Self-assessment Report of the Faculty of Economics and Business of the University of Amsterdam for the 2008 Research Assessment

ABS-RI
AMSTERDAM BUSINESS SCHOOL RESEARCH INSTITUTE

RESAM
RESEARCH INSTITUTE ECONOMICS & ECONOMETRICS AMSTERDAM
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Introduction on Faculty of Economics and Business

The Faculty of Economics and Business has two research institutes: one in business and one in economics and econometrics. This is in line with the situation in other faculties within the University of Amsterdam where separate research institutes exist to reflect different research areas and traditions. At the time of the previous research assessment, plans had already been made to set up a distinct research institute for business (as part of the creation of the Amsterdam Business School) in order to bring this area more towards the level where economics and econometrics already was. Targeted attention with specific knowledge of the respective business subfields was and is seen as necessary for this purpose. Increasing and furthering high-quality research in both business and economics/econometrics in a setting of healthy competition, mutual understanding and good cooperation where possible has been our approach.

Although certainly more can be done in our quest for excellence, we think steps forward have been made in the period under assessment, thanks to the dedicated attention that only separate institutes can guarantee. In the field of business, concerted efforts to strengthen areas other than finance, that already was at a high level, have been made, and in economics and econometrics, steps have been taken to improve programmes for which this was indicated while maintaining momentum in the programmes that had scored well in the previous period. This focused attention on the different disciplines has helped us to substantially increase research output in the business school in just a few years, whilst improvements in economics and econometrics have been sustained. The current report outlines developments and results for both institutes and their programmes put forward for assessment.

On a practical level, both institutes (and the schools of which they are part, i.e. the Amsterdam Business School and the Amsterdam School of Economics) have worked together very well. In the assessment period, they shared the support office (one staff member) and thus reaped synergies there. Coordination takes place where appropriate. For example, the research institute in economics and econometrics (RESAM) has main responsibility for the policies and practicalities related to the MPhil/Ph.D. programme in the Tinbergen Institute, and which also covers finance that is part of the research institute in business (ABS-RI). Policy changes with major implications are discussed between the two, and ABS-RI follows the policy adopted by RESAM.

Similarly, while both institutes have their own journal lists as a necessary reflection of their main focus and a clear statement of concomitant profiles and most-desired outlets, rankings are mutually recognised as a principle. Personnel policy also follows the same tenets in terms of for example tenure track and promotion principles, as also agreed in a joint committee that approves promotions and associate and full professor appointments, but differences within the disciplines covered by both institutes and their peculiarities in terms of publication requirements and labour market conditions are being taken into account (Details can be found in A4 of both institutes’ reports; although policies are largely similar, we have chosen to include them in both cases as this makes each report into a comprehensive whole with all relevant information for the institute together).

A final example is that both institutes cooperated in creating the Amsterdam Centre for Entrepreneurship that covers both, and there are various areas in which researchers across the areas work together, sometimes also in submitting research
grant proposals if this is deemed to have higher chances of success. As mentioned in the report, we stimulate researchers to cooperate both within and outside the university, but do not direct that, only facilitate where appropriate and feasible.

Hence, while targeted and separate attention for business on the one hand and economics and econometrics on the other continues to be needed as a reflection of research styles and traditions of the respective fields in which researchers can prosper, and there may be different interests when it comes to a division of scarce resources, this is accompanied by fruitful cooperation and reaping of synergies at the operational side. This serves the overall objective of fostering excellent and relevant research. Where we exactly are in this process is obviously up to the committee to assess.
A. Documentation regarding the level of the institute
RESAM - RESEARCH INSTITUTE IN ECONOMICS & ECONOMETRICS

- Name of the institute: RESAM – Research Institute in Economics & Econometrics Amsterdam
- Date of establishment: January 1, 1998
- Institutional affiliations and formal responsibilities: RESAM is the research institute of the Amsterdam School of Economics (ASE), which in turn is part of the Faculty of Economics and Business of the University of Amsterdam. RESAM’s formal responsibility is to stimulate excellent research in the field of economics, and to spent ASE’s research funds are spent efficiently.
- Research area: Economics, econometrics, actuarial science and operations research
- RESAM cooperates formally in the Tinbergen Institute (TI), this is the joint research school of the economics departments of Erasmus University, the Free University Amsterdam and the University of Amsterdam.

A.1 Mission statement

RESAM aims for research results that significantly improve our understanding of the operation of economic systems, the behaviour of agents in the economy and the effects of economic policies.

RESAM facilitates and promotes research by faculty members of the Amsterdam School of Economics to foster the academic ideal of intertwined university research and teaching.

A.2 Leadership

According to the law steering the management of universities in the Netherlands, the dean has the final authority on all research-related (and other) matters. The dean can formally or informally delegate whatever s/he wishes. So far delegation of research responsibilities within ASE have only been informal. There does not exist a document clearly defining the duties, authority and responsibilities of the director of RESAM. The director of RESAM is in the management team of ASE; also for this MT duties, authority and responsibilities have not been clearly defined.

RESAM currently covers nine research programs (+SEO), each of which is directed by a program leader. These programs are regarded as the natural units of organization of the research conducted in RESAM. Research agenda’s are primarily defined at the level of research groups, with an important role for the program leaders and other senior researchers.

RESAM’s main steering mechanism is its system of allocating research time. Based on publications in journals (or books) during the previous three years researchers can earn up to 0.5 FTE of research time. The system differentiates by quality of journals and number of co-authors. People who earn 100 so-called RESAM points (the equivalent of two single authored publications in B-journals in three years) receive the 0.5 FTE. People with less than 100 points can still earn 0.25 or 0.125 FTE research time. Faculty-members who are admitted as fellow of TI are automatically awarded the maximum research time of 0.5 FTE.
Decisions regarding the size of the institute's budget and the allocation of that budget are made in the management teams of Faculty of Economics and Business (FEB) and of the Amsterdam School of Economics. Formally the dean of the FEB takes the final decisions.

With the respect of the internal operation of the research institute (within RESAM's office) the management style of the director is informal and open. In relation to the program leaders and other faculty-members, the management style is best characterized as "laissez-faire". Program leaders and other faculty members manage the research on their groups. Communication is horizontal. It is believed that this style is the most suitable one in an academic environment with intrinsically motivated and highly creative professionals.

Besides the incentive to earn future research time, an important mean of motivation is the school's promotion policy as embedded in its personnel policy. In recent years the school changed from a system with fixed numbers of positions for full and associate professors to a system of career development. In the latter system a faculty member who meets certain standards in research (and teaching) can be promoted to a higher rank. This gives a strong incentive to publish in top-ranked journals as such publications have a heavy weight in promotion decisions.

A.3 Strategy and policy

At the moment of the previous research assessment RESAM was the umbrella institute for all research in the FEB. Nowadays it no longer covers the fields related to business studies (which include finance). It was believed that research and publication traditions in economics and business are too different to include them in the same institute. The divide between the research institutes in economics and business studies is mirrored by the division of the FEB into two separate schools: the Amsterdam School of Economics and the Amsterdam Business School, which both have a vice-dean in charge of daily operations in their respective schools.

Currently RESAM covers nine relatively homogenous research groups that (with one exception) share a common research culture, with a strong emphasis on and use of quantitative research tools.

Some programs represent research areas with a long-standing tradition in economics such as the groups in econometrics, macroeconomics, industrial organization and labour economics. Others represent relatively new fields such as experimental and behavioural economics and the application of nonlinear dynamics to economics. These latter programs are the continuations of successful projects sponsored by the Dutch Science Organization (NWO). The fields of history and methodology of economic thought and actuarial sciences resemble two typical ingredients of the Amsterdam School of Economics. Finally RESAM covers the field of Operations Research due to that field's close link in teaching with other quantitatively oriented fields.

There are no plans to change the current coverage of research areas. But obviously new areas are constantly explored and the institute's organization is sufficiently flexible to accommodate this, as shown by the start of the separate program in Industrial Economics, Competition and Antitrust in 2005. Potentially promising new areas include evolutionary game theory, network theory and neuronomics. As with successful innovations in the research program in the past (CREED, CENDEF,
these new areas should first secure a period of research funding from temporary funding agencies (NWO, EU). During that period, the new programs can prove to be important contributors to RESAM’s research program.

ASE/RESAM’s policy to embed successful innovative research programs that have been funded by NWO as a regular research program funded by RESAM, contrasts with policies pursued elsewhere, where successful innovative programs have a hard time entering the regular system.

In response to the previous research assessment there has been a gradual increase in the requirements to earn research time. In the past, faculty members could also earn research time with publications in so-called C-ranked journals (including some Dutch language journals). This is not possible anymore. This should strengthen faculty members’ awareness of the importance to conduct research that can potentially be published in high ranked international journals.

In response to the previous research assessment the program in comparative population and gender studies ended as a separate program, and became part of the human capital program. With the recent retirement of the full professor in this field, the program is now completely terminated.

ASE (together with the Finance group of ABS) participates as one of the three partners in the TI. The other partners are the economics departments of the Free University Amsterdam and the Erasmus University Rotterdam. TI plays an important role as graduate school in the training and supervision of Mphil and PhD students (see A6). In addition the TI is a place where many joint research activities take place, such as the organization of seminars, conferences and hosting visitors from abroad. In Amsterdam, TI is located in the same building complex as the Amsterdam School of Economics, making it particularly convenient for faculty members to go there. (Until 2002 TI was located along one of the canals at equal distance from the University of Amsterdam and the Free University Amsterdam.)

As a research school, TI also played an important role in setting higher standards for research. Qualifying as a fellow of TI is based on publications in international journals and (possibly) citation scores. TI-fellows automatically earn the maximum research time of 0.5 FTE. It is recent policy that new faculty-members only get tenure when they qualify as (junior) fellow of TI (or another recognized research school).

In recent years RESAM’s director has proposed that only fellows of TI (or another recognized research school) can obtain research time, but this proposal was not supported by a majority of the program leaders. Also the proposal to differentiate research time such that excellent researchers can get up to 0.7 FTE research time (at the cost of awarding less research time to people who earn less than 0.5 FTE) was not supported by a majority of the program leaders.

A.4 Researchers and other personnel

As stated in the introduction, personnel policy of the two schools of the FEB are very similar. As a consequence, the following text in almost identical to the corresponding section in the part of the ABS. Differences reflect differences between the disciplines covered by the two schools in terms of publication requirements and labour market conditions.
The aims of the ASE’s personnel policy for academic staff are:

a) to assist in the achievement of the aims of the ASE, and
b) to provide an attractive working environment for the staff.

The first objective requires appropriate policies in the fields of recruitment, tenure, promotion and (early) retirement. The second objective requires that the ASE provides attractive employment (salary, expenses, leave, computers, office space, secretariat, promotion criteria, good management) and academic (PhD students, seminars, colleagues) conditions. A highly qualified and well-motivated staff is the main asset of a teaching and research institution and essential to its success.

Assistant professors (UD’s) are recruited by open competition. Vacancies are advertised in the national press, and full details placed on the UvA website (in both Dutch & English), and usually advertised internationally as well. Members of appointments committees are expected to use their networks to draw the attention of suitable candidates, either national or international, to the vacancy. A public seminar will usually form part of the appointment process.

Requirements: meeting formal criteria adopted by all Dutch universities. Having a PhD in the relevant field, positive letters of reference and if possible some teaching experience.

Publications in serious journals (at least at B level) are desirable as is an ambition to contribute to international academic discussion by means of articles in international journals.

Initial appointment is normally for four years, with the possibility of a subsequent permanent position subject to favourable performance (‘tenure track’). In some cases the initial appointment may be for two years, with the possibility of a two-year extension if certain conditions are met, e.g. knowledge of Dutch. Decision about tenure is taken after four years. Requirements for tenure are favourable teaching evaluations, and (junior) fellowship of the Tinbergen Institute (or of another recognized research institute) or demonstrated potential to become so in a reasonable time.

Associate professors (UHDs) are recruited by open competition or internal promotion. General policies as listed under UDs also apply here. Requirements: meeting official criteria, specifically teaching experience and favourable teaching evaluations; design of new courses; substantial number of publications including a number in top journals; directing research of others (e.g. Ph.D. students); attracting external funding; international contacts and experience; management experience (e.g. as director of a course committee or of a teaching programme); and research impact (e.g. citations). All proposals for appointment at UHD level (which require 3 letters of reference from international referees) to go to an FEB committee which evaluates the proposal against these criteria.

Full professors (HGL) are recruited by open competition (except in cases of internal promotion) according to the guidelines in UvA publication Recruitment and Selection of Professors. All vacancies are to be advertised nationally and internationally. Requirements: official criteria, specifically wide teaching experience and demonstrated competence both in teaching and in designing courses; wide international contacts and experience; international reputation (e.g. as shown by citations); impressive publication list; a good record in Ph.D. student supervision; experience in fund-raising; expectation that she/he can provide academic leadership.
All proposals for appointment as HGL, including at least 3 letters of reference from international referees, go to a FEB committee (currently the Vaste Commissie Benoemingen (VCB)) which checks them against the criteria. Initial appointments as HGL are normally for 5 years, with the possibility of renewal till retirement age. The purpose of this is to prevent the ASE being saddled with the consequences of unsuitable appointments for decades. Initial appointments on a permanent basis are possible where the person concerned already has a permanent appointment at the ASE (e.g. as Associate professor) or is already a HGL elsewhere or where such an offer is necessary for labour market reasons.

PhD students are the future of the academic world. The ASE is keen to have a good number of them, give them a good training, and produce a regular stream of fresh PhDs. (See also A7: Research school activities.)

Postdocs. Good fresh Ph.D.s from the ABS or elsewhere may be offered postdoc positions. These are temporary research positions for a maximum of 4 years. Postdocs will also be required to do some teaching, normally at least 0.2. In some cases, at the end of the postdoc period, the postdoc may be offered a UD or even UHD position, if the person meets the criteria for those posts (see above). Up till now, postdoc positions have been mainly externally financed (Netherlands Organisation for Scientific Research, NWO). From 2008 onwards the ASE expects to have also some internally financed postdoc positions.

Evaluation
Each member of staff should have an annual assessment (jaargesprek) with the section head. This provides an opportunity for the person concerned to express their own views, and for the employer to explain the ASE’s evaluation of the person’s work and of their career prospects in the ASE. Except in the case of full time lecturers (docenten) and researchers (onderzoekers), the ASE strives for 50-50 appointments (teaching and research). Both teaching and research are required to be of a high level. Members of staff are expected to respond appropriately to poor student evaluations. Staff who fail to achieve good student evaluations of their courses, especially if this happens a number of times in a row, are required to participate in a course on teaching methods or presentational skills. Research time is allocated according to performance norms which are communicated to all members of staff. Staff who fail to meet the norm for 50% research time will receive less and will automatically receive an increased teaching task.

Promotions
The ASE operates on the ‘career principle’. This means that promotions are made on the basis of an individual’s achievements, independent of whether or not there is a vacancy (although obviously vacancies in key fields have to filled on retirement or resignation). Criteria for promotion are known to members of staff. There must be some ‘individualisation’ of the criteria since members of the ASE work in very different fields and have varying strengths.

Employment conditions
At the present time there are some possibilities to improve the income of staff and reimburse expenses (arbeidsmarkttoelage, functioneringstoelage, a one-off gratificatie, extra periodieken, onkosten) or improve their personal situation (crèche, housing) where this is necessary to retain or motivate them. These possibilities should be used as appropriate.

Flexibility/individualisation. In applying the above, we pay attention to special
circumstances affecting specific individuals and/or particular subject areas. Hence the policy is a set of guidelines, to be interpreted flexibly in particular cases, and not rigid and inflexible.

Table 33
Research staff at institutional level

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<td>48.14</td>
<td>51.85</td>
<td>54.93</td>
<td>53.87</td>
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<td>Non-tenured staff</td>
<td>Fte</td>
<td>28.83</td>
<td>30.45</td>
<td>33.41</td>
<td>28.61</td>
<td>33.62</td>
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<td>PhD students</td>
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<td>Sum</td>
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Table 34
Research staff at institutional level excluding SEO

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<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
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<td>25.44</td>
<td>24.83</td>
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Table 35
Research staff at programme level

<table>
<thead>
<tr>
<th>RESAM</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<td>UvA-Econometrics</td>
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<td>3.65</td>
<td>3.79</td>
<td>3.59</td>
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<td>Fte</td>
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<td>1.80</td>
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<td>7.74</td>
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<td>6.29</td>
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<td>0.68</td>
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<td>1.08</td>
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</tr>
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<td>1.48</td>
<td>1.80</td>
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<td>1.96</td>
<td>1.98</td>
<td>0.86</td>
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<td>2.81</td>
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<td>2.90</td>
<td>2.40</td>
<td>3.00</td>
<td>3.57</td>
<td>4.90</td>
</tr>
<tr>
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<td>5.27</td>
<td>6.33</td>
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<td>6.05</td>
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</table>

Tables 34 and 35 shows for the years 2001-2007 the number of research staff in various categories: tenured staff, non-tenured staff and PhD students, all measured in FTE’s (and not in persons). The size of tenured staff is around 25 FTE, and that of non-tenured around 30 FTE. The number of PhD students (measured in FTE) is around 17. The total number of PhD students (measured in persons) in 2007 was 32 (this also includes students funded from external sources). The drop in the number of PhD students in the last years is a consequence of a vacancy stop some years ago.

Table 36 gives the breakdown of research staff by programs. The sizes of most groups are fairly constant over time. Most of the year-to-year changes are attributable to vacancies not immediately filled when people leave. An exception is the program of Actuarial Sciences, which expanded in 2007 due to a large research
grant. The reduction in size of the Human Capital program is artificial. Until 2003 the IO-group was part of this program. Thereafter it started as an independent program.

### Table 35 (continued)

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<td>18.57</td>
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<th>2007</th>
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<td>2.45</td>
<td>3.30</td>
<td>4.43</td>
<td>2.30</td>
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<td>10.30</td>
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<tbody>
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<td>Tenured staff</td>
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<td>0.45</td>
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<td>0.45</td>
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<tr>
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<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
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<tr>
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<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
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<td>1.49</td>
<td>0.45</td>
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<th>2006</th>
<th>2007</th>
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<tbody>
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<td>Fte</td>
<td>18.39</td>
<td>22.78</td>
<td>25.60</td>
<td>29.19</td>
<td>29.04</td>
<td>26.29</td>
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<td>Sum</td>
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<td>26.40</td>
<td>29.99</td>
<td>31.57</td>
<td>32.42</td>
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### A.5 Resources, funding and facilities

Currently RESAM’s annual budget amounts to 4.5 million Euros, two thirds of that being spent on academic staff. RESAM is only in charge of the direct funding. It encourages faculty members to obtain research funds (and contracts), but has so far chosen to have no say in the allocation of such funds. That is to the discretion of the people acquiring these funds.

1.9 million is spent on research time of faculty members of ASE. This amount is the immediate result of applying RESAM’s system of awarding research time to the research output of faculty members of ASE. In a given year, there is not much RESAM can do to manipulate this. The deans of ASE and FEB decide who are on ASE’s payroll (and thus the amount of research output). Changing the system to award research time can only be done when announced some years (given the time it takes to publish) in advance. Another 1 million is assigned to untenured people (including salaries for PhD students).

Half of other expenditures are spent in the form of matching outside funding. For most of its funding schemes, the Dutch Science Organization (NWO) requires that the university that employs the recipient, bears part of the costs. This requirement (which has been terminated this year) absorbed a large substantial share of RESAM’s budget over the past years.

Another large portion of other expenditures is related to the Tinbergen Institute in the form of a lump sum payment to TI, scholarships and teaching in the Mphil program. 0.2 million Euros is directly assigned to the RESAM’s research programs, partly on
the basis of number of researchers and partly on the basis of the number of PhD defences.

Current resources are insufficient. First, the 0.5 FTE maximum research time that RESAM grants, translates into 150 teaching hours per week. This is substantially more than at competing Dutch and European universities. This makes it very difficult to attract/retain excellent researchers who obtained attractive offers elsewhere. Second, the budget available for the research programs is small. Per person (including PhD students) it amounts to around 2000 Euros. This is sufficient to attend one conference per person per year.

Third, the number of PhD students is at a low level. Per full professor there is around 1, implying that on average each full professor has only one defending PhD student every 3 to 4 years (assuming no PhD student drops out).

### Table 36

<table>
<thead>
<tr>
<th>Staff funding at level of the institute</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td>Direct funding fte's</td>
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<td>48%</td>
<td>44%</td>
<td>42%</td>
<td>36%</td>
<td>33%</td>
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<tr>
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<td>18%</td>
<td>16%</td>
<td>18%</td>
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<tr>
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<td>33%</td>
<td>35%</td>
<td>40%</td>
<td>41%</td>
<td>45%</td>
<td>45%</td>
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<tr>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Total</td>
<td>100%</td>
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<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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### Table 37

<table>
<thead>
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<th>Staff funding at level of the institute (excl. SEO)</th>
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<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
<td>Direct funding fte's</td>
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<td>67%</td>
<td>67%</td>
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<tr>
<td>Contracts</td>
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### Table 38

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<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<td>91%</td>
<td>85%</td>
<td>86%</td>
<td>73%</td>
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<tr>
<td>Other costs</td>
<td>9%</td>
<td>15%</td>
<td>7%</td>
<td>9%</td>
<td>15%</td>
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<tr>
<td>Total</td>
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<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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### Table 39

<table>
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<th>2003</th>
<th>2004</th>
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<td>5%</td>
<td>7%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
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**RESAM**

| Direct funding fte's                  | 32.42                | 37.65          | 40.31     | 36.15 | 35.94 |
| Research funds                        | 8.96                 | 14.80          | 14.92     | 13.18 | 15.09 |
| Contracts                             | 21.84                | 26.63          | 29.17     | 32.33 | 35.04 |
| Other                                 | 63.22                | 78.08          | 84.40     | 81.66 | 86.07 |
| Total                                 | 83.25                | 90.95          | 95.54     | 90.66 | 95.54 |

**RESAM (EXCL SEO)**

| Direct funding fte's                  | 31.42                | 36.65          | 39.11     | 34.93 | 34.84 |
| Research funds                        | 8.96                 | 14.80          | 14.92     | 13.18 | 15.09 |
| Contracts                             | 3.45                 | 2.85           | 3.97      | 3.56  | 4.57  |
| Other                                 | 43.83                | 54.30          | 58.00     | 51.67 | 54.50 |
| Total                                 | 48.97                | 59.30          | 62.97     | 55.84 | 59.54 |
A.6 Processes in research, internal and external collaborations

As explained above (A2) formulating research agenda’s, research initiatives etc. are taken at the level of research programs and/or at the level of individual researchers. It is RESAM’s responsibility to notice weak performance of specific research programs, to bring this to the attention of the board of ASE, and to propose effective measures. Large imbalances in the performance of different groups are a threat to a stimulating research environment. Programs may compete with each other for being the best program, but it is also important that the faculty is coherent, with a joint sense of purpose and operates in a cooperative spirit: members of various programs should respect each other’s work. In that respect we should mention that members from different programs work(ed) on joint research project (CREED with SCHOLAR, CENDEF, IO/SCHOLAR with SEO/Macroeconomics with Econometrics/ Econometrics with Finance, etc.)

Interaction across research groups is facilitated by the organization of a weekly internal seminar in which faculty members present their recent research (typically in a way accessible for non-specialists) and by the provision of information in the weekly electronic news bulletin.

RESAM produced a list with interesting, relevant funding opportunities, keeps this list up-to-date and informs researchers about funding schemes that are particularly important for them. RESAM also assists with the bureaucracies coming with funding applications.

The board of the UvA recently announced that its departments should identify (choose) at most three of its research groups as spearheads. Spearhead programs will receive extra funding. At the level of ASE this would imply that at most two of its programs are awarded this special status. This policy can easily disturb the existing balance across RESAM’s research groups. Moreover, it is likely (and seems reasonable) to appoint programs that are currently successful as spearhead. This ignores, however, that the groups that are currently successful would never have been appointed as spearhead if that policy had been introduced say 10 or 15 years ago.

Research school activities
Around 5 years ago FEB’s dean, together with the deans of the economics departments of Free University Amsterdam and Erasmus Universiteit Rotterdam, decided that TI should run a full-fledged 2-year Mphil-program of the level and quality comparable to the programs offered at the top schools in the United States and the United Kingdom. Each of these three departments separately is too small to run such a program.

Under the new director of graduate studies of TI (Jaap Abbring) this program was developed and implemented and excellent students were recruited from the international market (requiring to offer scholarships). The three universities participating in this program also committed to guarantee each year around 20 PhD positions for successful graduates from this Mphil-program. Given the small number of PhD students in ASE this effectively implied that (almost) all new PhD-students would come from the TI’s Mphil-program. Moreover, matching of students to advisors should in the first place be based on the research interests of the student.
In 2005, TI’s Mphil-program was evaluated very favourable by an international review committee chaired by professor Dale Jorgenson, stating that the core program is of a quality comparable to that of the top programs in the US and the UK.

Compared to the previous PhD-system, this new system brought a number of large changes.

- All students have now to go through the 1-year core program (micro/macro/econometrics) and could only in their second year specialize in their field of interest. In the past, students could attend whatever courses they and/or their advisor thought fit. The idea behind this change is that a somewhat broader orientation (1) leads to a more motivated choice of thesis topic, (2) places specializations into perspective, (3) can lead to fruitful fertilization across fields, and (4) prepares students better for a non-academic career after their defence.

- Students from the own (faculty-run) master programs could no longer apply for a PhD position in the ASE. Effectively turning TI’s Mphil-program into the only research master of the school. To accommodate students with a bachelor in econometrics (taught at UvA, VUA and EUR), the Mphil-program offers an advanced econometrics track. To make it possible for students with a master in econometrics (or another master) to skip certain courses, qualifying exams (QE) were introduced in which students can demonstrate the level at which they mastered the core topics.

- In the past advisors were assigned PhD positions on the basis of specific research proposals. Students were then hired for these specific projects. And they were thereby matched to their advisors before they had any graduate training. In the new system, students first do their 1-year of core courses and only during their second year in the Mphil program they start looking for someone that wants to advise them on their (self-chosen) thesis topic.

Big changes never come without resistance. It is argued that the Mphil-program does not provide students with the preparation/training needed for some fields and that the program has too much emphasis on mainstream economics and would probably attract too few students interested in other approaches.

RESAM keeps track of the progress of PhD students. A formal requirement is the annual review meeting of student and advisor. The outcomes of these reviews and possible conclusions are written down in a report that is then submitted to RESAM. Unfortunately this system does not work as it should. According to Dutch law, only on the basis of the first report is it possible to terminate the contract. The information available at that time is usually insufficient for such a far-reaching decision. RESAM therefore welcomes very much that in the near future this decision moment is postponed until 18 months. To further improve the information about students’ progress, RESAM now requires that students present their work in a publicly announced seminar before the first review can take place.

The Mphil program is only compulsory for PhD students funded from RESAM’s direct funding. So far it has been chosen not to apply this system to PhD students funded from other sources. It is important to monitor that the two systems do not lead to theses that systematically differ in quality.
A.7 Academic reputation

On the “all economics” ranking posted at http://www.econphd.net/rankings.htm, UvA occupies the 37th position worldwide. In the ranking of institutes on http://ideas.repec.org/top/, UvA holds the 45th position worldwide. These rankings are based on a mixture of various criteria including impact factors of journals in which papers have been published and citations.

