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A

THE RESEARCH INSTITUTE
CHAPTER 1: INSTITUTIONAL REVIEW

1.1. MISSION STATEMENT

RESAM has the following mission statement.

* RESAM 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.

* RESAM facilitates and promotes research by faculty members of the FEB to foster the academic ideal of intertwined university research and teaching.

RESAM (Research in EconomicS and econometrics Amsterdam) is one of the two research institutes of the Faculty of Economics & Business (FEB)\(^1\); the other being the research institute of the Amsterdam Business School (ABS-RI). RESAM was established in 1998 after the MUB (Wet Modernisering Universitair Bestuur (law on the modernization of university management)) came in effect. RESAM covers the wide area of economics and econometrics as can be seen from the names of the two Departments that employs its researchers: Algemene Economie (AE, Economics) and Kwantitatieve Economie (KE, Quantitative Economics).

Research is organised in Research Programmes, which are directed by 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 advice 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.

RESAM closely co-operates with the Tinbergen Institute, where many of RESAM’s researchers are appointed as fellow. The Tinbergen Institute also acts as the graduate school for RESAM Ph.D. students.

1.2. ALLOCATING RESOURCES

The total faculty budget available in the FEB, after deducting resources for administrative positions (dean, faculty bureau, department chairpersons, curriculum co-ordinators, institute directors), is divided between the two Schools, the School of Economics and the Business School. In principle time is equally allocated to teaching and to research. Schools are compensated by the research institute (RESAM for the School of Economics) and the teaching institute (OWI) for research and teaching tasks the department provides. Faculty members in the School of Economics are annually assigned time for research on the basis of their publication records in the past three years. In this way RESAM provides incentives to increase the quality and quantity of output.

Publications are graded by quality level of the outlet. For journals, RESAM distinguishes

- A: excellent, international top level
  Publications in A level journals set directions for research, by approach and by method. They select topics and set standards for analytical and methodological level.

\(^1\) Since January 1, 2006 Faculty of Economics and Business is the new name of the Faculty of Economics and Econometrics.
B: good international level
Publications in B level journals meet high analytic and methodological standards but have far less influence on direction and standards for future research.

C: international refereed journals
These journals satisfy the minimum norm of aiming for an international audience, applying blind refereeing, and publish in an accessible language. Analytical and methodological standards satisfy a generally accepted minimum level.

D: other, non-refereed and refereed

RESAM has drawn up a list of rankings of publication outlets (journals, publishing houses, conference proceedings, see the RESAM website www.fee.uva.nl/resam). 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, a B-level for 50 points, and a C-level for 25 points in 2000 and 2001. Individual authors of a publication with n authors each get a share of 2/(1+n) points of the publication. The weight for C-level publications was linearly reduced in three steps, with a resulting weight of zero for research published in 2004. The system will be fully implemented this year (2007) when research time is allocated for 2008, on the basis of results from 2004-2005-2006, three consecutive years in which a C publication does not yield points. Research time assigned to individuals is related to publication points over the past three years as follows:

100 or more : 0.5 fte
50-99 : 0.25 fte
1-49 : 0.125 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, have a five year protection period of their research time at the maximum of 0.5 of their working hours. Admission as TI Fellow is based on A- and B-level publications only (TI has its own grading of publications). New appointees are allotted the maximum research time for a period of three years.

RESAM stimulates concentration of the School’s research in Research Programmes also by other means (such as an annual budget for conference visits and other academic activities to the research programmes). Once a year RESAM hosts a meeting of the Council of Programme Leaders to discuss the results of the past year and plans for the future.

1.3. STRATEGY AND POLICY

After the VSNU Quality Assessment of Research in 1995, the Faculty started a process of realigning its research efforts by reducing the amount of research programmes. Before this assessment there were 25 programmes but in the next Quality Assessment (2001) only 14 programmes were submitted for evaluation. Several programmes in economics and econometrics were merged while research in the fields of marketing and management were discontinued. Thereafter the faculty has successfully focused its research programme even further. In 2002 the AgBS-RI (now ABS-RI) was established to stimulate research in business studies (with the three former RESAM programmes of Accounting, Organisations & Society, Corporate Finance & Financial Systems and Information Management). RESAM continued with eight research programme plus the SEO. New last year a new programme has been established: Industrial Economics, Competition and Antitrust so RESAM now has a balanced portfolio of 10 research programmes.

2 The SEO has a rather special status. It is a foundation for commercial contract research which seeks to benefit from interaction with academic research. By special agreement SEO is compensated for publication in the international academic community and is also considered as one of RESAMs research programmes.
RESAM 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 at the annual convocation of the Council of Programme Directors.

1.4. ORGANISATION

Friday, September 9 2005, the inaugural conference of the Amsterdam Schools of Economics and Business was held. On this conference the official establishment of two schools, the Amsterdam School of Economics and the Amsterdam Business School, within the Faculty was celebrated.

Figure 1: Organizational chart
The Amsterdam School of Economics offers several excellent master programmes in economics, econometrics, actuarial science and operations research & management and has a strong emphasis on research. The school has about 110 academic staff and 2400 students.

RESAM is the research institute of the school and the research director is part of the management team of the school. The management team, which further consists of the dean of the school, the department chairs and the director of the education institute, meets every month to discuss strategy and policy. Important issues addressed in 2006 concerning research are the organizational structure of the Faculty and the establishment of a formal policy on hiring, promotion and retention of faculty. An organisational chart of the Amsterdam School of Economics is given in figure 1.

Box 1: Research Highlight: Adriaan Soetevent

In the area of industrial organization, many empirical questions regarding the spatial competition of firms still deserve an answer. Which factors determine where firms locate and, given their own location and those of their competitors, what is the nature of competition between firms? In classical models of spatial differentiation, the location of firms is modelled by assuming that consumers and firms are all located on a line or circle and that a consumer’s utility from buying from a specific firm decreases with the distance between her and the firm’s position. This framework is not rich enough to describe empirical regularities like e.g. the observation that gasoline prices at stations along the highway are higher than in inner-cities. Given the higher transportation costs, one would suppose that prices in less populated areas like highways would be lower. Of course, theory and empirics can be reconciled by taking into account that many agents already commute for their work, thereby greatly reducing their transportation costs.

In my current research, I try to design and test more sophisticated models of spatial competition which incorporate the network aspect of road structures and the commuting behaviour of consumers along highways. Given these more realistic spatial structures, I try to find out were firms locate, how they compete and whether there is scope for collusive behaviour.

In industrial organisation, bringing theory to data is not always straightforward, but in this an empirical project on price developments in the Dutch market for retail gasoline (joint with Marco Haan, RuG, and Pim Heijnen, CeNDEF) will help. Our data comprise a huge amount of price data covering about 85% of all Dutch gasoline stations. There are three reasons to focus on this market in particular. First there are indications that this market is insufficiently competitive although thus far no form of collusive behaviour has been discovered. Second, the analysis can exploit the fact that in this market the underlying network structure (the network of roads) is exogenously determined and not part of the strategy set of market participants. Third, for identification we can exploit (exogenous) changes that occur in this network, such as changes in ownership and other station characteristics (such as changes into unmanned stations) and changes in the travelling time of consumers. The hope is that our extensive data set will shed new light on the nature and the extent of competition in this market.

An alternative route of testing the implications of network structures on spatial competition is to conduct laboratory experiments. In this light, it is fortunate that in the last years, Jeroen Hinloopen and I gained practical experience in conducting experiments in our project on the effect of leniency programs on collusive behaviour. I highly appreciate the opportunities provided by CREED to collaborate with them and to make use of their world-class lab.

In its emphasis on empirical estimation and experimental testing, the project nicely fits into the current research interests of the Industrial Organisation group, which also includes Patrick van Cayseele, Jeroen Hinloopen and Sander Onderstal. I expect we will put out many successful projects in these areas in the years to come.
CHAPTER 2: INPUT

Personnel policy and human resource management is the domain of the department chairs. RESAM encourages the departments to hire good researchers and to stimulate faculty to increase the quality and quantity of academic publications, it cannot exert direct influence on personnel policy. Broader strategy issues concerning hiring and firing, however, are discussed within the Amsterdam School of Economics management team and this has resulted in a document on personnel policies wherein requirements current and new staff should meet are clearly defined. In 2005 it was decided that tenured positions will only be awarded to people that meet the admission requirements for fellowship of an accredited research school (preferably the Tinbergen Institute) and that in these cases the research director will be asked for advice.

2.1. RESEARCHERS AND OTHER PERSONNEL

The tables below give some information on RESAM faculty. Table I shows that, contrary to previous years, in 2006 total research capacity has declined. This development was mainly due to the sharp decrease in the number of Ph.D. students during 2006. This was expected, since the outflow of students from the Tinbergen Institute research master (Mphil) was not sufficient to fill all available positions. RESAM has tried to remedy this by attracting PhD students from outside but was only partially successful in attracting excellent students. Table II shows that trends differ somewhat across research groups.

Table I: Input research Staff at institutional level

| WP 1 (first flow of funds, excl. Ph.D.'s) | 24.03 | 22.05 | 21.60 | 19.43 |
| WP 2 (second flow of funds, excl. Ph.D.'s) | 14.90 | 11.13 | 11.69 | 12.52 |
| WP 3 (third flow of funds, excl. Ph.D.'s) | 26.33 | 32.50 | 34.36 | 36.18 |
| Ph.D. students | 18.81 | 18.38 | 20.54 | 16.48 |
| Total Research staff | 84.07 | 84.06 | 88.19 | 84.61 |
| Support staff RESAM (bureau) | 0.60 | 0.60 | 0.60 | 0.60 |
| Total Staff | 84.67 | 84.66 | 88.79 | 85.21 |

Table II: Input research Staff at programme level

| UvA-Econometrics | fte | 2003 | 2004 | 2005 | 2006 |
| WP 1 (first flow of funds, excl. Ph.D.'s) | 4.14 | 2.85 | 3.09 | 3.09 |
| WP 2 (second flow of funds, excl. Ph.D.'s) | 1.80 | 1.40 | 1.61 | 0.97 |
| WP 3 (third flow of funds, excl. Ph.D.'s) | 0.00 | 0.00 | 0.00 | 0.00 |
| Ph.D. students | 1.80 | 1.87 | 1.80 | 2.20 |
| Total Research staff | 7.74 | 6.12 | 6.50 | 6.26 |

| WP 1 (first flow of funds, excl. Ph.D.'s) | 2.01 | 2.45 | 2.04 | 2.10 |
| 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) | 0.00 | 0.00 | 0.00 | 0.00 |
| Ph.D. students | 0.80 | 1.08 | 1.08 | 1.15 |
| Total Research staff | 2.81 | 3.53 | 3.12 | 3.25 |
Table II: Input research Staff at programme level (continued)

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<td>WP 2 (second flow of funds, excl. Ph.D.’s)</td>
<td>0.80</td>
<td>2.23</td>
<td>3.64</td>
<td>3.44</td>
<td></td>
</tr>
<tr>
<td>WP 3 (third flow of funds, excl. Ph.D.’s)</td>
<td>0.00</td>
<td>0.45</td>
<td>0.25</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Ph.D. students</td>
<td>3.45</td>
<td>3.30</td>
<td>4.33</td>
<td>2.30</td>
<td></td>
</tr>
<tr>
<td>Total Research staff</td>
<td>7.60</td>
<td>8.68</td>
<td>10.30</td>
<td>8.66</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industrial Economics, Competition &amp; Antitrust</th>
<th>fte</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP 1 (first flow of funds, excl. Ph.D.’s)</td>
<td>-</td>
<td>-</td>
<td>1.57</td>
<td>1.39</td>
<td></td>
</tr>
<tr>
<td>WP 2 (second flow of funds, excl. Ph.D.’s)</td>
<td>-</td>
<td>-</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>WP 3 (third flow of funds, excl. Ph.D.’s)</td>
<td>-</td>
<td>-</td>
<td>0.15</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Ph.D. students</td>
<td>-</td>
<td>-</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Total Research staff</td>
<td>-</td>
<td>-</td>
<td>1.72</td>
<td>1.39</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEO</th>
<th>fte</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP 1 (first flow of funds, excl. Ph.D.’s)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.80</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>WP 2 (second flow of funds, excl. Ph.D.’s)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>WP 3 (third flow of funds, excl. Ph.D.’s)</td>
<td>24.70</td>
<td>28.77</td>
<td>30.47</td>
<td>31.14</td>
<td></td>
</tr>
<tr>
<td>Ph.D. students</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.88</td>
<td></td>
</tr>
<tr>
<td>Total Research staff</td>
<td>25.50</td>
<td>29.57</td>
<td>32.07</td>
<td>32.02</td>
<td></td>
</tr>
</tbody>
</table>
Most faculty are in the ranks of professor and Ph.D. student (although the number of researchers (oz) is higher than the number of Ph.D. students, but 73% of researchers in table III are working at SEO Economic Research). Overall there seems to be a healthy mix of researchers in different stages of their career, although some programmes might benefit from a more balanced spread in ranks. Within the Management Team of the ASE a plan on development of human resources is being drafted.

### Table III: Ranks at programme level

<table>
<thead>
<tr>
<th>Research programme</th>
<th>Hgl</th>
<th>Uhd</th>
<th>Ud</th>
<th>Oz</th>
<th>Pdoc</th>
<th>Ph.D.</th>
<th>Guest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># fte</td>
<td># fte</td>
<td># fte</td>
<td># fte</td>
<td># fte</td>
<td># fte</td>
<td># fte</td>
<td># fte</td>
</tr>
<tr>
<td>UvA- Econometrics</td>
<td>4 1.61</td>
<td>3 0.50</td>
<td>3 1.48</td>
<td>-</td>
<td>-</td>
<td>2 0.47</td>
<td>5 2.20</td>
<td>1 0.00</td>
</tr>
<tr>
<td>Operations research</td>
<td>2 0.75</td>
<td>1 0.39</td>
<td>3 0.62</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3 1.15</td>
<td>-</td>
</tr>
<tr>
<td>Equilibrium, expectations &amp; dynamics</td>
<td>1 0.50</td>
<td>3 1.60</td>
<td>1 0.50</td>
<td>-</td>
<td>-</td>
<td>3 0.93</td>
<td>6 1.90</td>
<td>1 0.00</td>
</tr>
<tr>
<td>Actuarial science</td>
<td>6 1.12</td>
<td>1 0.00</td>
<td>2 0.50</td>
<td>1 0.10</td>
<td>1 0.14</td>
<td>2 0.72</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other research quantitative economics</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2 0.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>The Transformation of Europe</td>
<td>8 2.82</td>
<td>2 0.58</td>
<td>5 1.71</td>
<td>3 0.81</td>
<td>1 0.13</td>
<td>6 2.65</td>
<td>9 0.00</td>
<td>34 8.79</td>
</tr>
<tr>
<td>Human Capital</td>
<td>7 2.18</td>
<td>2 0.60</td>
<td>-</td>
<td>-</td>
<td>4 2.56</td>
<td>3 2.80</td>
<td>9 4.08</td>
<td>10 0.17</td>
</tr>
<tr>
<td>Methodology &amp; History of Economics</td>
<td>3 0.35</td>
<td>3 1.40</td>
<td>-</td>
<td>-</td>
<td>1 0.58</td>
<td>1 1.00</td>
<td>1 0.60</td>
<td>1 0.00</td>
</tr>
<tr>
<td>Experimental &amp; political economics</td>
<td>4 2.26</td>
<td>1 0.46</td>
<td>1 0.42</td>
<td>4 3.22</td>
<td>-</td>
<td>7 2.30</td>
<td>5 0.00</td>
<td>22 8.66</td>
</tr>
<tr>
<td>Industrial Econ., Competition &amp; Antitrust</td>
<td>1 0.10</td>
<td>1 0.50</td>
<td>3 0.79</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5 1.39</td>
</tr>
<tr>
<td>Other research economics</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2 0.00</td>
<td>-</td>
<td>-</td>
<td>2 0.00</td>
</tr>
<tr>
<td>SEO economic research</td>
<td>6 1.97</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>41 29.17</td>
<td>-</td>
<td>2 0.88</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>13.66</strong></td>
<td><strong>17</strong></td>
<td><strong>6.03</strong></td>
<td><strong>20</strong></td>
<td><strong>6.02</strong></td>
<td><strong>56</strong></td>
<td><strong>36.44</strong></td>
</tr>
</tbody>
</table>

* hgl=professor, uhd=associate professor, ud=assistant professor, oz=researchers, pdoc=postdoctoral fellow

### 2.2. RESOURCES, FUNDING AND FACILITIES

As can be seen in table IV only a very small part of RESAM funds is allocated to non-staff cost centres. Most of this non-staff funding goes to the Tinbergen Institute where it is used to cover the expenses of courses for Ph.D. students and is used to organize seminars for fellows.

Besides allocating funds to fixed cost-centres to meet obligations made in the past, the remainder of RESAM non-staff funds is distributed over the research programmes. This is done on the basis of the size of the programme (fte). Programme leaders are free to use money for any research related activities of programme members, such as visiting conferences, conducting experiments and collecting data. Figures on actual expenditures of programme funds by research programmes are not very insightful: some programmes save money over several years to cover future expenses, in other programmes RESAM funding is combined with funding from other sources to pay for conference visits or experiments.

In 2006 RESAM has made an effort to concentrate all research-related cost-centres on the RESAM budget. In this way a more insightful overview of what expenditures have been made on research within the School of Economics can be presented in next year’s report.

The usual table with income and expenditures per cost centre could not be made this year due to the fact UvA’s Central Administrative office was not able to present accurate figures in time.
Box 2: Research highlight: Wouter den Haan

Macroeconomics describes aggregate behaviour. Key variables that receive a lot of attention are inflation, real activity, unemployment, and economic growth. The question arises which modelling technique is best. The approach pioneered by Jan Tinbergen relied heavily on estimated laws of motions with a relatively small role for theory. Macroeconomic empirical relationships, however, turned out to be extremely unstable. A good example is the breakdown of the Phillips curve, the relationship between unemployment and inflation. Consequently, there was a strong urge to build macro models with microfoundations. That is, first model the behaviour of the individual and then aggregate. This is quite challenging because agents affect each other and decisions are made in a dynamic and stochastic world. The first generation of this class of models made the analysis tractable by assuming a market structure (namely complete markets) that effectively ensured that differences between agents were not important for macroeconomic behaviour. It is clear, however, that both the underlying assumption and the resulting model are inadequate.

My own research is part of the second generation of dynamic macro models based on microfoundations. Heterogeneity and "frictions" play a key role. Important frictions are asymmetric information between transaction partners, moral hazard, and the costs of finding transaction partners and building relationships. Part of this research project consists of the development of numerical algorithms with which these complex models can be solved. The biggest part of this project studies the importance of these frictions on business cycles. This is an intriguing question because of the interaction between the presence and importance of frictions and aggregate real activity. For example, an economic downturn may deteriorate firms' net worth, which makes it more difficult to overcome asymmetric information or moral hazard problems. This in turn leads to less loans being extended which leads to a further deterioration of firms' balance sheets. Moreover, if this downward spiral leads to a destruction of relationships between borrowers and lenders then this may make it very difficult for the economy to come out of this malaise.
CHAPTER 3: CURRENT STATE OF AFFAIRS

3.1. PROCESSES IN RESEARCH, INTERNAL AND EXTERNAL COLLABORATION

As explained in previous chapters, RESAM allocates resources on the basis of past performance. RESAM stimulates and facilitates application for external funding (NWO, KNAW, EU). In general, the research institute tries to stimulate an active research environment, by organizing a weekly general seminar (see box 3 for all RESAM seminars), 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. RESAM basically monitors and controls by rewarding output.

Another way in which RESAM creates a stimulating research environment is by sponsoring and participating in the Tinbergen Institute (TI). Two other Dutch universities (Erasmus University and Free 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.

