The 2011 annual research report of the University of Amsterdam School of Economics (ASE) provides information on the organisation, activities and results of ASE-RI. With the funding of the institute, staff members publish in and edit international journals, attend and organise international conferences and workshops, and write and supervise dissertations.

Over the past years, the number of publications in international A and B journals by ASE faculty members has been steadily increasing. In 2011, this increase was interrupted, partly due to the fact that the research staff has decreased as a consequence of the faculty reorganisation that started in 2010. On the other hand, the number of successfully defended theses showed a slight increase. Furthermore, the ASE has been able to attract a large number of new PhD students, not only from the MPhil programme of the Tinbergen Institute, but also from the European Doctorate in Economics program funded by Erasmus Mundus (EDEEM).

The 2011 QS World University Rankings by Subject for the discipline Economics and Econometrics puts ASE in the top 50 worldwide, in the top 15 in Europe and 2nd in the Netherlands. Other highlights are the EU FP7 subsidy for the CRISIS project in which CeNDEF participates, and the KVS penning for the best thesis in Economics by Vincent Sterk. Furthermore, researchers from the ASE continue to be highly visible in public debates on issues such as pension reform and the financial and sovereign debt crisis. Our research priority area on Behavioural Economics has continued to flourish, and various researchers continue to develop new initiatives to apply for large national and European research funds. I would like to end in thanking all research staff for their contributions.

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

THE RESEARCH INSTITUTE
CHAPTER 1: INSTITUTIONAL OVERVIEW

1.1 MISSION STATEMENT

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

1.2 ORGANISATION

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

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

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

1.3 STRATEGY AND POLICY

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

Faculty members in the Amsterdam School of Economics are assigned time annually for research based on their publication records in the past three years. In this way ASE-RI provides incentives to increase the quality and quantity of output. Publications are graded by quality level of the outlet. For journals, ASE-RI distinguishes:
- **A: excellent, international top level.** Publications set directions for research, by approach and by method, select topics and set standards for analytical and methodological level.

- **B: good international level.** Publications meet high analytic and methodological standards but have far less influence on direction and standards for future research.

- **Other refereed and non-refereed journals.** Journals satisfy the minimum norm of aiming for an international or national audience, applying blind refereeing, and publish in an accessible language. Analytical and methodological standards satisfy a generally accepted minimum level.

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

<table>
<thead>
<tr>
<th>Points</th>
<th>Research Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 or more:</td>
<td>0.5 fte</td>
</tr>
<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 co-operate, are allotted the maximum research time for a period of three years, at 0.5 of their working hours. Admission as a TI Fellow is based on A- and B-level publications only (TI has its own grading of publications).

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

---

**Box 1: Research Highlight: Michel Vellekoop (Actuarial Science)**

‘Actuaries and the Sahara’

Solutions to optimal investment problems such as the ones faced by insurance companies and pension funds necessitate the explicit specification of the institution’s attitude towards risk. Classical ideas about risk aversion usually boil down to assumptions that risk aversion is independent of wealth and income or that there is a relatively simple monotone relationship between risk aversion and wealth. Under such simplifying assumptions (known collectively as HARA, Hyperbolic Absolute Risk Aversion structures) the optimal strategies for investment and consumption can be derived and they take a rather simple and intuitive form. Such results are not just important for investors; they also play a role in asset pricing problems in markets where certain risks cannot be removed by hedging. Indeed, in such incomplete markets residual risks always remain and the specification of realistic yet tractable risk attitudes is thus of some importance for valuation problems in such markets.

Recent research at the Actuarial Science and Mathematical Finance group at the University of Amsterdam (in cooperation with the Universities of Maastricht and Bonn) has identified preference structures which imply non-monotone risk aversion but still allow the derivation of explicit solutions for optimal investment strategies. The new class of preferences has been called SAHARA (Symmetric Asymptotically Hyperbolic Absolute Risk Aversion) and its definition is based on a careful analysis of the dual formulation for the underlying stochastic optimization problem. It turns out that agents with such preferences show risk aversion which increases when we approach a certain wealth threshold from above, but below this threshold agents become more and more indifferent between falling below this value a bit or more severely. This can be interpreted as ‘gambling behavior’ or “precautionary spending”, the natural opposite of the well-known economic concept of “precautionary saving”.

Applications include the pricing of Unit-Linked Insurance Contracts which contain risks that cannot be hedged explicitly. Our utility functions of SAHARA class allow explicit solutions for loss distributions on the whole real line and can therefore handle unlimited loss distributions. This removes one of the main limitations for the application of wealth-dependent utility functions in valuation problems for incomplete markets.

CHAPTER 2: INPUT

2.1 RESOURCES AND OTHER PERSONNEL

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

The tables below give information on ASE-RI faculty. Table I shows that the overall research capacity was increasing until 2011. In 2010 research capacity increased, because of an increase in staff hired in the second and third flows of funds. The number of students had decreased slightly compared to 2009, but had increased compared to previous years. In 2011, there was a similar number of students. Overall however, the consequences of a major reorganisation of the Faculty of Economics and Business showed this year. A cut in numbers of scientific staff took place and the result is a decrease of 19% of total research staff in 2011.

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

<table>
<thead>
<tr>
<th>INPUT ASE-RI 2011</th>
<th>fte</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP 1 (first flow of funds, excl. Ph.D.’s)</td>
<td>23,63</td>
<td>24,94</td>
<td>25,83</td>
<td>21,31</td>
<td></td>
</tr>
<tr>
<td>WP 2 (second flow of funds, excl. Ph.D.’s)</td>
<td>8,07</td>
<td>5,82</td>
<td>6,87</td>
<td>6,32</td>
<td></td>
</tr>
<tr>
<td>WP 3 (third flow of funds, excl. Ph.D.’s)</td>
<td>36,05</td>
<td>35,00</td>
<td>36,36</td>
<td>23,78</td>
<td></td>
</tr>
<tr>
<td>Ph.D. students</td>
<td>14,75</td>
<td>19,14</td>
<td>18,45</td>
<td>18,91</td>
<td></td>
</tr>
<tr>
<td>Total Research staff</td>
<td>82,50</td>
<td>84,90</td>
<td>87,51</td>
<td>70,32</td>
<td></td>
</tr>
<tr>
<td>Support staff ASE-RI(bureau)</td>
<td>0,80</td>
<td>0,80</td>
<td>0,84</td>
<td>1,00</td>
<td></td>
</tr>
<tr>
<td>Total Staff</td>
<td>83,30</td>
<td>85,70</td>
<td>88,35</td>
<td>71,32</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>UvA-Econometrics</th>
<th>fte</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP 1 (first flow of funds, excl. Ph.D.’s)</td>
<td>4,24</td>
<td>4,71</td>
<td>5,73</td>
<td>3,96</td>
<td></td>
</tr>
<tr>
<td>WP 2 (second flow of funds, excl. Ph.D.’s)</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td>WP 3 (third flow of funds, excl. Ph.D.’s)</td>
<td>0,10</td>
<td>0,10</td>
<td>0,10</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td>Ph.D. students</td>
<td>2,30</td>
<td>1,80</td>
<td>0,00</td>
<td>1,45</td>
<td></td>
</tr>
<tr>
<td>Total Research staff</td>
<td>6,64</td>
<td>6,61</td>
<td>5,83</td>
<td>6,01</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
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<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>WP 1 (first flow of funds, excl. Ph.D.’s)</td>
<td>2,19</td>
<td>2,62</td>
<td>2,45</td>
<td>0,41</td>
<td></td>
</tr>
<tr>
<td>WP 2 (second flow of funds, excl. Ph.D.’s)</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td>WP 3 (third flow of funds, excl. Ph.D.’s)</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td>Ph.D. students</td>
<td>0,63</td>
<td>0,30</td>
<td>0,00</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td>Total Research staff</td>
<td>2,81</td>
<td>2,92</td>
<td>2,45</td>
<td>0,41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>fte</td>
<td>2008</td>
<td>2009</td>
<td>2010</td>
<td>2011</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Equilibrium, Expectations &amp; Dynamics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WP 1 (first flow of funds, excl. Ph.D.’s)</td>
<td>3.42</td>
<td>4.21</td>
<td>2.86</td>
<td>2.91</td>
<td></td>
</tr>
<tr>
<td>WP 2 (second flow of funds, excl. Ph.D.’s)</td>
<td>1.08</td>
<td>0.00</td>
<td>0.80</td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>WP 3 (third flow of funds, excl. Ph.D.’s)</td>
<td>0.70</td>
<td>0.36</td>
<td>1.11</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>Ph.D. students</td>
<td>2.40</td>
<td>2.60</td>
<td>2.55</td>
<td>3.83</td>
<td></td>
</tr>
<tr>
<td>Total Research staff</td>
<td>7.60</td>
<td>7.47</td>
<td>7.32</td>
<td>7.42</td>
<td></td>
</tr>
</tbody>
</table>

| **Actuarial Science**            |             |        |        |        |        |
| WP 1 (first flow of funds, excl. Ph.D.’s) | 0.86        | 1.79   | 1.75   | 0.96   |
| WP 2 (second flow of funds, excl. Ph.D.’s) | 0.50        | 0.50   | 0.00   | 0.60   |
| WP 3 (third flow of funds, excl. Ph.D.’s) | 1.84        | 0.61   | 0.51   | 0.77   |
| Ph.D. students                   | 1.46        | 1.10   | 0.70   | 0.47   |
| Total Research staff             | 4.66        | 4.00   | 2.96   | 2.80   |

| **IBIS**                        |             |        |        |        |        |
| WP 1 (first flow of funds, excl. Ph.D.’s) | 0.00        | 0.40   | 0.10   | 0.10   |
| WP 2 (second flow of funds, excl. Ph.D.’s) | 0.00        | 0.00   | 0.00   | 0.00   |
| WP 3 (third flow of funds, excl. Ph.D.’s) | 0.00        | 0.80   | 0.70   | 0.70   |
| Ph.D. students                   | 0.00        | 1.50   | 1.90   | 1.70   |
| Total Research staff             | 0.00        | 2.40   | 2.70   | 2.50   |

| **Mint**                        |             |        |        |        |        |
| WP 1 (first flow of funds, excl. Ph.D.’s) | 3.94        | 2.88   | 2.95   | 2.97   |
| WP 2 (second flow of funds, excl. Ph.D.’s) | 1.21        | 1.13   | 1.88   | 1.27   |
| WP 3 (third flow of funds, excl. Ph.D.’s) | 1.16        | 1.77   | 1.33   | 1.20   |
| Ph.D. students                   | 1.44        | 3.10   | 3.00   | 1.85   |
| Total Research staff             | 7.75        | 8.88   | 9.16   | 7.29   |

| **Human Capital**               |             |        |        |        |        |
| WP 1 (first flow of funds, excl. Ph.D.’s) | 2.69        | 3.40   | 4.05   | 4.33   |
| WP 2 (second flow of funds, excl. Ph.D.’s) | 1.56        | 1.96   | 1.34   | 1.50   |
| WP 3 (third flow of funds, excl. Ph.D.’s) | 1.84        | 3.32   | 3.52   | 0.49   |
| Ph.D. students                   | 1.80        | 2.10   | 3.70   | 5.28   |
| Total Research staff             | 7.89        | 9.88   | 12.01  | 11.60  |

| **History & Methodology of Economics** |             |        |        |        |        |
| WP 1 (first flow of funds, excl. Ph.D.’s) | 2.34        | 1.67   | 1.71   | 0.93   |
| WP 2 (second flow of funds, excl. Ph.D.’s) | 0.20        | 0.40   | 0.00   | 0.00   |
| WP 3 (third flow of funds, excl. Ph.D.’s) | 0.00        | 0.10   | 0.11   | 0.11   |
| Ph.D. students                   | 0.68        | 1.20   | 1.20   | 0.20   |
| Total Research staff             | 3.22        | 3.37   | 3.02   | 1.28   |

| **Experimental & Political Economics** |             |        |        |        |        |
| WP 1 (first flow of funds, excl. Ph.D.’s) | 2.83        | 2.57   | 3.33   | 3.81   |
| WP 2 (second flow of funds, excl. Ph.D.’s) | 2.62        | 1.33   | 1.58   | 0.75   |
| WP 3 (third flow of funds, excl. Ph.D.’s) | 0.25        | 0.00   | 0.10   | 0.00   |
| Ph.D. students                   | 3.98        | 4.30   | 4.30   | 3.33   |
| Total Research staff             | 9.68        | 8.20   | 8.20   | 7.89   |

| **Industrial Org., Competition Pol. & Regulation** |             |        |        |        |        |
| WP 1 (first flow of funds, excl. Ph.D.’s) | 0.88        | 0.69   | 0.90   | 0.03   |
| WP 2 (second flow of funds, excl. Ph.D.’s) | 0.90        | 1.40   | 1.27   | 1.00   |
| WP 3 (third flow of funds, excl. Ph.D.’s) | 0.00        | 0.00   | 0.00   | 0.00   |
| Ph.D. students                   | 1.08        | 1.14   | 1.10   | 0.80   |
| Total Research staff             | 2.86        | 3.73   | 3.27   | 2.73   |

| **SEO**                         |             |        |        |        |        |
| WP 1 (first flow of funds, excl. Ph.D.’s) | 0.24        | 0.00   | 0.00   | 0.00   |
| WP 2 (second flow of funds, excl. Ph.D.’s) | 0.00        | 0.00   | 0.00   | 0.00   |
| WP 3 (third flow of funds, excl. Ph.D.’s) | 30.16       | 27.94  | 28.88  | 20.45  |
| Ph.D. students                   | 0.06        | 0.00   | 0.00   | 0.00   |
| Total Research staff             | 30.46       | 27.94  | 28.88  | 20.45  |
Most faculty are in the ranks of professor and student (the number of researchers (oz) is highest, but 90% are working at SEO Economic Research). Overall there seems to be a healthy mix of researchers in different stages of their career, although the number of Postdocs is low and some programmes might benefit from a more balanced spread in ranks.

