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The Research Institute

RESam
**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 FEE to foster the academic ideal of intertwined university research and teaching.

RESAM (Research in EconomicS and econometrics AmsterdaM), is one of the research institutes of the Faculty of Economics & Econometrics. It was established in 1998 after the MUB (Wet Moderniseren Universitair Bestuur (law on the modernizing of university management)) came in effect and it 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).

Embracing the academic ideal of intertwined research and teaching implies broad coverage of research fields and topics. There is no emphasis on research in topics not related to the Faculty’s teaching programme. Research is organised in Research Programmes, 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 instruction and 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 time budget available in the FEE, after deducting time for administrative positions (department chairpersons, curriculum co-ordinators, institute directors), is divided between the two research Institutes, RESAM and AgBS-RI. In principle time is equally allocated to teaching and to research. The department (Afdeling) is compensated by the research institute (RESAM for AE and KE) and the teaching institute (OWI) for research and teaching tasks the department provides. Faculty members in the AE and KE departments are annually assigned time for research on the basis of their publication records in the past three years. In this way RESAM tries to stimulate faculty to increase the quality and quantity of their 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.

- **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 is being linearly reduced in three steps, with a
resulting weight of zero for research published in 2004. The new system has become operational for the research time assignment of the calendar year 2004 which has been calculated in 2003 on the basis of points earned by output published in 2000-2001-2002, for in 2002 a C publication counted for 16.67 points \((2/3 \times 25)\) for the first time. The system will be fully implemented 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:

<table>
<thead>
<tr>
<th>Points</th>
<th>FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 or more</td>
<td>0.5 fte</td>
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<tr>
<td>50-99</td>
<td>0.25 fte</td>
</tr>
<tr>
<td>1-49</td>
<td>0.125 fte</td>
</tr>
<tr>
<td>0</td>
<td>0 fte</td>
</tr>
</tbody>
</table>

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 cooperate, 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.

Aggregate research time remaining after individual allocations have been made is divided among Research Programmes, on the basis of performance (A-level publications, dissertations, reputation in the international research community). RESAM stimulates concentration of the faculty’s research in Research Programmes also by other means (such as a financial bonus for each completed dissertation and an annual amount for conference visits and other academic activities to the research programmes). However, up to now no extra research time has been available for the programme components due to the poor financial situation of the Faculty.

New Ph.D. projects are assigned to supervisors in an open competition on the basis of research proposals submitted to RESAM, after ranking of the proposals by a committee specifically appointed for this task. The total number of available positions is usually 27 fte per annum. This is determined from the targets set at the aggregate FEE level and a subsequent division between RESAM and AgBS-RI. Assignment is based on quality and relevance of the proposal, the supervision record of the applicant, and a balanced division of Ph.D. positions across the research programmes. Several Ph.D. positions are earmarked as a bonus for external research funding or for newly hired professional staff. When only a few positions are available in a given year RESAM may choose not to have an open competition but to assign positions to professors on the basis of strategic considerations or performance of the research programme.

At least once a year RESAM hosts a convocation of the Council of Programme Leaders to discuss the results of the past year and plans for the future. The Director of the research institute, furthermore, has contact with the Dean on a regular basis.

**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 (Amsterdam graduate Business
School Research Institute) was established to stimulate research in business studies (with the three former RESAM programmes of Accounting, Organisations and Society, Corporate Finance and Financial Systems and Information Management). RESAM continued with eight research programmes plus the SEO.  

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 faculties management, but develops in an open competitive environment. General policy issues are discussed at the annual convocation of the Council of Programme Directors.

Research highlight: Arthur Schram. How to explain homo economicus' cooperative behavior?

Most economic models and theories take self-interested agents as starting point for explaining economic behavior. In the economic practice however, as studied in economic experimental laboratories, economists find many forms of formal and informal cooperation between people. The biologists Martijn Egas and Maus Sabelis, my colleague Arno Riedl and I try to find an explanation for this behavior in evolutionary biology. Economics has a reputation of abstract theories and game theoretical models. It is however, also an experimental science. The models developed by experimental economists claim to explain behavior observed in the laboratories better than other economic theories. This kind of research is also conducted at the FEE, in the Center for Research in Experimental Economics and Political Decision-making (CREED). When you put a set of people in a laboratory and give them money and some rules that make them dependent on each other, very often some kind of cooperation develops; a group process in which self-interest becomes subdued to group interest. People seem to realize that self-interest can be better served by not pushing it too much and by putting group interest first.

Support of NWO will make it possible for this unique combination of economists and biologists to do large scale research on cooperative behavior and to appoint a set of young researchers to work on this project. We are not only interested in the emergence of cooperation but also how it develops into institutions and organizations. In the economy, institutions are central: the market, the stock market, banks and insurance companies, political and other governance organizations, these are all institutionalized forms of cooperation. As yet, however, there are no satisfactory explanations for the emergence and existence of institutionalized social behavior. Our research group will investigate how and why social institutions emerge simultaneously with the development of social behavior. We will simulate situations in which a group of individuals can do much better by each individual sacrificing the direct own interest in favor of the group well-being. This way we hope to find explanations for the emergence of norms and values in the economy and for the influence of informal networks and formal institutions such as the government and labor unions.

Questions around cooperative behavior and institutions are important themes in evolutionary biology. Cooperative behavior has under many species taken the form of some kind of institution. Think of the organization of a beehive with its task division, for instance. In human society institutions are highly developed because of our communication skills and techniques. This makes humans very interesting ‘guinea pigs’ for research on cooperative behavior.

Six years ago the biologist Ingrid Seinen started her Ph.D. research at CREED on the evolutionary biological basis of cooperative behavior. This started the dialogue between biologists and economists on a topic that is really hot today. Since the 1960’s biologists had neglected group selection. The attention had shifted to the evolutionary advantage of individuals that free ride on the group. The question of why there is social and cooperative behavior at all could, however, not be explained. Biologists now realize that cooperative behavior cannot be explained purely from kinship relations, indirect reciprocity seems the best alternative candidate explanation.

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1 In 2004 a new research programme has been established: ENCORE. This small programme conducts research in the field of Industrial Organization, with an emphasis on issues of competition and regulation.

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 RESAM’s research programmes.
Chapter 2: Input

Personnel policy and human resource management is the domain of the department chair (Afdelingsvoorzitter). Although, using the system to allocate research time described above, RESAM encourages the department 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.

2.1. Researchers and other personnel

The tables below give some information on RESAM faculty. Most faculty are in the ranks of professor and Ph.D. student. The number of post-docs has increased substantially, to 20, in 2002 and 19 in 2003. In 2000 only 11 postdocs worked at the FEE and their numbers were even less in the years before. The share of women in academic positions is still low in all categories except Ph.D. students although a slight decrease can be detected there. Only at SEO a rather balanced mix of male and female researchers can be found. The large share of women in ‘Other Scientific Staff’ can be mainly attributed to SEO.

Although most researchers are paid through regular funding, about 40% are ‘tweede geldstroom’ - researchers, showing the FEE has done well in attracting external funds. On the whole RESAM researchers have had no trouble to adapt to the stricter publication norms, in fact most have continued performing on a high level without needing to change their strategy.

Table 1: Research staff at institutional level

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<th>2003</th>
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<td>0.60</td>
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Table 2: Research staff at programme level

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<th>2003</th>
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<td><strong>Equilibrium, Expectations &amp; Dynamics</strong></td>
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Table 2: Research staff at programme level (continued)

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<tr>
<th>Experimental &amp; Political Economcs</th>
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<th>2001</th>
<th>2002</th>
<th>2003</th>
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<tbody>
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Table 3: ranks at programme level

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<th>Uhd</th>
<th>Ud</th>
<th>Oc</th>
<th>Pdoc</th>
<th>Ph.D.</th>
<th>Guest/Other</th>
<th>Total</th>
</tr>
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<td>2.50</td>
<td>1</td>
<td>1.50</td>
<td>6</td>
<td>0.38</td>
</tr>
<tr>
<td>Methodology &amp; History of Economics</td>
<td>4</td>
<td>0.45</td>
<td>3</td>
<td>0.50</td>
<td>1</td>
<td>0.40</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Experimental &amp; political economics</td>
<td>4</td>
<td>1.53</td>
<td>2</td>
<td>0.53</td>
<td>1</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Other research economics</td>
<td>0</td>
<td>0.00</td>
<td>1</td>
<td>0.13</td>
<td>1</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Foundation for economic research</td>
<td>5</td>
<td>1.78</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>25</td>
<td>2.12</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>11.43</td>
<td>16</td>
<td>7.75</td>
<td>22</td>
<td>5.14</td>
<td>26</td>
<td>2.60</td>
</tr>
</tbody>
</table>

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

2.2. Resources, funding and facilities

In 2003 RESAM had to deal with several cutbacks. The second research institute of the FEE, AgBS-RI, was formally established in 2002. Budget was first allocated for the fiscal year 2004. In 2003, however, the Dean decided to split the available non-staff budget between the two research institutes on the basis of fte. This meant that RESAM received approximately two-thirds of its original budget. This severely limited this institutes policy to fund research activities since well over 80% of all those who received funding (TI-fellow grants, grants for conference visits etc.) were RESAM researchers. i.e. this meant less money for equal responsibilities.

Table 4: Budget 2003 RESAM

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government grant</td>
<td>4.3</td>
<td>5.3</td>
<td>5.3</td>
<td>5.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External sources</td>
<td>1.5</td>
<td>1.3</td>
<td>2.0</td>
<td>1.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.8</td>
<td>6.6</td>
<td>7.3</td>
<td>6.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expenditures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel (PL)</td>
<td>5.1</td>
<td>5.4</td>
<td>6.0</td>
<td>5.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>academic staff</td>
<td>4.2</td>
<td></td>
<td></td>
<td>4.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>administrative staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>others</td>
<td>0.2</td>
<td></td>
<td></td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (OL)</td>
<td>0.9</td>
<td>0.6</td>
<td>1.6</td>
<td>1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.0</td>
<td>6.0</td>
<td>7.6</td>
<td>6.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Because of the overall poor financial situation of the FEE, cutbacks had to be made at every level. For RESAM this meant that the financial bonus for each completed dissertation to research programmes had to be withdrawn. In 2000, about € 110,000,- was reserved for this; a rather large sum compared to the overall other funds directly available to researchers (Fellow Budget, budgets for Conference Visits and Organisation). In addition to this, the Dean was forced to freeze all vacancies in 2003. This measure had the unfortunate consequence of diminishing the overall number of Ph.D. students working at the Faculty. Although beneficial to RESAM’s short-term financial situation it wasn’t without detriment to one of the institute’s core activities and might prove to have some negative financial consequences in the future since research institutes will be partially funded on the basis of the number of successfully defended theses.

These budget-cuts notwithstanding, RESAM decided to pursue its policy of giving individual programmes their own budgets. The money reserved for Tinbergen Fellows, visits and organisation of conference and of the planned magazine was directly allocated to the Research Programmes on the basis of fte and relative performance. Detailed information can be found in the individual programme chapters under ‘resources and funding’, totals are shown in the second part of table 5, below. The main reason why programmes have only used two-thirds of the money allotted to them is because this was done fairly late in the year, and individual programmes needed time to make a model for internal allocation. Because the money carries over to the next year the funds will not be lost to the research programmes.

