

QANU Research Review
Economics & Business Sciences

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FOREWORD

This report follows the Standard Evaluation Protocol 2003-2009 for Public Research Organisations (SEP) that was developed by VSNU, KNAW and NWO. The purpose of this report is to present a reliable picture of the research activities submitted for this review and to give feedback on the internal quality assurance of the organisations concerned.

The review committee was supported by QANU (Quality Assurance Netherlands Universities). QANU aims to ensure compliance with the SEP in all aspects and to produce independent assessment reports with peer review committees of international experts in the academic fields involved.

QANU wishes to thank the chairperson and members of the review committee for their participation in this assessment and for the dedication with which they carried out this task. We also thank the staff of the units under review for their carefully prepared documentation and for their co-operation during the assessment.

Quality Assurance Netherlands Universities

Mr. Chris C.J. Peels
Director

Dr. Jan G.F. Veldhuis
Chairman of the Board

PREFACE

This report describes the quality assessment of the university research programmes in Economics and Business in the Netherlands. The assessment covers the period 2001-2007 and was conducted according to the Standard Evaluation Protocol 2003-2009 for Public Research Organisations (SEP).

The quality assessment was carried out by a review committee consisting of one chair and eight members with expertise in economics and business and the relevant economical methodology. These experts come from Belgium, France, Germany, Italy and the United Kingdom. Their broad experience in research was most helpful when assessing the various programmes in economics and business.

From the very beginning, the committee worked as a team, including in the discussion about the phrasing of the conclusions and the assignment of the final ratings. The committee wants to stress that the ratings and the verbal commentary together reflect the full spectrum of the observations made.

As chair of the committee, I greatly appreciate the commitment, the high quality of the contributions, and the excellent cooperation of my eight colleagues. The committee wants to thank all persons involved in the thorough preparation of the review, and especially the secretary for his support from the very beginning through the final completion of this report.

Prof. R. van Dierdonck
Chairman of the committee

1. The review committee and the review procedures

Scope of the assessment

The Review Committee was asked to perform an assessment of the research in Economics and Business Sciences at the Rijksuniversiteit Groningen (RUG), Vrije Universiteit Amsterdam (VU), University of Amsterdam (UvA), Erasmus University Rotterdam (EUR), Tilburg University (UvT) and Maastricht University (UM). This assessment covers research in the period 2001-2007.

In accordance with the Standard Evaluation Protocol 2003-2009 for Public Research Organisations (SEP), the Committee's tasks were to assess the quality of the institutes and the research programmes on the basis of the information provided by the institutes and through interviews with the management and the research leaders, and to advise how this quality might be improved.

Composition of the Committee

The composition of the Committee was as follows:

- Prof. dr. Roland Van Dierdonck, Ghent University, chairman of the Committee
- Prof. dr. Giuseppe Bertola, Università di Torino
- Prof. dr. Catherine Casamatta, Université de Toulouse
- Prof. dr. Andrew Chesher, University College London
- Prof. dr. Pierre Dussauge, HEC School of Management, Paris
- Prof. dr. Matthias Jarke, RWTH Aachen
- Prof. dr. David Otley, Lancaster University
- Prof. dr. John Saunders, Aston University, Birmingham
- Prof. dr. Edward Snape, Hong Kong Baptist University.

A short curriculum vitae of each of the Committee members is included in Appendix A.

Roel Bennink of the Bureau of QANU (Quality Assurance Netherlands Universities) was appointed secretary to the Committee.

Independence

All members of the Committee signed a statement of independence to safeguard that they would assess the quality of the Institutes and research programmes in an unbiased and independent way. Any existing personal or professional relationships between Committee members and programmes under review were reported and discussed in the committee meeting. The Committee concluded that there were no unacceptable relations or dependencies and that there was no specific risk in terms of bias or undue influence.

Data provided to the Committee

The Committee has received detailed documentation consisting of the following parts:

- Self-evaluation reports of the units under review, including all the information required by the Standard Evaluation Protocol (SEP), with appendices;
- Copies of three key publications per research programme.