Box 3: Seminar series organised by and in co-operation with RESAM

<table>
<thead>
<tr>
<th>Seminar Series</th>
<th>Organisation</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>UvA-Econometrics Workshops</td>
<td>Kees Jan van Garderen, Fridays, Fortnightly</td>
<td></td>
</tr>
<tr>
<td>Tinbergen Institute Econometrics seminars</td>
<td>Kees Jan van Garderen &amp; Charles Bos, Fridays, Fortnightly</td>
<td></td>
</tr>
<tr>
<td>KAFEE Lunch Seminars</td>
<td>César Ariza, Adam Booij, Lev Ratnovski &amp; Marcos Ribeiro, weekly seminar, every Monday</td>
<td></td>
</tr>
<tr>
<td>Amsterdam Research Group in History and Methodology of Economics Seminars</td>
<td>Harro Maas, limited number of seminars throughout the year</td>
<td></td>
</tr>
<tr>
<td>Economics Colloquia</td>
<td>Franc Klaassen, Mikhail Anufriev &amp; Aljaž Ule, weekly seminar, every Thursday</td>
<td></td>
</tr>
<tr>
<td>Tinbergen Labour Seminar Series</td>
<td>Erik Plug, Bas van der Klaauw &amp; Pieter Gautier, weekly seminar, every Tuesday</td>
<td></td>
</tr>
<tr>
<td>Tinbergen Institute seminar series in Institution and Decision Analysis</td>
<td>Randolph Sloof, Matthijs van Veelen &amp; Mikhail Anufriev, weekly seminar, sometimes organized in Rotterdam</td>
<td></td>
</tr>
<tr>
<td>AIAS Lunch seminars</td>
<td>Kea Tijdens</td>
<td></td>
</tr>
</tbody>
</table>

As a graduate school, the Tinbergen Institute, initiated some major changes in 2003. With the introduction of the Bachelor-Master structure in the Netherlands the TI has chosen to offer a two-year research master (Master of Philosophy in Economics). These two years are basically part of a five-year Ph.D. track. Up until 2005 year most Dutch Ph.D. students started their work after four years of
university education. The first year of our Ph.D. students’ four-year term usually consisted of additional courses at the Tinbergen Institute, which left three years for actual research. The new master is an integration of this ‘old first year’ together with the last ‘normal university year’. Instead of 4-4 track (which usually was a 4-1-3 track) there has now emerged a 3-2-3 system. The advantage of this system is that the new TI-master offers students an excellent research-oriented two-year programme with good opportunities to meet top-level supervisors (TI-fellows).

In 2005 an international peer review committee consisting of prof. Dale Jorgenson, prof. David Hendry, prof. Arie Kapteyn, prof. Robert Merton and prof. Torsten Persson judged that the level of instruction in the core courses is comparable to the first-year program in leading graduate schools in economics in the UK and North America.

The number of students starting a Ph.D. training within RESAM was very uneven in recent years (three projectes started in 2005 (two on external funding) ten in 2004 (four of these on external funding), two in 2003, 21 in 2002 and two in 2001). The jump from 2001 to 2002 was due to postponing entry as a result of a new system of financial support. The strong drop in 2003, 2004 and 2005 was a consequence of a financial shortages and, since all projects run at least four years, because of the high number of projects started in 2002 that are still weighing down on the budget. Nine projects have started in 2006, five of which on (partial) external funding. The reason for the limited number of new projects in the 1st flow of funds is the fact that outflow of students who have completed their Mphil at the Tinbergen Institute was not yet sufficient to fill all these vacancies. Fortunately the inflow in the Tinbergen Mphil was sufficient in 2006 (there was actually a small surplus of excellent candidates) so this problem is not likely to persist in the future.

Table IV: Ph.D. graduations by cohort (FEB)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects started</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>11</td>
<td>16</td>
<td>16</td>
<td>15</td>
<td>13</td>
<td>3</td>
<td>27</td>
<td>138</td>
</tr>
<tr>
<td>Fraction graduated from total</td>
<td>82%</td>
<td>85%</td>
<td>54%</td>
<td>73%</td>
<td>75%</td>
<td>56%</td>
<td>67%</td>
<td>62%</td>
<td>67%</td>
<td>30%</td>
<td>61%</td>
</tr>
<tr>
<td>Graduated within 60 months</td>
<td>6/9</td>
<td>5/11</td>
<td>3/7</td>
<td>3/8</td>
<td>10/12</td>
<td>5/9</td>
<td>3/10</td>
<td>3/8</td>
<td>1/2</td>
<td>8/5</td>
<td>47/84</td>
</tr>
<tr>
<td>Fraction grad. within 60 months</td>
<td>67%</td>
<td>45%</td>
<td>43%</td>
<td>38%</td>
<td>83%</td>
<td>56%</td>
<td>30%</td>
<td>38%</td>
<td>50%</td>
<td>100%</td>
<td>56%</td>
</tr>
<tr>
<td>Av. duration to completion in m.</td>
<td>66</td>
<td>64</td>
<td>67</td>
<td>60</td>
<td>58</td>
<td>65</td>
<td>67</td>
<td>60</td>
<td>61</td>
<td>49</td>
<td>62</td>
</tr>
</tbody>
</table>

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

As can be seen in table V, on average, graduates needed 62 months from start of the contract to actual graduation. If a thesis has been accepted by the supervisor, it easily takes four months until actual graduation (6 weeks for the committee to read and react, communication to the dean and the office of the pedel, time to print, etc). Adding queuing time for the auditorium, a lag of up to six months after the expiry date of the contract time is quite normal. Hence, average completion time of 62 months, compared to a formal minimum of some 54 months is not bad. Reason for real concern is the overall low percentage of graduations (61%). It is, however, expected that this figure will rise when the new system, in which excellent students receive a comprehensive two-year research-training programme before entering the Ph.D., will have become fully operational. Additionally, the monitoring system for Ph.D. student progress has been improved.

Table V: Ph.D. graduations by cohort (RESAM)

<table>
<thead>
<tr>
<th>Cohort</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>Total/Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects started</td>
<td>9</td>
<td>5</td>
<td>10</td>
<td>2</td>
<td>21</td>
<td>47</td>
</tr>
<tr>
<td>Graduated/Total</td>
<td>6/9</td>
<td>5/5</td>
<td>7/10</td>
<td>1/2</td>
<td>7/21</td>
<td>26/47</td>
</tr>
<tr>
<td>Fraction graduated from total</td>
<td>67%</td>
<td>100%</td>
<td>70%</td>
<td>50%</td>
<td>33%</td>
<td>55%</td>
</tr>
<tr>
<td>Graduated within 60 months</td>
<td>4/6</td>
<td>2/5</td>
<td>2/7</td>
<td>0/1</td>
<td>7/7</td>
<td>15/26</td>
</tr>
<tr>
<td>Fraction grad. within 60 months</td>
<td>67%</td>
<td>40%</td>
<td>29%</td>
<td>0%</td>
<td>100%</td>
<td>58%</td>
</tr>
<tr>
<td>Av. duration to completion in m.</td>
<td>66</td>
<td>60</td>
<td>67</td>
<td>60</td>
<td>61</td>
<td>49</td>
</tr>
</tbody>
</table>
In 2006 41 Ph.D. students were working on different projects at RESAM. Contracts of 14 students expired during the year, six of them have graduated and the others are now finalizing their theses.

Box 3: Research Highlight: Cars Hommes (CeNDEF)

In 1998 Cars Hommes obtained a Pioneer grant from the Netherlands Organization for Scientific Research (NWO), to set up the Center for Nonlinear Dynamics in Economics and Finance (CeNDEF). Since then, CeNDEF has developed into a flourishing, multidisciplinary research group in behavioral economics and agent-based finance, emphasizing research themes such as heterogeneous interacting agent, bounded rationality, expectation formation and learning and evolutionary economics and finance.

Traditional economic theory describes the economy as an equilibrium outcome of activities of perfectly rational economic agents, often modelled within a representative rational agent framework. But the standard approach fails to explain important features of markets, such as high trading volume, the emergence of speculative bubbles and dramatic crashes and fat tail phenomena and clustered volatility in the returns distribution of financial assets. CeNDEF work fits into a newly emerging approach, where markets are viewed as complex evolving systems with a non-equilibrium price adjustment process driven by the bustling interaction of many heterogeneous individuals, who are boundedly rational using simple heuristics, learning and adapting their behavior over time. According to this view, aggregate market phenomena are thought of as emerging properties of complex systems resulting from the interaction of many heterogeneous consumers, firms, investors, etc.

The CeNDEF research program is a mixture of theoretical, empirical as well as experimental work using both analytical and computational tools. Since the mid nineties, Cars Hommes has been working with William Brock (University of Wisconsin), developing a theory of heterogeneous expectations, based upon evolutionary selection and reinforcement learning. Their joint papers published in Econometrica 1997 and the Journal of Economic Dynamics and Control 1998 have been widely cited and form one of the pillars of the CeNDEF research. An extensive recent survey of the heterogeneous agent approach is given in Hommes’ chapter in the Handbook of Computational Economics, 2006 and his entry on Interacting agents in finance in the New Palgrave Dictionary of Economics, 2007. Laboratory experiments on expectations are carried out in cooperation with the CREED experimental laboratory. A recent paper (jointly with Joep Sonnemans, Jan Tuinstra and Henk van de Velden) published in the Review of Financial Studies, 2005, shows that individuals can learn to coordinate on temporary asset price bubbles. The laboratory evidence is supported by an empirical paper (jointly with Peter Boswijk and Sebastiano Manzan), forthcoming in the Journal of Economic Dynamics and Control, 2007, estimating a heterogeneous agent model with fundamentalists and chartists on yearly S&P500 data, and showing that the strong rise in stock prices in the late nineties has been triggered by fundamentals (the internet technology), but strongly reinforced and exaggerated by trend following trading rules. The heterogeneous, interacting agent approach is likely to play an increasingly important role in economics and finance.

Another way to measure the success of Ph.D. education might be to look at where people are currently working. For this five cohorts have been examined. In the period from 1996 to 2000 47 students started working on a Ph.D. project in economics or econometrics of which 34 have graduated (at UvA or elsewhere) and three are currently finishing their thesis. Of those graduated 20 are now working as researchers within academia (20 at universities abroad including Princeton), seven are doing research within institutions for economic (policy) research such as the World Bank and IMF and the remainder work at financial institutions, mostly banks.

3.2. ACADEMIC REPUTATION

Econphd.net publishes rankings (that are quite substantial in scope (covering 63 journals over roughly ten years, 1993-2003)). ‘This ranking deviates from many conventional ones in that an author's entire publication history is attributed to the current affiliation, rather than the affiliation at time of publication. Hence this ranking is not a measure of department productivity over a period of time. It is

3 The ‘bursaal’-system was abolished in favor of the ‘AIO’-system. In the former system Ph.D. students are not employed by the university but received a scholarship whereas in the latter system the Ph.D. students are employees with concomitant rights and legal positions.
a measure of current faculty resources'. According to these rankings the University of Amsterdam occupies the 37th position worldwide and the sixth position within Europe. For certain sub-disciplines UvA ranks even higher: for econometrics UvA’s rank is 15 worldwide, for macroeconomics it occupies the 22nd position in the world and for public economics the 24th.

In 2003, CentER, the research institute in economics of Tilburg University, again drew up a ranking of Dutch economists and one of Dutch institutes and has since then repeated this exercise every year. In 2006 FEB ranked 5th, one place lower than the previous year. The number of FEB-researchers in the Top 40 increased however: four FEB researchers (three in 2005) were listed in the Top 40 of Dutch economists.

A ranking based on weighted publications exploits only one dimension of research performance. A ranking of European academic institutions in 1999 based on articles published in the ten most prestigious international journals from 1991 to 1996, has FEB ranking 17th. This puts FEB ahead of all other Dutch institutions: Tilburg (19), Maastricht (37), Erasmus (42), Groningen (55), Leiden (58), Nijmegen (81), Utrecht (97) and the Free University (111). Output is not scaled by size of the institute. The top ranking institution (LSE) has published almost 400 AER (American Economic Review) equivalent pages, the top ten all publish in excess of 140 AER equivalent pages. FEB published 86, Tilburg 80 pages, and all other Dutch institutions below 40 pages.

A ranking published in 2003, drawn up for the European Economic Association, puts the FEB at rank 10 in Europe. The ranking covers the period 1995-1999 and is based on thirty prestigious journals. Tilburg takes up rank 1 in Europe, Erasmus is at 15, VU at 30, Maastricht at 31 and Groningen at 60. A ranking based on publication in some 650 journals in the period 1994-1998 puts UvA at rank 7 in Europe (Tilburg at 5, EUR at 8, VU at 19, Maastricht at 27 and Groningen at 29). According to comparisons presented in another study, using a more statistical approach and based on list of top journals, FEB held the sixth position of the top European institutes, just behind the University of Oxford.

As table VII indicates RESAM faculty members take up many positions as editors or associate editors of international journals. Membership of editorial boards is also frequent.

Publications of RESAM faculty are cited quite often by other researchers. Below are the total amounts of citations of the five most cited researchers per research programme as queried with Google Scholar.

<table>
<thead>
<tr>
<th>Field</th>
<th>Total Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>UvA-Econometrics:</td>
<td>1050</td>
</tr>
<tr>
<td>Operations Research:</td>
<td>515</td>
</tr>
<tr>
<td>CeNDEF:</td>
<td>1260</td>
</tr>
<tr>
<td>Actuarial Science:</td>
<td>1405</td>
</tr>
<tr>
<td>The Transformation of Europe:</td>
<td>2046</td>
</tr>
<tr>
<td>Human Capital:</td>
<td>1720</td>
</tr>
<tr>
<td>History &amp; Methodology of Ec.:</td>
<td>1909</td>
</tr>
<tr>
<td>CREED:</td>
<td>1582</td>
</tr>
<tr>
<td>Industrial Economics:</td>
<td>477</td>
</tr>
</tbody>
</table>

This gives a total of 11964 citations. RESAM’s best cited active researcher is Cars Hommes, with 799 citations. The total amount of SCI/SSCI citations for his research group (Equilibrium, Expectations and Dynamics/CeNDEF) amounts to 587.

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4 http://www.econphd.net/rankings.htm
7 http://ewis.kub.nl/~few/few2/nieuws/Eroutop.htm
9 Query date: March 27, 2007. Only the top five best cited publications per researcher are taken into account.
10 Queried at the end of March 2007. Here also only the five best cited publications of the five best cited researchers are taken into account.

14
If we take a closer look at the most-cited publications of the two best RESAM-groups in the econphd.net ranking and the best-cited RESAM researcher according to Google Scholar we see that RESAM has a large impact on the scholarly debate on 1) the analysis of the European Stability and Growth Pact\(^{11}\), 2) dynamic panel data models\(^{12}\), and 3) equilibrium theory\(^{13}\).

### Table VI: Editorial positions in academic international journals

<table>
<thead>
<tr>
<th>Name</th>
<th>Membership</th>
<th>Journal</th>
<th>Rank</th>
<th>IF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bethlehem, J.</td>
<td>Member editorial panel</td>
<td>Journal of the Royal Statistics Society, Series A</td>
<td>1.075</td>
<td></td>
</tr>
<tr>
<td>Beetsma, R.M.W.J.</td>
<td>Associate editor</td>
<td>European Economic Review</td>
<td>A</td>
<td>0.958</td>
</tr>
<tr>
<td>Beetsma, R.M.W.J.</td>
<td>Associate editor</td>
<td>CESifo Economic Studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blaug, M.</td>
<td>Member editorial board</td>
<td>Journal of Economic Methodology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boumans, M.J.</td>
<td>Member editorial board</td>
<td>History of Political Economy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boumans, M.J.</td>
<td>Associate editor</td>
<td>Journal of Economic Methodology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Co-editor</td>
<td>Journal of Economic Methodology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Member editorial board</td>
<td>Review of Social Economy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Member editorial board</td>
<td>Research in the History of Ec. Thought &amp; Methodology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dhaene, J.</td>
<td>Associate editor</td>
<td>Insurance: Mathematics and Economics</td>
<td>A</td>
<td>0.605</td>
</tr>
<tr>
<td>Diks, C.G.H.</td>
<td>Associate editor</td>
<td>Studies in Nonlinear Dynamics in Econometrics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ellman, M.J.</td>
<td>Associate editor</td>
<td>Cambridge Journal of Economics</td>
<td>B</td>
<td>0.772</td>
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<tr>
<td>Ewijk, C. van</td>
<td>Editor</td>
<td>De Economist</td>
<td>B</td>
<td>0.083</td>
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<tr>
<td>Gooijer, J.G.</td>
<td>Editor</td>
<td>International Journal of Forecasting</td>
<td>B</td>
<td>0.753</td>
</tr>
<tr>
<td>Goovaerts, M.J.</td>
<td>Editor</td>
<td>Insurance: Mathematics and Economics</td>
<td>A</td>
<td>0.605</td>
</tr>
<tr>
<td>Goovaerts, M.J.</td>
<td>Editor</td>
<td>Journal of Computational and Applied Mathematics</td>
<td>B</td>
<td>0.569</td>
</tr>
<tr>
<td>Goovaerts, M.J.</td>
<td>Associate editor</td>
<td>Asin Bulletin</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Haan, W.J. den</td>
<td>Editor</td>
<td>Journal of Economic Dynamics and Control</td>
<td>A</td>
<td>0.691</td>
</tr>
<tr>
<td>Haan, W.J. den</td>
<td>Associate editor</td>
<td>Journal of Money Credit and Banking</td>
<td>A</td>
<td>0.980</td>
</tr>
<tr>
<td>Hartog, J.</td>
<td>Member editorial board</td>
<td>Economics of Education Review</td>
<td>B</td>
<td>0.495</td>
</tr>
<tr>
<td>Hinloopen, J.</td>
<td>Member editorial board</td>
<td>Review of Industrial Organization</td>
<td>B</td>
<td>0.388</td>
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<tr>
<td>Hommes, C.</td>
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<td>Computational Economics</td>
<td>B</td>
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<tr>
<td>Hommes, C.</td>
<td>Editor</td>
<td>Journal of Economic Dynamics and Control</td>
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<td>0.691</td>
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<tr>
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<td>Associate editor</td>
<td>Macroeconomic Dynamics</td>
<td>B</td>
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<tr>
<td>Hommes, C.</td>
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<td>Nonlinear Science</td>
<td>1.556</td>
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<tr>
<td>Hommes, C.</td>
<td>Associate editor</td>
<td>Journal of Economic Behavior &amp; Organization</td>
<td>B</td>
<td>0.780</td>
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<tr>
<td>Hommes, C.</td>
<td>Associate editorial board</td>
<td>Journal of Economic Interaction and Coordination</td>
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</tr>
<tr>
<td>Kaas, R.</td>
<td>Managing editor</td>
<td>Insurance: Mathematics and Economics</td>
<td>A</td>
<td>0.605</td>
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<tr>
<td>Kiviet, J.F.</td>
<td>Member editorial board</td>
<td>Foundations and Trends in Econometrics</td>
<td>B</td>
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<tr>
<td>Kleiberger, F.R.</td>
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<td>Economics Letters</td>
<td>B</td>
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<tr>
<td>Kocher, M.</td>
<td>Member editorial board</td>
<td>Journal of Economic Psychology</td>
<td>B</td>
<td>1.593</td>
</tr>
<tr>
<td>Kuper, E.</td>
<td>Associate editor</td>
<td>Feminist Economics</td>
<td>B</td>
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<tr>
<td>Morgan, M.S.</td>
<td>Member editorial board</td>
<td>History of Political Economy</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Morgan, M.S.</td>
<td>Member editorial board</td>
<td>Journal for the History of Economic Thought</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morgan, M.S.</td>
<td>Member editorial board</td>
<td>Journal of Economic Methodology</td>
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</tr>
<tr>
<td>Offerman, T.J.S.</td>
<td>Member editorial board</td>
<td>Experimental Economics</td>
<td>B</td>
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</tr>
<tr>
<td>Oosterbeek, H.</td>
<td>Member editorial board</td>
<td>Economics of Education Review</td>
<td>B</td>
<td>0.495</td>
</tr>
<tr>
<td>Praag, C.M. van</td>
<td>Associate editor</td>
<td>Small Business Economics</td>
<td>B</td>
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<td>Reuten, G.A.T.M.</td>
<td>Corresponding editor</td>
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<td></td>
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<tr>
<td>Reuten, G.A.T.M.</td>
<td>Member advisory board</td>
<td>Historical Materialism</td>
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<tr>
<td>Schram, A.</td>
<td>Editor</td>
<td>Experimental Economics</td>
<td>B</td>
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<tr>
<td>Sonnemans, J.</td>
<td>Associate editor</td>
<td>European Economic Review</td>
<td>A</td>
<td>0.958</td>
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<td>Sonnemans, J.</td>
<td>Member editorial board</td>
<td>Quantitative Finance</td>
<td>B</td>
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</tr>
<tr>
<td>Sonnemans, J.</td>
<td>Member editorial board</td>
<td>Journal of Economic Psychology</td>
<td>B</td>
<td>0.854</td>
</tr>
<tr>
<td>Tuinstra, J.</td>
<td>Associate editor</td>
<td>Journal of Economic Dynamics and Control</td>
<td>A</td>
<td>0.691</td>
</tr>
<tr>
<td>Volgenant, A.</td>
<td>Advisory editor</td>
<td>Computers and Operations Research</td>
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<td>Winden, F.A.A.M. van</td>
<td>Member editorial board</td>
<td>Public Choice</td>
<td>B</td>
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<td>Wit, J.G. de</td>
<td>Member editorial board</td>
<td>Journal of Air Transportation Management</td>
<td>B</td>
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<td>Wit, J.G. de</td>
<td>Member editorial board</td>
<td>Journal of Air Transportation</td>
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<td>Wolthuis, H.</td>
<td>Associate editor</td>
<td>Insurance: Mathematics and Economics</td>
<td>A</td>
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</tr>
</tbody>
</table>

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3.3. OVERVIEW OF RESULTS

Figure 2: Number of publication 1997-2006*

*Figure 2 shows a slow but steady increase in the number of A publications during 1997-2006. We should note however, that the ranking of publications is not constant over time. A systematic re-evaluation of journal rankings was first applied to the publications of the year 2000. Due to this re-evaluation the number of unknown (ONB) publication has been reduced to zero. The decrease of A and B publications in 2004 is probably partly due to the application of stricter rules for admitting unranked journals to the RESAM list.

