schram</i>
<i>METIS-code:</i>	<i>uva/feb/ase/epe</i>
<i>JEL-classification:</i>	<i>D7, D8</i>
<i>Starting date:</i>	<i>1991</i>
<i>Websites:</i>	<i>www.aseri.uva.nl/creed</i> <i>www.creedexperiment.nl/creed</i>
<i>VSNU-scores 2001-2007:</i>	<i>Quality: 5, Productivity: 4.5, Relevance: 5, Viability: 4.5</i>

11.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Abbink, K.	dr.	uhd	0,33	-	-	-	1
Bault, N.G.J.	dr.	postdoc	-	0,42	1,00	0,79	1
Bault, N.G.J.	dr.	guest	-	-	-	0,00	1
Boone, J.	prof. dr.	oz	0,28	-	-	-	2
Dogan, G.	dr.	ud	-	0,21	0,50	0,29	1
Elliot Ash, T.		guest	0,00	-	-	-	1
Fosgaard, T.	msc	guest	0,00	-	-	-	1
Gago Guerrero de Brito Robalo, P.M.	msc	guest	-	-	0,00	0,00	1
Gago Guerrero de Brito Robalo, P.M.	msc	phd	-	-	-	0,27	1
Garcia Gallego, J.A	dr.	guest	0,00	0,00	-	-	1
Gneezy, U.	prof. dr.	guest	-	-	-	0,00	1
Groot Ruiz, A.W.	msc	phd	0,60	0,60	0,10	-	2
Haan, Th. de	msc	phd	0,60	0,60	0,40	-	1
Haan, Th. de	msc	guest	-	-	0,00	0,00	1
Hoyer, M.	msc	phd	-	-	-	0,27	1
Hu, A.	msc	phd	0,60	0,35	-	-	2
Kamm, A.	msc	phd	-	-	-	0,27	1
Kantaroglu, G.		guest	0,00	-	-	-	1
Kopányi-Peuker, A.	msc	phd	-	-	0,00	0,33	1
Kopányi-Peuker, A.	msc	phd	-	-	-	0,47	2
Krawczyk, M.	dr.	phd	0,10	-	-	-	3
Le Lec, F.	dr.	oz	-	-	-	-	3
Leeuwen, B. van	msc	phd	-	-	0,20	0,80	1
Linde, J.	drs.	phd	0,60	0,60	0,48	-	1
Loerakker, B.	msc	phd	-	-	-	0,27	1
Michelucci, F.	dr.	postdoc	0,17	-	-	-	2
Offerman, T.J.S.	prof. dr.	hgl	0,50	0,50	0,50	0,50	1
Onderstal, A.M.	dr.	ud	0,28	-	-	-	2
Onderstal, A.M.	dr.	ud	0,07	0,20	0,20	0,20	1
Pelloux, B.	msc	phd	0,40	0,20	0,40	-	1
Pelloux, B.	msc	guest	-	0,00	-	-	1
Schram, A.J.H.C.	prof. dr.	hgl	0,17	0,50	0,50	0,50	1
Schimizu, K.	dr.	guest	0,00	0,00	-	-	1
Sonnemans, J.	prof. dr.	hgl	0,50	0,50	0,50	0,50	1

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Tsutsui, Y.		guest	-	0,00	0,00	-	1
Tyszler, M.	msc	phd	0,60	0,60	0,40	-	1
Ule, A.	dr.	oz	0,60	0,75	0,75	0,28	2
Ule, A.	dr.	oz	-	-	-	0,22	1
Veelen, C.M. van	dr.	ud	0,50	0,50	0,29	0,25	1
Veelen, C.M. van	dr.	uhd	-	-	-	0,25	1
Veen, A. van der	drs.	phd	0,60	0,60	-	-	2
Veen, A. van der	drs.	guest	-	-	0,00	0,00	1
Veldhuizen, R.R. van	msc	phd	0,20	0,60	0,60	0,53	1
Veldhuizen, R.R. van	dr.	guest	-	-	-	0,00	1
Wakker, P.P.	prof. dr.	guest	0,00	0,00	-	-	2
Weber, M.	msc	phd	-	-	0,15	0,33	1
Weber, M.	msc	phd	-	-	-	0,47	2
Winden, F.A.A.M. van	prof. dr.	hgl	0,50	0,50	0,32	0,21	1
Yang, Y.	msc	phd	-	0,20	0,60	0,80	1
Total 1st flow of funds			4,97	6,13	7,04	7,58	
Total 2nd flow of funds			3,13	2,30	0,85	1,22	
Total 3rd flow of funds			0,10	0,00	0,00	0,00	
Total 1st f.o.f. exd. Ph.D.'s			2,57	3,33	3,81	3,71	
Total 1st-3rd flow of funds			8,20	8,43	7,89	8,80	
Ph.D. students			4,30	4,35	3,33	4,81	

11.2 PROGRAMME DESIGN

Objective

Improving the understanding of the behavioural determinants and consequences of economic decision making by (a) focusing on political economic issues, (b) allowing for bounded rationality, and (c) using laboratory experimentation as research method.

Motivation

Political decision making plays an important role in economies. Governments, for example, are essential for the functioning of markets, may be called upon to correct for market failures, but also have their own dynamics. Positive welfare effects of policies cannot be taken for granted. It is, therefore, important to study political decision making and the way in which policies can be applied beneficially. These observations provide the motivation for the first project: “Economics of political decision making”, a long standing project at the FEB dating back to 1983. It is related to public choice and the more recent upsurge in political economics.

Economic models, also when concerned with political decision making, typically make strong assumptions about the rationality, sophistication, and selfishness of individual behaviour. Experimental and other empirical evidence suggests, however, that the predictive power of the standard ‘homo economicus’ model is often disappointing and depends on the institutional character of the decision making environment. There is a need for greater knowledge and a more satisfactory treatment of the bounds on rationality generated by the nature of cognition and emotion, and the influence of institutions. This motivates the second project: “Bounded rationality and institutions”, which fits into the emerging field of behavioural economics.

For the advancement of theory, empirical feedback is crucial. This may hold in particular for new research areas, when sorting out the most promising ways to go. Empirical analysis is seen as an important ingredient of this programme. For many of the issues studied in the aforementioned two projects, however, adequate field data are hard to come by or even

nonexistent. Laboratory experimentation is a helpful complementary research method, especially in these cases, for exploration or the testing of models focusing on fundamental behavioural aspects or mechanisms. This motivates the third project: “Experimental economics”, which is stimulated by, and provides feedback for, the other two projects.

Institutional embedding

The research of this programme is carried out within the Center for Research in Experimental Economics and political Decision-making (CREED), a research institute of the FEB. CREED was established in 1991 by a PIONIER-grant from the Netherlands Organisation for the Advancement of Scientific Research (NWO) for the development of experimental economics in the Netherlands. An important facility is the CREED-laboratory for experimental economics, one of the few dedicated computer laboratories in Europe. Its focus on political decision making and experimental economics distinguishes CREED internationally.

Projects

I Economics of political decision making

This project is concerned with the demand for and the endogenous supply of government policies, the ways in which coordination takes place through the political decision-making process, and the effects thereof on the economy. Major research topics are:

- Political participation and influence (voting, activity and influence of interest groups);
- Interaction between the public sector and the private sector (e.g. the development of social capital and its importance for the provision of public goods);
- Political economy of public and private institutions (e.g. issues of fiscal federalism).

II Bounded rationality and institutions

In this project fundamental aspects of individual decision making, with economic relevance, are investigated. More particularly, attention is focused on the impact of cognitive limitations and emotions. In addition, responses to the complexity and institutional characteristics of the decision environment are studied. Among the topics investigated are:

- Group formation in complex environments (e.g. development of political preferences through social interaction, development of interest groups);
- Economic significance and modelling of emotions (e.g. anger, anxiety, happiness);
- Performance of various auction formats;
- Irrationalities in risk attitudes, and efficiency gains by avoiding or reckoning with these.

III Experimental economics

The main purpose of laboratory experiments in economic research is to create a (political) economic process in a laboratory environment which allows for sufficient control and accurate measurement. Experiments are used for three purposes: (a) the testing of behavioural assumptions and predictions of existing (competing) theories; (b) the searching for facts that are instrumental in the construction of descriptive and explanatory theories; and (c) the evaluation of (new) institutions to assist policy makers. Research in this project is particularly stimulated by, and provides feedback for, the aforementioned two projects. Major lines of research are:

- Voting and electoral competition (behaviour of voters and political candidates/parties);

- Lobbying and political pressure (ways and means, and determinants of effectiveness);
- Emotions and economic behaviour (impact, and modelling);
- Markets and institutions (functioning of markets and, the design of, institutions);
- Evolution of cooperation (development of cooperative behaviour over time);
- Biases in risk attitudes.

11.3 PROGRAMME EVALUATION

2012 was a solid year for CREED, marked by continued high-level publications and, notably, a good many successful PhD defenses.

Two permanent personnel changes characterize 2012. Nadège Bault finished her postdoctoral position and Roel van Veldhuizen completed his PhD position. Nadège has found a position at the University of Lyon and Roel at the Wissenschaftszentrum Berlin. We are pleased to report that Roel successfully defended his thesis in January, 2013. In addition, Marcelo Tyszler, Ailko van der Veen, Jona Linde, Joris Gillet, Thomas de Haan, Adrian de Groot Ruiz and Ben Pelloux all successfully defended their theses in 2012. This is the first time in the 21-year history of CREED that seven PhD theses were completed in a single year. We also welcomed three new students who finished their MPhil at the Tinbergen Institute and have started their PhD training at CREED. These are Max Hoyer, Aaron Kamm and Ben Loerakker. Max and ben will be supervised by Frans van Winden and collaborate with the Cognitive Science Center Amsterdam. Aaron will be supervised by Arthur Schram. We look forward to working with all three of them in the coming three years. Finally, Gönül Dogan took time off for the happy occasion of her maternity leave and Matthijs van Veelen was (again) invited for an extended stay at Harvard University.

The high level of research at CREED continued in 2011. A series of top-level publications include articles in the Proceedings of the National Academy of Sciences, the European Economic Review, Games and Economic Behavior, the Journal of Risk and Uncertainty, and the Journal of Theoretical Biology. The diversity and multi-disciplinarity of research at CREED also shows from publications in the Journal of Theoretical Biology, Management Science, Frontiers in Neuroscience the Review of Law and Economics, the Journal of Law, Economics, and Organization.

Aside from 17 publications in top-tier peer-reviewed journals and 7 papers accepted for publication in 2013, external recognition of the research undertaken at CREED was received in various ways. These include 14 invitations to present seminars or keynote lectures, various associate editorships and (declined) invitations to become editor, two NWO-research talent grants (for the PhD positions of Anita Kópanyi-Peuker and Matthias Weber), funding from the research priority area Brain and Cognition (to support PhD candidate Ben Loerakker) and a continued membership of the Junior Academy of the Royal Netherlands Academy of Arts and Sciences Matthijs van Veelen. In addition, two members of CREED (Schram and van Veelen) were amongst the three UvA economists on the ESB top 40 list of economists in the Netherlands.

Research contacts were continued, i.a., by a successful seminar series that included presentations by renowned scholars such as Ariel Rubinstein, Jean-Robert Tyran, Martin Sefton, Sanjeev Goyal, Ayelet Gneezy, Roland Benabou, Joachim Weimann, Marie-Claire Villeval, Andreas Ortmann and Michael Kosfeld. CREED also co-organized the Amsterdam workshop on Behavioral and Experimental Economics (ABEE 2012), which falls within the framework of the faculty's Research Priority Area Behavioral Economics. Research contacts also include our participation in the cognitive science center (CSCA) and our yearly PhD

exchanges with the Universities of Nottingham and East Anglia and with New York University. These exchanges provide excellent opportunities for CREED PhD students to present their work (at all stages of the project) to an audience consisting of PhD students and world-renowned professors of the participating institutes.

11.4 RESOURCES AND FUNDING

The program again received modest funding from the research institute RESAM, which was largely spent to cover (part of the) traveling costs to attend conferences. Additional means were obtained from external funding and the Tinbergen Institute (for PhD-students).

Substantial additional means came from the UvA-Research Priority Area Behavioral Economics. This provides a solid foundation for paying participants in experiments at the CREED laboratory.

As for NWO funding, the VENI grant for Aljaž Ule came to an end.