Table 5.1: Funding and expenditure at institutional level: 1st flow of funds

<table>
<thead>
<tr>
<th>COST CENTRES*</th>
<th>Budget 2003</th>
<th>Exploitation 2003</th>
<th>%Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>73001 Academic Staff</td>
<td>3,574,200-</td>
<td>3,588,960-</td>
<td>100.4</td>
</tr>
<tr>
<td>73002 Ph.D. students</td>
<td>1,156,800-</td>
<td>1,000,584-</td>
<td>86.5</td>
</tr>
<tr>
<td>73011 Non-academic staff RESAM</td>
<td>701,200-</td>
<td>696,578-</td>
<td>77.8</td>
</tr>
<tr>
<td>73036 Resam Quarterly</td>
<td>12,000-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73037 Inaugural lectures</td>
<td>7,900-</td>
<td>8,415-</td>
<td>106.5</td>
</tr>
<tr>
<td>73039 Bonus for Ph.D. students</td>
<td>19,000-</td>
<td>13,163-</td>
<td>69.3</td>
</tr>
<tr>
<td>73040 Other</td>
<td>2,000-</td>
<td>5,554-</td>
<td>277.7</td>
</tr>
<tr>
<td>73041 Tinbergen Research Institute</td>
<td>85,000-</td>
<td>102,220-</td>
<td>120.3</td>
</tr>
<tr>
<td>73042 Tinbergen Graduate School</td>
<td>153,000-</td>
<td>169,361-</td>
<td>110.7</td>
</tr>
<tr>
<td>73043 Tinbergen Fellows</td>
<td>30,000-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73044 Ph.D. networks</td>
<td>20,000-</td>
<td>15,958-</td>
<td>79.8</td>
</tr>
<tr>
<td>73045 Bonus for thesis supervisors</td>
<td>17,472-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73046 Conference visits</td>
<td>28,000-</td>
<td>264-</td>
<td>0.9</td>
</tr>
<tr>
<td>73047 Organisation of conferences</td>
<td>10,000-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73051 Scholar</td>
<td>6,807-</td>
<td>8,827-</td>
<td>129.7</td>
</tr>
<tr>
<td>73052 Other matching ‘2de geldstroom’</td>
<td>45,000-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73056 Data collection</td>
<td>10,000-</td>
<td>22,170-</td>
<td>221.7</td>
</tr>
<tr>
<td>73095 Income research institute</td>
<td>5,231,283</td>
<td>5,055,200</td>
<td>96.6</td>
</tr>
<tr>
<td>73099 Compensation research institute</td>
<td>108,900</td>
<td>108,900</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total profitcenter</strong></td>
<td><strong>520,724-</strong></td>
<td><strong>485,425-</strong></td>
<td><strong>93.2</strong></td>
</tr>
</tbody>
</table>

* Several costs centres that now fall under AgBS-RI have been excluded. The actual total budget was € 9,076,- higher and the actual total exploitation € 7,023,- higher if these are included.
RESAM researchers were very successful in securing external funding. Among the grants received in 2003 were, a major research grant (1.25 million euro, NWO-VICI) for the project “Licence auctions: theory, policy, and experiments” (Jacob Goeree, CREED), an NWO (post-doc) grant for the project “The co-evolution of social behavior and social institutions: a combined theoretical and experimental approach”, joint with biologists from the Universiteit van Amsterdam, in the NWO-program Evolution and Behaviour (Arthur Schram and Arno Riedl, CREED), and an NWO VIDI research grant for the proposal “Intergenerational mobility and the nature and nurture of economic outcomes” (Erik Plug, Human Capital). Furthermore Kees Jan van Garderen’s KNAW Research Fellowship was extended for the proposal on “Conditional Inference and Small Samples in Econometrics” (Van Garderen, UvA-Econometrics).

Table 5.2: 2003 funding and expenditure at programme level: 1st flow of funds

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Budget</th>
<th>Exploitation</th>
<th>% budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eerste geldstroom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010031 Empirical Econometric Methods</td>
<td>7,826</td>
<td>7,022-</td>
<td>89.7</td>
</tr>
<tr>
<td>2010032 Operations Research</td>
<td>3,782</td>
<td>4,442-</td>
<td>117.4</td>
</tr>
<tr>
<td>2010033 Actuarial Science</td>
<td>2,991</td>
<td>354-</td>
<td>11.8</td>
</tr>
<tr>
<td>2010034 Transformation of Europe</td>
<td>9,150</td>
<td>5,757-</td>
<td>62.9</td>
</tr>
<tr>
<td>2010035 Methodology, History of Econ.</td>
<td>2,286</td>
<td>2,411-</td>
<td>105.5</td>
</tr>
<tr>
<td>2010036 Human Capital</td>
<td>10,208</td>
<td>8,923-</td>
<td>87.4</td>
</tr>
<tr>
<td>2010037 Experimental Political Econ.</td>
<td>8,961</td>
<td>5,558-</td>
<td>62.0</td>
</tr>
<tr>
<td>2024002 CeNDEF**</td>
<td>6,223</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2010038 SEO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>51,427</td>
<td>34,467-</td>
<td>67.0</td>
</tr>
</tbody>
</table>

** CeNDEF programme funds were added to the ‘2de geldstroom’ matching of this NWO programme.
Research highlight: Hessel Oosterbeek. Explaining Wage Inequality.

Wage inequality differs substantially across countries, and is larger in the US than in continental European countries. This is especially the case at the bottom of the wage distribution. Economists debate about the causes of these differences. Some argue that differences in institutions across countries are the driving force, while others make a case for differences in demand and supply forces. According to the institutions-explanation, high minimum wages, employment protection and a different role for unions are responsible for the relatively favorable labor market position of the low skilled in countries like Sweden, Germany, Switzerland and the Netherlands. According to the demand and supply-explanation, relative wages of low skilled workers in the US are lower than elsewhere as a result of an abundant supply of low skilled workers in the US.

Measurement of skills such that they are comparable across countries complicates the testing of the demand and supply-explanation. In an influential study Cornell University economists Blau and Kahn measured skills as a composite of years of schooling and years of work experience. On the basis of this skill measure they divided the US workforce into three equally sized skill groups: low, intermediate and high. Employees in ten other countries are then also assigned to skill groups based on the cutoffs between the skill groups in the US. The test is relatively straightforward: if the average wage of low skilled workers compared to intermediate skilled workers is lower in the US than in Germany one would expect that low skilled workers are relatively more abundant (compared to intermediate skilled workers) in the US than in Germany. Based on this procedure, Blau and Kahn dismissed the demand and supply explanation because they find no relation between the relative wage position of a skill category and its relative supply.

In our paper "Explaining international differences in male skill wage differentials by differences in demand and supply of skill" (Edwin Leuven, Hessel Oosterbeek and Hans van Ophem, published in the Economic Journal 114 (April 2004), 466-486) we argue that Blau and Kahn’s procedure breaks down because the skill measure they construct implicitly assumes that years of schooling and years of working experience are comparable across countries. It therefore ignores differences in education systems and post-school training systems across countries, and will result in wrong rankings if these differences matter. To illustrate the issue, Blau and Kahn's numbers imply that half of the German workforce belong to the lowest third of the workforce in the US. A conclusion that might be difficult to believe.

Instead of using education and training outcomes, our paper relies on information from literacy and numeracy tests that were developed with the explicit aim of being comparable across countries. Employees in fifteen different countries participated in the so-called International Adult Literacy Survey. Performing the analysis using this direct skill completely reverses the conclusion obtained by Blau and Kahn. A larger relative net supply of a skill group is associated with lower relative wages of that same skill group. More specifically, low skilled employees are relatively worse off in the US than their counterparts in continental Europe, not because they lack the protective labor market institutions but because there are so many of them. Reducing the supply of low skilled employees may therefore after all be an effective means to improve their relative wages.

Chapter 3: Current state of affairs

3.1. Processes in research, internal and external collaboration

RESAM allocates resources, after evaluating past performance. RESAM stimulates and facilitates application for external funding (NWO, KNAW, EU). In general, the research institute tries to stimulate and active research environment, by a financing weekly general seminar, where participants from all Research Programmes meet, and it tries to assist Programme members, when necessary, by providing them with information and administrative support.

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 tries to create 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 several seminars and publishing a discussion paper series.

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 last 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 will be 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 will now emerge 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).

The number of students starting a Ph.D. training has declined strongly in recent years (four projects started in 2003, thirty in 2002, four in 2001, thirteen in 2000 and seven project will probably start in 2004). 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 and 2004 was a consequence of a financial crises.

Table 6: Ph.D. graduations by cohort

<table>
<thead>
<tr>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects started</td>
<td>24</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>16</td>
<td>17</td>
<td>15</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td>Fraction graduated from total</td>
<td>0.63</td>
<td>0.73</td>
<td>0.85</td>
<td>0.54</td>
<td>0.62</td>
<td>0.69</td>
<td>0.29</td>
<td>0.20</td>
<td>57%</td>
</tr>
<tr>
<td>Graduated within 60 months</td>
<td>10/15</td>
<td>6/8</td>
<td>5/11</td>
<td>3/7</td>
<td>3/8</td>
<td>10/11</td>
<td>5/5</td>
<td>3/3</td>
<td>45/68</td>
</tr>
<tr>
<td>Fraction graduated within 60 months</td>
<td>0.67</td>
<td>0.75</td>
<td>0.45</td>
<td>0.43</td>
<td>0.38</td>
<td>0.91</td>
<td>1.00</td>
<td>1.00</td>
<td>70%</td>
</tr>
<tr>
<td>Average duration to completion in months</td>
<td>66.1</td>
<td>58.8</td>
<td>63.6</td>
<td>66.6</td>
<td>60.3</td>
<td>54.0</td>
<td>52.6</td>
<td>48.8</td>
<td>58.85</td>
</tr>
</tbody>
</table>

As can be seen in table 6, on average, graduates needed 59 months from start of the contract to actual graduation. If a thesis is 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,

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4 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 concommitant rights and legal positions.

5 Including all the Ph.D. students of the faculty (also those now under the Amsterdam graduate Business School Research Institute).
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 59 months for the first 57%, compared to a formal minimum of some 54 months is not bad. Reason for real concern is the overall low percentage of graduations (57%) although it proves difficult to take measures to increase this percentage.