Quite some ASE’s faculty members hold editorial positions. Often in field journals such as Quantitative Finance, Journal of Economic Dynamics and Control, Small, Business Economics, Economic of Education Review and Management Science, but also in general journals such as the Journal of Economic Literature and the European Economic Review.

The ASE has a relatively high success rate in its applications for research funding at the Dutch Science Foundation (NWO). 52 percent of the applications get funded, while this is on average 27% for Dutch economics departments, and on average 34% for all departments of the University of Amsterdam (source: presentation of NWO’s chairman Peter Nijkamp).

A.8 Internal evaluation

An internal evaluation of the various supporting units of the FEB (RESAM, personnel affairs, financial affairs, ICT, etc.) concluded that RESAM performed well on all accounts and is regarded as the best-functioning support unit.

The annual report of RESAM is always sent to the members of the external scientific committee (with professors Johan van Benthem, Barbara Wolfe, and – until recently – Henk Don as members) for comments and discussion.

RESAM’s policies and management are not equally appreciated by all research programs. Discontent seems to concentrate on the role of the Mphil program of the TI, which some think to be too rigid.

Evaluation by the internal research community and the external committee

Over the past seven years the output, in terms of international publications, has increased in quantity and quality. The ASE has also organised several successful and important conferences such as the Annual Congress of the European Economic Association in 2005, the 33rd EARIE (European Association for Research in Industrial Economics) congress in 2006 and a conference called "Monetary and Fiscal Stabilization with Imperfect Financial Markets" jointly with the CEPR (London) and De Nederlandsche Bank (DNB), also in 2006. Researchers in the School continue to be successful in attracting research funding from the Netherlands Organisation for Scientific Research (NWO).

A point of concern is the distribution of PhD students among research programmes. The number of students who successfully completed the Mphil programme at the Tinbergen Institute (TI) was quite small and therefore the inflow of PhD students was too limited. For this reason RESAM decided to hire external candidates. In 2006 the TI has very been successful in attracting students but, among the weak points in the system, is the fact that there are few incentives for Tinbergen Master students to continue with a UvA-supervisor. This is something that RESAM needs to address.
Furthermore, there is little indication that the seminar series are actively used to make students enthusiastic about research.

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

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

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

A.9 External validation

Most of the activities for external validation take place at the level of individual researchers and programs. Some of the groups (HC, TOE and SEO) are rather active in this regard with regular contributions in the national and local media for instance. On the News and Events part of the ASE website links to most of these contributions of faculty can be accessed.

At the level of ASE, we frequently organize seminars/lectures for alumni often on a topic that is in the news. ASE also organizes annually an event surrounding the government’s budget proposals.

A.10 Overview of the results

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<td>2. Dutch</td>
<td>18</td>
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<td>27</td>
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<td>4. Professional publications</td>
<td>27</td>
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Table 42
Total programme results, outcome in numbers international journal publications

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<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<th>2006</th>
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<td>109</td>
<td>105</td>
<td>115</td>
<td>108</td>
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A.11 Analysis, perspectives and expectations for the institute

SWOT

Strengths
- Nine research program, with a nice spread across traditional fields and new promising areas.
- A good functioning institute (SEO) conducting commissioned research at a high level
- A strong international reputation
- A well functioning cooperation in the Tinbergen Institute
- An ambitious high-level Mphil-program (a real asset!)
- Successful in acquiring research funding

Opportunities
- In the next few years, the baby-boomers will retire. This gives the opportunity to hire strong ambitious young faculty members.
- Starting this year, RESAM has a budget to recruit 2 to 3 postdocs.

Weaknesses
- Too many teaching hours for its researchers
- Due to lack of coordination ASE is not visible on the international job market as a recruiter.

Threats
- Reduced funding due to expansion of the Amsterdam Business School
- Unclear choices regarding the position of the Mphil-program
- Fiercer competition from other schools in Europe makes it more difficult to attract excellent students and new faculty members
- Very badly functioning ICT support, leading to lots of complaints and frustration by researchers and sometimes embarrassing exchanges with prominent visitors from abroad.
- UvA’s plan to define “spearhead programs”
B. Documentation regarding the level of the programmes
UvA-Econometrics

- Research area and mission: Assessment and enhancement of the accuracy, efficiency and robustness of econometric inference.
- JEL: C1, C2, C3, C4, C5.
- Programme leader(s) during the review period: Jan F. Kiviet.
- Starting date of the programme: early 1990’s.
- Formal affiliations outside the institute: Tinbergen Institute.

B.1 Leadership

The programme leader is mainly an administrator (responsible for annual report) and stimulator of joint activities (seminars, workshops) and of the external visibility (web pages, discussion paper series) and he is in charge of the allocation of the budget for travel to conferences (annually 12,000 €). The programme leader is not involved in hiring, annual assessment of individual performance, personnel policy etc.; this is the responsibility of the head of department and of individual supervisors of Ph.D. students. Hence, his leadership is a rather informal one; it is not based on hierarchy.

B.2 Strategy and policy

Research area: Assessment and enhancement of the accuracy, efficiency and robustness of econometric inference. Over the last five years the focus has been in particular on recent developments in topics as: weak instruments, invalid instruments, factor models and volatility clustering. Individual researchers determine their own research agenda, but mutual exchanges of ideas and joint research efforts are stimulated, especially at the regular informal research workshops.

The major criticism in the previous research assessment concerned the modest number of Ph.D. defences. Over the past five years the programme managed to extend the number of Ph.D. students and some increase in the number of defences has already been realised and a further increase is expected. Nevertheless, the programme still experiences difficulties in this respect of two different kinds: (a) relatively few of our own MSc students in econometrics show ambition in embarking on a Ph.D. project; (b) the current FEB-UvA policy regarding its commitments with the Tinbergen Institute may have established a quality improvement for students in economics and applied econometrics, they certainly obstruct students who specialize in econometric theory and other multidisciplinary fields. Repeatedly these serious problems have been discussed with the FEB management but without any positive effects. They have been put forward again, with suggested policy changes, in a letter of April 2007 (signed by about 20 TI Fellows from various research groups) to the Deans and Research Directors of the two Faculties of Economics and Business in Amsterdam. No answer has been received yet!

Nevertheless, we hope that the current situation will be changed soon and be brought in line with both the general UvA policies, which support open and international competitions, and those practiced at Erasmus university, where the entrance of Ph.D. students with an MSc in econometrics is not blocked but facilitated. Problem (a) is more difficult to tackle, because it is not just of a local nature. Also abroad, in the UK and US, few Ph.D. students are nationals and most are foreign. This has to do, as it seems, with salary structure and the general perception of pursuing an academic career by the current Dutch student generation. However, in
addition to that, at UvA problem (b) aggravates problem (a), because it confuses and
demoralizes our BSc and MSc students. Whereas over many decades the MSc in
Econometrics established the major supply road for Ph.D. tracks in economics in the
Netherlands, the current budgetary policy at UvA prevents entrance into the Ph.D.
programme after a master other than the MPhil of the Tinbergen Institute. Only when
too few MPhil’s are available/capable other students are admitted. Due to the latter
circumstances UvA-Econometrics could hire over the last few years a few Ph.D.
students with a more quantitative background than provided by the TI-MPhil from
abroad and from its own MSc in Econometrics.

We are opposing this policy by the successive Deans and RESAM directors now for
about 5 years, but no attempts have been made by those responsible to settle this
dispute, neither to find or suggest a compromise, nor have we ever heard any
arguments what is wrong suddenly with the MSc in Econometrics as a stepping stone
towards a Ph.D. Hence, it is needless to say that we are frustrated and dissatisfied
by the current FEB research management.

In the 1996-2000 assessment also the score given on relevance for UvA-
Econometrics was modest. Probably this score has to be interpreted exclusively as
‘practical relevance’. Our topics certainly have a substantive ‘scientific relevance’,
because they are addressed extensively both at the most prominent international
conferences of the major learned societies in economics and econometrics and in all
the top journals.

B.3 Processes in research, internal and external collaboration

Senior researchers are free to fill their own research agenda and to choose possible
collaborators. Junior (non-tenured) researchers and Ph.D. students work on projects
designed under the direction of their supervisors. These supervisors are also
responsible for the annual review process and any advice regarding changes in
contracts and salaries. This process is monitored by the head of department in case
of postdoc’s and by the RESAM director in case of Ph.D. students. There is not a
standard protocol regarding feedback from the RESAM director towards Ph.D.
supervisors, implying that often there is no feedback at all. The senior (tenured)
researchers are assessed annually by the head of department.

B.4 Academic reputation

A ranking based on international publications over the years 1993-2003 in 10
subdisciplines of economics (and primarily meant to inform graduate students on the
quality of faculty) finds with respect to econometrics (see:
www.econPh.D.net/rank/reconm.htm) that UvA-Econometrics is number 15
worldwide (before Harvard, Oxford, Cambridge), first in the Netherlands, and fourth
in Europe (behind LSE, Carlos III Madrid, European University Institute Florence). In
the nine other subdisciplines UvA occupies a more modest position, but also in two
other subdisciplines UvA is best in the Netherlands.

Rankings of institutions and of individuals according to various criteria based on
journal publications in econometrics (theory and general) can also be found in
theoretical econometrics 27th, 20th and 19th in the world respectively, and 5th, 6th and
7th in Europe, and 2nd, 2nd and 1st in the Netherlands. Regarding econometrics
general (within parentheses the ranking regarding econometric theory) over 2000-2005 the worldwide rankings of the universities in the Netherlands are: UvA 24 (19), EUR 29 (49), UvT 38 (60), VUA 52 (78), UM 120 (77), RUG 146 (>150).

B.5. Internal evaluation and analysis, perspectives and expectations for the research programme

Over the last decade all senior members of UvA-Econometrics did meet the standards set by RESAM regarding output in terms of publications. Although these standards are rather limited in detail they are convenient in practice for an initial screening. We realise that they are also relatively mild. The standards set by the Tinbergen Institute for qualifying as a TI fellow are slightly more demanding, but these discriminate against our researchers who specialize more in statistics than in econometrics. Nevertheless, all UvA-Econometrics researchers who work in econometrics are TI fellows. Hence, the criteria used locally no longer trigger our ambitions, though of course the implicit international criteria do, i.e. improving our profile regarding giving key-note speeches at international conferences and strengthening our positions in next versions of lists such as published in Baltagi, B.H. (2007), Worldwide Econometrics Rankings: 1989-2005, *Econometric Theory* 23, 952-1012.

B.6. External validation

Not relevant.

B.7. Researchers and other personnel

As already explained there are hardly any responsibilities at the programme level regarding personnel policy. However, programme members make attempts to find external funding for research projects. Recently there have not been successes in this respect. It seems that approval of econometric theory proposals is hardly possible if the project does not have a substantial practical economic component. The programme (leader) stimulates and supports both senior researchers and Ph.D. students (already in their first year, but in later years conditional on a paper presentation) to actively participate preferably at least once per year in international conferences and to build and maintain their own international network of scholars working in their area.

Regarding placement of former Ph.D. students we can report the following: Bun (2001) is now assistant professor at University of Amsterdam; Zerom (2002) is assistant professor at California State University at Fullerton (US); de Bruin (2002) no information; van der Ploeg (2006) started at ING bank as risk manager; Cheng (2007) is assistant professor at Shanghai University of Finance and Economics; and Schrager (2007) is risk manager at ING.

With respect to faculty with less than a 0.2 appointment we can remark the following. Frank Kleibergen has been UHD in Econometrics at the UvA from January 2002 until December 2007. In September 2003 he accepted a (fulltime) professorship of Economics at Brown University, taking unpaid leave from September 2003 through December 2007. During this period, he has continued to mention the UvA as one of his affiliations in his publications. After all, apart from his
own contribution, UvA remained the base for his NWO Vernieuwingsimpuls project. Then, and now after the completion of this project, he has kept in regular contact with the UvA-Econometrics group: in the summer period he has usually spent a few weeks at the department in Amsterdam, discussing recent research with colleagues and Ph.D. students. From February through September 2007 he spent a sabbatical away from Brown at the UvA. Although he has not formally acted as a promotor for an UvA Ph.D. student during this period, he has been available for research advice to Ph.D. students.

Dr. Roel Oomen has been research affiliate at the UvA-Econometrics group since March 2004. Since then he has mentioned the UvA as one of his affiliations in his publications, and he spent time at the UvA-Econometrics group on average once a year for a short research visit and a seminar. He has also been available for advice to Ph.D. students, in particular for Antoine van der Ploeg.

Table 43

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B.8 Resources, funding and facilities

No responsibilities at the programme level, apart from travel budget (see above).

Table 44
Staff funding at programme level

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<td>69%</td>
<td>68%</td>
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<td>100%</td>
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B.9 Overview of the results

Key publications


Table 45
Total programme results: outcome in numbers

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Table 46

Programme results: outcome in numbers (core faculty)

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Table 47

Total programme results: outcome in numbers international journal publications

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<td>11</td>
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OUTPUT
UvA-ECONOMETRICS

2007

1. International academic publications

Journals


Books, chapters


2. Dutch academic publications

Chapters

3. Ph.D. theses

1. International Academic Publications

**Journals**


**Books, Monographs**


2. Dutch Academic Publications

**Chapters**

3. Ph.D. Theses


5. Other

*Awards*

2005

1. International Academic Publications

**Journals**


**Books**


**Chapters**


4. Professional Publications

2004

1. International Academic Publications

**Journals**


**Chapters**

2. Dutch Academic Publications

**Journals**

**Books**
4. Professional Publications and products


5. Other

Grants
Garderen, K.J. van (2004). Travel and Academic Visit Grant from KNAW and the Academy of the Social Sciences in Australia.
Kiviet, J.F. (2004). NWO bezoekersbeurs (visiting grant, duration of 3 months) for Prof.dr. Jean-Marie Dufour (Université de Montréal, Canada) visiting University of Amsterdam.

Awards
2003

1. International Academic Publications

**Journals**

**Books, Monographs**

**Chapters**

2. Dutch Academic Publications

Journals

4. Professional Publications


5. Other

Prizes
Kleibergen, F.R (2003). Joint winner of the Tinbergen Prize for the most scientifically successful alumnus of the Tinbergen Institute.
2002

1. International Academic Publications

**Journals**


**Chapters**


2. Dutch Academic Publications

**Books**

3. Ph.D. Thesis


4. Professional Publications


5. Other

Grants

Garderen, K.J. van & Schluter, C. (2001/2002) Economic and Social Research Council (of the UK) grant for research on “Improved Inference Methods for Inequality Measures”.

RESAM: UvA-Econometrics
2001

1. International Academic Publications

**Journals**


**Chapters**


2. Dutch Academic Publications

**Journals**

3. Ph.D. Thesis


4. Professional Publications


5. Other

Grants

Garderen, K.J. van (2001). Acquired KNAW fellowship. Embarks on programme (cofunded by FEE for 1 postdoc and 1 AIO for the duration of the KNAW fellowship) titled: Conditional Inference and Small Samples in Econometrics.

Kleibergen, F. (2001). Acquired a NWO Vernieuwingsimpuls grant of F 1.5 million (€ 680,000) on the research proposal ‘Empirical Comparison of Economic Models’. The research proposal is for a five year period and embodies three themes:

- Development of robust two step procedures
- Comparison of non-nested economic models
- Improving the empirical foundation of domestic economic models by combining them internationally This research grant will be activated from January 1, 2002 onwards and besides the applicant, it will provide funding for one postdoctoral fellow and one or two Ph.D. students.
OUTPUT FACULTY WITH LESS THAN 0.2 APPOINTMENT
UvA-ECONOMETRICS

Table 48

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</table>

1. International academic publications

**Journals**

**2007**


**2006**


**2005**


2004

2. Dutch Academic Publications

Chapters

2006
B.10 Analysis, perspectives and expectations for the research programme

SWOT analysis regarding the activities and current position of UvA-Econometrics:

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<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>good reputation, a steady stream of A and B publications</td>
<td>few links with practitioners</td>
</tr>
<tr>
<td>quality of human capital</td>
<td>few ties with other units of FEB outside QE department</td>
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<tr>
<td>expertise in a broad range of cutting edge areas of econometric (and statistical) theory</td>
<td>relatively little external funding</td>
</tr>
<tr>
<td>coherence of and atmosphere within the group</td>
<td>obstructed and rather ad-hoc entry into Ph.D. programme</td>
</tr>
<tr>
<td>active seminar and workshop series</td>
<td>a slight tendency towards a less favourable balance than 50/50 between A and B publications</td>
</tr>
<tr>
<td>exposure via own discussion paper series</td>
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<tr>
<td>tight but appropriate facilities regarding computing and travel</td>
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<table>
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<th>Opportunities</th>
<th>Threats</th>
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<tr>
<td>development of a UvA Graduate School in Quantitative Economics (as suggested by UvA-CvB), revitalizing a stimulating FEB research policy and management</td>
<td>rather few of our current MSc Econometrics students show ambitions towards the Ph.D. programme</td>
</tr>
<tr>
<td>developing a more applied profile within ASE and with the ABS</td>
<td>research input by senior staff slipping towards less than 50% of their total labour input.</td>
</tr>
<tr>
<td>improving the research content of our BSc and MSc programmes and stimulating an increased inflow from talented foreign students.</td>
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Operations Research

- Research code: JEL code: Co, C6, I1, N6, N7, C61, C63.
- Programme leader(s) during the review period: Prof.dr. N.M. van Dijk (since 1992).
- Other structural co-operations and relations with national and international research groups: Czech academy of Sciences, Academic Medical Center, Tokyo University.
- Research Mission: The development, the application and the dissemination of special (a) insights (b) mathematical results and (c) computational (numerical and simulation) tools for the support and improvement of practical questions of logistical nature (delays, output, costs) within production, transportation (railways, airports) and services (banks, call centers, hospitals, health care).

B.1 Leadership

The style of the programme leader is flexible and aims to make researchers feel comfortable and free in choosing their research topics, as he believes the intrinsic motivational challenge to be essential for the quality of research. Nevertheless, by enthusiasm and providing specific topics of practical interest, he stimulates and fosters research interactions and collaboration within the group, and with others. Accordingly, he has largely been responsible for the improved internal collaboration. In addition he has initiated and stimulated various collaborative external research of practical and societal interest. (see B.2 and B.3 under: fundamental applied research and collaboration).

These external and practical collaborations require regularly planned meetings for discussion and evaluation with the programme leader involved. For internal collaborations no planned meetings take place but discussions among the researchers involved also take place regularly. During these discussions, the programme leader also strongly stimulates faculty to write an article when appropriate.

For one new and somewhat older programme member, appointed in 2001 on a teaching position, research time was reduced to zero. By the various research collaborations and strong stimulation by the programme leader, this programme member has meanwhile changed his research topic and became involved in collaborative research within health care with one completed and two forthcoming publications in established journals.

B.2 Strategy and policy

Research area and mission
The research mission of this programme is the development, application and dissemination of special (a) insights (b) mathematical results and (c) computational (numerical and simulation) tools for the support and improvement of practical questions of logistical nature (delays, output, costs) within production, transportation (railways, airports) and services (banks, call centers, hospitals, health care).
The research group concentrates on three research directions: (i) combinatorial optimization, (ii) queueing and queueing networks, and (iii) fundamental applied research.

(i) **In combinatorial optimization** we deal with topics such as: linear assignment problems, generalizations of the traveling salesman problem, Steiner tree problems on graphs and generalizations, and degree constrained trees and problems with criteria as bottleneck, minimum deviation, and partial sum.

The research focuses on both exact and heuristic methods. The heuristic methods are of most interest from a practical point of view, as an optimal solution might be (NP-) hard to obtain while in practice a nearly optimal solution might also be sufficient. Special interest therefore has been developed for the numerical implementation by heuristic algorithms.

As one illustration, next to the publications listed in B9, there is one recent paper forthcoming in “Computers and Operations Research” on Polynomial Algorithms for Robust Bottleneck Problems, by Duin and Volgenant, that can be expected to be cited highly for its practical value.

(ii) **Queueing** is the classical discipline within Operations Research that provides insights and analytic results for predicting the performance for single or multiple server systems, such as arising in daily-life (e.g. waiting lines, telephony, hospitals, banks). As of today, even these most ‘simple’ practical systems are still highly open for research, e.g. see key-publications by Van Dijk and Miyazawa (2004), and Örmeci and Van der Wal (2006).

Queueing or stochastic service networks are known to be most useful for modeling purposes in manufacturing (production lines), computer science (computer networks), communications (long distance and mobile communications) and transportation (railway systems, traffic lights) and with growing interest, service networks (as hospitals). The research within the group concentrates on: the development of closed form (exact) expressions, most notably product form expressions and simple performance bounds for networks that are non-solvable (e.g. see key publication by Van Dijk and Van der Sluis (2002)). At present, the programme leader is co-editor of a book, for which he has also written four extended chapters, on the topic of Queueing Networks in a state-of-the-art series of Operations Research and Management (also see B.4).

As practical systems in manufacturing, telecommunications and computer networking are often non-solvable, approximations and bounds have to be developed. The error introduced by such approximations or bounds is a first point of considerate interest. In addition, state spaces are usually far too large for computational purposes. To develop different methods to overcome this intractability is a second point of challenging and future research. There are two forthcoming papers on this topic, one by R. Haijema & J. van der Wal on Markov Decision Theory in “Probability Theory and its Applications” and one by N.M. van Dijk on State space truncation in “European Journal of Operational Research”.

(iii) **Fundamental applied research** concerns a new direction taken (also see below under changes) for the development, and application of special insights and computational techniques adopted from Operations Research for specific practical problems of a logistical nature such as arising in: telecommunications, transportation (railway networks and traffic lights), inventory (blood) management, health care (hospitals) and call centers.
For this purpose also practical and societal external research interactions are sought and at present take place with the Dutch Blood bank, the Dutch Railways, the Dutch Airport (Schiphol Airport), the Amsterdam Academic Medical Center and various hospitals.

As a particular theme and common component in the various practical research studies under this category, the combination of Operations Research and Simulation has hereby been taken up as a leading ‘new’ general approach (see key publication Van Dijk et al. (2005)). This approach combines insights and techniques from Operations Research with the present-day capabilities of simulation technology. The approach appears to be highly open and promising for further research development.

Previous assessment and changes
Despite its productivity (see response letter of 2002), during the former evaluation period up to 2000, the programme was considered most viable and vulnerable. Unfortunately, at the beginning of the evaluation period this observation turned out to be correct. During the first years, as well as before, the programme leader was only parttime available (due to personal circumstances). In addition, the researchers were small in number and individually oriented. Accordingly, in line with the former visitation outcomes, the programme had set itself the objectives of:

- A stronger interaction among the group
- A stronger research orientation of all members
- A more balanced and consistent production over all the members

Next to the yearly number of publications, dropping and recovering over the years, as can be seen in B.9, the steps in these directions have become visible in the second half of the evaluation period by:

- An overall research mind setting and research participation among the group,
- Different research interactions among various members,
- Productivity by each of the individual members.

Two Ph.D. students (one with partial external funding) have started and are expected to complete their theses by the end of 2008. One former Ph.D. student has completed its thesis in 2003 under joint supervision by the programme leader and a colleague (from the Vrije Universiteit). Unfortunately none of the “own” master students from the OR-group who were stimulated for and got interested in Ph.D. research, could be funded due to the total “vacancy stop” of the department during a few years, and obtained Ph.D. positions elsewhere.

In addition, during the current evaluation period a major transition has been made from a primarily theoretically oriented programme into a programme that still aims to develop and apply fundamental results, but triggered by specific practical applications such as mentioned above under the third research category of fundamental applied research. Some specific current topics are: Pooling and overflow questions (e.g. for call centers and within hospitals), Stochastic Railway network analysis, Blood management for bloodbanks and waiting time analysis for hospital logistics.

Some specific examples of the results of this change from theoretical to practical but still fundamental research orientation are:

- One forthcoming paper (accepted May 2006) in the journal Production and Operations Management” (listed as no.1 cited journal in the field of
Operations Research and Management over 2006 and in the top-20 list of management journals of Business Week) (To pool or not to pool in call centers by N.M. van Dijk and E. van der Sluis).

- One forthcoming paper (accepted November 2006) in the journal *Performance Evaluation* on a classical problem in queueing as of interest in telecommunication up-to-present day call centers (Call Packing bounds for overflow by N.M. van Dijk and E. van der Sluis).
- Two forthcoming papers on blood platelet production in *The International Journal of Production Economics* (accepted September 2006) and *Transfusion* (accepted November 2006), a leading journal in the field of blood medicine (by R. Haijema, J. van der Wal, N.M. van Dijk and C. Smit Sibinga)
- One published (2007) and four ‘in revision for acceptance’ papers on hospital logistics with involvement by Hontelez, Joustra, Van der Sluis and Van Dijk.

(These forthcoming publications are listed here to demonstrate the quality and successfulness of the transition.)

**Future**

The programme will continue in this line of the ‘new’ research direction taken of fundamental research as motivated by specific practical questions (rather than by more global research or application areas) of general societal interest.

It will also continue and focus on the collaboration both internally between the group members and externally with other institutions (as the Academic Medical Center, various hospitals and the Dutch Blood bank) as well as research groups at other universities (e.g. Royal Melbourne Institute at University of Melbourne, KU Leuven, Tokyo University of Technology, Czech Academy of Sciences, Eindhoven University).

The programme will submit a grant proposal at NWO/STW/Zon-MW and set up a group in the direction of health care applications to be able to hire a group of Ph.D. students.

Finally, in the near future the programme aims to fill two new positions by younger permanent staff members. Hiring strong researchers is essential for the program’s future position.

**B.3 Processes in research, internal and external collaboration**

In line with the objectives, the internal collaboration between the programme members has been highly stimulated and improved with joint research in different configurations e.g. see:

- Duin and Van der Sluis,
- Haijema, Duin and Van Dijk
- Haijema, Van der Wal and Van Dijk
- Van Dijk and Van der Sluis
- Volgenant and Duin

In addition, the two Ph.D. students are jointly supervised by two programme members.

There are also several international research co-operations. For instance with E.L.
Örmeci (see Örmeci and Van der Wal, 2006), S. Voss (see Duin, Volgenant, Voss, 2004), M. Haviv (see Haviv and Van der Wal, 2007), M. Miyazawa (see Van Dijk and Miyazawa, 2004), K. Sladky (see Van Dijk and Sladky, 2006) and A. Segerstedt (see Nilsson, Segerstedt, Van der Sluis, 2006)

In the third category of fundamental applied research external and practical collaborative research takes place with the Dutch Blood bank, the Dutch Railways, the Dutch Airport (Schiphol Airport), the Amsterdam Academic Medical Center and various hospitals.

**B.4 Academic reputation**

Despite the fact that his research undertaken at this group within the field of Operations Research has a more mathematical than economic orientation, the programme leader was listed (ranked 17th and 31st) at the Dutch top-40 economists list in 2003 and 2004.

In 2007, the programme leader received an NWO grant for a one-year replacement of teaching in order to perform research on networks of queues.