CREED continued to receive funding from contracted research for governmental institutions and business. In 2012 a major project was completed for the Dutch CPB, in which Aljaž Ule and Arthur Schram studied the effects on infrastructural investments of uncertainty caused by electoral competition.

11.5 OUTPUT

Key publications

- Andersen, S., S. Ertaç, U. Gneezy, M. Hoffman and J.A. List (2011) Stakes matter in the ultimatum game. *American Economic Review*, 101, 3427-3439. [A]
- Brandts, J., Riedl, A. & Winden, F.A.A.M. van (2009). Competitive Rivalry, Social Disposition, and Subjective Well-being: An Experiment. *Journal of Public Economics*, 93, 1158-1167. [A]
- Gneezy, A., Gneezy, U., Riener, G., & Nelson, L. (2012). Pay-what-You-want, identity, and self-signaling in markets. *Proceedings of the National Academy of Sciences* 109 (19), 7236- 7240. [A]
- Grosser, J., & A. Schram (2010). Public Opinion Polls, Voter Turnout and Welfare: An Experimental Study. *the American Journal of Political Science* 54, 2010; 700-717. [A]
- Offerman, T.J.S., Sonnemans, J.H., Kuilen, G. van de, & Wakker, P.P. (2009). A Truth-Serum for Non-Bayesians: Correcting Proper Scoring Rules for Risk Attitudes. *Review of Economic Studies* 76, 1461-1489. [A]
- Ule, A., Schram, A.J.H.C., Riedl, A. & Cason, T. (2009). Indirect Punishment and Generosity Towards Strangers. *Science*, 326, 1701-1703. [A]
- Veelen, M. van, García, J., Rand, D. & Nowak, M. (2012). Direct reciprocity in structured populations *Proceedings of the National Academy of Sciences* 109, 9929-9934. [A]
- Veelen, M. van, & Weide, R. van der (2008). A note on different approaches to index number theory, *American Economic Review* 98, 1722-1730. [A]

Forthcoming

- Andersen, S., Ertac, S. Gneezy, U., List, J. & Maximiano, S. (2013). Gender, Competitiveness and Socialization at a Young Age: Evidence from a

- Matrilineal and a Patriarchal Society. Forthcoming in the *Review of Economics and Statistics*.
- Bertrand, R., Schram, A.J.H.C. & Vaassen, E. (2012). Understanding Contract Audits: An Experimental Approach Auditing. Forthcoming in *A Journal of Practice and Theory* (February 2013).
- Doğan, G., Assen, M. van, & Potters, J. (2013). The Effect of Link Costs on Simple Buyer-Seller Networks. *Games and Economic Behavior* 77.
- Fershtman, C., Gneezy, U. & List, J. (2013). Equity Aversion: Social Norms and the Desire to be Ahead. Forthcoming in *AEJ Micro*.
- Goeree, J. K., Offerman, T.J.S. & Sloof, R. (2012). Demand Reduction and Preemptive Bidding in License Auctions. Forthcoming in *Experimental Economics*.
- Maximiano, S., Sloof, R. & Sonnemans, J.H. (2012). Gift exchange and the separation of ownership and control. Forthcoming in *Games and Economic Behavior*.
- Nosenzo, D., Offerman, T.J.S., Sefton, M. & Veen, A. van der (2012). Encouraging Compliance: Bonuses versus Fines in Inspection Games. Forthcoming in *Journal of Law, Economics and Organization*.

Publications in numbers

<i>Experimental & Political Economics</i>				2012
1) Academic publications	a) in refereed journals	A	6	
		B	4	
		Other	3	13
	b) in other journals		0	0
	c) book chapters	A	0	
		B	0	
		Other	0	0
	d) proceedings		2	2
<i>Subtotal</i>				15
2) Books		A	0	
		B	0	
		Other	0	0
3) Ph.D. theses			7	7
4) Professional publications			0	0
5) Popular publications			1	1
6) Working papers			21	21
Total				44

Article in journal – refereed

A

- Bao, T., Hommes C.H., Sonnemans, J.H. & Tuinstra, J. (2012). Individual Expectations, Limited Rationality and Aggregate Outcomes. *Journal of Economic Dynamics and Control* 36, 1101-1120.
- Erat, S. & Gneezy, U. (2012). White Lies. *Management Science*, 58 (4) 723-733.
- Linde, J. & Sonnemans, J.H. (2012). Social Comparison and Risky Choices. *Journal of Risk and Uncertainty* 44, 45-72.
- Riedl, A. & Winden, F. van (2012). Input versus Output Taxation in an Experimental International Economy. *European Economic Review* 56, 216-232.
- Sonnemans, J.H. & Dijk, F. van (2012). Errors in judicial decisions: experimental evidence. *Journal of Law, Economics, and Organization* 28, 687-716.
- Veelen, M. van (2012). Robustness against indirect invasions. *Games and Economic Behavior* 74, 382-393.

B

- Heemeijer, P., Hommes, C.H., Sonnemans, J.H. & Tuinstra, J. (2012). An experimental study on expectations and learning in overlapping generations models. *Studies in Nonlinear Dynamics and Econometrics* 16.
- Vyrastekova, J., Onderstal, S. & Koning, P. (2012). Self-selection and the Power of Incentive Schemes: An Experimental Study. *Applied Economics* 44, 4211-4219.
- Veelen, M. van & Nowak, M. (2012). Multi-player games on the cycle. *Journal of Theoretical Biology* 292, 116-128.
- Veelen, M. van, García, J., Egas, M. & Sabelis, M.W. (2012). Group selection and inclusive fitness are not equivalent; the Price equation vs. models and statistics. *Journal of Theoretical Biology* 299, 64-80.

Other

- Fahrenfort, J., Winden, F. van, Pelloux, B., Stallen. M & Ridderinkhof, R. (2012). Neural Correlates of Dynamically Evolving Interpersonal Ties Predict Prosocial Behavior. *Frontiers in Neuroscience* 6, 1-14 1101-1120.
- Winden, F. van (2012). Affective Social Ties - Missing Link in Governance Theory. *Rationality, Morals and Markets* 3, 108-122.
- Winden, F. van & Ash, E. (2012). On The Behavioral Economics of Crime. *Review of Law & Economics* 8, 181-213.

Article in magazine or newspaper – popular scientific

- Winden, F. van (2012). Interview Rostra Economica, *Neuroeconomie: Op reis door het brein*, door Boot, M. & Ruwaard, S. nr. 290, juni, 32-37.

Conference paper (proceedings) – non-refereed

- Gneezy, A., Gneezy, U., Riener, G., & Nelson, L. (2012). Pay-what-You-want, identity, and self-signaling in markets. *Proceedings of the National Academy of Sciences* 109 (19), 7236- 7240.
- Veelen, M. van, García, J., Rand, D. & Nowak, M. (2012). Direct reciprocity in structured populations. *Proceedings of the National Academy of Sciences* 109, 9929-9934.

Report – working- and discussion papers

- Bault, N., Pelloux, B., Fahrenfort, J., Ridderinkhof, K. & Winden, F. van (2012). *Neural underpinnings of dynamic social ties formation in a public good game*.
- De Groot Ruiz, A., Offerman, T.J.S. & Onderstal, S. (2012). *An Experimental Study of Credible Deviations and ACDC*, Discussion paper, University of Amsterdam. July 12.
- De Groot Ruiz, A., Offerman, T.J.S. & Onderstal, S. (2012). *Power and the Privilege of Clarity: An Analysis of Bargaining Power and Information Transmission*. Discussion Paper, University of Amsterdam. July 26.
- De Groot Ruiz, A., Offerman, T.J.S. & Onderstal, S. (2012). *Equilibrium Selection in Cheap Talk Games: ACDC Rocks When Other Criteria Remain Silent*, Discussion Paper, University of Amsterdam. November 18.
- Dijk, F. van, Sonnemans, J.H. & Bauw, E. (2012). *Judicial error by groups and individuals*.
- Dreu, C. de, Scholte, H., Winden, F. van & Ridderinkhof, K. (2012). Oxytocin modulates competitive approach and associated neural circuitry in predator-prey conflicts among humans.
- Goossens, D., Onderstal, S., Spieksma, F. & Pijnacker, J. (2012). *Combinatorial Auction Design for Real-Estate Markets*. SSRN working paper 1209.
- Haan, Th. De, Offerman, T.J.S. & Sloof, R. (2012). *Money talks? An Experimental investigation of cheap talk and burned money*. Discussion Paper, University of Amsterdam. November 19.

- Haan, Th. de, Offerman, T.J.S. & Sloof, R. (2012). *Discrimination in the Labor Market: the Curse of Competition between Workers*. Discussion Paper, University of Amsterdam. November 20.
- Hu, A., Offerman, T.J.S. & Zou, L. (2012). *How Risk Sharing May Enhance Efficiency in English Auctions*. Discussion Paper, University of Amsterdam. April.
- Kopany-Peuker, A., Offerman, T. & Sloof, R. (2012). Fostering cooperation through the enhancement of own vulnerability, Tinbergen Institute Discussion Paper, TI 2012-132/I
- Linde, J. & Sonnemans, J.H. (2012). *Social Preferences in Private Decisions*.
- Nosenzo, D., Offerman, T.J.S., Sefton, M. & Veen, A. van der (2012). *Discretionary Sanctions and Rewards in the Repeated Inspection Game*, Discussion Paper, University of Amsterdam. August 1.
- Nosenzo, D., Offerman, T.J.S., Sefton, M. & Veen, A. van der (2012). *Encouraging Compliance: Bonuses versus Fines in Inspection Games*, Discussion Paper, University of Amsterdam. September 13.
- Pelloux, B., Bault, N., Fahrenfort, J. Ridderinkhof, K. & Winden, F. van (2012). On the dynamic development of social ties: Theory and application.
- Robalo, P. & Sayag, R. (2012). *Information at a Cost: A Lab Experiment*. Tinbergen Institute Discussion Paper, TI 2012-143/VII.
- Schram, A. & Charness (2012). Social and Moral Norms in the Laboratory, February 2.
- Schram, A., Ule A. (2012). Investment with unstable regulation. September 21.
- Veelen, M. van & García, J. (2012). *In and out of equilibrium II: evolution in repeated games with discounting and complexity costs*, TI discussion paper series, # 12-089/I.
- Veldhuizen, R. van (2012). *The Influence of Wages on Public Officials' Corruptibility: A Laboratory Investigation*. Tinbergen Instituut Discussion Paper, TI 2012-038/1.
- Yang, Y. Onderstal, S & Schram, A (2012). *Inequality Aversion Revisited*, University of Amsterdam & Tinbergen Institute, CREED working paper, October 4.

UvA Dissertation – internally prepared

- Gillet, J. (12 April 2012). Groups in Economics.
- Groot Ruiz, A. de (14 September 2012). Essays on Bargaining and Strategic Communication.
- Haan, Th. De (5 Juli, 2012). Strategic Communication: Theory and Experiment.
- Linde, J. (2 March 2012). Experimenting with new combinations of old ideas.
- Pelloux, B. (11 December 2012). PhD (UvA and Lyon [co-tutelle]): On the Role of Emotions and Social Ties in Public Good Games: Behavioral and Neuroeconomic Studies.
- Tyszler, M. (3 February 2012). Political Economics in the Laboratory.
- Veen, A. van der (28 Februari 2012). Inducing Good Behavior.

Conference organiser

- Winden, F. van (2012). Organizer of Expert Meeting – Aversive motivational Processes and Decision-making (CSCA, research priority program Brain & Cognition), 25 May.

Recognition

- Schram, A. (2012). NW)-Research Talent grant for PhD position M. Weber (A Behavioral Approach to Tax Incidence).

Media appearance

- Veelen, M. van (2012). De economie van de toekomst. Dwarse denkers met visie voorbij de crisis. KennisCafé (De Balie), 16 januari.
- Veelen, M. van (2012). Radio 1, naar aanleiding van installatie als lid van De Jonge Akademie, 16 maart.

Veelen, M. van (2012). Amsterdam FM. Swammerdam over de wetenschap in Amsterdam. Uitzending over altruisme, 18 november.

Editorship

- Offerman, T. (2012). *Games and Economic Behavior*, Associate editor.
Offerman, T. (2012). *Experimental Economics*, member editorial board.
Schram, A. (2012). *Experimental Economics*, Advisory editor.
Sonnemans, J. (2012). *European Economic Review*, Associate editor.
Sonnemans, J. (2012). *Journal of Economic Psychology*, member editorial board.
Sonnemans, J. (2012). *Quantitative Finance*, member editorial board.
Winden, F. van (2012). *Public Choice*, member editorial board.