Table III Ranks at programme level

<table>
<thead>
<tr>
<th>Research programme</th>
<th>Hgl</th>
<th>Uhd</th>
<th>Ud</th>
<th>Oz</th>
<th>Pdoc</th>
<th>Ph.D.</th>
<th>Guest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># tfr</td>
<td># tfr</td>
<td># tfr</td>
<td># tfr</td>
<td># tfr</td>
<td># tfr</td>
<td># tfr</td>
<td># tfr</td>
</tr>
<tr>
<td>UvA Econometrics</td>
<td>6 1.24</td>
<td>3 1.73</td>
<td>4 1.59</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>5 2.45</td>
<td>2 0.00</td>
<td>20 6.01</td>
</tr>
<tr>
<td>Operations research</td>
<td>3 0.12</td>
<td>2 0.11</td>
<td>3 0.18</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>0 0.41</td>
</tr>
<tr>
<td>Equilibrium, expectations &amp; dynamics</td>
<td>1 0.50</td>
<td>3 1.50</td>
<td>3 0.91</td>
<td>0 0.00</td>
<td>4 0.85</td>
<td>12 3.83</td>
<td>5 1.00</td>
<td>28 8.42</td>
</tr>
<tr>
<td>Actuarial science</td>
<td>4 1.80</td>
<td>0 0.00</td>
<td>2 0.91</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>4 0.47</td>
<td>4 0.00</td>
<td>8.40</td>
</tr>
<tr>
<td>IBIS</td>
<td>1 0.40</td>
<td>1 0.40</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>4 0.47</td>
<td>1 0.00</td>
<td>6 2.50</td>
</tr>
<tr>
<td>MInt</td>
<td>7 1.90</td>
<td>2 1.00</td>
<td>2 0.68</td>
<td>0 0.00</td>
<td>4 1.28</td>
<td>1 0.28</td>
<td>7 1.50</td>
<td>25 7.29</td>
</tr>
<tr>
<td>Human Capital</td>
<td>9 3.35</td>
<td>0 0.00</td>
<td>4 2.00</td>
<td>2 0.80</td>
<td>1 0.17</td>
<td>11 4.68</td>
<td>10 0.00</td>
<td>37 11.00</td>
</tr>
<tr>
<td>Methodology &amp; History of Economics</td>
<td>3 0.42</td>
<td>3 0.62</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>2 0.20</td>
<td>2 0.00</td>
<td>10 1.24</td>
</tr>
<tr>
<td>Experimental &amp; political economics</td>
<td>4 1.82</td>
<td>0 0.00</td>
<td>3 0.99</td>
<td>1 0.75</td>
<td>1 1.00</td>
<td>10 3.33</td>
<td>4 0.00</td>
<td>23 7.89</td>
</tr>
<tr>
<td>Industrial org., Competition pol.&amp; Regulation</td>
<td>3 1.05</td>
<td>0 0.00</td>
<td>2 0.90</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>3 0.80</td>
<td>0 0.00</td>
<td>8 7.23</td>
</tr>
<tr>
<td>Other research economics</td>
<td>2 0.00</td>
<td>0 0.00</td>
<td>3 0.13</td>
<td>1 0.20</td>
<td>0 0.00</td>
<td>2 0.40</td>
<td>2 0.00</td>
<td>10 2.33</td>
</tr>
<tr>
<td>SEO economic research</td>
<td>3 1.66</td>
<td>0 0.00</td>
<td>3 0.99</td>
<td>35 27.22</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>0 0.00</td>
<td>38 28.88</td>
</tr>
<tr>
<td>Total</td>
<td>48 13.86</td>
<td>14 5.36</td>
<td>26 8.29</td>
<td>39 29.57</td>
<td>10 3.71</td>
<td>60 49.71</td>
<td>32 1.00</td>
<td>221 81.50</td>
</tr>
</tbody>
</table>

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

2.2 RESOURCES, FUNDING AND FACILITIES

The ASE-RI budget is allocated to non-staff cost centres. Most of this non-staff funding is spent on the Tinbergen Institute, where it is used to cover the expenses of the MPhil programme, courses for students and the organisation of seminars. Another larger part of the ASE-RI budget concerns funding of the research priority area ‘Behavioural Economics’.

Besides funds allocated to fixed cost-centres to meet obligations made in the past, the ASE-RI budget contains funds distributed over the research programmes. The allocation of part of this funding is based on the size of the programme (fte). Programme leaders can use this funding for any research related activities of programme members, such as visiting conferences, conducting experiments and collecting data. Besides the direct funding of research programmes, professors who successfully deliver a are granted a bonus. Dissertations written within 55 months after their appointment are granted twice the standard amount.
CHAPTER 3: CURRENT STATE OF AFFAIRS

3.1 PROCESSES IN RESEARCH, INTERNAL AND EXTERNAL COLLABORATION

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

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

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

<table>
<thead>
<tr>
<th>Seminar series</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economics Colloquia</strong></td>
<td>Sander Onderstal, Jeroen van de Ven, Tatiana Kiseleva &amp; Marco van der Leij</td>
</tr>
<tr>
<td><strong>Macro Seminars at the Tinbergen Institute</strong></td>
<td>Wouter den Haan, Pieter Gautier, Bjoern Bruegemann</td>
</tr>
<tr>
<td><strong>Tinbergen Institute Econometrics Seminars &amp; Workshops</strong></td>
<td>Simon Broda &amp; Michael Massmann</td>
</tr>
<tr>
<td><strong>KAFFEE Lunch seminar</strong></td>
<td>Noemi Peter, Matthias Weber &amp; David Kopanyi</td>
</tr>
<tr>
<td><strong>CREED-Tinbergen series in Institutions and Decision Analysis</strong></td>
<td>Gonul Dogan</td>
</tr>
<tr>
<td><strong>Tinbergen Institute Lunch Seminars Series</strong></td>
<td>Raphie Hayat &amp; Dennis Bonam</td>
</tr>
<tr>
<td><strong>Tinbergen Empirical Microeconomics Seminars</strong></td>
<td>Erik Plug, Monique de Haan</td>
</tr>
</tbody>
</table>

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

As a graduate school, the Tinbergen Institute offers a two-year research master (Master of Philosophy in Economics). These two years are part of a five-year track. The advantage of this system is that it offers students an excellent research-oriented two-year programme with good opportunities to meet top-level supervisors (TI-fellows).
The number of students starting a project within ASE-RI was uneven in previous years but now seems to stabilize around an annual inflow of around ten. As can be seen from Table IV, there are major differences between the flows of fund. But in general we see a higher influx of externally funded students in recent years.

Table IV: Inflow 2000-2011 (ASE-RI)

<table>
<thead>
<tr>
<th>Cohort</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st flow of fund projects</td>
<td>9</td>
<td>1.75</td>
<td>18</td>
<td>2.75</td>
<td>6</td>
<td>1</td>
<td>4.5</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>7</td>
<td>5.8</td>
</tr>
<tr>
<td>2nd flow of fund projects</td>
<td>0</td>
<td>0.25</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>3.2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>3rd flow of fund projects</td>
<td>0</td>
<td>0</td>
<td>0.25</td>
<td>0</td>
<td>2</td>
<td>1.5</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Total projects started</td>
<td>9</td>
<td>2</td>
<td>21</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>9</td>
<td>8</td>
<td>11</td>
<td>6</td>
<td>7</td>
<td>11</td>
<td>8.5</td>
</tr>
</tbody>
</table>

The jump from 2001 to 2002 was due to postponing entry as a result of a new system of financial support1. The strong drop in 2003, 2004 and 2005 was a consequence of a financial shortage and, since all projects run at least four years, because of the high number of projects started in 2002 that are still weighing down on the budget. In recent years the outflow of students who completed their MPhil at the Tinbergen Institute was sufficient to fill in all of the vacancies.

Table V: graduations by cohort (FEB)*

<table>
<thead>
<tr>
<th>Cohort</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>Total/Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects started</td>
<td>16</td>
<td>15</td>
<td>12</td>
<td>3</td>
<td>28</td>
<td>8</td>
<td>14</td>
<td>8</td>
<td>17</td>
<td>15</td>
<td>136</td>
</tr>
<tr>
<td>Fraction graduated from total</td>
<td>56%</td>
<td>73%</td>
<td>58%</td>
<td>100%</td>
<td>57%</td>
<td>63%</td>
<td>79%</td>
<td>50%</td>
<td>29%</td>
<td>20%</td>
<td>59%</td>
</tr>
<tr>
<td>Graduated within 60 months</td>
<td>5/9</td>
<td>3/11</td>
<td>3/7</td>
<td>1/3</td>
<td>10/16</td>
<td>2/5</td>
<td>4/8</td>
<td>3/4</td>
<td>5/5</td>
<td>3/3</td>
<td>39/71</td>
</tr>
<tr>
<td>Fraction grad. within 60 months</td>
<td>56%</td>
<td>27%</td>
<td>43%</td>
<td>33%</td>
<td>63%</td>
<td>40%</td>
<td>50%</td>
<td>75%</td>
<td>100%</td>
<td>100%</td>
<td>59%</td>
</tr>
<tr>
<td>Av. duration to completion in m.</td>
<td>65</td>
<td>69</td>
<td>60</td>
<td>65</td>
<td>58</td>
<td>63</td>
<td>62</td>
<td>54</td>
<td>43</td>
<td>42</td>
<td>58</td>
</tr>
</tbody>
</table>

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

As can be seen in Table V, on average, students at the FEB needed 60 months from start of the contract to actual graduation. Reason for more concern is the overall low percentage of graduations (58%). It is, however, expected that this figure will rise in the near future, when a larger proportion of projects started are carried out by students with a completed two-year research-training programme. From Table VI, we see a slightly better figure for the ASE-RI students. This is partly due to the fact that the relative weight of the most recent years is higher, since they naturally score better because part of these cohorts still has to graduate.

Table VI: graduations by cohort (ASE-RI)

<table>
<thead>
<tr>
<th>Cohort</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>Total/Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects started</td>
<td>9</td>
<td>5</td>
<td>9</td>
<td>2</td>
<td>21</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>9</td>
<td>8</td>
<td>79</td>
</tr>
<tr>
<td>Graduated/Total</td>
<td>6/9</td>
<td>5/5</td>
<td>6/9</td>
<td>2/2</td>
<td>15/21</td>
<td>0/3</td>
<td>3/10</td>
<td>1/3</td>
<td>1/9</td>
<td>1/8</td>
<td>38/79</td>
</tr>
<tr>
<td>Fraction graduated from total</td>
<td>67%</td>
<td>100%</td>
<td>67%</td>
<td>100%</td>
<td>62%</td>
<td>0%</td>
<td>33%</td>
<td>33%</td>
<td>11%</td>
<td>13%</td>
<td>49%</td>
</tr>
<tr>
<td>Graduated within 60 months</td>
<td>4/6</td>
<td>2/5</td>
<td>2/6</td>
<td>0/2</td>
<td>9/13</td>
<td>0/0</td>
<td>3/3</td>
<td>1/1</td>
<td>1/1</td>
<td>1/1</td>
<td>23/38</td>
</tr>
<tr>
<td>Fraction grad. within 60 months</td>
<td>67%</td>
<td>40%</td>
<td>33%</td>
<td>0%</td>
<td>69%</td>
<td>0%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>61%</td>
</tr>
<tr>
<td>Av. duration to completion in m.</td>
<td>60</td>
<td>67</td>
<td>51</td>
<td>68</td>
<td>51</td>
<td>-</td>
<td>56</td>
<td>49</td>
<td>40</td>
<td>35</td>
<td>53</td>
</tr>
</tbody>
</table>

1 The 'bursaal'-system was abolished in favor of the 'AIO'-system. In the former system PhD students are not employed by the university but received a scholarship whereas in the latter system the PhD students are employees with concomitant rights and legal positions.
3.2 ACADEMIC REPUTATION

In 2011, CentER, the research institute in economics of Tilburg University, drew up the Top 100 Worldwide Economics Schools Research Ranking based on research contributions over the period 2007-2011². The University of Amsterdam ranked 2nd in the Netherlands, 6th in Europe, and 28th worldwide. This differs from the results of the ESB Economentop 40 of 2011, where UvA ranked 4th in the Netherlands³. Furthermore, the 2011 QS World University Rankings by Subject puts FEB at rank 44 for the discipline Economics and Econometrics (12th in Europe, 2nd in the Netherlands).

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

³ http://esbonline.sdu.nl/esb/
<table>
<thead>
<tr>
<th>Name</th>
<th>Editorialship</th>
<th>Journal</th>
<th>Editors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buurina, B.J.</td>
<td>Member editorial board</td>
<td>Tijdschrift voor Tweeklaring</td>
<td></td>
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<tr>
<td>Beetsma, R.M.W.j.</td>
<td>Associate editor</td>
<td>CESifo Economic Studies</td>
<td></td>
</tr>
<tr>
<td>Hsieh, C.</td>
<td>Editor</td>
<td>International Journal of Technology Marketing</td>
<td></td>
</tr>
<tr>
<td>Boann, M.J.</td>
<td>Member advisory board</td>
<td>European Journal for Philosophy and Economics</td>
<td>B</td>
</tr>
<tr>
<td>Boann, M.J.</td>
<td>Associate editor</td>
<td>Journal of Economic Methodology</td>
<td>B</td>
</tr>
<tr>
<td>Boann, M.J.</td>
<td>Co-editor</td>
<td>Journal of the History of Economic Thought</td>
<td>B</td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Member scientific committee</td>
<td>Review de Philosophie Économique</td>
<td>B</td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Editor</td>
<td>Advances in Social Economics book series, Ranchhdy</td>
<td>B</td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Member editorial board</td>
<td>Forum for Social Economics</td>
<td>A</td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Member editorial board</td>
<td>Economic Journal</td>
<td>A</td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Associate editor</td>
<td>Economics</td>
<td>B</td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Advisory editor</td>
<td>Journal of Economic Dynamics and Central</td>
<td>A</td>
</tr>
<tr>
<td>Davis, J.B.</td>
<td>Associate editor</td>
<td>Journal of Money Credit and Banking</td>
<td></td>
</tr>
<tr>
<td>Diks, C.G.H.</td>
<td>Associate editor</td>
<td>Studies in Nonlinear Dynamics in Economics</td>
<td>B</td>
</tr>
<tr>
<td>Does, R.J.M.M.</td>
<td>Member editorial advisory board</td>
<td>International Journal of Lean Six Sigma</td>
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<tr>
<td>Does, R.J.M.M.</td>
<td>Member editorial board</td>
<td>Quality Engineering</td>
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<td>Does, R.J.M.M.</td>
<td>Member editorial board</td>
<td>Quality Engineering</td>
<td></td>
</tr>
<tr>
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<td>Column editor</td>
<td>Quality Technology and Quantitative Management</td>
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</tr>
<tr>
<td>Ewijk, C.</td>
<td>Editor</td>
<td>De Economist</td>
<td>B</td>
</tr>
<tr>
<td>Goosier, J.G. de</td>
<td>Associate Editor</td>
<td>International Journal of Forecasting</td>
<td>B</td>
</tr>
<tr>
<td>Gooijer, J.G. de</td>
<td>Associate Editor</td>
<td>Empirical Economics</td>
<td>B</td>
</tr>
<tr>
<td>Gooijer, M.J.</td>
<td>Editor</td>
<td>Insurance, Mathematics and Economics</td>
<td>A</td>
</tr>
<tr>
<td>Gooijer, M.J.</td>
<td>Editor</td>
<td>Journal of Computational and Applied Mathematics</td>
<td>B</td>
</tr>
<tr>
<td>Hartog, J.</td>
<td>Member editorial board</td>
<td>Economics of Education Review</td>
<td>B</td>
</tr>
<tr>
<td>Hartog, J.</td>
<td>Member editorial board</td>
<td>Journal of Happiness and Development</td>
<td>B</td>
</tr>
<tr>
<td>Hinkooper, J.</td>
<td>Associate editor</td>
<td>Review of Industrial Organization</td>
<td>B</td>
</tr>
<tr>
<td>Hommen, C.</td>
<td>Associate editor</td>
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<td>B</td>
</tr>
<tr>
<td>Hommen, C.</td>
<td>Associate editor</td>
<td>Journal of Nonlinear Science</td>
<td>B</td>
</tr>
<tr>
<td>Hommen, C.</td>
<td>Associate editor</td>
<td>Journal of Economic Behavior &amp; Organization</td>
<td>A</td>
</tr>
<tr>
<td>Hommen, C.</td>
<td>Editor</td>
<td>Journal of Economic Dynamics and Control</td>
<td>A</td>
</tr>
<tr>
<td>Hommen, C.</td>
<td>Associate editorial board</td>
<td>Journal of Economic Interation and Coordination</td>
<td>B</td>
</tr>
<tr>
<td>Hommen, C.</td>
<td>Associate editor</td>
<td>Macroeconomic Dynamics</td>
<td>B</td>
</tr>
<tr>
<td>Huisch, C.</td>
<td>Editor</td>
<td>International Journal of Technology Marketing</td>
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<tr>
<td>Jager, H.</td>
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<td>Kwartierschrift Economie</td>
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<td>Managing editor</td>
<td>Insurance: Mathematics and Economics</td>
<td>A</td>
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<td>Maint, J. de</td>
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<tr>
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<td>A</td>
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<td>Ms Jadas</td>
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<td>B</td>
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<td>Tijdschrift voor Politieke Economie (TPE: Digital)</td>
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<td>Tainton, J.</td>
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3.3 OVERVIEW OF RESULTS

Figure I: Number of publications 2005-2011

Table VIII: Publications 2005-2011

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<th>Year</th>
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Figure I and Table VIII show an increasing total output between 2005 and 2010. In 2011 the output decreased, which is partly due to a reorganisation in the Faculty of Economics and Business. This reorganisation led to a decrease in scientific staff (see Table I).