Figure 3: A and B-publications 1996-2005

Note also that as of 2002 publications refer to RESAM only whereas before they included the output of the research programmes of the ABS-RI (Amsterdam Business School-Research Institute).

14 Due to a miscalculation the number of publications in the year 1999 (as published in the Annual Report 1999 and the Annual Report 2000) was much too high (for 1999 41 A, 70 B, 80 C, 72 B/R and 2 ONB were given). The figures and tables in this report (as well as those in the Annual Report 2001) show the correct numbers for all years.
Table VII: Aggregated results of the institute

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>RES - EEM</td>
<td>UvA-Econometrics</td>
<td>7 9 0 0 0 0</td>
<td>1</td>
<td>3</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3.09</td>
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<tr>
<td>RES - OON</td>
<td>Operations Research</td>
<td>1 11 0 1 0 0</td>
<td>5</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2.10</td>
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<tr>
<td>RES - E&amp;D</td>
<td>Equilibrium, Expectations and Dynamics</td>
<td>3 10 2 1 3 0</td>
<td>1</td>
<td>0</td>
<td>15</td>
<td>1</td>
<td>4</td>
<td>1</td>
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<tr>
<td>RES - ACT</td>
<td>Actuarial Scince</td>
<td>1 7 7 0 1 0</td>
<td>10</td>
<td>2</td>
<td>14</td>
<td>2</td>
<td>2</td>
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<td>RES - TOE</td>
<td>Transformation of Europe</td>
<td>6 3 4 2 2 0</td>
<td>17</td>
<td>3</td>
<td>30</td>
<td>6</td>
<td>31</td>
<td>0</td>
<td>3.97</td>
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<td>RES - HUM</td>
<td>Human Capital</td>
<td>4 3 3 0 4 1</td>
<td>4</td>
<td>6</td>
<td>27</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>2.18</td>
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</tr>
<tr>
<td>RES - HME</td>
<td>History &amp; Methodology of Economics</td>
<td>1 2 5 0 7 0</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2.33</td>
<td></td>
</tr>
<tr>
<td>RES - EXP</td>
<td>Experimental &amp; Political Economics</td>
<td>8 15 1 0 2 1</td>
<td>1</td>
<td>2</td>
<td>31</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>1.92</td>
<td></td>
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<tr>
<td>RES - ICA</td>
<td>Industrial Econ., Competition &amp; Antitrust</td>
<td>1 3 4 0 0 0</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1.39</td>
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<td>93</td>
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<td>0</td>
<td>8</td>
<td>2</td>
<td>0.00</td>
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<tr>
<td>RES - OVO</td>
<td>Other Research KE</td>
<td>0 0 0 0 0 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>RES - OVO</td>
<td>Other Research AE</td>
<td>0 0 1 0 0 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Total</td>
<td></td>
<td>32 64 34 5 19 3</td>
<td>136</td>
<td>51</td>
<td>153</td>
<td>16</td>
<td>55</td>
<td>8</td>
<td>19.43</td>
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</tr>
<tr>
<td>Aggregated total</td>
<td></td>
<td>130 27</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.43</td>
</tr>
</tbody>
</table>

Output in different outlets by research programme is shown in table VIII.

**Figure 4: RESAM dissertations**

*From 2002 excluding dissertations within programmes that are now under ABS-RI. Category I: Ph.D. students who worked at FEB and graduated at FEB, II: external candidates who graduated at FEB, III: FEB staff that graduated elsewhere, IV: non-FEB students who graduated elsewhere with a FEB promotor.

The number of dissertations has dropped to six in 2003 and four in 2004 and has, as was expected, risen again to eight in 2005 and nine in 2006. This was mainly due to the fact that rather many dissertations were successfully defended in 2001 and 2002. As the hiring rate fluctuated over the years, contract expirations are also very uneven. It again has to be noted here that as of 2002

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15 As of last year, only publications of faculty on which their UvA-affiliation is mentioned, will be counted in the tables and figures. The total number of Academic Publications (books) includes monographs as well as chapters in books. In 2004 one monograph was published by an A-level publisher and two by non-refereed publishers. Publications in proceedings are counted in the Academic Publications (excl. books) section.
dissertations refer to RESAM only whereas before they included the output of the research programmes of the research institute of the ABS. It is expected that numbers of successfully defended theses will increase even more in 2007.

3.4 RELEVANCE TO SOCIETY

Although the main aim of RESAM is to let its research contribute to the international academic discourse, most research done within RESAM 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 Operations Research programme has initiated several projects together with other partners that yield results that are highly valuable to society including a project done together with the national railways and two projects in cooperation with an academic hospital (one on patient care and one on efficient blood storage).

The SCHOLAR group within the Human Capital research programme has traditionally yielded many results that help us better understand the functioning of external and internal labour markets, and form the basis for solid advice on policy issues related to socio-economic questions of efficiency and distribution of economic welfare.

Researchers from the programmes The Transformation of Europe 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.

The analysis of cartels and cartel stability, done by the Industrial Economics, Competition and Antitrust programme, figures prominently among the international research contributions that shape the minds of policy makers both domestically and abroad.

Researchers at CREED, furthermore, have done various consultancy work for public and private institutions. One project, for the Ministry of Economic Affairs (EZ) and the Ministry of Health, Well-Being and Sport (VWS) concerned the choice behavior of consumers in insurance markets for health care. Another project, commissioned by the Dutch government and the Municipality of Amsterdam concerns the design of auctions (using game theory and behavioral economics) for auctioning shares to interested parties within the so-called “Zuidas-Dok” project. Furthermore, a start was made for a new project commissioned by the Dutch Central Bank concerning the interaction between banks.
CHAPTER 4: ANALYSIS, PERSPECTIVES AND EXPECTATIONS FOR THE INSTITUTE

4.1. SWOT DIRECTOR RESAM

The Amsterdam School of Economics runs several research programs with a strong international reputation. In spite of fierce competition, output in top-ranked international journals remains at a high level. Because good researchers are attracted by other good researchers, this strong reputation is a very valuable asset for the School.

A permanent threat for the School’s research position is that very successful researchers accept a (n even more prestigious) position elsewhere. It is a challenge to recruit new people to replace the researchers who left. To foster this, the School is introducing a tenure track system because such a system is attractive for productive researchers. In this system new hires will have a probation period of 4 years. After 4 years an in-or-out decision is taken. A requirement to get “in” is that the candidate qualifies for the fellow criteria of the Tinbergen Institute (TI). The details of this personnel policy are available as a separate document.

RESAM allocates research time on the basis of research output (details are on the RESAM website). A weakness of the current allocation model is that the relation between research output and awarded research time is rather flat. Everyone who earns at least 100 points gets the full research time (0.5fte) and there is no differentiation above this threshold (there is differentiation below the threshold). Because most people earn these 100 points, most people are located on this flat segment. It is questionable whether this model gives sufficiently strong incentives and whether it allocates the available research time efficiently (even if incentives play no role). The RESAM director will evaluate the current model and propose changes.

The facts in this report (again) show that the success rate of PhD students needs to be improved. Too many PhD students drop out or are confronted with substantial delays. The new Mphil program in economics offered by the TI provides the opportunity to improve the success rate of PhD students. Students graduating from this demanding program should be able to finish a PhD thesis in three years. Moreover, rather than PhD students working on projects formulated by advisors, the new system gives more scope for students to formulate their own research interests (and find an advisor). This change is also expected to boost the success rate.

Although the new structure offers opportunities for improvement, there are also threats. Some researchers feel that the core of the Mphil-program is too narrow or too broad and fear that this will discourage students interested in their fields to enter the program. It is important that also these researchers feel comfortable with the new structure and support it. There is reason for optimism though. Successful Dutch economists working abroad keep on saying that the new program is a big improvement.

The introduction of the new structure was accompanied by substantial drop in the inflow of PhD-students in the first years. Last year (academic year 2006/7) was the first year in which the intake of the TI reached its target level of 30 students. First impressions are that this will also be the case for next year’s cohort. The intake shows a good mixture of foreign students and students with a Dutch nationality.

It is now important that graduates of the Mphil program find their way to supervisors and that the outflow is reasonably spread over the different universities participating in the TI and over different research fields.
At a central level the Universiteit van Amsterdam is introducing a new model to allocate funds to departments. During the past year there has not been much progress in the actual implementation of this model and in the decision-making with regard to the translation of this model within the Faculty of Economics and Business. It is therefore still unclear which amount is exactly earmarked for RESAM’s research programs and it is therefore also unclear what the exact consequences of these changes will be. In the near (?) future this will either lead to nice opportunities or will threaten RESAM’s research.

In 2008 the research programmes of the School of Economics are up for external examination (“onderzoeksvisitatie”). It has been decided that this examination will be undertaken jointly with other School of Economics in the Netherlands Preparation for this examination will start soon by drafting a self-evaluation report.

4.2. ASSESSMENT OF THE COUNCIL OF PROGRAMME LEADERS

In 2006 another successful international conference was organized: the 33rd EARIE (European Association for Research in Industrial Economics) congress. Keynote speakers included Ernst Fehr (University of Zürich) and Joseph Harrington Jr. (Johns Hopkins University). The local organizing committee (the members of the research programme Industrial Economics, Competition and Antitrust) were able accommodate over 400 participants in 20 parallel sessions.

Other successes include the organization by the research programme the Transformation of Europe of a successful conference "Monetary and Fiscal Stabilization with Imperfect Financial Markets" in Amsterdam jointly with the CEPR (London) and De Nederlandsche Bank (DNB). The year also marked the start of the VICI project of Prof. Wouter den Haan, who returned to the Netherlands from London Business School. Further, in a consortium with Tilburg University and the CPB ToE acquired a Netspar grant for the theme "The macroeconomics of pension reform". We aim at further tightening of our relationship with policy institutions, in particular the central banking community. Finally, Beetsma has become a member of a Steering Group for the EU Budget Review 2008, a group of high-level European Commission officials and external members that analyzes the strategic allocation of the EU public finances for the long run.

A point of concern is the distribution of PhD students among research programmes. Last year the number of students who successfully completed the Mphil programme at the Tinbergen Institute (TI) was quite small and therefore the inflow of PhD students was too limited. For this reason RESAM decided to hire external candidates. In 2006 the TI has been very successful in attracting students but there are signs that most of them have a strong interest in doing PhD research in behavioral economics. This might pose a problem for several research programmes such as UvA-econometrics.

Several non-academic problems continue to seriously hamper research and teaching at the Amsterdam School of Economics. ICT services are sub-standard. In quite some cases it took far too long to before a new researcher or guest could start working on a PC. Furthermore, there seems to be a lack of understanding of what ICT services are essential to research and teaching; urgent problems don’t get prioritized (well). Getting the necessary permits for foreign researchers takes a lot of time and effort. Although the reasons for these problems usually need to be sought outside the UvA they pose a threat to research (collaboration) and the image of the School and the University as well.

4.3. ASSESSMENT OF THE EXTERNAL ADVISORY COMMITTEE

Overall the quality and quantity of research seems quite good and seems to hold its own in international ratings. Below are some points of concern.

Compared with last year, the external advisory committee is under the impression that the graduate
program is moving in the right direction. Among the weak points in the system is the fact that there are few incentives for Tinbergen Master students to continue with a UvA-supervisor. This is something that RESAM needs to address. Furthermore, there is little indication that the seminar series are actively used to make students enthusiastic about research.

A second point, one the committee has already stressed in previous years, is that RESAM should be more active in encouraging multidisciplinary work. This can be done without losing sight of furthering research in core economic fields. It is important that this broader interdisciplinary outreach is not neglected. RESAM has a great potential to fulfill a role as central cultural broker between various disciplines.

Finally: although the research institute seems to be quite successful in attracting external funding it seems to be lacking a clear policy in this regard. Since governmental funding (1st flow of funds) has decreased over the last years, and this trend will probably continue in the (near) future it would be advisable if RESAM thought about what policies and instruments could strengthen the institute’s ability to secure external funding.
B

THE RESEARCH PROGRAMMES
CHAPTER 5: UvA-ECONOMETRICS

Programme director: Prof. dr J.F. Kiviet
Department: Quantitative Economics (KE)
METIS-code: uva/fee/res/eem/prog
JEL-classification: C1, C2, C3, C4, C5
Web-address: www.ase.uva.nl/ke/UvA-Econometrics
Starting date programme: 1997

5.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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Total 3rd flow of funds: 0.00 0.00 0.00
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Total 1st-3rd flow of funds: 6.12 6.50 6.26
Ph.D. students: 1.87 1.80 2.20
5.2 PROGRAMME DESIGN

Objectives
Assessment and enhancement of the accuracy, efficiency and robustness of econometric inference obtained from finite sets of empirical data by models which may be dynamic, non-linear, not fully parametric, and nonetheless misspecified. Separate attention is being paid to cases where the data are discrete or truncated, stationary or nonstationary, trended and/or seasonal, and where they pertain to a cross-section, a set of discrete time-series, or a panel.

Motivation
Empirical economic data are usually not obtained from markets or agents in static equilibrium, but they give a random and disturbed indication at a certain moment in time, or over a relatively short period, of a dynamic adjustment process. Also they usually concern just a few aspects of the underlying mostly very complex linear or non-linear economic system, and sample sizes are often rather small. The various projects united in this programme all try to gear statistical techniques to the typical characteristics of particular relevant empirical economic relationships and corresponding observed data in the interest of accurate and efficient inference. The goal is to obtain a proper interpretation of the essentials of the analysed phenomena in order to test economic theory, to support decision making and for forecasting purposes.

Techniques
Both analytic and experimental methods are used in this programme to improve understanding of the available econometric or statistical inference techniques, and to develop and test alternatives. The analytic aspects often involve the derivation (possibly using computer algebra systems) 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 an interplay with actual applied econometric research. These applications come from both macro and micro economics or business and finance. Aggregate demand (the consumption function) but also demand systems, monetary relationships (demand for money, interest rates) but also data from financial markets (stock returns, credit risk) are studied or provide prototypical examples for exercises in econometric theory on modelling and analysing dynamic relationships, focusing on various aspects such as dynamic or functional misspecification, order of integration, cointegration, exogeneity, seasonality, structural change in parameter values, stochastic volatility, approximation errors in inference due to finite sample sizes, etc. The economic behaviour of individual agents is analysed on the basis of crosssection data (wage determination, job mobility and allocation), duration data (on unemployment) and panel, longitudinal or spatial data (budget survey analysis, analysis of treatment effect such as training).

Subprogrammes, themes
The programme is not a collection of separate clearly demarcated sub-programmes, though within the general theme described above, the following four strongly intertwined sub-themes can be distinguished:
• **Accurate inference in finite samples.** Within this theme, analytical finite sample approximations, Bayesian inference, simulation-based inference, inference based on GMM with weak instruments, conditional inference, and methods from differential geometry are studied for (and applied in) models that may be dynamic, simultaneous, non-linear or nonstandard in another way.
- **analysis of non-stationary data.** This leads to the analysis of unit roots, cointegration and error correction models, the role of (weak) exogeneity in such models, the development of robust two-step procedures, the analysis of non-stationary seasonal and periodic models, and non-stationary models for processes in finance and marketing.

- **model selection and model comparison.** Within this theme, both linear and non-linear models are considered, nested or non-nested, often with an emphasis on time series. Relevant topics are information criteria and entropy measures, the Fisher information matrix, model inference, and space-time modeling of socio-economic data.

- **econometrics of financial markets.** Topics are ARCH and stochastic volatility models, the econometrics of the CAPM and factor models, econometric analysis of credit risk, the analysis of option data and implied volatilities, and the analysis of high-frequency data and realized volatility. In addition there are various **miscellanea**, including work on poverty measures, on discrete data, on non-response, and on historical aspects of statistics and econometrics.

The major research themes by individual are as follows:

**Jelke Bethlehem**’s major research is on the quality of data collected by means of surveys, in particular web-surveys, with special emphasis on non-response adjustment techniques and development of new methods to reduce the bias of estimates due to under-coverage and self-selection of respondents.

**Peter Boswijk**’s research is in the econometric analysis of financial time series, in particular investigating the effect of modeling salient features of financial data such as volatility clustering and heavy tails, and more generally on efficient inference procedures for unit roots and cointegration.

**Maurice Bun** runs research projects that entail the analysis of the so-called weak instrument problem for IV and GMM inference methods in dynamic panel data models, development of bias-corrected estimation procedures for dynamic panel data models, empirical analysis of the determinants of international trade, and empirical analysis of the effect of targeted marketing activities on customer profitability.

**Kees Jan van Garderen** studies the effects of curvature and small samples on estimation and inference in econometric models, requiring investigation of conditional inference using differential geometry and higher order approximation techniques such as Edgeworth and Saddlepoint expansions. His further research topics include the improvement of inference for income inequality measures, aggregation and forecasting in nonstationary and nonlinear models, and the effects of weak instruments.

**Noud van Giersbergen** examines methods to improve finite-sample inference in dynamic regression models. These methods can range from computer intensive techniques, such as bootstrap or other resampling methods, to analytical methods, such as bias correction and Bartlett corrections. Regarding empirical research he takes a special interest in analyzing the valuation of IPO (Initial Public Offerings) data.