Procedures followed by the Committee

The Committee proceeded according to the Standard Evaluation Protocol (SEP). Prior to the Committee meeting, each programme was assigned to two reviewers, who independently formulated a preliminary assessment. The final assessments are based on the documentation provided by the Institutes, the key publications and the interviews with the management and with the leaders of the programmes. The interviews took place in November 2008 and May 2009 (see the schedule in Appendix C) on a central location in Utrecht. No site visits took place.

Preceding the interviews, the Committee was briefed by QANU about research assessment according to the SEP. On the same day, the Committee discussed the preliminary assessments. For each programme a number of comments and questions were decided upon. The Committee also agreed upon procedural matters and aspects of the assessment. After the interviews, the Committee discussed the scores and comments. The texts for the committee report were finalised through email exchanges. The final version was presented to the faculties for factual corrections and comments. The comments were discussed in the Committee and led to textual changes in the report on a number of points. The Committee decided not to change any scores, in order to maintain consistency across the groups and because the scores are based on the documentation and the interviews only and do not take later developments into account. The Committee also felt that scores in previous reviews could not influence the scores in this review. The final report was presented to the Boards of the participating universities and was printed after their formal acceptance of the report.

The Committee used the rating system of the Standard Evaluation Protocol. The meaning of the scores is described in Appendix B.

2. General remarks

First of all, the Committee wants to express its appreciation of the whole review process. The universities in the Netherlands have had the courage to ask scholars from abroad to gauge their research output against internationally agreed standards. We are inclined to believe that, over the years, this process has contributed to the high quality which we generally observed.

Warning to the reader

The reader should be aware that this review does not cover all the research in Economics and Business Science at the universities in the Netherlands. Although the universities have agreed to submit all their publicly financed research for external review every six years, they are free to decide which research is submitted to which committee and in which year. The Erasmus University Rotterdam (EUR) has not submitted the management science research in the Rotterdam School of Management (RSM) in this review, but only the research carried out in the Erasmus School of Economics (ESE). Also, three research programmes of the University of Groningen that were recently (re)formulated and did not yet comply with the criteria of the research institute SOM, were submitted to this Committee for confidential advice only. Such limitations should be taken into account when comparing scores across institutes.

2.1. Overall Assessment

Generally, the Committee was very impressed by the research at the Dutch Faculties of Economics and Business Administration. The average quantity and quality of the research output is very high. Table 1 gives an overview of the numerical scores. The average score on the four assessment criteria was significantly above 4. No less than 35 programmes scored 4 or higher on these four criteria; and 12 programmes scored a 5 on Quality. In some areas, research at Dutch Faculties of Economics and Business Administration is clearly world-leading.

Because of the quality of their research, researchers associated with Dutch faculties of economics and business administration regularly succeed in publishing in the top journals. Research productivity is also high, as measured for instance by publication output per capita (expressed in FTE's). Dutch researchers are very visible at international conferences in various fields where they often play an active role. The Committee was also pleased by the high degree of relevance of the research, indicating that high quality of fundamental research does not need to exclude societal relevance. As prescribed by the current Standard Evaluation Protocol 2003-2009, the Committee did not only take the relevance of research for end-user into account, but also its relevance for the academic community as measured for instance by citation indices in high-impact journals. The scores for viability are also high in most cases, but the Committee expressed some concern about the viability of some of the programmes.

There does not seem to be one overriding reason that can explain this remarkable position. In this report we try to identify some factors that have contributed to the current situation, but at the same time try to offer explanations for some of the relative weaknesses and threats we saw.

2.2. Resources

2.2.1. Human resources and HRM policy

The Committee observed that the input of human resources in the 54 research programmes in the six universities has increased significantly over the last seven years: from 705 FTE's in 2001 to 864 in 2007 which is an increase of 22 %.