Table IX: Aggregated results of the institute

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In comparison to 2010, which was not a very successful year in terms of dissertations, 2011 showed a slightly higher number dissertations. Yet a higher increase is expected in 2012.

### 3.4 RELEVANCE TO SOCIETY

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

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

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

SEO Economic Research carries out contract research for ministries and public organisations, private companies and non-profit institutions, nationally and internationally. SEO distinguishes itself from other research bureaus by its analytical approach. Modern economic analysis is applied to practical issues. Empirical questions are tackled with the econometrics toolkit.
CHAPTER 4: RESEARCH PRIORITY AREA: BEHAVIOURAL ECONOMICS

4.1 BACKGROUND

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

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

4.2 FOCUS

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

4.3 ORGANISATION

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

In 2011, the committee dealing with the allocation of resources, consisting of Theo Offerman, Erik Plug, Adriaan Soetevent, Joep Sonnemans and Jan Tuinstra, funded 20 applications and the workshop ABEE11. In addition, the committee funded an exchange of students of the Research priority Area and students of NYU. Both the workshop in New York where the
Amsterdam-based students presented and the one in Amsterdam where the New York based students presented led to a fruitful exchange of ideas and were very successful.

Of course, after an experiment has been run it still takes considerable time before a paper is published. Nevertheless, the Research Priority Area Behavioural Economics already has produced quite a few top publications, amongst which in the *American Economic Review* (Abbink, et al, 2010; Kuhn et al, 2011), the *Journal of Economic Literature* (Holmlund et al., forthcoming), *Nature* (van Veelen et al., 2010), *Science* (Ule et al., 2009) and the *Review of Economic Studies* (Offerman et al, 2009).

The workshop ABEE11 dealt with learning in Macro Economics and Behavioural Finance and was organised by Mikhail Anufriev and Jan Tuinstra. Some presentations were held by international top researchers (Jasmina Arifovic, Vessela Daskalova, John Duffy, Martin Ellison, George Evans, Dirk Helbing, Thorsten Hens, Charles Noussair and Frank Westerhoff and the others by Amsterdam-based researchers. In this way a very fruitful exchange of ideas was established. For 2012 another workshop is planned that will focus on Behavioural Industrial Organisation.
‘Employers use their networks’

While many economists believe in the efficiency of the market mechanism, sociologists stress that the social context in which an individual operates affects her choice set and may therefore affect this efficiency. One area where this is deemed important is the labor market.

A firm can hire along two channels. One covers traditional market-oriented institutions like employment agencies or advertisements, where multiple firms announce their vacancies and many workers offer their services. The law of supply and demand determines matches and wages. In practice, many firms do not restrict their recruitment efforts to this kind of institution. Instead, when looking to hire, they involve their social network. They ask friends and colleagues for information about suitable workers. One reason for doing so relates to the type of job. For many jobs, it is difficult to monitor precisely how well the employee is doing. Because of this moral hazard, the employer has to trust that the job is being done properly. This is where the social network can be useful. In particular, other employers can share their experience with the trustworthiness of a job candidate. In contrast, such information is rarely available when hiring on the market.

We study this phenomenon in three papers, using laboratory experiments to collect data. In our experiments, in each round every employer seeks to engage in a labor contract with a single worker. After a contract has been established, a worker has discretion in the effort she exerts. An untrustworthy worker will accept a high wage but exert low effort. An employer may choose to recruit via a centralized market or negotiate bilaterally with one specific worker. In the latter case, she may obtain information from other employers about the worker’s trustworthiness in previous jobs.

In Schram et al. (2010) this information was exogenously generated, i.e., given by us. Whenever an employer decided to hire through bilateral negotiations, we informed her about this worker’s history of trustworthiness. We observe that approximately 30% of the job matches occur outside of the market. Workers hired here earn higher wages, are more trustworthy and generate higher earnings for the firm. In Brandts et al. (2010) we show that this effect occurs in large markets as well as in small markets.

Gërxhani et al. (2011) takes the next step. Here, we investigate whether employers are able to endogenously form social networks that allow them to bypass the market and increase the efficiency of the hiring process by sharing information. Instead of giving them information about the worker’s history of trustworthiness, we allow them to ask other employers about their experience with the worker. We observe the emergence of two kinds of information sharing networks. If requests for information are anonymous, some groups of employers share this information as contributions to a public good. When employers can identify who is asking for information (and who is giving it), they form reciprocal networks of (sub)groups mutually sharing information about former workers. In both cases, these endogenous networks yield the same kind of benefits to both employers and workers as we observed when we provided information. Now, about 60% of the labor contracts are made outside of the market. We conclude that employers are able to create social structures that allow them to avoid the moral hazard problem and increase efficiency compared to the case where markets are at work without further social structure.

references

B

THE RESEARCH PROGRAMMES
5.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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5.2 PROGRAMME DESIGN

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

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

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

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

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

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

- **Econometric Theory.** Within this sub-theme, analytical finite sample approximations, simulation-based inference, inference based on IV/GMM with weak instruments, conditional inference, methods from differential geometry as well as semi- and non-parametric methods are studied for and applied in models that may be dynamic, simultaneous or non-linear.

- **Microeconometrics.** Econometric analyses within this sub-theme often entail a quantitative assessment of the effectiveness of a policy intervention. Outside controlled experiments policies are usually endogenous. Unbiased assessment of effectiveness requires adequate modelling of the causality, handling of any unobserved heterogeneity and understanding of the identification issues. Applications within this sub-theme often include panel data, which calls for the development of accurate inference methods for dynamic panel data models.

- **Financial Econometrics.** Topics are ARCH and stochastic volatility models, the econometrics of the CAPM and factor models, econometric models of the term structure of interest rates, econometric analysis of credit risk, the analysis of option data and implied volatilities, and the analysis of high-frequency data and realized volatility. Applications within this sub-theme often include non-stationary data. This leads to the analysis of unit roots, cointegration and error correction models, the role of (weak) exogeneity in such models and structural change.

5.3 PROGRAMME EVALUATION

In recent years, the size of UvA-Econometrics has been just at the minimal critical mass required to maintain a stimulating research environment. In 2011, the early retirement of two professors (Bethlehem and de Gooijer), and the substantial reduction in the appointment of a third professor (Kiviet) have led to a decline in research time available to the programme. This threatens the programme’s viability, despite the appointment of an assistant professor as of September 2011. Therefore, a proposal for appointing an additional faculty member, preferably at the senior level, will be developed in the first months of 2012.

Almost weekly, a Friday afternoon (mostly external) seminar is organised at (and funded by) the Tinbergen Institute, jointly with econometricians from VU University Amsterdam. There is a clear upward trend, both in the quality of the speakers and in the attendance of this seminar. In addition, about once a month an internal informal workshop is held on Thursdays at lunch time. In the latter, research projects which are still in an early stage are discussed. These meetings stimulate the coherence of the research programme and should lead to more joint research projects. All activities and achievements of UvA-Econometrics are communicated via its web-site (www.ase.uva.nl/UvA-Econometrics).

It is the ambition of UvA-Econometrics to find further international recognition as one of the major strongholds in theoretical econometrics worldwide. The activities and achievements over the last decade (number and quality of publications, presentations at and invitations for international meetings, responsibilities regarding journals and conferences, hosting of visiting scholars, exposure at peer institutions, etc.) have been substantial, but leave ample room for further qualitative and quantitative improvements. Most individual members of UvA-Econometrics continue to operate in intensive formal and informal national and international networks. However, the recently implemented substantial increases in teaching loads will undoubtedly have negative effects on the research achievements over the coming years. As
part of a strategy for improvement of research output, UvA-Econometrics aims to strengthen the ties with other faculty research programs, in the form of joint applied research projects in micro-econometrics and financial econometrics.

In the years before 2011, the programme has had no inflow of new students for a few years, leading to a gradual decline in the number of active students. This may be explained by a combination of factors: the faculty’s policy to fund only students with an MPhil degree from the Tinbergen Institute, a lack of interest of MPhil graduates in econometric theory, and a lack of effort or success in obtaining external funding for projects. In 2011, this negative trend has been broken, and in total five new students have started a project at UvA-Econometrics. Of these five, three are funded by various NWO grants, and one is funded by the European Doctorate in Economics Erasmus Mundus (EDEEM) network. Furthermore, two of the five students have been recruited from the Tinbergen Institute MPhil program.

It is expected that the Tinbergen Institute MPhil in Econometrics track, which started in 2011, should lead to a continued inflow of talented students into the UvA-Econometrics programme, in particular if the teaching of courses in the MPhil program by members of UvA-Econometrics is intensified. In addition, the Tinbergen Institute has recently organised a so-called Fast Track in Econometrics, which should enable MSc students in Econometrics to complete both their MSc program and the MPhil program in two years’ time. The possibility to start a four-year project based on an MSc in Econometrics only will be limited to externally funded projects, but the Tinbergen Institute has facilitated such appointments in the form of a 40-ec programme that can be followed in the first of the four years.

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

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

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

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

**Threats**: decreased research input due to faculty members having reaching (early) retirement age; research input by senior staff may slip towards less than 40% of their total labour input.

### 5.4 RESOURCES AND FUNDING

The current ASE-RI facilities allow the active researchers (and also first and second year students) to attend at least one international conference per year.

Recently, UvA-Econometrics has been quite successful in obtaining external funding for research activities. An NWO-VIDI grant awarded to Maurice Bun in 2010 will enable him and an extra student (Rutger Poldermans) to work for the next 5 years on a project titled: “Causal inference with panel data”. The project has started in April 2011 and will end in March 2016. Furthermore, two open-competition NWO grants for students were awarded to Jan Kiviet and Peter Boswijk. Milan Pleus and Arturas Juodis have started as students on
these projects. Finally, Andrew Pua has been selected by the EDEEM network on a project supervised by Peter Boswijk and Maurice Bun. Compared with previous years this attraction of additional external funding is quite a remarkable achievement.

5.5 OUTPUT

**Key publications**


**Forthcoming**


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

**A**

**B**

Academic publications (in/of books) – refereed

**A**

**B**

Other


Academic publications (in proceedings) – non-refereed


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


Academic publications (working- and discussion papers)


Contributions to academic conferences, workshops and seminars


Bethlehem, J.G. (September, 2011). Selection problems in Web Surveys. Invited presentation, 8th Scientific Meeting of the Classification and Data Analysis Group of the Italian Statistical Society, Pavia, Italy.


Bun, M.J.G. (2011, 8 June). Identification pathologies and their effects on GMM test statistics for dynamic panel data models. 3rd Amsterdam-Bonn Workshop in Econometrics, University of Bonn.


Kiviet, J.F. (2011, 8 September). Identification and inference in a simultaneous equation under alternative information sets and sampling schemes. Staff seminar at National University of Singapore.

Kiviet, J.F. (2011, 14 October). Reliability of econometric inference from small panel data sets, illustrated by an analysis of the causes of the decline in infant mortality in Brazil. Staff seminar at Nanyang Technological University, Singapore.


Stakėnas, P. (2011, 8 June). Estimation and inference of fractionally integrated time series via autoregressive approximation. 3rd Amsterdam-Bonn Workshop in Econometrics, University of Bonn.


Organisational contributions to conferences, workshops and seminars


Garderen, K.J. van (2011). Member Quantitative Economics Doctorate (QED) and Network.

**Participation in academic networks & fellowships**
Boswijk, H.P. (2011). Member of the Board of the Tinbergen Institute.
Kleibergen, F. (2011) Associate research fellow Tinbergen Institute.

**Editor or member of editorial board**

**Referee activities**


Membership of academic committees (including committees outside the FEB)
Bethlehem, J.G. (2011). Member of the Board of Overseers of the MESS Project (Multi-disciplinary facility for measurement and Experimentation in the Social Sciences).
Boswijk, H.P. (2011). Member of committee of Oleg Sokolinkiy, Erasmus University, Rotterdam.
Garderen, K.J. van (2011). Member Doctoral Board of EDEEM (European Doctorate in Economics- Erasmus Mundus).

Research contributions in the media

Grants, prizes and honours

Various activities
CHAPTER 6: OPERATIONS RESEARCH & MANAGEMENT

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

6.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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6.2 PROGRAMME DESIGN

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

Accordingly, three lines of research and associated activities are distinguished:

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
## 6.3 OUTPUT

### Key publications


### Forthcoming


Wei, W. van der, Dijk, N.M. van & Mei, R. van der. Product form results for two-station networks with shared resources. *Performance Evaluation*. [A]
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A

B

Academic publications (in/of books) – refereed

B

Academic publications (in proceedings) – non-refereed

Academic publications (working- and discussion papers)

Organisational contributions to conferences, workshops and seminars

Participation in academic networks & fellowships

Editor or member of editorial board

Referee activities

Membership of academic committees (including committees outside the FEB)

Grants, prizes and honours
Dijk, N.M. van, Wal, J. van der, Haijema, R., Kortbeek, N., Janssen, M., Jansen, N. & Kort, W. de: Platelet Pool Inventory Management: theory meets practice. Interactive poster session award at the annual national meeting of the American Institute for Operations Research and Management Science (INFORMS), Charlotte, November 23, USA.
## 7.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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7.2 PROGRAMME DESIGN

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

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

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

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

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

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

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

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

### 7.3 PROGRAMME EVALUATION

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

The publication record of the year 2011 is excellent. The output was 13 articles in international refereed journals (of which 7 A and 3 B publications) and one publication in a book. Moreover Cars Hommes is part of a consortium which has been awarded an EU-STREP grant for the project “Complexity Research Initiative for Systemic Instabilities”. Moreover, two students, Tatiana Kiseleva and Paolo Zeppini, defended their thesis successfully.