<table>
<thead>
<tr>
<th>Ph.D. students 01/01/03</th>
<th>Ph.D. students 31/12/03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bajdechi, S.</td>
<td>Al-Ibrahim, A.</td>
</tr>
<tr>
<td>Brouns, G.</td>
<td>Bajdechi, S.</td>
</tr>
<tr>
<td>Cardoso, P.</td>
<td>Cheng, Y.</td>
</tr>
<tr>
<td>Cheng, Y.</td>
<td>Daniels, T.</td>
</tr>
<tr>
<td>Dindo, P.</td>
<td>Dindo, P.</td>
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<tr>
<td>Ferrer-i-Carbonell, A.</td>
<td>Gillet, J.</td>
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<tr>
<td>Gillet, J.</td>
<td>Gustafsson, E.</td>
</tr>
<tr>
<td>Gustafsson, E.</td>
<td>Haijema, R.</td>
</tr>
<tr>
<td>Haajema, R.</td>
<td>Heemeijer, P.</td>
</tr>
<tr>
<td>Heemeijer, P.</td>
<td>Hoog, S. van der</td>
</tr>
<tr>
<td>Hoog, S. van der</td>
<td>Hopfensitz, A.</td>
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<td>Hopfensitz, A.</td>
<td>Horen, N. van</td>
</tr>
<tr>
<td>Horen, N. van</td>
<td>Joseph, A.</td>
</tr>
<tr>
<td>Hu, Y.</td>
<td>Klaveren, C. van</td>
</tr>
<tr>
<td>Joseph, A.</td>
<td>Kuijen, G. van der</td>
</tr>
<tr>
<td>Klaveren, C. van</td>
<td>Kusmierski-Bilard, D.</td>
</tr>
<tr>
<td>Kuijen, G. van der</td>
<td>Laeven, R.</td>
</tr>
<tr>
<td>Kusmierski-Bilard, D.</td>
<td>Leefmans, N.</td>
</tr>
<tr>
<td>Laeven, R.</td>
<td>Maximiano, S.</td>
</tr>
<tr>
<td>Leefmans, N.</td>
<td>Panchenko, V.</td>
</tr>
<tr>
<td>Maximiano, S.</td>
<td>Ploeg, A. van der</td>
</tr>
<tr>
<td>Panchenko, V.</td>
<td>Reuben-Paris, E.</td>
</tr>
<tr>
<td>Ploeg, A. van der</td>
<td>Ribeiro, M.</td>
</tr>
<tr>
<td>Reuben-Paris, E.</td>
<td>Rusinova, D.</td>
</tr>
<tr>
<td>Ribeiro, M.</td>
<td>Schouwstra, M.</td>
</tr>
<tr>
<td>Rusinova, D.</td>
<td>Schrager, D.</td>
</tr>
<tr>
<td>Schouwstra, M.</td>
<td>Schreuder, K.</td>
</tr>
<tr>
<td>Schrager, D.</td>
<td>Sluis, J. van der</td>
</tr>
<tr>
<td>Schreuder, K.</td>
<td>Weide, R. van der</td>
</tr>
<tr>
<td>Sluis, J. van der</td>
<td>Yergou, S.</td>
</tr>
<tr>
<td>Ule, A.</td>
<td></td>
</tr>
<tr>
<td>Weide, R. van der</td>
<td></td>
</tr>
<tr>
<td>Yergou, S.</td>
<td></td>
</tr>
</tbody>
</table>

Total: 33 Total: 30
Same: 28 Same: 28
Other: 5 Other: 2

Table 7: Ph.D. students throughout 2003

3.2. Academic reputation
In 2003, CentER, the research institute in economics of Tilburg University, again drew up a ranking of Dutch economists and one of Dutch institutes. FEE ranked 4th, the same position it occupied in the 1999 ranking but in 2003 it was just behind the number three (VU) whereas in 1999 it ranked only slightly above the number five. Seven FEE researchers (six from RESAM) were listed in the Top 40 of Dutch economists, CREEDs Peter Wakker taking the first position. Since the Tilburg rankings were based on rather old publication records it is to be expected that the FEE will do even better in the years to come.

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 FEE ranking 17th. This puts FEE ahead of all

---

6 Only the publications from 1997-2001 on the ISI CD-ROMs were used. Because of this several publications from 2001 that were not on the CD-ROM were excluded from the calculation.

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. FEE published 86, Tilburg 80 pages, and all other Dutch institutions below 40 pages.

Table 8: Editorial positions

<table>
<thead>
<tr>
<th>Name</th>
<th>Editorship</th>
<th>Journal</th>
<th>Ranking</th>
<th>IF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bethlehem, J.</td>
<td>Editor</td>
<td>Journal of the Royal Statistics Society, Series A</td>
<td>B</td>
<td>1.315</td>
</tr>
<tr>
<td>Blaauw, M.</td>
<td>Member editorial board</td>
<td>Feminist Economics</td>
<td>B</td>
<td>0.361</td>
</tr>
<tr>
<td>Bleichrodt, H.</td>
<td>Associate editor</td>
<td>European Economic Review</td>
<td>A</td>
<td>0.726</td>
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<tr>
<td>Bleichrodt, H.</td>
<td>Associate editor</td>
<td>Journal of Health Economics</td>
<td>B</td>
<td>1.716</td>
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<tr>
<td>Bleichrodt, H.</td>
<td>Member editorial board</td>
<td>Medical Decision Making</td>
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<td>1.915</td>
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<tr>
<td>Dhaene, J.</td>
<td>Associate editor</td>
<td>Insurance: Mathematics and Economics</td>
<td>A</td>
<td>0.606</td>
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<tr>
<td>Ellman, M.J.</td>
<td>Associate editor</td>
<td>Cambridge Journal of Economics</td>
<td>B</td>
<td>0.688</td>
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<td>Groene, J.K.</td>
<td>Associate editor</td>
<td>Games and Economic Behavior</td>
<td>A</td>
<td>0.887</td>
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<tr>
<td>Gootjes, J.G. de</td>
<td>Editor-in-chief</td>
<td>International Journal of Forecasting</td>
<td>B</td>
<td>0.500</td>
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<tr>
<td>Groenews, M.J.</td>
<td>Editor</td>
<td>Insurance: Mathematics and Economics</td>
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<td>Hartog, J.</td>
<td>Member editorial board</td>
<td>Journal of Computational and Applied Mathematics</td>
<td>B</td>
<td>0.564</td>
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<td>Labour Economics</td>
<td>B</td>
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<tr>
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<td>Co-editor</td>
<td>Review of Industrial Organization</td>
<td>B</td>
<td>0.350</td>
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<tr>
<td>Hommes, C.</td>
<td>Associate editor</td>
<td>Computational Economics</td>
<td>B</td>
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<td>Journal of Economic Dynamics and Control</td>
<td>A</td>
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<td>B</td>
<td>0.872</td>
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<td>1.167</td>
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<td>Quantitative Finance</td>
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<td>Kaas, R.</td>
<td>Managing editor</td>
<td>Insurance: Mathematics and Economics</td>
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<td>Klebergen, F.R.</td>
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<td>Economics Letters</td>
<td>B</td>
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<td>Feminist Economics</td>
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<td>History of Political Economy</td>
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<td>Associate editor</td>
<td>Economics of Education Review</td>
<td>B</td>
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<tr>
<td>Praag, B.M.S. van</td>
<td>Associate editor</td>
<td>Journal of Economic Inequality</td>
<td>B</td>
<td></td>
</tr>
<tr>
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<td>Journal of Economics</td>
<td>B</td>
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<tr>
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<td>Small Business Economics</td>
<td>B</td>
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<td>Experimental Economics</td>
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<td>Advisory editor</td>
<td>Computers and Operations Research</td>
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<td>Member editorial board</td>
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<td>1.065</td>
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<tr>
<td>Wakker, P.P.</td>
<td>Associate editor</td>
<td>Journal of Risk and Uncertainty</td>
<td>A</td>
<td>0.846</td>
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<td>Wakker, P.P.</td>
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<td>Management Science</td>
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<td>Public Choice</td>
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<td>Wolthus, H.</td>
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<td>Insurance: Mathematics and Economics</td>
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</table>

A ranking published in 2003, drawn up for the European Economic Association, puts the FEE at rank 9 in Europe. The ranking covers the period 1995-1999 and is based on the thirty most prestigious journals. Tilburg takes up rank 1 in Europe, Erasmus is at 14, VU at 30, Groningen at 59, Maastricht at 74. 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).

As table 8 indicates RESAM faculty members take up many positions as editors or associate editors of top-ranking international journals. Membership of editorial boards is also frequent. Table 9 shows that even relatively recent publications are well-cited by the academic community. Overall, RESAM clearly has managed to become one of the major research institutes in Europe.

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3.3. Overview of the results

Table 10.1: Aggregated results of the institute

<table>
<thead>
<tr>
<th>MEETIS code</th>
<th>Research programme</th>
<th>Ac.ref (excl. books)</th>
<th>Ac.ref (books)</th>
<th>Ac.nonref (excl. books)</th>
<th>Ac.nonref (books)</th>
<th>Working &amp; Discussion Papers</th>
<th>Prof. publ.</th>
<th>Pop. publ.</th>
<th>Fte wp incl Ph.D.'s</th>
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<td>RES - EEM</td>
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<td>A 5 8 B 1 C 1</td>
<td>A 3 1 B 15</td>
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<td>A 15 B 5 C 1</td>
<td>A 13 13</td>
<td>A 37</td>
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<tr>
<td>RES - E&amp;D</td>
<td>Equilibrium, Expectations and Dynamics</td>
<td>A 3 8 B 13 C 11</td>
<td>A 13 7</td>
<td>A 33</td>
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<td>RES - ACT</td>
<td>Actuarial Science</td>
<td>A 2 10 B 4 C 11</td>
<td>A 11 7</td>
<td>A 33</td>
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<td>RES - TOE</td>
<td>Transformation of Europe</td>
<td>A 4 9 B 2 C 19</td>
<td>A 15</td>
<td>A 5 1</td>
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<tr>
<td>RES - HUM</td>
<td>Human Capital</td>
<td>A 4 15 B 5 C 13</td>
<td>A 13 13</td>
<td>A 37</td>
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<td>RES - HME</td>
<td>Methodology &amp; History of Economics</td>
<td>A 2 3 B 9 C 6</td>
<td>A 2 6</td>
<td>A 3</td>
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<tr>
<td>RES - EXP</td>
<td>Experimental &amp; Political Economics</td>
<td>A 10 B 3 C 11</td>
<td>A 39</td>
<td>A 1 3</td>
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<td>SEO - SEO</td>
<td>SEO-Amsterdam Economics</td>
<td>A 1 B 51 C 1</td>
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<td>RES-OVO</td>
<td>Other Research KE</td>
<td>A 2 B 2</td>
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<td>RES - OVO</td>
<td>Other Research AE</td>
<td>A - B -</td>
<td>A -</td>
<td>A -</td>
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<td>Total</td>
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<td>Total* 26 82 38 17 4 107 30 167 51 70 25.83</td>
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</table>

Figure 2: Number of publications 1996-2003

B/R=Books and reports, ONB=unknown

10 RESAM has calculated the number of citations of it’s researchers using the ISI database available on the Internet. The results are presented above in table 6. The calculation has been done in the following way. First, within a two-week time span, (summer 2003) a query using the ISI database has been done using the names of all RESAM researchers and an additional check was made using the lists of publications of the researchers. In cases of ’difficult’ names (i.e. names with a possibility of being spelt in more than one way) two or more queries were done (for example using ‘wijnbergen s*’ and ‘vanwijnbergen s*’). Only researchers that were cited 50 or more times are listed.

11 As of this year, only publications of faculty on which their UvA-affiliation is mentioned, will be counted in the tables and figures.
Table 10.2: Aggregated results of the institute

<table>
<thead>
<tr>
<th>RESAM</th>
<th>2003</th>
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<tbody>
<tr>
<td>1) Academic publications</td>
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<tr>
<td>a) in refereed journals</td>
<td>A 26</td>
</tr>
<tr>
<td></td>
<td>B 62</td>
</tr>
<tr>
<td></td>
<td>C 14</td>
</tr>
<tr>
<td>b) in other journals</td>
<td></td>
</tr>
<tr>
<td>c) book chapters</td>
<td>A 8</td>
</tr>
<tr>
<td></td>
<td>B 16</td>
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<tr>
<td></td>
<td>C 4</td>
</tr>
<tr>
<td>Other</td>
<td>25</td>
</tr>
<tr>
<td>d) in proceedings</td>
<td>12</td>
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<tr>
<td>Total</td>
<td>265</td>
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<tr>
<td>2) Monographs</td>
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<tr>
<td>A</td>
<td>1</td>
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<td>B</td>
<td>2</td>
</tr>
<tr>
<td>C</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
<tr>
<td>3) Ph.D. theses</td>
<td>6</td>
</tr>
<tr>
<td>4) Professional publications</td>
<td>51</td>
</tr>
<tr>
<td>5) Popular publications</td>
<td>70</td>
</tr>
<tr>
<td>6) Working papers</td>
<td>167</td>
</tr>
<tr>
<td>Total</td>
<td>563</td>
</tr>
</tbody>
</table>

As Tables 10.1 and 10.2, and Figures 2 indicate, the total number of refereed publications is not much higher than in 1996, but the quality level has increased substantially. A and B level publications in journals are now structurally more frequent than five years ago.