Book review

- Veelen, M. van (2012). Review of "A cooperative species: Human reciprocity and its evolution" by Samuel Bowles and Herbert Gintis. *Journal of Economic Literature* 50, 797-803.

Keynote/invited talk

- Offerman, T.J.S. (February 1, 2012). *Discrimination in the Labor Market: the Curse of Competition between Workers*. Invited Seminar, UCSD, San Diego.
Offerman, T.J.S. (February 3, 2012). *Fostering Cooperation Through the Enhancement of Own Vulnerability*. Invited lecture, UCSB, Santa Barbara.
Offerman, T.J.S. (October 17, 2012). *Fostering Cooperation Through the Enhancement of Own Vulnerability*. Invited Seminar, Friedrich Schiller University, Jena.
Offerman, T.J.S. (October 26, 2012). *Fostering Cooperation Through the Enhancement of Own Vulnerability*. Invited Seminar, University of Paris 1, Paris.
Onderstal, S. (January 25, 2012). *Bidding to Give in the Field: Door-to-Door Fundraisers Had it Right from the Start*. Seminar Bicocca Milan.
Onderstal, S. (February 24, 2012). *Bidding to Give in the Field: Door-to-Door Fundraisers Had from the Start*. Seminar Tilburg University.
Onderstal, S. (May 9, 2012). Seminar Erasmus University Rotterdam.
Schram, A. (5 Nov. 2012). *Stars need Benefits*. Seminar, Georgia State University, Atlanta, U.S.A.
Schram, A. (7 Nov. 2012). *Altruism, Group Identity and Political Participation*. Seminar Institute for Advanced Studies, Princeton University, Princeton, U.S.A.
Sonnemans, J.(12 September 2012). *Nonrenewable Resources, Strategic Behavior and the Hotelling Rule: An Experiment*. Seminar Universidag Nacional de Colombia (Medellin).
Sonnemans, J. (19 December 2012). *Evaluation ans Strategies in the Minority Game: A Multi-Round Strategy Experiment*, Universität Konstanz.
Winden, F. van (20 April, 2012). *Affective social ties, missing link in governance theory*, THEEM conference, Konstanz, keynote lecture
Winden, F. van (9 May, 2012). *Neural correlates of dynamic social tie formation and cooperation*, *Neuroeconomics Talks*. University of Maastricht, invited lecture.
Winden, F. van (5 October, 2012). *Towards a new model of choice under uncertainty, Ambiguity in the Economy and in Economics Conference*, University of Nijmegen, keynote lecture.

Other lectures

- Kopány-Peuker, A. (20 April 2012). *Endogenizing punishments in social dilemmas – Fostering cooperation through the enhancement of own vulnerability*. ACLE Competition & Regulation Meeting, Amsterdam.
- Kopány-Peuker, A. (4 June 2012). *Endogenizing punishments in social dilemmas – Fostering cooperation through the enhancement of own vulnerability*. M-BEES 2012, Maastricht.
- Kopány-Peuker, A. (14 September 2012). *Endogenizing punishments in social dilemmas – Fostering cooperation through the enhancement of own vulnerability*. ESA European Conference, Cologne, Germany, Maastricht.
- Onderstal, S. (October 19, 2012). *Keeping Out Trojan Horses: Auctions and Bankruptcy in the Laboratory*. Nederlandse Economendag, Amsterdam.
- Onderstal, S. (June 24, 2012). *Power and the Privilege of Clarity: An Analysis of Bargaining Transmission*. ESA conference New York City.
- Robalo, P. (June 2012). *Other-regarding Preferences, Group Identity and Political Participation: an Experiment*. Economic Science Association International Conference, New York University, New York, USA.
- Robalo, P. (June, 2012). *Information at a Cost: a Lab Experiment*. University of East Anglia, Norwich, England.
- Robalo, P. (July 2012). *Other-regarding Preferences, Group Identity and Political Participation: an Experiment*. 6th Annual Meeting Portuguese Economic Journal, University of Porto, Porto, Portugal.
- Schram, A. (March 2012). *Social and Moral Norms in the Laboratory*. IMEBE 2012, Castillon, France.
- Schram, A. (August 2012). *Social Norms in Sociology and Economics*. International Sociological Association 2012, Buenos Aires.
- Ule, A. (June 2012). *Commitment Aversion*. ESA international meeting New York.
- Ule, A. (October 2012). *Investment with unstable regulation*. CPB seminar.
- Ule, A. (October 2012). *Focal Points Revisited: Team Reasoning, the Principle of Insufficient Reason and Cognitive Hierarchy Theory*. Toulouse School of Economics seminar.

Membership academies

- Onderstal, S. (2006-). Fellow Tinbergen Instituut.
- Onderstal, S. (2006-). Fellow ACLE.
- Onderstal, S. (2006-). Fellow ENCORE.
- Offerman, T.J.S. (2012). Fellow Tinbergen Institute.
- Offerman, T.J.S. (2012). Fellow CESS, NYU.
- Offerman, T.J.S. (2012). Fellow CeDEX, University of Nottingham.
- Offerman, T.J.S. (February 2, 2012). Member PhD committee E.Maasland, Tilburg University.
- Schram, A. (2012). Fellow Tinbergen Institute.
- Veelen, M. van (2012). Member De Jonge Akademie.
- Winden, F. van (2012). Fellow Tinbergen Institute, CEPR, CESifo.
- Winden, F. van (2012). Membership NWO Program Committee Social Infrastructure Agenda – Governance.
- Winden, F. van (2012). Member of: Koninklijke Hollandsche Maatschappij der Wetenschappen.
- Winden, F. van (2012). Member Academic Advisory Council, Max Planck Institute for Research on Collective Goods, Bonn, meeting 9-10 January.

Relevant position

- Doğan, G. (2012). Referee for: *European Economic Review*.

- Offerman, T.J.S. (2012). Referee for: *American Economic Review*, *Experimental Economics*, *European Economic Review*, *Games and Economic Behavior*, *Journal of the European Economic Association*, *Journal of Law and Economic Organization*, *Management Science*, *Quarterly Journal of Economics*, *Review of Economic Studies*.
- Onderstal, S. (2012). Referee for *Experimental Economics*, *Games and Economic Behavior*, *Journal of Economic Behavior & Organization*, *Journal of Economic Theory*, *Journal of Economics*, *Journal of Industrial Economics*, *Journal of Mathematical Economics*, *Journal of Public Economic Theory*, *Journal of Public Economics*, *Journal of Public Procurement*, *Review of Economic Studies*, *Southern Economic Journal*, and *Czech Science Foundation*.
- Schram, A. (2012). Referee for *American Political Science Review*, *Decision Support Systems*, *Economic Journal* (2x), *European Economic Review*, *Experimental Economics* (2x), *Games and Economic Behavior*, *International Journal of Environmental Research and Public Health*, *Journal of Economic Behavior and Organization* (2x), *Journal of the European Economic Association*, *Journal of Public Economics* (2x), *Public Choice*, *Review of Economic Studies* (2x).
- Veelen, M. van (2012). Referee for: *Biology Letters*, *BMC Biology*, *Journal of Theoretical Biology*, *Proceedings of the National Academy of Sciences*, *Theoretical Population Biology*, *Journal of Economic Theory*, *Journal of Conflict Resolution*.
- Robalo, P. (2012). Referee for: *Journal of Economic Behavior and Organization*.
- Ule, A. (2010-2013). Member of the board of the Slovenian Quality Assurance Agency for Higher Education. Referee for: *European Journal of Operational Research*, *Games and Economic Behavior*, *Journal of Conflict Resolution*, *Management Science*, *Proceedings of the Royal Society B*.
- Winden, F. van (2012). Referee for: *Experimental Economics* (2x), *Public Choice*, *Journal of Economic Surveys*; Max Planck Institute for Research on Collective Goods, Bonn.

12. INDUSTRIAL ORGANIZATION, COMPETITION POLICIES & REGULATION

Programme director: *Prof.dr. A.R. Soetevenet &*

Prof.dr. J. Hinlopen

uva/feb/ase/mo

METIS-code:

L

JEL-classification:

L

Starting date:

2005

Website:

www.aseri.uva.nl/mo

VSNU-scores 2001-2007:

Quality: 5, Productivity: 4.5, Relevance: 5,

Viability: 4,5

12.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Cayseele, P. van	prof. dr.	hgl	0,20	0,10	0,03	-	1
Czibor, E.	msc	phd	-	-	-	0,27	1
Dominguez Martinez, S.	dr.	ud	-	-	-	0,50	1
Doarest, A.	msc	phd	0,60	0,15	0,00	-	1
Leffelaar-Felsö, F.A.	msc	phd	0,54	0,35	0,00	-	1
Hinlopen, J.	prof. dr.	hgl	0,50	0,50	0,50	0,50	1
Hoogendoorn, S.	msc	phd	-	-	-	0,80	3
Hsieh, C.	dr.	ud	-	-	-	0,50	1
Onderstal, S.	dr.	ud	0,49	0,30	0,30	0,30	1
Praag, C.M. van	prof. dr.	hgl	-	-	-	0,25	1
Rosendahl Huber, L.	msc	phd	-	-	-	0,80	3
Schinkel, M.P.	prof. dr.	hgl	-	-	-	0,19	1
Seldeslachts, J.	dr.	ud	0,50	0,50	0,60	0,80	2
Siemens, F. von	dr.	ud	-	-	-	0,33	1
Sloof, R.	prof. dr.	hgl	-	-	-	0,50	1
Smrkolj, G.	msc	phd	-	0,60	0,60	0,53	1
Soetevenet, A.R.	prof. dr.	hgl	0,90	0,77	0,50	0,50	1
Sol, J.	dr.	ud	-	-	-	0,50	1
Toth, L.	msc	phd	-	-	-	0,23	1
Ven, J. van de	dr.	ud	-	-	-	0,10	1
Zhou, L.	msc	phd	-	-	0,20	0,80	1
Total 1st flow of funds			3,23	2,00	1,73	6,00	
Total 2nd flow of funds			0,50	1,27	1,00	0,80	
Total 3rd flow of funds			0,00	0,00	0,00	1,60	
Total 1st f.o.f. exd. Ph.D.'s			2,09	0,90	0,93	4,17	
Total all flows of funds			3,73	3,27	2,73	8,40	
Ph.D. students			1,14	1,10	0,80	3,43	

12.2 PROGRAMME DESIGN

Objective

Improving the understanding of the working of imperfectly competitive markets and the possible role for government intervention on these markets by focusing on issues within the sphere of Industrial Organization and using applied oligopoly theory, field experiments and laboratory experimentation as research methods.

Motivation

Industrial Organization (IO) studies imperfectly competitive markets, in particular how firms compete with each other on these markets and what the effects are of policy interventions aimed at affecting market performance. The natural focus of IO is on oligopolies where firms have some market power. Topics of interest thus include pricing strategies, strategic interaction, collusion and tacit collusion, spatial competition, research and development, inter-firm relationships, competition policies, market design, auctions, and regulation. IO is a field that uses all three types of research strategies: theoretical, empirical, and experimental. The research program does not preclude any of these research methods.

Projects

The activities within the research program can be subdivided into four strands of research, which are interrelated:

Research and development.

Research cooperations are key for businesses to successfully innovate and prosper, and firms increasingly rely on extensive networks to achieve their goals. It is, however, still poorly understood how these R&D cooperatives are formed, how they evolve, what their impact is on R&D activities, and what should constitute an optimal R&D policy. These questions drive several research lines. For instance, group members are developing a theoretical framework of research network formation. This framework is tested against a database that includes all large research collaborations in the U.S. Other group members work on dynamic models of R&D, the novelty being here the application of bifurcation methods. This allows for a global analysis, including (transitory) parameter configurations that preclude single-stage equilibria. Yet other group members assess the welfare implications of sustaining R&D cooperatives. Again, the fundamental trade-off between static and dynamic efficiency is addressed, giving additional insights as to what should constitute an optimal R&D-stimulating policy.