The programme is internationally established, as is shown by excellent citation statistics (e.g. according to the Science Citation Index (SCI) in 2011 almost 280 citations of published work by group members), many (invited) lectures at international seminars, conferences and workshops by various members of the research group. In the IDEAS/RePEc ranking of Top 20% institutes (http://ideas.repec.org/top/top.netherlands.html), CeNDEF ranks as number 15. This ranking contains faculties of economics and departments; among the small institutes of
the order of a research group (about 10 researchers) CeNDEF ranks 4th on the list (after the UvA Finance Group, SCHOLAR and CREED).

In 2011, there was a large influx of new students: Tomasz Makarewicz, Michiel van de Leur, Marcin Wolski, Dávid Kopányi and Juanxi Wang joined the group. These are partly Tinbergen students, and partly students that are financed by international programs.

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

**Strengths**: international reputation as an excellent research group on nonlinear dynamics and complexity applications in economics and finance, high scientific impact (e.g., with more than 330 citations, Brock and Hommes, Econometrica 1997, is one of the best cited journal articles co-authored by a Dutch economist), regular international visitors, active seminars and international workshops, own working paper series, frequently visited website, good facilities for computing and travel;

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

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

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

**7.4 RESOURCES AND FUNDING**

The budget received from ASE-RI every year (about 12,000 Euro) only covers on average one conference per researcher per year. In the last couple of years the remaining CeNDEF budget (from the NWO-Pionier grant 1998-2003) was able to cover additional conferences, workshops, etc., if desired. A budget of the Faculty covers some of the costs for the Economics Colloquia; another budget of the Tinbergen Institute covers the costs of joint research seminars Institutions and Decision Analysis, together with CREED (UvA) and the VU mathematical economics group.

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

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

In 2011, CeNDEF has been part of several European consortia that obtained grants: the EU FP7-ICT project “Complexity Research Initiative for Systemic InstabilitieS” (CRISIS), the EU COST action IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”, and two INET projects, “Coordination of Expectations”, led by Roger Guesnerie and “Heterogeneous Expectations and Financial Crises”, led by Cars Hommes.

Also, a number of students have joined the group in 2011: Tomasz Makarewicz and Dávid Kopányi after having completed their Mphil at the Tinbergen institute, while Michiel van de Leur, Marcin Wolski and Juanxi Wang started to spend their first year at CeNDEF as students under the “European Doctorate in Economics Erasmus Mundus” (EDEEM) programme.

7.5 OUTPUT

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**Dissertations**


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

A


Other

Academic publications (in/of books) – refereed


Academic publications (working- and discussion papers)


Professional publications


Contributions to academic conferences, workshops and seminars


Bao, T. (2011, 14 September). Learning, Forecasting and Optimizing: an Experimental Study. Seminar at Department of Economics, University of Pittsburgh, Pittsburgh, USA.
Bao, T. (2011, 16 September). Learning, Forecasting and Optimizing: an Experimental Study. CESS-CREED workshop, New York, USA.


Hommes, C.H. (2011, June 1-3), Experiments and models of heterogeneous expectations in economics, Keynote Lecture 7th International Conference on Nonlinear Economic Dynamics, June 1-3, 2011, Cartagena, Spain

Hommes, C.H. (2011, June 9-10), What can Central Bankers learn from Agent-Based Models in order to manage the current and prevent the next crisis?, Invited Lecture Workshop Alternative Approaches to Modeling Systemic Risk, ECB, Frankfurt, Germany.


Hommes, C.H. (2011, 6 December), Behavioural learning equilibria, Invited Lecture Symposium 10 years of BiGSEM, Bielefeld, Germany.


Organisational contributions to conferences, workshops and seminars


Anufriev, M. (2011). Organizer of Amsterdam Symposium on Behavioural and Experimental Economics under the title "Learning in macroeconomics and behavioural finance".


**Participation in academic networks & fellowships**

**Editor or member of editorial board**
Diks, C.G.H. (2011). Associate Editor *Studies in Nonlinear Dynamics & Finance*
Hommes, C.H. (2011), Associate Editor *Macroeconomic Dynamics*.
Hommes, C.H. (2011), Associate Editor *Computational Economics*.
Hommes, C.H. (2011), Associate Editor *Journal of Nonlinear Science*.
Hommes, C.H. (2011), Associate Editor *Journal of Economic Interaction and Coordination*.

**Referee activities**


Membership of academic committees (including committees outside the FEB)


Research contributions in the media


Grants, prizes and honours

Anufriev, M. (2011). Visiting Professor fellowship, LUISS University, Rome, Italy.


CHAPTER 8: ACTUARIAL SCIENCE

Programme director: Prof.dr.ir. M.H. Vellekoop
Department: Quantitative Economics
METIS code: uva/feb/ase/act
JEL-classification: C, G2
Starting date programme: 1989
Website: http://ase.uva.nl/act/research.cfm

8.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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| Total 1st flow of funds | 1,96 | 1,99 | 1,85 | 0,96 |
| Total 2nd flow of funds | 0,50 | 0,50 | 0,00 | 0,60 |
| Total 3rd flow of funds | 2,20 | 1,51 | 1,11 | 1,24 |
| Total 1st f.o.f. excl. Ph.D.'s | 0,86 | 1,79 | 1,75 | 0,96 |
| Total 1st-3rd flow of funds | 4,66 | 4,00 | 2,96 | 2,80 |
| Ph.D. students | 1,46 | 1,10 | 0,70 | 0,47 |
8.2 PROGRAMME DESIGN

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

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

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

8.3 PROGRAMME EVALUATION

The year 2011 has been an exciting one for the Actuarial Group, which included two promotions, the arrival of three new members of staff and two professional awards being granted to its members. In January Richard Plat defended his thesis which focused mainly improved models for mortality and its consequences for insurers and pension funds. This research direction will continue to play an important role in the group thanks to the arrival of a new student, Frank van Berkum, who will work on related issues via a part-time position which is partially funded by Netspar. At the same time two staff members, Katrien Antonio and Michel Vellekoop, have been invited to sit on the official Dutch mortality research
committee of the Dutch Actuarial Society, thus guaranteeing that the group will continue to
play a role in the practical as well as the scientific debate about longevity. The appreciation
for the scientific work of Plat and Antonio from the Dutch actuarial profession has clearly
been stated when they were awarded the prestigious Johan de Witt Prijs this year for their
work on the rather different topic of micro-level stochastic loss reserving. Within the
framework of a VENI grant (started in June 2010), Katrien Antonio continues her research on
stochastic loss reserving, in cooperation with researchers from both UCL (Belgium) and KU
Leuven (Belgium).

A second part-time Netspar student who joined the group, Jan de Kort, will focus on the
pricing and hedging of derivatives and the possible role such instruments can play in risk
management problems for insurance companies and pension funds. This subject is a subtheme
of the larger Netspar theme ‘Reconciling Short Term Risks and Long Term Goals for
Retirement Provisions’ which is coordinated by the group and which is mainly concerned
with the Dutch pension funds’ and insurance companies’ reaction to the financial crisis. The
thesis Defined Ambition of a staff member of the group, Jan Tamerus, can also be seen in the
same light but in this work the view is taken that not just the asset and liability management
of pension funds has to change, but the pension contract itself. The enormous influence that
the ideas in this thesis have had on the Dutch pension debate manifested itself in the
overwhelming interest from policymakers in this field which could hardly be fitted in the
Aula during Tamerus’ defense. On a slightly smaller scale, the group organized round table
discussions after the first nationwide survey on longevity risk for pension funds and followed
up with working group meetings and the final Netspar debate in The Hague on this important
issue.

International visibility was enhanced by an invited lecture at the Worldbank on the use of
derivatives for pension funds and by the active involvement of the group in the organisation
of the international conference on Insurance Mathematics and Economics in Trieste, the
AFMATH conference in Brussels and the international ASTIN meeting in The Hague this
year. In June, the Memorable Actuarial Research Conference (MARC) was organized
together with the KU Leuven in honor of prof. Goovaerts. Both he and prof. Kuné retired
from the group this year after many years of contributions to its research programmes and
both will be sadly missed in the years to come. The group is very happy that the Dutch
branche organisation of insurers, het Verbond van Verzekeraars, have decided to sponsor a
new chair on Insurance Economics in the Actuarial Science group and that as a result prof.
Roger Laeven will join us at the start of 2012. The well-established cooperation of Laeven
with Goovaerts and Kaas guarantees that the group’s strong research direction on risk
measures and regulatory issues will continue to flourish.

Strengths: The group is well positioned to continue to play an important role in national and
international research networks which are increasingly interested in topics where the group
has an excellent track record such as stochastic loss reserving, mortality modeling, financial
risk management, risk measures and dependence, regulatory design and pension reform.

Weaknesses: The Actuarial Science group is small. The retirement of some researchers and
the completion of theses mean that it is important to start hiring new staff as soon as possible.

Opportunities: More cooperation with other groups outside and inside the faculty is possible
now that pension reform and regulatory issues are more and more in the spotlight due to the
important consequences for society at large.

Threats: The teaching load for the group has increased due to our new initiatives in executive
education programmes. This manifests itself for example in the large number of extra Master
theses that require supervision and may put further pressure on the time available for research.
8.4 RESOURCES AND FUNDING

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

10/2009 – 09/2011. Rotman International Centre for Pension Management (ICPM) research grant: When do derivatives add value in asset allocation problems for pension funds ?. Coordinators: Michel Vellekoop & Jiajia Cui, C$ 58.000,-

8.5 OUTPUT

Key publications

Forthcoming
### Publications in numbers

**Actuarial Science**

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<td><strong>2) Books</strong></td>
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**Dissertations**


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

**A**


**B**


**Other**


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


**Professional publications**


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


**Other lectures on research**


Organisational contributions to conferences, workshops and seminars
Vellekoop, M.H. (2011, January 11). Round Table Discussion with Dutch pension funds on use of longevity swaps, Utrecht.

Participation in academic networks & fellowships
Vellekoop, M.H., Research Fellow, Netspar

Editor or member of editorial board

Referee activities

Membership of academic committees (including committees outside the FEB)
Vellekoop, M.H. (2011, December 21). Member promotion committee of Linda Sleddens. Promotor: prof.dr. J. Bilderbeek, Faculty of Business and Management, University of Twente.

Research contributions in the media

Grants, prizes and honours
Antonio, K. (2011). Research project awarded by FWO ‘Stochastic models in health insurance’ (244.000 euro), together with prof. Jan Dhaene (KU Leuven) and prof. Michel Denuit (UCL, Belgium).

Various activities
Tamerus, J.H. (1992- ). Member of the Pension Committee of the Dutch Labour Foundation on behalf of the Union for Middelclass and Higher Employees (MHP).
Vellekoop, M.H. (2004-). Director of Research for the Derivatives Technology Foundation, Amsterdam
Vellekoop, M.H. (2011-). Member of Commissie Sterfte Onderzoek (CSO) of the Actuarial Association.
CHAPTER 9: INDUSTRIAL STATISTICS (IBIS)

Programme’s director: Prof. dr. R.J.M.M. Does

Website: www.ibisuva.nl

Department: Quantitative Economics

METIS-code: uva/feb/ase/ovo

Starting date programme: 1994

Website: www.ibisuva.nl


9.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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Total 2nd flow of funds: 0,00 0,00 0,00 0,00
Total 3rd flow of funds: 0,00 2,30 2,60 2,40
Total 1st f.o.f. excl. Ph.D.’s: 0,00 0,40 0,10 0,10
Total 1st-3rd flow of funds: 0,00 2,40 2,70 2,50
Ph.D. students: 0,00 1,50 1,90 1,70

9.2 PROGRAMME DESIGN

All members of the institute, except for Prof. dr. R.J.M.M. Does, are full-time employed at the Institute for Business and Industrial Statistics (IBIS UvA). IBIS UvA is an independent consulting firm, owned by the University of Amsterdam. The institute is organisationally affiliated to the department of Quantitative Economics. The interaction of scientific research on the one hand, and its application in the service of IBIS UvA’s clients on the other, is seen as the crux of the institute.

Context and mission

In the early twentieth century, industry has been one of the cradles of the discipline of statistics. The original application context of industrial statistics has been quality control, but a modern notion of the field would include operations management, process management, and product design as well.

Typical application areas such as product and process development, quality and efficiency improvement, reliability and safety engineering, and surveillance and monitoring of complex
systems, entail applied empirical research and statistical decision making. Business and industrial statistics aims to develop rational prescriptions for such applications, including techniques, methods, and principles.

**Research methods / traditions**
The fact that methods and techniques are the deliverables of the research programme places business and industrial statistics in the category of methodological sciences, such as statistics and methods research (psychometrics, econometrics), design research (engineering, architecture), and action research (substantial parts of business administration and management science). Whereas logical correctness is the criterion for the products of formal sciences such as mathematics, and reproducibility is the criterion in empirical sciences, the criteria for the output of business and industrial statistics are usefulness and effectiveness.

Business and industrial statistics make frequent use of results and theories from a multitude of scientific disciplines, such as mathematics and mathematical statistics, engineering, and business-economics.

**Dissemination and value realisation**
The consulting work of IBIS UvA, focusing on healthcare, financial services and the high-tech industry, provides both an empirical basis for the research, as well as an outlet allowing the research results to be of direct value to society. IBIS UvA is also a founding member of the Dommel Valley Platform, a collaborative initiative of the high-tech industry in Eindhoven Region aiming to gather, develop and disseminate knowledge on techniques for product development and reliability management.

IBIS UvA has participated substantially in professional networks such as the American Society for Quality (ASQ), the International Society for Business and Industrial Statistics (ISBIS), and the European Network for Business and Industrial Statistics (ENBIS). All offer ample opportunities for promoting new methods and techniques to practitioners.

Technometrics is a highly regarded journal on statistical methods in the physical, chemical and engineering sciences. The Journal of Quality Technology is also a highly regarded journal in industrial statistics and publishes papers on methods for quality improvement and control. The Quality Management Journal and the International Journal of Quality and Reliability Management are well-respected outlets for papers on predominantly qualitative techniques for quality improvement. Other international journals include Quality and Reliability Engineering International and Applied Stochastic Models for Business and Industry. It is gratifying to note that Technometrics and JQT are qualified as A-journals and IJQRM, QMJ, QREI and AMSBI as B-level journals.