As was recommended in the previous evaluation, most institutions have introduced a tenure track, which has undoubtedly had a positive effect on the research. Some other HR policies have also had a beneficial impact, e.g. the reward systems with clear incentives for outstanding performance. In most cases excellent research performance is rewarded by allocating extra research time to the individual at the expense of teaching, sometimes also by financial rewards, either as personal income, but more frequently for research related expenses. In some institutions the dean or the head of the research school have the autonomy to deviate from the reward system in the rest of the university or from the national system, in other cases such flexibility does not exist. The Committee believes that having such flexibility is especially important for attracting and retaining internationally reputed researchers and to sustain or improve the generally high position of the economics and management sciences research at Dutch Universities. In the interviews, not being able to pay internationally competitive salaries was considered as one of the major threats for the future. Some attention should be paid to the development of a more explicit and general strategy to reward and retain successful researchers.

In most faculties it is very clear what output is expected from the researchers and what role this plays in the promotion system. This clarity is in some cases a by-product of the existence of research schools inside or outside the Faculty that have clear criteria for membership. Another important factor is the peer pressure inside the research school or among the various research schools at different universities.

The Committee found that many programmes show a high international presence: cooperation with reputed institutes, formal or informal collaborations with colleagues all over the world, international doctoral students who are increasingly recruited by good business schools or faculties of economics, and visiting researchers or researchers who stay connected to a certain programme for a certain percentage of their time. The Committee was sometimes concerned about these small percentages and wondered what the real impact was. In most cases however, these 'visitors' tended to be very useful, not least for the doctoral students.

As a final remark concerning the strengths, the Committee wants to draw attention to the faculty development programme, which we found in most cases. The training provided in the research schools was thorough with quite often an effective coaching approach. The teaching load for starting faculty was light to very light.

A characteristic shared by almost all programmes and schools as far as HR is concerned is the lack of gender diversity. The vast majority of the researchers in the various programmes are male. Some institutions expressed an intention to come to a more balanced situation.

2.2.2. Financial resources

A high research output can only be realised with the necessary financial resources. Three types of money streams fund the research at the six universities: direct funding, research council funding and contract research. Some programmes receive very generous income from corporations. This includes the income generated from contract research but also sponsorship by private companies or institutions of more fundamental research. We can refer to the sponsorship of PhD research and the increasing success of chair contracts. Some institutions are better in attracting these funds than others, which gives them a competitive advantage.

Some institutions are very successful in attracting contract research. This depends partly on the strategy of the institution. Some have no explicit strategy towards contract research, which

creates an ambiguous situation. The Committee recommends that each school develop a clear strategy towards contract research, including how to organize it.

Currently the balance in research funding is very much tilted towards the first money stream. We generally would recommend that the institutions pursue a more balanced situation to support the viability of the research programmes. The first money stream is mainly student enrolment driven: the more students, the more funds are available for research. This leads in some cases to the undesirable situation that teaching is mainly in large groups, especially for bachelor students. This might lead to a negative attitude of the faculty towards teaching MBA programmes, where quality standards tend to be higher and therefore must be in smaller groups, which absorbs resources.

Some groups are fairly successful in attracting so-called second stream research money; others are less successful and identify this as a weakness. Generally, the success rate at NWO is lower than for instance in the field of psychological sciences. Both fields are combined in one field at NWO (*Maatschappij- en Gedragwetenschappen*). In most interviews this was seen as unfair given the different research traditions in the different fields. Many of the interviewees would prefer to have separate committees at NWO. The Committee favours such a split.

The Committee expects that the importance of the second and third stream of money will grow over time. Most faculty positions in the tenure track are currently based on the first income stream. Universities are reluctant to make faculty commitments based on what they see as less secure revenues. With the expected changes in the composition of revenues, Schools and research programmes will have to change their attitude and accept the possibility to employ tenured faculty based on other than first stream income. Externally funded endowed chairs are worth considering in this respect.