**Jan de Gooijer** works on non-linear time-series analysis and forecasting techniques. Recently he developed a general test statistic for detecting change-points in multidimensional stochastic processes with unknown parameters, and he studied a class of regression models in which the mean function is specified parametrically, as in the existing regression methods, but the residual distribution is modeled non-parametrically by a kernel estimator without imposing any assumption on its distribution.

**Jan Kiviet**’s current research is focused on three themes, viz. characterizing the salient features of the limiting and finite sample distributions of estimators that exploit possibly invalid and weak instruments; analyzing the joint effects of weighting matrices and instrument weakness in GMM estimators for dynamic panel data models; and establishing an impartial methodology for comparing alternative inference techniques by Monte Carlo simulation.

**Frank Kleibergen**’s research is mainly centered around estimating and testing of simultaneous equations by IV, LIML or GMM techniques, allowing for weak instruments or identification problems, but he also works on linear factor models.

**Andre Klein** works mainly on problems related to establishing expressions for the Fisher Information matrix in time-series models.

**Federico Martellosio** (left in 2006) worked on the analysis of spatial data, and more specifically on tests for spatial autocorrelation in the context of the linear regression model, and on analyzing the
correlation structure of spatial autoregressive models when the observational units are irregularly placed.

Hans van Ophem (presently no allocation of time for research) works mainly on empirical labour market studies.

The appointed PhD candidates work on the following projects:

César Ariza Rojas (supervised by Kees Jan van Garderen) studies the class of models where he variance is a function of the mean and its implications for inference, especially when these models belong to the curved exponential family. Conditional densities are derived using different ancillary statistics and particular approximations of the conditional density.

Yebin Cheng (supervised by Jan de Gooijer) established a Bahadur type representation for the local linear estimator of a generalized additive conditional quantile and derived its asymptotic normality. The rate of convergence of the corresponding remainder term has been obtained, and a test statistic is proposed.

Zhengyuan Gao (supervised by Kees Jan van Garderen) works on developing a modified estimation approach within the class of empirical likelihood methods, which allows to use a specified exponential family to model the data generation process. The asymptotic properties of the estimator and relevant tests will be investigated exploiting the connection with curved exponential families.

Jerzy Niemczyk (supervised by Jan Kiviet) works on a project in which the qualities of inference techniques for establishing exogeneity of variables are being examined, especially when these are exploited in a sequential modeling strategy. Also the consequences for inference obtained by employing invalid exogeneity assumptions are examined.

Yang Zu (supervised by Peter Boswijk) examines the time-varying properties of financial correlations, both the continuous-time diffusion limit of Dynamic Conditional Correlation (DCC) models and the asymptotic properties of the DCC and non-parametric correlations filters. In addition, cointegration tests when the error vector has a time-varying correlation matrix, and the effects of time varying correlations on derivative pricing will be studied.

5.3 PROGRAMME EVALUATION

The current achievements within this program are still very much in line with the latest VSNU assessment covering 1996 through 2000, which awarded an excellent mark for quality, a good mark regarding viability, and satisfactory marks with respect to relevance and productivity, where the modest rating of the latter was mainly due to the relatively small number of Ph.D. students. However, in 2006 the number of Ph.D. students increased from 3 to 5.

During 2006 a considerable number of papers (co)authored by UvA-Econometrics researchers has been published in leading journals (7 x A, 8 x B), and also the number of papers not yet published though already accepted by prominent periodicals or publishing houses is quite substantial (currently about 15, but perhaps relatively few in A rated journals). These achievements have been realized in all four major sub-themes of the UvA-Econometrics research program. They perpetuate its reputation regarding quality and productivity of research output. Recently a worldwide ranking (based on international publications over the years 1993-2003) of academic research groups in econometrics was published via the internet (see: www.econphd.net/rank/reconm.htm). UvA-Econometrics was rated as number 15 worldwide (before Harvard, Oxford, Cambridge), first in the Netherlands, and fourth in Europe (behind LSE, Carlos III Madrid, European University Institute Florence).

The current size of the group of researchers in econometrics offers the minimal critical mass required to maintain a very stimulating research environment. Almost weekly a Friday afternoon (external) seminar or (internal) workshop is organized at (and funded by) the Tinbergen Institute. All members, especially the Ph.D. students (which are presently all from abroad), are strongly encouraged to participate actively in these weekly joint exchanges of ideas and achievements. All activities and achievements of UvA-Econometrics are communicated via its web-site www.fee.uva.nl/ke/UvAEconometrics from which UvA-Econometrics discussion papers can be
downloaded. Where possible and useful collaboration with similar groups is pursued to improve the general research environment.

Most individual members of UvA-Econometrics continue to operate in intensive formal and informal national and international networks. 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 2006 (number and quality of publications, presentations at and invitations for international meetings, editorial responsibilities, hosting of visiting scholars, exposure at peer institutions, etc.) have been very substantial, but certainly leave ample room for further qualitative and quantitative improvements.

Over the last couple of years attempts have been made to obtain EU-funding for projects that aim at human capacity building regarding teaching and research skills in (applied) econometrics at particular Asian universities. However, these attempts have not been successful. Major difficulties were that at least 4 (2 Asian and 2 European) partner universities have to be found with ambitions and capacities that match as closely and widely as required by EU. In the end too few participants were willing to embark on the detailed financial and labour commitments that are entailed. However, these attempts did result in various interesting contacts and a few positive ad-hoc results, viz. in a grant for a visiting scholar (PhD candidate) from Sri Lanka, and similar for MSc students in econometrics. More recently, links have been established with the Division of Economics of the Nanyang Technological University in Singapore, and these may lead to more structural research contacts and hopefully to inflow of MSc students, because NTU is one of the few foreign universities that has a BSc program that corresponds closely to our own BSc.

Although two more PhD students were hired during 2006, UvA-Econometrics is still very pessimistic about its future in this respect. Current policy within FEB-UvA and the Tinbergen Institute will obstruct the future inflow (via 1e geldstroom) of qualified PhD candidates that obtained an MSc in Econometrics from UvA, or from other Dutch or foreign universities. Our recently hired PhD students received a master from Brussels, Manchester, Southampton and Tilburg respectively. There they received a training that suits their needs better than (especially the first year of) the TI M.Phil. does. Nevertheless, in future we have to recruit our PhD’s from the TI M.Phil whereas in general we would prefer students from our own (or similar) MSc programmes. Clearly the present generation of TI M.Phil students have not been selected such that they may develop ambitions into the direction of writing a thesis in econometrics. TI does not offer a breeding place for such students, in a similar way as the MSc program in econometrics already does for over half a century. Therefore, we urge for facilities that enable to select our share of Ph.D. positions not just from within TI, but also in an open competition from our UvA master program and from similar programs in the Netherlands and abroad. That seems the only viable and market efficient way to continue at UvA a Dutch (and internationally widely recognized) tradition of a steady production of high-quality Ph.D.’s in econometrics.

In short, the strengths of the program are: coherence, quality and size of the group of researchers, the pleasant and stimulating work environment; its weaknesses are: very little attention is being paid to micro-econometrics, output of dissertations is relatively low, too many group members are subject to heavy claims to conduct management tasks or accomplish disproportionate teaching loads; its opportunities are: to shift the efforts a bit more from B towards A publications, to offer hospitality more often to inspiring scholars to spend their sabbatical in our midst, to make more efforts in applying for extra research funding (NWO, EU, etc.); and the major threats are: institutionalized barriers to hire qualified Ph.D. students.

5.4 RESOURCES AND FUNDING

Until a few years back the budget for compensating travel, subsistence and conference fees of the research group was very tight. Strict rationing of the budget over the active researchers induced most of them to find alternative funding (for instance from budgets created in the past on the basis of
successful PhD defenses, from compensations paid by the business school for special courses taught, or originating from other commissioners of special projects, etc.). As a result last years budget obtained via RESAM (about € 12,000,-) was not exhausted. However, early 2007 substantial amounts will be spent to invest in our contacts with NTU in Singapore. Since it is expected that most of the alternative funds will dry out soon, UvA-Econometrics hopes that the level of the present annual budget can be maintained. Over the last few years researchers have been confronted with sharply increasing price levels at conferences and for travel and accommodation. The NWO subsidy to Frank Kleibergen’s VIDI project has ended and the programme will need to look at opportunities to secure new external funding.

5.5 OUTPUT

Key publications

- **Kleibergen, F. (2005).** Testing Parameters in GMM without assuming that they are identified. *Econometrica, 73*, 1103-1124.

Forthcoming


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### Dissertations


### Academic publications (excluding publications in/of books) – refereed


**Academic publications (excluding publications in/of books) – non-refereed**


**Academic publications (in/of books) – non-refereed**


**Academic publications (working- and discussion papers)**


33

Contributions to academic conferences, workshops and seminars


Garderen, K.J. van (2006, 22 May) Improving Inference for Inequality Measures, UvA.


**Organisational contributions to conferences, workshops and seminars**


Garderen, K.J. van (2006). Co-ordinating Committee Member of the Netherlands Econometric Study Group.


**UvA-Econometrics Seminars and Workshops**


(2006, 31 March). César Ariza Rojas (University of Amsterdam) Saddlepoint approximation of the density of the MLE of the mean for the normal distribution with fixed coefficient of variation.


(2006, 12 May). Jurek Niemczyk (University of Amsterdam) On the limiting and empirical distribution of IV estimators when some of the instruments are invalid.


(2006, 6 October). Peter Kennedy (Simon Fraser, Vancouver) When are supply and demand determined recursively rather than simultaneously? Another look at the Fulton fish market.

(2006, 10 November). Joakim Westerlund (Lund University, Sweden) Simple Tests for Cointegration in Dependent Panels with Structural Breaks.


Editor or member of editorial board

Referee activities

Participation in academic networks & fellowships

**Membership of academic committees (including Ph.D. committees outside the ASE)**
Gooijer, J.G. de. (2006, 6 December). Member of the Ph.D. committee for M.B. Vermaat. Promotor: Prof.dr. R.J.M.M. Does. [Faculty of Natural Sciences, Mathematics, and Informatics, Universiteit van Amsterdam].

**Research contributions in the media**

**Grants, prizes and honours**

**Various activities**
Gooijer, J.G. de (2006). External expert for a proposal to confer the title of Professor to a person at the University of London, UK.


Kiviet, J.F. (2006, 26 July - 4 August). Work visit to CIREQ at Université de Montréal (Québec, Canada).
CHAPTER 6: OPERATIONS RESEARCH & MANAGEMENT

Programme director: Prof. dr N.M. van Dijk
Department: Quantitative Economics (KE)
METIS-code: uva/fee/res/or/ prog
JEL-classification: C4
Starting date programme: 1989
Website: www.ase.uva.nl/orm

6.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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Total 3rd flow of funds 0.15 0.15 0.15
Total 1st f.o.f. excl. Ph.D.'s 2.45 2.04 2.10
Total 1st-3rd flow of funds 3.53 3.12 3.25
Ph.D. students 1.08 1.08 1.15

6.2 PROGRAMME DESIGN

The general research mission of the Programme can be formulated as threefold
(i) The development and continuation of fundamental theoretical research in the areas of deterministic and stochastic operations research.
(ii) The application and development of scientific research in these fields for technological and infrastructure applications.
(iii) The dissemination of general insights and scientific results from the field of Operations Research for daily-life non-technical logistical situations.
Accordingly, three lines of research and associated activities are distinguished:

1 Fundamental Theoretical Research
In this category in turn three directions of research are followed:
1.1 Combinatorial Optimisation specialised to:
- Generalisations of the Travelling Salesman Problems such as Peripatetic Salesman Problem;
- Steiner Tree Problems on Graphs and Generalisations as multiweighted problems;
• Degree constrained trees and problems with criteria as bottleneck, minimum deviation, and partial sum;
• Linear Assignment Problems

This research is focused on both exact and heuristic methods. The heuristic methods are of most interest from a practical point of view, as in many cases a nearly optimal solution is also sufficient. Special interest has been developed for the numerical implementation of algorithms.

1.2 Queuing Network Analysis
Stochastic service networks naturally arise in manufacturing (production lines), computer science (computer networks), telecommunications (long distance, satellite and mobile communications) and transportation (railway systems, traffic lights). The research themes are:
• the development of closed form (exact) expressions for stochastic service networks, most notably product form expressions for queuing networks;
• the development of simple insights in when and when not a stochastic network has this so-called product form steady state distribution.
• simple performance bounds for networks that are non-solvable due to practical phenomena such as finite capacity constraints, job-priorities or breakdowns.

1.3 Markov Chain Analysis
1.3.1 Error Bound Analysis for Approximate Markov Chain Modelling
• As practical systems that arise in manufacturing, telecommunications and computer networking are often non-solvable for the reasons mentioned, based on the insights and results above, approximations and bounds have to be developed. The error introduced by such approximations or bounds is of practical interest. To this end a technique has been developed to provide analytical error bounds. The application and extension of this technique remains a continuing research interest for a variety of situations. Particular research problems are:
• error bounds for non-exponential stochastic networks;
• error bounds for the truncation of Markov chains;
• error bounds for sensitivity analysis.
1.3.2 Continuous time and large Markov Chain Modelling
• Continuous time Markov Chain Models are known to provide a powerful tool for the description and modelling for a variety of applied fields. Unfortunately, for computational purposes these systems are generally hard if not impossible to handle, as the state spaces are usually far too large. Different methods to overcome this intractability are of ongoing research, such as by aggregation methods and uniformization.

II Fundamental Applied Research
This concerns queuing network and Markov chain modelling for a number of applied technical fields in order to obtain computationally attractive results. Most notably:
• Telecommunications (mobile communications, long-distance communications)
• Transportation Networks (Public transportation, Railways)
• Inventory systems and Reliability Networks

III Practical Research for Daily-life Logistics (Operations Management)
This concerns the application of insights and techniques from Operations Research for a number of practical logistical environments such as in:
• Administrative and Production Logistics
• Health care and hospitals
• Call Centers
6.3 PROGRAMME EVALUATION

In response to the last research visitation, the program set itself the objectives of:

- A strong interaction among the group
- A strong research orientation of all members
- A more balanced and structured production over all the members.

The steps in these directions have been reflected in 2006, as by:

- An overall research mind setting and participation among the group
- Different research interactions among various members
  (see
  - Duin and Van der Sluis
  - Haijema, Duin and Van Dijk
  - Haijema, Van der Wal and Van Dijk
  - Van Dijk and Van der Sluis
  - Volgenant and Duin
- Productivity by each of the individual members
  (see
  - Duin
  - Van der Sluis
  - Van der Wal
  - Volgenant
  - Van Dijk

In addition there are two Ph.D. students (one with partial external funding). Unfortunately four “own” students from the OR-group could not be funded due to the total vacancy stop of the FEE and obtained Ph.D. positions elsewhere.

All three categories of research of the programme design have been addressed as shown by:

**Fundamental theoretical research**
Duin
Duin and Van der Sluis
Van Dijk (4x)
Volgenant (4x)
Van der Wal (2x)

**Fundamental Applied Research**
Van der Sluis
Van der Wal
Van Dijk and Van der Sluis (2x)

**Practical Research**
Van Dijk and Van der Sluis
Haijema, Van der Wal and Van Dijk (2x)
Haijema, Duin and Van Dijk
Van der Wal (2x)
Volgenant

**Future objectives**
- The three objectives mentioned above.
- More research profiling (e.g. by conferences and presentations).
External funding for applied research.

6.4 RESOURCES AND FUNDING

The research budget (as for travelling) has been rather, and in fact too, limited. By small practical (research) projects limited external funding (3de geldstroom) has therefore been acquired and used. One Ph.D. student is partially funded (3de geldstroom) by the Dutch Railways (NS). Furthermore a 50% external funding is acquired for one new Ph.D. student.

6.5 OUTPUT

Key Publications


Forthcoming


**Publications in numbers**

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**Academic publications (excluding publications in/of books) – refereed**


Academic publications in proceedings – refereed

Academic publications (in/of books) – refereed

Academic publications (in proceedings) – non-refereed

Academic publications (working- and discussion papers)

Popular publication

Contributions to academic conferences, workshops and seminars


Sluis, E. van der (2006, 6 November). Some experiments with the Economic Lot Scheduling Problem. KAFEE Lunch seminar.


**Participation in academic networks & fellowships**


**Editor or member of editorial board**


**Referee activities**


CHAPTER 7: EQUILIBRIUM, EXPECTATIONS & DYNAMICS

Subprogrammes: NWO-Vernieuwingsimpuls Information Flows in Financial Markets
EU STREP Project Financial Markets and Complexity
NWO-VIDI Structural Stability in Economic Dynamics

Programme director: Prof.dr. C.H. Hommes
Department: Quantitative Economics
METIS-code: uva/fee/res/e&d/prog
JEL-classification: C, D, E6
Web-address: www.ase.uva.nl/cendef
Starting date programme: 1998

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Total 3rd flow of funds | 0.00 | 0.00 | 0.00 |
Total 1st f.o.f. excl. Ph.D.'s | 2.50 | 2.50 | 1.50 |
Total 1st-3rd flow of funds | 6.50 | 5.70 | 5.43 |
Ph.D. students | 2.60 | 1.80 | 1.90 |
7.2 PROGRAMME DESIGN

The objective of the program is the development of (mathematical) economic theory, which is focussed on the understanding of economic processes. The program aims at developing models of economic behaviour, in microeconomics, macroeconomics and finance. Emphasis is given to behavioural models of dynamic market phenomena. The research group has 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 as well as real data. The NWO-Vernieuwingsimpuls Information Flows in Financial Markets, the EU STREP project Financial Markets and Complexity and the NWO-VIDI program Structural Stability in Economic Dynamics are part of the research program. The program can be subdivided into five, closely related and interacting 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. Existence of equilibria as well as conditions for stability or instability of dynamic adjustment processes are studied.

**Game theory:** This part of the program 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 and in real markets.

**Nonlinear economic dynamics:** This part of the program 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 mimic 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 optimization:** This is an important topic in economic dynamics. Emphasis is given to dynamic optimization problems in environmental economics, characterized by a conflict between economic benefits and ecological costs. Tools from nonlinear dynamics and bifurcation theory are employed to investigate non-convex dynamic optimization 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, and numerical methods yield insights, not just at isolated parameter values, but for the complete parameter set.
7.3 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 a 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 particular non-linear time series analysis, to test behavioural models empirically. Weddepohl retired in 2002 and Furth and Koster joined the group in 2002, and game theory has become one of the research themes of the program. At the end of 2003, the CeNDEF postdocs Diks, Tuinstra and Wagener obtained tenured positions, so that the continuation of the research program has been ensured.

The year 2006 has been an excellent year. The output has been very good both in quantity and in quality (16 journal articles, including 3 A publications, and 4 refereed publications in books, including a chapter in the Handbook of Computational Economics). With another 11 forthcoming publications the output is expected to remain good in 2007. The research program has gained international recognition, as e.g. shown by excellent citation statistics (e.g. according to the Science Citation Index (SCI) in 2006 about 100 citations of published work by group members and more than 600 cumulative citations 1988-2005) and many (invited) lectures at international seminars, conferences and workshops by various members of the research group. Hommes was ranked at the 22th position in the ESB Economen Top 40 (based on publications in 1999-2003) and at the 30th position of the ESB Economen Citatie Top 30 (based on citations 1999-2003).

In 2005 two new projects have started. In July 2005 Wagener obtained a NWO-MaG VIDI grant for the research proposal “Structural Stability in Economic Dynamics”. This project employs tools from nonlinear dynamics and bifurcation theory to investigate non-convex dynamic optimization problems characterized by a conflict between economic benefits and environmental externalities. In September 2006 two Ph-D students (Kiseleva and Mohammadian Moghayer) started working on this project and a postdoc (Heijnen) started in December 2006.