Behavioral industrial organization

Empirical and experimental evidence has mounted that people do not always comply with the assumptions of traditional economic models of ‘optimal’ behavior. These “anomalies” gave rise to the ever growing subfield of behavioural economics. A next important avenue of research in behavioral economics is whether firms in specific market contexts can and do exploit the bounded rationality of consumers. For example, can firms sell more or soften competition by increasing the number of product that serves no purpose except for confusing buyers. In current research, group members empirically investigate the use of gift certificates (VVV Cadeaubon) by Dutch consumers: Do people spend gift certificates they receive differently than they spend monetary gifts, and does it matter whether they received the certificate from friends or from their employer? In another project, a series of experiments is conducted to study the relationship between competition, the size of a loss and firm profits in insurance markets.

Auctions

In the past few decades, the study of auctions has become one of the most active research areas in economic sciences. We aim at answering questions such as: How to prevent cartel formation in auctions? What is the effect of limited liability on bidding behavior? How to design auctions of multiple objects? What are optimal mechanisms in quasi-markets such as

welfare-to-work markets and health care markets? What is the effect of license auctions on the performance of markets? For example, group members studied experimentally the effectiveness of antitrust policies against bidding rings in auctions. Others have examined the impact of fundraising mechanisms on charitable giving in a door-to-door fundraising field experiment.

Regulation and Competition Policies

Since 2005, group members have collected detailed price information on the Dutch market for retail gasoline. With these data, the competitive effects of the governmental program of auctioning licenses to operate gasoline sites at highways have been quantified. Currently, the data are used to develop an automated procedure to identify regional clusters of low price variation, an indicator of possible collusive practices. Other current empirical projects on competition policy deal with potential deterrence effects of merger policy tools, based on data from the U.S. Department of Justice and the U.S. Federal Trade Commission. Furthermore, group members investigate whether firms that collaborate in research joint ventures, use these collaborations to collude in product markets. Also the impact of antitrust policy at large was investigated. This was done by further refining the methodologies to estimate price cost margins and by applying the methodology to data from the Indonesian economy. In addition to the nation-wide impact of the introduction of antitrust policy, also the change in the behavior of targeted firms was investigated by a difference in difference method.

12.3 PROGRAMME EVALUATION

Strengths:

- The group has a very broad orientation, both in terms of the choice of research topics as in terms of methodologies used (theoretical/(lab/field)experimental/empirical).
- Group members are each other's complements, which regularly yields papers that are co-authored by several group members.
- The group is well-embedded in ASE and in Tinbergen Institute; group members thus have co-authored papers with members from other ASE research groups.
- The research performed by the group is very visible and of great practical importance. Group members have close links with governmental bodies such as ministries and antitrust agencies.
- The group is young and has a high growth potential.

Weaknesses:

- The connections with US universities could be strengthened.
- The group is not prominent in the arena of theoretical industrial organization, except for the field of auction theory.

Opportunities:

- Within Europe, the group has close contacts with research groups in industrial organization at other universities. The challenge is to establish a more formal network with these other departments in order to pool research projects and resources.
- Jeroen Hinloopen will spend the first six months of 2013 at Purdue University.

Threats:

- Group members have been requested to carry out heavy administrative duties. This may endanger the internal coherency of the research theme because of the reduced availability of these members.
- The group has a small-scale, with only a few PhD students and no postdocs; a viable research program needs a continuous inflow and outflow of PhD students.

Scientific successes

- Ailko van der Veen and Adrian de Groot-Ruiz successfully defended their Ph.D. theses in 2012. Both theses were supervised by Theo Offerman (promoter) and Sander Onderstal (co-promoter).
- Grega Smrkolj will defend his Ph.D.-thesis in the Summer of 2013, which was written under the supervision of Jeroen Hinloopen (promoter) and Florian Wagener (co-promoter).

Societal relevance

Research by the group on the deterrence effects of merger policy tools and the effectiveness of leniency programs is directly relevant to competition agencies and governmental bodies such as the ACM. Besides, the group's empirical projects target specific markets the functioning of which is of major importance to social welfare, such as the banking sector, insurance markets, retail gasoline pricing and public procurement. For this reason, research by the group regularly features in national newspapers and international magazines. Group members also appear on television to contribute to the debate by commenting on the developments in specific markets and the effects of these on competition. Group members also participate in governmental expert committees and provide targeted advise for particular policy issues. For instance, Sander Onderstal advised the Ministry of Economic Affairs on the design of the auction for mobile telecommunications that took place at the end of 2012, and Jo Seldeslachts was member of the expert committee "Toekomst van toezicht" of the Dutch Wetenschappelijke Raad voor het Regeringsbeleid (WRR).

12.4 RESOURCES AND FUNDING

Jo Seldeslachts obtained a human development grant from the European Union that amounts to about €180.000.

12.5 OUTPUT

Key publications

- Banal-Estañol, A., Heidhues, P., Nitsche, R. & Seldeslachts, J. (2010). Screening and Merger Activity. *Journal of Industrial Economics*, LVIII (4), 1-24.
- Belot, M., Bhaskar, V. & Ven, J. v.d. (2012). Can Observers Predict Trustworthiness? *Review of Economics and Statistics* 94(1), 246-259.
- Hinloopen, J. & Soetevenet, A.R. (2008). Laboratory evidence on the effectiveness of corporate leniency programs. *RAND Journal of Economics*, 39, No. 2 (Summer), 607-616.
- Kuhn, P., Kooreman P., Soetevenet, A.R. & Kapteyn, A. (2011). The Effects of Lottery Prizes on Winners and their Neighbors: Evidence from the Dutch Postcode Lottery. *The American Economic Review*, 101(5), 2226-2247.
- Schram, A.J.H.C. & Onderstal, S. (2009). Bidding to Give: An Experimental Comparison of Auctions for Charity. *International Economic Review* 50, 431-457.

Forthcoming

- Clougherty, J. & Seldeslachts, J. The Deterrence Effects of US Merger Policy Instruments. *Journal of Law, Economics and Organization*. [A]
- Hinloopen, J. & Wagenvoort, R. On the exact finite sample distribution of the L_1 FCvM test statistic. *Communications in Statistics*.

- Hoogendoorn, S.M., H. Oosterbeek and C.M. van Praag. The impact of gender diversity on the performance of business teams: Evidence from a field experiment, *Management Science*.
- Van Praag, C.M., A. van Witteloostuijn and J. van der Sluis. The higher returns to formal education for entrepreneurs versus employees, *Small Business Economics*, (DOI 10.1007/s11187-012-9443-y).
- Van Praag, C.M. and A. van Stel. The more business owners the merrier? The role of tertiary education, *Small Business Economics* (DOI 10.1007/s11187-012-9436-x).
- Goeree, J., Offerman, T. and R. Sloof. Demand reduction and preemptive bidding in multi-unit license auctions. *Experimental Economics*. [B]
- Maximiano, S., Sloof, R. and J. Sonnemans (2013). Gift exchange and the separation of ownership and control, *Games and Economic Behavior* 77, 41-60. [A]

Publications in numbers

<i>Industrial Organization, Competition Policies & Regulation</i>						2012
1) Academic publications		a) in refereed journals	A	3		
			B	6		
			Other	3	12	
		b) in other journals		0	0	
		c) book chapters	A	0		
			B	0		
			Other	0	0	
		d) proceedings		0	0	
<i>Subtotal</i>						12
2) Books			A	0		
			B	0		
			Other	0	0	
3) Ph.D. theses				1	1	
4) Professional publications				11	11	
5) Popular publications				12	12	
6) Working papers				12	12	
Total						48

Article in journal – refereed

A

- Belot, M., Bhaskar,V. & Ven, J. v.d. (2012). Beauty and the Sources of Discrimination. *Journal of Human Resources* 47(3), 851-872.
- Belot, M., Bhaskar, V. & Ven, J. v.d. (2012). Can Observers Predict Trustworthiness? *Review of Economics and Statistics* 94(1), 246-259.
- Parker, S. and Van Praag, C.M. (2012). The entrepreneur's mode of entry: Business takeover or new venture start? *Journal of Business Venturing* 27 (1), pp. 31-46.

B

- Baarsma, B., Kemp, R., Van der Noll, R. & Seldeslachts, J. (2012). Let's not Stick Together: Anticipation of Cartel and Merger Control in The Netherlands. *De Economist* 160 (4), 357-376.
- Bosma, N., Hessels, J., Schutjens, V., Van Praag, C.M., and Verheul, I (2012). Entrepreneurship and role models. *Journal of Economic Psychology* 33, 410-422.
- Hinloopen, J. & Van Marrewijk, C. (2012). Power laws and comparative advantage. *Applied Economics*, 44, Issue 12, 1483 – 1507.
- Siemens, F. von (2012). Social Preferences, Sorting, and Competition, *Scandinavian Journal of Economics* 114 (2012), 780-807.

Ven, J. v.d. (2012). Framing Contracts. *Journal of Institutional and Theoretical Economics* 168, 89-93 (Comment).

Vyrastekova, J., Onderstal, S. & Koning, P. (2012). Self-selection and the Power of Incentive Schemes: An Experimental Study. *Applied Economics* 44, 4211-4219.

Other

Duso, T., Pennings, E. & Seldeslachts, J. (2012). On the Stability of Research Joint Ventures: Implications for Collusion. *Review of Business and Economic Literature* 57 (1), 98-110.

Hinloopen, J., Wagenvoort, R. & Van Marrewijk, C. (2012). A K-sample homogeneity test: the Harmonic Weighted Mass index. *International Econometric Review*, 4, Issue 1 (April), 17 – 39.

Haan, M.A., Heijnen, P. & Soetevenet, A.R. (2012). De prijseffecten van benzineveilin-gen. *Tijdschrift Politieke Economie*, 6(1), 35-48.

Article in journal – professional

Schinkel, M.P. (2012). Hoe de Banken hun PLV's Kregen. *Markt & Mededinging*, 15(5), 2012, 190-196.

Dijkstra, M. and M.P. Schinkel (October 12, 2012). Hollands Hoge Hypotheekrentes. *Economisch Statistische Berichten*, 594-597.

Dijkstra, M. and M.P. Schinkel (October 12, 2012). Naschrift bij: Hollands Hoge Hypotheekrentes (met Mark Dijkstra). *Economisch Statistische Berichten*, 599.

Schinkel, M.P. (2012). Euribor-rigging. *Markt & Mededinging*, 15(4), 157-160.

Schinkel, M.P. (2012). De Geldwisselaars. *Markt & Mededinging*, 15(3), 125-128.

Schinkel, M.P. (2012). Persberichten van Bezwaar. *Markt & Mededinging*, 15(2), 81-83.

Schinkel, M.P. (2012). Handhavingshuisstijl. *Markt & Mededinging*, 15(1), 16-19.

Van Praag, C.M. and F. Kwik (2012). De Stand van het Ondernemerschap in Nederland: Een Internationale Vergelijking, *ACE Entrepreneurship Update 12*, Amsterdam.

Van Praag, C.M. and R. Thurik (2012). Canon Deel 4: Ondernemerschap. *Economische Statistische Berichten* 97 (4644), 576-579.

Van Praag, C.M. and R. Thurik (2012). Canon Ondernemerschap, *ACE Entrepreneurship Update 14*, Amsterdam.

Article in magazine or newspaper – popular scientific

Praag, C.M. van (October 12, 2012). Ons onderwijs selecteert niet op talent maar op zwakte. *NRC Opinie*.

Praag, C.M. van en A. Rinnooy Kan (2012). De Stille Arbeidsrevolutie. *NRC Handelsblad Opinie*.

Praag, C.M. van and L. Stevens (March 12, 2012). Opinie: Meer innovatie begint op universiteit. *Het Financiële Dagblad*.

Praag, C.M. van and D. van den Brink (May 2012). Bezuinigen en groeien (opinie artikel). *Het Financiële Dagblad*.

Praag, C.M. van and D. van den Brink (December 27, 2012). Maak kredietgarantie MKB niet permanent (opinie artikel). *Het Financiële Dagblad*.

Praag, C.M. van (March 16, 2012). Te weinig ondernemersambitie. *Het Financiële Dagblad*.

Praag, C.M. van (May 31, 2012). Maxima ontvangt onderzoeksrapport op UvA. *Volkskrant*.

Praag, C.M. van (January 2012). Das motiv des Loney-Rider. *Handelsblatt*.

Praag, C.M. van (May 30, 2012). Maxima neemt ACE onderzoek in ontvangst. *Foliaweb.nl*.

Praag, C.M. van (May 30, 2012). Maxima ontvangt onderzoeksrapport op UvA. *Het Parool*.