Among other research activities, this grant is partially obtained to publish/edit a book called “Queueing networks: A fundamental approach” within the esteemed “International Series in Operations Research and Management” subtitled “Advancing the State-of-the-Art”. This editorship is in response to a (repeated) direct invitation by the series editor-in-chief F.S. Hillier, Stanford University.

In 2005, the programme leader has been selected by a peer-review committee to give a presentation at the newly set up yearly “Practice meetings” of the American Society of Operations Research (ORSA/TIMS) (currently IFORS).

In 2005, a plenary presentation was invited at the Winter Simulation Conference, the annual major event for (logistic) simulation.

**B.5. Internal evaluation and analysis, perspectives and expectations for the research programme**

The evaluation as reflected by the annual research report by the institute is discussed with the programme members. In personal discussions with each of the members research is stimulated.

As indicated, after a vulnerable period a recovery and improvement has become clearly visible in line with the objectives set. The improvement is partially reflected in the output over 2006 and 2007, partially in various main forthcoming papers. This line is aimed for to be continued.

The expectation therefore is regarded as positive in combination with the goal (and approval by the department) of having a new staff member, with research time included. Two Ph.D. students are expected to graduate by the end of 2008 and financial support will be applied for, both internally and externally, to be able to contract new Ph.D. students.
B.6. External validation

The external collaborations as mentioned under B1 and the corresponding fundings as mentioned under B8 can be regarded as a first recognition outside the scientific community.

In 2007 a small booklet has been produced by the University of Amsterdam, called: “Parallelle agenda’s: onderzoek in de samenleving” (research for society), to briefly present 20 selected research themes/activities for society, executed at this university. The theme “wachttijden in (jeugd)zorg” (waiting times in (youth) health care) as suggested by the OR-programme was one of these.

In 2007 a proposal: “Wiskundige optimalisatie van donorbloed” (Mathematical optimisation of blood donation) by the OR-programme has been selected number 1 by the department (FEB) as university (UvA) candidacy for promoting research for society (among which by presentation to general public) (Wetenschap en maatschappij).

In 2004 (2x) and 2007, three articles have been written for “Medisch Contact” (a major Dutch professional magazine for physicians) to illustrate the use of OR-(queueing) insights and simulation in health care, particularly for the societal purpose of enabling ‘parttime’ physicians.

In 2003, 2004 and 2005, a one-day course was given to high school teachers in mathematics and in 2003, an article was written in their professional magazine to illustrate the ‘new’ possibilities of mathematics for practical problems with present-day tools as simulation.

Next to forthcoming publications in scientific journals, the external research collaboration with the Dutch Blood bank (Groningen and Nijmegen), the Dutch Railways (Prorail), the AMC (Amsterdam Academic Medical Center) are all meant to lead to practical implementations.

B.7. Researchers and other personnel

As indicated before, due to a vacancy stop by the department over a couple of years, some potential Ph.D. students from the own OR-teaching programme could not be funded and have obtained positions elsewhere.

With approval by the department chair and dean during 2008/2009 one and possibly two new staff members will be sought for (preferably at associate and full professor level) in anticipation of two programme members retiring in 2010. A strong research background and orientation for research are essential requirements.

In addition, in 2009 an NWO/Zon-MW research grant is planned to be applied for so as to be able to fund a number of Ph.D. (3/4) students, within the area of health care.
Table 49

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B.8 Resources, funding and facilities

By small practical (research) projects limited external contract funding has been acquired as for student assistance and traveling.

In 2007 / 2008, a halftime research position is obtained from the Dutch Blood bank. One Ph.D. student is partially funded by the Dutch railways (NS). One new Ph.D. student is 50% funded by the AMC.

Table 50

<table>
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<th>Staff funding at programme level</th>
<th>2001</th>
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B.9 Overview of the results

Comment on the key publications
The key publications have been chosen to reflect the

- analytical
- computational and
- practical oriented research

that is undertaken by the group in different constellations.
The first paper illustrates the theoretical and analytic research that is present within the group (for queueing, Markov decision theory and combinatorial optimization). In this paper new results are obtained for most classical ‘simple’ single- and multi-server queues.

The second paper shows the numerical point of view (that is also paid considerable attention to within the group for both queueing and combinatorial optimization problems). The fourth and fifth paper are illustrative for the variety of theoretical research undertaken in both the field of Combinatorial Optimization and Queueing.

The third paper finally, though just a proceedings paper associated with an invited plenary presentation, has been chosen as it illustrates the new direction of practically motivated research, the various internal collaborations as well as the combination of fundamental research and simulation. Each of the applications covered in this paper has a corresponding more detailed technical publication as mentioned in the references. This practically motivated and combined approach will be continued.

**Key publications**


**Table 51**

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<th>Total programme results: outcome in numbers</th>
<th>2001</th>
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**Table 52**

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<th>2004</th>
<th>2005</th>
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<td>12</td>
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OUTPUT
OPERATIONS RESEARCH

2007

1. International academic publications

Journals

Chapters
2006

1. International academic publications

Journals


Chapters


2005

1. International academic publications

Journals

Chapters
2004

1. International academic publications

**Journals**

4. Professional Publications

2003

1. International academic publications

Journals

Chapters
2002

1. International academic publications

**Journals**

**Chapters**

4. Professional Publications

2001

1. International academic publications

**Journals**


**Chapters**


2. Dutch Publications

**Journals**

4. Professional Publications


B.10 Analysis, perspectives and expectations for the research programme

SWOT

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<th>Strengths</th>
<th>Weaknesses</th>
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<td>▪ The theoretical quality and technical skills of the programme members, the openness and stimulation for practical topics, the build-up collaborations both internally and externally as well as the practical contacts by the programme leader</td>
<td>▪ A small size and two members close to retirement</td>
</tr>
<tr>
<td>▪ Fundamental research motivated by selective practical problems (particularly in the field of health care services).</td>
<td>▪ An insufficient number of Ph.D.’s and possibilities for hiring new ones</td>
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<tr>
<td>▪ Collaboration with ‘real life’ institutes for real life research</td>
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<table>
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<tr>
<th>Opportunities</th>
<th>Threats</th>
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<tbody>
<tr>
<td>▪ Recruitment of new staff members</td>
<td>▪ Competition from other OR-groups for recruitment of staff members and Ph.D. students</td>
</tr>
<tr>
<td>▪ Further development of analytically based but computationally oriented research with present-day software support, most notably in combination with computer simulation</td>
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Equilibrium, Expectations & Dynamics

- Research area and mission: The objective of the programme is to investigate dynamic economic processes using theoretical, computational, empirical and experimental methods. Central to the approach taken is the assumption that real economic agents are only boundedly rational. This calls for developing models featuring agents with different degrees of rationality; in order to discipline these models, their behavioural assumptions are tested empirically and experimentally.
- JEL: C, D, E6.
- Programme leader(s) during the review period: Prof.dr. C.H. Hommes (2001-2007) & Dr. F.O.O. Wagener (2007).
- Starting date of the programme: 1998.


- Formal affiliations outside the institute (e.g. research school) and other structural co-operations and relations with national and international research groups: Tinbergen Institute, EU-Programme Complex Markets.

In the CeNDEF period, the programme has changed extensively, both in scientific direction and in its personal composition. By now, the redesigned programme has reached maturity and develops steadily, while regularly branching into new research areas.

B.1 Leadership

The primary tasks of the programme leader are to create a fertile research environment, to motivate the investigators and to monitor the quality of the scientific output. As the group is rather young, the day-to-day management is very informal. There are four tenured senior researchers and a fluctuating number of junior researchers. The senior researchers assist the programme leader in several of the management tasks; discuss with him the performance of the other group members; and play a large role in developing new research avenues.

B.2 Strategy and policy

In the beginning of the 1990's, the predecessor of the programme was a small, mostly method-driven mathematical economics programme under the title equilibrium and dynamics. Funded by a NWO-MaG Pionier grant, Cars Hommes started the Center for Nonlinear Dynamics in Economics and Finance (CeNDEF) in 1998. By attracting several young and promising postdoctoral researchers, this has had the effect of rejuvenating and enlarging the programme significantly. Moreover, since its initialisation CeNDEF has developed into an internationally respected research institute with a constant inflow and outflow of Ph.D. students, postdoctoral researchers and international visitors. Simultaneously the research approach changed to being more multi-disciplinary and problem-driven, focussing on explaining economic stylised facts using the core assumption of bounded rationality and the application of nonlinear dynamics. Also the programme has diversified, adding to its fields of interest game theory and evolutionary game theory, dynamic optimisation, structural stability and
complex market research. To reflect the change, the title of the programme has been modified to *equilibrium, expectations and dynamics*.

At the time of the previous research assessment (2000), these developments were only in their initial stages. This was reflected in relatively low scores for scientific quality and relevance of the programme. This was reflected in a low score for scientific quality and a very low score for relevance of the program. During the intervening years, the programme was very successful in implementing its new research approach. We like to point out two instances of external recognition of a substantial improvement of both the scientific quality and the relevance: in 2005 David Colander published an article in the Cambridge Journal of Economics, where he reflected about the future development of the science of economics. He stated that “The work done at CeNDEF (...) is an example of the approach I have in mind that will become the dominant approach in the future. Researchers there are combining new and old strategies to address fundamental questions.” And in 2006, the Bank of England published a working paper, co-authored by Mervyn King, the Governor of the Bank, using methodology developed at CeNDEF to model heterogeneous beliefs about future inflation rates.

As the models used in almost all investigations are inherently nonlinear and dynamic, the programme has heavy mathematical, statistical and computational components; in particular ideas and tools from non-linear dynamics and complexity research are important to the programme. To carry out this multi-disciplinary approach, the group has accumulated a wide variety of expertise next to its economic core, from the fields of mathematics, statistics, physics and psychology.

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 versus infinite horizon, representative agent versus heterogeneous agents, temporary equilibrium, single, representative agent as well as heterogeneous, interacting agents equilibria. Existence of equilibria as well as conditions for stability or instability of dynamic adjustment processes are studied.

**Game theory & 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. Non-cooperative games (e.g. oligopoly models and models of anticompetitive behaviour such as mergers and cartels) as well as cooperative games (cost sharing, general equilibrium) are studied. Another topic of research are evolutionary games with heterogeneous boundedly rational strategies competing against each other.

**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 are investigated. Formation of expectations is studied in theory, in laboratory experiments.
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.

The problem driven approach, the emphasis given to behavioural modelling and the new applications to environmental problems all have substantially improved the relevance of the program. As the programme has matured over the last years, the principal objective is steady growth. An important development in this respect has been that the faculty has granted tenure to the three original postdoctoral research assistants of the CeNDEF project, ensuring that the programme would keep critical mass. All three have meanwhile reached the rank of Associate Professor and they are developing their own research agendas. Two of them have been awarded individual NWO research grants: Cees Diks obtained an NWO-Vernieuwingsimpuls grant in 2001, and Florian Wagener an NWO-VIDI grant in 2005. These grants are very beneficial for the research effort of the programme, as the regular teaching load which the Department imposes is rather high. That being said, the programme has developed several new courses for the departmental curriculum as well as for the Tinbergen Institute. Moreover, a significant effort has gone into developing the E&F Chaos software package. With this educational tool students can simulate and analyse economic dynamical systems: it is especially useful for master thesis research. Another important area, where the programme has been quite successful, is the recruitment and training of promising young researchers as Ph.D. students. This will ensure the long-term dissemination of the programme's research themes.

B.3 Processes in research, internal and external collaboration

The number of individual projects, projects with only members of the group participating, and projects with both group members and external researchers participating, are well balanced. Over the review period, 30% of the refereed journal articles were single-authored papers; 20% were multi-authored with only group members participating; the remaining 50% were multi-authored with at least one non-group author. Of the latter category, about 66% had at least one international co-author. It is a policy goal that Ph.D. students write at least one single-authored paper,
which may feature as “job market paper” after their project has finished.

On a regular basis, reading groups and internal seminars are organised. In reading groups potentially interesting new research areas are surveyed; at the internal seminars, new results and work in progress are presented to the scrutiny of the whole research group. They are an important training ground for Ph.D. students before they actually present at international conferences, but more widely they fulfil the purpose of keeping the whole group informed of the research of its members.

The group assembles at least once a month for an informal “coffee meeting”. This is the place where announcements are made that affect the whole group. At the January coffee meeting the research results of the previous year and the projected results of the coming year are presented and discussed, with a great level of qualitative and quantitative detail. This evaluation is the main quality control instrument of the group; as the results are discussed openly, there is a gentle social pressure not to perform worse than one’s peers.

Furthermore, there has been a constant stream of visitors to the group (amongst others William Brock, Dee Dechert, Alan Kirman, Blake LeBaron, Thomas Lux, Thomas Sargent), and group members have paid shorter and longer visits to research groups all over the world. In many cases, these contacts have lead to joint research projects.

**B.4 Academic reputation**

The programme has been very successful over the review period. The Web of Knowledge citation database lists more than 800 citations to work of tenured group members (Hommes, Diks, Furth, Tuinstra, Wagener, Koster, Ramer) in the period 2001-2007. More than 250 works cite the seminal papers of Brock & Hommes 1997 (Econometrica) and 1998 (JEDC); a large part of this success is due to the group's efforts to explore the research topics of these papers and to disseminate their results.

As already mentioned, additionally to the NWO Pionier grant obtained by Hommes in 1998, two more individual research grants have been awarded to group members: in 2001 Diks obtained a NWO-Vernieuwingsimpuls grant for his project *Information Flow in Financial Markets*, and in 2005 Wagener was awarded a NWO-VIDI grant for the project *Structural Stability in Economic Dynamics*. Hommes has been awarded a NWO Vervangingsubsidie for the period 2006-2008. Finally, van der Hoog and Anufriev have both obtained prizes for the best student paper, the former at the 2004 Conference on Computing in Economics and Finance, the latter at the ACSEG 2005 meeting.

The group is one of the six participants of the international consortium that has been awarded an EU-STREP grant for the project *Financial Markets and Complexity* in 2005.

Hommes is co-editor of the *Journal of Economic Dynamics and Control* and associate editor of *Macroeconomic Dynamics*, *Journal of Economic Behaviour and Organisation*, *Journal of Economic Interaction and Co-ordination*, *Journal of Nonlinear Science*, *Computational Economics* and *Quantitative Finance*. Diks is associate editor of *Studies in Nonlinear Dynamics in Econometrics*. Tuinstra is associate editor of *Journal of Economic Dynamics and Control*. Diks, Tuinstra and Wagener have all served as Editor of special issues of the *Journal of Economic Dynamics and Control*. The group has organised the 2000 and 2001 CeNDEF Workshops, which were attended by more than 100 scientists, and the 2004
Conference on Computing in Economics and Finance, which was attended by more than 300 participants. Hommes, Diks, Tuinstra and Wagener have been member of the programme committee of several “Computing in Economics and Finance” conferences, Diks has additionally served as member of the programme committee of several SNDE meetings. Also, the group has organised three *Lorentz Workshops* (2002, 2007) at the Lorentz Center in Leiden; these workshops are co-financed by the Lorentz Center and have the same format as the well-known Stanford SITE Workshops.

Finally, Hommes has been invited to write the entry of “Interacting agents in finance” for the second edition of the “New Palgrave”.

B.5. Internal evaluation and analysis, perspectives and expectations for the research programme

The RESAM system of allotting research time is working quite well for the programme: the minimal publication requirements are amply fulfilled by all tenured researchers. There is an issue with the recognition of publications in non-economic journals: this is always done on a case-to-case basis, which tends to undervalue the multi-disciplinarity of the research. This issue is much more pronounced in the evaluations of the Tinbergen Institute, which simply does not recognise such publications, and which in this manner seems to discourage multi-disciplinary research institutionally.

B.6. External validation

As may be expected for a research programme that treats fundamental issues, expressions of interest in the results come mostly from the scientific community itself. However, several aspects of the programme have generated outside attention. Hommes has given the Paradiso lecture in 2002, being the first economist to do so. This is a prestigious public lecture organised by a public education trust, NWO, the national newspaper NRC and the television station VPRO. He has also given several interviews on national radio and television channels. The Ph.D. thesis on technical trading of Griffioen led in 2003 to an interview with him in *FEM Business* and to an article about his work in the national newspaper *de Volkskrant* in the same year. In 2006, both Hommes and Wagener were invited to give lectures at a conference at the European Central Bank on Monetary Policy, Asset markets and Learning. In 2007 Hommes was invited to give a seminar at the Bank of England; in the same year, there have been expressions of interest of the Milieu en Natuurplanbureau for the project *Structural Stability in Economic Dynamics*, as this project has a strong environmental component.

B.7. Researchers and other personnel

In general we follow the common institute practices of ASE and RESAM. Recruitment is habitually done by a committee of at least two senior researchers and a member of the personnel department. Training of Ph.D. students is done within the faculty and the Tinbergen Institute; however, with the latter organisation there has been some friction, as the TI takes a rather narrow view of its role and does not tend to meet the needs of a multi-disciplinary oriented research programme. In general, the programme aims at maintaining a good equilibrium between achieving a good
general training in economics and catering for the specific needs of the Ph.D. project and preferences of the Ph.D. student.

When a Ph.D. student completes the 3rd year of his project, the supervisor discusses with him his interests, future plans and expectations. If necessary, the activities of the student in the final year are adapted to fit in better with these plans.

Ilija Zovko is an external Ph.D. student, whose research is mainly done at the Santa Fe Institute (USA) with Doyne Farmer and Cars Hommes as his two supervisors. Ilija has visited the CeNDEF group regularly, usually through short yearly visits (2-3 weeks) to work on his thesis and interact with researchers at CeNDEF and other groups, e.g. econometrics and finance.

Table 53

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<td>0.50</td>
<td>0.80</td>
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<td>Ramer, R.</td>
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<tr>
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<td>-</td>
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<tr>
<td>Wagener, F. (CeNDEF)</td>
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<td>-</td>
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<td><strong>Other Tenured Staff</strong></td>
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<td>0.15</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

| **Total Tenured Staff** | 1.42 | 1.96 | 1.91 | 2.90 | 3.30 | 2.60 | 2.95 |
| **Non-Tenured Staff** | | | | | | | |
| Anufriev, M. | - | - | - | - | 0.20 | 0.80 | 0.80 |
| Assenza, T. | - | - | - | - | - | - | 1.00 |
| Bekiros, S. | - | - | - | - | 0.05 | - | 1.00 |
| Diks, C. (CeNDEF) | 0.80 | 0.80 | 0.60 | 0.20 | - | - | - |
| Dindo, P.D.E. | - | - | - | - | - | 0.25 | - |
| Heijnen, P. | - | - | - | - | - | 0.08 | 0.80 |
| Manzana, S. (CeNDEF) | - | - | 0.80 | 0.80 | 0.40 | - | - |
| Tuinstra, J. | 0.80 | 0.80 | 0.60 | - | - | - | - |
| Wagener, F. (CeNDEF) | 0.80 | 0.80 | 0.60 | - | - | - | - |
| Zerom, D. (CeNDEF) | - | 0.21 | 0.40 | - | - | - | - |
| Zovko, I. (CeNDEF) | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| **PhD's** | | | | | | | |
| Dindo, P.D.E. | - | 0.20 | 0.60 | 0.60 | 0.60 | 0.60 | - |
| Griffioen, G.A.W. (CeNDEF) | 0.60 | 0.45 | - | - | - | - | - |
| Heemeijer, P. (CeNDEF) | - | 0.35 | 0.60 | 0.60 | 0.60 | 0.25 | - |
| Hoog, S. van der | 0.60 | 0.60 | 0.60 | 0.45 | - | - | - |
| Kiseleva, T. | - | - | - | - | 0.20 | 0.60 | - |
| Manzana, S. (CeNDEF) | 0.60 | 0.60 | - | - | - | - | - |
| Massar, D. | - | - | - | - | - | - | 0.20 |
| Mohammad Moghayer, S. | - | - | - | - | 0.20 | 0.60 | - |
| Ochea, M.I. | - | - | - | - | 0.20 | 0.60 | - |
| Panchenko, V. (CeNDEF) | - | 0.10 | 0.60 | 0.60 | 0.60 | 0.45 | - |
| Velden, H. van de | 0.40 | - | - | - | - | - | - |
| Weide, R. van der (CeNDEF) | 0.60 | 0.60 | 0.60 | 0.35 | - | - | - |

| **Total Non-Tenured Staff** | 5.20 | 5.51 | 6.00 | 3.60 | 2.40 | 2.83 | 5.85 |
| **Total Research Staff** | 6.62 | 7.47 | 7.91 | 6.50 | 5.70 | 5.43 | 8.80 |
B.8 Resources, funding and facilities

The primary research facilities provided by the faculty are very good and up-to-date. Funds for travel are however on the meagre side; this has not been a huge problem in the past years, as the programme has been supplied with several NWO and EU grants, but it might become an issue in the future. The group will therefore also in the future try to obtain external funding, both from NWO and from the appropriate European research agencies.

### Table 54

<table>
<thead>
<tr>
<th>Funding</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct funding fte's</td>
<td>61%</td>
<td>58%</td>
<td>53%</td>
<td>69%</td>
<td>65%</td>
<td>48%</td>
<td>40%</td>
</tr>
<tr>
<td>Research funds</td>
<td>39%</td>
<td>42%</td>
<td>47%</td>
<td>31%</td>
<td>35%</td>
<td>52%</td>
<td>60%</td>
</tr>
<tr>
<td>Contracts</td>
<td>0%</td>
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<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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<td>Other</td>
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<td>Total</td>
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<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

B.9 Overview of the results

**Key publications**


**Comments on the 5 key publications:**

The key publications have been chosen to illustrate the multi-disciplinary aspects of the program. Hommes (2006) is an up-to-date overview chapter on one of the main research themes, dynamic models with heterogeneous agents, in the prestigious *Handbook of Computational Economics*. Hommes et al. (*Review of Financial Studies* 2005) illustrates some of the laboratory experiments done in recent years. Wagener (2003) illustrates recent applications in environmental economics, and laid the foundation of the NWO VIDI programme on *Structural Stability and Economic Dynamics*. Droste et al. (*Games and Economic Behaviour* 2002) is a game theoretical application of evolutionary selection among heterogeneous strategies. Finally, Diks and Panchenko (*Journal of Economic Dynamics and Control* 2006) illustrates empirical work, as part of Panchenko’s Ph.D. thesis and the NWO-Vernieuwingsimpuls programme *Information Flows in Financial Markets*. 
### Table 55
Total programme results: outcome in numbers

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
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<tbody>
<tr>
<td>1. International</td>
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<td></td>
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<tr>
<td>a. journals</td>
<td>3</td>
<td>10</td>
<td>11</td>
<td>9</td>
<td>17</td>
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<td>10</td>
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<tr>
<td>b. books, monographs</td>
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<td>1</td>
<td>5</td>
<td>4</td>
<td>1</td>
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<td>2</td>
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<td>chapters</td>
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<tr>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Professional publications</td>
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<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
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<td></td>
</tr>
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</table>

### Table 56
Programme results: outcome in numbers (core faculty)

<table>
<thead>
<tr>
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<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
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<td>10</td>
<td>11</td>
<td>9</td>
<td>17</td>
<td>15</td>
<td>10</td>
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<td>1</td>
<td>4</td>
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<td>3. PhD theses</td>
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</table>

### Table 57
Total programme results: outcome in numbers international journal publications

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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<td>9</td>
<td>11</td>
<td>12</td>
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</table>
OUTPUT

EQUILIBRIUM, EXPECTATIONS & DYNAMICS

2007

1. International academic publications

Journals

Chapters

3. Ph.D. Thesis
4. Professional publications

1. International academic publications

Journals


Chapters


Anufriev, M. & Panchenko V. (2006). Heterogeneous beliefs under different market


3 Ph.D. Thesis


4. Professional Publications


5. Other

**Grants**


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

2005

1. International academic publications

**Journals**


**Chapters**


### 3. Ph.D. Thesis


### 4. Professional Publications


### 5. Other

**Grants**

Koster, M. (2005, July-September). Travel grant from project Guillermo Owen entitled *Game-Theoretic Approaches to Terrorist and Insurgent Networks*, Naval Postgraduate School, Monterey CA.

**Prizes**

Anufriev, M. (2005, November). Winner of the 1st Student Prize Award for the paper presentation *Wealth-driven competition in a speculative financial market: example with "rational" strategies*, awarded by the ACSEG meeting in Aix-en-Provence, France.
2004

1. International academic publications

**Journals**


**Chapters**


2. Dutch academic publications

Books

5. Other

Grants

Prizes
Hoog, S. van der (2004). Student Prize for Best Student Paper at 10th SCE Conference, July 8-11, Amsterdam.
2003

1. International academic publications

**Journals**


3. Ph.D. Theses


4. Professional Publications


2002

1. International Academic Publications

**Journals**


**Books edited**


**Chapters**


Tuinstra, J. (2002). Nonlinear dynamics and the stability of competitive equilibria. In

2. Dutch Publications

Journals

5. Other

Grants
2001

1. International academic publications

Journals

Chapters

3. Ph.D. Thesis


4. Professional Publications


5. Other

Grants
OUTPUT FACULTY WITH LESS THAN 0.2 APPOINTMENT
EQUILIBRIUM, EXPECTATIONS & DYNAMICS

Table 58
Programme results: outcome in numbers (faculty < 0.2 appointment)

<table>
<thead>
<tr>
<th></th>
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<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
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<tr>
<td>b. books, monographs</td>
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</tbody>
</table>

1. International Academic Publications

Journals
2002
B.10 Analysis, perspectives and expectations for the research programme

SWOT

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The programme has a very high scientific impact in terms of citations</td>
<td>Links with practitioners and policy makers are still limited</td>
</tr>
<tr>
<td>The research group is young, yet it has reached maturity and critical mass</td>
<td></td>
</tr>
<tr>
<td>The group is internationally visible and recognised, attracting many short term and long term visitors and long-term international co-operation</td>
<td></td>
</tr>
<tr>
<td>The group has been very successful in obtaining external funding</td>
<td></td>
</tr>
<tr>
<td>The research is problem-based and multi-disciplinary; the group members have a variety of different scientific backgrounds</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>To apply group-specific know-how to core economic problems, and to demonstrate in this way the value of the programme’s characteristic approach</td>
<td>The complexity of the tools used may turn out to be an impediment at disseminating the research approach</td>
</tr>
<tr>
<td>To focus more on macro-economic stability and monetary policy questions</td>
<td>A multidisciplinary group is likely to be handicapped when evaluated in a mono-disciplinary environment</td>
</tr>
</tbody>
</table>
Actuarial Science

- JEL-classification: C, G2
- Programme leader(s) during the review period: Prof.dr. H. Wolthuis (– 2002), Prof.dr. R. Kaas (2003 - 2007) Current programme leader (as per 1-1-2008) Prof.dr. A. Pelsser.
- Starting date of the programme: 1989
- Formal affiliations outside the institute: Tinbergen Institute and Netspar.
- Other structural co-operations and relations with national and international research groups: Actuarial Department of University of Leuven.
- Research Mission: The programme concerns both fundamental and applied research in the field of actuarial science and risk management, mainly directed at insurance and pension funds, but also at banks and other financial institutions.