In future years, the institute aims to publish more papers in the operations management and the management of healthcare literatures.

**Research themes**

1. **Statistical process control and control charting methodology**
Statistical process control (SPC) offers methods for detecting when a system transits from a normal state to a disturbed state (named out-of-control). Methodology for SPC in the manufacturing industry has, in the previous two decades, reached a mature stage. Attention is now shifting to control chart methods for robust monitoring and for detecting small shifts in the parameters. Such applications require an integration of SPC with robust statistics and adding additional runs rules to the control charts.
In the previous years, this research theme has resulted in 5 dissertations. Currently, 4 persons work on projects. Three of them are from Pakistan. Does and Schoonhoven participate in this research theme.

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

So far, the research theme has resulted in 3 dissertations and 1 current project. De Mast, Does and Lokkerbol participate in this research theme.

3. Measurement system analysis
The precision of measurement devices in the engineering and physical disciplines, as well as the reliability of medical diagnoses and psychometrical instruments and tests, and finally, the legal implications of metrology, are topics with substantial impact. All three topics struggle with fundamental and practical hiatuses in insight, for which it is plausible that industrial statistics can make contributions and possibly even induce breakthroughs. Among the objectives for the next 10 years, is the challenge to improve the industrial standard for measurement systems analysis (as laid down in AIAG, 2002), and to improve the international legal standard for modeling measurement precision (as specified in ISO, 1995).

The research theme has resulted in the previous years in 1 dissertation and 1 current project. De Mast and Erdmann participate in this research theme.

4. Exploratory data analysis and problem-solving
Both in statistics and in research methodology for empirical inquiry, understanding of hypothesis generation (or: discovery) lags far behind understanding of hypothesis-testing and modeling (or: justification). One of the probable causes is the intrinsically multi-disciplinary nature of the topic. The research theme has so far focused on the development of a framework for teaching exploratory data analysis, and has resulted in 1 current project. De Mast and Lokkerbol participate in this research theme.

5. Healthcare engineering
Pressure on healthcare to improve quality, efficiency and safety is high. The research theme Healthcare Engineering aims to make applicable in healthcare the kind of techniques used for process improvement and control in industry. The consultancy activities of IBIS UvA, as well as the excellent network of contacts in healthcare, provide a good empirical basis for the research, and ample opportunities to test methods in practice.

The research theme has resulted in 1 dissertation and 2 current projects. De Mast, Does, Niemeijer (UMCG) and Kemper participate in this research theme.

9.3 PROGRAMME EVALUATION

Strengths: The consulting activities of IBIS offer opportunities for cross-fertilization that are recognized internationally as unique. Further, members of the institute have in recent years made substantial investments in building an international network, which has begun to bear fruit.
Inspired by identified needs in the consulting practice, the research in recent years has been daring in taking up research topics beyond well-trodden paths, and which include ill-structured problems that do not fall in an established research framework. The international appreciation for the research contributions of the institute is attested by the various prizes and prestigious positions awarded to members of the institute.

**Weaknesses:** The institute takes identified problems in the field as point of departure for research, instead of departing from a specific research method and searching for a matching application. As a consequence, it is sometimes difficult to find a suitable outlet for the research, which may fail to fit in the research templates prescribed by established journals. The size of the group, especially the capacity at senior level, is small.

**Opportunities:** The transfer of the institute from the Faculty of Science to the FEB is decisively felt as a good initiative. The nature of research done at the institute fits better in the variety of research traditions found in the FEB than in the paradigm of formal science which dominates the KdV Institute for Mathematics. The business school provides new potential outlets for our knowledge, notably, courses for students and perhaps courses for executives.

The commercial exploitation of our knowledge in 2011 were at an all times’ high, with the healthcare community, the service industries, and the high-tech world all highly interested in buying our expertise. Especially the public trainings offered by IBIS UvA were extremely successful in 2011.

**Threats:** Consulting activities reduce effective research time for the senior members of the institute to about 0.2 or 0.3 fte. Although an efficient way of working has proved to enable substantial accomplishments in limited time, time budgets are a concern.

Although the institute has been quite successful in attracting students of high potential, the institute has been unsuccessful in keeping them after their promotion.

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

**9.4 RESOURCES AND FUNDING**

Prof. Does’s full professor position at the FEB is partially (0.2 fte) paid for by funds of the 1st flow and since September 1, 2012 (0.4 fte) by funds of the 3rd flow of executive programmes. All other positions are paid for by funds of the 3rd flow. Prof.dr. De Mast has a 0.2 fte position as HGL, which is paid for from the dividend of IBIS. The other personnel costs are directly paid by IBIS.

**9.5 OUTPUT**

**Key publications**

Forthcoming
Erdmann, T., Mast, J. de & Warrens, M. Some common errors of experimental design, interpretation and inference in agreement studies. Statistical Methods in Medical Research.
Kemper, B.P.H. & Mandjes , M.R.H. Mean sojourn times in two-queue fork-join systems: bounds and approximations. OR Spectrum. [B]

Publications in numbers

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

A


B


Other


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


Professional publications


Contributions to academic conferences, workshops and seminars


Other lectures on research


Participation in academic networks & fellowships


Mast J. de (2011). Senior Member, American Society for Quality (ASQ).

Editor or member of editorial board
Does, R.J.M.M. (2011) Member Editorial Board, and Member Advisory Board, Quality Engineering.
Does, RJMM (2011) Column Editor, Quality Engineering.


**Referee activities**


### CHAPTER 10: MINT (MACRO AND INTERNATIONAL ECONOMICS)

**Programme director:** Dr. F.J.G.M. Klaassen  
**Department:** Economics  
**METIS-code:** uva/feb/ase/mint  
**JEL-classification:** E, F, H  
**Website:** [www.ase.uva.nl/mint](http://www.ase.uva.nl/mint)  
**Starting date programme:** 2001  
**VSNU-scores 2001-2007:** Quality: 4, Productivity: 4, Relevance: 5, Viability: 4.5

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

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10.2 PROGRAMME DESIGN

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

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

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

Monetary economics and monetary policy
Monetary policy is used throughout the world to accomplish important macroeconomic objectives such as price stability, exchange rate stability, and/or full employment. In one project Christian Stoltenberg has studied monetary policy in the United States. Since the mid-1980s the interest-rate policy of the Federal Reserve System has been more aggressive in fighting inflation than in the past. He explains this with a decreasing role of cash in transactions. Sajjad Zaheer focuses on Islamic banking, a fast-growing part of the financial sector. He compares the transmission of a monetary contraction through Islamic and
conventional banks and finds that the former cut their lending less, weakening the monetary policy transmission. Arturo Ormeno evaluates the impact of a macro uncertainty shock on commercial bank loans, in particular whether bank loan variations are direct consequences of the investment decisions by firms, or if there are other financial channels at play that intensify the impact of uncertainty shocks on the real economy.

Fiscal policy
Fiscal policy is a crucial aspect of macroeconomics given that government expenditures are a substantial fraction of GDP, they play an important role in welfare redistribution, and financing these expenditures through debt and taxes is likely to have important effects on, for example, financial markets, labour force participation, and investment. Roel Beetsma and Massimo Giuliodori find that first-release outcomes on fiscal deficits (published at the end of the year of budget implementation) are on average over-optimistic, and their results suggest that improving the quality of institutions reduces this bias. Markus Kirchner also studies fiscal policy. Together with Sweder van Wijnbergen he studies the effects of fiscal stimulus and financial sector support in times of financial stress, and the impact of public debt and sovereign risk on macro fluctuations, both motivated by the recent crises.

Financial fragility and macroeconomics
This theme was also stimulated by the recent crises, showing the interaction between banking distress, fiscal policy to mitigate financial crisis, public debt, sovereign risk, international spillovers, and banking supervision. Markus Kirchner, Petr Sedláček, and Sweder van Wijnbergen are working on this. One project studies the effects of deficit-financed government policies during a financial crisis based on a macroeconomic model with financial intermediation that allows for different types of assets in intermediary portfolios. It shows that a fiscal expansion can raise credit spreads during a crisis, which can even further deepen the crisis. Another study is about the possible costs of increased bank regulation as recently proposed by many governments.

Foreign exchange market
The foreign exchange market is the largest financial market in the world. Many countries have managed or fixed exchange rates, and these are our research focus. Speculative attacks on them can have serious economic and societal consequences. Henk Jager and Franc Klaassen work on the measurement of pressure on currencies, particularly before a fixed exchange rate collapses, and have analysed the interaction between speculators and the monetary authority to better understand why the threat of an interest rate defence can be effective in avoiding a currency crisis. Dirk Veestraeten has studied the effect of a switch towards a fixed exchange rate regime if policymakers retain the right to postpone such a switch, such as Denmark and Sweden regarding the euro.

Pensions and macroeconomic developments
Research projects of Roel Beetsma, Alessandro Bucciol, Casper van Ewijk, Ward Romp, and Siert Jan Vos focus on the sustainability of pension systems and the consequences of changing them, as is heavily debated at present. One project stems from the fact that calls for abolishing mandatory participation are becoming louder, as young generations see their contribution payments rise and doubts about their own future pensions are getting stronger. Is a funded pension system with intergenerational risk sharing feasible when participation in the system is no longer mandatory? For many plausible parameter combinations the answer is negative, so that mandatory participation is a necessity.

Business cycles and macroeconomic models with heterogeneous agents
Several projects mentioned above deal with business cycles. Here we mention some additional projects. Wouter den Haan and Petr Sedláček develop a framework with heterogeneous firms that face inefficiencies and they show that in such a model aggregate fluctuations have serious negative welfare consequences. How financial innovation has
affected the cyclical behaviour of consumer loans has been studied by Wouter den Haan and Vincent Sterk. Sweder van Wijnbergen and Tim Willems explain why in recent times employment takes so long to reach pre-recession levels during the recovery. Roel Beetsma and Franc Klaassen study the asymmetry of business cycles, with particular reference to the effectiveness of policy in downturns.

10.3 PROGRAMME EVALUATION

During 2011 MInt published 18 articles in international refereed journals and there are 12 of such publications forthcoming. This includes two publications in the most esteemed journals; one by Wouter den Haan in the American Economic Review, and one by Roel Beetsma and Massimo Giuliodori in the Journal of Economic Literature, a journal in which prominent economists are asked to review recent developments in their field.

The students of the group also have done well. Four completed their theses this year. Vincent Sterk (supervised by Wouter den Haan) graduated cum laude and won the prestigious KVS-penning, awarded once every three years to the best thesis in Economics defended at a Dutch university. Vincent took up a position as assistant professor at University College London. Also Matija Lozej and Petr Sedláček (both Wouter den Haan) and Markus Kirchner (Sweder van Wijnbergen) defended their theses. Matija went to the Central Bank of Slovenia, and Markus to the Central Bank of Chile. Petr stayed at MInt on an externally-funded postdoc position, and at the recent international job market he got numerous invitations to present his paper at prestigious universities and policy institutions.

During 2011 Alessandro Bucciol left the group to become an assistant professor at the University of Verona. Former programme director Wouter den Haan decided to move to the London School of Economics when his NWO Vici grant expired. At the end of 2011 we started recruiting on the international job market and have good hope that we will be successful in again attracting a promising scholar. MInt members are also talking to external interested partners to attract additional external funds to further strengthen the group. We continue to stimulate the coherence of the group by seminars, joint lunches, drinks, and other activities.

The visibility of the group and the interaction with the academic community have been further enhanced through numerous external presentations, conference participations, and participation in networks such as Netspar. We have a seminar series with renowned speakers, which is now organised jointly with the VU University Amsterdam and funded by the Tinbergen Institute. The programme is being noticed by the outside world, for instance reflected by invitations for presentations, contributions to research volumes, referee activities, the high quality of applicants in the latest international recruitment rounds, and the presence of two MInt members in the ESB top 40 of Dutch economists (Roel Beetsma ranked 25, and Coen Teulings 14).

There are intensive contacts with policy institutions via visitorships and joint research papers (European Commission, ECB, IMF, WTO), joint appointments (Casper van Ewijk as deputy director at the Dutch Bureau of Economic Policy Analysis (CPB), and Wouter den Haan as an academic partner of the CPB), seminars, joint positions and teaching (Dutch Central Bank), and memberships of several advisory committees for the Dutch government. There are also collaborations with businesses, such as APG, Atradius, Mn Services, and Rabobank. And we take part in public debates on issues such as pension reform and the financial and sovereign debt crises. Particularly Roel Beetsma, Lex Hoogduin, and Sweder van Wijnbergen are frequently asked by radio and television channels to comment on such topics, and they regularly write for opinion pages of quality newspapers. Another sign of the societal
relevance is that many students take our courses and write their theses at MIInt, by which we can also disseminate insights from research on key (inter)national events and debates.

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

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

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

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

**Threats:** Financial distress at FEB and the resulting faculty reorganisation with vacancy stop have substantially increased the teaching load and administrative duties for MIInt researchers. This is particularly relevant due to the number of students that we serve. To avoid a negative impact on research output, this situation needs to be improved. Another threat is the low intake of new PhD students in recent years. We hope that the severe restrictions on such intake due to the reorganisation will soon be alleviated.

**10.4 RESOURCES AND FUNDING**

To finance our conferences, traveling, seminars, visitors, and so on, we use first-stream resources from the government, funds from the research institute, the Tinbergen Institute, and the following other sources. The market-frictions project led by Wouter den Haan is financed by NWO (professor, postdoc and students). The pension research led by Roel Beetsma uses funds from Netspar and Mn Services (postdocs and student). Sweder van Wijnbergen has a grant for research on credit crisis consequences from the Gieskes-Strijbis Foundation (professor and postdoc). In addition, two students are financed by the Dutch Central Bank, one by the Pakistan government, and one by Rabobank. There is more external funding in the pipeline.
10.5 OUTPUT

Key publications


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Dissertations

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

A

B


Other


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


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


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


Academic publications (working- and discussion papers)


Veestraeten, D.J.M. (2011). *Stochastic process switching when the time is ripe*. University of Amsterdam.


**Professional publications**


**Popular publications**


Contributions to academic conferences, workshops and seminars

Beetsma, R.M.W.J. (2011, 1 March). Discussion leader Round Table Toekomst Pensioenstelsel organised by Mn Services, Voorburg.

Beetsma, R.M.W.J. (2011, 3 March). Discussion leader PRMIA Netherlands Risk Round Table organised at Ernst & Young, Amsterdam.

Beetsma, R.M.W.J. (2011, 9 March). The consequences of indexed debt for welfare and funding ratios in the Dutch pension system, Erasmus University, Rotterdam.


Beetsma, R.M.W.J. (2011, 6 April). From first-release to ex-post fiscal data: exploring the sources of revision errors in the EU, University of Aarhus, Aarhus.

Beetsma, R.M.W.J. (2011, 7 April). From first-release to ex-post fiscal data: exploring the sources of revision errors in the EU, University of Oslo, Oslo.