Hommes obtained an EU grant for a research proposal Financial Markets and Complexity, jointly with the universities of Warwick, Kiel, Marseille, Trieste and Caglieri, a STREP project within the EU 6th framework programme. This project focuses on the analysis of emergent properties of interacting agent systems. Mikhail Anufriev started as a postdoc in this EU-project in October 2005. The second year TI student Marius Ochea joined the group in September 2005 on a Ph-D project at the border of nonlinear dynamics and evolutionary game theory. Valentyn Panchenko finished his Ph-D thesis Nonparametric Methods in Economics and Finance: dependence, causality and prediction in October 2006 (well within 4 years). It is expected that three Ph-D students (Dindo (February 2007), Heemeijer, and van der Weide) will finish their thesis in 2007. It is therefore important that new Ph-D students will join the group next year. Hommes obtained a NWO Vervangingssubsidie in September 2006 for the project Nonlinear Dynamics, Bounded Rationality and Interacting Agents. For this project, Heemeijer has been hired as assistant professor, starting in September 2006.

7.4 RESOURCES AND FUNDING

The programme received a very modest amount of funding from the research institute RESAM. As usual, this money was mostly spent to cover (part of) the costs related to the participation in conferences and workshops by research group members. Additional means were obtained from external funding and the Tinbergen Institute (for the PhD-students). Substantial additional funding comes from the Dutch science foundation NWO (a NWO Vernieuwingsimpuls (Diks), a VIDI grant (Wagener) and a Vervangingssubsidie (Hommes)), and the European Union (an EU STREP grant (Hommes)).
7.5 OUTPUT

**Key publications**


**Forthcoming**


Publications in numbers

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<th>Equilibrium, Expectations &amp; Dynamics</th>
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<td>a) in refereed journals</td>
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<td></td>
<td>B 10</td>
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<td>C 2</td>
</tr>
<tr>
<td>b) in other journals</td>
<td></td>
</tr>
<tr>
<td>c) book chapters</td>
<td>A 1</td>
</tr>
<tr>
<td></td>
<td>B 3</td>
</tr>
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<td>d) proceedings</td>
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<td>3) Ph.D. theses</td>
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Dissertations


Academic publications (excluding publications in/of books) – refereed

A


B


**Academic publications (in/of books) – refereed**


**Academic publications (in/of proceedings) – non-refereed**


**Academic publications (working- and discussion papers)**


**Professional publications**


**Popular publications**


**Contributions to academic conferences, workshops and seminars**


Anufriev, M. (2006, 13 June). Heterogeneous Beliefs under Different Market Architectures, invited seminar, Sant'Anna School of Advanced Studies, Pisa, Italy.


Diks, C. (2006, 24 March). Nonparametric tests for serial independence based on quadratic forms, 14th annual symposium of the SNDE, St. Louis, USA.


Tuinstra, J. (2006, 22 June). Game theory in law and economics, GloRiClass Seminar, Institute for Logic, Language and Computation, Universiteit van Amsterdam, Amsterdam, The Netherlands

Other lectures on research

Organisational contributions to conferences, workshops and seminars
Participation in academic networks & fellowships
Furth, D. (-2006). Fellow NAKE.
Tuinstra, J. (2006-) Fellow of the Amsterdam Center for Law & Economics.

Editor or member of editorial board

Referee activities

**Grants, prizes and honours**


Koster, M. (2006, August). Travel grant from H. Moulin, Rice University, Houston TX, USA.

CHAPTER 8: ACTUARIAL SCIENCE

Programme director: Prof.dr R. Kaas
Department: Quantitative Economics
METIS code: uva/fee/res/act/prog
JEL-classification: C, G2
Starting date programme: 1989

8.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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| Total 1st flow of funds | 1.89 | 2.16 | 1.55 |
| Total 2nd flow of funds | 0.97 | 0.19 | 0.39 |
| Total 3rd flow of funds | 0.46 | 0.46 | 0.64 |
| Total 1st f.o.f. excl. Ph.D.'s | 0.88 | 0.95 | 0.95 |
| Total 1st-3rd flow of funds | 3.32 | 2.81 | 2.58 |
| Ph.D. students          | 1.01 | 1.21 | 0.72 |

8.2 PROGRAMME DESIGN

The programme concerns both fundamental and applied research in the field of financial institutions, mainly directed at insurance, social insurance included, but also at banks and other financial institutions. The research mainly concerns the mathematical modelling, estimation, appraisal and control of financial risks of financial institutions (for insurers in the field of life, non-life and pension insurance) under complete and incomplete information. For long term insurance contracts, especially pensions, saving by insurance is significant, which leads to accompanying investment problems. This for instance concerns the "tuning" of the insurance and investment portfolios. Another practical aspect is the influence of the "risk of longevity" on the policies of life insurance, social insurance and care
insurance. This remains a permanent subject of investigation. Present-day problems of insurance companies concern decreasing profit margins, increasing competition and selective behaviour of the insured and of insurance companies. Up to now limited attention has been given to problems that emerge from the privatisation of social insurance. The research partly deals with problems related to the supervision of insurance companies.

An important subject of investigation is the further development of actuarial risk theory, in particular the development of new mathematical and economic models in the fields of mathematical reserves, equalisation reserves and solvency margins 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 the consequences for the determination of insurance premiums. In the premium calculation, the determination of factors that affect the risk (risk classification) is a significant aspect. 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. Another theoretical research subject concerns the unification of several distinct actuarial theories in the field of non-life, life and pension insurance, partly in connection with stochastic financial mathematics. A new research project deals with the valuation of interest rate guarantees in insurance and financial products. Another topic of interest will be the Generalized Linear Models and Generalized Linear Mixed Models. GLMs can be used for a variety of actuarial statistical problems like survival modeling, graduation, multiple-state models, loss distributions, risk classification, premium rating and claims reserving in non-life-insurance. Credibility models can in fact be viewed as GLMMs, having both random (subject-specific) and fixed effects in the linear predictor.

8.3 PROGRAMME EVALUATION

The main focus of the research of the Actuarial Science group in the last few years has been on the subject of ordering of risks and dependence of risks, as can be seen from the lists of publications. In the future, research in this field will continue, but there will be also be growing attention for the field of financial modelling. In cooperation with the professors of financial economics and financial econometrics of our faculty a Ph.D. research project called “Valuation of Interest Guarantees in Insurance Projects” has started in 2002, about the integration of actuarial and financial modelling. A second Ph.D. project has started in May 2002, called “Risk Measures and Dependencies between Risks”, hence also a project that combines insurance and financial market elements. Also in May 2002 we started a project, financed by NWO, called “The Theory of Dependencies of risks applied to asset-liability models”. These research projects have resulted in three PhD's, two in 2005 (Laeven, Vanduffel), one in 2007 (Schrager).

Our Belgian colleagues at the KU Leuven are running a large GOA Project called `Actuarial, financial and statistical aspects of dependencies in insurance and financial portfolios". In this framework a cooperation has been established between the GOA group and the Actuarial Section of the Universiteit van Amsterdam (Prof. Dr. R. Kaas, Prof. Dr. H. Wolthuis, Dr. R. Laeven, Dr. S. Vanduffel, Prof. Dr. J. Dhaene). Within Belgium, a close co-operation already exists between the GOA-group and the University of Antwerp (A. De Schepper, M. Van Wouwe) and the University of Ghent (M. Vanmaele) as well as with the UCL (M. Denuit), all resulting in joint papers within the topic of the GOA. Partly as a reaction to comments of the VSNU assessment of research quality in 2002, we have adapted our submission behaviour and included submissions to journals in related fields without of course neglecting our classical publications outlets (the typical actuarial journals). We think that with this international co-operation we succeed in playing a more pronounced role in the international world, where we succeeded in becoming one of the few university groups involved in the project concerning R(isk) B(ased) C(apital) evaluations, which will to some extent form the basis of the new IAS 52 reporting. We refer to the "Report of Solvency working party" (www.iasb.org.uk and www.actuaries.org). As a consequence we are also involved in the IAA Risk-Based Capital Solvency Structure working party, which is preparing a final report. The basic concepts
in the actuarial reserving and risk taking strategies rely heavily on the notion of economic capital. Using the concepts of risk order and comonotonicity we succeeded in providing the instruments for describing the role of economic capital and capital allocation taking into account diversification effects. These theoretical results in the meantime have had some influence on the RBC-approach from the IAA and the S&P rating agency. Some of our theoretical results may serve as a basis (and are in fact a breakthrough) for the capital adequacy of financial conglomerates.


The actuarial group supports the actuarial profession's rethinking of their role in the world. Research work has been initiated into the history of and the philosophy behind the actuarial profession.

As a consequence of our activities, the University of Amsterdam plays an important role in the organisation of actuarial and financial meetings world-wide. Our researchers are members of organising committees and of scientific committees of various forthcoming important actuarial-financial colloquia and conferences. Several international series of conferences are organised with the co-operation of the members of our team: the annual IME conferences (this year Leuven), the biannual ICCAM conferences at the KU Leuven, the conferences at the University of the Aegean (Samos), as well as the Brazilian Conferences on Statistical Modelling in Insurance and Finance (Ubatuba).

Some new projects will be submitted to NWO or related institutions in co-operation with the Actuarial and the Accountancy-Finance-Insurance groups of the Department of Applied Economic Science of the K.U. Leuven and the group Financial Economics of the University of Amsterdam.

In the future, the actuarial group at the UvA will actively participate in the Netspar project. The newly appointed professor Antoon Pelsser will play an important role in this. Several PhD students and a postdoc (Ms. An Chen) will assist him. On November, 2, 2006, in Felix Meritis, Amsterdam, there has been a seminar entitled Marketconform Waarderen van Verzekeringscontracten (Market Valuation of Insurance Contracts). Speakers at this conference were Boender and Steehouwer (Ortec), Bühlmann and Wüthrich (ETH Zürich), Driessen (UvA & Netspar), Hele (deputy CFO, ING Group), Kleinow (Heriot-Watt University Edinburgh), Kortleve (PGGM) and Pelsser (ING Groep & UvA).

The annual research output of the actuarial research group has been on the rise since 2001. This trend has continued until 2005, even though the actuarial research group at the University of Amsterdam is very small and in fact shrinking. In 2006, the size of the group did not shrink further. On the other hand, the number of publications was slightly less than the year before.

8.4 RESOURCES AND FUNDING

Besides the modest standard funding for conference visits etc. provided by the Research Institute RESAM in 2006 (€ 6.252,-) and an unexpected premium for successfully defended dissertations (€ 6.000,-) from extra funding to RESAM by the Ministry of Education individual researchers have secured several grants and fellowships. Below are several Research fellowships awarded to members of the group.

8.5 OUTPUT

Key publications

Forthcoming


Publications in numbers

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<td>c) book chapters A</td>
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Academic publications (excluding publications in/of books) – refereed


**Academic publications (in/of books) – refereed**


**Academic publications (in proceedings) – non-refereed**


**Academic publications (excluding publications in/of books) – non-refereed**


**Academic publications (in/of books) – non-refereed**


**Academic publications (working- and discussion papers)**


**Professional publications**


**Popular publications**


**Contributions to academic conferences, workshops and seminars**


Dhaene, J. (2006, December). Risk measures, Faculté des HEC, Université de Lausanne, Switzerland.


**Organisational contributions to conferences, workshops and seminars**


Participation in academic networks & fellowships

Editor or member of editorial board

Referee activities

Membership of academic committees (including Ph.D. committees outside the FEB)

Grants, prizes and honours
flows, with applications to pricing, provisioning and solvency, promoter: Marc Goovaerts, co-promoter: Jan Dhaene, € 60 000 per year.


Various activities


### 9.1 RESEARCHERS AND RESEARCH TIME IN FTE

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CHAPTER 10: THE TRANSFORMATION OF EUROPE: MONETARY, FISCAL & INSTITUTIONAL ASPECTS

Subprogrammes:  
A: International Economics  
B: Macroeconomics  
C: Monetary Economics  
D: Transition Economics

Programme director:  Prof.dr. R.M.W.J. Beetsma  
Department:  Algemene economie (economics)  
METIS-code:  uva/fee/res/toe/prog  
JEL-classification:  E, F, H, P  
Web-address:  www.fee.uva.nl/toe  
Starting date programme:  2001  

10.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTEs

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Subprogramme B: Macroeconomics (Beetsma)

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The Transformation of Europe - Beetsma
Economics

10.2 PROGRAMME DESIGN

The program intends to use theoretical and empirical methods to analyse important current and future economic issues in the areas of international economics, macroeconomics, monetary economics and transition economics. Part of the program emphasizes European issues in these areas. Dissemination of the results takes place mainly via international, refereed scientific journals, but also via more policy-oriented outlets. The research program can be positioned as “society-driven”.

Subprogram A: International Economics

This program explores the behaviour of nominal and real exchange rates. The approach is both analytical and empirical, while making use of advanced econometric time series analysis. More specifically, we analyse speculative attacks, currency crises, and, related to this, exchange rate policy. This is relevant for some countries in the European Union and for all the countries in Central and Eastern Europe that are not yet part of EMU. Further, we investigate the influence of real exchange rate volatility on international trade, which is often mentioned as a key reason for European monetary integration, but which empirically is largely an unresolved issue. Finally, we explore the effects of monetary unification on international trade within the union.

Subprogram B: Macroeconomics

Major topics in this subprogram are fiscal policy, dynamic stochastic general equilibrium modelling and population ageing. These lines of research are often intertwined. As far as fiscal policy is concerned, we investigate how the presence of fiscal constraints affects the incentives for structural reform and, via this channel, the functioning of the European Monetary Union (EMU). We also analyse fiscal policy in the context of models of the New Open Economy Macroeconomics literature, which focuses on sticky prices and imperfect competition. Our empirical work in this area explores the international spill-over effects of fiscal policy shocks in the Euro-area and U.S. fiscal policy over the past century. The stochastic dynamic equilibrium modeling focuses on heterogeneous agents and uninsurable idiosyncratic risks. Population ageing is studied from various perspectives. For example,
in the context of our participation in the Netspar project on population ageing, we investigate the role of pension systems in general equilibrium models of intergenerational risk-sharing.

**Subprogram C: Monetary Economics**

Research within this subprogram focuses on two broad topics. The first is uncertainty, information, communication and monetary policy. Specific issues include the credibility of central bank announcements, the effects of central bank communication on output stabilisation, central bank transparency, inflation targeting under uncertainty and the role of the media in shaping consumer confidence. The other broad topic concerns nominal and financial rigidities and the transmission process of monetary policy. Specifically, price setting behaviour of Dutch firms is studied and the sticky information Phillips curve is estimated for the Netherlands. Further, we study the Dutch and European housing market dynamics, as well as the role of monetary policy for such dynamics.

**Subprogram D: Transition Economics**

Central to this theme is the transition of the countries of the former communist block. This allows us to draw some general conclusions for the theory of economic systems, which is of great practical importance for the future of the European Union, as it has admitted a number of these countries recently and it is about to admit more countries. The project pays particular attention to the institutional aspects of the transition, the role of agriculture, the role of the informal sector (which is much more important than was initially expected) and the role of ethnic issues. The analysis is both theoretical and empirical.

**10.3 PROGRAMME EVALUATION**

The main objectives of the program are to enhance our understanding of current policy issues in the subject areas of this program (positive analysis) and, where possible, to come up with welfare-enhancing policy recommendations (normative analysis). The main activity has been research aimed at publications in international, refereed scientific journals. The program has been strengthened by the venue of the NWO-VICI project led by Wouter den Haan. The program has also won a Netspar theme grant (to be shared with a team at Tilburg University and the CPB in The Hague). It is fair to say that this program is either first or second in its areas in the Netherlands. Output has increased somewhat and we expect it to increase further in the near future, both because of the newly acquired projects and because of the fact that our existing researchers are becoming more senior. Our aim is to publish occasionally also in the top journals, a prospect that has become realistic with the new VICI project. Over the coming years we will try to further increase the critical mass of the program and enhance its reputation. One instrument to this end is an intensified collaboration with researchers from leading foreign institutions.

The main results in terms of economic substance over the past year are described in the sequel.

**Subprogramme A**

*Franc Klaassen* studied the effect of European monetary unification on intra-euro zone trade flows. A major economic reason for the introduction of the euro was its supposedly positive effect on trade. There exist a few papers that estimate this effect, and one reports trade benefits of between 5% and 40%. Franc intended to improve these estimates by paying special attention to the characteristics of trade data, particularly the fact that trade levels increase over time and he shows that taking account of this reduces the estimated trade benefit to a statistically insignificant 3%. In another project with *Henk Jager*, Franc measures pressure in the foreign exchange market, that is, the pressure on a currency to depreciate. In case of a floating exchange rate, pressure equals the observed depreciation of the domestic currency. In a managed exchange rate regime, however, the monetary authorities can use interest rates and official foreign exchange interventions to offset pressure, so that the observed depreciation alone no longer reveals the pressure; exchange market pressure is unobserved. The authors develop a new measure to nevertheless measure the pressure, which improves on existing measures because their approach is model-free and gives much more plausible indications of pressure.
Dirk Veestraeten continued his research on exchange rate dynamics in target zones. One of the main predictions of the target zone literature is the presence of the so-called target zone nonlinearities, i.e. of a nonlinear relationship between fundamentals and exchange rates. However, the presence of these target zone nonlinearities has generally been refuted in empirical research. Dirk argues that this may be due to the estimation being performed vis-à-vis official limits when in fact monetary authorities are targeting a narrower band. Estimation results for the Belgian and French franc between 1993 and 1997 confirm that nonlinearities are present when narrower zones are accounted for.

Tijmen Daniëls’ Ph.D project revolves around the use of game theory to understand the sudden stops, and loss of confidence, associated with financial crises. The focus is on understanding the effects of institutional features on the incentives of the different economic actors involved. The objective of the project is to provide the answers to questions such as: what is the impact of uncertainty, belief formation and disclosure of information on the stability of an exchange rate regime, or the financial system in general? How is this affected by the domestic institutions that have played a role in recent major crises?

Naomi Leefmans’ research concentrated on her Ph.D project “Openness and productivity growth: the case of Tanzania”. In particular, she aims to acquire further insight into the relation between trade liberalization and economic growth through a firm-level analysis of efficiency changes and investment behavior for the case of Tanzania.

Subprogramme B

Wouter den Haan worked on three research projects. The first project uses dynamic stochastic general equilibrium models that incorporate matching models to study business cycles and labor market questions. In one sub-project, it is shown that by incorporating a matching friction, the model can generate aggregate expansions when expectations about future productivity improve. This is a challenge since in most models a wealth effect implies that in anticipation of future growth agents should dissave and work less, that is, the model would generate an economic downturn. Philip Jung also works in this area. He has used Bayesian estimation techniques to estimate this type of models and investigates which model specifications are best suited to explain a wide range of German and US labor market developments. Wouter’s second project investigates the role of debt and equity finance for business cycle fluctuations. This study consists of an empirical component and a theoretical component. The empirical part uses a panel of U.S. listed firms and documents that debt and equity are highly cyclical for most firms and that the cyclicality of equity issuance is decreasing with firm size. A model with heterogeneous firms is built to explain the empirical findings. The third research project develops algorithms to solve models with heterogeneous agents in the presence of aggregate uncertainty. These models are difficult to solve since the cross-sectional distribution, i.e., an infinite-dimensional object, is a state variable.