The Committee observed a significant difference between the older and the younger universities. It appears that in the older (comprehensive) universities an internal reallocation of the generated revenues is taking place, transferring funds from among others the economical and management sciences towards the natural or exact sciences. This may put the faculties of the older universities in a disadvantageous competitive position compared to those of the newer ones.

We already mentioned the advantage of some financial flexibility to reward excellent performance or to pay supplements to attract and retain international faculty. In some cases we also noticed the use of such money to provide seed money to starting researchers or researchers with novel ideas.

The Faculties generally have no endowment income, which places them at a significant disadvantage against well endowed schools in the US. In Canada and the UK successful attempts have recently been made to increase endowments. The Dutch universities should perhaps also consider making long-term plans to close the funding gap and become less dependent upon the state.

2.3. Organisation of research

Research in Economics & Business Sciences in the Netherlands is organized in research programmes and in research 'schools'. We evaluated in total 54 research programmes, including 3 programmes that were not yet formally recognized as such. In addition we evaluated 7 research "schools" and one PhD programme.

Generally the Committee found that both organisational concepts (programme and school) have proven to be effective vehicles to organize the research activities and to improve the quality and quantity of the research output in the six universities.

2.4. Research programmes

The number of programmes decreased from the 60 that were in existence in 2002 when the previous review took place. A direct comparison is not possible as the participating universities 7 years ago did not correspond with the current participating universities. Nevertheless we got the impression that one of the overall recommendations of the previous review, to reduce the number of research programmes, was unevenly implemented.

A major reduction of programmes was observed at Erasmus University (from 15 to 6 programmes). This was sometimes achieved by combining programmes into one programme, but also by pruning the research programme portfolio and concentrating on a smaller number of programmes. The Committee was of the opinion that this concentration has contributed to the marked improvement in the performance of this university.

Other universities have responded by simply combining programmes, which of course created the potential to start interdisciplinary research, but most often blurred the focus and as such weakened the concept of programmatic research. It should also be noted that in some cases the number of programmes showed an organic growth, in line with the expansion of the faculty.

The concept of programmatic research was not always applied with the same rigour. In some programmes heterogeneous research interests were combined. While in theory this provides the opportunity for novel and revealing research, in some cases we found little or no interaction between members of the same programme. In addition there was not always the same coherence in the research programme. We urge therefore for more focus. Focus increases the impact and visibility of research output within the scientific community. Internally focus facilitates leadership and collaboration. Focus does not necessarily mean monodisciplinary research. A research programme can also focus on an interdisciplinary issue, but in such cases the programme needs to be designed with a clear rationale for interdisciplinary work.

2.5. Research Schools

The concept of research schools groups the various research programmes at a faculty into one (sometimes two) research oriented structure. As a research arm of a full range business school or faculty of economics it is believed to be well suited to meet the needs of the business and other economic actors, students as well as the academic community. Such a structure emphasizes the importance of research, and provides incentives and guidelines for excellent research. It provides a home for research oriented activities like a PhD programme and more recently MPhil programmes. It also makes interuniversity collaboration possible and therefore solves the problem of insufficient critical mass, especially in PhD programmes. Theoretically it could also stimulate the kind of cooperation that leads to multidisciplinary research.

In our observations nobody questioned the value of research schools. However, we have to state that the concept was not always implemented in an equally strong way. In some cases it was indeed fairly strong where people identified themselves strongly with their school, while in other case the association with the school was much weaker, loosely connecting the research

at the faculty. The difference probably goes hand in hand with the difference in approach and attitude towards the management of research. (See later)

There is a danger that the existence of research schools within a faculty increases the gap with teaching activities. However, some universities have shown that this does not need to be the case.

Research schools provide the potential to stimulate cooperation. This is particularly the case in the Tinbergen Institute which is situated in Amsterdam and Rotterdam. However, somewhat to our surprise we found few instances where active collaboration in research programmes took place. The collaboration was more at the PhD and MPhil level. We realise that from a certain level on, collaboration should go beyond national boundaries.