Giuliodori, M. (2011, 31 March). From First-Release to Ex-Post Fiscal Data: Exploring the Sources of Revision Errors in the EU, Banca d’Italia Fiscal Policy Workshop on Rules and Institutions for Sound Fiscal Policy after the Crisis, Perugia, Italy.
Hoogduin, L.H. (2011, 7 September). Comment on Charles Goodhart at the opening of the Academic Year at Duisenberg School of Finance Amsterdam.
Sedláček, P. (2011, 4 April). Match efficiency and the cyclical behaviour of job finding rates, Mainz Workshop in Labour Economics, Johannes Gutenberg University Mainz, Germany.
Sedláček, P. (2011, 14 October). Firm age, business cycles and aggregate labour market dynamics, NAKE day, Utrecht University.
Sterk, V. (2011, February). Home equity, Mobility and Macroeconomic Fluctuations, Federal Reserve Board.
Sterk, V. (2011, February). Home equity, Mobility and Macroeconomic Fluctuations, Michigan State University.
Sterk, V. (2011, February). Home equity, Mobility and Macroeconomic Fluctuations, CREI, Barcelona.
Sterk, V. (2011, February). Home equity, Mobility and Macroeconomic Fluctuations, Bank of Spain, Madrid.
Sterk, V. (2011, April). Home equity, Mobility and Macroeconomic Fluctuations, Humboldt University, Berlin.
Sterk, V. (2011, July). Home equity, Mobility and Macroeconomic Fluctuations. SED annual meetings, Ghent, Belgium.


Other lectures on research


Organisational contributions to conferences, workshops and seminars


Participation in academic networks & fellowships

Beetsma, R.M.W.J. (2011). Research Fellow CEPR.


Bucciol, A. (2011). Researcher at the University of Verona.


Den Haan, W.J. (2011). Research Fellow CEPR.


**Editor or member of editorial board**


**Referee activities**


**Membership of academic committees (including committees outside the FEB)**


Research contributions in the media
Bucciol, A. (2011, October). Interview with Focus (Italian monthly magazine).
Ewijk, C. van (2011, 8 September). Interview with European Voice.

Grants, prizes and honours
Haan, W.J. den (2011) VICI scholarship from N.W.O.
Veestraeten, D.J.M. (2011). Excellent teacher’s award Faculty of Business and Economics, University of Amsterdam.

Various activities
Beetsma, R.M.W.J. (2011). Member of Supervisory Board of BNG Vermogensbeheer.
Ewijk, C. van (2011). Member board of advisors, NZA (Dutch Healthcare Authority)
Ewijk, C. van (2011). Member Social Economic Council (kroonlid SER)

Hoogduin, L.H. (2011). Member of the advisory board of the Economics Faculty of de Rijksuniversiteit Groningen.

Hoogduin, L.H. (2011). Member of the advisory board of Tijdschrift voor Politieke Economie.

Hoogduin, L.H. (2011). Member of the advisory board of Financial Students Amsterdam (FSA).

Hoogduin, L.H. (2011). Member of the advisory board of the annual conference of the Erasmus economics students (EFR), Rotterdam.

Hoogduin, L.H. (2011). Member of the advisory board of Tilburg Centre of Finance (TCF).

Hoogduin, L.H. (2011). Member of the advisory board of Stichting Economisch Onderzoek (SEO), Amsterdam.

Hoogduin, L.H. (2011). Member of the advisory board of Risk student association, Groningen.

Hoogduin, L. H. (2011). Member of the Advisory Board of the NWO network on complexity.


## CHAPTER 11: HUMAN CAPITAL

**Subprogrammes:** ACE, TIER & AIID  
**Programme director:** Prof.dr. E. Plug  
**Department:** Economics  
**METIS code:** uva/feb/ase/hum  
**JEL-classification:** I, J, L  
**Website:** www.ase.uva.nl/scholar  
**Starting date programme:** 2001  

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

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### 11.2 PROGRAMME DESIGN

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

**Motivation**
Human capital is the key concept to describe, analyse and understand individual competencies in the labour market. They are vital for individuals’ welfare, for business performance and for aggregate economic performance. Understanding issues of definition, measurement, investment, obsolescence, utilization and (market) valuation of human capital can contribute to a better understanding of the functioning of external and internal labour markets, and form the basis for solid advise 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
Human capital has a very flexible structure, with scope for individual research projects, internal and external joint work and cooperation and more formal projects. Research in the Human Capital programme covers several topics, such as intergenerational transmission of inequality (Plug), on incentives, payment systems and internal organisation of firms (Sloof), on entrepreneurship (C.M. van Praag), on immigration and on risk issues in schooling (Hartog). Van Praag’s work on entrepreneurship and schooling involves cooperation with the flourishing and expanding ACE, The Amsterdam Center of Entrepreneurship. Scholars from AIID also participate in the programme. The Amsterdam Institute for International Development (AIID) is a joint initiative of the University of Amsterdam and the VU University Amsterdam. AIID is a multidisciplinary research network with a strong focus on generating evidence to improve the design of policies to reduce poverty. AIID scholars participate in particular with their research on human capital and health and with impact evaluation of sector-wide programmes. The three institutes, TIER, ACE and AIID, all share the same ambition to perform research at the highest academic standards on issues with high societal relevance: education, entrepreneurship, economic development of poor nations.

For many years SCHOLAR, funded by a large grant from NWO, was a highly successful project on the interaction between education and the labour market. SCHOLAR has been succeeded by TIER, Top Institute for Evidence Based Education Research, started May 1, 2008, a new recognition of the successful blend of scientific quality and policy relevance. TIER is funded by a large 5-year grant from the Ministry of Education (and matching by participating universities), but the grant is fully administered by NWO. The Institute is joint with RU Groningen, RU Maastricht and CPB. Research will focus on the effectiveness of policy interventions in education.

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

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

The mission of ACE is to promote entrepreneurship through research and education. It's a joint venture of UvA, HvA and VU. ACE aims to contribute solid research to the international scientific community and to disseminate results in education, among policy makers, (potential) entrepreneurs and in society at large. ACE is strongly embedded in the social and political structures related to entrepreneurship and in the international research community, both informally and formally (eg joint research projects, reputed international fellows).
The Amsterdam Institute for International Development (AIID) aims at a comprehensive understanding of international development, with a special emphasis on the reduction of poverty in developing countries and transition economies. The institute is a multidisciplinary network with a strong focus on policy. Its policy advise is based on long-term fundamental research. The network includes researchers in the fields of biology, earth sciences, economics, law, medicine, political and social sciences.

By striving to accomplish its mission, AIID hopes to be of service to the millions of individuals around the world still living in greater or lesser poverty.

11.3 PROGRAMME EVALUATION

In 2011 the human capital group has witnessed one important change; Joop Hartog has turned 65 and decided to retire. He also stepped down as programme director. Joop has been the founding father of the human capital group, which would not be what it is today without the contributions of Joop Hartog. Joop’s footprints are clearly visible; of the (give or take) 30 students he delivered, Hessel Oosterbeek, Henriette Maassen van den Brink and Mirjam van Praag are now prominent members of the human capital group. We are pleased that he will remain active as researcher at the human capital group. Erik Plug has taken over as programme director. Two other personnel changes occurred in 2011; Judith Lammers has left AIID for a position outside academia. Nadine Ketel, a MPhil graduate from Tinbergen Institute, has joined us as student. Jona Linde, a graduate from CREED, has joined the human capital group as postdoc.

The group delivers high quality research; also 2011 has been a good year in terms of scientific output. The human capital group has published 23 articles in international refereed journals. In addition, the group has 12 articles already accepted for publication. Of the 23 published articles, 10 articles were published in A level journals. Of the 12 forthcoming articles, 4 of them will end up in A level journals. This is a remarkable quantity increase of high quality publications compared to previous years, with 4 A level publications in 2010, and 4 A level publications in 2009. High quality publications include publications in world leading economics journals. Randolph Sloof has experienced an exceptional year with 4 A level publications.

Erik Plug, together with Helena Holmlund and Mikael Lindahl, has an article published in the Journal of Economic Literature, which is a journal in which prominent economists are asked to review recent developments in their field. Monique de Haan (as single author) and Hessel Oosterbeek (together with Edwin Leuven, Bas van der Klauw and Joep Sonnemans) have their papers published in the Journal of Labor Economics, which is one of the most esteemed field journals with a top-10 article influence score among all economics journals.

The human capital group provides a stimulating research environment. This environment is partially shaped through national and international connections, external seminar series, internal work-in-progress meetings, and international visitors. Human capital members have close research contacts with researchers at ASE and Tinbergen Institute, work together with researchers from Europe and US, and are regularly invited to give seminars and (keynote) speeches throughout the world. Members of the human capital group organize a successful weekly seminar series at Tinbergen Institute. The seminar series is internationally renowned, and, in 2011, included presentations of Joshua Angrist, David Cesarini, Peter Fredriksson, Enrico Moretti and Bernard Salanie. Members of the human capital group (including senior researchers, students and visitors) also come together weekly to discuss their work in various stages. The human capital group has been attractive to visiting professors, post-doc researchers and students. In 2011 the human capital group has welcomed the visitors Nina Drange and Christine Felfe.
The human capital group also attracts many students; there are now 12 students. Each year there is a stable inflow of students from Tinbergen Institute. This is year Nadine Ketel has joined us. Students are doing well. For example, Thomas Buser, a student of Hessel Oosterbeek and Erik Plug, has already a paper accepted for publication in the Journal of Economic Behaviour and Organisation, which is an A level journal. Thomas Buser has also visited Stanford University. Laura Rosendahl Huber, a student of Mirjam van Praag, has been invited to visit the University of Lisbon.

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

Overall, 2011 has been a very good year.

There is, however, serious concern about future group size and structure. As of next year, the human capital group will turn into a small-scale research programme; that is, all human capital members of ACE will move to the IO group, one full professor at TIER has retired this year, one talented and successful postdoc at TIER faces an expiring contract with uncertain prospect of renewal, four students at TIER have expiring contracts, and AIID is already marginalised to one single part-time researcher (Judith Lammers has left, Jacques van der Gaag spends almost all his time abroad). The large reduction in group size, in combination with the current financial hardship at the department, may lead to an unbalanced research group with only a few students, postdocs and full professors; a viable and serious research programme would require one or two tenured assistant/associate professor positions.

The main challenge of the human capital group in transition is to maintain the high level of research in future years. The reduction in size may be used to improve the internal coherency and visibility of research; the human capital group will cover mainstream topics in applied microeconomics (including the economics of education, family and demographic economics, health economics, labor economics and development economics) with a strong focus on microeconometrics. But at the same time, the reduction in size should be compensated; the human capital group would like to hire a researcher for a tenured assistant professor position in the field of applied microeconometrics. We think this is a good idea for three reasons; (a) the human capital group would certainly benefit from additional microeconometric input; (b) the human capital group offers an interesting mixture of applied microeconomics and microeconometrics, which is exactly what most microeconometricians end up doing nowadays; and (c) the human capital group would also complement the econometrics group, which has been largely engaged in times series econometrics during the last 10 years.

This evaluation can be summarized in the following SWOT analysis:

**Strengths:** high quality research addressing issues of societal relevance; stimulating research environment; good reputation; healthy inflow and outflow of students; substantial external funding.
Weaknesses: largely dependent on external funding.

Opportunities: improve the internal coherency and visibility of research theme; introduce tenured assistant professor position in the field of applied microeconometrics.

Threats: human capital group may turn into small-scale and unbalanced research programme; any serious research programme would at least require one or two tenured assistant/associate professor positions.

11.4 RESOURCES AND FUNDING

TIER-research is funded through NWO and must comply with NWO formulated rules of evaluation. Over a period of 5 years (2008-2013) TIER will receive €5.3 million. All researchers at TIER are (in part) financed by TIER. One student is externally funded (NWO). Two students are co-financed together with Free University Amsterdam (VU). Several visiting researchers participate in the program, without financial compensation. ACE and AIID also receive substantial external funding. In 2011 ACE received about 1.65 million euro in external subsidies.

11.5 OUTPUT

Key publications

Forthcoming


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

A


Other


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

A


B


98
Human Capital – Plug

Economics

Other


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


Haan, M. de (2011, May 3). University of Bristol, invited seminar, Bristol, United Kingdom.


Hoogendoorn, S. (2011, September 14). Do more flavors make a richer salad bowl? Ethnic diversity and team performance in a randomized field experiment. Presentation at seminar series of the Utrecht School of Economics (USE), Utrecht University (UU).


**Other lectures on research**


Praag, C.M. van (2011, 10 February). Effecten van ondernemerschaps-onderwijs, Hogeschool van Amsterdam seminar domein onderwijs en management, lerarenopleiding.


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


Participation in academic networks & fellowships

Hartog, J. (2011). Fellow of Tinbergen Institute, IZA, AIAS, CESifo, CrEAM, Member KNAW Royal Dutch Academy of Sciences.
Plug, E. (2011). Research Fellow Tinbergen Institute; Research Fellow Institute for Labour Studies, IZA, Bonn, Germany; Research Fellow Uppsala Center for Labor Studies, UCLS, Uppsala, Sweden; Expert member Expert Network of Economics of Education EENEE; Council member European Society of Population Economics; Board member European Association of Labour Economics.
Praag, C.M. van (2011). Research Fellow Tinbergen Institute, Research Professor at the Max Planck Institute of Economics, Jena, Research Fellow IZA Institute for Labour Market Research, Bonn, Research Fellow IZA Institute for Labour Market Research, Bonn, Research Fellow ACLE.
Sloof, R. (2011). Research fellow at the Tinbergen Institute, Fellow of the Amsterdam Center for Law and Economics.

Editor or member of editorial board

Hartog, J. (2011). Member Editorial Board of ISRN Education.

Referee activities

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Membership of academic committees (including committees outside the FEB)


Research contributions in the media


Hartog, J. (2011, 1 August). Wereldomroep.


Praag, C.M. van (2011, 18 January). Discussieleider Big Improvement Day.


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Grants, prizes and honours
Praag, C.M. van (2011). Amsterdam Center for Entrepreneurship winner of the European Enterprise Award, European Commission.