Roel Beetsma (joint with Rick van der Ploeg, EUI, Florence) developed a political economy theory of overinvestment in public projects. The government has an incentive to invest excessively in its own ideological project in order to bind the hands of a potentially different successor. This also causes a deficit bias. A prominent role is given to the possibility to (partially) scrap old projects, which further boosts investment and deficits. Special attention is further given to complementarity of the current project with subsequent investment projects. Deficit restrictions are welfare improving, but appropriate public investment restrictions even more so. Roel (joint with Lans Bovenberg, Tilburg University) worked on intergenerational risk sharing under different pension systems. In particular, he found that with appropriate investment portfolios defined-benefit fully funded pension funds can provide for optimal risk sharing. The optimal investment portfolios ensure that, including their (residual) claims on the pension funds, all individuals, young and old, hold appropriate proportions of equity, nominal and real debt, such that all fundamental shocks (productivity, depreciation and inflation shocks) are optimally shared among all individuals.

Marcos Ribeiro investigates the past effectiveness of the Maastricht Treaty and the Stability and Growth Pact in disciplining fiscal policy in the Euro zone. He estimates fiscal reaction functions for a panel of Euro zone members and finds that both the Treaty during the run-up to EMU and the Pact have been effective in tackling excessive deficits in the Euro zone. However, neither of them has altered the cyclical behaviour of the fiscal authorities in the region. In another project with Roel Beetsma and Andreas Schabert, Marcos contrasts deficit sanctions with debt sanctions. Both types of
sanctions discipline impatient partisan governments and reduce public spending. However, they induce different responses to the business cycle. Using perturbation methods, the authors are able to evaluate the welfare consequences of the two types of sanctions.

**Subprogramme C**

Massimo Giuliodori (joint with Franc Klaassen and Roel Beetsma) explores the effects of fiscal policy on foreign countries within the European Union. They show that an increase in German government spending or a decrease in net taxes of 1% of GDP stimulates foreign income by, on average, 0.1%. These effects are larger for neighboring countries such as the Netherlands, but lower when the fiscal stimulus occurs in smaller economies. The substantial magnitudes of the spillover effects are useful input for the discussion on whether to coordinate fiscal policy in Europe. Moreover, the existence of the spillovers makes it easier for countries to fulfill Europe’s Stability and Growth Pact. In another project (with Ester Faia, University of Pompeu Fabra in Barcelona, and Michele Ruta, European University Institute Florence), Massimo develops a political economy model of exchange rate policy based on a common agency approach with rational expectations. In the model financial and exporter lobbies exert political pressures to influence the government’s choice of exchange rate policy. The model shows that political pressures affect exchange rate policy and create an over-commitment to exchange rate stability. This helps to rationalize the empirical evidence on fear of large currency swings that characterizes exchange rate policy of many emerging market economies. Moreover, the model suggests that the effects of political pressures on the exchange rate are smaller if the quality of institutions is higher. The authors find empirical evidence for a large sample of emerging market economies consistent with these theoretical implications. In a third project (joint with Roel Beetsma), Massimo investigates the interdependence of fiscal policies, and in particular deficits, in the European Union using an empirical analysis based on real-time fiscal data. There are many potential reasons why fiscal policies could be interdependent, such as direct externalities due to cross-border public investments, yardstick competition, tax competition and peer pressure among governments. The advantage of using real-time data is that they better reflect the policymakers’ intentions than revised data. Controlling for a large set of relevant determinants of primary cyclically adjusted deficits, the authors find indeed evidence of fiscal policy interdependence. However, the interdependence is rather asymmetrically distributed: the fiscal stances of the large countries affect the fiscal stances of the small countries, but not vice versa.

The literature on central bank (CB) independence developed in the 1990s was very concrete in terms of the policy recommendations it put forward. As a consequence, these recommendations found their way into the policy sphere in a timely and effective manner. The more recent literature on the issues of communication and transparency of monetary policy has, however, not been equally unambiguous. Views on the merits of transparency vary widely and different reasons are often provided to justify similar views. Few disagree, however, that it is through expectations that transparency affects macroeconomic variables and that private sector expectations themselves are crucial in assisting or hindering a central bank’s ability to achieve its objectives. Maria Demertzis argues that the soundness of monetary policy decisions is not solely determined by their own worth. By implication, policy mistakes alone are not always enough to produce long term negative effects on monetary stability and by the same token, correct decisions are not sufficient to guarantee successful results. In both cases, what people believe about these decisions and subsequent policies is just as important. This point stems from Phelps’ contribution to the relevance of expectations in price stability. That said, central banks acquire a dual role: the first is naturally to assess the conditions at hand and make as sound decisions as their information and skills allow; equally important is the second task, which is to inform and convince the public about the value of their intentions. This, according to former ECB Board Member Otmar Issing, and others, can be done by rule-based behavior and transparent operations. In order to examine how such behavior affects expectations, Maria and others describes monetary policy as an information game and confirm Issing’s argument of the importance of explicit quantitative targets in monetary policy implementation. The authors take this issue further and show that it is important to evaluate the merits of any regime in the context of the economic environment it operates in. They thus demonstrate that in the presence of unstable economic conditions, namely large shocks, announcing a clear inflation target cannot be the incontestable nostrum. This is in line with
Goodhart's appreciation of the at times necessary lack of correspondence between monetary theory and monetary practice or with Issing et al.'s need for the application of 'judgment'.

Subprogramme D
Ruta Aidis has been granted funding from the British Academy to collect and analyse data on the tendencies of university students in Lithuania for short and long term migration. She is also involved in collaborative efforts to analyse the influence of gender and children on entrepreneurship. In addition, she is continuing to explore the impact of the institutional environment on entrepreneurship development in the EU and transition countries.

Michael Ellman analysed whether the Ukrainian famine of 1933 qualified as ‘genocide’ as defined in the 1948 UN Convention. In addition, he argued that the ‘report’ of a 1939 meeting between Stalin and Aleksandra Kollontai is a forgery. He also examined the contribution of the archival revolution to the understanding of Stalinism.

Klarita Gerxhani’s current research focuses on three main areas. First, based on a large dataset for Albania, it investigates the importance of formal and informal institutions for tax evasion and unregistered labour market participation. Secondly, it studies the formation of social capital in Eastern Europe and attempts to explain the gap relative to the developed countries. Thirdly, it examines how formal and informal institutions affect the search channels that employers use when recruiting employees and, vice versa, how the recruitment channels used affect the development of these institutions.

Ruud Knaack (joint with Henk Jager) worked on two related papers about the lessons to be learned from the transition process for international economics and development economics. In addition he began a new paper on the lessons of transition for economic theory.

Desislava Rusinova worked on a political economy model of rent-seeking and state capture in transition. She built a two-period general equilibrium model where individuals make a choice between productive activity and rent-seeking. She found that under unfavourable initial conditions or too slow institutional reform the economy ends up in a bad equilibrium with stalled reforms, substantial rent seeking, and high inequality.

Marije Schouwstra carried on with her research on the transition in Mongolia. She analysed the data she had collected in her fieldwork. She also elaborated a theoretical model for policy analysis and evaluation.

10.4 RESOURCES AND FUNDING
The programme received a modest funding from the research institute for conference visits of €14,000,-. The programme has been very successful in attracting external funding: Wouter den Haan was awarded a VICI subsidy from NWO (€1,250,000,-) and Roel Beetsma and Casper van Ewijk received NETSPAR €1,000,000,- funding for research.

10.5 OUTPUT

Key publications

**Forthcoming**


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**Dissertations**

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A


B


C


Academic publications (in/of books) – refereed


The transformation of Europe - Beetsma

Economics


Academic publications (excluding publications in/of books) – non-refereed


Academic publications (in/of books) – non-refereed


Academic publications (working- and discussion papers)

The Transformation of Europe - Beetsma
Economics


**Professional publications**


**Popular publications**


**Contributions to academic conferences, workshops and seminars**


Den Haan, W.J. (2006, March). The role of debt and equity over the business cycle. Finance and Consumption Workshop, European University Institute, Florence, Italy.


Den Haan, W.J. (2006, April). The role of debt and equity over the business cycle.CERGE-EI, Prague, Tsjech Republic


Horen, N. van (2006, 26 June). Location decisions of foreign banks and competitive advantage, Kafee lunch seminar, University of Amsterdam.


Horen, N. van (2006, 8 September). Location decisions of foreign banks and competitive advantage, Seminar American University, Washington, DC.


Other lectures on research

Organisational contributions to conferences, workshops and seminars
Demertzis, M. (2006). Member of the Visiting Scholar Programme Committee, De Nederlandsche Bank
Giuliodori, M. (2006). Organizer of the internal seminar series of the “Transformation of Europe” research program at the University of Amsterdam.

Participation in academic networks & fellowships
Jacobs, B. (2004- ). Fellow Tinbergen Institute
Jacobs, B. (2005- ). Fellow CentER
Jacobs, B. (2006). Fellow CESifo
Vermeylen, K. (2006). Affiliate Member of the Sloan Industry Studies Program of the Alfred P. Sloan Foundation (New York, U.S.) and the Center for Industry Studies at the University of Pittsburgh (Pittsburgh, U.S.)

Editor or member of editorial board
Ewijk, C. van (1996-). Editor De Economist.
Hoogduin, L.H. (2006). Member of the editorial board of FMS.

Referee activities

Membership of academic committees (including PhD-Committees outside the FEB)

Ellman, M. (2006). Member Advisory Board of the Amsterdam Research Centre for Corporate Governance Regulation, VU Amsterdam.


Hoogduin, L.H. External examiner for Ph.D thesis of D.J. Janssen; Rijksuniversiteit Groningen


Research contributions in the media


Hoogduin, L.H. (2006, September). De diplomatieke stoplichtstrategie van Lex Hoogduin. AENORM.


Grants, prizes and honours


Aidis, R. (2004-6). British Academy Small Project Grant for the ‘Youth Emigration’ project. Primary investigator and grant holder.

Aidis, R. KEINS, Knowledge-Based Entrepreneurship Project, EU 6th Framework project, member.

Den Haan, W.J. (2006) VICI scholarship from NWO.


**Various activities**


### CHAPTER 11: HUMAN CAPITAL

**Subprogrammes:** SCHOLAR
**Programme director:** Prof.dr. J. Hartog
**Department:** Economics
**METIS-code:** uva/fee/res/hum/prog
**JEL-classification:** I, J, L
**VSNU-scores 1995-2000:** Quality: 3, Productivity: 4, Relevance: 4, Viability: 4
**Website:** www.ase.uva.nl/scholar
**Starting date programme:** 2001

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11.2 PROGRAMME DESIGN

Mission
The Programme aims to improve the understanding of the economic role of human capital.

Motivation
Human capital is the key concept to describe, analyse and understand individual competencies in the labour market. They are vital for individuals’ welfare, for business performance and for aggregate economic performance. Understanding issues of definition, measurement, investment, obsolescence, utilization and (market) valuation of human capital can contribute to a better understanding of the functioning of external and internal labour markets, and form the basis for solid advice on policy issues related to socio-economic questions of efficiency and distribution of economic welfare.

Techniques
Participants of the Programme apply techniques from microeconomics (including applied game theory), econometrics and experimental economics. The research orientation is both theoretical and empirical.

Subprogrammes and projects

SCHOLAR
SCHOLAR is an NWO funded project to analyse the efficiency of the transition from education to the labour market and its consequences for economic development, as well as the equity aspects of the transition. Key questions relate to the optimal investment in schooling and training, the relation between home and school investments and implications for public policy.

Comparative gender and population economics
The Research Programme directly focuses on economic effects of changing gender relations in the family, the market and economic institutions. As such, it constitutes a coherent perspective and it develops concepts and expertise that are required to address current problems concerning work, care and income in economic and social policy.
Social inequality and direct welfare measurement
The labour market is an important distribution mechanism for income and individual welfare. We study both distributions and measurement issues. While the dominant approach in economics only considers utility (or welfare) measurements as revealed in actual choice behaviour as acceptable, with direct measures of welfare and risk attitudes, normative analyses gain considerable value. Applications include normative analysis of the tax structure, measurement of external effects and the relation between health and welfare.

11.3 PROGRAMME EVALUATION
SCHOLAR continues to be a flourishing research center. Members generate a permanent flow of high quality research output and have a strong international reputation. Reputation is evident from invitations for (keynote) speeches, contributions to research volumes, journal guest editorship, and referee activities for the world’s leading journals. Research quality makes SCHOLAR attractive for visiting professors, post-docs and PhD students. Members are also frequently consulted on government policy issues (ad hoc and in institutions like Onderwijsraad (Education Council) and Raad van Economische Adviseurs (Council of Economic Advisors)) and undertake commissioned research that fits their academic program. Within SCHOLAR, the focus on entrepreneurship is a growing activity, with increasing success.

In 2006, SCHOLAR was evaluated by a reputed international committee (Professor Anders Bjorklund, Stockholm University, Professor Stephen Machin University College London and LSE, and Professor Henry Levin, Columbia University, Chairman). From their report, available in full on the RESAM website, we quote:

“The following five issues formulated in the mid term evaluation are readdressed:

1. International rank: whether the program is internationally a leader in its field;
2. Scale: whether the scale of the program is substantial;
3. Coherence: whether the program is set up in a coherent fashion;
4. Output: whether the output is high by all available standards;
5. Policy relevance: whether the contributions have a relevance for policy (whether government or firm policy).

The committee judges that on all of these points the SCHOLAR project has performed excellently. The committee has been very impressed by the performance of the SCHOLAR group. The output in terms of publications and activities is outstanding, and the public returns are multiple. Firstly, good scholars and excellent graduate students have been attracted and trained, who now have promising academic career prospects. Secondly, excellent topics have been addressed. Thirdly, very important policy relevant issues have been researched. Fourthly, important insights have been garnered in the research which have been disseminated in scholarly and policy articles and which make contributions to both the Dutch and international policy agenda.”

The subprogram Gender and Inequality continues its focus on policy oriented work with external funding, in particular from the European Union. A key activity in this subprogram is the construction of a dataset on wages and working conditions through the internet on a very large international scale; the project has attracted international attention and participation. The book by Van Praag and Ferrer Carbonell, *Happiness Quantified* is an international success: a paperback edition as well as a Chinese translation are in preparation.

11.4 RESOURCES AND FUNDING
SCHOLAR was initially funded with a Pionier Grant from the national science foundation NWO. The seven year funding term has now ended. Both good housekeeping and the acquisition of extra funding during the project (both from academic sources and commissioned research) have created some
financial reserve that can still be spent on research activities. In the meantime, SCHOLAR staff have become regular staff member of the department, while some managed to obtain further NWO funding (VENI and VIDI programs). However, as the financial reserve of SCHOLAR will soon be depleted, staff will become fully dependent on faculty resources for their academic facilities. Material facilities (computer support, financial administration) are sometimes sources of irritation.

11.5 OUTPUT

Key publications


Forthcoming


Groot, W., Maassen van den Brink, H. & Praag, B. van (2007). The compensating income variation of social capital. Forthcoming in *Social Indicators Research*.
Habbani, K., Groot, W. & Jelovac, I. (2007). Do free of charge public health services impede the


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**Publications in numbers**

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SUBPROGRAMME SCHOLAR

Dissertations

Academic publications (excluding publications in/of books) – refereed


Academic publications (in/of books) – refereed

Praag, C.M. van (2006). *Nieuwe Combinaties*. Book based on inaugural lecture from September, 28th, with the official installment as a professor of “Entrepreneurship and Organization”, December. Amsterdam: Amsterdam University Press, the Netherlands. [C].

**Academic publications (excluding publications in/of books) – non-refereed**


**Academic publications (in/of books) – non-refereed**


**Academic publications (working- and discussion papers)**


Professional publications


Contributions to academic conferences, workshops and seminars


Praag, C.M. van (2006). Comparing the Returns to Education for Entrepreneurs and Employees, Invited Seminar at the Utrecht School of Economics, the Netherlands.


Other lectures on research


Praag, C.M. van (2006). Nieuwe Combinaties, inaugural lecture at the University of Amsterdam.

Praag, C.M. van (2006). Ondernemers, groei van de organisatie begint bij jezelf, invited keynote lecture at conference for entrepreneurs, organized by Podium, de personele factor voor ondernemend Rotterdam.

Praag, C.M. van (2006). Wetenschappelijk onderzoek naar ondernemerschap en onderwijs, invited lecture at conference Succesvol Leren Ondernemen, University of Amsterdam (organized by AMSEB, Leren Ondernemen (Ministry of Economic Affairs and Ministry of Education), and ACE


Organisational contributions to conferences, workshops and seminars
Ferrer-i-Carbonell, A. (2006, July 3-5). Member of the program committee for the 7th International German Socio-Economic Panel User Conference- SOEP, Berlin, Germany.


Sloof, R. (2006). Organiser (jointly) TI/CREEED seminars, University of Amsterdam

**Participation in academic networks & fellowships**

Ferrero-i-Carbonell, A. (2006). Fellow Tinbergen Instituut, Amsterdam
Hartog, J. (2006). Fellow Tinbergen Institute, Amsterdam; Fellow IZA, Bonn, Germany.
Leuven, E. (2006). Fellow Tinbergen Institute, Amsterdam; Fellow IZA, Bonn, Germany.
Plug, E. (2006). Fellow Tinbergen Institute, Amsterdam; Fellow IZA, Bonn, Germany.
Praag, C.M. van (2006- ). Research Fellow Tinbergen Institute, Amsterdam.
Praag, C.M. van (2006- ). Research professor at the Max Planck Institute of Economics, Jena, Research Fellow IZA Institute for Labour Market Research, Bonn.

**Editor or member of editorial board**

Praag, C.M. van (2005-). Associate Editor Small Business Economics Springer Academic Press

**Referee activities**


**Membership of academic committees (including Ph.D. committees outside the FEB)**

**Research contributions in the media**

Praag, C.M.van (2006, 7 December). Kenniskring Amsterdam and VNO-NCW panel participant in conference on ‘kennis te koop’.

**Grants, prizes, honours**

Hartog, J. (2006). Research grant: KNAW (Royal Dutch Academy of Sciences), Education and risk in China
Sloof, R. (2006, July). Awarded a grant from the municipality of Valencia to visit the University of Valencia for one month.

**Various activities**

Hartog, J. (2006- ), member Raad van Economische Adviseurs (Council of Economic Advisors, advising Dutch Parliament), May 1.
Praag, C.M. van (2006- ). Director of the Amsterdam Center for Entrepreneurship.
Praag, C.M. van (2006). Member of the Think Tank of Dialogues towards a more entrepreneurial Dutch society.
Praag, C.M. van (2006). Member of the Expert Committee Kapitaalmarkt toegang Kleine en Middelgrote Ondernemingen van het Ministerie van Economische Zaken (chairman: Fred VondeWall)
Praag, C.M. van (2006). Lustrum committee University of Amsterdam 375.
SUBPROGRAMMES GENDER & POPULATION ECONOMICS
AND SOCIAL INEQUALITY

Academic publications (in/of books) – refereed

Academic publications (working- and discussion papers)
Tijdens, K.G. (2006). Why do employees work overtime hours? Paid and unpaid overtime working in Belgium, Germany, the Netherlands and the United Kingdom, University of Amsterdam, AIAS working paper WP47.
Tijdens, K.G., Klaveren, M. van, Houwing, H., Meer, M. van der & Essen, M. van (2006). Temp Work Agencies in the Netherlands, Amsterdam, University of Amsterdam, AIAS working paper WP48.

Professional publications

Popular publications

**Contributions to academic conferences, workshops and seminars**


Tijdens, K.G. (2006, 29 June). Part-time working and overtime hours. Paid and unpaid overtime working in the Netherlands and Germany, Paper presentation at the AIAS lunchseminar, Amsterdam, University of Amsterdam, AIAS.


Tijdens, K.G. (2006, 15 September). Presentation of the WIBAR project and the WageIndicator data, Brussels, ETUI.


**Other lectures on research**


**Organisational contributions to conferences, workshops and seminars**


**Participation in academic networks & fellowships**

Tijdens, K.G. (2005- ). Member of the European Advisory Committee on statistical information in the economic and social spheres. Eurostat, Luxembourg.