Figure 3: Number of dissertations

Figure 2 shows a slow but steady increase in the number of A publications over the last 6 years. We should note however, that the ranking of publications is not constant over time. A systematic re-

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An explanation of the categories follows here. A: FEE candidate who graduated at the FEE (fully internal), B: candidate from outside who graduated at the FEE (prepared externally). Since both A and B dissertations were defended at the FEE they count for the total of ‘FEE-dissertations’. C: FEE candidate graduated elsewhere, D: FEE promotor supervised an external candidate who graduated elsewhere.
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.

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

The number of dissertations has dropped to six in 2003. This was mainly due to the fact that rather many dissertations were successfully defended in the previous two years. 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 dissertations refer to RESAM only whereas before they included the output of the research programmes of the research institute of the AgBS. It is expected that numbers will again start to increase in 2004.

13 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.
Chapter 4: Analysis, perspectives and expectations for the institute

4.1. SWOT Director RESAM
The major strength of the research institute is the general outlook and orientation of faculty members. There is very active, lively research climate, with high ambitions and much interaction and exchange.

Both in quantity and in quality, publications are at high level. The association with the Tinbergen Institute provides an excellent Ph.D. training; TI can be ranked among the top graduate schools in Europe. Faculty members perform well in searching external funding from national (NWO, KNAW) and international (EU) sources.

Still, there are weaknesses. Success in obtaining external funding is not equally distributed among Research Programmes, and some obtain no external funding at all. Publications are in some cases, unevenly distributed within Programmes, and there is scope for raising the bottom of this distribution.

The level of ambition within RESAM is generally quite high. The dynamic situation in Europe, with growing intensity of competition for students and research faculty, openness and transparency of quality levels and active interaction among research groups, provides new opportunities to carve out a reputation at the European level and beyond. RESAM faculty members take up this challenge and aim for research performance to seize this opportunity. Most Programme Directors perceive their Programme as ranking among the best in Europe, and some aim for true leadership in the sense of influencing the international research agenda.

But certainly there are threats and hurdles. RESAM Research Programmes have gained international reputation, but without significant funding to provide excellent research opportunities further growth will not be possible, and deterioration may set in. The increased openness of the international research community and increased mobility of faculty generates a more competitive labour market, and attracting and keeping highly qualified faculty is not easy.

Given the ambitions, opportunities and threats, RESAM sees no reason for changes in its objectives an research strategy. RESAM’s general strategy seems to work quite well, with specific minimum research output standards at the individual level, general measures to enhance an active, ambitious research climate, discussion of goals and performances with individual Programme Directors to discuss common concerns and to share the responsibility for good collective performance.

4.2. Assessment Council of Programme Leaders
Overall, the Council has reason to be quite satisfied with the results obtained over the last couple of years and in 2003 in particular. Not only has the number of A and B-level publications increased significantly, which is reflected in the high number of researchers in the 2003 edition of the Tilburg Top 40 of Dutch economists, most of the research groups have also proven to be viable and are highly active in research, as is shown by the fact that many seminar series have been organised, which provide valuable opportunities for exchange and interaction. If we continue this trend, we will undoubtedly remain one of the major European universities as far as research is concerned. The clear objectives set and the consistent faculty-policy concerning quality of research have certainly contributed much to these results. Furthermore, the atmosphere is good and a general positive and enthusiastic outlook can be detected.

There are, however, also points of concern. The first and foremost is the current financial constraint under which the faculty has to operate. There are too few funds for basic necessities such as for conference visits, inviting guests, conducting experiments or buying data. The travel money for a very vulnerable group, the Ph.D. students, has also been cut back by the Tinbergen Institute in 2002 and no solution for this has yet been presented.
Secondly, as has been shown above, the Faculty is on the right track in creating a top-level research institute in economics and econometrics, efforts will need to be continued to remain on this track. The best universities in the U.S. are constantly searching for top-level researchers and the departure of one or two of these researchers would prove to be a serious danger to the FEE’s ambition. The FEE needs to further improve it’s research environment so that good researchers feel welcome and are able to realize their full potential.

Finally the Council is basically optimistic about the developments at the Tinbergen Institute several issues need to be addressed. Not all fields in which research is done by RESAM programmes are represented in the TI, notably statistics, actuarial science and the history and methodology of economics. This also has implications for the TI as a graduate school. The TI programme is not suited for all RESAM-students and might prove to be holding back the progress of Ph.D.’s with projects in specific fields. On the other hand, creating a small pool of excellent mphil-students from which Ph.D.’s can be selected is seen as a positive development.
B

The Research Programmes

RESam
**UvA-Econometrics**

**Programme director:** Prof. dr J.F. Kiviet  
**Department:** Quantitative Economics (KE)  
**METIS-code:** uva/fee/res/eem/prog  
**JEL-classification:** C  
**Web-address:** www.fee.uva.nl/ke/UvA-Econometrics  
**VSNU-scores:** Quality: 5, Productivity: 3, Relevance: 3, Viability: 4

**Members of the research group and research in FTEs**

<table>
<thead>
<tr>
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| Total 1st flow of funds | 5.36 | 3.30 | 4.76 | 4.88 | 5.95 | 5.94 |
| Total 2nd flow of funds | 0.50 | 1.75 | 1.75 | 1.75 | 1.80 | 1.80 |
| Total 3rd flow of funds | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total 1st f.o.f. excl. Ph.D."s | 3.96 | 2.15 | 3.61 | 3.73 | 4.15 | 4.14 |
| Total 1st-3rd flow of funds | 5.86 | 5.05 | 6.51 | 6.63 | 7.75 | 7.74 |
| Ph.D. students | 1.40 | 1.15 | 1.15 | 1.15 | 1.80 | 1.80 |

**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

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14 In this Annual Report the rectification ('comp') column (in the tables showing research in fte for each programme) is used to administer several adjustments. One of these is to indicate the difference between allotted research time and time that has actually been spent on research. By doing this no attempt is made to recalculate allotted research time (i.e. RESAM expenditure) but just to administer the actual time that individual researchers have spent on research so that later productivity values (output/input) can be calculated more precisely. These amounts are preceded by a minus when the actual time spent researching is less than the allotted amount. A positive number in this column represents compensation by the Dean or department chairperson.
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, randomisation 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, co integration, 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 cross-section data (wage determination, job mobility and allocation), duration data (on unemployment) and panel and longitudinal 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 six partly intertwined sub-themes can be distinguished.

The first theme is primarily concerned with accurate inference in finite samples. Within this theme, analytical finite sample approximations, Bayesian inference, simulation-based inference, inference based on GMM, conditional inference, and methods from differential geometry are studied for (and applied in) models that may be dynamic, simultaneous, non-linear or non-standard in another way. Main contributors are Kiviet, van Garderen, Kleibergen, van Giersbergen, Bun, Mavroeidis and Joseph.

The second theme centers around the 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. The main participants are Boswijk, Kleibergen, van Giersbergen and Omtzigt.

The third theme deals with model selection and model comparison. Within this theme, both linear and non-linear models are considered, nested or non-nested, with an emphasis on time series. Relevant topics are information criteria and entropy measures, the Fisher information matrix, model inference, and space-time modelling of socio-economic data. Contributors are de Gooijer, Bethlehem, Kleibergen, Klein, van Casteren and Cheng.
In the fourth theme the focus is on the econometrics of financial markets. Topics are ARCH and stochastic volatility models, the econometrics of the CAPM and factor models, econometric analysis of credit risk, and the analysis of option data and implied volatilities. Participants are here Boswijk, Kleibergen and Van der Ploeg.

The fifth theme is concerned with micro-econometrics, focusing on limited dependent and discrete data, with applications in labour market econometrics. Contributors are van Ophem and Cramer.

Finally there are miscellanea, including work on poverty measures by van Garderen and on historical aspects of econometrics by Kiviet.

**Resources and funding**
The programme received a very modest amount of funding (€ 7800,-) from the research institute RESAM in 2003. The money was mostly spent on costs related to conference visits by programme members. Clearly this amount was not enough to even let all the researchers visit a conference abroad once. Additional conference visits and other activities had to be sponsored by external funding (‘3rde geldstroom activiteiten’).

**Programme evaluation**
The current achievements within this program seem to be still 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. The program has not been able yet to extend its number of Ph.D. students. Moreover, two researchers funded by the NWO-Vernieuwingsimpuls reduced their affiliation with UvA.

Nevertheless, the present size of the group of researchers in econometrics offers critical mass such that it enables to maintain a very stimulating research environment. Almost weekly a Friday afternoon (external) seminar or (internal) workshop is organized.

Most members of UvA-Econometrics 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 2003 (number and quality of publications, presentations at and invitations for international meetings, editorial responsibilities) have been substantial, but leave ample room for qualitative and quantitative improvements.

**Key publications**

**Forthcoming publications**


Cramer, J.S. (2004). The Early Origins of the Logit Model. Accepted for publication in *Studies in the History and Philosophy of Biological and Biomedical Sciences*.

Cramer, J.S. (2004). Scoring Bank Loans that May Go Wrong, a Case Study. Accepted for publication in *Statistica Neerlandica*.


Kleibergen, F.R. (2004). Invariant Bayesian inference in regression models that is robust against the Jeffreys-Lindleys paradox. Accepted for publication in the *Journal of Econometrics*.


### Publications in numbers

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| 2) Monographs | | |
| A | 1 |
| B | 1 |
| C | |
| Total | 3 |

| 3) Ph.D. theses | | |
| | |
| 4) Professional publications | 3 |
| 5) Popular publications | 1 |
| 6) Working papers | 15 |
| Total | 38 |
Dissertations

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

Academic publications (in/of books) – refereed

Academic publications (excluding publications in/of books) – non-refereed
**Academic publications (working- and discussion papers)**


**Professional publications**


**Popular publications**

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


Kleibergen, F.R. (2003, 14 May). Testing parameters in GMM without assuming that they are identified. ECB Frankfurt, Germany.

Kleibergen, F.R. (2003, 2 June). Expansions of GMM statistics that indicate their properties under weak and or many instruments and the bootstrap. Conference on Weak Instruments, MIT.


Kleibergen, F.R. (2003, 12 December). Expansions of GMM statistics that indicate their properties under weak and or many instruments and the bootstrap, at the EC² conference, University College London, United Kingdom. Keynote speaker.


Organisational contributions to conferences, workshops and seminars


Seminars organised by UvA-Econometrics


Workshops organised by UvA-Econometrics


**Participation in academic networks & fellowships**

Boswijk, H.P. (2002- ). Member of the ESF-EMM network (Econometric Methods for the Modelling of nonstationary data, policy analysis and forecasting; financed by the European Science Foundation).

**Editor or member of editorial board**


**Referee activities**

Membership of academic committees (incl. Ph.D. committees outside the FEE)
Boswijk, H.P. (2003). Member of the Educational Board of the Tinbergen Institute.
Boswijk, H.P. (2003). Member of the Board of the Netherlands Network of Economics.

Research contributions in the media

Grants, prizes and honours
Garderen, K.J.van (2003). KNAW Research Fellowship extension for proposal on “Conditional Inference and Small Samples in Econometrics”
Kleibergen, F.R (2003). Joint winner of the Tinbergen Prize for the most scientifically successful alumnus of the Tinbergen Institute.