Praag, C.M. van. (May 30, 2012). Princess Maxima attends seminar entrepreneurship education. *Royalpress.nl*.

Praag, C.M. van. (May 31, 2012). Maxima ontvangt onderzoeksrapport op UvA. *Metro editie Amsterdam*.

Report – professional

Schinkel, M.P. (2012). “Toelichting op genoemde schatting van mogelijke extra winsten op de Nederlandse hypotheekportefeuille sinds mei 2009 in de Zembla-uitzending “Uw Hypotheek als Melkkoe” van 14 september 2012,” online appendix to television interview at www.mpschinkel.nl.

Report – working- and discussion papers

- Barros P., Clougherty J. & Seldeslachts J. (2012). Europeanization of EU member-state competition policy: The commission’s leadership role KU Leuven Research Report - MSI_1218.
- Dijkstra, M. and M.P. Schinkel (2012). NMa’s Hypotheektarief-calculatiemethode: Actualisatie en herinterpretatie. ACLE Working Paper Series 2012-07.
- Goossens, D., Onderstal, S., Spieksma, F. & Pijnacker, J. (2012). Combinatorial Auction Design for Real-Estate Markets. SSRN working paper 1209.
- Heijnen, P., Haan, M.A. & Soeteveent, A.R. (2012). Screening for Collusion: A Spatial Statistics Approach. Tinbergen Institute working paper #12-058/1.
- Felsö, F. & Soeteveent, A.R. (2012). How Consumers Use Gift Certificates. Tinbergen Institute working paper #12-002/1.
- Kopányi-Peuker, A., Offerman, T., and R. Sloof (2012). Fostering cooperation through the enhancement of own vulnerability. TI-discussion paper 12-132/1.
- Rosendahl-Huber , L., Sloof, R., and C.M. van Praag (2012). The effect of early entrepreneurship education. Evidence from a randomized field experiment. TI-discussion paper 12-041/3.
- Van Praag, C.M. (with S. Hoogendoorn, S.C. Parker) (2012). Ability Dispersion and Team Performance: A Field Experiment. Tinbergen Institute Working Paper, 12-130/VII.
- Van Praag, C.M. (with S. Hoogendoorn) (2012). Ethnic Diversity and Team Performance: A Field Experiment, Tinbergen Institute Working Paper, 12-068/3.
- Van Praag, C.M. (with M. Lindquist, J. Sol) (2012). Why do Entrepreneurial Parents have Entrepreneurial Children?, Tinbergen Institute Working Paper, 12-062/3.
- Van Praag, C.M. (with L. Rosendahl Huber, R. Sloof) (2012). The Effect of Early Entrepreneurship Education: Evidence from a Randomized Field Experiment, Tinbergen Institute Working Paper, 12-041/3.
- Yang, Y., Onderstal, S. & Schram, A. (2012). Inequity Aversion Revisited. CREED working paper.

UvA Dissertation – internally prepared

Haan, T. de (July 5, 2012). Strategic Communication: Theory and Experiment. (together with Theo Offerman, co-promotor R. Sloof).

Recognition

- Dijkstra, M. and M.P. Schinkel (September 2012). “Eigen Huis Rentebarometer,” data input and conceptual contributions to the development of online measurement tool <http://www.eigenhuis.nl/tools/rentebarometer/>.
- Praag, C.M. van (July 18, 2012). Folia maakt kennis met.... Mirjam van Praag. Folia radio Amsterdam and Folia Website Portret.
- Praag, C.M. van (March 19, 2012). “Innovatiedip baart hoogleraren zorgen”, interview for article in *Intermediair*.
- Praag, C.M. van (May 31, 2012). “Prinses Maxima ontvangt resultaten van BizWorld”, film on bastaschooltv.nl.
- Van Praag, CM, C.M. Hsieh and S. Parker (2012). One of the best paper awards at the Academy of Management (2012) for ‘Risk, Balanced Skills and Entrepreneurs’, (Tinbergen Institute working paper 11-178/3).

- Schinkel, M.P. (April 2012). Interview in Vastgoed, "NMa en NVM in de clinch over Funda: Wie heeft gelijk?", 87, p.9.
- Schinkel, M.P. (November 2012). Interview in Eigen Huis Magazine, "Eigen Huis Rentebarometer: Uw hypotheek is te duur," 38, p. 30.
- Seldeslachts, J. Marie Curie Career Development Fellowship, EU, 2011-2013.
- Sloof, R. MaGW Onderzoekstalent 2011 grant from NWO for the PhD position of Anita Kopányi-Peuker (co-supervised with Theo Offerman).

Media appearance

- Schinkel, M.P. (September 14, 2012). Zembla-uitzending "Uw Hypotheek als Melkkoe".
- Schinkel, M.P. (2012). Various interviews on Business News Radio (BNR).
- Schinkel, M.P. (2012). Various interviews for Financieel Dagblad, Volkskrant, Trouw, Telegraaf.
- Schinkel, M.P. (2012). Member Economenpanel Business News Radio (BNR).
- Soetevent, A.R. (August 21 2012). Interview on the Dutch Postcode Lottery at *The Mooney Show*, RTÉ Radio 1, Ireland.
- Praag, C.M. van (December 26, 2012). Wetenschapsprogramma hoe? zo? Radio NTR.

Keynote/invited talk

- Hinloopen, J. (2012, June). Output commitment through product bundling: experimental evidence, M-BEES conference, Maastricht.
- Hinloopen, J. (2012, July). Output commitment through product bundling: experimental evidence. IIOC conference, Arlington.
- Hinloopen, J. (2012, July). Output commitment through product bundling: experimental evidence. CRESSE conference, Crete.
- Hinloopen, J. (2012, August). Insurance, risk-aversion, and loss manipulation: an experiment. ABEE conference, Amsterdam.
- Onderstal, S. (January 25, 2012). Bidding to Give in the Field: Door-to-Door Fundraisers Had it Right from the Start. Seminar Bicocca Milan.
- Onderstal, S. (February 24, 2012). Bidding to Give in the Field: Door-to-Door Fundraisers Had it Right from the Start. Seminar Tilburg University.
- Onderstal, S. (May 9, 2012). Power and the Privilege of Clarity: An Analysis of Bargaining Power and Information Transmission. Seminar Erasmus University Rotterdam.
- Onderstal, S. (June 24, 2012). Power and the Privilege of Clarity: An Analysis of Bargaining Power and Information Transmission. ESA conference New York City.
- Onderstal, S. (October 19, 2012). Keeping Out Trojan Horses: Auctions and Bankruptcy in the Laboratory. Nederlandse Economendag, Amsterdam.
- Praag, C.M. van (January 10, 2012). Invited Seminar Centraal Planbureau Den Haag on 'It's the opportunity cost, stupid! How self-employment responds to financial incentives of return, risk and skew' (with P. Berkhout and J. Hartog).
- Praag, C.M. van (January 18, 2012). Invited Seminar at Ivey Business School, University of Western Ontario, Canada on "The effect of early entrepreneurship education on the development of entrepreneurial competencies and intentions" (with Laura Rosendahl Huber and Randolph Sloof).
- Praag, C.M. van (February 9, 2012). Invited Seminar at IFN Research Institute of Industrial Economics Stockholm Sweden on 'The effect of early entrepreneurship education on the development of entrepreneurial competencies and intentions' (with Laura Rosendahl Huber and Randolph Sloof).
- Praag, C.M. van (January 26, 2012). Invited Key Note Lecture at the Norwegian Research Council, Research and Innovation Policy Conference, Oslo, Norway on 'It's the opportunity cost, stupid! How self-employment responds to financial incentives of return, risk and skew' (with P. Berkhout and J. Hartog).

- Praag, C.M. van (June 12, 2012). Invited Lecture on ‘Field Experiments in Entrepreneurship Economics’ at the IZA Entrepreneurship Economics PhD Workshop in Potsdam.
- Praag, C.M. van (June 15, 2012). Invited Key Note Lecture on ‘Entrepreneurship, Nature, Nurture and Role Models’ at the Uddeville Conference on Innovation and Industrial Economics, University of Faro, Portugal.
- Praag, C.M. van (June 15, 2012). Invited seminar on ‘Why do entrepreneurial parents have entrepreneurial children?’ (with J. Sol and M. Lindquist) at ISEG – School of Economics and Management Technical University of Lisbon, Portugal.
- Praag, C.M. van and C.M. Hsieh (August 6, 2012). Presentation at the Academy of Management ‘Risk, Balanced Skills and Entrepreneurs’, Boston, USA.
- Praag, C.M. van and S.M. Hoogendoorn (August 7, 2012). Presentation at the Academy of Management ‘Ethnic Diversity and Team Performance: A Field Experiment’, Boston, USA.
- Praag, C.M. van (September 10, 2012). Invited seminar on ‘Why do entrepreneurial parents have entrepreneurial children?’ (with J. Sol and M. Lindquist) at the Norwegian Business School, Economics Department, Oslo, Norway.
- Praag, C.M. van (September 14, 2012). Invited discussant at the First CEPR Workshop on Incentives, Management and Organization at Bocconi University, Milan, Italy.
- Praag, C.M. van (September 22, 2012). Invited presentation at the 3rd HEC Workshop on Entrepreneurship on ‘The effect of early entrepreneurship education on the development of entrepreneurial competencies and intentions’ (with Laura Rosendahl Huber and Randolph Sloof).
- Praag, C.M. van (September 22, 2012). Invited participant in Round Table Policy Discussion (with R. Fairlie and S. Parker) 3rd HEC Workshop on Entrepreneurship on ‘Entrepreneurship Education Evaluation’.
- Praag, C.M. van (October 19, 2012). Invited workshop lecture ‘Why do entrepreneurial parents have entrepreneurial children?’ (with J. Sol and M. Lindquist) at the Nederlandse Economendag, De Nederlandsche Bank, Amsterdam.
- Schinkel, M.P. (November 1, 2012). Presentation of *State-aided Price Coordination in Dutch Mortgage Banking* at De Rijksacademie voor Financiën, Economie en Bedrijfsvoering, The Hague, The Netherlands.
- Schinkel, M.P. (October 19, 2012). Presentation in session on “Prijsvorming in de Nederlandse Hypotheekmarkt sinds de Kredietcrisis,” *De Nederlandse Economendag 2012*, CPB, Den Haag.
- Schinkel, M.P. (September 22-23, 2012). Presentation on *State-aided Price Coordination in Dutch Mortgage Banking* at The Antitrust Enforcement Symposium, Pembroke College, Oxford, U.K.
- Schinkel, M.P. (September 2-4, 2012). Presentation on *State-aided Price Coordination in Dutch Mortgage Banking* at the 2012 Congress of the European Association for Research in Industrial Economics (EARIE), Rome, Italy.
- Schinkel, M.P. (June 20, 2012). Presentation on *State-aided Price Coordination in Dutch Mortgage Banking* at the 8th annual ELEA Symposium, College of Europe, Bruges, Belgium.
- Schinkel, M.P. (June 14-15, 2012). Presentation on *State-aided Price Coordination in Dutch Mortgage Banking* at the CCP 8th Annual Conference, UEA, Norwich, U.K.
- Schinkel, M.P. (May 10-11, 2012). Keynote address on *State-aided Price Coordination in Dutch Mortgage Banking* at the 6th CLEEN conference, Mannheim, Germany.
- Seldeslachts, J. (May 2012). Collusion through Joint R&D: An Empirical Assessment. Erasmus University Rotterdam.
- Seldeslachts, J. (May 2012). Collusion through Joint R&D: An Empirical Assessment. Invited seminar NMa, The Hague.
- Seldeslachts, J. (September 2012). Collusion through Joint R&D: An Empirical Assessment. TI 25 years Celebration, Amsterdam.
- Seldeslachts, J. (December 2012). Success and Failure in Strategic Alliances: Theory and Experimental Evidence. Invited seminar Copenhagen University.