Various activities
Haan, M. de (2011, August-September). Visiting researcher at the University of Oslo, Norway.
Maassen van den Brink, H. (2008-2011). Member Netwerk Onderwijs Innovatie, Ministerie OCW.
Maassen van den Brink, H.(2008-). Leadpartner Nices Institute, Urban Research.
Maassen van den Brink, H.(2006-). Chair MaGW/ Nederlandse Organisatie voor Wetenschappelijk Onderzoek.
Maassen van den Brink, H. (2010-). member Commissie Hoger Onderwijs KNAW.
Maassen van den Brink, H. (2006-). Chair ERIC, Evaluating Research in Context
Maassen van den Brink, H. (2009-). Member Board Rathenau Instituut.
Maassen van den Brink, H. (2007-). Member Wetenschappelijke Adviesraad St Gak (SIG).
Maassen van den Brink, H. Member Commissie OCW: Kwaliteit en Bekostiging.
Maassen van den Brink, H. Member Kenniskamers ministerie van OCW.
Maassen van den Brink, H. (2004-). Member Supervisory Board Leids Universitair Medisch Centrum (LUMC).
Maassen van den Brink, H. (2009-). Member Supervisory Board HAN Hogeschool Arnhem & Nijmegen.
Praag, C.M. van (2005-). Founding academic Director of the Amsterdam Center for.
Praag, C.M. van (2008-). Member of the Supervisory Board of APG Group NV.
Praag, C.M. van (2010-). Member of the Board of SEO Economisch Onderzoek.
Praag, C.M. van (2011-). Member of the CPC (Supervisory Board of the CPB).
Praag, C.M. van (2011-). President of the Amsterdam Academic Club.
Praag, C.M. van (2010-). Member Raad van Toezicht Kriterion.
Praag, C.M. van (2009-). Member of the Board of the Dutch Friends of the Tel Aviv University.
Praag, C.M. van (2008-). Member of the Supervisory Board of APG Group NV.
Praag, C.M. van (2010-). Member of the ‘kerngroep humuslaag’ Economic Development Board Amsterdam.
Praag, C.M. van (2009-). Member of the Curatorium of the Chair “Ethnic entrepreneurship”, IMES UvA (Sponsored by VNO NCW).
Praag, C.M. van (2009-). Member of the Advisory Board of the UvA/AMC Technology Transfer Office.
Praag, C.M. van (2007-). Member of the Supervisory Board of the EIM scientific program SME’s and entrepreneurship.
Praag, C.M. van (2011). Chairman of the ‘Begeleidingscommissie’ Adviesraad Wetenschap en Technologiebeleid : Ambitious Entrepreneurship (Research consortium led by Erik Stam)
Praag, C.M. van (2010-). Affiliate, Statistics Norway, Oslo, Norway.
Wolf, I.F. de (2009-). Academic committee ‘Onderwijsbewijs’, a specific grant for experimental research on Dutch schools.
Wolf, I.F. de (2009-). Member BOPO, grant for policy oriented research in primary education (‘Beleidsgericht Onderzoek in het Primair Onderwijs’).
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## 12.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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| Total 1st flow of funds | 2,42 | 1,67 | 1,71 | 0,93 |
| Total 2nd flow of funds | 0,80 | 1,60 | 1,20 | 0,20 |
| Total 3rd flow of funds | 0,00 | 0,10 | 0,11 | 0,11 |

Total 1st f.o.f. excl. Ph.D.’s | 2,34 | 1,67 | 1,71 | 0,93 |
Total all flows of funds | 3,22 | 3,37 | 3,02 | 1,24 |
Ph.D. students | 0,68 | 1,20 | 1,20 | 0,20 |
12.2 PROGRAMME DESIGN

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

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

A central characteristic of recent economics is a renewed interest in the relation between economic behaviour and social structure, as reflected in a succession of new views and ideas about how economic behaviour and social structure are mutually influencing. These new currents in theory go hand in hand with new ideas about modelling, 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 modelling 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, modelling, 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 behaviour in relation to social structure
- Models as instruments mediating between theory and data
- Economic policy, norms, and values
- Methodological approach with a theory-historical perspective

12.3 PROGRAMME EVALUATION

The history and methodology of economics group was closed in 2011 in response to financial problems in the Amsterdam School of Economics. Despite this, members of the group remained highly active in research. Highlights of research include Individuals and Identity in
History & Methodology of Economics – Davis & Boumans


Members of the group were also highly active in editorial service. John Davis as editor of the Journal of Economic Methodology (Routledge), Marcel Boumans as editor of the Journal of the History of Economic Thought (Cambridge University Press) and associate editor of Journal of Economic Methodology, and Albert Jolink is editor of Economisch Statistische Berichten. Davis is also the editor of the Routledge books series, Advances in Social Economics. In addition, both Harro Maas and Mary Morgan are on the editorial board of History of Political Economy (Duke University), and Boumans, Davis, Maas and Morgan are on a number of editorial boards.

Ricardo Crespo was promoted as a September 7 (promotor John Davis; co-promotor Marcel Boumans). Maarten Biermans is scheduled to be promoted May 25, 2012 (promotor John Davis; co-promotor Harro Maas). Dirk Damsma is planned for promotion in late 2012 (promotor John Davis; co-promotor Geert Reuten).

Harro Maas left the University of Amsterdam to accept a position at Utrecht University. Marcel Boumans remains at the University and adds a position at Erasmus University Rotterdam.

12.4 RESOURCES AND FUNDING

H. Maas earned a NWO Vidi research project: Observations in economics, historically considered, budget Euro 405.600, 2008-2012.

12.5 OUTPUT

Key publications


Forthcoming


Davis, J.B. Samuels on methodological pluralism. *Research in the History of Economic Thought and Methodology*.


---

**Publications in numbers**

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**Dissertations**


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

A


B

Reuten, G. & Thomas, P. (2011). From the Fall of the Profit Rate in the 'Grundrisse' to the Cyclical Development of the Profit Rate in 'Capital'. Science & Society, 75, (1), 74-90.

Other


Academic publications (in/of books) – refereed

A


B


Other


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

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

Popular publications

Academic publications (working- and discussion papers)

Contributions to academic conferences, workshops and seminars
Organisational contributions to conferences, workshops and seminars


Participation in academic networks & fellowships
Boumans, M.J. (2002-date). Tinbergen Institute fellow
Boumans, M.J. (2010-date). Board member, Nederlandse Vereniging voor Wetenschapsfilosofie.
Boumans, M.J. (2008-2013). Member of team (C) Philosophy of the Cultural and Social Sciences of The Philosophy of Science in a European Perspective, an ESF Research Networking Programme.
Boumans, M.J. (2006-date). Member organisation committee, Society for Philosophy of Science in Practice.
Boumans, M.J. (1995-date). Research associate, LSE Centre for Philosophy of the Natural and Social Science.
Morgan, M.S. (2010 September-December). Shelby Cullom Davis Fellow, Project Group on Authority and Legitimation, Princeton University, USA.

Editor or member of editorial board

Referee activities
Membership of academic committees (including committees outside the FEB)
Morgan, M.S. (2011). Member Scientific Board, Lichtenberg Kolleg, Georg-August-Universität, Göttingen
Morgan, M.S. (2011). Member British Academy, Economics and Economic History Section Committee.

Research contributions in the media

Grants, prizes and honours

Various activities
Nobel Economics Prize, Invited nominator
# CHAPTER 13: EXPERIMENTAL & POLITICAL ECONOMICS (CREED)

**Programme Director**  
Prof dr. A.J.H.C. Schram  
**Department:** Economics  
**METIS-code:** uva/feb/ase/epe  
**JEL-classification:** D7, D8  
**Websites:**  
www.ase.uva.nl/creed  
www.creedexperiment.nl/creed  
**Starting date programme:** 1991  

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

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### 13.2 PROGRAMME DESIGN

**Objective**

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

**Motivation**

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

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

For the advancement of theory, empirical feedback is crucial. This may hold in particular for new research areas, when sorting out the most promising ways to go. Empirical analysis is seen as an important ingredient of this programme. For many of the issues studied in the aforementioned two projects, however, adequate field data are hard to come by or even nonexistent. Laboratory experimentation is a helpful complementary research method, especially in these cases, for exploration or the testing of models focusing on fundamental behavioural aspects or mechanisms. This motivates the third project: “Experimental economics”, which is stimulated by, and provides feedback for, the other two projects.
Institutional embedding
The research of this programme is carried out within the Center for Research in Experimental Economics and political Decision-making (CREED), a research institute of the FEB. CREED was established in 1991 by a PIONIER-grant from the Netherlands Organisation for the Advancement of Scientific Research (NWO) for the development of experimental economics in the Netherlands. An important facility is the CREED-laboratory for experimental economics, one of the few dedicated computer laboratories in Europe. Its focus on political decision making and experimental economics distinguishes CREED internationally.

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

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

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

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

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

- Voting and electoral competition (behaviour of voters and political candidates/parties);
- Lobbying and political pressure (ways and means, and determinants of effectiveness);
- Emotions and economic behaviour (impact, and modelling);
- Markets and institutions (functioning of markets and, the design of, institutions);
- Evolution of cooperation (development of cooperative behaviour over time);
- Biases in risk attitudes.
13.3 PROGRAMME EVALUATION

2011 marked the 20th anniversary of CREED, which was set up in 1991 by Frans van Winden and Arthur Schram, aided by a NWO-PIONIER grant. This anniversary was celebrated in a small workshop with presentations by Jordi Brandts and Charlie Holt.

A number of changes in personnel characterize 2011. For one thing, this was the first year after Frans van Winden stepped down as director of CREED. Frans had been director of our group since we started in 1991. CREED is very pleased that Frans has been able to continue his appointment at the UvA after reaching the official retirement age in April. CREED will therefore continue to benefit from his research efforts in the coming years. Other changes are all students that have reached the end of their position at CREED. These are Adrian de Groot Ruiz, Thomas de Haan, Jona Linde, Ben Pelloux, Marcelo Tyszler, and Adriaan van der Veen. Three of these positions were related to the expired NWO-Vidi grant to former CREED member Jacob Goeree. We are pleased to report that four of these six students have (as of January 2012) had their dissertations approved by their committees, the other two have submitted it to the committee. Finally, Julian Garcia successfully defended his thesis on the evolutionary origin of altruism and cooperation at the Free University of Amsterdam, under co-supervision of Matthijs van Veelen. Julian now works as a postdoctoral researcher at the Max Planck Institute in P"oln. Aside from students leaving, we also welcomed three new students who finished their MPhil at the Tinbergen Institute and have started their training at CREED. These are Anita Kopányi-Peuker, Boris van Leeuwen, and Matthias Weber. We look forward to working with them in the coming three years.

The high level of research at CREED continued in 2011. A series of top-level publications include articles in the Proceedings of the National Academy of Sciences, the Journal of Economic Theory, the Journal of Labour Economics, Games and Economic Behaviour and two in the European Economic Review. The diversity and multi-disciplinarity of research at CREED also shows from publications in the Journal of Theoretical Biology (2), and Theory and Decision.

Aside from 13 publications in top-tier peer-reviewed journals, external recognition of the research undertaken at CREED was received in two ways. First, Matthijs van Veelen was appointed to the Junior Academy of the Royal Netherlands Academy of Arts and Sciences. Second, two members of CREED (Schram and van Veelen) were amongst the four UvA economists on the ESB top 40 list of economists in the Netherlands.

Research contacts were continued, i.a., by a successful seminar series that included presentations by renowned scholars such as Gary Charness, Eric van Damme, John O’Doherty, Dirk Engelmann, Georg Kirchsteiger, Botond Koszegi, Jason Shachat, Kenneth Williams, and Christian Zehnder. CREED also co-organized the Amsterdam workshop on Behavioural and Experimental Economics (ABEE 2011), which falls within the framework of the faculty’s Zwaartepunt Behavioural Economics. Research contacts also include our participation in the cognitive science center (CSCA) and our yearly exchanges with the Universities of Nottingham and East Anglia and with New York University. These exchanges provide excellent opportunities for CREED students to present their work (at all stages of the project) to an audience consisting of students and world-renowned professors of the participating institutes.
13.4 RESOURCES AND FUNDING

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

Substantial additional means came from the UvA zwaartepunt Behavioural Economics. This provides a solid foundation for paying participants in experiments at the CREED laboratory. As for NWO funding, the VENI grant for Aljaž Ule continued and various proposals have been submitted by CREED members for further funding.

The UvA zwaartepunt Brain and Cognition covers 50% of the appointment of Nadege Bault from August 1, 2010 to August 1, 2012. From August 1, 2012 her appointment will be covered fully by the Zwaartepunt.

13.5 OUTPUT

**Key publications**


**Forthcoming**


125

Veelen, M. van, Garcia, J., Egas, M., & Sabelis, M.W. (2011). Group selection and inclusive fitness are not equivalent; the Price equation vs. models and statistic. *Journal of Theoretical Biology*.


### Publications in numbers

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

#### A


#### B


**Other**


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


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


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


Veelen, C.M. van (2011, April 11). "In and out of equilibrium: evolution of strategies in repeated games with discounting". Invited seminar, Carleton University, Ottawa.

Veelen, C.M. van (2011, April 13). "The Price equation vs. models & statistics". Invited seminar, Queens University, Kingston, Canada.

Veelen, C.M. van (2011, July 12). "In and out of equilibrium: evolution of strategies in repeated games with discounting". International Conference on Game Theory, Stony Brook.

Veelen, C.M. van (2011, November 11). "In and out of equilibrium: evolution of strategies in repeated games with discounting and population structure". Invited seminar, Universiteit Maastricht.

Veelen, C.M. van (2011, November 15). "In and out of equilibrium: evolution of strategies in repeated games with discounting and population structure". Invited seminar, Universität Bielefeld.

Winden, F.A.A.M. van (2011, 11 February). Breaking the violence, Department of Economics (EHH), Stockholm University, invited seminar.

Winden, F.A.A.M. van (2011, 28 February). Behavioural economics of crime, ACLE, University of Amsterdam, invited seminar.

Winden, F.A.A.M. van (2011, 7 March). Neuroeconomics, AMC, Amsterdam, invited (Grand Rounds) seminar.

Winden, F.A.A.M. van (2011, 16 February). Breaking the violence, Department of Economics, Bilkent University, Ankara, invited seminar.


Other lectures on research
Winden, F.A.A.M. van (2011, 10 May). Lecture on neuroeconomics, commenting on Jan Derksen, UvA Collegereeks Brein, IIS, University of Amsterdam.

Organisational contributions to conferences, workshops and seminars
Experimental & Political Economics – Schram


Participation in academic networks & fellowships


Offerman, T.J.S. (2011). Fellow of CESS, NYU.


Winden, F.A.A.M. van. Member Koninklijke Hollandsche Maatschappij der Wetenschappen

Winden, F.A.A.M. van. Fellow of: CEPR, CESifo, Tinbergen Institute.

Editor or member of editorial board


Offerman, T.J.S. (2011). Member of the Editorial Board of Experimental Economics.


Referee activities


**Membership of academic committees (including committees outside the FEB)**

Offerman, T.J.S. (2011, June 14). Member of committee Martha Serra Garcia; Tilburg University.


Sonnemans, J. (2011, February 16) Member of committee Kenan Kalayci; Tilburg University.

Winden, F.A.A.M. van (as of 7 February 2011): member Scientific Advisory Board at the Max Planck Institute for Research on Collective Goods in Bonn.

Winden, F.A.A.M. van (2011, 1 July 2011). -committee: Shaul Salvi, Ethical Decision Making (promotor: Carsten De Dreu, UvA), University of Amsterdam.