B.1 Leadership

We see the programme leader mainly in the role of a coach. It is the role of the senior researchers within the programme to identify and select the research lines they wish to pursue. It is the responsibility of the programme leader to create the conditions where excellent research can flourish. This includes the active supervision of our junior researchers, maintaining an active seminar series for Actuarial Science, and regular attendance of international conferences. All staff is reviewed annually by the head of the department QE. Any problems concerning research performance are communicated to the programme leader.

B.2 Strategy and policy

The research mainly concerns the mathematical modelling, estimation, appraisal and control of financial risks of financial institutions (for insurers in the field of life, non-life and pension insurance) under complete and incomplete information and compete and incomplete markets. For long term insurance contracts, especially pensions, saving by insurance is significant, which leads to accompanying investment problems. This for instance concerns the "tuning" of the insurance and investment portfolios. Another practical aspect is the influence of the "risk of longevity" on the policies of life insurance, social insurance and care insurance. This remains a permanent subject of investigation. Present-day problems of insurance companies concern decreasing profit margins, increasing competition and selective behaviour of the insured and of insurance companies. Up to now limited attention has been given to problems that emerge from the privatisation of social insurance. The research partly deals with problems related to the supervision of insurance companies. Another important subject of investigation is the further development of actuarial risk theory, in particular the development of new mathematical and economic models in the fields of 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 the consequences for the determination of insurance premiums. In the premium calculation, the determination of factors that affect the risk (risk classification) is a significant aspect. Other aspects are the homogeneity and heterogeneity of insurance portfolios, the probabilistic and subsidising solidarity imposed on the insured, the voluntary or compulsory character of the insurance, and the auto-selection and anti-selection of
those insured. Another theoretical research subject concerns the unification of several distinct actuarial theories in the field of non-life, life and pension insurance, partly in connection with stochastic financial mathematics. Another topic of interest will be the Generalized Linear Models and Generalized Linear Mixed Models. GLMs can be used for a variety of actuarial statistical problems like survival modelling, graduation, multiple-state models, loss distributions, risk classification, premium rating and claims reserving in non-life-insurance. Credibility models can in fact be viewed as GLMMs, having both random (subject-specific) and fixed effects in the linear predictor.

We have taken the issues raised in the previous research assessment (in particular the concerns on Productivity, Relevance and Viability) very seriously. The main focus of the research of the Actuarial Science group in the last few years has traditionally been on the subject of ordering of risks and dependence of risks. More recently we have also shifted our attention more to the field of financial modelling. In co-operation with the professors of financial economics and financial econometrics of our faculty, and partners from Netspar (both academic and industry partners), we closely collaborate on research projects about the integration of actuarial and financial modelling, which is currently a fast developing field. These research projects have already resulted in three Ph.D.’s: two in 2005 (Laeven, Vanduffel), one in 2007 (Schrager). Furthermore, our group hosts a €1mln funded Netspar theme “Valuation and Risk Management for Insurance Companies and Pension Funds” (coordinated by Pelsser) that started in April 2006 and runs until April 2009. This grant has allowed us to expand our research group and invest heavily in young talented researchers. We have been able to hire one postdoc (Chen) and five Ph.D. students (Cao, Plat, Janssen, Van Haastrecht, Joseph). These Ph.D.-students work parttime in the insurance industry, and work parttime on their Ph.D. at the UvA.

B.3 Processes in research, internal and external collaboration

At our research group we actively coach young researchers and Ph.D. students. We view them as academic “apprentices” who learn the academic trade from their “masters” (i.e. the senior researchers). Ph.D. students are coached on a regular basis (at least bi-weekly) by their supervisors on all aspects of the academic trade: selecting interesting research topics, writing of papers, giving presentations, etc. Junior researchers are also coached by one or several senior researchers, but have already a larger responsibility in determining their research agenda. Senior researchers, being the experts in their fields, are responsible for selecting their own research topics. However, they are held accountable for their scientific output by benchmarking them against the RESAM publication list.

We run an active seminar series where we invite international researchers to present their work to the Actuarial Science group. For example, this year we have a list of 15 speakers including Damir Filipovic, Peter Jørgensen, Lane Hughston, Alex McNeil and Laura Ballotta. Furthermore we attend the seminars of the Finance group and the Tinbergen Institute.

Our Belgian colleagues at the KU Leuven are running a large GOA Project called “Actuarial, financial and statistical aspects of dependencies in insurance and financial portfolios”. In this framework, co-operation has been established between the GOA group and the Actuarial Section of the Universiteit van Amsterdam (R. Kaas, J. Dhaene). Within Belgium, a close co-operation already exists between the GOA-group and the University of Antwerp (A. De Schepper, M. Van Wouwe) and the
University of Ghent (M. Vanmaele) as well as with the UCL (M. Denuit), all resulting in joint papers within the topic of the GOA. We think that with this international co-operation we succeed in playing a more pronounced role in the international world, where we succeeded in becoming one of the few university groups involved in the project concerning R(isk) B(ased) C(apital) evaluations, which will to some extent form the basis of the new IAS 52 reporting. We refer to the "Report of Solvency working party" (www.iasb.org.uk and www.actuaries.org). As a consequence we are also involved in the IAA Risk-Based Capital Solvency Structure working party, which is preparing a final report. The basic concepts in the actuarial reserving and risk taking strategies rely heavily on the notion of economic capital. Using the concepts of risk order and comonotonicity we succeeded in providing the instruments for describing the role of economic capital and capital allocation taking into account diversification effects. These theoretical results in the meantime have had some influence on the RBC-approach from the IAA and the S&P rating agency. Some of our theoretical results may serve as a basis (and are in fact a breakthrough) for the capital adequacy of financial conglomerates.

B.4 Academic reputation


Goovaerts has been awarded an honorary doctorate from the University of Ankara (Turkey), for his contributions to non-life actuarial science.
Goovaerts is a Fellow of the Tinbergen Institute.
Goovaerts, Kaas and Pelsser are Senior Researchers of Netspar.


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

insurance undertakings in the European Single Insurance Market, promoter: Jan Dhaene, researcher: Maciej Sterzynski. € 135 000.

B.5. Internal evaluation and analysis, perspectives and expectations for the research programme

Research output is benchmarked against the RESAM journal list. We expect the senior researchers in our group to be international experts in their area. This implies that senior researchers are expected to qualify for membership for one or more top research schools (like Tinbergen Institute or Netspar). Ph.D. students are evaluated after one year, to assess the likelihood that they will complete their Ph.D. on time. Based on this evaluation a decision is made to extend their contract after the first year or not.

B.6. External validation

The actuarial group supports the actuarial profession’s rethinking of their role in the world. Research work has been initiated into the history of and the philosophy behind the actuarial profession. This happens in close co-operation with professionals organisations such as the Dutch Actuarial Society (Actuarieel Genootschap) and the International Actuarial Association.

As a consequence of our activities, the University of Amsterdam plays an important role in the organisation of actuarial and financial meetings world-wide. Our researchers are members of organising committees and of scientific committees of various forthcoming important actuarial-financial colloquia and conferences. Several international series of conferences are organised with the co-operation of the members of our team: the annual IME conferences, the biannual ICCAM conferences at the KU Leuven, the conferences at the University of the Aegean (Samos), as well as the Brazilian Conferences on Statistical Modelling in Insurance and Finance (Ubatuba). Furthermore, a series of seminars has been organised in co-operation with Netspar, PRMIA (association of risk managers) and Dutch Actuarial Society. These seminars are aimed at both practitioners and academics.

B.7. Researchers and other personnel

The Actuarial Science research programme is actively recruiting Ph.D. students and junior researchers in order to ensure the continued viability of the research programme for the years to come. In 2006 and 2007 we have already hired 5 Ph.D. students and one postdoc. We plan to continue this active hiring policy in the coming years.
Our past Ph.D. students are finding good positions both in academia as well as in the industry. Steven Vanduffel has a part-time appointment at the University of Leuven and is co-holder of the Fortis Chair in Financial and Actuarial Risk Management. David Schrager is working at ING Group, Corporate Insurance Risk Management. Roger Laeven has an appointment at the University of Tilburg, and currently has a visiting position at Princeton. He has also won the Christiaan Huygens prize in 2007, awarded by the Royal Dutch Academy of Sciences (KNAW).

Prof Dhaene has been having a nominal appointment at our faculty since a long time now, and he reports his UvA affiliation on publications. He participates substantially in our research program. Apart from regular visits to Amsterdam and many co-authored articles, he is cooperating with Prof Goovaerts, Prof Kaas and Prof Denuit (UCL) in a project to produce a number of books; textbooks as well as research monographs. Two have already appeared; a text on comonotonicity is in preparation. Also, he cooperates with Prof Pelsser on their joint topic, the market-consistent valuation of insurance contracts. The intention is that there will be a teacher exchange between the two. He also acts as co-organiser of the series of IME-conferences initiated at the UvA, and their spin-offs. He has been a member of several promotion committees at the UvA, most recently those of Laeven and Vanduffel, of which he was one of the two promoters.

Table 59

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B.8 Resources, funding and facilities

The €1mln research grant from Netspar has had a very positive impact on the research activities and the viability of the Actuarial Science research programme. We are already working on securing funding from Netspar and the insurance industry for the period after April 2009. We have already obtained a verbal commitment from the insurance industry, and we will submit a written proposal for funding in the first half of 2008.

Table 60
Staff funding at programme level

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<th>2004</th>
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<th>2006</th>
<th>2007</th>
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B.9 Overview of the results

**Key publications**


Table 61
Total programme results: outcome in numbers

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### Table 62

Programme results: outcome in numbers (core faculty)

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### Table 63

Total programme results: outcome in numbers international journal publications

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OUTPUT

ACTUARIAL SCIENCE

2007

1. International academic publications

**Journals**

**Books, chapters**

2. International academic publications

**Books, chapters**
Bruning, R. (2007) "Uitkeringssymmetrie bij gespiegelde levensverzekeringen": in ‘Sensei in het actuariaat’

3. Ph.D. Thesis

4. Professional publications and products


Rijckevorsel, j.l.a. van, L. Steevens (2007). The role of insurance in the provision of pension revenue september 2007, *CEA Statistics* no. 28

5. Other

*Prizes*

2006

1. International academic publications

Journals

Chapters

2. Dutch academic publications

Journals

Chapters

4. Professional Publications

5. Other
Grants
1. International academic publications

**Journals**


**Books, Monographs**


**Chapters**


**2. Dutch academic publications**

**Journals**


**Chapters**


**3. Ph.D. Theses**


**4. Professional Publications**


5. Other

Grants
2004

1. International academic publications

**Journals**


Tang, Q. (2004). The ruin probability of a discrete time risk model under constant


**Chapters**


2. Dutch academic publications

**Journals**


**Books**


4. Professional Publications and products


5. Other

Grants
2003

1. International academic publications

Journals


Books, Monographs

Chapters

2. Dutch academic publications

Journals

Chapters
4. Professional Publications and products


5. Other

Grants

2002

1. international academic publications

Journals
Tang, Q.H. & Yan, J.A. (2002). A sharp inequality for the tail probabilities of sums of i.i.d. r.v.'s with dominatedly varying tails. Science in China (Series A), 45, (8), 1006-1011.

Books, Monographs

Chapters

2. Dutch academic publications

*Books*

*Chapters*

4. Professional Publications and products

Heerwaarden, A.E. van (2002). Opleidingsnieuws van de Universiteit van Amsterdam; 2-.maandelijkse rubriek in *De Actuaris.*
Tamerus, J.H. (2002). *Prijs van zekerheid hand in hand met solvabiliteitsbeoordeling*
2001

1. international academic publications

**Journals**


**Books, Monographs**


**Chapters**


2. Dutch academic publications

**Journals**

**Chapters**

4. Professional Publications and products


5. Other

**Grants**
OUTPUT FACULTY WITH LESS THAN 0.2 APPOINTMENT
ACTUARIAL SCIENCE

Table 64
Programme results: outcome in numbers (faculty < 0.2 appointment)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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</thead>
<tbody>
<tr>
<td>1. International</td>
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<tr>
<td>a. journals</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
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<td></td>
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<tr>
<td>b. books, monographs</td>
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<tr>
<td>c. books, edited</td>
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<td>d. chapters</td>
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<tr>
<td>2. Dutch</td>
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<tr>
<td>3. PhD theses</td>
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<tr>
<td>4. Professional</td>
<td></td>
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<tr>
<td>publications</td>
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<td></td>
</tr>
</tbody>
</table>

1. International academic publications

Journals
2007

2006

2003

2001

Books, Monographs
2004

Chapters
2005

2004

2003

5. Other

Grants
2006
B.10 Analysis, perspectives and expectations for the research programme

SWOT

The field of actuarial science is experiencing a sea change: the application of financial economic valuation and risk management techniques is having a profound impact on actuarial science and the actuarial profession.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- We feel that the Actuarial Science research group is well positioned to be an international leader in this changing environment.</td>
<td></td>
</tr>
<tr>
<td>- We feel that the Actuarial Science research group is well positioned to also give guidance to the actuarial professionals and the insurance and pensions industry world-wide.</td>
<td></td>
</tr>
<tr>
<td>- Our research group is rather small, so we very face a significant “key person” risk, especially for the senior researchers.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- By offering parttime positions and an exiting research agenda we have been able to attract top talent to our group.</td>
<td></td>
</tr>
<tr>
<td>- We are confident that we can continue to produce a steady stream of research output that is of the highest academic standard, and is also relevant for the industry and the actuarial profession.</td>
<td></td>
</tr>
<tr>
<td>- Due to the high salaries paid in the industry, it is difficult for us to attract and retain the most promising research talents.</td>
<td></td>
</tr>
</tbody>
</table>
Transformation of Europe

- Research area and mission: Macroeconomics, international economics, monetary economics and transition economics. The programme aims at investigating and answering important questions for Europe and other parts of the world in the aforementioned areas.
- JEL: E, F, H, P
- Programme leader(s) during the review period: Roel Beetsma.
- Starting date of the programme: January 1, 2000.
- Formal affiliations outside the institute: This programme is part of RESAM, the research school of the Amsterdam School of Economics. It has no further formal ties.

The current programme was created eight years ago out of a set of smaller programmes. Although no longer in the starting up phase, there are still important transitions taking place. In particular, members of the original smaller programmes are still being replaced by new, younger researchers. The programme has benefited from the venue of Prof.dr. Wouter den Haan (formerly at the University of California at San Diego and London Business School) and his VICI grant. This, as well as the parttime return of Prof.dr. Rick van der Ploeg (also at Oxford University and formerly at the European University Institute and London School of Economics), are among the factors that form the basis for further expansion, in terms of quality and quantity of this research programme. These senior hires have been important in attracting young researchers. In addition to several postdocs the group has also successfully participated in the international job market, which resulted in hiring Christian Stoltenberg, a student of Harald Uhlig (now at the University of Chicago). Members of the programme have published in the very best journals and can be expected to do so given that some have recently received revise and resubmits from top journals like the *American Economic Review* and the *Journal of Monetary Economics*. Members of the programme have also been invited to write an article for the *Journal of Economic Literature*.

B.1 Leadership

The programme leader provides academic and strategic leadership. Academic leadership is shared mainly with Prof.dr. Wouter den Haan, but also with the other professors in the programme, where each person provides the leadership in the area in which he is an expert. Strategic leadership involves the directions in which the main research lines develop and expand, as well as recruiting. The programme leader is responsible for the overall functioning and delegates a variety of tasks to lower levels, such as the compilation of the annual report, the website and the organisation of the various seminar series. The programme leader keeps control over the finances of the programme. Management style is to provide the participants the freedom to conduct their own research within certain limits, but also to stimulate active co-operation and to get everyone involved and feel part of the group. Style is informal and “light”, aimed at stimulating creativity and providing individual participants, especially the younger ones with advice on their research strategy. Communication between management and other researchers is frequent (on a weekly, sometimes daily basis) and informal (often even over lunch which we usually have together as a group). However, management also aims at making participants aware that we are striving for gradual but ongoing improvement of the programme. The programme leader regularly discusses with the other participants their research progress and provides them with advice on their research if necessary. Researchers
earn research time on the basis of their publication achievements.

B.2 Strategy and policy

The research areas of this programme are macroeconomics, international economics, monetary economics and transition economics. The programme aims at investigating and answering important questions in the aforementioned areas with some emphasis on questions related to the European economies. The programme was formed out of the original smaller programmes that still exist as the subprogrammes. The organisation by subprogrammes is only for practical management purposes (span of control) and there are no barriers in doing research with members of other subprogrammes. In fact, much of the research cuts through the subprogrammes. The research focus has gradually shifted. The original focus was on the macroeconomic, and related aspects, of the European Union, while, moreover, transition economics played an important role. Transition economics is gradually being built down, while in other dimensions the programme has broadened its scope. Hence, the in the previous assessment observed “heterogeneity of research interests” between the transition economics subprogramme and the other parts of the research programme is vanishing with the phasing out of this subprogramme.

The European Union as study object is still important, but in relative terms its weight has declined substantially. In particular, the macroeconomics of pensions has acquired a place in the programme (stimulated by participation in Netspar and through a Netspar theme grant). With the venue of Wouter den Haan, research on business cycles, macro-labour economics, the monetary transmission mechanism and computational methods have obtained more importance. Fiscal policy (and its political economy aspects) remains an important part of the program. Exchange rate economics also remains a part of the programme. There is a chance that in the near future we will change the name of the programme to reflect its wider coverage.

After the previous assessment, the strategy of hiring high quality young and senior professors has improved the quality of the program. The plan is to continue to attract the best young researchers within our fields of interest. Another important element on the programme’s agenda/wish list is hiring one more fulltime senior person of international stature (ideally in international economics) who can help in providing co-leadership and support, through his experience and contacts, the programme’s path towards higher excellence. Such an appointment should be helpful in our fulfilling our goal of letting the members who publish in second-tier or B journals publish in first-tier or A journals. Moreover, although some members have already published in the best or A* journals (like the *American Economic Review* and *Review of Economic Studies*), the aim is to increase the frequency of publishing in those journals as well. An important part of the group's strategy to improve the quality of the research output (and the publication outlets) is to encourage collaboration with outstanding academics from prominent institutions abroad.

B.3 Processes in research, internal and external collaboration

Researchers determine their own research agenda with the only constraint that most of the research undertaken must fall within the scope of the programme. Collaboration with other researchers in the programme is stimulated and the many joint projects have led to a stimulating research atmosphere in which the programme members function well. We also stimulate joint work between junior researchers and
Ph.D. students and their supervisors. This provides those researchers with practical research experience (“learning-by-doing”). Ph.D. students have a formal training provided by the Tinbergen Institute. There are several concrete elements in place to foster such collaboration and create a healthy research environment. In addition, to a formal seminar series the programme also has a more informal lunch seminar in which often preliminary work is presented. This makes it possible to point especially younger members in the right direction. Less concrete but equally important is the vision that researchers should be around often, interact, and be interested in each other's work. In terms of external collaboration we aim at an improvement in the quality of the outside researchers and institutes that we are working with. We see this a one route towards publication in top field journals and hopefully also top general interest journals. Besides this it yields valuable contacts and puts the programme on the map in the international research community, which is important in terms of for example placing Ph.D. students. The senior members have already been quite successful in making contacts with academics at top universities and are frequently invited to give outside seminars. The aim is to strengthen the links between the junior members of the programme and the outside academic community, for example, by inviting academics to the UvA more often.

B.4 Academic reputation

There are clear signs that the academic reputation of the research programme is increasing. One such sign is the success in obtaining awards from outside institutions. Several of these awards are substantial (as high as EUR 800,000 of outside funding). In particular, we have received funding from the European Commission (2002 – 2006) for the Macroeconomic Policymaking in Monetary Unions (MAPMU) project, from Netspar for the theme grant on the macroeconomics of pension systems (2007-2010) and from the NWO for the VICI grant of Prof.dr. Wouter den Haan (2006-2011).

Another such sign is that our former members have obtained high-level appointments: Andreas Schabert who was assistant professor was appointed full professor at the University of Dortmund, Bas Jacobs who was postdoc has been appointed full professor at the University of Rotterdam, Philip Jung who was postdoc has been appointed assistant professor at the University of Mannheim, and Pontus Rendahl who is a postdoc has been appointed assistant professor at the University of California at Davis. Our students have obtained jobs at the IMF, University College London, and CEPII (Paris).

Our members have been on several editorial boards during the evaluation period. The main positions are Editor of the Journal of Economic Dynamics and Control (Wouter den Haan), Associate Editor of the Journal of Economic Literature (Roel Beetsma), Associate Editor of the European Economic Review (Roel Beetsma), Associate Editor of the Journal of Money, Credit, and Banking (Wouter den Haan), and Editor of CESifo Economic Studies (Roel Beetsma).

B.5. Internal evaluation and analysis, perspectives and expectations for the research programme

The University of Amsterdam has several concrete procedures in place to evaluate the teaching and research output. First, there is an annual evaluation by the deputy dean. Second, there are also strict publishing requirements. In particular, publications
are awarded points based on the quality of the journal and if not enough points are earned then the teaching buy out is lost. Third, as participant of the Tinbergen Institute, programme members have a chance to become Tinbergen fellows. The requirements of the Tinbergen institute are more demanding than those imposed by the University to receive the teaching buy out. Nevertheless, there are five members of the group that are Tinbergen fellows. Finally, the teaching at the Tinbergen institute is shared by the three participating universities but the core macro sequence is almost completely taught by members of our programme and so is a large part of the macro electives.

B.6. External validation

The programme is having an impact on the outside world. Although this is not always visible, the programme is being noticed (as is clear from the informal circuit). For example, employees of the European Commission have mentioned this to the programme leader. It is also visible from the fact that members are being invited for “major lectures”, such as the organisation of a plenary session at the annual conference of the European Economic Association (Beetsma, 2007) and a plenary presentation at a large conference organised by the German Ministry of Finance (Beetsma, 2007). There are intensive contacts with the European Commission (visitorships and joint research papers), the ECB (visitorships and internships), the IMF (visitorships and joint research papers), the Dutch Central Bank (joint conference organisation, joint appointments and supervision of Ph.D. students), the CPB (a joint Netspar project and a joint appointment of Casper van Ewijk, Deputy Director at CPB and Professor at the UvA) and Robeco (Lex Hoogduin, Professor at the UvA and Chief Economist Robeco). Beetsma was appointed Member of the Steering Committee on the EU Budget Review (committee with top Commission officials, a.o. the Deputy Secretary General). There are contacts with parties in the financial world (banks and pension funds). Moreover, several of the group members (in particular Beetsma, Hoogduin, Van Wijnbergen and Van der Ploeg) are frequently asked by radio and television channels to comment on macroeconomic questions. They also regularly contribute to the policy discussion in the opinion pages of quality newspapers. The Economist in the Economics Focus (12-18 November 2005) has spent a full page of discussion of Beetsma’s research.

B.7. Researchers and other personnel

Most recruiting is done jointly for teaching and research. Exceptions are postdocs who are recruited purely for research, although they will have to do some teaching to equip them for life after their postdoctoral fellowship. Recruiting takes place at the level of the programme, although selected candidates of course have to be accorded by the Dean of the School. Ph.D. students that join our group have in most cases received their formal training from the Tinbergen Institute. People recruited at the Assistant Professor level are expected to follow the standard tenure-track and become Associate Professor and eventually Professor. While this has not always been the case in the past, recruiting will in the future follow the standard U.S. job market cycle. Employees will be stimulated to spend longer periods abroad (e.g. Franc Klaassen will spend two months at the University of Wisconsin, Beetsma has spent longer periods at the EUI in Florence, the ECB, UBC Vancouver and UC Berkeley, and Wouter den Haan visits the London School of Economics on a regular basis).
RESAM: The Transformation of Europe

Table 65
Name

Total
2001

Total
2002

Total
2003

Total
2004

Total
2005

Total
2006

Total
2007

0.47
0.11
0.50
0.16
0.50
0.10
0.20
0.20

0.40
0.11
0.50
0.16
0.45
0.11
0.20
0.18

0.45
0.11
0.53
0.45
0.11
0.20
0.10

0.50
0.11
0.53
0.04
0.44
0.11
0.20
0.10

0.56
0.11
0.50
0.11
0.43
0.11
0.20
0.55

0.60
0.11
0.50
0.50
0.11
0.40
0.08
0.20
0.52

0.53
0.11
0.25
0.80
0.07
0.40
0.00
0.20
0.42

0.24
0.25

0.00
0.24
0.19

0.00
0.08
0.23
-

0.00
0.50
0.23
-

0.00
0.50
0.08
-

0.00
0.50
0.08
-

0.00
0.50
0.00
-

0.40
0.40
-

0.40
0.44
-

Full Professor
Beetsma, R.
Ewijk, C. van
Ellman, M.J.
Fase, M.M.G.
Haan, W.J. den
Hoogduin, L.
Jager, H.
Jepma, C.J.
Ploeg, F. van der
Wijnbergen, S.J.G.
Associate Professor (UHD)
Carchedi, G.
Klaassen, F.J.G.M.
Knaack, R.K.
Prast, H.M.
Assistant professor (UD)
Veestraeten, D.
Vermeylen, K.
Westerhout, E.W.M.T.
Other Tenured Staff
Catalán-Aravena, O.O.
Thio, B.

-

-

0.02

0.11

0.20
0.20
0.07

0.26
0.25

0.30
0.25

0.25
0.13

0.25
0.13

0.20
0.06

0.00
0.06

0.20
0.06

Total Tenured Staff

3.24

3.09

2.66

3.25

3.88

4.46

4.38

Non -Tenured Staff
Aidis, R.
Buiter, W.
Cruijsen, C.A.B. van der
Demertzis, M.
Gërxhani, K.
Giuliodori, M.
Giuliodori, M.
Graaf, Th. de
Hek, P. de
Hoeberichts, M.M.
Horen, N. van
Jacobs, B.
Jung, P.
Klaassen, F.J.G.M.
Maes, K.
Rendahl, R.P.
Romp, W.E.
Schabert, A.
Scharrenborg, R.
Spange, M.
Veestraeten, D.
Vermeylen, K.
Vuuren, A.P. van
Westerhout, E.W.M.T.
PhD's
Aidis, R.
Daal, W.
Daniëls, T.R.
Horen, N. van
Kusmerski, D.
Leefmans, N.
Ribeiro-Poplawski, M.
Rusinova, D.
Schouwstra, M.
Sterk, V.
Vos, S.J.