- Soetevent, A.R. (March 5, 2012). Bidding to Give in the Field: Door-to-Door Fundraisers Had it Right from the Start. Seminar EIPE, Erasmus University Rotterdam.
- Soetevent, A.R. (April 26, 2012). How Consumers Use Gift Certificates. Seminar University of Bologna, Italy.
- Soetevent, A.R. (November 28, 2012). Insurance, risk aversion, and loss manipulation: an experiment. Seminar University of Frankfurt, Germany.
- Soetevent, A.R. (December 6, 2012). Insurance, risk aversion, and loss manipulation: an experiment. Seminar Lund University, Sweden.
- Soetevent, A.R. (December 7, 2012). Insurance, risk aversion, and loss manipulation: an experiment. Seminar University of Copenhagen, Denmark.
- Ven, J. v.d. (January 30, 2012). Paper: Buying lies: The effects of interaction and context on the ability to detect deceit. University of Lyon, Lyon, France.
- Ven, J. v.d. (September 6, 2012). Paper: Buying lies: The effects of interaction and context on the ability to detect deceit. Tinbergen Institute, Amsterdam).
- Ven, J. v.d. (November 13, 2012). Paper: Bad News: An Experimental Study On The Informational Effects Of Rewards. Tilburg University , Tilburg.

Other lectures

- Dominguez-Martinez, S. (June 8, 2012). On the Role of Pre-Determined Rules for HRM Policies. Applied Economy Meeting. A Coruña, Spain. Conference presentation.
- Hinloopen, J. (October 2012). Masterclass on Experiments in IO, University of St. Andrews, UK.
- Praag, C.M. van (February 1, 2012). SER Symposium De Kracht van de Stille Arbeidsrevolutie Keynote lecture.
- Praag, C.M. van (February 13, 2012). “Beloning, spannend onderwerp”, Bijdrage aan ‘Stand van de Wetenschap’, Spui25, Amsterdam.
- Praag, C.M. van (April 11, 2012). “Regisseur je success: Business meets RABO”, Lecture on Research in Entrepreneurship.
- Praag, C.M. van and L. Rosendahl Huber (May 30, 2012). “Effecten van Onderwijs in ondernemen op de basisschool”, ACE Event in Aula UvA, where we offered the research report to Crown Princess Maxima, based on “The effect of early entrepreneurship education on the development of entrepreneurial competencies and intentions” (with Laura Rosendahl Huber and Randolph Sloof).
- Praag, C.M. van (July 3, 2012). Invited lecture/discussion on Self-employed Entrepreneurship (ZZP) at the Wiardi Beckman Stichting of the PvdA, Den Haag.
- Praag, C.M. van (September 3, 2012). Minicollege Glazen Huis Spui, UvA, Start of the Academic Year “Ondernemerschap, kun je dat leren?”.
- Praag, C.M. van (November 3, 2012). SER/NCR Symposium “Wat is De Kracht van de Coöperatie?”.
- Praag, C.M. van (October 10, 2012). ERIM Erasmus PhD Course on Entrepreneurship, Rotterdam.
- Schinkel, M.P. (November 30, 2012). Symposium *Banken en Publieke Belangen*, De Rijksacademie voor Financiën, Economie en Bedrijfsvoering, The Hague, The Netherlands.
- Schinkel, M.P. (November 22, 2012). Roundtable at the conference *EU Competition Law and Financial Markets*, Brussels School of Competition, Brussels, Belgium.
- Schinkel, M.P. (March 16, 2012). Discussant of Jorge Padilla at TILEC conference *The Economics of Search and Search Advertising*, Brussels, Belgium.
- Seldeslachts, J. (2012). Economics of Information, PhD Workshop KU Leuven.
- Seldeslachts, J. (2012). Theory of Industrial Organization, Lecture Series KU Leuven.
- Sloof, R. (2012). Workshop presentation, Eurocities Economic Development Forum, Amsterdam.

- Smrkolj, G. (2012, April 24). Seminar presentation, Centre for Competition Policy, University of East Anglia, UK. Presented Paper: In Defense of Trusts: R&D Cooperation in Global Perspective.
- Smrkolj, G. (2012, April 19). Seminar presentation, CeNDEF, University of Amsterdam, The Netherlands. Presented Paper: In Defense of Trusts: R&D Cooperation in Global Perspective.
- Smrkolj, G. (2012, Januar 23). Seminar presentation, Université catholique de Louvain, Belgium. Presented Paper: From Mind to Market: A Global, Dynamic Analysis of R&D.
- Ven, J. v.d. (May 31-June 2, 2012). Buying lies: The effects of interaction and context on the ability to detect deceit, paper ASFEE, Montpellier, France.
- Ven, J. v.d. (June 4, 2012). Buying lies: The effects of interaction and context on the ability to detect deceit, paper MBEES, Maastricht.
- Ven, J. v.d. (June 21-24, 2012). Buying lies: The effects of interaction and context on the ability to detect deceit, paper ESA, New York, USA.
- Ven, J. v.d. (August 29, 2012). Buying lies: The effects of interaction and context on the ability to detect deceit, paper University of Mainz, Mainz, Germany.

Conference organiser

- Praag, C.M. van (February 1, 2012). SER Symposium De Kracht van de Stille Arbeidsrevolutie (joint with Esther Raats-Coster and Linde Gonggrijp).
- Praag, C.M. van and L. Rosendahl Huber (May 30, 2012). ACE event “Effecten van Onderwijs in ondernemen op de basisschool”, Aula UvA, where we offered the research report to Crown Princess Maxima. Other speakers Caroline Gehrels (City of Amsterdam), Chris Buijink (Ministry of Economic Affairs), Alexander Rinnooy Kan (SER) and various young entrepreneurs.
- Praag, C.M. van (July 8-14, 2012). Organizer of the First Residence Week of Scholars in Entrepreneurship, Oxford, (joint with Prof S. Estrin, LSE and Prof D. Audretsch, Indiana University in Bloomington).
- Praag, C.M. van (August 31-September 1, 2012). 4th edition of the Amsterdam Symposium on Behavioral and Experimental Economics, ABEE 2012 “Behavioral Economics in Markets and Organizations”, (joint with R. Sloof, A. Soeteven and J. Hinloopen), Amsterdam KNAW.
- Praag, C.M. van (2012-2013). Organizer of the lecture/discussion series on Behavioral Economics in the AAC (Amsterdam Academic/Faculty Club), (joint with Prof J. Hartog).
- Praag, C.M. van (October 8, 2012). FEB Seminar Peter Thompson Markets & Organizations group seminar: New firm performance and the replacement of founders, organized by ASE and ACE.
- Schinkel, M.P. (April 20, 2012). Member of the 8th annual ACLE Competition & Regulation Meeting on *Behavioral Competition and Regulation*, Amsterdam.
- Schinkel, M.P. (2012). Member of the ACE steering committee.
- Schinkel, M.P. (2012). Member of the Program Committee of the IIOC.
- Schinkel, M.P. (2012). CRESSE Associate.
- Soeteven, A. R. (August 31-September, 2012). co-organizer of the 4th Amsterdam Symposium on Behavioral and Experimental Economics on Behavioral Economics in Markets and Organizations, Amsterdam.
- Ven, J. v.d. (April, 20, 2012). ACLE Workshop: Behavioral Competition and Regulation, Organising committee, chair, Amsterdam.

Editorship

- Praag, C.M. van (2005-). Associate Editor *Small Business Economics* .
Praag, C.M. van (2012-). Associate Editor of *IZA Journal of European Labor Studies*.
Soeteveent, A.R.(2012). Associate editor *De Economist*.
Ven, J. v.d. (2012). Associate Editor *International Review of Law and Economics*.

Membership academies

- Dominguez-Martinez, S. (2012). Junior Research Fellow Tinbergen Institute.
Praag, C.M. van (2003-). Research Fellow Tinbergen Institute.
Praag, C.M. van (2005-). Research Fellow IZA Institute for Labour Market Research, Bonn.
Praag, C.M. van (2005-). Research Fellow IZA Institute for Labour Market Research, Bonn.
Praag, C.M. van (2010-). Research Fellow ACLE.
Praag, C.M. van (2010-). Member of the Koninklijke Hollandsche Maatschappij der Wetenschappen.
Praag, C.M. van (January 24, 2012). Member of the Small PhD Committee of Xavier Baeten “Firm Level Corporate Governance Characteristics and CEO Remuneration: A Cross-National European Study”, Ghent University, Belgium (supervisor Prof Lutgart van den Berghe).
Praag, C.M. van (2009-). Member of the Curatorium of the Chair “Ethnic entrepreneurship”, IMES UvA (Sponsored by VNO NCW).
Praag, C.M. van (2007-). Member of the Supervisory Board of the EIM scientific program ‘SME’s and entrepreneurship’.
Praag, C.M. van (2010-). Research Affiliate, Statistics Norway, Oslo, Norway.
Praag, C.M. van (September 28, 2012). Member of the PhD Committee of Bart Sleutjens, Utrecht University.
Praag, C.M. van (2011-2012). Chair of the Supervisory Committee of the Academic Study Group (led by Prof dr E. Stam) that was commissioned by the AWT (Adviesraad voor het Wetenschaps- en Technologiebeleid) to study Ambitious Entrepreneurship: A review of the academic literature and new directions for public policy. Based on this the AWT wrote an advisory letter to the Minister of Economic Policy and Innovation.
Praag, C.M. van (2005-). Founding academic Director of the Amsterdam Center for Entrepreneurship.
Praag, C.M. van (2008-). Member of the Supervisory Board of APG Group NV.
Praag, C.M. van (2010-). Member of the Board of SEO Economisch Onderzoek.
Praag, C.M. van. (2010-). Appointed Crown member of the Socio Economic Council of the Government (SER).
Praag, C.M. van (2011-). Member of the CPC (Supervisory Board of the CPB).
Praag, C.M. van (2011-). President of the Amsterdam Academic Club.
Praag, C.M. van. (2010-). Member Raad van Toezicht Kriterion.
Praag, C.M. van (2009-). Member of the Board of the Dutch Friends of the Tel Aviv University.
Praag, C.M. van (2012-). Member of the Advisory Council of Social Enterprise Netherlands.
Seldeslachts, J. (2012). EARIE, EEA.
Sloof, R. (September 2012). Member of PhD committee Adrian de Groot Ruiz, University of Amsterdam, Essays on Bargaining and Strategic Communication.
Sloof, R. (2000-). Research fellow at the Tinbergen Institute.
Sloof, R. (2008-). Fellow of the Amsterdam Center for Law and Economics.
Soeteveent, A.R. (2005-). Fellow Tinbergen Institute.
Soeteveent, A.R. (2006-). Fellow ENCORE.
Soeteveent, A.R., (2008-). Fellow ACLE.

Relevant positions

- Dominguez-Martinez, S. (2012). Referee for *Journal of Economics & Management Strategy*.

- Hinloopen, J. (2012). Referee for *European Economic Review*, *Oxford Economic Papers*, *Australian Economic Papers*, *Economics Bulletin*, *International Review of Law and Economics*, *Journal of Economics*.
- Onderstal, S. (2012). Referee for *Experimental Economics*, *Games and Economic Behavior*, *Journal of Industrial Economics*, *Journal of Mathematical Economics*, *Journal of Public Economic Theory*, *Journal of Public Economics*, *Journal of Public Procurement*, *Review of Economic Studies*, *Southern Economic Journal*, and Czech Science Foundation.
- Praag, C.M. van (2012). Referee for *Economic Journal*, *Economics of Education Review*, *European Economic Review*, *Journal of Business Venturing*, *Journal of Labor Economics*, *Management Science*, *Quarterly Journal of Economics*.
- Schinkel, M.P. (2012). Referee for *The Journal of the European Economic Association*, *The Journal of Institutional and Theoretical Economics*, *Review of Industrial Organization*.
- Seldeslachts, J. (2012). Wetenschappelijke Raad voor het Regersingsbeleid (WRR), The Hague, Member of Expert Committee on Antitrust.
- Seldeslachts, J. (2012). Referee for *Journal of Law, Economics and Organization*; *International Journal of Industrial Organization*; *Review of Business and Economic Literature*.
- Sloof, R. (2012). Referee for *Experimental Economics* (2x), *European Economic Review*, *Games and Economic Behavior*, *Journal of Economic Behavior and Organization*, *Journal of Economics and Management Strategy*, *Journal of Economic Psychology*, *Public Choice*.
- Sloof, R. (2012). Referee for grant application at The Rovert H. Arnow Center for Bedouin Studies and Development, Ben Gurion University of the Negev.
- Soeteveent, A.R. (2012). Referee for *Experimental Economics*, *ETRI Journal*, *Journal of the European Economic Association*, *Journal of Public Economics*, and *National Science Foundation*.
- Ven, J. van de (2012). Referee for *American Economic Review*, *Management Science*, *Economic Journal*, *European Economic Review*, *Games and Economic Behavior*.