**Research contributions in the media**


**Grants, prizes and honours**


Veelen, M. van (2011). *Elected to The Young Academy of the KNAW*

Winden, F.A.A.M. van (22 July). Visitor’s Grant NWO-JSPS (29,896 euro) for Yoshiro Tsutsui, Graduate School of Economics, Osaka University.

**Various activities**


Ule, A. (2011). Board member of the Slovenian quality assurance agency for higher education.
CHAPTER 14: INDUSTRIAL ORGANISATION, COMPETITION POLICIES & REGULATION

Programme Director: Prof. dr. A.R. Soetevent & Prof. dr. J. Hinloopen

Department: Economics (AE)
METIS-code: uva/fec/ase/io
JEL-classification: L
Starting date programme: 2005
Website: www.ase.uva.nl/io

14.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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Total 3rd flow of funds  0,00  0,00  0,00  0,00
Total 1st f.o.f. excl. Ph.D.'s  0,88  0,69  0,90  0,93
Total all flows of funds  2,86  3,73  3,27  2,73
Ph.D. students  1,08  1,14  1,10  0,80

14.2 PROGRAMME DESIGN

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

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

Projects
The programme of the IO group can be subdivided into four strands of research, which are interrelated:

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

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

Auctions
In the past few decades, the study of auctions has become one of the most active research areas in economic sciences. We aim at answering questions such as: How to prevent cartel formation in auctions? What is the effect of limited liability on bidding behaviour? How to design auctions of multiple objects? What are optimal mechanisms in quasi-markets such as welfare-to-work markets and health care markets? What is the effect of license auctions on the performance of markets? For example, groups members have studied experimentally the impact leniency programmes on the collusive properties of different auction types. Others have studied fundraising mechanisms on charitable giving in a door-to-door fundraising field experiment. The starting point here is that people are not purely selfish because if they were they would donate nothing to charity.

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

14.3 PROGRAMME EVALUATION

Strengths

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

Weaknesses

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

Opportunities

- Within Europe, the group has close contacts with research groups in industrial organisation at other universities. The challenge is to establish a more formal network with these other departments in order to pool research projects and resources.

Threats

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

Relevance to society

Due to his research project on deterrence effects of merger policy tools, the NMa invited Jo Seldeslachts to be part of an expert committee that guides a policy project there, where the impact of the NMa’s actions is evaluated through the use of a survey of competition lawyers and economic consultants. As a result of his involvement in the Netherlands in the erection of an economic bureau with the NMa, Patrick Van Cayseele was involved in the selection of a chief competition economist for the NMa and delivered the keynote lecture at the installation conference. The NMa hired Sander Onderstal as external expert in the Transdev/Veolia merger case. Sander Onderstal advised the Ministry of Economic Affairs on future auctions for radio spectrum. Furthermore, Audrey Hu successfully defended her thesis on auctions that was supervised by Theo Offerman (promotor) and Sander Onderstal (co-promotor). Jeroen Hinloopen gave his inaugural lecture, which was picked up by several (national) media, including the popular consumer’s programme TROS Radar. Jeroen Hinloopen and Sander Onderstal’s research on leniency programmes was picked up by the German Handelsblatt. Adriaan Soetevent’s research on the Dutch Postcode Lottery received extensive
attention in the Dutch media, including interviews at Radio-1, BNN Today and RTL-z. The project on gift certificates of Soetevent and Flóra Felső was recently mentioned in Het Financieele Dagblad.

14.4 RESOURCES AND FUNDING

The programme received funding from the research institute ASE-RI but this amount was (very) modest relative to the cost of participation of group members in conferences and other research-related activities. Soetevent’s VENI scholarship amounted about €200,000 for a three year period and ended in 2010. And Jo Seldeslachts obtained a research grant from the European Union that amounts to about €180,000. Some of the group members managed to obtain additional means from commissioned research for public and private institutions.

14.5 OUTPUT

**Key publications**


**Forthcoming**


Publications in numbers

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Total

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

Academic publications (working- and discussion papers)


Professional publications


Popular publications


Contributions to academic conferences, workshops and seminars


Onderstal, S. (2011, 7-10 April). Bidding to Give in the Field: Door-to-Door Fundraisers Had it Right from the Start. IMEBE workshop Barcelona.


Seldeslachts, J. (2011, 3 November). Technological Progress via Outward-Bound Experiences: M&As as Responses to a Sustained Lack of Productivity Growth. Invited seminar, Business Dept., University of Illinois at Urbana Champaign, USA.


Smrkolj, G. (2011, September 3-11). The 2011 Zurich Initiative on Computational Economics (ZICE11), The University of Zurich, Switzerland.

Soetevent, A.R. (2011, 9 April). Price Competition on Graphs. 9th International Industrial Organization Conference (IIOC), Boston, USA.


Other lectures on research


Organisational contributions to conferences, workshops and seminars


Participation in academic networks & fellowships
Hinloopen, J. (2001-). Fellow Tinbergen Instituut.

Hinloopen, J. (2006-). Fellow ENCORE.

Hinloopen, J. (2008-). Fellow ACLE.


Onderstal, S. (2006-). Fellow ACLE (Amsterdam Center for Law & Economics).


Seldeslachts, J. (2010-). Fellow Tinbergen Instituut.


Soetevent, A.R. (2006-). Fellow ENCORE.

Soetevent, A.R. (2008-). Fellow ACLE.

Editor or member of editorial board
Hinloopen, J. (2002-). Associate Editor Review of Industrial Organization.

Onderstal, S. (2010-). Editor TPEdigitaal.

Referee activities

Membership of academic committees (including committees outside the FEB)

Research contributions in the media

Grants, prizes and honours

Various activities
Hinloopen, J. (2011, 15 April). Member of the recruiting committee for a Chair in Industrial Organization, University of East Anglia.
Onderstal, S. (2011). Referee for NWO.
Smrkolj, G. (until October 2011). The Students Council of the Tinbergen Institute- Chair.
Soetevent, A.R. (2011). Referee for NWO.
### 15.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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Total 1st flow of funds: 0,58, 0,51, 1,63, 1,18
Total 2nd flow of funds: 0,50, 0,50, 0,50, 0,50
Total 3rd flow of funds: 1,45, 0,00, 0,20, 1,40
Total 1st f.o.f. excl. Ph.D.’s: 0,58, 0,96, 1,63, 1,18
Total all flows of funds: 2,53, 1,01, 2,33, 3,08
Ph.D. students: 0,45, 0,00, 0,20, 1,40

### 15.2 OUTPUT

**Forthcoming**

### Publications in numbers

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

**A**


**Other**


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

**B**


**Other**


### 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**

Tijdens, K.G. (2011). The international WageIndicator survey on work and wages. presentation Erasmus FSW Honours program, 08-Jun-11, Rotterdam.


Other lectures on research


Organisational contributions to conferences, workshops and seminars


Participation in academic networks & fellowships

Jacobs, D. (2005-). Member of the editorial board of Holland Management Review.

Referee activities


Membership of academic committees (including committees outside the FEB)

Jacobs, D. (2005-). Member of the research committee of IFFTI, the International Foundation of Fashion Technology Institutes.

Research contributions in the media

Other Research

Economics


Grants, prizes and honours
Tijdens, K.G. (2011). COST Action Grant for WEBDATANET.

Various activities
Jacobs, D. (2007-). Member of the Strategic Advisory Committee of the Stichting Industriebeleid en Communicatie (Foundation Industrial Policy and Communication).
Tijdens, K.G. (2011). Member advisory committee 'New Skills for New Jobs - Monitoring Labour Market Developments in the EU (European Vacancy Monitor)', EU-Employment, Social Affairs and Equal Opportunities DG.
Tijdens, K.G. (2011). Member international board 'Detailed Analyses of VET Systems in 7 EU countries', University of Ljubjana (Slovenia).
CHAPTER 16: SEO ECONOMIC RESEARCH

Subprogrammes: Labour Economics & Education
Health Economics & Social Security
Regulation & Competition Policy
Aviation Economics
Cost-benefit analysis and Economic Activity
Market and Government

Programme Director: Prof. dr. J.J.M. Theeuwes
METIS-code: uva/feb/ase/seo
JEL-classification: I, J, L, Q, R
Web-address: www.seo.nl

16.1 MEMBERS OF THE RESEARCH GROUP AND RESEARCH IN FTES

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16.2 PROGRAMME DESIGN

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

SEO carries out contract research for ministries and public organizations, private companies and non-profit institutions, nationally and internationally. SEO distinguishes itself from commercial research bureau’s by its analytical approach. Modern economic analysis is applied to practical issues. Empirical questions are tackled with the econometrics toolkit. SEO is not linked to vested interests or political parties and research questions are approached with an independent scientific mindset.

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

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

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

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

In the section Cost-benefit & Business cost-benefit analysis is not only applied to infrastructural projects but also to a wider area of investment and policy initiatives. The section also has a regional economics component which concentrates on issues of regional growth, employment and productivity issues, local labour markets and regional mobility. And the section is involved in sector- and industry studies and business dynamics.
**Aviation Economics** is a section specializing in aviation economics. It advises governments, airlines, airports, financial institutions and other interested parties on the economic issues related to aviation. Aviation Economics activities include operations research, econometric analyses and forecasting, feasibility studies and research into competition and market issues, as well as work in transport and regional economics.

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

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

### 16.3 PROGRAMME EVALUATION

Academic publications by researchers at SEO Economic Research are often a spin-off from contract research which is SEO’s core activity. This year 20 articles were published in refereed journals or refereed books. The number of non-refereed academic publications was substantial.

In 2011 SEO researchers published 72 commissioned reports and 162 other publication such as popular publications and newspaper articles.

In 2011 dr. Michael Sattinger, Professor of Economics at the State University of New York, Albany and Randstad Professor of the Chair of “Markt van Uitzendwezen en Flexwerken” at the University of Amsterdam, visited SEO Economics in May and September 2011 to work with the Labour Economics and Education section researchers doing a study on measuring mismatch on the labour market. This study will be published in the Summer of 2012.

### 16.4 RESOURCES AND FUNDING

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

16.5 OUTPUT

**Key publications**


**Forthcoming**


**Publications in numbers**

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<tr>
<td>B 6</td>
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<tr>
<td>b) in other journals</td>
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</tr>
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<td>c) book chapters</td>
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<tr>
<td>B 1</td>
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<td>Other 7</td>
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<tr>
<td>d) in proceedings</td>
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<td>6) Working papers</td>
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</table>
**Academic publications (excluding publications in/of books) – refereed**

**A**


**B**


**Other**


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

B


Other


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


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


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


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


**Professional publications**


Tieben, B., m.m.v. Baarsma, B. (2011). *Advies Tariefregulering Leveringsmarkt Energie. SEO-rapport 2011-20*. Amsterdam SEO.


**Popular publications**


Contributions to academic conferences, workshops and seminars


Mededinging in de West”, presentatie voor het projectteam Caribisch Nederland van het ministerie van EL&I.


**Other lectures on research**


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


**Participation in academic networks & fellowships**


Baarsma, B.E. (2010-). Member Vrouwen in zorg.

Baarsma, B.E. (2010-). Member Academisch Genootschap Aanbesteden.

Baarsma, B.E. (2010-). Member Koninklijke Vereniging van Staathuishoudkunde.

Baarsma, B.E. (2010-). Member Kring Amsterdamse Economien.

Baarsma, B.E. (2010-). Member Economenpanel van BNR Nieuwsradio.

Baarsma, B.E. (2009-) Member of jury Grote Financiën Scriptieprijs, ministerie van Financiën.


Baarsma, B.E. (2007-). Member of Vereniging Mededingingsrecht.

Burghouwt, G. (2004-). Member of the Air Transport Research Society.


Heyma, A. (2010-). Member Klankbordgroep voor UWV Kenniscentrum.

Heyma, A. (2011-). Member Klankbordgroep Arbeidsmarkt Ouderen voor CPB.


Koopmans, C.C. (2009-). Chairman Advisory Board, International Master Programme Spatial Transport and Environmental Economics (STREEM), VU University, Amsterdam.

Noll, R. van der (2009-). Member of Vereniging voor Mededingingsrecht.

Noll, R. van der (2010-). Member Board of Jong Vereniging voor Mededingingsrecht.

Theeuwes, J.J.M. (2007-). Member Economenpanel van BNR Nieuwsradio.
Theeuwes, J.J.M. (2000-). Member Rekencommissie voor het VWS veld.
Theeuwes, J.J.M. (2000-). Member Commissie Minimum Lonen van de SER.
Theeuwes, J.J.M. (2007-). Member Board of Advisers Airmeth, Amsterdam.
Theeuwes, J.J.M. (2009-). Chairman of the Jury of the dissertation prize of the Koninklijke Vereniging voor de Staathuishoudkunde.
Theeuwes, J.J.M. (2010-). Member of the Wetenschappelijke Commissie Wijkaanpak, Ministry of BZK.
Theeuwes, J.J.M. (2010-). Member of the Evaluatiecommissie Risicoverevening, Ministry of VWS.
Theeuwes, J.J.M. (2011-). Member of the International Review Panel for Educational Programs in Economic Sciences at Flemish Universities, Belgium.

**Editor or member of editorial board**

Baarsma, B.E. (2009-). Member editorial board Tijdschrift voor Toezicht.
Theeuwes, J.J.M. (2007-). Member editorial board Tijdschrift voor Arbeidsvraagstukken.
Theeuwes, J.J.M. (2007-). Member editorial board Sociale en Culturele Wetenschappen van de Amsterdam University Press (AUP).

**Referee activities**

Baarsma, B.E. (2011-). Referee for Beleidsonderzoek Online.
Research contributions in the media


Lange, B. de & Trommelen, J. (2011, 8 March). Dure olie sijpelt zelfs door tot in lipstiek. G. Burghovert over de gevolgen van dure olie voor de luchtvaart. Dagblad van het Noorden, 14, (Afgedrukt in: de Stentor, BN/De Stem, Brabands Dagblad, Dagblad de Limburger, De Gelderlander, de Twentse courant Tubantia, etc.).

Lange, B. de & Trommelen, J. (2011, 10 March). Dure olie sijpelt door tot in lipstick; De gevolgen van de hoge olieprijs zijn in veel sectoren merkbaar. Voor duurzame energie is de dure olie een zegen. 'Allerei energiebesparende technieken worden sneller rendabel.' G. Burghouwt over de gevolgen van dure olie voor de luchtvaart. Nederlands Dagblad.


**Various activities**

Baarsma, B.E. (2011-). Member Raad van Commissarissen Stichtingen Espria en Woonzorg Nederland (also member audit committee).

Baarsma, B.E. (2010-). Member Raad van Toezicht St. Elisabeth ziekenhuis, Tilburg.

Baarsma, B.E. (2010-). Member Raad van Toezicht van BNN.

Baarsma, B.E. (2010-). Member audit committee FNV Bondgenoten.

Baarsma, B.E. (2008-). Member Raad van Commissarissen Loyalis NV (also member audit committee).