Various activities
Kiviet, J.F. (2003, 9-22 February). Visiting researcher at University of Science and Technology in Hong Kong.
**Members of the research group and research in FTEs**

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**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:

**I 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

Resources and funding
The programme received a very modest amount of funding (less than € 3800,-) from the research institute RESAM in 2003. The money was mostly spent on costs related to conference visits by programme members. Clearly this amount was not enough to even let all the researchers visit a conference abroad once. Additional conference visits and other activities had to be sponsored by external funding (‘3rde geldstroom activiteiten’).

Program Evaluation
As evaluated by the research visitation in 2002 with a low score for its viability, the programme appeared to be quite vulnerable (such as due to a temporary half-time reduction of the program leader)
which had resulted in a strong reduction of research activities over the last few years. It also suffered from a total lack of Ph.D.’s.

Most curiously and incorrectly, also the production and quality were evaluated as poor and weak, while in the given time-period (1995-2000) it appeared to be by far the highest of all programmes within the FEE (in both the category of all refereed journals and of A,B-journals), as also (partially) confirmed by the position of the programme leader at the 2003 top-40 list of Dutch economists.

This evaluation resulted in three objectives:

- the completions and development of Ph.D.’s
- more research interaction among the members
- a more balanced production over the programme members

The first steps in each of these directions has been set during 2003 such as

- a Ph.D. completion in 2003 (see dissertations)
- a Ph.D. completion in 2004 and in 2005 (old Ph.D. students)
- one extra Ph.D. position (co-financed by the Dutch Railways)
- and, last but not least, research involvements of almost all members (V.d. Wal, C. Duin, A. Volgenant, V. Dijk) as well as interactions (see reports Van Dijk & Van der Sluis; Duin, Haijema and Van Dijk; Haijema and Van der Wal; Al-Ibrahim, Duin and Van der Sluis; Duin and Volgenant).

The threefold objectives and categories of research of the program design as described above remain standing with the following activities over 2003.

**Fundamental theoretical research**

1.1 See To Appear: Volgenant (3x)
   
   See To Appear: Volgenant & Duin (2x)

1.2 See Refereed:  Van der Wal (3x)

1.3 See To Appear: Van Dijk and Miyazawa

   See Report:  Van Dijk and Sladky

**Fundamental applied research**

See reports: Duin and Van der Sluis (2x)

See reports: Van Dijk and Van der Sluis

See reports: Van der Wal (2x)

**Practical research**

See reports: Haijema, Duin and Van Dijk

See report: Haijema and Van der Wal

See popular publications: Van Dijk (2x)

See organisation: Van Dijk

**Key Publications**


**Forthcoming**

**Publications in numbers**

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Dissertations

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

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

Academic publications (working- and discussion papers)

Popular publications

Contributions to academic conferences, workshops and seminars

Other lectures on research

Organisational contributions to conferences, workshops and seminars
Dijk, N.M. van (2003, 30 September). Seminar Integraal Voorraadbeheer, in co-operation with Vereniging van Logistiek Adviseurs (VeLa), Zoetermeer.
Dijk, N.M. van & Sluis, E. van der (2003, 10 October). Themeday for highschool (VWO) mathematics teachers, Universiteit van Amsterdam.
Dijk, N.M. van (2003, 30 October). Workshop Wachttijlj Simulatie voor Ziekenhuizen in co-operation with the Ministry of Health, Welfare and Sport (Ministerie van Volksgezondheid, Welzijn en Sport (VWS)), Universiteit van Amsterdam.

Participation in academic networks & fellowships
Dijk, N.M. van (2003). Member LNMB (Landelijk Netwerk Mathematische Besliskunde)
Volgenant, A. (2003). Member LNMB (Landelijk Netwerk Mathematische Besliskunde)
Wal, J. van der (2003). Member LNMB (Landelijk Netwerk Mathematische Besliskunde)

Editor or member of editorial board

Referee activities

Membership of academic committees (incl. Ph.D. committees outside the FEE)
Equilibrium, Expectations & Dynamics

Subprogrammes: CeNDEF Pionier program (NWO-MaG)
NWO-Vernieuwingsimpuls Information Flows in Financial Markets.

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.fee.uva.nl/cendef
VSNU-scores: Quality: 3, Productivity: 3, Relevance: 2, Viability: 4

Members of the research group and research in FTEs

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Total 1st-3rd flow of funds: 6.20 6.79 7.47 7.47 7.76 7.91

Programme design

The objective of the programme is the development of mathematical economic theory, which is focussed on the understanding of economic processes. The programme 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-MaG Pionier project Center for Nonlinear Dynamics in Economics and Finance (CeNDEF) and the NWO-Vernieuwingsimpuls Information Flows in Financial Markets are part of the research program. The program can be subdivided into four, closely related and interacting themes:

Equilibrium theory: Individual optimizing 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 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 stylized facts observed in real economic and financial time series.

**Resources and funding**
The programme received a very modest amount of funding (€ 6200,-) from the research institute RESAM in 2003. The money was mostly spent on costs related to conference visits by programme members and academic literature. Additional conference visits and other activities were sponsored by external funding (‘3de geldstroom activiteiten’) and through the Tinbergen Institute.

**Programme evaluation**
This programme grew out of a mathematical economics program, led by Weddepohl, which was quite small until the mid nineties. The group was extended considerably in 1998, due to a NWO-MaG Pionier grant awarded to Hommes, to set up the Center for Nonlinear Dynamics in Economics and Finance (CeNDEF). Weddepohl retired in 2002 but is still at the department one day per week. More recently Furth and Koster joined the group and game theory has become one of the research themes of the programme. At the end of 2003, the CeNDEF postdocs Diks, Tuinstra and Wagener obtained a tenured position, so that the continuation of the research program will be ensured.

The output of more than 10 articles in international journals is satisfactory, given that most members of the group are relatively young including 7 Ph-D students. Two Ph-D thesis (Griffioen, March 2003 and Manzan, June 2003) have successfully been completed. The research programme has gained international recognition, as e.g. shown by good social science citation statistics (e.g. in 2003 more than 50 citations of published work by group members, and more than 250 cumulative citations) and many (invited) lectures given at international seminars, conferences and workshops by various members of the research group. Diks was listed in the ESB/Intermediair Economen Top 40 in 2003 and Hommes was listed in the 4th edition of *Who’s who in Economics*. Various contributions and interviews in the media also witness the social relevance of the research program.
Key publications

Forthcoming

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Dissertations

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Academic publications (working- and discussion papers)
Diks, C.G.H. & Weide, R. van der (2003). Heterogeneity as a natural source of randomness. *CeNDEF Working paper 03-05,* Universiteit van Amsterdam. Also appeared as *Tinbergen Institute discussion paper TI 03-073/1.*


**Professional publications**


**Popular publications**


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


Weide, R. van der (2003, 24 September). The Evolution of Expectations Towards Expiration, invited seminar at the University of Copenhagen, Denmark, September 24, 2003;

Organisational contributions to conferences, workshops and seminars
Diks, C. (2003). Member of the programme committee of the 12th SNDE meeting, Villa La Pietra, March 13-15, Florence, Italy.

Participation in academic networks & fellowships

Editor or member of editorial board

Referee activities


**Membership of academic committees (incl. Ph.D. committees outside the FEE)**
Furth, D. (2003, 29 September). Member of the promotion committee of ms. K.H. Pham Do: *Essays in Game Theory and Natural Resource Management*. Promotores: Prof. Dr. S.H. Tijs & Prof. Dr. H. Folmer, Universiteit van Tilburg


**Research contributions in the media**


**Grants, prizes and honours**

Diks, C. (2003). Top-40 ranking (40th position) in the Dutch Economists Top-40 (Published in *Intermediair* and *ESB*).


**Actuarial Science**

**Programme director:** Prof. dr R. Kaas  
**Department:** Quantitative Economics  
**METIS code:** uva/fee/res/act/prog  
**JEL-classification:** C, G2  
**VSNU-scores:** Quality: 4, Productivity: 3, Relevance: 3, Viability: 2

Members of the research group and research in FTEs

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**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.

**Resources and funding**
The programme received a very modest amount of funding (€ 2900) from the research institute RESAM in 2003. The money was spent on costs related to conference visits by programme members.

**Programme Evaluation**
The main focus of the research of the Actuarial Science group presently is on the subject of ordering of risks and dependence of risks, as can be seen from the lists publications. In the future, research in this field will continue, but there will also be a shift to 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 a Postdoc, financed by NWO, has started working on a project called “The Theory of Dependencies of risks applied to asset-liability models”.

Our Belgian colleagues in Leuven have started 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. Q. Tang, Drs. R. Laeven). 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 have the impression 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 reporting. We refer to the "Report of Solvency working party" (www.iiasb.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. We have the impression that some of our theoretical results can serve as a basis (and are in fact a breakthrough) for the capital adequacy of financial conglomerates.

In our recent actuarial book Modern Actuarial Risk Theory (2001), we integrate classical actuarial techniques with financial aspects based on dependencies. It is important to note that this book, published by Kluwer Academic Publishers, has had its seventh printing this year. This is rather exceptional for books within the rather small actuarial field. The Chinese edition of this book will be on the market in the next few months.

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 Lyon), 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 held for the first time this year (Ubatuba). Also, we contributed to the organisation of the AFIR-colloquium, which was held in Maastricht this year.

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.

The annual research output of the actuarial research group has more than doubled in 2002 with respect to 2001. In 2003, we have managed to increase the output even further.

**Key publications**


**Forthcoming**


### Publications in numbers

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Dissertations


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


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


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


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


**Professional publications**


**Popular publications**


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


Schrager, D.F. (27 June). Lyon, France. Pricing Rate of Return Guarantees in Regular Premium Unit Linked Insurance, IME Congress.


Other lectures on research


Willemse, W.J. (2003, 26 June). nH hotel, Zoetermeer, Bevindingen van de ASLI-werkgroep Uniseks, workshop ASLI.

Organisational contributions to conferences, workshops and seminars


Heerwaarden, A.E. van (2003, 9 October). VSAE Actuarial Debate, member of panel.


Editor or member of editorial board


Heerwaarden, A.E. van (2003). Member editorial board *De Actuaris*.


Referee activities


Membership of academic committees (incl. Ph.D. committees outside the FEE)


Heerwaarden, A.E. van (2003). Member of AG-working group ‘Zekerheid tot elke prijs’.


Laeven, R.J.A. (2003). Member of the AFIR working group Credit Risk.


Wolthuis, H. (2003). Member of committee life tables AG.

**Research contributions in the media**

**Grants, prizes and honors**

**Various activities**
Heerwaarden, A.E. van (2003). Opleidingsnieuws van de Universiteit van Amsterdam'. Bi-monthly column in *De Actuaris*.
[http://www1.fee.uva.nl/ke/act/actuariallinks.htm](http://www1.fee.uva.nl/ke/act/actuariallinks.htm)
### Researchers and research time in FTE

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

The Transformation of Europe: Monetary, Fiscal & Institutional Aspects

Subprogrammes:

A: Monetary, Fiscal & Exchange Rate Policy
B: Evolution, Transformation & Operation of Economic Systems

Programme director: Prof.dr. R.M.W.J. Beetsma

Department: Algemene economie

METIS-code: uva/fee/res/toe/prog

JEL-classification: E, F, H, P

Web-address: www.fee.uva.nl/toe

VSNU-scores: Quality: 4, Productivity: 4, Relevance: 4, Viability: 3

Member of the research groups and research in FTEs

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Subprogramme Evolution, Transformation and Operation of Economic Systems

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| Ellman, M.J. | dr | guest | - | - | - | - | - | - | - | AE | 1 |
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Total 2nd flow of funds 0.00 0.00 0.00 0.00 0.00 0.00
Total 3rd flow of funds 0.10 0.11 0.11 0.11 0.11 0.11
Total 1st-3rd flow of funds 7.18 6.11 7.53 7.78 8.42 8.49
Programme design
The programme intends to use theoretical and empirical methods to analyse important current and future economic issues for Europe that are in the areas of macroeconomics, international economics, monetary economics and transition economics. Dissemination of the results takes place mainly via international, refereed scientific journals, but also via more policy-oriented outlets. The research programme can be positioned as “society-driven” and mildly multidisciplinary.