0.50
0.42
0.80
0.17
0.13
0.16

0.00
0.32
0.80
0.08
0.30
0.50
0.50
0.16

0.00
0.76
0.50
0.29
0.00
0.50
0.53
0.50
0.10

0.00
0.00
0.00
0.00
0.00
0.83
0.00
0.00
0.53
0.50
0.10
-

0.00
0.00
0.00
0.00
0.00
0.53
0.10
0.00
0.15
0.88
0.33
0.30
0.12
-

0.00
0.00
0.00
0.00
0.00
0.50
0.25
0.00
0.00
0.41
0.13
0.50
-

0.00
0.00
0.00
0.00
0.00
0.50
0.00
0.00
0.24
0.80
0.27
0.27
-

-

-

0.60
0.36
0.60
0.20
0.20
-

0.60
0.24
0.60
0.20
0.20
0.17
0.20
0.20
-

0.10
0.55
0.15
0.60
0.20
0.60
0.60
0.15
-

0.60
0.25
0.60
0.32
0.60
0.25
0.35
-

0.60
0.17
0.60
0.51
0.60
0.36
0.60
-

0.60
0.60
0.38
0.60
0.27
0.20
-

0.05
0.32
0.33
0.00
0.20
0.15

Total Non-Tenured

4.14

5.07

6.13

4.93

5.85

4.44

3.13

Total Research Staff

7.38

8.16

8.79

8.18

9.73

8.90

7.51

257


Some researchers involved have only very small appointments:

- Aidis, Gerxhani and Schouwstra: they are former Ph.D. students of a programme member (Prof.dr. Michael Ellman) and as such have kept guest researcher positions with no formal obligations.
- Buiter: he is a guest researcher with no formal obligations. His main appointment is as a Professor at the London School of Economics.
- Carchedi: he is retired and has retained a guest researcher’s position with no formal obligations.
- Daniels: his appointment has been terminated.
- Hoogduin: his appointment is part-time teaching and part-time research. His main appointment is Chief Economist of Robeco. He is also former research director of the Dutch Central Bank. His appointment is also important for the link between academia and the central and commercial banking world.
- Jepma: his appointment has been terminated.
- Knaack: his appointment has been gradually reduced as he approaches retirement.
- Thio: his appointment is gradually being phased out.
- Van der Crujssen, Demertzis and Hoeberichts: they have their main appointment at the Dutch Central Bank. They have a guest researcher’s position with no formal obligations. Their appointment serves to strengthen the monetary economics/policy part of the programme and to strengthen ties with the Dutch Central Bank.
- Van Ewijk: his appointment is half teaching and half research. His main appointment is Deputy-Director of the CPB. He is also involved (as overall leader) in the Netspar theme grant on the macroeconomics of pension systems. His appointment is also important for the link between academia and actual policymaking.
- Van Horen: she is a former Ph.D. student of a programme member (Prof.dr. Henk Jager) and as such has kept guest researcher positions with no formal obligations.

B.8 Resources, funding and facilities

Research facilities on the whole are reasonable. The library is reasonably well equipped with most of the relevant (though not all) journals being available online. Most of the books though are found at the central library in the centre of the city, while for renewal of the library pass has to go there in person, an obvious discouragement of use of the library. ICT support is poor. The network is frequently unavailable and there are often problems with the software. License renewal for some packages each year is a hassle and time consuming. However, there are some signs the matters are improving in this regard. Funding for research activity (travelling, books, etcetera) has so far never been an obstacle. It should be said, though, that the senior programme members get most of their travelling financed from outside by host institutions and conference organisations. With the growth of the group and its quality, we expect programme members to make more use of the research funds in the future.
Table 66
Staff funding at programme level

<table>
<thead>
<tr>
<th>Funding</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct funding fte's</td>
<td>88%</td>
<td>91%</td>
<td>84%</td>
<td>87%</td>
<td>81%</td>
<td>77%</td>
<td>61%</td>
</tr>
<tr>
<td>Research funds</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td>Contracts</td>
<td>12%</td>
<td>9%</td>
<td>16%</td>
<td>11%</td>
<td>17%</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

B.9 Overview of the results

Key publications


Table 67
Total programme results: outcome in numbers

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<td>1. International</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. journals</td>
<td>24</td>
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Table 68
Programme results: outcome in numbers (core faculty)

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### Table 69

Total programme results: outcome in numbers international journal publications

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</table>
OUTPUT
THE TRANSFORMATION OF EUROPE

2007

1. International academic publications

Journals

Chapters

2. Dutch academic publications

Journals

Chapters

4. Professional Publications and products

Ploeg, F. van der (2007). Dr. Pangloss en de zoetwatergekken (Dr Pangloss and the fresh water idiots), in *Gevaarlijke Ideeën – De belangrijkste denkers van nu over wat zij een gevaarlijk idee vinden*, Het Spectrum: Utrecht.

5. Other

*Grants*
2006

1. International academic publications

Journals


**Books, Monographs**


**Chapters**


**2. Dutch academic publications**

**Journals**


**Chapters**

4. Professional Publications and products


5. Other

*Grants*
Den Haan, W.J. (2006) VICI scholarship from NWO.
2005

1. international academic publications

**Journals**


**Chapters**


RESAM: The Transformation of Europe


2. Dutch academic publications

Journals

Books

Chapters

3. Ph.D. Theses
4. Professional Publications and products


5. Other

Grants

2004

1. International academic publications

**Journals**

**Chapters**
2. Dutch academic publications

**Journals**


**Chapters**


4. Professional Publications and products


5. Other

**Grants, prizes and honours**


Ewijk, C. van (2004, July). European Science Foundation/ NWO grant on research proposal Homeownership, Commuting and Labour Mobility, (Postdoc 0.3 for 2 years.)
2003

1. International academic publications

Journals


Books, Monographs


Chapters


2. Dutch academic publications

Journals


3. Ph.D. Theses


4. Professional Publications and products


RESAM: The Transformation of Europe

2002

1. International academic publications

Journals

Chapters

2. Dutch academic publications

Journals
RESAM: The Transformation of Europe

Maandschrift Economie, 66, 286-295.

Chapters

3. Ph.D. Theses

4. Professional publications and products
Aelementair, 2, 8-9.
5. Other

Grants
Beetsma, R.M.W.J. (2002, November). RTN (European Commission) grant on research proposal “Macroeconomic Policy Design for Monetary Unions”.

Awards
1. International academic publications

Journals

**Books, Monographs**

**Chapters**
2. Dutch academic publications

**Journals**


**Books, monographs**


**Chapters**


3. Ph.D. Theses


Junz, H.B. (2001, 8 May). *Where did all the money go?* [Promotor Prof.dr. M.M.G. Fase].


4. Professional publications and products


OUTPUT FACULTY WITH LESS THAN 0.2 APPOINTMENT
THE TRANSFORMATION OF EUROPE

Table 70
Programme results: outcome in numbers (faculty < 0.2 appointment)

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1. International academic publications

**Journals**

**2007**

**2006**

**2005**


2004


2003


2002


Chapters

2007


2. Dutch academic publications

Journals

2007

2006

4. Professional Publications and products

2007


2006


2005


5. Other

Prizes
2007

Grants
2005
B.10 Analysis, perspectives and expectations for the research programme

SWOT

Strengths
- excellent research atmosphere
- frequent publications in excellent journals
- good interactions with the other academics outside the Netherlands by the senior members
- extremely determined management, aimed at achieving the objective of becoming one of the top programmes in our area in Europe. Over the years, management has acquired a lot of experience in building up a research programme.

Weaknesses
- the number of international contacts of junior members
- the number of visiting international scholars
- uncertainty and lack of control on teaching curriculum puts an unnecessary burden on the members of the programme (for example, our two largest courses taught are in the same block)
- a number of researchers have unfortunately not been very active over the past years and as a result have also lost most of their research time. It would be best if their appointments with the research programme could be terminated. The problem is that relative to the size of the appointment, the amount of nominal research time can become arbitrarily small and people can remain member of the research programme. It would be good to be able to apply additional criteria to the participation in the programme, for example based on how frequently one presents in the informal seminar series, whether one helps in organizing seminars, etcetera.

Opportunities
- Outside funding by pension funds and other parties in the financial world. Concrete steps are being undertaken and have already resulted in an informal permission by a financial company to finance a postdoc.
- Improved collaboration with DNB (more than the two Ph.D. students that they now fund and some joint appointments)
- Upward potential in terms of collaboration with academics from top institutions
- New appointments to replace faculty that will retire in the near future

Threats
- Departure of one the two most research active senior members (den Haan & Beetsma) would make it harder to continue the momentum build up
Human Capital

- Research code: Zo mogelijk invullen met metis, NABS of JEL-classification
- Programme leader(s) during the review period: Prof.dr. Joop Hartog
- JEL: I, J, L

Starting date of the programme: The programme was initiated to meet the requirements of the “Voorwaardelijke Financiering” (Conditional Funding), in 1983.

- Formal affiliations outside the institute: Research and Ph.D. training are strongly embedded in the Tinbergen Institute (Labour, Region and the Environment) and until recently also in the NAKE network. Programme members are individually associated with the main international networks (CEPR, IZA, CESifo)
- Research area and mission: The Programme aims to improve the understanding of the economic role of human capital. Human capital can be defined as the value of all assets tied to an individual that generate a future stream of utility. The stock of human capital can be enlarged by deliberate investment, in schooling, education and training, in health, in information. Investment decisions will require comparison of costs and benefits. In this research programme we are interested in the investment decisions of individuals, households, firms, institutions (such as schools) and the government and in the consequences of the decisions, both for the agents and for society at large.

B.1 Leadership

The programme leader oversees the operation of the research programme and reports annually to the management of the research institute, RESAM. The Annual Report to the Research Institute is an important moment for taking stock: assessing past performance, reflection on future possibilities and challenges, options for research funding, attracting new Ph D’s, post docs etc. More importantly, there is continuous informal interaction and communication among senior faculty and between senior and junior faculty. For junior faculty, the annual evaluation is important. For Ph.D.’s there is a well-defined cycle of supervision, stimulation and assessment.

SCHOLAR is a significant component of the programme (see below) and the Managing Director of SCHOLAR (Maassen van den Brink) has played and no doubt will continue to play an important role in managing and utilising resources and assessing performance of externally funded researchers.

B.2 Strategy and policy

_Human Capital_ has a long history. It was formalised shortly after the appointment of Hartog as professor of microeconomics in 1981, in the framework of “Voorwaardelijke Financiering” (Conditional funding, a government imposed funding structure). Research focused on the performance of the labour market, in terms of efficiency and distribution, with a regular flow of external funding from the national science foundation NWO and government agencies. Later, under the new institutional regime, with all research under the umbrella of a Research Institute, the programme got its present structure.
A 6 million guilder (€ 2.7 million) NWO grant was obtained in 1996 for SCHOLAR, a six-year research programme on schooling, labour market and economic development. It should deliver high quality academic research on the role of human capital and also contribute actively to translation and communication of relevant research results to society at large and to policy makers. SCHOLAR fitted in the tradition of combining academic research with attention for policy relevance, policy advice and distributional issues. SCHOLAR gradually became the core of the programme.

The two other pillars, under different names but presently labelled Comparative gender and population economics and Social inequality and direct welfare measurement also have their roots in the early history of the programme. The social inequality subprogramme has its roots in the attention for distribution issues, and later came to lean mostly on co-operation with AIAS, an interfaculty research institute.

The comparative gender subprogramme has been alternating between integration and independence. It started in the late 1980's with a government subsidy for a chair in (women's) Emancipation Economics, as part of the labour research programme. When the present institutional structure was implemented, it set out as an independent programme, but after the most recent Research assessment (Visitatie) considered the programme too small, it became part of Human capital. As explained below, it will now be discontinued.

Understanding the role of human capital has always been the connecting feature of the research activities. Direct research questions on schooling and on-the-job training have been studied (rates of return, schooling and training participation decisions, the human capital production function). Schooling and training have always been central variables in research on mobility, migration, earnings inequality, female participation, unemployment etc. The most recent research line that has been developing quite rapidly, on entrepreneurship, also focuses on the role of human capital (relevance of schooling for entrepreneurs, selecting effective training programmes, etc).

Topics for new research are selected for their link with expertise of the Programme members, their intrinsic interest and their potential for results that will interest the international research community. All programme members (senior, junior, Ph.D.’s) participate actively in this community.

From the very beginning of the research programme, empirical work has dominated. While members have also engaged in developing theoretical models, measurement and testing has been far more prominent. Initially, this was based on the usual econometric methods, later experimental methods were added, stimulate by the proximity of CREED researchers and laboratory. As an outgrowth of the work on estimating causal effects of schooling on earnings, interest in the proper econometric methodology (natural and quasi-natural experiments, instrumental variables, regression discontinuities, twin and adoptee data, field experiments) has been strong. Communicating the value of such methodology to policy makers has recently resulted in a € 5 million grant for a Center for evidence-based interventions in education.

The empirical focus also leads to special attention for interesting datasets. They may be obtained or accessed as an intentional by-product of commissioned research (such as for government agencies), from joint work with institutions that have rich datasets (such as Swedish or Danish research centers and the Dutch National
Statistical Office) or from deliberate spending of time and other resources (such as large surveys in newspapers or at internet).

In the subprogramme Social Inequality, Tijdens builds large data collections as a research basis that is also accessible for external researchers and that draws growing international attention:

- **Annual Social Reports data set**
  a collection of Annual Social Reports of approximately 300 companies in the Netherlands, some dating back as far as 1990; reports until 1998 have been coded for 200 variables.

- **Best Employers survey (2001 to date):**
  a dataset concerning HRM-policies in 30 organisations, surveyed every 3 months; Tijdens is advisor, the survey is under supervision of the weekly magazine *Intermediair*

- **The collective agreements database (2002 to date):**
  an annual dataset with coded information from 1,300 collective bargaining agreements, collected by the trade union confederation FNV; AIAS converts the data

- **Wage Indicator (2000 to date):**
  a continuous questionnaire on the internet in Belgium, Denmark, Germany, Finland, Italy, Poland, Spain, United Kingdom, Brazil, India, South Africa, United States, South Korea, Hungary, Argentina, Mexico (see [www.loonwijzer.nl](http://www.loonwijzer.nl)).

Interaction with society and policy makers thus appears to pay off in creating opportunities for funding high-quality research, while at the same time serving society and policy makers with relevant research results. This leads to financial support, commissioned research and to access to and creation of valuable data sets. In particular, co-operation with the labour movement has created the unique dataset on wages and working conditions by internet users, now available in 11 countries and the basis for a joint venture with the Labour Union and Worklife Programme at Harvard University.

As academic and policy interest in entrepreneurship grew, and it became clear that the relevance of human capital for successful entrepreneurship was poorly understood, the research effort in this direction was stepped up. Again based on active interaction with policy makers and the business community, this recently resulted in a research grant of 6 million € for a Centre on entrepreneurship, a joint venture with the business school.

Teaching and research are highly complementary. All lecturing activities are in the fields of labour economics, microeconomics and econometrics, thus jointly covering microeconometrics. Teaching takes place in the regular FEB curriculum, but also in the Tinbergen Institute. Senior researchers are Fellow of the Tinbergen Institute and actively participate in the seminars and conferences (presenting, attending and organizing). Academic interaction in TI leads to joint work, both as joint research and joint teaching. Interaction between research and teaching also occurs in a special series of lectures for the top 10% students in the economics faculty (Talent Lectures), where four members of the Research Programme participate with lectures related to their research topics.

In the first round of National Research Visitations, the programme was rated 4 on each dimension. In the second round, the score was 3 on Quality and 4 on the other dimensions. The score on Quality was perceived as an underrating, and has been interpreted as an indication of underperformance relative to potential. To improve quality, hiring and promotion standards have been raised and awareness of the need
for high level performance has been stimulated.

As of 2008, as part of the ongoing process of adjusting research to opportunities and circumstances, the subprogramme Comparative Gender and Population Economics will be terminated. With the retirement of professor Gustafsson has lost its viability. The subprogramme Social inequality will be fully concentrated at AIAS. It had become rather small and it fits better in the multidisciplinary environment of AIAS.

Also as of 2008, the programme will be expanded with a large impact evaluation study on the introduction of low-cost health insurance packages for low-income workers in several African countries. The insurance provides access to basic health care and will always include coverage for counseling and treatment for HIV/AIDS. Insurance should eliminate the most severe financial consequences of becoming HIV positive, and provide treatment for those who suffer from AIDS. In this way, infected individuals can stay productive and can continue to provide for their families. Of particular importance is the impact of investment in human capital, especially for the next generation. The project is joint with the Free University) and will be led by professor Jacques van der Gaag. It is funded by a € 100 million grant of the Dutch government. Data will be collected from large household surveys covering both the treatment group and a control group, with households interviewed annually for a period of three to five years. It is expected that 6-8 projects will be in the field before the end of 2008. The study will contribute to our main themes: health and education as key factors in human capital, the methodology of impact evaluation and attention for social inequality. It also fits with other evaluation research in the developing world: Oosterbeek is advisor to the government of Ecuador and will supervise a Ph.D. research project in government intervention in rural development.

### B.3 Processes in research, internal and external collaboration

The research programme has developed over many years and through selection and self-selection, a highly motivated, ambitious and competent group of senior researchers has emerged. This group has a very active interaction and also interacts with junior faculty and Ph.D.’s. Joint work develops spontaneously, there is quick feedback on ideas and results. On top of that, there is slightly more formal interaction in internal seminars. Ph.D.’s are tightly monitored and supervised, learn a lot from joint research and are fully embedded in an active research culture that aims for participation at international frontiers.

Reputed international research centers are visited, reputed international scholars visit, either as guests of the Research Programme or through Tinbergen Institute (seminars, workshops, visitors). The Royal Dutch Academy of Sciences funds a co-operation with Peking University.

The combination of personal ambition, annual assessments, the academic career promotion system and a very stimulating research environment create a competitive environment that is very conducive to aiming for the best possible results.

### B.4 Academic reputation

1. **SCHOLAR evaluation**

In October 2006, an international evaluation committee, consisting of prof Anders Bjorklund (Stockholm University), prof Henry Levin (Columbia University) and prof
Stephen Machin (UCLondon and LSE) was very positive on SCHOLAR. To quote from their report:

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

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

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

2. Participation in editorial work
As spelled out elsewhere, programme members participate actively in editorial work for international journals. They are represented in leading journals of their fields (Economics of Education Review, Labour Economics, Small Business Economics). On top of that they act as guest editors for Special Issues.

3. Programme organisers international network meetings, conferences etc
Programme members are actively engaged in initiating and organising specialist meetings in their field of research, ad hoc or as a member of international research networks (CEPR, IZA, TSER).

4. Refereeing

5. Visiting positions, keynote speeches, foreign dissertation committees
In 2006, C. M. van Praag was appointed as a Research professor at the Max Planck Institute of Economics, Jena. During the last 6 years Hartog held visiting positions in many places, including Stanford and Harvard. Programme members gave keynote speeches at international conferences ands were invited to participate in Ph.D. exam committees abroad.

Dr. Wim Groot, one of the founders of SCHOLAR, was awarded an honourary doctorate at National University of ‘Kyiv-Mohyla Academy’, Kiev, Ukraine, in September 2004.

6. External funding
SCHOLAR Programme members obtained many grants from external academic
research funding agencies, such as the Dutch National Science Foundation NWO (Veni, Vidi, Vici grants for Plug, Leuven and Ferrer Carbonell) and the European Union (TSER grants, totalling some 400 000 €). Tijdens obtained external Dutch grants totalling some 200 000 € in the period 2001-2007 and coordinated grants totalling some 2 000 000 € from the European Union, mostly for data collection.

7. Academic training
Hartog supervised 36 promotions since 1986; the vast majority is still active in research, mostly academic, 9 of them are now full professor at a Dutch university. Other supervisor's graduates now work for the government, in private consulting firms or in academic research. The most recent graduate took up a position in the Department of Economics at the University of Chicago.

B.5 Internal evaluation and analysis
Programme members are generally satisfied about the quality of the research environment and the funding opportunities. They appreciate the system of incentives where research time is allotted on the basis of performance with a strong objective component (the system used by RESAM and Tinbergen Institute to grade journals and publishing houses for academic standing).

Attracting good Ph.D. students is a problem however.

B.6 External validation
Programme members actively disseminate research results to society at large. Three programme members write (or wrote) columns for national newspapers, Hartog was a member of the Council of Economic Advisors (a council of 5 independent advisors to parliament), Hartog and Oosterbeek were advisors to the government on active labour market policies. Maassen van den Brink is active in a wide spectre of academic, government and social advisory and resource allocating bodies (Chair Social Sciences Dutch Science Foundation, Advisory Council NIAS, SIG, Chair European Conference under Dutch EU Chair, chair Evaluating Research in Context (NWO, KNAW, VSNU) Commissie voor vaststelling maatschappelijke kwaliteit van Onderzoek, member Taskforce Elderly and Work, member Council on Education, Advisory Committee CPB, Onderwijsraad, RVZ). Groot and Maassen van den Brink were members of SER (Social Economic Council) committees.

Tijdens is a Member of EUROSTAT’s Advisory Committee on statistical information (CEIES)

Between 2000 and 2007, SCHOLAR raised 550,000 € for commissioned research. Examples are studies on the effectiveness of tax credits for company training programmes and effectiveness of subsidies for schools with children from disadvantaged family backgrounds.
### Table 71

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B.7 Researchers and other personnel

Senior researchers funded by the university have been the core of the group ever since the start of the research program. The senior researchers attract a fluctuating group of temporary researchers, as PhD’s, invited post-docs or post-docs who apply for visits; post-docs are financed by external funding. Some outside researchers have long-standing connections with the program. Professor Groot is one of the recipients of the original NWO grant that created SCHOLAR; he remained connected to the group when he moved to Maastricht, and he published much joint work with Maassen van den Brink. Van der Klaauw has been funded for some years in the SCHOLAR program and maintained a close connection not only through joint research and intellectual interaction but also as active participant in the organization of the labour program in the Tinbergen Institute. Similarly, Webbink has been funded for some time by SCHOLAR and since then maintained close connection, with joint research and frequent visits; he establishes a link with the education research group at CPB and will also play a pivotal role in the new Center on evidence based interventions in education.

B.8 Resources, funding and facilities

The program always thrived on external funding, and successful competition for PhD funding, both internal and external. In the present senior staff, only three researchers have always been fully funded by university funds (“eerste geldstroom”). All others either started on external funding or have always been on external funding. Resources provided by the university for data collection, experiments, visits to other research centers, and for inviting visitors are essentially zero. University funding (about € 10,000,- per annum) barely suffices for workshop/conference participation.

Table 72

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B.9 Overview of the results

Key publications


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Total programme results: outcome in numbers

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Table 74
Programme results: outcome in numbers (core faculty)

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<td>5</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
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</tr>
<tr>
<td>4. Professional publications</td>
<td>7</td>
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<td>4</td>
<td>22</td>
<td>4</td>
<td>4</td>
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Table 75
Total programme results: outcome in numbers international journal publications

<table>
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<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<td>International Top Journals</td>
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<td>Other international Journals</td>
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<td>22</td>
<td>21</td>
<td>17</td>
<td>13</td>
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</tbody>
</table>
OUTPUT
HUMAN CAPITAL

2007

1. International academic publications

**Journals**


**Books, edited**

**Books, chapters**


2. Dutch academic publications

Journals


3. Ph.D. Theses

Sluis, J. van der (2007, April 20). Successful entrepreneurship and human capital. Universiteit van Amsterdam {promotor Prof.dr. C.M. van Praag, Prof.dr. J. Hartog} [cat. I]

Maximiano, S. (2007, February 23). Essays in Organisational Economics. Universiteit van Amsterdam (promotor Prof.dr. H. Oosterbeek, co-promotor Dr. R. Sloof) [cat. I]


4. Professional publications and products

Berkhout, P. and J. Hartog, Nederland kieskeurig met kennismigrant, Economisch Statistische Berichten, 4505, 142-143


RESAM: Human Capital

Tijdschrift voor Openbare Financiën (2)
Maassen van den Brink, H. (2007). Hoe vroeger op school hoe beter, Economisch Statistische Berichten, Jaargang 92, nr. 4523, pp 733

5. Other

Grants
Hartog, J. (2007-2008). KNAW (Royal Dutch Academy of Sciences), Education and risk in China
Sloof, R. (2007). Awarded a grant from a Spanish scientific institution (IVIE) to run experiments at the University of Valencia
2006

1. International Academic Publications

**Journals**

**Books, Monographs**

**Books edited**

**Chapters**
Maternity, Economic Analyses for Industrialized Countries. Dordrecht: Springer.

2. Dutch academic publications

Journals

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

Chapters

3. Ph.D. Thesis


4. Professional publications and products


5. Other

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

Awards
2005

1. International academic publications

**Journals**


**Books, Monographs**


**Chapters**


**2. Dutch academic publications**

**Journals**


**Books**


**Chapters**

Koninklijke Vereniging voor Staathuishoudkunde. Utrecht: Lemma.

3. Ph.D. Theses


4. Professional publications and products

Praag, C.M. van (2005). Rapport Literature review Relatie beloning van topbestuurders en bedrijfssprestaties. [Commissioned by the Monitoring Commissie Corporate Governance Code].

5. Other

Grants
Ferrer-i-Carbonell, A. (2005). Received a VENI grant (NWO).
2004

1. International academic publications

**Journals**


Books, Monographs

Books edited

Chapters

2. Dutch academic publications

Journals

Chapters
faalt. Preadvies voor de Koninklijke Vereniging voor de Staathuishoudkunde (pp. 137-160). KVS.


3. Ph.D. Theses


4. Professional publications and products


### 5. Other

**Grants**


Maassen van den Brink, H. (2004). Grant voor Surf project 'Community website for SCHOLAR(s), in co-operation with K. de Belder, UB, UVA.
Awards
2003

1. International academic publications

**Journals**


**Chapters**


2. Dutch academic publications

**Journals**


**Books**

**Chapters**
3. Ph.D. Thesis


4. Professional Publications and products


5. Other

Grants


Awards


2002

1. International academic publications

Journals


**Books, Monographs**


**Chapters**


**2. Dutch academic publications**

**Journals**


**Books**


**Chapters**


3. Ph.D. Theses


4. Professional Publications and products


5. Other

Grants


Hinloopen, J. (2002). co-author of the winning bid for hosting the Network on Competition and Regulation at the FEE of the University of Amsterdam, involving a six year subsidy of 3 M € in total (with J. Theeuwes).
2001

1. International academic publications

**Journals**

**Books, Monographs**

**Chapters**


2. Dutch academic publications

Journals


Chapters


3. Ph.D. Theses


4. Professional Publications and products


OUTPUT FACULTY WITH LESS THAN 0.2 APPOINTMENT
HUMAN CAPITAL

Table 76
Programme results: outcome in numbers (faculty < 0.2 appointment)

<table>
<thead>
<tr>
<th></th>
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<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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<td>d. chapters</td>
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<tr>
<td>2. Dutch</td>
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<td></td>
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<td>3. PhD theses</td>
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<td>4. Professional publications</td>
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</tr>
</tbody>
</table>

1. International academic publications

**Journals**

2007


2006


2005


2004


2003


Review (三田商学研究), 46, (3).

2001

Books, chapters
2007

2004

2. Dutch academic publications

Journals
2006

2005

2003

2001

Chapters
2006
RESAM: Human Capital

Staathuishoudkunde (pp. 44-50). KVS.