**Editor or member of editorial board**


**Referee activities**


**Membership of academic committees (including Ph.D. committees outside the FEB)**


**Grants, prizes and honours**

**Various activities**
Wetzels, C.M.M.P. (2006-). Co-applicant of a research proposal on gender and job insecurity to the Spanish Ministry of Social Affairs and Employment (with the University of Salamanca)
CHAPTER 12: HISTORY & METHODOLOGY OF ECONOMICS:
THEORIZING, MODELING AND POLICY APPLICATION

Programme directors: Prof. dr. J.B. Davis & dr. M.J. Boumans
Department: Economics
Starting date programme: 2002
METIS-code: uva/fee/res/hme/prog
JEL-classification: B (B0-B5)
Website: www.ase.uva.nl/hme
Starting date programme: 1998

12.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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Schliesser, E.
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12.2 PROGRAMME DESIGN

This research programme investigates the mutual connections in economics between theorizing, modeling, and policy application, in order to explain research strategies and methods of explanation in economics. In this investigation, the research group employs a methodological approach using a theory-historical perspective. This involves examining changing research strategies and methods of explanation as employed in the history of economics up to the present.

We investigate current economics as the product of past economics, and study past economics to
understand the development of current economics. For both our study of current economics and past economics we focus on the research strategies and methods of explanation of economists. We particularly focus on current economics because of the special methodological issues involved in its strategies and methods of explanation (see below), and because of its rapid evolution and change in recent decades.

A central characteristic of recent economics is a renewed interest in the relation between economic behavior and social structure, as reflected in a succession of new views and ideas about how economic behavior and social structure are mutually influencing. These new currents in theory go hand in hand with new ideas about modeling, measurement, and investigative methods appropriate to economics. In line with the research group’s earlier research into models as instruments that mediate between theory and data, we investigate how these new techniques and methods are used to further represent, measure, and intervene in the economy.

Changes in economic theorizing and modeling have been accompanied by new thinking about the scope and content of economic policy. This has expanded the range of norms and values at work in the applied and policy domains in economics, and also produced changes in thinking about the nature of political decision-making in regard to the economy and to economics as a science. The linkages between economic theorizing, modeling, and measurement to economic policy are an explicit concern in the programme.

As a meta-study of economics, our investigations should serve economic researchers by pointing out the implications and consequences of various research strategies and methods of explanation in different sub-fields of economics as they relate to the discipline of economics as a whole. In addition, we also aim to produce research that clarifies to the users of economic science in the public domain what current economics involves and how this applies to economic policy and political decision-making.

Keywords
- Research strategies and methods of explanation in economics
- Current economics as the product of past economics
- Economic behavior in relation to social structure
- Models as instruments mediating between theory and data
- Economic policy, norms, and values
- Methodological approach with a theory-historical perspective

12.3 PROGRAMME EVALUATION

The History and Methodology of Economics Group remains highly active in research and publication, with all members of the Group making important research contributions in 2006. Further, the research that is forthcoming from the Group for 2006 demonstrates that this high degree of activity will continue on into the future.

The Group has also sponsored and co-sponsored a number of workshops in 2006. On April 21-22 whole day meetings on “Measurement in Economics” occurred at the Tinbergen Institute with many internationally recognized scholars participating. The workshop papers will appear as Measurement in Economics: a Handbook published by Elsevier in June 2007. On June 14 and December 13 the Group again co-sponsored its twice-annual workshop with the Cachan, France École normale superieure History of Social Science Group. In April also a workshop on ‘Rationality in Science and Technology’ was organised for PhD students and postdocs. In addition, two days of internal workshops were held in the fall, with special attention given to doctoral student presentations.
For the second year, the Group taught its jointly-produced textbook for the Economic Methodology course, *A Short Introduction to Economic Methodology*. The text was revised from the previous year based on experience acquired in teaching. Cambridge University Press has requested the text be submitted for possible publication, and that will occur in early 2007. The Group feels strongly that this text can fill an unexploited niche in international teaching in economic methodology, and that its publication will add to the international reputation of the Group.

The *Journal of Economic Methodology* editorial office has now been in the Group for a second year. John Davis is an Editor of the journal and Marcel Boumans is an Associate Editor of the journal.

The Group is now preparing the program for the 12th World Congress of Social Economics to be held next June 8-10 at the Amsterdam School of Economics. John Davis and Harro Maas are members of the organizing committee. Davis is President-Elect of the Association for Social Economics which is sponsoring the World Congress.

Three PhD students, Floris Heukelom, Maarten Biermans, and Jan de Jonge are moving towards completing their dissertations with the expectation of all finishing in early 2008. Ricardo Crespo has joined the Group as a new PhD researcher.

### 12.4 RESOURCES AND FUNDING

For the workshop ‘Measurement in Economics’ we received 3,695,13 euro from NWO/ISW-funds. For the workshop ‘Experts in Observation’ we received 750 euro from the Tinbergen Institute. Besides these external funds the programme received an amount for conference visits and other research related activities from RESAM.

### 12.5 OUTPUT

#### Key publications


#### Forthcoming


**Publications in numbers**

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Dissertations


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A

B


C


Academic publications (in/of books) – refereed


Academic publications (excluding publications in/of books) – non-refereed


**Academic publications (in/of books) – non-refereed**


**Academic publications (working- and discussion papers)**


Reuten, G.A.T.M. (2006). *On the quantitative homology between circulating capital and capital value; the problem of Marx's and the Marxian notion of 'variable capital'.*

**Professional publications**


**Popular publications**


**Contributions to academic conferences, workshops and seminars**


Other lectures on research


Organisational contributions to conferences, workshops and seminars


Heukelom, F. (2006). Chair weekly lunch seminar Tinbergen Institute, Amsterdam


Reuten, G.A.T.M. (2006, 18 and 25 September). Seminars on recent volumes of the Marx-Engels-Gesamtausgabe (MEGA) with contributions by Regina Roth (editor of the MEGA) and by Wei Xiaoping (director of the Marxian Philosophy Institute of the Chinese Academy of Social Sciences). University of Amsterdam.

**Participation in academic networks & fellowships**


Boumans, M.J. (2002-date). Fellow NAKE.


Boumans, M.J. (2004-date). Member of board Dutch-Flemish Network for Philosophy of Science and Technology.


Davis, J.B. (2006). Advisory Board, University of Stirling Centre for Economic Methodology


Morgan, M.S. (2006). Overseas Fellow of the KNAW.


**Editor or member of editorial board**


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**Referee activities**


**Membership of academic committees (including Ph.D. committees outside the FEB)**


**Grants, prizes and honours**


Reprints


Various activities

CHAPTER 13: EXPERIMENTAL & POLITICAL ECONOMICS (CREED)

Programme Director: Prof.dr. F.A.A.M. van Winden
Department: Economics (AE)
METIS-code: uva/fee/res/exp/prog
JEL-classification: D7, D8
Web-address: www.ase.uva.nl/creed
Starting date programme: 1991

13.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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Total 2nd flow of funds | 2.43 | 4.04 | 3.79
Total 3rd flow of funds | 0.14 | 1.08 | 1.60

Total 1st f.o.f. excl. Ph.D.'s | 3.11 | 1.98 | 1.92
Total 1st-3rd flow of funds | 8.68 | 10.30 | 8.66
Ph.D. students | 3.30 | 4.43 | 2.30
13.2 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 Organization 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

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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.

### 13.3 PROGRAMME EVALUATION

Research activities were performed at a highly satisfactory level, and were well distributed over the different themes. The output is comparable to last year’s, albeit with more publications. As a consequence of our expertise in decision making analysis and an increasing interest in bounded rationality (cognition and emotion) and evolutionary aspects, contacts have been established with the Cognitive Science Center Amsterdam (CSCA) to see how CREED can participate in this Center.

Klaus Abbink enriched the strength of our group as associate professor in economics, as announced in the previous report. Klaus’ research interests nicely cover the three main research themes of CREED (political decision making, bounded rationality, and experimental economics).

Three PhD-theses were finished and successfully defended by Jens Grosser, Astrid Hopfensitz, and Ernesto Reuben. All of them make substantial contributions, breaking new ground; the first concerning our understanding of political participation and the latter two regarding the economic significance of emotions in bargaining and investment. They have also succeeded in getting attractive academic research positions; Jens is now at the economics department of Princeton University, Astrid at the Swiss Center for Affective Sciences (Geneva), and Ernesto at the Kellogg School of Management (Northwestern University). Furthermore, while Joris Gillet and Gijs van de Kuilen - busy finishing their dissertations - recently left, Audrey Hu and Ailko van de Veen joined the group as PhD students to work within the NWO-VICI project on auctions.

Interaction with other research institutions was strengthened in various ways. Juan Lacomba and Francis Lagos (both University of Granada) stayed from September 2005 till February 2006, while Peter Martinsson (University of Göteborg) visited CREED in December. As one of the very first experimental economics laboratories in Europe CREED was represented at the 20th anniversary of Bonn Econ Lab in February at Bonn University. Masaru Kohno and Yukihiko Funaki from Waseda University (Japan) came over in March to discuss our involvement as leading research center in an
international workshop on new directions in political economic experiments and behavioral research (held in October in Amsterdam). As part of a series of research exchanges with other labs, another successful CREED-CeDEx workshop was held in May at Nottingham University (a similar exchange exists with New York University). Furthermore, in the context of the international ENABLE network (coordinated by CREED), several early stage and experienced researchers participated in this year’s summer school and symposium, held in Munich (Fraueninsel). Finally, about 20 foreign researchers presented a seminar in the series organized by CREED within the Institutions and Decision Analysis program of the Tinbergen Institute.

Honors like invited (keynote) lectures but also a recent worldwide economics ranking (www.econphd.net) may testify to the significance of CREED’s research. According to the ranking, the University of Amsterdam occupies the 24th position within the field of Public Economics and the 18th position in the sub-field of Political Economy (in both cases, the top in the Netherlands and the 3rd position in Europe).

Also this year, consultancy work for public and private institutions took place in various ways, showing the societal and policy relevance of CREED’s research. One project, for the Ministry of Economic Affairs (EZ) and the Ministry of Health, Well-Being and Sport (VWS) concerned the choice behavior of consumers in insurance markets for health care. Another project, commissioned by the Dutch government and the Municipality of Amsterdam concerns the design of auctions (using game theory and behavioral economics) for auctioning shares to interested parties within the so-called “Zuidas-Dok” project. Furthermore, a start was made for a new project commissioned by the Dutch Central Bank concerning the interaction between banks.

### 13.4 RESOURCES AND FUNDING

The programme received a very modest amount of funding from the research institute RESAM. As last year, this money was mostly spent to cover (part of) the costs related to the participation in conferences by research group members. Additional means were obtained from external funding and the Tinbergen Institute (for the PhD-students).

Substantial additional means come from the Dutch science foundation NWO (several major grants), the European Union, and commissioned research for public and private institutions. For example, a major budget item like the payment of subjects participating in experiments at the CREED-laboratory is taken care of by using these external sources.

### 13.5 OUTPUT

**Key publications**


Forthcoming


Kugler, T., Bornstein, M., Kocher, M. & Sutter, M. Trust between individuals and groups: Groups are less trusting than individuals but just as trustworthy. Forthcoming in Journal of Economic Psychology.

Kocher, M. & Sutter, M. Individual versus group behavior and the role of the decision making process in gift-exchange experiments. Forthcoming in Empirica.


Publications in numbers

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Dissertations

Academic publications (excluding publications in/of books) – refereed


Sonnemans, J., Dijk, F. van & Winden, F.A.A.M. van (2006). On the dynamics of social ties structures in groups (An earlier version of this paper was titled: Group formation in a public good experiment) *Journal of Economic Psychology*, 27, 187-204. [B].


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**Academic publications (in/of books) – refereed**


**Academic publications (excluding in/of books) – non-refereed**


**Academic publications (in/of books) – non-refereed**


**Academic publications (working- and discussion papers)**


**Popular publications**


**Contributions to academic conferences, workshops and seminars**


Krawczyk, M.W. (2006). The role of Repetition and Observability in Deterring Underwriting Fraud, 16th Conference of the Department of Economics of the Warsaw University, Czestochowa, Poland.


Ule, A. (2006, October). Exclusion and cooperation in social network experiments. 21COE-GLOPE conference of the Waseda University, Amsterdam.


Winden, F.A.A.M. van (2006, May). He who gets to rule will get the gold. CREED-CEDEX Meeting, Nottingham.


Other lectures on research
Onderstal, S. (2006). Werkzoekenden onder de hamer, gastcollege voor UvA’s econometristen vereniging VSAE.

Organisational contributions to conferences, workshops and seminars
Winden, F.A.A.M. van (2006, May). Coordinator and chair of ENABLE annual network meeting, Munich (Fraueninsel).
Winden, F.A.A.M. van (2006, June). Coordinator and chair of ENABLE Mid-Term Review Meeting, Munich (Fraueninsel).

Participation in academic networks & fellowships
Winden, F.A.A.M. van (2006). Affiliated with NETSPAR.

Editor or member of editorial board
**Referee activities**


**Membership of academic committees (including Ph.D. committees outside the FEB)**


**Research contributions in the media**


**Grants, prizes and honours**


**Various activities**


Winden, F.A.A.M. van (2006, 15-22 October). Visitor of Andrew Young School of Policy Studies, Georgia State University, Atlanta.
CHAPTER 14: INDUSTRIAL ECONOMICS, COMPETITION & ANTITRUST

Programme Director: Prof.dr. P. van Cayseele
Department: Economics (AE)
METIS-code: uva/fee/res/ica/prog
JEL-classification: L
Starting date programme: 2005

14.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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14.2 PROGRAMME DESIGN

The Research Program is organized following 4 research themes:

Cartel Behavior and Stability
In this strand of research, we investigate how cartels are formed and whether they continue to exist, that is whether they are stable. Methodologically, we combine Game Theory with elements from Law and Economics as well as with Experimental Economics.

Market Power, Consumer Search and Social Networks
It is well-known that in the absence of searching consumers, enterprises more easily can exploit market power. We investigate how the information obtained by the consumer on the price vector charged by competing firms can mitigate the need to do individual search. Extensions include obtaining information on the quality of the goods.

Auctions and Seller/Buyer Mechanisms
Many auction formats exist and given the environment, one may show they are optimal, by using mechanism design theory. While well-established in the literature, mechanism design theory assumes that one party can set the rules, whereas maybe the other party has private information. In a repeated
interaction over time, the buyer and seller each have some power to determine the rules of the game. Rather than bargaining over a single transaction, they might negotiate the procurement mechanism. This could explain why in reality one observes mechanisms different from the auction format.

Two-Sided Markets
It is recognized more and more that platforms cater for different groups of consumers, the idea being that the different groups are brought together to conclude a transaction. Payment services, Settlement, Safekeeping and Custody of Financial Securities, Newspapers, Video Streaming, Health Care Insurance, a.s.o. are but a few examples of industries operating according to this business model. But such a market organization has quite different implications for market delineation, pricing, ... and therefore the exploration of the model has led to the identification of many sources of mistakes in the practice of Antitrust.

14.3 PROGRAMME EVALUATION

For the Industrial Economics research group, 2006 constituted an exciting year with numerous highlights. Members of the group managed to publish 1 article in an A-journal and 3 articles in B-journals. In August we hosted the 33rd EARIE conference that was attended by a record number of 434 participants from all parts of the world. The organization of this conference has greatly enhanced the international visibility of the group and as such fits into our objective to be one of the leading groups in industrial economics in Europe. Another hallmark was the arrival of our first PhD-student in December. He will work on bridging the gap between theoretical cartel stability analysis and new empirical IO.

The smooth performance of the group has been helped by the circumstance that there were no big changes in the group’s composition. Jeroen Hinloopen was appointed as a part-time professor of industrial organization at the University of Leuven but continued his work at the University of Amsterdam. The only change that has come out of the interest government and other universities have shown in the members of the group is that Sander Onderstal has accepted a part-time advisory position at the Ministry of Economic Affairs from 1 February 2007 onwards. These developments are in line with the traditional visibility of Amsterdam in government and entrepreneurial circles in this area of research. The downside of this is that it reveals that the group is rather small relative to the teaching load and the always-expanding research diversity of the industrial economics field.

Looking ahead, the research program in coming years will be a consolidation of the research efforts that the members of the IO group have been engaged in at the past. The field of industrial economics in general has moved from theory to applied empirical research and the research focus of our group illustrates this trend. Exemplary in this respect is the reading group on new empirical IO that started in December. In light of this, the strong quantitative background of many of the group members is an asset, as are the connection with CREED and the international network with the Universities of Johns Hopkins, Purdue, London, Leuven and Tufts University.

Our current research includes laboratory experiments to test auction designs and anticompetitive behavior. In collaboration with the University of Groningen data on the Dutch retail gasoline market have been collected which will be analyzed in 2007. In the next few years, we strive to further explore the potential of experiments and empirical data in our research. In this respect, the visit of Nicolaas de Roos, a former PhD-student of Ariel Pakes, in the Spring of 2007 is perfectly timed.

Societal relevance
Given the increasing interest in antitrust issues over the last decade, most publications that originate from the research efforts of the Industrial Economics, Competition and Antitrust Group of the Universiteit van Amsterdam, have direct policy relevance. Especially the analysis of cartels and cartel stability figures prominently among the international research contributions that shape the minds of policy makers both domestically and abroad. The design of leniency programs to “bring in cartels”,
the analysis of procurement in the presence of bid rigging, the importance of social networks and their effect on searching behavior and potential for collusion are but a few examples where government agencies involved in the enforcement of antitrust laws can gain advantage from the know-how created.

The research activities moreover are not only focused at investigating collusive issues within the traditional manufacturing industries, but on the contrary also are directed at the novel business models that arise from trading and care-taking activities. As such, two-sided markets as well as trading and comparative advantage models are investigated with the purpose of revealing the antitrust implications to competition authorities and policy-makers in general.

Also the methodologies developed, more in particular the combination of game theoretic foundations of oligopoly models, with New Empirical Industrial Organization and Experimental Economics aim at providing tools and instruments that can be used for policy makers, for instance when they need to get a feel of the price-cost margin in a particular industry, or decide on reposing on price fixing infringement.

14.4 RESOURCES AND FUNDING

The programme received funding from the research institute RESAM but this amount was modest relative to the cost of participation of group members in conferences. With the arrival of our first PhD-student additional means were obtained from the Tinbergen Institute. Some of the group members managed to additional means from commissioned research for public and private institutions.

14.5 OUTPUT

Key publications

Forthcoming


**Publications in numbers**

**Industrial Economics, Competition & Antitrust**

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**Academic publications (excluding publications in/of books) – refereed**


**Academic publications (excluding publications in/of books) – non-refereed**


**Academic publications (in/of books) – non-refereed**

**Academic publications (working- and discussion papers)**
Hinloopen, J. & Marrewijk, C. van (2006). *Comparative advantage, the rank-size rule, and Zipf’s law,* Tinbergen Institute Discussion Paper, 06-100/1.

**Professional publications**

**Popular publications**

**Contributions to academic conferences, workshops and seminars**


Hinloopen, J (2006, April), discussant of: Christopher R. Knittel and Lepore, Jason W., Tacit collusion in the presence of cyclical demand and endogenous capacity levels, at the annual conference of the Industrial Organization Society (IOS), Boston


Soetevent, A.R. (2006, 7 January). Wages and Unemployment in a Random Social Network with Arbitrary Degree Distribution. AEA Annual Meeting, Boston, MA, USA


**Other lectures on research**


**Organisational contributions to conferences, workshops and seminars**

Cayseele, P. van (August 2006). chair scientific committee 33rd Annual Conference of the European Association for Research in Industrial Economics (EARIE)


**Participation in academic networks & fellowships**

Cayseele, P. van (2003-). Fellow ENCORE (Economics Network for Competition and Regulation).
Cayseele, P. van (2005-). Fellow ACLE (Amsterdam Center for Law & Economics).
Cayseele, P. van (2005-). Member of the Scientific Board of FWO (The Belgian NWO).
Hinloopen, J. (2001-). Fellow Tinbergen Instituut.
Hinloopen, J. (2002-). Fellow ENCORE.
Onderstal, S. (2006-). Fellow ACLE (Amsterdam Center for Law & Economics).
Onderstal, S. (2006-). Fellow ENCORE.
Soetevent, A.R. (2006-). Fellow ENCORE.