Subprogramme A: Monetary, Fiscal and Exchange Rate Policy

Monetary and fiscal policy
This line of research is both theoretical and empirical. We explore how the presence of fiscal constraints (in particular, the Stability and Growth Pact) affects the functioning of the European Monetary Union (EMU) and, in particular, the incentives for structural reform. We analyse fiscal policy in the context of models of the New Open Economy Macroeconomics literature (which focuses on sticky prices and imperfect competition) with fiscal policy. Further, we analyse the international spill-over effects of fiscal policy shocks in the Euro-area. Finally, we investigate the impact of population ageing on the public budget and the potential violation of the fiscal constraints. As far as this research line is concerned, we also explore the international spillovers of national pension policies.

Exchange rates
We explore the behaviour of nominal and real exchange rates. The approach is both analytical and empirical, using 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 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 intra-union trade.

Subprogramme B: Evolution, Transformation and Operation of Economic Systems

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 will admit a number of these countries in the very near future. 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.

Resources and funding
The programme received a very modest amount of funding (€ 9100,-) from the research institute RESAM in 2003. The money was mostly spent on costs related to conference visits by programme members and a computer. Clearly this amount was not enough to even let all the researchers visit a conference abroad once. Additional conference visits and other activities had to be sponsored by external funding (‘3rde geldstroom activiteiten’) and through the Tinbergen Institute.

Programme evaluation
The main objectives of the programme are to enhance our understanding of current European policy issues in the subject areas of this programme (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. One of the programme members (Beetsma) was listed in the ESB/Intermediair top-40 of Dutch economists. Many of the programme members are relatively young. We now see that the output of these members, both in terms of quantity and quality, is on an upward trend. We can thus expect the program to improve further in the future. The ambition will be to publish at least one article every two years in a top-5 journal. We also aim at a
The main results in terms of economic substance over the past year are described in the sequel.

Subprogramme A

Beetsma (in collaboration with Jensen, University of Copenhagen) includes fiscal policy in a new-open economy macro-model of a monetary union, with price stickiness and imperfect competition. They characterize the optimal monetary and fiscal policies under commitment and discretion, thereby drawing a number of analogies to optimal monetary policies in a closed economy price-stickiness model. Both the availability of fiscal stabilization policy and a capacity to commit yield substantial welfare gains. The authors also explore a variety of fiscal rules. Even simple, well-chosen fiscal rules provide significant gains compared to discretionary fiscal stabilisation. In a joint project with Xavier Debrun (IMF), Beetsma explores the implications of fiscal rules, such as the Stability and Growth Pact, for the incentive to conduct structural reforms, when such reforms impose high upfront costs. Finally, Giuliodori and Beetsma investigate the effects of fiscal policy shocks (discretionary changes in government spending or in net taxes) in major European economies both on the national economy and on other European economies via the trade channel. There is evidence of significant international spillovers via this channel.

Vermeylen extended his previous research into several directions, with two main results. First, the extent to which fluctuations in job insecurity affect precautionary saving and aggregate consumption depends strongly on the wage dynamics after an unemployment spell. Typically, unemployed workers who find a new job have to accept a lower wage than the wage they earned before they became unemployed. The extent to which the wage is lower than before the unemployment spell and the speed with which this wage gap decreases with longer tenure, are both important to determine how strong aggregate consumption reacts to fluctuations in job insecurity.

Klaassen (in a joint project with Maurice Bun, University of Amsterdam) focuses on the effect of European monetary unification on intra-EMU trade flows. After all, a major economic reason for the introduction of EMU was its supposedly positive effect on trade. We intend to improve existing estimates (showing large positive effects) by paying special attention to the characteristics of trade data. One aspect is that trade levels increase over time and we show that taking account of this reduces the estimated trade benefit to a statistically insignificant 3%. Redoing the exercise for data involving other currency unions, for which one typically finds enormous trade benefits of about 100%, we obtain a reduction to 25%. Improving the econometric specification further will hopefully lead to a satisfactory model that can be used to explain the trade benefits of monetary unification from economic theoretic points of view.

Veestraeten explores the effects of restrictions on the fluctuation potential of financial prices, such as share prices and exchange rates. He derives probability density functions for the case of the so-called geometric Brownian motion between linear, i.e. time-dependent boundaries. Subsequently, he focuses on the valuation of financial options and derives the closed-form option pricing equations. He examines the implications of boundaries on prices in terms of the three anomalies to the Black and Scholes pricing methodology, namely the skew, the volatility smile and the term structure of implicit standard deviations. Simulations reveal that neglecting boundaries creates substantial mispricing that often surpasses 100%. Furthermore, the model is able to generate most of the patterns connected with the aforementioned three anomalies and thus provides an additional theoretical explanation for these stylised facts.

Subprogramme B

In her thesis, Aidis draws attention to the difficult economic environment for small and medium sized enterprises (SMEs) in transition countries. Her thesis combined survey, case study and statistical
methods. The topic is important because in the early transition period attention was mainly focused on the privatisation of the inherited giant state-owned enterprises (SOEs) and little attention was payed to the importance of SMEs. It is also important because Lithuania will become a member of the EU in 2004.

Ellman published a paper on the Soviet 1937-38 show trials, which presents an entirely new interpretation of these trials, radically at variance with the dominant academic orthodoxy, especially in the USA. It is partly based on archive material collected on visits to Russian archives. The new interpretation has important implications for the study of Stalinism.

**Key publications**


**Forthcoming**


## Publications in numbers

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


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


**Professional publications**


**Popular publications**


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


Other lectures on research


Organisational contributions to conferences, workshops and seminars
Jepma, C.J. (2003). Member of the programme committee of the Standardisation of baselines workshop, JIN, Groningen, 6-7 November.

Participation in academic networks & fellowships
Beetsma, R.M.W.J. (2003). Research Fellow of CEPR, Fellow of CESifo, Fellow of Tinbergen Institute and Fellow of NAKE.
Ellman, M. (2003). Fellow Tinbergen Institute, NAKE and AIID.
Jepma, C.J. (2003). Member National Committee Climate Research, NWO.

Editor or member of editorial board

Referee activities
Membership of academic committees (incl. PhD-Committees outside the FEE)


Ewijk, C. van (2003). Member of PhD committee of J. van de Ven, *Psychological sentiments and economic behaviour* (Tilburg University, October).


Research contributions in the media


Jepma, C.J. (2003). Interview in TV-documentary on GHG emissions trading in the Kyoto Protocol, RVU.


Maes, K. (2003, 29 March) Interview in *De Financieel Economische Tijd*.

Maes, K. (2003, 8 August). Interview in *De Financieel Economische Tijd*


Various activities

### Human Capital

**Subprogrammes:**

- SCHOLAR
  - Population & Gender Economics
    - Social Inequality & Direct Welfare Measurement
  - Programme director: Prof.dr. J. Hartog
  - Department: Economics
  - METIS-code: uva/fee/res/hum/prog
  - JEL-classification: I, J, L
  - VSNU-scores: Quality: 3, Productivity: 4, Relevance: 4, Viability: 4

### Members of the research group and research in FTEs

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Ph. D. students: 3.51 5.05 5.05 5.05 3.51 5.05
Ph. D. scores: Quality: 3, Productivity: 4, Relevance: 4, Viability: 4
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.

Economics of organisation and personnel
This subprogram studies organisational and management phenomena (within firms) from a theoretical economic perspective. A better understanding of the process of coordination and motivation of people within organizations in relationship to corporate performance is core of the study. The focus of research applications usually lies in models on “markets or hierarchies”; personnel economics (designing incentive contracts and assigning property rights for employees and managers that motivate these agents to achieve organizational objectives), corporate governance and control. Economic theories underlying the explanation of observed phenomena are agency theory and incomplete contracting models. The frameworks used are based on game theory and price theory. Empirical research instruments in this area are econometric analysis of company data (across and within companies) and laboratory experiments.

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. An important research topic in this subprogramme is the ageing problem and the consequent pension problem. One of the issues under study is improvement of human capital by education and training as a substitute for investing in physical capital.

Resources and funding
The programme received a very modest amount of funding (€ 10.000,-) from the research institute RESAM in 2003. The money was mostly spent on costs related to conference visits by programme
members. Clearly this amount was not enough to even let all the researchers visit a conference abroad once. Additional conference visits and other activities had to be sponsored by external funding (‘3rde geldstroom activiteiten’) and through the Tinbergen Institute.

**Programme Evaluation**

The programme is performing quite well in terms of published research output, both in terms of quantity (with 24 refereed publications) and in terms of quality, with 5 A level publications and several A level publications in portfolio. Members were present at many international conferences and workshops, where one paper even got the Best Paper Award (Van der Sluis, Van Praag and Vijverberg). Members of the group maintain and extend a strong international reputation, and are frequently invited to participate in European research programmes; SCHOLAR was invited to participate in a program on education (coordinated by Dr Woessmann, CESifo, München), Gustafsson in a programme on Motherhood choices (coordinated by dr Meulders, ULB Bruxelles), Hartog in a programme on Human capital as a risky investment (coordinated by dr Skyt Nielsesen, Arhus Business School). Quality is acknowledged by the NWO VIDI subsidy awarded to dr Plug.

The research contributions cover a broad spectrum of topics, ranging from fertility and motherhood, male/female wage differentials, ICT, health, risk attitudes and education, migration, training, types of employment contracts to entrepreneurship. Many topics have a high societal relevance and members frequently report in the media or in lectures, both solicited or a their own initiative. The relevance of human capital is a connecting feature in almost all the research. By the end of 2004, the period of NWO subsidy will come to an end. The programme will however be continued, maintaining the SCHOLAR name, and further intensifying the focus on issues in human capital.

**Key publications**


**Forthcoming**


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**Publications in numbers**

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Subprogramme Population & gender economics

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


**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)

Popular publications

Contribution to academic conferences, workshops and seminars


Other lectures on research


Organisational contributions to seminars/conferences


**Editor or member of editorial board**


**Participation in academic networks**


**Referee activities**


**Research contributions in the media**


**Grants, prizes and honors**


**Various Activities**

Social inequality and welfare measurement

Dissertations

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

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)
Praag, B.M.S. van & Cardoso P. (2003). The mix between pay-as-you-go and funded pensions and what demography has to do with it. CESifo working paper no. 865, february.

Professional publications

Popular publications

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


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


**Participation in academic networks & fellowships**

Praag, B.M.S. van (2003). Fellow of Tinbergen Institute, DIW, Berlin, IZA, Bonn, CEsifo, München, SCHOLAR, Universiteit van Amsterdam.

**Editor or member of editorial board**


**Membership of academic committees (incl. Ph.D. committees outside the FEE)**


**Research contributions in the media**


**Various activities**

SCHOLAR

Dissertations

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

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)**


**Professional publications**


**Popular publications**


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


Sloof, R. (2003). Seminar presentation, Tinbergen Institute, Erasmus University Rotterdam, the Netherlands.

Sloof, R. (2003). Seminar presentation, Mathematics Department, University of Amsterdam, the Netherlands.


Praag, C.M. van (2003, October). The Value Relevance of Internal Monitoring, invited seminar at The Tinbergen Institute Rotterdam.