13. SEO ECONOMIC RESEARCH

<i>Subprogrammes:</i>	<i>Labour Economics & Education</i>
	<i>Health Economics & Social Security</i>
	<i>Regulation & Competition Policy</i>
	<i>Aviation Economics</i>
	<i>Cost-benefit & Business</i>
	<i>Market and Government</i>
<i>Programme director:</i>	<i>Prof.dr. B.E. Baarsma</i>
<i>METIS-code:</i>	<i>uva/feb/ase/seo</i>
<i>JEL-classification:</i>	<i>I, J, L, Q, R</i>
<i>Website:</i>	<i>www.seo.nl</i>

13.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Scientific Staff SEO							
Baarsma, B.E.	dr.	oz	1,00	1,00	1,00	1,00	3
Grand, J.B. Le	dr.	oz	0,71	-	-	-	3
Kerste, M.W.M.	drs.	oz	1,00	-	-	-	3
Koopmans, C.C.	prof. dr.	hgl	-	-	-	0,80	3
Theeuwes, J.J.M.	prof. dr.	hgl	0,50	0,53	0,53	0,48	3
Market & State							
Buuren, K.B. van	drs.	oz	-	0,33	1,00	1,00	3
Gerritsen, M.	drs.	oz	-	0,14	0,95	1,00	3
Leussink, L.	msc	oz	-	-	0,08	1,00	3
Voort, J. van der	msc	oz	-	-	1,00	0,95	3
Regulation & Competition Policy							
Akker, I.J.	MA	oz	-	0,79	0,88	-	3
Gerritsen, M.	drs.	oz	0,31	-	-	-	3
Hof, B.J.F.	drs.	oz	-	-	-	0,95	3
Janssen, K.	drs.	oz	0,42	-	-	-	3
Kerste, M.W.M.	drs.	oz	-	1,00	1,00	1,00	3
Kocsis, V.	dr.	oz	-	-	-	0,63	3
Noll, R. van der	dr.	oz	-	1,00	1,00	1,00	3
Nooij, M.N. de	drs.	oz	0,80	-	-	-	3
Poort, J.	drs.	oz	1,00	1,00	0,50	-	3
Rosenboom, N.	msc	oz	-	0,39	1,00	0,88	3
Tieben, L.A.W.	drs.	oz	0,84	0,84	0,92	1,00	3
Weda, J.N.T.	drs.	oz	1,00	1,00	1,00	1,00	3

Name	Title	Function	Total 2009	Total 2010	Total 2011	Total 2012	Funding
Labour Economics & Education							
Berg, E. van den	drs.	oz	1,00	1,00	1,00	1,00	3
Berkhout, E.E.	drs.	oz	1,00	1,00	1,00	1,00	3
Bisschop, P.	msc	oz	-	-	-	1,00	3
Graaf, D. de	drs.	oz	0,84	0,80	0,67	-	3
Graaf-Zijl, M. de	dr.	oz	-	-	-	-	3
Heyma, A.O.J.	dr.	oz	1,00	1,00	1,00	1,00	3
Hof, B.J.F.	drs.	oz	0,39	-	-	-	3
Klaveren, C.P.B.J.	drs.	oz	0,08	-	-	-	3
Mulder, J.	drs.	oz	-	-	0,04	0,84	3
Pass, J.	msc	oz	-	-	0,47	-	3
Prins, J.	msc	oz	-	-	1,00	1,00	3
Scavenius, J.E.B.	msc	oz	0,47	-	-	-	3
Smid, Th.	msc	oz	0,83	0,98	0,32	-	3
Volkerink, M.D.	msc	oz	-	1,00	1,00	1,00	3
Werff, S.G. van der	msc	oz	1,00	1,00	1,00	1,00	3
Health Economics & Social Security							
Berden, C.B.	dr.	oz	1,00	1,00	1,00	0,89	3
Hop, P.J.		oz	0,63	0,32	-	-	3
Houkes-Hommes, A.R.B.	drs.	oz	0,84	0,84	0,67	-	3
Kerkhofs, M.	dr.	oz	-	0,06	-	-	3
Kok, L.M.	drs.	oz	0,84	0,84	0,84	0,84	3
Lammers, M.	msc	oz	-	-	0,17	1,00	3
Scholte, R.S.	drs.	oz	-	-	-	0,33	3
Tempelman, D.C.G.	drs.	oz	1,00	0,98	0,95	0,87	3
Cost-Benefit Analysis and Economics Activity							
Berg, M. van den	drs.	oz	0,84	0,56	1,00	-	3
Dorenbos, R.J.	drs.	oz	-	-	-	-	3
Dosker, R.	drs.	oz	0,33	1,00	0,95	-	3
Holleman, J.	drs.	oz	-	-	-	-	3
Koopmans, C.C.	prof. dr.	hgl	0,26	0,80	0,80	-	3
Koutstaal, P.	drs.	oz	-	-	0,21	-	3
Nooij, M. de	drs.	oz	-	0,68	0,16	-	3
Risseeuw, P.R.	drs.	oz	1,00	1,00	0,75	-	3
Sheikh, O.	msc	oz	0,66	-	-	-	3
Tewes, F.W.	drs.	oz	0,71	0,24	-	-	3
Willebrands, D.	msc	oz	-	0,74	0,63	-	3
Aviation Economics							
Burghouwt, G.	dr.	oz	1,00	1,00	1,00	1,00	3
Kempen, T.	drs.	oz	-	0,14	0,48	0,48	3
Krul, J.	drs.	oz	-	-	0,07	0,18	3
Lieshout, R.B.T.	drs.	oz	1,00	1,00	1,00	1,00	3
Veldhuis, J.G.	drs.	oz	0,84	0,80	0,80	0,80	3
Wit, J. de	prof drs	hgl	0,80	0,33	-	-	3
Yilmaz, H.	drs.	oz	1,00	0,75	-	-	3
Zuidberg, J.	msc	oz	1,00	1,00	1,00	1,00	3

		<i>Totaal 2009</i>	<i>Total 2010</i>	<i>Total 2011</i>	<i>Total 2012</i>	
Total 1st flow of funds		0,00	0,00	0,00	0,00	
Total 2nd flow of funds		0,00	0,00	0,00	0,00	
Total 3rd flow of funds		27,94	28,88	20,43	28,92	
Total 1st f.o.f. exd. Ph.D.'s		0,00	0,00	0,00	0,00	
Total all flows of funds		27,94	28,88	20,43	28,92	
Ph.D. students		0,00	0,00	0,00	0,00	

13.2 PROGRAMME DESIGN

SEO Economic Research was founded in 1949, as a research institute of the Faculty of Economics at the University of Amsterdam, to encourage applied research. Since the 1980s it has been financially independent from the university, while retaining close links with the academic community.

SEO carries out contract research for ministries and public organizations, private companies and non-profit institutions, nationally and internationally. SEO distinguishes itself from commercial research bureau's by its analytical approach. Modern economic analysis is applied to practical issues. Empirical questions are tackled with the econometrics toolkit.

SEO is not linked to vested interests or political parties and research questions are approached with an independent scientific mindset.

SEO Economic Research is a medium-sized horizontal organisation. It has an academic staff of about 40 economists and econometrists. When a research question has multiple dimensions SEO can call upon specialists from other disciplines – often from within the University of Amsterdam - such as the Amsterdam Institute for Advanced Labour Studies (AIAS) and the Institute for Information Law (IViR).

Structure

SEO Economic Research consists of six research groups or sections organised along fields of economic research. A first section is **Labour Economics & Education** which specialises in labour market, labour market policy, schooling and training research. Research topics deal with employability, transition from school to work, temporary work, re-integration and exit from unemployment, wage differentials, employment benefits, migration, schooling and work and the evaluation of educational policies.

The section **Health Economics & Social Security** analyses developments in healthcare and social security, with research often shaped by the highly regulated nature of these two sectors. This section specialises among others in market analyses, effectiveness and cost-benefit studies and budgeting and costing systems.

Research in the section **Regulation & Competition Policy** concentrates on the design, analysis and evaluation of competition and government intervention. The section deals with issues related to the structure, conduct and performance of markets and sectors, regulation and deregulation, economic aspects of cartels, mergers, market dominance and other topics in the field of competition. It assesses new or established regulations and policy from the perspective of law and economics.

Aviation Economics is a section specializing in aviation economics. It advises governments, airlines, airports, financial institutions and other interested parties on the economic issues related to aviation. Aviation Economics activities include operations research, econometric

analyses and forecasting, feasibility studies and research into competition and market issues, as well as work in transport and regional economics.

The **Market & State** section specialises in the economic analysis of state aid and public tenders. Economic organization and the boundaries between public and private economic activity are other issues that are dealt with in this section.

Organisation

SEO Economic Research is governed by a six-member Executive Board. Day-to-day policy is in the hands of the general director and the scientific director and of the management team, which consists of both directors and the section heads. SEO Economic Research also has an Advisory Board which meets yearly to review its research programme.

13.3 PROGRAMME EVALUATION

Academic publications by researchers at SEO Economic Research are often a spin-off from contract research which is SEO's core activity. This year 31 articles were published in refereed journals or refereed books. The number of non-refereed academic publications was substantial. In 2012 SEO researchers published 57 commissioned reports and 123 other publication such as popular publications and newspaper articles.

13.4 RESOURCES AND FUNDING

SEO Economic Research has set up an internal fund for scientific research (WEO) which allots time to researchers working at SEO and which enables them to prepare papers for scientific publications and to participate in economic conferences. This fund has also a provision to finance time spend on preparing a doctoral dissertation and to participate in (international) economic conferences. Researchers at SEO Economic Research publish regularly in national and international professional journals. Only by publishing and lecturing, a research institute stays 'alert' and keeps abreast of the newest developments in applied economic research. Core activity is contract research and the majority of research funding originates from contract parties.

SEO holds an NEN-EN ISO 9001:2008 quality certificate for Applied Economic Research and Consulting.

13.5 OUTPUT

Key publications

- Atlamaz, M., Berden, C., Peters, H. & Vermeulen, D. (2011). Non-cooperative solutions for estate division problems. *Games and Economic Behavior*, 73, (1), 39-51. [A]
- Baarsma, B.E., Kemp, R.G.M., Noll, R. van der & Seldeslachts, J. (2012). Let's Not Stick Together: Anticipation of Cartel and Merger Control in The Netherlands. *De Economist*, 160, (4), 357-376. [B]
- Baarsma, B. (2011). Rewriting European competition law from an economic perspective. *European Competition Journal*, 7, (3), 559-585. [B]
- Ewijk, C. van & Volkerink, M. (2012). Will Ageing Lead to a Higher Real Exchange Rate for the Netherlands? *De Economist*, 160, (1), 59-81[B]
- Graaf-Zijl, M. de, Berg, G. J. van den & Heyma, A. (2011). Stepping-stones for the unemployed: the effect of temporary jobs on the duration until (regular) work. *Journal of Population Economics*, 24, (1), 107-139. [B]
- Lammers, M., Bloemen, H. & Hochguertel, S. (2012). Job search requirements for older

unemployed: Transitions to employment, early retirement and disability benefits.
European Economic Review.
<http://www.sciencedirect.com/science/article/pii/S0014292112001493> [A]

Suau-Sanchez, P. & Burghouwt, G. (2012). Connectivity levels and the competitive position of Spanish airports and Iberia's network rationalization strategy, 2001–2007. *Journal of Air Transport Management*, 18, (1), 47-53. [B]

Publications in numbers

SEO					2012
Academic		a) in refereed journals	A	0	
			B	12	
			Other	16	28
		b) in other journals		1	1
		c) book chapters	A	0	
			B	0	
			Other	3	3
		d) in proceedings		1	1
<i>Subtotal</i>					33
2) Books			A	0	
			B	1	
			Other	2	3
3) Ph.D. theses				0	0
4) Professional publications				79	79
5) Popular publications				0	0
6) Working papers				7	7
Total					122

Article in journal - refereed

B

- Baarsma, B.E. & Barendrecht, J.M. (2012). Mediation 2.0. *Nederlands Juristenblad*, 32, (32), 2239-2243.
- Baarsma, B.E. (2012). Blijft mediation de eeuwige belofte of wordt het een volwassen markt? *Nederlands Juristenblad*, 87, (1), 14-20.
- Baarsma, B.E., Kemp, R.G.M., Noll, R. van der & Seldeslachts, J. (2012). Let's Not Stick Together: Anticipation of Cartel and Merger Control in The Netherlands. *De Economist*, 160, (4), 357-376.
- Ewijk, C. van & Volkerink, M. (2012). Will Ageing Lead to a Higher Real Exchange Rate for the Netherlands? *De Economist*, 160, (1), 59-81.
- Hof, B, Heyma, A. & Hoorn, T. van der (2012). Comparing the performance of models for wider economic benefits of transport infrastructure: results of a Dutch case study. *Transportation*, 39, (6), 1241-1258.
- Kerste, M., Poort, J. & Eijk, N. van (2012). Valuing commercial radio licenses. *European Journal of Law and Economics*, 34, (1), 1-23.
- Koopmans, C., Rietveld, P. & Huijg, A. (2012). An Accessibility Approach to Railways and Municipal Population Growth, 1840-1930. *Journal of Transport Geography*, (25), 98-104.
<http://www.sciencedirect.com/science/article/pii/S0014292112001493>
- Lieshout, R. (2012). Measuring the size of an airport's catchment area. *Journal of Transport Geography*, (25), 27-34.