**Editor or member of editorial board**

Cayseele, P. van (2006). Member of the Kernredactiecomité of the *Tijdschrift voor Belgische Mededinging – Revue de la Concurrence Belge*.


Hinloopen, J. (November 2006). Guest Editor special issue of *the International Journal of Industrial Organization* on collusion and tacit collusion.

**Referee activities**


**Membership of academic committees (including Ph.D. committees outside the FEB)**


**Various activities**

## 15.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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| Ph.D. students                | 0.00 | 0.00 | 0.00 |
CHAPTER 16: SEO ECONOMIC RESEARCH

Subprogrammes:  
Regions & Transport  
Labour Economics & Education  
Health Economics & Social Security  
Regulation & Competition Policy  
Aviation Economics  
Industrial Economics

Programme Director:  Prof. dr. J.J.M. Theeuwes

METIS-code:  uva/fee/seo/seo/prog

JEL-classification:  I, J, L, Q, R

Web-address:  www.seo.nl


Date of establishment:  1950

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<td>Graaf, D. de</td>
<td>drs</td>
<td>oz</td>
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<td>SEO</td>
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</tr>
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<td>1.00</td>
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<td>-</td>
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<td>oz</td>
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<td>1.00</td>
<td>0.25</td>
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</tbody>
</table>

16 Until he left for the CPB in May prof.dr. Coen N. Teulings was director of SEO.
16.2 PROGRAMME DESIGN

SEO Economic Research was founded in 1949 as a contract research institute by the Faculty of Economics of the University of Amsterdam. Since then SEO has operated successfully in the market for applied economic research and analysis. Today, research is carried out by a staff of about 40 professionals, mostly economists and econometricians. With its supporting staff of about ten, SEO is a middle-sized economic research institute and a major player in the higher segment of the market for applied economic research in The Netherlands. Contract research and consultancy is largely for the public sector, the share of research projects for the private sector and international organization is rapidly growing. Results are published in the SEO research report series and frequently presented at seminars and conferences.

Core markets
SEO Economic Research consists of six research clusters:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Function</th>
<th>Total 2004</th>
<th>Total 2005</th>
<th>Dept.</th>
<th>Funding</th>
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<tr>
<td>Health Economics &amp; Social Security</td>
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</tr>
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<td></td>
<td></td>
<td>0.48</td>
<td>AE 3</td>
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<td>0.84</td>
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<td>Industrial Economics</td>
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<tr>
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<td>hgl</td>
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</table>
Regions & Transport
An important activity of this cluster is the monitoring of the regional economy of greater Amsterdam, resulting in a yearly publication discussing the economic conditions and prospects of the Amsterdam area. Other activities in this cluster are the research on infrastructure and the housing market and applications of cost benefit analyses.

Labour Economics & Education
Economic analysis in this cluster concerns the transition from school to the labour market, flexible labour and the educational choice of pupils and students, wage inequalities and the development of the Dutch information economy. Annually published research monographs are the *Education and Labour Monitor* analysing the initial labour market experiences of higher educated labour market entrants and the *Study Choice Monitor* documenting the educational choices of students at the end of secondary schooling.

Health Economics & Social Security
This cluster analyses developments in health care and social security. The main focus concerns the highly regulated character of these two sectors. In order to get grip on the effects of regulation, the cluster studies the costs and benefits and the optimal design of regulation. Furthermore the cluster analyses consumer preferences in these sectors.

Regulation & Competition Policy
The Competition and Regulation Division focuses on the design, analysis and evaluation of the changes in economic organization. We are specialised in economic and econometric research and advice in the fields of competition and regulation. Our work on the economic aspects of changing competition rules is useful for both public sector agencies and private sector parties. Prominent research themes in 2006 are regulatory issues in the telecom and energy sector as well as in the professional services sector; the identification and definition of public interests in several policy areas for different ministries and social cost benefit analysis of various policy measures and projects.

Aviation Economics (AAE)
AAE is a cluster within SEO Economic Research. In 2003 AAE was involved in a growing range of aviation economics projects. Recent reports concern:
- airline alliance scenarios, a tourism/airlift model for Aruba, scenario/strategy analysis for Seoul Airport, effects of secondary slot trading at Schiphol airport
- improving the KLM hub & spoke system, accessibility of an offshore airport, relocation of Naples airport and airport licensing.

In 2006 Dr. Hidenobu Matsumoto of the University of Kobe, Japan stayed 3 months with SEO Economic Research for his study of airport systems. Dr. Matsumoto prepares currently some papers on the results of this stay. When NWO grants him a scholarship for a longer stay in 2007 he will continue his research.

Industrial Economics
This cluster joined the Institute in the summer of 2005. Its research field consists of the relations between firms, and processes within firms, in the context of (mainly service) industries. Research projects concern benchmarking studies, market structure studies and scenario analyses. Some of the industries under study are real estate brokerage, financial services, architecture and fund raising & charities.

The research and reports of SEO Economic Research are independent of the commercial and political interest of the contractants. Research contracts can be from ministries, local governments or international organizations. Private companies and non-governmental institutions contribute an important part to the contract portfolio.

Organisation
SEO Economic Research is an independent research institute without much bureaucracy. Most of the
research is done in house, but SEO co-operates frequently with other research institutes. SEO has a non-executive board of 7 members and a council of scientific advisors who meet regularly and discuss the research programme of SEO. The management team of SEO takes care of the daily policy.

**Science**


### 16.3 PROGRAMME EVALUATION

Academic publications made by members of SEO Economic Research are usually a spin-off from contract research, SEO’s main activity. This year 8 articles in refereed journals were published plus 4 refereed book publication. The number of non-refereed academic publications was large.

SEO Economic Research also creates a stimulating environment for Ph.D. research. Like in previous years, a thesis was defended successfully by one of SEO’s contract researchers. Overall, academic output has remained fairly constant over the years.

### 16.4 RESOURCES AND FUNDING

SEO Economic Research obtains the majority of funding from contract research. In 2006 SEO Economic Research had 2 employees in the ‘AIO-programme’ from RESAM for 0.4 fte each.

### 16.5 OUTPUT

<table>
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<th><strong>Key Publications</strong></th>
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<table>
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<th><strong>Forthcoming</strong></th>
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Publications in numbers

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<td>a) in refereed journals</td>
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<td>B</td>
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<td>C</td>
<td>7</td>
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<td>b) in other journals</td>
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<td>c) book chapters</td>
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<td>d) in proceedings</td>
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<td>Other</td>
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<td>3) Ph.D. theses</td>
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<td>4) Professional publications</td>
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<td>5) Popular publications</td>
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<td>6) Working papers</td>
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Dissertations

Academic publications (excluding publications in/of books) – refereed


Academic publications (in/of books)-refereed

Academic publications (excluding publications in/of books) – non-refereed
Aalbers, R. & Nooij, M. de (2006). Per maand of per kWh?: beoordeling van de effecten van een ander tariefsysteem voor kleinverbruikers elektriciteit. SEO-rapport, 865. Amsterdam: SEO.
bedrijfsvergelijgend onderzoek onder leden van de NVA 2005. SEO-rapport, 914. Amsterdam: SEO.


projecten te meten. SEO-rapport, 858. Amsterdam: SEO.


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**Publications in proceedings**

Academic publications (in/of books) –non-refereed


Working- and discussion papers


Popular publications


**Contributions to academic conferences, workshops and seminars**


Nooij, M. de (2006, 10 August). Presentation Guaranteeing that the lights always come on: how much is this really worth? New Zealand Institute for the Study of Competition and Regulation, Wellington, New Zealand.


**Other lectures on research**


Jubileumcongres ESB. Wassenaar: Kasteel de Wittenburg.


Organisational contributions to conferences, workshops and seminars
Kok, L. (2006, 4-7 October). Member Forum Health policy innovation. 9th European Health Forum Gastein. Bad Hofgastein, Austria.

Participation in academic networks & fellowships
Burghouwt, G. (2004-). Member of the Air Transport Society.
Leeuwen, M.J. (2003-). Member advisory board Rapportage Sport SCP.
Nooij, M. de (2005). Member scientific committee The European Electricity Market 05, Warschau, Polen.
Teulings, C.N. (2005-). Member of the REA-Raad van Economisch Adviseurs of the Tweede Kamer der Staten Generaal.
Teulings, C.N. (2004-). Chairman Committee II new examination programme economy for Havo and Vwo.
Teulings, C.N. (2004-). Member manifesto committee of the political party PvdA.
Teulings, C.N. (2003-). Member of the Committee Dijkstal (salaries political and civil top).
Teulings, C.N. (2001-). Member of the CPC (Central Planning Committee) of the CPB (Central Planning Bureau).
Wit, J.G. de (2001-). Member Scientific Board Annual Hamburg Aviation Conference.
Wit, J.G. de (2004-). Member of the German Aviation Research Society.
Wit, J.G. de (2004-). Member Steering Committee Air Transport Research Society.
Wit, J.G. de (2004-). Member Benelux Inter Universitaire Groepering van Vervoerseconomen (BIVEC).
Wit, J.G. de (2004-). Member of the Aviation Forecasting and Economics Committee of the Transportation Research Board USA.

Editorships
Kok, L. (2003-). Member editorial-advisory board Rendemens.
Theeuwes, C.N. (2002-). Member editorial board ESB (Economisch Statistische Berichten).
Theeuwes, J.J.M. Member editorial board. Sociale en culturele wetenschappen. Amsterdam University Press.
Theeuwes, J.J.M. Member editorial board. Tijdschrift voor Arbeidsmarktvaarstukken.
Wit, J.G. de (2005-). Member of the editorial board Tijdschrift voor Vervoerswetenschap.
Wit, J.G. de (2004-). Member of the editorial board Journal of Air Transport Management.
Wit, J.G. de (2004-). Member of the editorial board Journal of Air Transportation.

Referee activities

Membership of academic committees (including Ph.D. committees outside the FEB)
Burghouwt, G. (2004-). Member of the Urban and Regional Research Centre Utrecht (URU).
Research contributions in the media


Wit, NRC Handelsblad, 1.

Various activities
Nooij, M. de (July/August 2006). Visiting researcher, New Zealand Institute for the Study of Competition and Regulation, Victoria University, Wellington, New Zealand.
Appendices

APPENDIX I  LIST OF PERSONS, COMMITTEES AND ADDRESSES

Board Amsterdam School of Economics
Vice-dean School of Economics: Prof. dr. H. Maassen van den Brink
Director RESAM: Prof. dr. H. Oosterbeek
Chair Department Quantitative Economics: Prof. dr. H.P. Boswijk
Managing Director Onderwijsinstituut: Dr. J.C.M. van Ophem

Board Faculty
Dean FEB (interim): Prof. dr. H. Maassen van den Brink
Managing director: Mr. L.J. Verhulst
Vice-dean School of Economics: Prof. dr. H. Maassen van den Brink
Vice-dean Business School: Prof. dr. W.P. Rees
Director RESAM: Prof. dr. H. Oosterbeek
Director ABS-RI: Prof. dr. A. Kolk
Director Onderwijsinstituut: Dr. J.C.M. van Ophem

Advisory committees
The Council of Programme Leaders advises Managing Director RESAM on academic issues and research policy. Members of the council are Prof. dr J. Kiviet, Prof. dr ir N.M. van Dijk, Prof. dr C. Hommes, Prof. dr R. Kaas, Prof. dr R. Beetsma, Prof. dr J.B. Davis, Dr. M.J. Boumans, Prof. dr F.A.A.M. van Winden, Prof. dr. P. van Cayseele, Prof. dr J.J.M. Theeuwes

The External Advisory Committee (EAC) advises the Managing Director RESAM on research policy and strategy. The EAC is involved in the self-evaluations and VSNU visitations, like the one in 2001. The members are Prof. dr J. van Benthem, UvA, Dr H. Don (CPB) and Prof. dr B. Wolfe, University of Wisconsin, Madison (USA).

Programme Leaders
UvA-Econometrics: Prof.dr J.F. Kiviet
Operations Research & Management: Prof.dr N.M. van Dijk
Equilibrium, Expectation & Dynamics: Prof.dr C.H. Hommes
Actuarial Science: Prof.dr R. Kaas
The Transformation of Europe: Prof.dr R.M.W.J. Beetsma
Human Capital: Prof.dr J. Hartog
Methodology & History of Economics: Prof.dr J.B. Davis & Dr M.J. Boumans
Experimental and Political Economics: Prof.dr F.A.A.M. van Winden
Industrial Economics, Competition & Antitrust: Prof.dr. P. van Cayseele
Amsterdam Economics (SEO): Prof.dr J.J.M. Theeuwes

Address
Faculty of Economics & Business
Universiteit van Amsterdam
Roetersstraat 11
NL-1018 WB Amsterdam
RESAM Bureau, room E6.06
Phone: +31-(0)20-5255261
Fax: +31-(0)20-5254036
resam-ase@uva.nl
<table>
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<th>Name</th>
<th>Programme</th>
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<td>Aalbers, R.F.A.</td>
<td>SEO</td>
<td>SEO</td>
<td>r.aalbers[at]seo.nl</td>
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<td>AE</td>
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<td>Aidis, R.</td>
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<td>-</td>
<td>r.aidis[at]uc.ac.uk</td>
</tr>
<tr>
<td>Al-İbrahim, A.</td>
<td>OR</td>
<td>KE</td>
<td>A.Allİbrahim[at]uva.nl</td>
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<td>Anufriev, M.</td>
<td>EED</td>
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<td>M.Anufriev[at]uva.nl</td>
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<td>Ariza-Rojas, C.</td>
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Appendices
APPENDIX II  Abbreviations

AAE  Aviation Economics (SEO cluster)
ABS  Universiteit van Amsterdam Business School
ABS-RI Universiteit van Amsterdam Business School Research Institute
AE  Algemene Economie (afdeling) Economics (department)
AER  American Economic Review
Afd  Afdeling Department
AgBS  Amsterdam graduate Business School, now ABS
AgBS-RI Amsterdam graduate Business School Research Institute, now ABS-RI
AIAS  Amsterdam Instituut voor Arbeidsstudies Amsterdam Institute for Labour Studies
AIID  Amsterdam Institute for International Development
AIO  Assistent in Opleiding (promovendus) Ph.D.-student
AR  Autoregression
ARCH  Autoregressive Conditional Heteroskedasticity
ASE  Universiteit van Amsterdam School of Economics
BIB  Bibliotheek Library
Burs  Bursaal Ph.D.-student
B/R  Books & Reports
BS  Business Studies (department)
CAPM  Capital Asset Pricing Model
CB  Central Bank
CeNDEF  Center for Nonlinear Dynamics in Economics and Finance
CentER  Center for Economic Research, Tilburg University
CESifo  Joint subsidiary company of Center for Economic Studies at the University of Munich and the Ifo Institute for Economic Research.
CEPR  Centre for Economic Policy Research
CIS  Commonwealth of Independent (countries)
CPNSS  Centre for Philosophy of Natural and Social Sciences
CPB  Centraal Plan Bureau Central Planning Bureau
CPI  Consumer Price Index
CREED  Center for Research in Experimental Economics and Political Decision Making
CSCA  Cognitive Science Center Amsterdam
CUP  Chicago University Press
DNB  De Nederlandsche Bank The Dutch Central Bank
Drs  Doctorandus (Dutch equivalent of master title)
EARIE  European Association for Research in Industrial Economics
EC  European Commission
ECB  European Central Bank
ECN  Energieonderzoek Centrum Nederland
EMU  European Monetary Union
ENABLE European Network for the Advancement of Behavioural Economics
ENCORE Economics Network for Competition & Regulation
ESB  Economisch-Statistische Berichten (journal)
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<td>EU</td>
<td>European Union</td>
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<tr>
<td>EUR</td>
<td>Erasmus Universiteit Rotterdam</td>
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<td>EZ</td>
<td>Ministry of Economic Affairs</td>
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<tr>
<td>FEE</td>
<td>Faculty of Economics and Econometrics</td>
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<td>FEZ</td>
<td>Financial Department</td>
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<td>FGV</td>
<td>Fundacão Getulio Vargas</td>
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<td>FTE</td>
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<td>Facilitaire Zaken</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GLM</td>
<td>Generalized Linear Mixed Models</td>
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<td>GOA</td>
<td>Geconcentreerde OnderzoeksActie</td>
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<tr>
<td>GMM</td>
<td>Generalized Method of Moments</td>
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<td>HGL</td>
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<td>IAA</td>
<td>International Actuarial Association</td>
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<td>IAS</td>
<td>International Accounting Standards</td>
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<td>IBNR</td>
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<td>ICCAM</td>
<td>International Congress on Computational and Applied Mathematics</td>
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<td>IEC</td>
<td>In- &amp; Externe Communicatie</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>ICA</td>
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<td>IPN</td>
<td>Inflation Persistence Network</td>
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<td>IZA</td>
<td>Forschungsinstitut zur Zukunft der Arbeit</td>
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<td>JEL</td>
<td>Journal of Economic Literature</td>
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<td>LNMB</td>
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<td>LSE</td>
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<td>METIS</td>
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<tr>
<td>MSc</td>
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<td>MUB</td>
<td>Wet Modernisering Universitair Bestuur (law on the modernizing of university governance)</td>
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<td>NWO</td>
<td>Nederlandse Organisatie voor Wetenschappelijk Onderzoek</td>
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<td>NWO-MaG</td>
<td>Netherlands Organisation for Scientific Research</td>
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<td>NWO-Social and Behavioural Sciences</td>
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<td>Acronym</td>
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<tr>
<td>NWO-ISW</td>
<td>NWO-Internationalisering Sociale Wetenschappen</td>
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<td>NTU</td>
<td>Nanyang Technological University</td>
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<td>OBP</td>
<td>Ondersteunend &amp; Beheerspersoneel (Support staff)</td>
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<td>ONB</td>
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<td>OZ</td>
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<tr>
<td>OVO</td>
<td>Overig Onderzoek (Non-programme research)</td>
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<td>OWI</td>
<td>Onderwijsinstituut (Teaching Institute)</td>
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<tr>
<td>OZI</td>
<td>Onderzoekinstituut (Research Institute)</td>
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<td>Ph.D.</td>
<td>Philosophy Doctor</td>
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<td>PL</td>
<td>Personele lasten (Costs of personnel)</td>
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<td>PPI</td>
<td>Producern Price Index</td>
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<td>RBC</td>
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<td>RESAM</td>
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<td>S&amp;P</td>
<td>Standard &amp; Poor</td>
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<td>SCHOLAR</td>
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<td>SHUFE</td>
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<td>STREP</td>
<td>Specific Targeted Research or Innovation Project</td>
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<tr>
<td>SWOT</td>
<td>(Analysis of) Strengths, Weaknessess, Opportunities &amp; Threats</td>
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<td>TAR</td>
<td>Threshold Autoregression</td>
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<td>UHD</td>
<td>Universitair Hoofddocent (Associate Professor)</td>
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<td>UMTS</td>
<td>Universal Mobile Telecommunications System</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>UvA</td>
<td>Universiteit van Amsterdam</td>
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<td>VSNU</td>
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Association of Universities in the Netherlands

VU  Vrije Universiteit Amsterdam
     Free University Amsterdam

VWS (Ministerie van) Volksgezondheid, Welzijn en Sport
     Ministry of Health Welfare and Sport

WP  Wetenschappelijk Personeel
     Faculty