2004

4. Professional publications and products

2002
B.10 Analysis, perspectives and expectations for the research programme

SWOT

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>- Our strength is our human capital. The research group is lively,</td>
<td>- The group is strong in senior research capacity but the balance between junior and senior</td>
</tr>
<tr>
<td>dynamic, entrepreneurial and creative, with lots of productive</td>
<td>research capacity is weak. More good Ph.D. students and postdocs would be a fruitful basis</td>
</tr>
<tr>
<td>interaction.</td>
<td>for additional research output.</td>
</tr>
<tr>
<td>- The group has a good mixture of focus on the academic community and on</td>
<td>- The group is strong in senior research capacity but the balance between junior and senior</td>
</tr>
<tr>
<td>society.</td>
<td>research capacity is weak. More good Ph.D. students and postdocs would be a fruitful basis</td>
</tr>
<tr>
<td>- We are strong in generating external funding, to a significant extent</td>
<td>for additional research output.</td>
</tr>
<tr>
<td>precisely because of this mixture</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- With growing international reputation of the research group it should</td>
<td>- Quitting of good senior researchers would impose a loss on the group, and it is important</td>
</tr>
<tr>
<td>be possible to attract high-quality visitors and further increase</td>
<td>to prevent this by giving them excellent working conditions.</td>
</tr>
<tr>
<td>interaction with and integration in the international research</td>
<td>- Basic funding from the university budget is modest and financial constraints are alleviated</td>
</tr>
<tr>
<td>community.</td>
<td>through external funding. However these funds have to be obtained in strong external</td>
</tr>
<tr>
<td>- The newly acquired funding brings opportunities to attract good scholars</td>
<td>competition, at a cost of time and effort and under uncertainty.</td>
</tr>
<tr>
<td>and finance good data collection.</td>
<td></td>
</tr>
</tbody>
</table>
History & Methodology of Economics: Theorizing, Modeling and Policy Application

- Research area and mission: Methodological approach to past and current economics. This research programme investigates the mutual connections in economics between theorizing, modeling, and policy application, in order to explain research strategies and methods of explanation in past and current 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. 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.
- JEL: B (B0-B5)
- Starting date of the programme: 1998
- Formal affiliations outside the institute: History of Social Science Group, École normale supérieure de Cachan, Center for History in Management and Economics (CHIMES), EUR: M. Blaug, Visiting Director and Co-director, Centre for Philosophy of Natural and Social Science, LSE, UK: M.J. Boumans, Research Associate; M.S. Morgan, Research Associate, Department of Economic History, LSE, UK: M.S. Morgan, Professor History of Economics, Erasmus Institute for Philosophy and Economics, EUR: M. Blaug, Visiting Professor, Honorary Member and Member Advisory Board; J.B. Davis, Member, Marquette University, USA: J.B. Davis, Professor Economics, Max Planck Institute for the History of Science, Berlin, Germany: H.B.J.B. Maas, Core member research project 'The History of Scientific Observation', Netherlands Network of Economics (NAKE): M.J.Boumans, Fellow; G.A.T.M. Reuten, Fellow, Tinbergen Institute: J.B. Davis, Fellow; M.J. Boumans, Fellow, Trends and Tensions in Intellectual Integration group, University of Helsinki: J.B. Davis, Research Associate.

B.1 Leadership

The History and Methodology group is directed by two programme leaders (John Davis, Chair of the group, and Marcel Boumans). Boumans organizes teaching and administration, and Davis directs the research programme and Ph.D. supervision. Both activities are carried out in regular consultation with other group members. Annual meetings are held by both Davis and Boumans with the Chair of the School of Economics, Henriette Maassen van den Brink, and with the Director of Research, Hessiel Oosterbeek. In addition, regular meetings have been held with the Director of the Tinbergen Institute, Maarten Janssen. Management style includes formal and informal communication, and emphasis is placed on maintaining open channels of communication. Motivation focuses on clear explanation of the nature of the history and methodology field, its academic requirements, and its status and state of development within the science of economics as a whole. Boumans and Davis also emphasize the history of contribution the group has made in the Amsterdam School, as well as the opportunities for contributions in the future.
B.2 Strategy and policy

We investigate current economics as the product of past economics, and study past economics to understand the development of current economics. 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 mutually influence one another. These new currents in theory go hand in hand with new ideas about modeling, measurement, and investigative methods appropriate to economics. In line with the research group’s earlier research into models as instruments that mediate between theory and data, we investigate how these new techniques and methods are used to further represent, measure, and intervene in the economy.

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

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

The two main changes in the research programme over the period 2002-2007 were to increase the focus on recent history of economics and methodology in which there have been considerable changes in the last two decades and to increase the attention to normative and policy themes which have become increasingly important in the global economy. These changes built on the programme’s previous focus on methods of measurement and quantitative techniques in the history and methodology of economics. Teaching (in both the Amsterdam School of Economics and the Tinbergen Institute) and Ph.D. supervision over this period have emphasized these changes, and several Ph.D.’s will soon complete to reflect this. Editorships of two main journals in the field (Journal of Economic Methodology and Journal of the History of Economic Thought) have also been brought into the group to reinforce these directions. Leadership in these journals helps to communicate the group’s research programme to the wider academic community. In addition, the group is completing its first textbook in the field of economic methodology (to be published by Palgrave), which will be used in required teaching in the Amsterdam School of Economics and at universities throughout the world.

The group is undertaking a new research focus on forms of scientific observation in economics in connection with NWO funding to Harro Maas that will support further Ph.D. supervision. This initiative is part of the group’s 2008-2013 plan to extend and
deepen the research programme’s emphasis on measurement, new developments in current economics, economic policy and ethics, and scientific practices in recent economics. In addition, a new Pierson chair, Albert Jolink, has joined the group to specialize in Dutch history of economics, particularly twentieth century history, including special attention to Jan Tinbergen.

A last but not least item that should be mentioned is that for the previous assessment our programme was represented by Mark Blaug, as interim chair holder. For the assessment of our programme, this was quite an unfortunate coincidence, because due to this interim period our programme was represented by an otherwise excellent chair holder but who was neither committed to nor responsible for the continuation of our programme. As a result the former committee received the wrong impression that “the departure of, first, Morgan and, then, Blaug may affect the productivity of the programme considerably”. We hope that the continuous (even increasing) productivity of the more permanent members, Marcel Boumans and Harro Maas, and the later chair holder John Davis have shown that our programme is very productive and viable.

B.3 Processes in research, internal and external collaboration

The research process and the research culture of the group combine individual production and group collaboration. Individual research projects are presented and evaluated within the group through frequent and regular discussion and review of past output prior to researchers’ undertaking individual research efforts. Individual research in progress is subject to continuing commentary and evaluation, in particular in the form of review of intermediate stages of research. A key means are seminar presentations of work in progress which occur throughout the academic year and also on a year-end research day in December.

In addition, within-group collaboration and review are supported by external interaction with other research groups: the Cachan History of Social Science Group at École normale supérieure in Paris, the Center for Philosophy of Natural and Social Science (CPNSS) at the London School of Economics, Department of Economic History at the London School of Economics, Erasmus Institute for Philosophy and Economics in Rotterdam, and the Max Planck Institute for the History of Science in Berlin. An additional external collaboration is planned with the Trends and Tensions in Intellectual Integration group at University of Helsinki. These external interactions rely on two principal forms of communication and exchange: presentation of work in progress to new constituencies and regular participation as research associates to gain knowledge of work parallel research developed elsewhere. The LSE groups’ connection emphasizes the Amsterdam group’s long-standing emphasis on methods of measurement and quantitative techniques in the history and methodology of economics. The Cachan and Helsinki connections emphasize and widen the Amsterdam group’s emphasis on the changing nature of recent economics within social science generally. A key part of all these external interactions is creating opportunities for junior researchers, including Ph.D. students, to present and share their work and gain access to scholars elsewhere, pursuing related subjects of research by visiting these other research groups.

B.4 Academic reputation

The Amsterdam history and methodology group has established itself as one of the
three top groups in its field, together with the CPNSS group at LSE and the history of economics group at Duke University. The Amsterdam group, however, is unique in maintaining excellence in both history and methodology of economics. The group’s balanced and comprehensive approach to the two fields is demonstrated by its range of high-level publications and through having journal editorships in both fields *(Journal of Economic Methodology* and *Journal of the History of Economic Thought*), memberships of various editorial boards of international journals (*History of Political Economy*, *Journal of Institutional Economics*, *Feminist Economics*, *Revue de Philosophie Économique*, *Review of Social Economy*), and memberships of various boards of international societies and networks (Association for Social Economics, European Society for the History of Economic Thought, History of Economics Society, International Association for Feminist Economics, International Network for Economic Method, Philosophy of Science Association, Society for Philosophy of Science in Practice). Boumans and Davis were given external peer reviews by the Tinbergen Institute in 2006, judged to be high ranked scholars, and were re-appointed as Fellows. Harro Maas’ recent book on William Stanley Jevons was judged the best book by the History of Economics Society in 2006. Mark Blaug is universally recognised as the most accomplished and famous living historian of economics.

**B.5 Internal evaluation and analysis, perspectives and expectations for the research programme**

The term of the current Chair runs to 2013. It is crucial that this position be filled by an individual of the highest international reputation. The high regard the group has had internationally for many years – that it is seen as one of three best programmes in the world – is due to its having had a succession of very well regarded chairs who have been both productive as individual scholars and well connected to academic networks in the field.

The HME group is at a significant disadvantage in terms of the current RESAM system regarding funding Ph.D. students. The current arrangement requires individuals have earned a Tinbergen MPhil. However, Tinbergen MPhil’s have insufficient training in history and methodology of economics to begin Ph.D. dissertations in the field. The HME group strongly favors exceptions to the current RESAM policy to permit it funding for Ph.D. students the group judges to be qualified.

The Chair was guaranteed funding for one Ph.D. student upon at the start of his first five-year contract. No further funding has come forward with the start of his second five-year contract. To maintain the high level of Ph.D. supervision currently in place, one Ph.D. student should be funded for this second five-year contract.

**B.6. External validation**

Geert Reuten is, since June 12, 2007, senator in the Dutch Senate for the Socialist Party. He gained this position due to his academic work.

**B.7. Researchers and other personnel**

Encouragement of our Ph.D. students to stay for a while at some of the other research groups with whom we cooperate (the ones that are mentioned in B.3)
A number of scholars of international reputation are affiliated with the group as Research Associates. Research Associates visit the group on a regular basis to present their research and discuss the research of the group. They are appointed for three-year (renewable) terms, and identify themselves as Research Associates of the group in their publications. These individuals also help create opportunities for members of the group at the Research Associates’ institutions.

Our Ph.D. students secured full academic positions:
Hsiang-Ke Chao is Associate Professor of Economics at National Tsing Hua University, Taiwan
Peter Rodenberg is Assistant Professor at the Department of European Studies of the University of Amsterdam
Floris Heukelom is Assistant Professor at the Department of Economics of the Radboud University Nijmegen

Table 77

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<td>1.76</td>
<td>1.81</td>
<td>1.72</td>
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<tr>
<td>Non-Tenured Staff</td>
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<td>2.21</td>
<td>2.18</td>
<td>2.30</td>
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</table>

<table>
<thead>
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<th></th>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Chao, H.-K.</td>
<td>0.60</td>
<td>0.25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Heukelom, F.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.50</td>
<td>0.60</td>
<td>0.60</td>
<td>0.44</td>
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<tr>
<td>Rodenburg, P.</td>
<td>0.60</td>
<td>0.60</td>
<td>0.10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Went, R.</td>
<td>0.13</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Research Staff</td>
<td>3.05</td>
<td>2.57</td>
<td>1.86</td>
<td>2.73</td>
<td>3.93</td>
<td>3.93</td>
<td>3.97</td>
</tr>
</tbody>
</table>

Prof. M.S. Morgan has been chairholder of our group from 1992 to 1999 and maintained a nominal appointment at the faculty and conscientiously reports her affiliation with the University of Amsterdam in all her publications. She has continued to participate in our research program by means of regular visits, co-authorships, and supervision. Two of her Ph.D.-students, Hsiang-Ke Chao and Peter Rodenburg, have been copromoted by Marcel Boumans.

Prof. M. Blaug has been chairholder of our research group from 1999 to 2002 and maintained a nominal appointment at the faculty. He has continued to participate in our research program by means of regular visits, Ph.D. teaching and supervision.
Dr. R. Went is a former Ph.D.-student of our group and maintained a 0-appointment as research associate, and fulfills our requirements as stated above.

Dr. E.S. Schlieser recently joined our group on a guest-appointment and fulfills our requirements for being research associate, as stated above. He shows strong commitment and involvement by attending almost every meeting or seminar of our research group.

B.8 Resources, funding and facilities


<table>
<thead>
<tr>
<th>Table 78</th>
<th>Staff funding at programme level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding</strong></td>
<td>2001</td>
</tr>
<tr>
<td>Direct funding fte's</td>
<td>96%</td>
</tr>
<tr>
<td>Research funds</td>
<td>0%</td>
</tr>
<tr>
<td>Contracts</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

B.9 Overview of the results

*Key publications*


<table>
<thead>
<tr>
<th>Table 79</th>
<th>Total programme results: outcome in numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. International</strong></td>
<td>2001</td>
</tr>
<tr>
<td>a. journals</td>
<td>10</td>
</tr>
<tr>
<td>b. books, monographs</td>
<td>1</td>
</tr>
<tr>
<td>c. books, edited</td>
<td></td>
</tr>
<tr>
<td>d. chapters</td>
<td>6</td>
</tr>
<tr>
<td><strong>2. Dutch</strong></td>
<td></td>
</tr>
<tr>
<td>a. journals</td>
<td>5</td>
</tr>
<tr>
<td>b. books</td>
<td>1</td>
</tr>
<tr>
<td>c. chapters</td>
<td>0</td>
</tr>
<tr>
<td><strong>3. PhD theses</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>4. Professional publications</strong></td>
<td>2</td>
</tr>
</tbody>
</table>
### Table 80

Programme results: outcome in numbers (core faculty)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<td>6</td>
<td>8</td>
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<td>6</td>
<td>8</td>
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<tr>
<td>b. books, monographs</td>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>c. books, edited</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
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<td>d. chapters</td>
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<td>2</td>
<td>3</td>
<td>2</td>
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<td>1</td>
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<td>1</td>
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<tr>
<td>chapters</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3. PhD theses</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>4. Professional publications</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>7</td>
</tr>
</tbody>
</table>

### Table 81

Total programme results: outcome in numbers international journal publications

<table>
<thead>
<tr>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Top Journals</td>
<td>1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other international Journals</td>
<td>10</td>
<td>12</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>6</td>
</tr>
</tbody>
</table>
OUTPUT
HISTORY & METHODOLOGY OF ECONOMICS

2007

1. International academic publications

Journals

Books, edited

Books, chapters

2. Dutch academic publications

Journals

4. Professional publications and products


5. Other

Awards

Grants

339
2006

1. International academic publications

**Journals**

**Books, Monographs**

**Books edited**

**Chapters**
3. Ph.D. Theses


4. Professional Publications and products


5. Other

*Awards*


*Grants*


341
2005

1. International academic publications

**Journals**


**Books, Monographs**


**Books edited**

**Chapters**


Heertje, A. technical change and entrepreneurship: An overview from Cantillon to


Reuten, G.A.T.M. (2005). El trabajo difícil de una teoría del valor social: metáforas y dialéctica sistemática al principio de 'El Capital' de Marx [The difficult labour of a theory of social value; metaphors and systematic dialectics at the beginning of Marx's 'Capital' (transl. Mario L. Robles Baez)]. In Robles Baez, Mario L. (comp.), Dialectica y Capital; Elementos para una reconstrucción de la crítica de la economía política [Dialectics and Capital; Elements of a reconstruction of the critique of political economy] (pp. 31-58).

2. Dutch academic publications

Journals


4. Professional publications and products

Boumans, M.J. (2005). When evidence is not in the mean. Discussion paper DP 76/05. LSE, CPNSS.


2004

1. International academic publications

Journals

Books edited

Chapters


Maas, H. (2004). Contributions to The Biographical Dictionary of British Economists and The Dictionary of Nineteenth-Century British Scientists. Bristol: Thoemmes Continuum. Entries on: Babbage, Charles (1791-1871) (pp. 35-38); Cairnes, John Elliot (1823-1875) (pp. 174-179); Cobden, Richard (1804-65) (pp. 245-247); Hartley, David (1705-57) (pp. 491-493); Jenkin, Henry Charles Fleeming (1833-1885) (pp. 589-591); Jennings, Richard (1814-1891) (pp. 591-592); Jevons, William Stanley (1835-1882) (pp. 1074-1077); Jones, Richard (1790-1855) (pp. 613-617); Mandeville, Bernard de (1670-1733) (pp. 730-734); Whewell, William (1794-1866) (pp. 1287-1289).


2. Dutch academic Publications

Journals


Chapters

4. Professional publications and products


5. Other

Prizes

Grants
Kuiper, E. (2004). NWO-VENI grant three year project on ‘Gender and Adam Smith’. €200.000,-.
2003

1. International academic publications

**Journals**

**Books, Monographs**

**Books edited**

**Chapters**
Macmillan.

2. Dutch academic publications

Journals

Chapters

4. Professional publications and products


5. Other

Grants
2002

1. International academic publications

Journals

Books edited

Chapters


3. Ph.D. Theses


4. Professional publications and products


5. Other

Grants
2001

1. International academic publications

**Journals**


**Books edited**


**Chapters**


2. Dutch academic publications

**Journals**

3. Ph.D. Theses
Kuiper, E. (2001). The most valuable of all capital; a gender reading of economics texts. Universiteit van Amsterdam. [Supervisors S. Gustafson and G. Reuten].

4. Professional publications and products

5. Other

Grants
Boumans, M.J. (2001-2002). Fellow of NIAS.
OUTPUT FACULTY WITH LESS THAN 0.2 APPOINTMENT
HISTORY & METHODOLOGY OF ECONOMICS

Table 82
Programme results: outcome in numbers (faculty < 0.2 appointment)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td>1. International</td>
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<td>2</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>b. books, monographs</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>c. books, edited</td>
<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
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<td>3. PhD theses</td>
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<td>4. Professional publications</td>
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<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. International academic publications

Journals
2007

2006

2005

2004

2003

**2002**


**2001**


**Books, chapters**

**2007**


**2003**


**2002**


355
**Books edited**

**2003**

**2001**

**Books, monographs**

**2006**

**2002**

**2. Dutch academic publications**

**Journals**

**2007**

**2003**

**2002**

**3. Ph.D. Theses**

**2006**

**2005**

**2001**
4. Professional Publications and products

2007

2006

2005
Morgan, M.S. Experimental Farming and Ricardo’s Political Arithmetic of Distribution. Working papers on The Nature of Evidence: How Well Do ‘Facts’ Travel? No. 03/05. LSE.

2002

2001

5. Other

Grants
B.10 Analysis, perspectives and expectations for the research programme

SWOT

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ worldwide unique combination of history and methodology</td>
<td>▪ We need more people to diversify coverage within history and methodology.</td>
</tr>
<tr>
<td>▪ international orientation and cooperation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Becoming one of the main centers for research in methodology and history.</td>
<td>▪ Not being acknowledged as a reputable field within economics.</td>
</tr>
<tr>
<td>▪ Also, new developments in methodology – experimentalism etc. – could enable us to offer a new initiative.</td>
<td></td>
</tr>
</tbody>
</table>
Experimental & Political Economics

- Research area and mission: Our mission is to do cutting-edge research in the area of experimental and political economics.
- JEL Code: C7, C9, D7, D8, H41
- Programme leader during the review period: Frans van Winden
- Starting date of the programme: 1991
- Formal affiliations outside the institute (e.g. research school) and other structural co-operations and relations with national and international research groups: Tinbergen Institute; EC-MC-RTN ENABLE (international research network with teams from Toulouse, Zurich, Mannheim, Munich, CEPR (Oxford), Stockholm, Harvard and Princeton)

B.1 Leadership

The responsibilities of a programme leader in relation to the management of the institute (RESAM) are largely informal. In practice, the formal responsibilities are mostly related to the co-ordination of the annual research report, the allocation of a small budget, a yearly meeting with the director of the institute together with the other programme leaders, and being a spokesman for the research group.

The management style can be characterized as ‘management by persuasion’, within a strongly horizontally organised research group at the senior researcher level.

Communication and control is institutionalized in different ways. At the senior research level there is a yearly ‘Financial & planning meeting’ (with as an important fixed agenda item the ways and means to cover the substantial experimental payments and the reputation of the lab). For the whole group there is the monthly ‘CREED-meeting’ and ‘Newsletter’ (with fixed items such as ‘research’, ‘visits’, and ‘whereabouts’), the regular ‘CREED-lunch-seminars’ where in particular new experimental designs are presented and discussed (a must for young researchers and external users of the CREED-lab), and the regular advanced research seminars organised jointly with the Tinbergen Institute (programme ‘Institutions and Decision Analysis’). There is further an informal ‘CREED-coffee’ on Wednesdays. CREED is an ‘open door’ research group with traditionally a lot of interaction between researchers at all levels. Other important channels for (external) communication are the CREED-secretariat, the CREED-website, and a web-based recruiting system for experimental subjects.

Within the constraints of the wider Faculty organisation motivation largely takes place via informal and immaterial channels, like recommendations and proposals for honours/awards or career development (job market, internal position, salary), individual encouragement, special attention in the group’s newsletter, social events, and the like.

Important channels for improvement and innovation are – in addition to the internal ‘fora’ mentioned above and the innovative larger research projects supported by the Dutch science foundation NWO – the many visitors and the research networks (ENDEAR, ENABLE) and research group exchanges (NYU, Nottingham, Waseda) maintained by CREED. The involvement of world-wide top-researchers facilitates the tracking and digestion of cutting-edge knowledge as well as new developments or opportunities for improvement and innovation.
B.2 Strategy and policy

Research area
The research area concerns experimental and political economics.

Mission
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 new 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 non-existent. 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.

Previous assessment
The previous assessment regarded the ‘quality’ of this research programme excellent
(5) and its ‘viability’ beyond doubt (5). Regarding ‘productivity’ the hope for an ‘even larger output’ was expressed (4), while with respect to the programme’s ‘relevance’ (3) it was mentioned that, notwithstanding its theoretical orientation, “the group still maintains an interest in work with policy relevance.”

While taking care to keep and even further strengthen the quality and viability of the programme, several actions have been taken to further improve its productivity and societal (policy) relevance. First of all, productivity has been greatly improved through appointments (professorships, Ph.D.-positions), an adjustment in publication efforts towards higher ranked publication outlets, and, last but not least, the coming of age of the research programme (CREED celebrated its 10th anniversary in 2001, commemorated with a special Faculty brochure). To illustrate, the total number of international publications was about 4 times as large as the total number in the previous assessment period. Moreover, 7 publications were in the top-five journals (AA-journals according to the Tinbergen Institute’s ranking), compared to 0 in the previous period. CREED members contributed 25% of the total number of AA-publications of the Tinbergen Institute, while comprising only 5-6% of its fellows (see B10). The number of doctoral theses per year increased with about 45% (this excludes the 4 theses that are expected to be finished in 2008).

Second, more effort has been put in getting across and exploiting the group’s expertise to the benefit of third parties, involving private as well as public institutions. This is partly related to the development of new lines of research (e.g., an NWO-VICI grant for the theoretical, experimental, and policy related study of license auctions). As discussed in greater detail below (see B6), over the relevant period CREED has been frequently asked for advise, for carrying out consultancy projects, and to inform a wider audience about the relevance of its research findings.

**Development over the relevant period**

Some of the more important research innovations within the programme during the present assessment period are related to the employment of new researchers, the appointment of full professorships for behavioural game theory and behavioural economics (next to the already existing ones for experimental economics and public economics), and the acquisition of a series of (major) research grants (NWO, EU).

Areas that were substantially stimulated this way are related to (key publications within parentheses):

- the dynamics of social institutions (norms, social networks; Ule, 2007);

More generally, compared to the previous assessment, a shift has occurred toward more fundamental aspects of decision making. This shift also shows up in the new
third project of the programme: ‘Bounded rationality and institutions’.

Future
The longer term development of a (fundamental) research programme is by its very nature notoriously difficult to plan, due to its internal dynamics (what proves to be interesting to pursue?) and the exit or entry of productive and innovative researchers. On the other hand, in the short run, existing projects and grants largely determine its more general course. Some foreseen new accents in the shorter run are related to the role of communication in (strategic) decision making, the development of social networks, and the (neuro-)psychological underpinning of behavioural assumptions in economic modelling. Moreover, developments in experimental technology have made it possible to expand laboratory control beyond the walls of the laboratory itself, for example, by running experiments via the internet or in the field. It is to be expected that such new methods will be increasingly used by CREED. Links and exchanges with other important research groups (at present, at NYU and Nottingham) are expected to be continued and strengthened. Furthermore, cooperation with biologists (IBED) and neuro-psychologists/scientists (ACACIA, CSCA) of the UvA is expected to grow.

Regarding teaching, CREED has successfully promoted and actively supports the use of experiments in the classroom to make teaching more vivid and effective (cases and software have been developed to that purpose in the past). Moreover, it has stimulated the incorporation of new subjects, like experimental and (more recently) behavioural economics, in the curricula at the undergraduate as well as the graduate level.

CREED maintains important links with the Tinbergen Institute. It provides a substantial input in its research programme (Institutions and Decision Analysis) as well as its teaching curriculum (with courses in: experimental economics and public/political economics). In response to CREED’s leading role in research, the core programme has also been adjusted to include a course on behavioural economics and information economics in the micro-economics curriculum. CREED is also affiliated with the Cognitive Science Center Amsterdam (Steering group, lecturing).

Finally, regarding (inter-)national affiliations, CREED is keen on developing and maintaining an active involvement in important academic networks (e.g., EU-RTNs like ENDEAR and ENABLE, CEPR, Royal Netherlands Academy of Arts and Sciences) and academic associations (frequent involvement in management and organisational activity), regular exchanges with research groups (e.g., at NYU and Nottingham University), and participation in the editorial boards of relevant publication outlets (e.g., EER, Experimental Economics, Games and Economic Behaviour, Management Science).

B.3 Processes in research, internal and external collaboration
The culture of our programme can be characterized by open communication, extensive interactions and collaborations within the research group and with other groups at our university or other universities. A quick look at the publication list shows that only about 13% of the publications are single-authored, around 13% are collaborations with only other group members, 16% are with other UvA researchers, and about 60% are with researchers from other universities. Noteworthy are the experimental studies involving the CeNDEF group, the Scholar group, and the IO
group at our Faculty. Recently, we have witnessed a growing interest from the business school. In addition, a fruitful collaboration with theoretical biologists at the UvA (IBED) has been established through a major NWO-grant, leading to both theoretical and experimental studies. A recent NWO-pilot-grant supports a new neuro-economics project with neuropsychologists at the UvA (ACACIA).

A good example of our culture of open interaction, and of our quality control and methodological safeguarding are the internal CREED-seminars. In these seminars, new ideas are presented and designs of experiments are discussed at a very early stage. In principal, one is not allowed to use resources like the laboratory and money without at least once presenting an internal seminar. This has many advantages: at this stage one is generally more open for suggestions and discussion can be particularly helpful (because after the experiment is run, you can only discuss the analyses and presentation); we get to know the interests and ideas of everybody including our visitors; and it is very instructive and stimulating. Additionally, our Ph.D. students and junior staff are offered a useful training in presenting and debating. Further training aspects are discussed under B7.