Praag, C.M. van (2003, June). Lack of investment opportunities hinders entrepreneurial venture performance, conference presentation at the Babson Kaufmann Conference on Entrepreneurship, Boston, US.

Praag, C.M. van (2003, April). The Value Relevance of Internal Monitoring, invited seminar at Warwick Economics Faculty, UK.

Praag, C.M. van (2003, March). First Author Determinants”, Invited Seminar at IZA, Bonn, Germany.

Praag, C.M. van (2003, February). First Author Determinants, invited seminar at Aarhus Business School, Denmark.

Praag, C.M. van (2003, January). Education and Entrepreneurship: a meta-analysis pertaining to industrialized countries, invited seminar at Durham University, UK.


Other lectures on research


Organisational contributions to conferences, workshops and seminars


Praag, C.M. van (2003). Organizer of various ACCF conferences, workshops and seminars in Amsterdam.

Participation in academic networks & fellowships


Praag, C.M. van (2003). Fellow Tinbergen Institute, Amsterdam.


**Editor or member of editorial board**


Praag, C.M. van. (2003). Member of the Editorial Board of *Small Business Economics*.


**Referee activities**


**Membership of academic committees (incl. Ph.D. committees outside the FEE)**

Hartog, J. (2003, May). Member of the Ph.D. committee of J. Dohmen, Maastricht. Promotor was professor Pfann.

Hartog, J. (2003, November). Member of the Ph.D. committee of B. Kriechel, Maastrich. Promotor was professor Pfann.


Maassen van den Brink, H. (1998- ). Member of the Scientific Committee of the KNAW Netherlands Institute for Advanced Study in the Humanities and Social Sciences. Wassenaar.

Maassen van den Brink, H. (1998 - present). Member of the board of the ‘Max Goote’ Knowledge Center, University of Amsterdam, Amsterdam.

Maassen van den Brink, H. (2000-2003). Member of the Scientific Advisory Board (Maatschappelijke Adviesraad) of the SISWO Institute, Amsterdam.
Maassen van den Brink, H. (2002-2005). Member of the Senate (Senaat), Universiteit van Amsterdam.
Maassen van den Brink, H. (2002-2005). Member of the Committee Ethical Questions (Algemene Instellingsgebonden Etische Commissie), Universiteit van Amsterdam.

Research contributions in the media

Grants, prizes and honours
Industrial Organisation

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

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

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

**Professional publications**

**Popular publications**

**Contributions to academic conferences, workshops and seminars**
Goeree, M.S. (2003, August). EARIE Conference. Helsinki, Finland
Goeree, M.S. (2003, October). Department of Economics Workshop, University of Warwick, UK.


Organisational contributions to conferences, workshops and seminars


Participation in academic networks & fellowships

Editor or member of editorial board

Referee activities

Grants, prizes and honours
Programme directors: Prof.dr. J.B. Davis & dr. G.A.T.M. Reuten
Department: Economics
METIS-code: uva/fee/res/hme/prog
JEL-classification: B
VSNU-scores: Quality: 3, Productivity: 3, Relevance: 2, Viability: 2

Members of the research group and research in FTE

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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 employed in the history of economics up to the present.

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.

**Theorizing, modeling and policy application**

**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

**Resources and funding**

The programme received a very modest amount of funding (less than € 2300,-) from the research institute RESAM in 2003. The money was mostly spent on costs related to conference visits by programme members. Clearly this amount was not enough to even let all the researchers visit a conference abroad once. Additional conference visits and other activities had to be sponsored by external funding (‘3rde geldstroom activiteiten’) and through the Tinbergen Institute.

**Programme evaluation**

The History and Methodology of Economics Group continues to be quite active in research with all its members contributing a substantial number of high quality publications in 2003. The Group ran a well-publicized seminar series in 2003 with seven presentations by well-known individuals in the field, leading to a number of requests by individuals elsewhere to be added to future seminar schedules. Parallel to the seminar series the Group ran a series of internal workshops in which members of the group presented their own papers and discussed their most recent research. Members of the Group were also active in presenting papers at various international conferences during the year. The Group also began the organization of the annual conference of the main professional society in the field of methodology of economics, the *International Network for Economic Method* (to be held at the Faculty 19-21 August 2004).

Prof. John Davis also presented his inaugural lecture as Professor of History and Philosophy of Economics at University of Amsterdam in December.

Due to the recent financial situation at the Faculty, the Group was unable to replace AIOs in 2002 and 2003. However, through other measures the Group expects to start three new PhDs in 2004.

Other developments include the creation of a new web page for the group, the distribution of the Group’s most recent research memoranda series, and the affiliation of two external Research Associates to the Group.

**Key publications**


Forthcoming


**Publications in numbers**

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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**

Kuiper, E. (2003, 4 September). Maybe it is time for a psychology of economics? Conference International Network for Economic Methodology (INEM), Leeds, UK.
Morgan, M.S. (2003, 6-8 June). Commentator at a workshop on "Mathematics, Simulation and the Sciences” at Centre for Interdisciplinary Research, University of Bielefeld.


Other lectures on research

Davis, J. (2003, 8 December). The Individual in Economics. Inaugural lecture as Professor of History and Philosophy of Economics, Universiteit van Amsterdam.

Went, R.C.P.M. (2003, 7 February). Lecture on globalization at the ‘Docentendag Maatschappijleer’ of the Nederlandse Vereniging van Leraren Maatschappijleer (NVLM) and the Instituut voor Publiek en Politiek (IPP), Zwolle.


Organisational contributions to conferences, workshops and seminars


Participation in academic networks & fellowships

Boumans, M. (200?-) Fellow NAKE.
Davis, J. (2002- ). Member, Erasmus Institute for Philosophy of Economics.
Morgan, M.S. (....-date). Fellow Tinbergen Institute.
Morgan, M.S. (2003). Research Associate, Centre for Philosophy of Natural and Social Science, London School of Economics.

**Editor or member of editorial board**


**Referee activities**

Economic Thought.

Membership of academic committees (incl. Ph.D. committees outside the FEE)
Morgan, M.S. (2003, 4 June). Member of Promotion Committee for Fritz Bos, University of Groningen.

Research contributions in the media

Grants, prizes and honours
Morgan, M.S. (2003). Fellow, British Academy
Morgan, M.S. (2003). Overseas Fellow, KNAW

Various activities
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: www1.fee.uva.nl/creed

VSNU-scores: Quality : 5, Productivity : 4, Relevance : 3, Viability : 5

Members of the research group and research in FTEs

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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 FEE 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 FEE. 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
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.

Resources and funding

The programme received a very modest amount of funding (€ 8900,-) from the research institute RESAM in 2003. The money was mostly spent on costs related to conference visits by programme members. Clearly this amount was not enough to even let all the researchers visit a conference abroad once. Additional conference visits and other activities had to be sponsored by external funding ('3rde geldstroom activiteiten') and through the Tinbergen Institute.

Programme evaluation

The strong development in terms of publications was reinforced this year. The affiliation of Han Bleichrodt with CREED has been helpful in this respect. His expertise and research in health economics and utility analysis particularly suits the political economics and individual decision making projects of the research programme.

Among the awards and honors received this year were three CREEDers ranked in the Dutch Top40 for economists, including the number one place, a 90th rank in a listing of most cited scientists in economics and business, a publication award, many invited lectures, external advising and reviewing for foreign academic institutions, fellowships (among which, CEPR and Econometric Society), and several major research grants from national and international institutions. A recent listing by this faculty’s research institute, moreover, shows that eight of the ten best cited publications by RESAM researchers ever come from researchers affiliated with CREED. Finally, the policy relevance of CREED’s research may be illustrated through its consultancy work for various institutions (e.g., OPTA and the Dutch Central Bank).

Among the grants received this year is an NWO (post-doc) grant for the project “The co-evolution of social behavior and social institutions: a combined theoretical and experimental approach”, joint with biologists from the Universiteit van Amsterdam, in the NWO-program Evolution and Behavior.

One major research grant is an NWO-VICI grant for the project “License auctions: theory, policy, and experiments”. This project will study the impact of market structure on the performance of licence auctions, and is aimed at helping policy-makers to design more efficient assignment mechanisms. Experiments play an important role in the project: to stress test proposed designs and to study complex situations that are intractable from a theoretical viewpoint.

Another major grant concerns the EC-MRTN project ENABLE, which stands for European Network for the Advancement of Behavioral Economics. This project, coordinated by CREED, comprises seven research teams from Europe and two US teams (Harvard/MIT and Princeton). It brings together leading economists as well as psychologists to work on the interface of their disciplines, using theoretical modelling and laboratory experimentation as research methods. The coordination and research activity of a similar EC-RTN project (ENDEAR) was successfully completed this year.

The facilities of the CREED-laboratory have been enriched with a web-system for the recruiting of subjects, which turns out to be an enormous time-saver for running experiments.
Finally, it is an honor to mention that Charles Holt (University of Virginia), a leading researcher in experimental economics and frequent visitor of CREED, became Honorary Professor of the Universiteit van Amsterdam.

**Key publications**

As of this year report, any publication over the last five years in journals classified as "AA" by the Tinbergen Institute will be automatically mentioned here. These are: the *American Economic Review*, *Econometrica*, *Journal of Political Economy*, *Quarterly Journal of Economics*, and the *Review of Economic Studies*. In addition, at most one (more) publication considered to be key by the researchers themselves will be listed.


**Forthcoming**


### Publications in numbers

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


Academic publications (in/of books) – refereed


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


**Professional publications**


**Popular publications**


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

Goeree, J.K. (2003, 10 February). Costly Voting with Correlated Preferences, invited talk, Law School, University of Southern California, USA.


Wakker, P.P. (2003, 7 July). Deriving Bi-Symmetry Theorems from Tradeoff-Consistency Theorems, Workshop on Risk, Uncertainty and Decision, Bocconi University, Milano, Italy. Invited lecture.


Winden, F.A.A.M. van (2003, 7 February). Emotions and decision making under risk. 3rd Tucson Interdisciplinary Workshop on Decision Making (TIWODM): The Role of Affect and Emotions in Decision Making, University of Arizona. Invited lecture.


**Other lectures on research**

Riedl, A. (2003, 25 September). In search of stars: efficiency, equity and the dynamics of network formation. Internal workshop on Social Networks, CREED, Faculty of Economics and Econometrics, University of Amsterdam, The Netherlands

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


Winden, F.A.A.M. van (2003, 28 February – 2 March). Co-organizer workshop and chair network meeting of EC-RTN ENDEAR.


**Participation in academic networks & fellowships**


Goeree, J.K. (2003). Research Fellow CEPR.


Großer, J. (2003). ENDEAR visiting fellow at the Center for Rationality and Interactive Decision Theory, RatioLab, Hebrew University of Jerusalem (February to April).


Schram, A. (2003). Fellow NAKE.