- Lieshout, R.B.T., Matsumoto, H. (2012). New international services and the competitiveness of Tokyo International Airport. *Journal of Transport Geography*, (22), 53-64.
- Peer, S., Koopmans, C. & Verhoef, E.T. (2012). Predicting Travel Time Variability for Cost-Benefit Analysis. *Transportation Research Part A: Policy and Practice*, 79-90.
- Suau Sanchez, P. & Burghouwt, G. (2012). Connectivity levels and the competitive position of Spanish airports and Iberia's network rationalization. *Journal of Air Transport Management*, (18), 47-53.
- Wit, J.G. de & Zuidberg, J. (2012). The growth limits of the low cost carrier model. *Journal of Air Transport Management*. (21), 17-23.

Other

- Baarsma, B.E. (2012). De rol van de ondernemingsraad bij het bevorderen van de kwaliteit van intern toezicht. *Tijdschrift voor Toezicht*, 3, (1), 56-62.
- Baarsma, B.E. & Lückerath-Rovers, M. (2012). De toegevoegde waarde van de voordrachtscommissaris. *Maandblad voor accountancy en bedrijfseconomie*, 86, 345-355.
- Baarsma, B.E., Noll, R. van der & Kemp, R.G.M. (2012). Anticipatie op kartel- en concentratietoezicht. *Tijdschrift voor Toezicht*, 3, (2), 23-37.
- Bisschop, P., Kastoryano, S.P. & Klaauw, B. van der (2012). Effect van tippelzones op lokale criminaliteit. *Tijdschrift voor Criminologie*, 54, (4), 320-334.
- Buijen, K.H.S. van, Gerritsen, M., Leussink, L. & Voort, J. van der (2012). Het effect van aanbesteden op de kwaliteit van openbaar vervoer. *TPEdigitaal*, 6, (1), 63-74.
- Graaf, D. de, Putte, B. van den, Werff, S.G. van der & Kessels, R. (2012). Het motiverende effect van normatieve en afschrikwekkende boodschappen. *Tijdschrift voor Toezicht*, 3, (2), 50-62.
- Kolkman, J. & Zuidberg, J. (2011). Belastingen in de luchtvaart. *TPEdigitaal*, 5, (3), 4-15.
- Lieshout, R. & Matsumoto, H. (2011). Estimation of Route Choice Probabilities and Transfer Hub Market Shares of Passenger departing from Japan 2. *Kansai Airport Review*, (390), 18-20. (in Japanese).
- Matsumoto, H., Lieshout, R.B.T. (2012). The Era of Low-cost Carriers Starting in Japan 1: Foreign Incumbent LCCs and Japanese New Entrants. *Kansai Airport Review*, (404), 21-23.
- Matsumoto, H., Lieshout, R.B.T. (2012). The Era of Low-cost Carriers Starting in Japan 2: Estimation of Airlines' Market Shares. *Kansai Airport Review*, (405), 18-21.
- Matsumoto, H., Lieshout, R.B.T. (2012). The Era of Low-cost Carriers Starting in Japan 3: Suggestions from the US and Europe. *Kansai Airport Review*, (406), 40-43.
- Tieben, B. (2011). Economisch Evenwicht: de spanning tussen normatief principe en positieve wetenschap. *Kwartalschrift Economie*, 7, (4), 587-606.
- Rosenboom, N.S.R. (2012). Career development after cartel prosecution: cartel versus non-cartel managers. *Journal of Competition Law and Economics*, 8, (1), 145-165.
- Rosenboom, N. (2012). Hoe passen overeenkomsten met het oog op duurzaamheid binnen de rechtstreeks werkende uitzondering van het karteltoezicht? *Tijdschrift voor Toezicht*, 3, (1), 56-62.
- Veldhuis, J. & Matsumoto, H. (2011). Estimation of Route Choice Probabilities and Transfer Hub Market Shares of Passengers departing from Japan 1. *Kansai Airport Review*, (389), 18-20. (in Japanese).
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- Berg, E. van den & Heyma, A. (2012, 7 March). *Resultaten nulmeting SlimFit*. Bijeenkomst controlescholen SlimFit, Utrecht.
- Berg, E. van den & Heyma, A. (2012, 21 March). *Resultaten nulmeting SlimFit*. Bijeenkomst projectleiders LvoorL, Utrecht.
- Berg, E. van den & Heyma, A. (2012, 11 April). *Ins en outs onderzoek SlimFit*. Centrale Kennisdeel sessie SlimFit, Utrecht.
- Berg, E. van den (2012, 12 December). *Onderzoek SlimFit: respons + stukje outcome*. Centrale kennisdeel sessie SlimFit, Utrecht.
- Berkhout, E. & Volkerink, M. (2011, 12 December). *Wat beweegt kennismigranten? Een analyse van de concurrentiekracht van Nederland bij het aantrekken van kennismigranten*. Arbeidsmarktcongres, Leuven.
- Heyma, A. (2012, 7 June). *Flexibele Schil*. Algemene Rekenkamer, Den Haag.
- Heyma, A. (2012, 11 June). *Deelname aan Klankborgroep Arbeidsmarkt Ouderen, CPB*. Ministerie van Sociale Zaken en Werkgelegenheid, Den Haag.
- Heyma, A. (2012, 13 June). *Deelname aan themagesprek Kwaliteit en beschikbaarheid onderwijspersoneel*. CAOP, Den Haag.
- Heyma, A. (2012, 18 June). *Deelname aan Regiowerktop RPA*. Het Park, Hoorn.
- Heyma, A. (2012, 27 June). *Into the Gap*. Nederlandse Vertegenwoordiging Randstad, Brussel.
- Heyma, A. (2012, 6 September). *Langdurig verblijf in de flexibele schil van de arbeidsmarkt*. Economenlunch NMa, Den Haag.
- Heyma, A. (2012, 10 September). *Deelname aan beleidsseminar Flexibele Arbeid*. Felix Merites, Amsterdam.
- Heyma, A. (2012, 26 September). *Hoe produceer ik kennis?* Bijeenkomst SlimFit basisscholen, Utrecht.
- Heyma, A. (2012, 10 October). *Langdurig verblijf in de flexibele schil van de arbeidsmarkt*. NVA-TvA 2012 congres SER, Den Haag.
- Heyma, A. (2012, 18 October). *Effect woonsituatie op arbeidsaanbod*. Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, Den Haag.
- Heyma, A. (2012, 22 November). *Wat maakt een oudere werknemer aantrekkelijk?* Strategieoverleg Ministerie van Sociale Zaken en Werkgelegenheid, Den Haag.
- Heyma, A. (2012, 23 November). *Regionale arbeidsmarktprognose 2012*. Noord-Hollandse Arbeidsmarkt en Onderwijs Monitor 2012, Technisch College Velsen, IJmuiden.

- Heyma, A. (2012, 4 December). *Deelname aan Klankbordgroep Arbeidsmarkt Ouderen, CPB*. Ministerie van Sociale Zaken en Werkgelegenheid, Den Haag.
- Heyma, A. (2012, 6 December). *Deelname aan beleidsseminar Flexible Arbeid*. CAOP, Den Haag.
- Hochguertel, S. & Lammers, M. (2012, 5 June). *Pension rules and labor market dynamics*. Meeting of the Danish Microeconometric Network, Copenhagen.
- Kok, L. (2011, 19 October). *Hogere kwaliteit én lagere kosten: een illusie?* Symposium Elseviers ‘Beste Ziekenhuizen’, Wassenaar.
- Krul, J. (2012, 26 April). *Airports in a competitive environment*. Conference of World Airport Lawyers Association, Amsterdam.
- Krul, J. (2012, 8 May). *By plane of course: the role of air transport in the development of international tourism*. VUGS symposium The future of tourism, Utrecht.
- Krul, J. (2012, 23 November). Success factors for the Airport City. Bewegingen rond de luchtvaart symposium, Schiphol.
- Lammers, M. (2012, 25 January). *Pension rules and labour market dynamics*. International Pension Workshop, Amsterdam.
- Noll, R. van der (2012, 16 October). *Flexibel Auteursrecht*. Symposium Auteursrecht en economie, Amsterdam.
- Noll, R. van der (2012, 4 September). *Let's not stick together: anticipation of cartel and merger control in the Netherlands*. European Association for Research in Industrial Economics (EARIE) Annual Conference, Rome.
- Noll, R. van der & Rosenboom, N. (2012, 4 April). *Economische argumentatie in de praktijk*. Seminar Toepassing van het Mededingingsrecht in de praktijk, Rotterdam.
- Poort, J. & Weda, J. (2012, 30 August). *Windows or opportunities*. Creative with IP event, Amsterdam.
- Theeuwes, J. (2012, 23 January). *De arbeidsmarkt van de metropoolregio – vijf jaar vooruit kijken*. Nieuwjaarssymposium. Kamer van Koophandel, Amsterdam.
- Volkerink, M. (2012, 9 February). *De toekomst van de arbeidsmarkt in de Metropoolregio Amsterdam tot 2016*. Kamer van Koophandel, Amsterdam.
- Volkerink, M. (2012, 16 February). *De toekomst van de arbeidsmarkt in de Metropoolregio Amsterdam tot 2016*. SADC/EDA, Dahme-Spreewald, Germany.
- Volkerink, M. (2012, 10 October). *Een verkenning van de toekomstige arbeidsmarkt van de overheid*. Netwerkbijeenkomst Arbeidsmarkt A&O Provincies, Utrecht.

Other lectures

- Berg, E. van den (2012, 9 October). *Beleidsevaluaties in de praktijk*. Gascollege Universiteit van Utrecht, Utrecht.

Membership academies

- Baarsma, B. (2012). Member of the Academisch Genootschap Aanbesteden.
- Burghouwt, G. (2012). Member of Ph.D. committee of Franziska Kuper, University of Antwerp, Antwerp.

Relevant position

- Baarsma, B. (2012). Crown member of the SER, Member of the Supervisory Board of Loyalis NV (member Audit Committee), Member of the Supervisory Board of the St. Elisabeth Hospital Tilburg, Member of the Supervisory Board of BNN, Member of the Supervisory Board of Espria, Member of the Supervisory Board of Woonzorg Nederland, Member of the Audit Committee of FNV Bondgenoten, Member of the Advisory Board of Peak Invest (education), Member of the Supervisory Board of the G500 (political youth movement), Non-governmental expert on behalf of the

- Nederlands in the International Competition Network (ICN), Referee for: *Beleidsonderzoek Online, Energy Policy, Energy*.
- Burghouwt, G. (2012). Referee for: *European Journal of Transport and Infrastructure Research, Geographical Analysis, Journal of Airport Management, Journal of Air Transport Management, Journal of Transport Geography, Journal of Transport Economics and Policy, Research in Transportation Business, Tijdschrift voor Economische en Sociale Geografie, Transportation Research part E, Transport Policy, Transport Reviews*.
- Lieshout, R. (2012). Referee for: *Journal of Transport Geography, European Journal of Transport and Infrastructure Research*.
- Kok, L. (2012). Referee for: *Journal of Social Policy*.
- Koopmans, C. (2012). Referee for: *European Journal of Transport and Infrastructure Research*.
- Noll, R. van der (2012). Referee for: *TPEdigitaal*.

University of Amsterdam
Amsterdam School of Economics - Research Institute
Valckenierstraat 65-67
1018 XE Amsterdam

T +31 20 525 4276
E ase-ri@uva.nl
www.aseri.uva.nl