In addition to these early-stage internal seminars, we organise seminars at the Faculty and the Tinbergen Institute where completed working papers are presented by us and by visitors.

Our national and international contacts are very valuable. In the Netherlands we have contacts and collaborations with Tilburg and Maastricht where the former CREED-members Jan Potters and Arno Riedl now run their own research groups. International collaborations are enhanced in the following ways: we are the coordinators of two European (MC-RTN) research networks ENDEAR and ENABLE (with joint projects, summer schools, workshops); we organise an annual meeting with research groups from NYU and Nottingham University, and on a regular basis international workshops and conferences (e.g., ESA, Public Choice); and we receive many visitors who want to spend some time at our group. We also encourage Ph.D. students, postdocs, and senior researchers to spend some time at other groups. Our network benefits from the active involvement of the more senior researchers in international associations and the editorial boards of international journals (see B4).

Processes in which research strategies are evaluated and redirected have been indicated under B1.

B.4 Academic reputation

CREED is one of the leading institutes for Experimental Economics in the world. In the period under observation, CREED members were invited to give 34 lectures at major international conferences and workshops (including 11 keynote addresses) and 170 invited seminars outside of the UvA. Moreover, two world conferences (The World Meetings of the Economic Science Association in 2004 and the first World Meetings of the Public Choice Society in 2007) and a major European conference (EARIE) were organised by individual CREED members as well as over a dozen smaller workshops. CREED members also regularly serve on the programme committees of international conferences, on Ph.D. committees outside of the UvA (over 15 times during the period under consideration), and as external advisor to foreign academic institutions (regarding research programmes, appointments, prizes).
Aside from a variety of smaller grants (like two NWO-VENI grants, and an NWO-Pilot Project grant on cognition), CREED members acquired three major scientific grants (each over €500) in this period: An NWO-VICI grant for the theoretical, experimental and policy related study of license auctions; a European MC-RTN grant (ENABLE) for the advancement of behavioural economics (including teams from Harvard and Princeton); and a project within the NWO programme Evolution and Behaviour.

Various fellowships were awarded by, among others, the Econometric Society, CEPR, and the Royal Netherlands Academy of Arts and Sciences (KNAW). Members received publication awards in 2002, 2003, and 2005. CREED traditionally scores well in national and international rankings. It is always represented in the top 40 of Dutch economists published by ESB. Between 2001 and 2007 this included first place rankings and various top 10 slots. It was also in the top 100 of the most cited scientists in economics and business published in 2003. In the Faculty’s list of 10 most cited publications, 8 slots were taken by CREED members. In a comprehensive analysis of various individual rankings of Dutch economists published in De Economist in 2007, two CREED members are ranked in the top 10. As a group, the political economics group of the UvA (which consists mainly of CREED) ranked 3rd in Europe in a ranking published in 2006 (http://www.econPh.D.net).

CREED’s reputation also shows from its members’ editorial activities. In the period concerned CREED members served as: editor of the journals Experimental Economics, the European Journal of Political Economy, and Theory and Decision; associate editor of the European Economic Review, Games and Economic Behaviour, and the Journal of Risk and Uncertainty; editorial board member of Public Choice, the Journal of Economic Psychology, Quantitative Finance, the Journal of Behavioural Decision Making, the Journal of Mathematical Psychology, the Journal of Risk and Uncertainty, Management Science, Medical Decision Making, Experimental Economics, and Theory and Decision. CREED is also active in the boards of various international organisations, such as the Economic Science Association (for experimental economics), the European Public Choice Society, and the International Institute of Public Finance.

CREED’s academic reputation further shows from the academic positions obtained by former CREED members. CREED Ph.D.-students found jobs at, among others, Princeton University, the University of Chicago, Northwestern University, and the University of Toulouse. In addition, CREED members left to take full professorships at the University of Maastricht, the Erasmus University Rotterdam, and the California Institute of Technology.

In a recent report of the executive board of the UvA ("Onderzoeksvisie Universiteit van Amsterdam", College van Bestuur, 2006) CREED's research is explicitly mentioned as part of the characteristic research of this university.

**B.5. Internal evaluation and analysis, perspectives and expectations for the research programme**

In the past six years, we managed to fulfil our ambition to become recognised as one of the leading groups in the world in our field of Experimental Economics. That we succeeded doing so can be inferred from the regular stream of publications in the top-5 journals, the frequent invitations for CREED members to perform as key-note speaker and the fact that we organised the world meeting for the Economics Science Association in 2004, the most important conference on Experimental Economics. We
succeeded in hiring top researchers like Jacob Goeree and Peter Wakker and we attracted excellent Ph-D students, some of whom went to top Institutes like Princeton and Northwestern after obtaining their degree. This year we attracted three of the best students out of a cohort of 22 students from the T1 graduate program. All this means that we are successful according to our own standards and our institute's standards. Our objective is to maintain our international position in the next six years, and to expand it where possible.

B.6. External validation

The discussion of real-world policy issues benefits substantially from a combined game theoretic and experimental research input. The combined efforts of experimental economists and game theorists to guide the Federal Communication Commission in the US to design the telecom license auctions is a primary example of such research. Given the available expertise at CREED, it is not surprising that CREED-members frequently advise public as well as private institutions on the design of economic institutions. Examples concerning the period 2001-2007 where various ministries were involved include license auctions, the tax system, and the introduction of the new health-insurance system.

An important part of CREED’s advisory work was dedicated to the design of auctions (starting with a project commissioned by the biggest Dutch flower auction in the previous assessment period). CREED advised about how to design the allocation mechanisms for assigning commercial radio-frequencies (‘Zero-Base’), for Public Access Mobile Radio (‘PAMR’), for special telephone-numbers (‘18XY’), for assigning the locations of gas-stations to oil-companies, for the sale of wireless local loop frequencies (‘WLL’) and for assigning shares of the Zuidas-Dok project to private bidders.

Other main projects for the government concern an experimental study of the employment effects of shifting the tax burden from labour to value added (‘Plan van Elswijk’), and an experimental study that investigated how people deal with the abundance of available information when they choose their health-insurance and how the processing of information affects their choices for health-insurance.

Some research was also commissioned by private institutions. For instance, CREED advised SHELL and TEXACO on the question what strategy to pursue in the auctions for the locations of gas-stations. Furthermore, several studies were commissioned by the Dutch Central Bank, one regarding the consequences of vote rotation in committees (instead of all members always having a vote), and a recent project concerning the stability of inter-bank payment systems.

Members of CREED regularly disseminate their knowledge through seminars for laymen audiences (such as for high-school students in disadvantaged neighborhoods) or more professional audiences (e.g., ministries). CREED also regularly contributes to major Dutch newspapers, professional magazines (e.g., ESB), and radio and television. Topics that are covered range from the prevention of terrorism, and the effects of employing auctions on consumer prices in the aftermarket, to the voting-procedure of choosing the new pope.
B.7. Researchers and other personnel

Ph.D.-candidates are acquired in two ways: via the Tinbergen Institute’s Mphil-programme and via external funding (NWO or the European Community). Though the MPhil programme of the Tinbergen Institute has only recently started to supply more than a handful of students to the three participating faculties, CREED seems to be an attractive group for students to move to. For example, it is already known that three MPhil candidates will join CREED in 2008. Training occurs ‘hands on’ within the research group and through the regular exchanges with other research groups, through courses of the Tinbergen Institute, international summer schools, and skills & career development opportunities facilitated by the Faculty and the EU-RTN grants. Junior researchers (postdocs) have typically started on the basis of external funding (NWO, EC). Recruitment is organised through official channels (in co-ordination with the Faculty) but generally the group’s international network gives access to many excellent candidates. The most successful postdocs are proposed for getting tenure by the Faculty (recently, Ule and van Veelen).

CREED members can obtain (and two in fact did obtain) full professorships based on academic merits (as part of their career development at the Faculty). In addition, there is a continuous search (alertness) for young and more senior talent from elsewhere, in interaction with the dean.
Table 83

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B.8 Resources, funding and facilities

Facilities
CREED’s main facility is its laboratory. This consists of three parts: a reception room (36m²), an operational annex storage center (20m²), and a laboratory (108m²) stocked with 30 desktop computers separated in cubicles. The laboratory is equipped with a ‘computer floor’ to hide cables, and a cooling system. The computer equipment has recently been renewed and is sufficient to serve its purpose. New equipment is planned, however, for future experiments (e.g., audio and video facilities). For the use of equipment requiring specialized psychological or neuroscientific expertise (like eye-tracking and brain-scanning) existing links with the Cognitive Science Center Amsterdam (and the new Spinoza Centre for Neuroimaging) are already exploited and may be further developed.

The CREED laboratory is used by CREED members but also on a regular basis by other Faculty members, in particular from research groups in the Amsterdam School of Economics (e.g., SCHOLAR, ENCORE, and CenDEF) and the Amsterdam Business School. On occasion, the facilities are used by researchers from other Universities.

Because the demand for the CREED laboratory now exceeds the available capacity (leading to unacceptable waiting times for running experiments), CREED has recently proposed a reconstruction of the laboratory where the number of terminals would be increased to 40 and the parallel running of experiments would be enabled.

CREED further maintains a small library, mainly with various technical and specialized handbooks and some journals, and a web-based recruiting system for experimental subjects.

Personnel
The number of young researchers (at the tenure level) has increased over the years, mainly as a consequence of large scale, externally funded projects such as the NWO-VICI and ENABLE projects (e.g., involving Jan Boone, Martin Kocher, and Sander Onderstal). In addition, CREED was ‘rejuvenated’ by a process where Jacob Goeree, Peter Wakker and Arno Riedl left for (full professorship) positions elsewhere. Matthijs van Veelen and Aljaž Ule obtained tenured assistant professorships and Klaus Abbink was hired as a tenured associate professor. Theo Offerman and Joep Sonnemans were promoted to full professor. The result is a more balanced distribution in terms of both age and academic position. Because of the grants received, the percentage of salaries paid directly by the Faculty (‘eerste geldstroom’) was reduced from more than 80% in 2001-2003 to less than 40% in the last two years.

Future Funding Targets
Aside from an increase in the laboratory’s capacity and new equipment, CREED aims at some further growth in research personnel. It is an internationally renowned institute that provides an attractive working environment for top-level research. On a regular basis excellent researchers from around the world have shown interest in moving to CREED and it would greatly stimulate the Faculty’s research if it were possible to accommodate some of these wishes.
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<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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</tbody>
</table>

B.9 Overview of the results

Key publications


Table 85

<table>
<thead>
<tr>
<th>Outcome</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
<td>1. International</td>
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<tr>
<td>a. journals</td>
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<td>16</td>
<td>12</td>
<td>14</td>
<td>15</td>
<td>26</td>
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<td>b. books, monographs</td>
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<td>d. chapters</td>
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<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>e. Professional publications</td>
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<td></td>
<td></td>
<td></td>
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<td>1</td>
<td>3</td>
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</table>

Table 86

<table>
<thead>
<tr>
<th>Outcome</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
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<td>6</td>
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<td>8</td>
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<td>9</td>
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<tr>
<td>Other International Journals</td>
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<td>4</td>
<td>11</td>
<td>6</td>
<td>19</td>
<td>15</td>
</tr>
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</table>
1. International academic publications

**Journals**


Veelen, M. van and Hopfensitz, A. (2007). In Love and War; altruism, norm


**Chapters**


**3. Ph.D. Thesis**


**4. Professional publications and products**


2006

1. International academic Publications

**Journals**


**Chapters**


**2. Dutch academic publications**

**Journals**


**3. Ph.D. Theses**


Hopfensitz, A. (2006, 23 February). *The Role of Affect in Reciprocity and Risk*
Taking. Universiteit van Amsterdam. [promotor Prof.dr. F.A.A.M. van Winden] [cat. I]
2005

1. International academic publications

**Journals**


**Chapters**


2. Dutch academic publications

Journals

Chapters

3. Ph.D. Thesis

2004

1. international academic publications

**Journals**

**Chapters**
2003

1. International academic publications

**Journals**


**Chapters**


2. Dutch academic publications

*Journals*

4. Professional publications and products

2002

1. International academic publications

**Journals**


**Chapters**


2. Dutch academic publications

**Journals**

3. Ph.D. Thesis
2001

1. International academic publications

Journals


3. Ph.D. Thesis

### B.10 Analysis, perspectives and expectations for the research programme

#### SWOT

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CREED</strong> has more than fulfilled the hope of an even larger output expressed in the previous assessment report. For example, in sharp contrast with the previous period, papers regularly appeared in the very best journals. In fact, if we consider the rankings of journals by the Tinbergen Institute, and the affiliations of the authors at the time of publication, 25% (6/24) of the AA-publications in the Tinbergen Institute were by CREED-members, whereas CREED members constitute only 5-6% of the fellows of the Tinbergen Institute.</td>
<td>A more solid foundation of CREED’s outlays on subject payments would be desirable. It seems reasonable that the University would contribute to experimental research, just as it does to other empirical investigations.</td>
</tr>
<tr>
<td><strong>CREED</strong> manages to combine fundamental research published in the best journals with consultancy for the private and the public sector. A substantial amount of CREED’s research money is raised via consultancy and through funds obtained from NWO and the European Community, and is successfully used for research.</td>
<td></td>
</tr>
<tr>
<td>In a relatively short period, <strong>CREED</strong> has become an established brand in experimental economics. It has a leading role in the field in the Netherlands, where ex-CREED members have started experimental economics at other universities (like Jan Potters at the University of Tilburg and Arno Riedl at Maastricht University). <strong>CREED</strong> is now recognised as one of the main centers for experimental economics in the world. This is also testified by the many invitations for lectures, keynote addresses, external advising (on appointments, research programmes, laboratory design), and the participation in professional boards and academic committees.</td>
<td></td>
</tr>
</tbody>
</table>
**Opportunities**

- With its cutting edge and innovative research, which belongs to the core of economics but has also strong interfaces with the wider social and life sciences, CREED offers a window of opportunity.

**Threats**

- To maintain its leading role, it is crucial that CREED can count on being able to replace top-researchers if they leave for better positions at ‘ivy-league’ universities. It takes much more time to build up an excellent reputation as a research group than to lose it.
- Finally, to continue to be recognised as one of the main centers of experimental economics in the world, we also need to be able to handle the increasing utilization of our lab and to include new technological advances in our research. In addition to the greater details provided under B8, it is important to stress here that these technological advances will also substantially reinforce the financial issue raised above. For example, the use of neural techniques like brain-scanning are extremely costly from a traditional economic research perspective.
Industrial Organisation, Competition Policies & Regulation

- Research code: JEL-Code: L
- Programme leader(s) during the review period: Prof. dr. P. J. G. van Cayseele (2005 - )
- Starting date of the programme: 2005
- Formal affiliations outside the institute: Katholieke Universiteit Leuven
- Research Mission: 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.

B.1 Leadership

The programme leader has only a limited affiliation (20%) with the university. Time to manage the programme is therefore limited. The organisation of the IO-group, which is responsible for the research program, is strongly horizontal. This allows for an informal and ‘light’ management style. At the same time, it is projected that as of January 2009 there will be a full time programme leader. With the envisaged growth of the number of Ph.D.-candidates that will be affiliated to the IO-group this could mean a more formal management structure.

Currently the main formal task of the programme leader is the allocation of a small research budget amongst the members of the research program. Priority is given here to to Ph.D.-candidates in the allocation of this budget.

As to communication and control, there are ad hoc group meetings during which ongoing administrative matters are discussed. Interaction with the Ph.D.-students is institutionalized in that weekly meetings are held to discuss their research progress. These meetings are conducted not only with the programme leader but also by the other group members.

B.2 Strategy and policy

Research area
The research area concerns industrial organisation.

Mission
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.

Historical context
The research programme itself is only recently established. The IO-group used to be part of Amsterdam Business School, although it did not carry the label IO-group. 2002 three faculty members, two assistant professors and one associate professor, associated with the subject field of IO (in part because these members taught IO courses) moved from the ABS to the Amsterdam School of Economics to form the IO-group. The Full Professor of IO at that time, Stephen Martin, left at that time to
take up a position at Purdue University. One of the assistant professors, Michelle Goeree, left the university shortly afterwards as well. This left an IO-group that consisted of two members: Jeroen Hinloopen (associate professor) and Maria Brouwer (assistant professor).

In 2002 Recruiting started at all levels. This quickly resulted in two assistant professors, one of which was joining CREED at the same time for a fixed period of time (5 years), after which he will be a fulltime member of the IO-group. On the other hand, it took three years to attract a Full Professor (be it for 20% only).

Initially the research carried out by the members of the IO-group was classified as a subprogramme within the labour research program. As of January 2005 the current programme was initiated. An important reason for this delay in establishing the current programme was the lack of a professor of IO who could take on the role as programme leader. As mentioned, it took three years to appoint the successor to Stephen Martin, Patrick van Cayseele. With the arrival of Patrick van Cayseele the research programme was established.

An important stimulus to the IO-group was that in 2002 Jeroen Hinloopen won a €1.5 million tender for setting up the Economics Network for Competition and Regulation (ENCORE). This was joint work with Jules Theeuwes, who became the director of the network. Jeroen Hinloopen became the academic director of the network (for 20%) while being affiliated with the IO-group for the remaining 80%. The academic director was responsible for all academic aspects of the network, including the organisation of a seminar series in IO, the distribution of research money for policy-driven IO-research, the setting up of ENCORE Summer Schools, and the wider dissemination of the network within the international academic setting. Meanwhile ENCORE is an established brand name due to the numerous activities organised during the tender period (2003 – 2006). As of January 2006 Jeroen Hinloopen stepped down as academic director after successfully winning the follow-up tender for another three years. ENCORE was then transferred to the Amsterdam Centre for Law and Economics (ACLE).

Institutional embedding
The research of this programme is carried out within the IO-group of the Amsterdam School of Economics. One member of the IO-group is also affiliated with the Center for Research in Experimental Economics and political Decision-making (CREED), for 43%. This affiliation ends in 2009 after which he will join the IO-group fulltime. The contract of the current programme leader ends at the end of 2009 as well. It is envisaged that as of January 2009 the current associate professor of the group will replace the programme leader as he is to be promoted to the level of full professor.

Previous assessment
NA

Development over the relevant period
Although the programme needs to be fully developed further, several noteworthy developments can be mentioned:

- One member of the group (Adriaan Soetevent) succeeded in attracting a Veni-grant from NWO.
- One Ph.D.-student (Aufa Doarest) joined the group (and another one did so as of March 2008).
- One member of the group (Jeroen Hinloopen) became a parttime full professor at the Katholieke Universiteit Leuven.
- In the three years that the programme was operational the group realised 2 AA-
publications, 2 A publications, and 9 B publications (according to the TI-journal ranking).

Future
Future developments are inherently difficult to predict but the IO-group seems to be well prepared for developing the programme such that it (continues to) meet international standards. Recently it was decided by the management of the ASE that another assistant professor of IO can be hired due to the NWO-grant of Adriaan Soetevent. It is the group's intention to attract a young, active scholar that can contribute to group's research environment.

Through the involvement of the group in the MPhil. teaching programme of the TI (Jeroen Hinloopen) it is also known that at least two students that are currently enrolled in the programme wants to join the IO-group to carry out their research for completing their Ph.D.-thesis. This adds to the critical mass that is necessary to further develop the research program. It will also mean that more structure will be given to the organisation of the group (i.e. internal seminars to present ongoing work, bi-monthly group meetings to discuss group-related issues, etc.).

B.3 Processes in research, internal and external collaboration

The programme is still relatively small which has the advantage that the all group members actively involved in decisions concerning the direction of the programme. Collaboration between group members in terms of joint research projects was little in the first years of the programme, partly because newly arrived members first had to finish previous projects they were involved in. Recently a number of promising joint research projects have started, one of which already led to a paper that is forthcoming in an A-journal.

An initiative taken up in 2007 to further the internal collaboration is to organise a reading group on empirical and experimental IO. During these weekly meetings members of the IO-group discuss important (working) papers whereby one different member each week prepares a discussion note. The Ph.D.-students of the IO-group participate in these meetings as well (as do researchers from outside the IO-group, be it on a more ad hoc basis).

The IO-group has a substantial national and international network. This resulted in joint publications with researchers from Caltech, University of Georgia, CREED, and the Erasmus University of Rotterdam, among others. Moreover, in 2005, the IO-group was responsible for organizing the annual EARIE-conference, a major European conference in the field of industrial organisation, which attracted over 600 attendants. In addition, several researchers visited our group for some time.

B.4 Academic reputation

The programme only started as of 2005, but it brought together researchers with an excellent track record of research. Most people in the group hold either joint appointment at universities abroad (University of Leuven, Belgium) or are involved in other top research programmes at UVA as well (e.g. CREED), or their research was awarded with outside finance (Veni-grant from NWO). Most members of the IO-group are fellow of the Tinbergen Institute and of the Amsterdam Centre for Law and Economics. One member of the IO-group sits on the Editorial Board of the Review of Industrial Organisation, and all members are regularly invited for giving seminars.
B.5. Internal evaluation and analysis, perspectives and expectations for the research programme

The IO-group uses the list of the ranked journals provided by the research institute as an important measuring rod to evaluate its members. The group aims for path-breaking publications in the highest journals on this list. The publication record shows that the group regularly succeeds in publishing in AA or A journals. Considering the forthcoming papers (two A publications so far) the group is confident that this high-quality output will remain the group’s reference level.

B.6. External validation

In 2002 the IO-group won a 1.5 million € tender for setting up the Economics Network for Competition and Regulation (ENCORE). Meanwhile ENCORE is an established brand name due to the numerous activities organised during the tender period (2003 – 2006). As of January 2006 the academic director of ENCORE, who was at the same time the associate professor of the IO-group, stepped down after successfully winning the follow-up tender for another three years. ENCORE was then transferred to the Amsterdam Centre for Law and Economics (ACLE).

Members of the IO-group are frequently asked for advisory work for both public and private institutions outside academics. The Ministry of Economic Affairs appointed one member of the group as advisor. Invited workshops and seminars in which classroom experiments were used to illuminate the functioning of markets were organised for the NMa (2006 and 2007) and for the congress of VECON, the Dutch association of teachers of economics. The group shared their expertise on, e.g., auctions, collusion and the Dutch retail gasoline market by giving various seminars at the Ministry of Economic Affairs, NMa, OPTA, and SEO Economic Research.

Other research was commissioned by public and private institutions. The group, for example, designed and supervised on behalf of CCV Europe and in collaboration with the Reumafonds a field study on the effects of cash and electronic payment systems on contributions to charity. Other examples include advice on auction design for the Zuidas-Dok project and welfare-to-work programmes for the Ministry of Social Affairs.

Members of the IO-group also feature every so often in the popular press. Media performances include interviews and articles in national newspapers and on radio.
B.7. Researchers and other personnel

Table 87

<table>
<thead>
<tr>
<th>Name</th>
<th>Total 2005</th>
<th>Total 2006</th>
<th>Total 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full Professor</strong></td>
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<td></td>
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<tr>
<td>Cayseele, P. van</td>
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<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td><strong>Associate Professor (UHD)</strong></td>
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<td></td>
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<td>Hinloopen, J.</td>
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<td><strong>Assistant Professor (UD)</strong></td>
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<td>Brouwer, M.T.</td>
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<td>Onderstal, S.</td>
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</tr>
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<td>Soetevent, A.R.</td>
<td>0.50</td>
<td>0.50</td>
<td>0.63</td>
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<tr>
<td><strong>Total Tenured Staff</strong></td>
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<td>1.39</td>
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<td><strong>PhD’s</strong></td>
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<td>Doarest, A.</td>
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<td>-</td>
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<tr>
<td><strong>Total Non-Tenured Staff</strong></td>
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<td>0.00</td>
<td>0.45</td>
</tr>
<tr>
<td><strong>Total Research Staff</strong></td>
<td>1.72</td>
<td>1.39</td>
<td>1.94</td>
</tr>
</tbody>
</table>

B.8 Resources, funding and facilities

Facilities
The IO-group is actively involved in experimental research. For this the laboratory of CREED is being used.

Funding
Ever since the start of the programme in 2005, one or more group members have been (partially) externally funded by projects like the ENCORE, NWO-VICI and NWO-VENI projects (involving Jeroen Hinloopen, Sander Onderstal and Adriaan Soetevent respectively). The group is on average young of age and in the early stages of their academic career. The current group composition forms an excellent basis for further expansion in terms of research personnel in the next few years. To this end, the group aims to attract further external funding and to keep providing a stimulating environment where talented researchers can prosper.

Table 88

<table>
<thead>
<tr>
<th>Staff funding at programme level</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding</strong></td>
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</tr>
<tr>
<td>Direct funding fte’s</td>
<td>91%</td>
<td>100%</td>
<td>85%</td>
</tr>
<tr>
<td>Research funds</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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<tr>
<td>Contracts</td>
<td>9%</td>
<td>0%</td>
<td>15%</td>
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<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
B.9 Overview of the results

Key publications

Table 89
Total programme results: outcome in numbers

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. International</td>
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<td></td>
</tr>
<tr>
<td>a. journals</td>
<td>6</td>
<td>8</td>
<td>5</td>
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<tr>
<td>b. books, monographs</td>
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<tr>
<td>c. books, edited</td>
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<td>chapters</td>
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<td>3. PhD theses</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Professional publications</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Table 90
Total programme results: outcome in numbers international journal publications

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Top Journals</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other international Journals</td>
<td>3</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>
1. International academic publications

**Journals**


2. Dutch academic publications

**Journals**


4. Professional publications and products


5. Other

**Grants**

2006

1. International academic publications

**Journals**


**Books**


2. Dutch academic publications

**Journals**


**Books**


4. Professional Publications and products

2005

1. International academic publications

**Journals**


**Chapters**


2. Dutch academic publications

**Journals**


**Chapters**

### B.10 Analysis, perspectives and expectations for the research programme

#### SWOT

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- High productive, young researchers</td>
<td>- Size</td>
</tr>
<tr>
<td>- Active internal collaboration</td>
<td>- Missing fulltime professor</td>
</tr>
<tr>
<td>- Abundant (research) potential</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- External funding</td>
<td>- Allow to grow?</td>
</tr>
<tr>
<td>- Future Ph.D. students</td>
<td>- Continuity</td>
</tr>
</tbody>
</table>

395
SEO Economic Research

- Research code: JEL codes D4, H5, J, I, L, L93, K2, R3
- Starting date of the programme: SEO Economic Research was founded in 1949, as a research institute of the Faculty of Economics at the Universiteit van Amsterdam, to encourage applied research. Since the 1980s it has been legally independent from the university, while retaining close links with the academic community and the economics faculty.
- Formal affiliations outside the institute: None apart from the UvA Faculty of Economics and Business administration, the Amsterdam School of Economics and RESAM. Jules Theeuwes is professor of applied economics and Jaap de Wit is professor of transport economics at the economics faculty.
- Other structural co-operations and relations with national and international research groups: AIAS (Amsterdam Institute for Advanced Labour Studies), IViR (Institute for Information Law, Faculty of Law), SCO Kohnstamm Instituut (Faculty of Social and Behavioural Sciences)
- Research Mission: SEO carries out contract research in applied economics for the public and the private sector and for non-profit institutions, nationally and internationally. SEO distinguishes itself from other contract research bureaus by its analytical approach. Modern economic analysis is applied to practical issues. Empirical questions are tackled with the econometrics toolkit. SEO aims at contributing significantly to the development of the field of applied economic research by means of scientific and professional publications.