**Editor or member of editorial board**

**Referee activities**
Ule, A. Referee for Scandinavian Journal of Economics.
Winden, F.A.A.M. van (2003). Referee for NIAS.
Membership of academic committees (incl. Ph.D. committees outside the FEE)

Grants, prizes and honours
Goeree, J.K. (2003). CEPR Research Fellow
Goeree, J.K. (2003). Tinbergen Prize
Ule, A. (2003). Marie Curie European Training Grant for a six month research visit of the Institute for Economic Analysis at the Universita Autonoma de Barcelona.
Info op: http://www.informs.org/Prizes/DecisionAnalysisSocPrize.html#DAPubAward
Info op: http://www.in-cites.com/nobel/2003-eco-top100.html

Various activities

Winden, F.A.A.M. van (2003). Experimental project on committee decision making, commissioned by the Dutch Central Bank (joint with Vjolca Sadiraj).
Other Research
Department: Economics
METIS-code: uva/fee/res/ore/prog

Researchers

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Total all flows of funds: 0.23 0.34 0.31 0.41 0.13 0.13

Forthcoming

Contributions to academic conferences, workshops and seminars

Various activities
Amsterdam Economics
SEO Stichting Economisch Onderzoek

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

Programme Director: Prof.dr. H.A. Keuzenkamp
METIS-code: uva/fee/seo/seo/prog
JEL-classification: I, J, L, Q, R
Web-address: www1.fee.uva.nl/seo
VSNU-scores: Quality: 3, Productivity: 3, Relevance: 4, Viability: 4

Members of the research group

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123
Programme design
SEO Amsterdam Economics was founded in 1949 as a contract research institute by the Department 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 25 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 for international organisations (Worldbank, European Commission, US AID, US Bureau of the (Census) is a growing activity of SEO Amsterdam Economics. Research results are published in the SEO research report series and frequently presented at seminars and conferences.

Core markets
SEO consists of five research clusters:
Regional Economics & Transport
An important activity within 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 the building and housing market and the development of a value assessing instrument for commercial and office buildings.
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
Important projects of the health economics and social security cluster are the development of an allocation model for social security benefits (to provide local authorities with incentives to get welfare recipients back on the job), research on local poverty policy, the demand for medical treatment and the demand for and supply of child care.
Regulation & Competition Policy
This is a research area of growing importance, as witnessed by the increasing impact of the Dutch Competition Authority (NMa), and the development of regulation policy in the last years. It belongs to the new innovative research fields of this moment. Recent research projects concern entry into the telecommunication market and vertical integration in the market for schoolbooks and the relation between productivity and competition and cartel agreements in the building sector.
Aviation Economics (AAE)
AAE is the youngest cluster within Amsterdam Economics. In 2002 AAE was involved in a growing range of aviation economics projects. Recent reports concern:
- airroutes over Amsterdam, airline alliance scenarios
- improving the KLM hub & spoke system, accessibility of an offshore airport, relocation of Naples airport and airport licensing.

SEO research is independent of the commercial and political interest of the contractants. Research contracts can be from ministries, local governments or international organisations, but also private companies and non-governmental institutions contribute an important part to the contract portfolio.

Organisation
SEO Amsterdam Economics 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 such as Intomart, the SCO-Kohnstam Institute, AROMedia, ECN, IvR (Instituut voor Informatie recht), AIAS (Amsterdams Instituut voor Arbeidsstudies) and PricewaterhouseCoopers. SEO has a non-executive board of 7 members and a council of advisors who meet regularly and discuss the research
programme of SEO. The management team of SEO (consisting of the general director and heads of research clusters) takes care of daily policy.

Science
SEO regularly publishes in Dutch and international professional journals. Only by publishing and lecturing, a research institute stays 'alert' and keeps abreast of the newest developments in applied economic research. SEO holds an NEN-EN ISO 9001 quality certificate for Applied Economic Research and Consulting.

Programme Evaluation
Academic publications made by members of SEO Amsterdam Economics are usually a spin-off from contract research. SEO’s main activity. This year three articles in refereed journals were published plus a refereed book publication. The number of non-refereed academic publications was large.

SEO 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.

Key Publications

Publications in numbers

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


Academic publications (in/of books) – refereed


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


**Professional publications**


Popular publications


Prospect, 9, (2), 4-6.

Contributions (lectures) to conferences, workshops and seminars


Research contributions in the media


**Membership editorial staff or referee activities**


Kok, L. (2003). Member editorial board *TPE*.
Leeuwen, M.J. (2003). Member advisory board Rapportage Sport SCP.

**Membership of academic networks**
Keuzenkamp, H.A. (2000). Member scientific advisory board ICES.

**Membership of academic committees (incl. PhD committees outside the UvA)**
Keuzenkamp, H.A. (2000). Member advisory committee Nationale Rekeningen, CBS.
Keuzenkamp, H.A. (2000). Member advisory board AIAS.
Theeuwes, J.J.M. (2002). Chairman Adviescommissie Arbeidsmarktstatistieken, CBS.
APPENDIX I  LIST OF PERSONS, COMMISSIONS AND ADDRESSES

Board Faculty
Dean FEE: Prof.dr J. van der Gaag
Managing director: R.K. Popma
Managing Director RESAM Research Institute: Prof. dr J. Hartog.
Managing Director AgBS Research Institute: Prof. dr. A. Kolk
Managing Director Onderwijsinstituut: Prof.dr J.C.M. van Ophem

Advisory committees
The Council of Programme Leaders advises the 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. G. Reuten, Prof. dr F.A.A.M. van Winden, Prof. dr C.N. Teulings, Prof. dr J. Theeuwes.

The External Advisory Committee (EAC) advises the Managing Director RESAM on research policy and strategy. The EAC usually meets once every two years and 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: 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 G.A. Reuten
Experimental and Political Economics (CREED): Prof.dr F.A.A.M. van Winden
Amsterdam Economics (SEO): Prof.dr C.N. Teulings

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resam-fee@uva.nl
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## APPENDIX II

### Abbreviations

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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>AAE</td>
<td>Aviation Economics (SEO cluster)</td>
</tr>
<tr>
<td>AE</td>
<td>Algemene Economie Economics</td>
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<tr>
<td>Afd</td>
<td>Afdeling Department</td>
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<tr>
<td>AgBS</td>
<td>Amsterdam graduate Business School</td>
</tr>
<tr>
<td>AgBS-RI</td>
<td>Amsterdam graduate Business School Research Institute</td>
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<tr>
<td>AIAS</td>
<td>Amsterdams Instituut voor Arbeidsstudies Amsterdam Institute for Labour Studies</td>
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<tr>
<td>AIID</td>
<td>Amsterdam Institute for International Development</td>
</tr>
<tr>
<td>AIO</td>
<td>Assistent in Opleiding Ph.D.-student</td>
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<tr>
<td>ARCH</td>
<td>Autoregressive Conditional Heteroskedasticity</td>
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<tr>
<td>BIB</td>
<td>Bibliotheek Library</td>
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<tr>
<td>Burs</td>
<td>Bursaal Ph.D.-student</td>
</tr>
<tr>
<td>B/R</td>
<td>Books &amp; Reports</td>
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<tr>
<td>BS</td>
<td>Business Studies</td>
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<tr>
<td>BV</td>
<td>Bedrijfsvoering Operational Management</td>
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<tr>
<td>CAPM</td>
<td>Capital Asset Pricing Model</td>
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<tr>
<td>CeNDEF</td>
<td>Center for Nonlinear Dynamics in Economics and Finance</td>
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<tr>
<td>CentER</td>
<td>Center for Economic Research, Tilburg University</td>
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<tr>
<td>CESifo</td>
<td>Joint subsidiary company of Center for Economic Studies at the University of Munich and the Ifo Institute for Economic Research.</td>
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<tr>
<td>CEPR</td>
<td>Centre for Economic Policy Research</td>
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<tr>
<td>CPB</td>
<td>Centraal Plan Bureau Central Planning Bureau</td>
</tr>
<tr>
<td>CREED</td>
<td>Center for Research in Experimental Economics and Political Decision Making</td>
</tr>
<tr>
<td>DNB</td>
<td>De Nederlandsche Bank The Dutch Central Bank</td>
</tr>
<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>ECB</td>
<td>European Central Bank</td>
</tr>
<tr>
<td>ECN</td>
<td>Energieonderzoek Centrum Nederland</td>
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<tr>
<td>EMU</td>
<td>European Monetary Union</td>
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<tr>
<td>ENABLE</td>
<td>European Network for the Advancement of Behavioural Economics</td>
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<tr>
<td>ENCORE</td>
<td>Economics Network for Competition &amp; Regulation</td>
</tr>
<tr>
<td>ENDEAR</td>
<td>European Network for the Development of Experimental Economics and its Application to Research on Institutional Decision Making</td>
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<tr>
<td>ESB</td>
<td>Economisch-Statistische Berichten (journal)</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>EUR</td>
<td>Erasmus Universiteit Rotterdam</td>
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<tr>
<td>FEE</td>
<td>Faculty of Economics and Econometrics</td>
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<tr>
<td>FEZ</td>
<td>Financieel-Economische Zaken Financial Department</td>
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<td>FIG</td>
<td>Facultaire Informatiseringsgroep</td>
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Appendices

Computer & Information Technology Services
FZ Facilitaire Zaken
Facilities & Services
GOA Geconcentreerde OnderzoeksActie
GMM Generalized Method of Moments
HGL Hoogleraar
Professor
IAA International Actuarial Association
IAS International Accounting Standards
IBNR Incurred but not reported
ICCAM International Congress on Computational and Applied Mathematics
ICT Information and Communication Technology
IEC In- & Externe Communicatie
Internal and External Communication
IME Insurance: Mathematics and Economics (journal)
IMF Internationaal Monetair Fonds
International Monetary Fund
IVIR Instituut voor Informatierecht
Institute for Information Law
IZA Forschungsinstitut zur Zukunft der Arbeid
Institute for the Study of Labor
JEL Journal of Economic Literature
KE Kwantitatieve Economie
Quantitative Economics
KLM Koninklijke Nederlandse Luchtvaart Maatschappij
Royal Dutch Airlines
KNAW Koninklijke Nederlandse Akademie van Wetenschappen
KUB Katholieke Universiteit Brabant
Katholic University Tilburg
LNMB Landelijk Netwerk Mathematische Besliskunde
LSE London School of Economics
METIS Research Information System (formerly OZIS)
MSc Master of Science
MUB Wet Moderniserings Universitair Bestuur (law on the modernizing of university management)
NAKE Netwerk Algemene en Kwantitatieve Economie
NMa Nederlandse Mededingings autoriteit
Dutch Competition Authority
NWO Nederlandse Organisatie voor Wetenschappelijk Onderzoek
Netherlands Organisation for Scientific Research
NWO-MaG NWO-Maatschappij & Gedrag
NWO-Social and behavioural sciences
OBP Ondersteunend & Beheerspersoneel
Support staff
OL Overige lasten
Other costs
ONB Onbekend (tijdschriften)
Publications with no ranking
OPTA Onafhankelijke Post en Telecommunicatie Autoriteit
Dutch Independent Post and Telecommunications Authority
OZ Onderzoeker
Researcher
OVO Overig Onderzoek
Non-programme research

OWI
Onderwijsinstituut
Teaching Institute

OZI
Onderzoeksinstituut
Research Institute

PDOC
Postdoc

PL
Personele lasten
Costs of personnel

PZ
Personnel Department

RBC
Risk Based Capital

RESAM
Research Institute in Economics & Econometrics

RTN
Research Training Networks (EU)

RUG
Rijks Universiteit Groningen

S&P
Standard & Poor

SCHOLAR
Schooling, Labour Market and Economic Development

SEO
Stichting voor Economisch Onderzoek
Amsterdam Economics

SME
Small and Medium-sized Enterprises

SOE
State-Owned Enterprises

SWOT
(Analysis of) Strengths, Weaknesses, Opportunities & Threats

TI
Tinbergen Instituut
Tinbergen Institute

UCL
Université Catholique de Louvain

UD
Universitair Docent
Assistant Professor

UHD
Universitair Hoofddocent
Associate Professor

ULB
Université Libre de Bruxelles
Free University of Brussels

USAID
United States Agency for International Development

UvA
Universiteit van Amsterdam

VIDI
NWO Research grant

VICI
NWO Research grant

VSNU
Vereniging van Samenwerkende Nederlandse Universiteiten
Association of Universities in the Netherlands

VU
Vrije Universiteit Amsterdam
Free University Amsterdam