In the last decade SEO has grown into a renowned contract research institute, occupying a niche for independent and authoritative economic research in the contract research market.

B.1 Leadership

Programme leader
SEO Economic Research is governed by a seven-member Executive Board. The dean of the economics faculty (Tom Wansbeek) and the vice dean of the Amsterdam School of Economics (Henriëtte Maassen van den Brink) are members of the executive board. SEO has an Advisory Board which meets yearly to review its strategy and its research programme.

Day-to-day management responsibility at SEO is in the hands of the director (Jules Theeuwes) and the vice director (Barbara Baarsma). The SEO management team consists of the two directors and the section heads. SEO is subdivided into five sections. Each section head is responsible for the quality of contract and academic research in his or her section.

The final responsibility for research quality of contract and academic research and for the SEO academic research programme is with the director.

Motivation
SEO staff members are expected to spend most of their time on contract research and on the acquisition of new contracts. The required time to work on contract research varies from 62% for junior researchers to 42% for section heads. Higher level staff members are expected to spend more time on contract acquisition.
SEO staff members spend on average 8% of their time on academic research. This consists of time spent on writing scientific articles, chapters of dissertations, participating in reading groups and internal SEO seminars and in national and international economic conferences.

Scientific output (articles, presentations at conferences, progress in dissertation) of each staff member is monitored and evaluated (together with other aspects of performance at work) in the twice yearly evaluation rounds. Performance of staff members is evaluated by the section heads, performance of section heads and vice director is evaluated by the director. The director is evaluated by the chairman of the SEO Executive Board. A more than average academic output (compared to other SEO staff members) is one of the prerequisites to get a personal financial bonus at the end of the year. A personal financial bonus can be substantial for excellent performance (in good years).

B.2 Strategy and policy

Research area
SEO Economic Research consists of five research groups or sections organised along fields of applied economic research. A first section is Labour Economics & Education which specialises in research on labour markets, labour market policy, schooling and training. Recent applied research papers deal with supply and demand projections, matching problems, internal and external labour market dynamics, wage differentials, employment benefits, migration, ethnic minorities, career choices and schooling and work.

The section on 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. Major work has been done recently on the evaluation of the effectiveness of labour-market reintegration services.

Research in the section on 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.

Starting with the question of how companies relate to one another within their own industry the Industrial Economics section combines findings obtained from research at the sector and individual company levels. The structure of a business sector is mapped by answering questions such as what kind of businesses are there, how do they profile themselves, to what extent and in what ways do they work together, where do innovations come from, how do they spread and how do they perform financially? In this section there is special focus on the real estate sectors and the sector of financial services.

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 research topics in which SEO is active changes over time. SEO will always be in the applied economics field but the specifics of its topics are determined by the market. Hence research topics within sections and sections themselves change over time. In the period under consideration (2000-2007) SEO has added the section on Industrial Economics and has phased out a section on regional economics and transport. At the moment SEO is investing in building a section in applied financial economics. SEO also aims at increasing the share of commissioned research from the private sector and from international parties in its portfolio of contract research in the next years.

**Strategy and policy**

SEO Economic Research has always encouraged its researchers to publish in scientific journals, to participate in economic conferences and to complete a PH.D. degree. This policy enhances the attractiveness of SEO as an employer for economic researchers. Scientific publications have a positive effect on the quality of our contract research. The research institute of the economics faculty of the UvA supports SEO Economic Research in these policies.

In the last years SEO has intensified its scientific strategy. Since 2007 a programme to stimulate scientific production (“wetenschapsplan”) has been initiated and a substantial internal budget for scientific research has been set aside. This budget is financed out of the positive result from contact research. These funds are distributed (on the basis of research proposals) among SEO staff members to finance time spend on scientific activities (publications, congress participation, and dissertation). In this way staff members can reduce the time required for contract research and increased the allotted time for academic research. Its aim is to increase scientific quality and productivity of SEO researchers. We expect that this plan will stimulate the production of more publications in economic journals by SEO, more active participation in economic conferences and more dissertations. Only by publishing and presenting research results, a research institute stays ‘alert’ and keeps abreast of the newest developments in applied economics.

SEO Economic Research creates a stimulating environment for Ph.D. research. Over the years many PH.D.’s have been completed by SEO researchers and have been supervised by SEO professors. At this moment SEO has 5 staff members working towards a PH.D.

**B.3 Processes in research, internal and external collaboration**

Academic publications by members of SEO Economic Research are often a spin-off from contract research. As stressed earlier academic publications have consistently been stimulated and rewarded (financially and career wise) by SEO management. The policy to encourage scientific production has been intensified in a new “wetenschapsplan”.

It is SEO policy to stimulate publications in refereed economic journals (A and B publications). But it is also in our interest to publish in policy oriented publications, professional journals, economic weeklies and newspapers. Participation in the public discourse on economic issues by staff members is much encouraged. Publications in scientific, professional and popular media have a positive effect on growth of the portfolio of contract research for SEO.
For many young researchers in the field of applied economics SEO provides a training ground. SEO regularly hires junior researchers (economists, econometricians) often right after graduation. A common career path starts at the level of junior researcher, goes on to researcher and then to senior researcher. SEO invests a lot in junior researchers. It trains them on the job or through external training courses on how to write and present (competitive) research proposals and research papers and how to manage time and deadlines in research production. After a few years as a senior researcher staff members often leave SEO for other jobs (often with parties that have commissioned research at SEO).

SEO organises a weekly seminar for the presentation of research results by its staff members and by invited researchers (often from the UvA). SEO invites specialists to teach in-house courses on new developments in applied economics (such as econometric models for qualitative data and panel data and new developments in cost benefit analysis).

Contract research is almost always done in a research group consisting of junior and senior researchers and a research project leader. Academic research is mostly done in a combination of junior and senior people.

In our contract research we often work together with other contract research bureaus who have research skills which are complimentary to ours, e.g. skills in data collection or in disciplines other than economics. SEO highly favors working together in contract research projects with researchers from the economics faculty. In the past we have for instance worked together with researchers from the Industrial Organisation group, CREED and the econometrics group in the economics faculty.

Over the last years SEO has been doing labour market research commissioned by Randstad Holding (a large international temporary work agency headquartered in the Netherlands). Research topics in the past on this project have been flexible work arrangements, immigration and labour force participation. As part of this research project Randstad finances two part-time visiting professorships. These visitors participate in the research programme of SEO and in other research groups of the UvA. The two recent visitors were Professor Piet Emmer, labour history at the University of Leiden and Professor Christian Dustmann, labour and population economics at University College London. They stayed at AIAS (Amsterdam Institute of Advanced Labour Studies) during their visiting period.

SEO also accommodates visiting researchers. In 2007 Dr. Hidenobu Matsumoto of the University of Kobe, Japan stayed 3 months with SEO Economic Research for his study of airport systems. He returned this year and was granted a scholarship by NWO up to September 2008 to continue his research.

AIRNETH is a dedicated world-wide scientific network for aviation research and policy in the Netherlands. It is part of SEO and is related to the section on Aviation Economics. AIRNETH stimulates publications in aviation economics and organises workshops and conferences. It was set up in 2005 and is financed (until 2009) by the The Netherlands Directorate-General for Civil Aviation and Freight Transport (see www.airneth.com).

B.4 Academic reputation

As can be seen from the following review a lot of editorial and refereeing work is
done by SEO staff members. They also participate as members of editorial boards of journals and in academic and advisory boards. The list is for the period 2002 – 2007. Participation in editorial activities and advisory boards is mostly concentrated among senior researchers, section heads and directors of SEO.

Editorships, Editorial Boards
- H. Keuzenkamp: Member editorial board Socialisme en Democratie
- L. Kok: Member editorial board Tijdschrift voor Politieke Ekonomie, Member editorial board Rendemens
- C. Teulings: Member editorial Board ESB
- J. Theeuwes: Founding editor Labour Economics; Member editorial board Bedrijfseconomische Signalementen (SDU); Member editorial board Amsterdam University Press (AUP); Member of the editorial board of Tijdschrift voor Arbeidsmarktvraagstukken; Member scientific advisory board of the digital Tijdschrift voor Politieke Ekonomie (TPE-Digital)
- J. de Wit: Member of the editorial board of Journal of Air Transportation Management; Member of the editorial board of Journal of Air Transport; Member of the editorial board of Tijdschrift voor Vervoerswetenschappen;

Referee activities
- B. Baarsma: Energy Policy
- G. Burghouwt, Applied Geography; European Journal of Infrastructure; Transport Policy
- J. Theeuwes: Labour Economics
- J. de Wit: Tijdschrift voor Vervoerswetenschappen; Journal of Transport Economics and Transportation Policy

Academic Networks, Academic Committees, Advisory boards and committees
- B. Baarsma: Member Visitatiecommissie Prestaties Publieke Omroep
- G. Burghouwt: Member of the urban and Regional Research Centre Utrecht (URU); member of the Air Transport Research Society
- Heyma, Fellow Amsterdam Institute for Advanced Labour Studies (AIAS)
- M. de Nooij: Member scientific committee the European Electricity Market
- H. Keuzenkamp: Member Scientific Advisory Board ICES; Member Advisory Board National Accounts, CBS, Member Advisory Board AIAS; Member of Raad van Economisch Adviseurs van de Tweede Kamer (REA);
- Teulings: Fellow Tinbergen Institute; Chairman Committee New Examination Programme Economy for Havo and VWO; Member manifesto committee of the politica programme PvdA; Member of the Committee Dijkstal (salaries political and civil top); Member of the Central Planning Committte of the Central Planning Bureau (CPB);
- J. Theeuwes, Chairman Advisory Board Labour Statistics CBS; Chairman Advisory Board Social Statistics CBS, Member Advisory Board Collective Agreements in Health and Care Sector, Ministry of Health; Member Committee Minimum Wages, SER; Member of the scientific committee of the Raad voor de Rechtspraak; Chairman Vakraad Economie of the Koninklijke Vereniging voor de Staathuishoudkunde; Member Board of the Dutch Society for Social Security; member of the Economists panel for Business News Radio.
- J. de Wit: Member of the German Aviation Research Society; Member Steering Committee Air Transport Research Society; Member Benelux Inter Universitaire Groepering Vervoerseconomen (BIVEC), Member of the Aviation Forecasting and Economics Committee of the Transportation Research Board USA; Added expert member Raad van Verkeer en Waterstaat voor Luchtvaartzaken.
**B.5. Internal evaluation and analysis, perspectives and expectations for the research programme**

The SEO academic research programme is an integral part of the research programme of RESAM. The ties between SEO and RESAM are specified in a formal agreement that dates from February 2001. Although SEO is not a regular within-faculty research group, we adhere to the same principles for excellent scientific research as other research programmes within RESAM. The research output of SEO is registered and added to the departmental output in the yearly scientific report of RESAM. SEO participates in the faculty meetings of programme directors. Evaluation of the progress of the parttime aio’s working at SEO and co-financed by RESAM is done together with the faculty research director. The new “wetenschapsplan” of SEO has been commented upon by the faculty research director. The dean of the economics faculty and the vice dean of the Amsterdam School of Economics are members of SEO’s executive board. Strategic and policy plans from the directors have to be approved by the executive board.

**B.6. External validation**

It is SEO policy to encourage staff member to publish and disseminate research results as widely as possible. SEO is in the media very often. Staff members are encouraged to write policy articles in newspapers and weeklies. Senior staff members, section heads and directors are regularly interviewed by journalists from newspapers and news magazines and by radio and television stations.

Appearance by staff member in the media is monitored on the SEO website (http://www.seo.nl/nl/actueel/seoinmediaweb). We had more than 50 entries in the 2007 list, which implies that SEO is in the media once a week on average.

**B.7. Researchers and other personnel**

Academic research production is an integral part of SEO work and of information flows at SEO. There is a number of top-bottom information channels through which staff members are informed about policy (including policy regarding academic production). And there are bottom top information flows. There is a newsletter (written by the director) which appears (almost) every week and which announces and explains changes in policies. Staff members in each of the five sections meet every week to discuss all work and research related matters. All sections have internal sessions in which staff present work in progress (both academic and contract research) or read journal articles or book chapters together. SEO has an official OR (work council). Policies about the scientific research programme are part of the agenda of discussion between director and members of the OR. The OR organises a yearly questionnaire among staff members about job satisfaction and other work issues. Management reacts extensively to the results of the yearly questionnaire and adjust its policies if necessary.

New staff at the junior or intermediate level is hired by the section heads. Senior staff is hired by the director. The director and vice director are appointed by the executive board. New staff members are assigned a coach on their first working day. The coach helps the new worker in the first weeks to get acquainted with SEO mores. SEO has a personnel turnover of roughly 15-20% per year. Part of this high turnover can be explained by the large in- and outflow of student assistants.
Table 91

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<td>-</td>
</tr>
<tr>
<td>Vegt, C. van der</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>0.80</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
</tr>
<tr>
<td>Veldhuis, J.G.</td>
<td>-</td>
<td>0.84</td>
<td>0.95</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Velthuysen, J.W.</td>
<td>-</td>
<td>0.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Winter, J.M. de</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Zijderveld, C.E.</td>
<td>0.85</td>
<td>1.00</td>
<td>0.58</td>
<td>0.63</td>
<td>0.42</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Total tenured staff** | 18.39 | 22.78 | 25.60 | 29.19 | 29.04 | 26.39 | 20.28
Table 91 (continued)

<table>
<thead>
<tr>
<th>Nontenured staff</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alla, A.</td>
<td>0.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berg, E. van den</td>
<td>0.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berg, M. van den</td>
<td></td>
<td>0.13</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Bremer, S.</td>
<td></td>
<td></td>
<td>0.55</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Gerritsen, M.</td>
<td></td>
<td></td>
<td>0.70</td>
<td>0.95</td>
<td></td>
</tr>
<tr>
<td>Gietema, B.G.</td>
<td></td>
<td>0.34</td>
<td>0.63</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>Hollanders, D.A.</td>
<td></td>
<td>0.80</td>
<td>0.20</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>Holleman, J.</td>
<td></td>
<td>0.46</td>
<td>0.84</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>Houkes-Homens, A.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.84</td>
</tr>
<tr>
<td>Janssen, K.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.80</td>
</tr>
<tr>
<td>Klaveren, C.P.B.J.</td>
<td></td>
<td></td>
<td>0.50</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Leenheer, J.</td>
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<td></td>
<td>0.50</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>Seikh, O.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.61</td>
</tr>
<tr>
<td>Sluis, J. van der</td>
<td></td>
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<td>0.33</td>
<td>0.37</td>
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<tr>
<td>Smits, F.</td>
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<td></td>
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<td>0.49</td>
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<tr>
<td>Weda, J.N.T.</td>
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<td>0.44</td>
</tr>
<tr>
<td>Zuidberg, J.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.35</td>
</tr>
<tr>
<td>PhD students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buiren, K.B.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.24</td>
</tr>
<tr>
<td>Ferrer-i-Carbonell, A.F.C.</td>
<td>0.60</td>
<td>0.60</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Graaf-Zijl, M. de</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
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</tr>
<tr>
<td>Hollanders, D.A.</td>
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</tr>
<tr>
<td>Leffelaar-Felsö, F.A.</td>
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<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
</tr>
</tbody>
</table>

Total non-tenured staff 1.00 1.00 0.80 0.80 2.53 6.13 11.33

Total research staff 19.39 23.78 26.40 29.99 31.57 32.52 31.61

SEO holds an NEN-EN ISO 9001:2000 quality certificate for Applied Economic Research and Consulting. This implies that all SEO work procedures and information flows are structured along prescribed ways and checked yearly by the certification agency.

B.8 Resources, funding and facilities

SEO Economic Research obtains its funding almost exclusively from contract research. Part of the funding is obtained - according to the 2001 agreement between RESAM and SEO – as a compensation for SEO’s research output in terms of A and B publications. Out of the compensation two SEO staff members can be financed as (part time) aio’s in the ‘AIO-programme’ from RESAM.

The compensation which the SEO obtains from RESAM is added to the total scientific budget available under the new “wetenschapsplan” to intensify academic production (see above: strategy and policy). SEO funds its scientific budget from the positive result it obtains from contract research. The yearly total scientific budget varies with this positive result. In good years the scientific budget will be substantial. Research facilities (installations, equipment, computers, library) are financed from the proceeds of contract research. SEO has a 10 person strong supporting staff for administration, secretariat, library, web management and computers. Total amount of commissioned research of SEO was close to 3,7 million € in 2007. SEO has a total staff of between 50 and 55 persons. Both the total amount of contract research and staff size grows over time.
Table 92
Staff funding at programme level

<table>
<thead>
<tr>
<th>Funding</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct funding fte's</td>
<td>5%</td>
<td>4%</td>
<td>5%</td>
<td>4%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
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<tr>
<td>Research funds</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Contracts</td>
<td>95%</td>
<td>96%</td>
<td>95%</td>
<td>96%</td>
<td>97%</td>
<td>98%</td>
<td>98%</td>
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<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

B.9 Overview of the results

Key publications


Table 93
Total programme results: outcome in numbers

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. International</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. journals</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>10</td>
<td>11</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>b. books, monographs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>c. books, edited</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. chapters</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Dutch journals</td>
<td>23</td>
<td>20</td>
<td>11</td>
<td>15</td>
<td>30</td>
<td>26</td>
<td>23</td>
</tr>
<tr>
<td>books</td>
<td>29</td>
<td>50</td>
<td>37</td>
<td>55</td>
<td>45</td>
<td>70</td>
<td>51</td>
</tr>
<tr>
<td>chapters</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>3. PhD theses</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>4. Professional publications</td>
<td>7</td>
<td>5</td>
<td>29</td>
<td>10</td>
<td>9</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 94
Total programme results: outcome in numbers international journal publications

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Top Journals</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Other international Journals</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>9</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>
OUTPUT
SEO ECONOMIC RESEARCH

2007

1. International academic publications

Journals

Books, Monographs

Chapters

2. Dutch Academic publications

Journals


**Books**


RESAM: SEO Economic Research


Risseeuw, P. (2007). De uitdaging is steeds hetzelfde, alleen de invulling is anders: een onderzoek naar de ondersteuningsstructuur van de Nederlandse muziekssector. SEO-rapport, 2007-66. Amsterdam: SEO.


977. Amsterdam: SEO.

**Chapters**


3. Ph.D. Theses


4. Professional Publications and products


Wit, J.G. de (2007, 7 July). Mainportbelang, capaciteit en selectiviteit: even goed schudden ... www.luchtvaartnieuws.nl
2006

1. International academic publications

**Journals**

**Books, Monographs**

**Chapters**

2. Dutch academic publications

**Journals**


Economisch Statistische Berichten, 91, (4495), 508.

Books
Aalbers, R. & Nooij, M. de (2006). Per maand of per kWh?: beoordeling van de effecten van een ander tariefsysteem voor kleinverbruikers elektriciteit. SEO-rapport, 865. Amsterdam: SEO.

RESAM: SEO Economic Research


Chapters
3. Ph.D. Theses


4. Professional publications and products


1. International academic publications

**Journals**


**Books, Monographs**


Leiden: Rand Europe.

Chapters

2. Dutch academic publications

Journals


**Books**


vervoer en deelgroepvervoer in zes landen. SEO-rapport, 812. Amsterdam: SEO.


Chapters


4. Professional publications and products

1. International academic publications

**Journals**

**Books, Monographs**

**Chapters**

2. Dutch academic publications
**Journals**


**Books**


van open standaarden en open source software in de Nederlandse publieke
Amsterdam: SEO.
marktverstoring: analyse breedbandplannen publieke en private partijen.
SEO-rapport, 787A. Amsterdam: SEO.
Jeugdwerkeloosheid: een eerste opzet. SEO-rapport, 771. Amsterdam: SEO.
748. Amsterdam: SEO.
Berkhout, P. & Graaf, D. de (2004). Weegprocedure en correctie voor allochtonen
zonder InterNet. SEO-rapport, 730. Amsterdam: SEO.
Biermans, M., Korteweg, J.A. & Leeuwen, M van (2004). De keuze voor
beta/techniek: kwantitatieve analyse van de keuze voor beta/techniek op
basis van TKMST-data. SEO-rapport, 721. Amsterdam: SEO.
een vergezocht probleem?: een onderzoek onder de 100 grootste zakelijke
dienstverleners uit de provincie Utrecht. SEO-rapport, 785. Amsterdam: SEO.
Bijvoet, C.C. & Koopmans, C.C. (2004). De effectiviteit van regionaal beleid in
wettelijk onderzoek vanaf 1970. SEO-rapport, 751. Amsterdam: SEO.
werking van het besluit vrijstelling combinatieovereenkomsten. SEO-rapport,
780. Amsterdam: SEO.
SEO-rapport, 749. Amsterdam: SEO.
Grijpstra D.H., Klaer, P.M. de, Leeuwen, M.J. de, Biermans, M.L., Graaf, D. de,
Arbeidsmarktmonitor Zuidelijk Noord-Holland. December 2004. Amsterdam:
RPA Zuidelijk Noord-Holland.
WWB. SEO-rapport, 743. Amsterdam: SEO.
naar de nieuwe levensloopregeling. SEO-rapport, 781. Amsterdam: SEO.
RMO werkdocument, 3. Den Haag: Raad voor Maatschappelijke
Ontwikkeling.
op het pensioen. SEO-rapport, 778. Amsterdam: SEO.
Grijpstra D.H., Klaver, P.M. de, Leeuwen, M.J. van, Biermans, M.L., Graaf, D. de,
Zuidelijk Noord-Holland.
Amsterdam: SEO.
SEO-rapport, 724. Amsterdam: SEO.
Hof, B. & Koopmans, C. (2004). De maatschappelijke betekenis van doorvoer:
second opinion bij TNO Inro onderzoek. SEO-rapport, 736. Amsterdam: SEO.
verschillen in arbeidsongeschediktheidsrisico. SEO-rapport, 744. Amsterdam:
SEO.
728. Amsterdam: SEO.


Chapters


3. Ph.D. Thesis

4. Professional publications and products


2003

1. International academic publications

**Journals**

**Chapters**

2. Dutch academic publications

**Journals**

**Books**


beginnende bestuurders tegen het licht. SEO-rapport, 670. Amsterdam: SEO.
Mulder, J. (2003). De blinde vlek van transparantie: een onderzoek naar de invloed
van transparantie op de hoogte van notaristarieven in de onroerendgoedpraktijk. SEO-rapport, 696. Amsterdam: SEO.
maatschappelijke kosten en baten van de invoering van de OV-Chipkaart.
Utrecht: Hypercube Business Innovation.
versus domeinmonopolie en ministerieplicht: over de gevolgen van
marktwerving in het notariaat. Amsterdam: Berenschot; Den Haag: Ministerie
van Economische Zaken.
rapport, 679. Amsterdam: SEO.
beleid. SEO-rapport, 706A. Amsterdam: SEO.
onderzoek en het bedrijfsleven. SEO-rapport, 669. Amsterdam: SEO.
maakindustrie. SEO-rapport, 678. Amsterdam: SEO.
Theeuwes, J.J.M. (2003). Het publieke belang van de Europese elektriciteitsmarkt:
position paper. SEO-rapport, 663. Amsterdam: SEO.
voorjaar 2003. SEO-rapport, 681. Amsterdam: SEO.
Vegt, C. van der (2003). Amsterdamse economische verkenningen najaarsbrief
2003: de regionale economie in 2003 en 2004, herziene ramingen. SEO-
rapport, 705. Amsterdam: SEO.
luchthaven?: een analyse naar de invloed van zachte factoren op luchthaven-
voortransport keuze. SEO-rapport, 707. Amsterdam: SEO.
conjunctuur: motieven van werkgevers en de gevolgen voor de samenloop
met conjunctuur. SEO-rapport, 704. Amsterdam: SEO, HSI.

Chapters
(eds), Jaarboek Overheidsfinanciën 2003 (pp.133-156). Den Haag: Sdu
uitgevers.

4. Professional publications and products
economische lust of last?: een literatuurstudie naar de economische aspecten
Bekkers, R., Baarsma, B., Bilderbeek, R., Maltha, S., Groot, H., Vanderberg, R.,
empirische studie naar de economische aspecten van het auteursrecht in het
Nederlandse multimediACLuster. Den Haag: Ministerie van Economische
Zaken.
Benedictus, H., Boer, R. dem, Meer, M. van der, Salverda, W., Visser, J. & Zijl, M.
(2003). The European social dialogue: development, sectoral variation and
prospects report to the Ministry of Social Affairs and Employment. The
Hague: Ministry of Social Affairs and Employment.
stap van school naar werk? Amsterdam: CWI Centrum voor Werk en Inkomen.


2002

1. International academic publications

**Journals**

**Books, Monographs**

**Chapters**

2. Dutch academic publications

**Journals**


**Books**


Zoetermeer: Ministerie van Onderwijs, Cultuur en Wetenschappen.


Dutch experiences with European employment strategy. SEO-rapport, 611. Amsterdam: Amsterdam Economics, Institute for Advanced Labour Studies.

**Chapters**


**3. Ph.D. Thesis**


**4. Professional Publications and products**


Leeuwen, M.J. van & Graaf, D. de (2002). Contributors to *Euro Student: social and economic conditions of student life in Europe 2000. Synopsis of indicators and national profiles for Austria, Belgium (Flemish Community), Belgium*
(Wallonia-Brussels Community), Finland, France, Germany, Ireland, Italy and the Netherlands. Hannover: HIS Hochschul-Informations-System.
2001

1. International academic publications

**Journals**

**Books, Monographs**

**Books edited**

**Chapters**

2. Dutch academic publications

**Journals**
arbeidsparticipatie van ouderen. *PS Documenta, 4*, (15), 1823-1833.

**Books**


SEO.

Chapters

3. Ph.D. Thesis

4. Professional publications and products
B.10 Analysis, perspectives and expectations for the research programme

SWOT

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The scientific curiosity and research interest of staff members is a huge strength. New staff members join SEO because they like to do applied research that is useful for society. And they like to publish about their research results</td>
<td>• In a contract research bureau the strict deadline for commissioned research implies that contract research always has priority over scientific research. With the new “wetenschapsplan” we hope to make it easier to spend more time on scientific production.</td>
</tr>
<tr>
<td>• SEO is highly regarded in the field of contract research and often attracts research questions which are hard but also exciting from a scientific point of view</td>
<td>• Because funding of scientific research depends on the returns of contract research we depend on the economic cycle in the market of contract research. As we have spread our contract research portfolio over more sectors (public, private, non-profit, international) we have had a positive result in each year of the period under consideration. But some years were better than others.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>• While doing contract research staff members sometimes encounter interesting data sets or stimulating research questions that can be used or expanded into scientific publications</td>
<td>• It is increasingly hard to attract and keep good economic researchers</td>
</tr>
<tr>
<td>• We are valued in the market for our scientific approach. Strengthening our scientific fame will increase our market value and our result and put us onto a virtuous cycle.</td>
<td></td>
</tr>
</tbody>
</table>