2.6. PhD Programmes / MPhil

PhD programmes are one of the strengths of the research system in the Netherlands compared to other European countries. They are generously funded, by sources which include industry, they are able to attract good international students, and to place their graduates at reputed institutions. The doctoral students we have been able to interview were quite satisfied with their programme. The existence of research schools is without any doubt a reason behind the success.

Some complaints were voiced by the interviewees about too rigorously applied requirements, especially in fields outside finance, marketing and economics, such as information systems

2.7. Separate units for contract research

We referred earlier to the need in some institutes for a more explicit strategy towards contract research. The institutes that have a clear view on contract research and where contract research is an important source of income, tend to organize contract research in a separate unit, sometimes even in a separate business unit. This facilitates the professionalization of the contacts with the customers.

2.8. Some dilemma's/strategic choices

Reading the self-evaluation reports and listening to the researchers and management staff during the interviews, the Committee identified a number of dilemmas or strategic choices for the various Faculties. There is typically no right or wrong position or choice, but there is a need for clarity, consistency and coherence. These are issues that should be dealt with at the level of the institutions or the faculty. In some cases we observed a discrepancy with respect to these choices between the individual researcher and the programme manager and/or the management of the faculty or the university. We hope that by identifying these dilemmas we can stimulate the institutions to start the debate, make a choice and formulate a coherent research strategy.

2.9. Multidisciplinary vs. monodisciplinary research

Some research programmes were clearly monodisciplinary, while others were by design or by default multidisciplinary. Choosing a monodisciplinary focus has some advantages, but also some disadvantages. A monodisciplinary perspective creates focus in terms of the list of targeted journals, type of research, reward and promotion, etc. It also facilitates the access to the top journals, which tend to favour monodisciplinary research. By increasing the homogeneity and therefore comparability among the various groups, a healthy amount of peer pressure stimulates competition and helps to raise the ambition and quality.

This monodisciplinary strategy is not without its risks. The interaction with other disciplines such as sociology, psychology, etc. can in certain areas be very enriching and stimulating. A monodisciplinary approach to business issues does not always correspond with

the multidisciplinary of real business problems. In other words, relevance might be at issue. Perhaps more importantly, much interesting and important research is going on at the borders between different disciplines. Moreover funding agencies tend to favour multidisciplinary research even in fundamental research programmes.

In our review we have seen few interdisciplinary projects that work across various social sciences. If collaboration existed, it was much more across networks within the same discipline. We realize that the latter type of collaboration improves the chances of getting the research published, while the former approach, as stated earlier, diminishes these chances. While it is by no means certain that the really novel research will come from collaboration across disciplines, it would be regrettable if the publication strategy becomes the dominant factor in decisions about research directions.

2.10. Combining Economics with Business Sciences

Dutch universities (except the Erasmus University Rotterdam) have chosen to organize economics and management sciences within the same faculty. This runs against international trends according to which business schools are increasingly organized separately from a faculty of economics. This is especially the case if the emphasis of the business school is predominantly on graduate (i.e. master) or even post-graduate education, in particular at post-experience levels.

The main reasons are:

- that the expectations and requirements of the three 'customer groups' are different
- that the dynamics of the environment of the two disciplines are different and therefore the capability to react flexibly to these differences should be different
- that most of the issues businesses are facing are multidisciplinary
- that management sciences are not only based on economics but also on such fields as psychology, sociology, technology, law or even philosophy
- that the educational programmes should not only be focused on transfer of knowledge but also on personal (skills, attitude) development.

Some would argue that a business or management school should have a more professional and practice-oriented mission as is the case for medical or law schools.

While the differences appear to have mainly an impact on the educational activities and less on the research activities, there is clearly an issue; otherwise we would not find different structures.

Almost from the very beginning of business schools in the previous century, the position of research and the difference with economical sciences has been at the centre of the debate in academic circles. Quite often this was a debate between the importance of rigour versus relevance, monodisciplinarity versus multidisciplinary, fundamental versus applied research (where research is judged by its relevance not only to new knowledge and theory, but also to clinical and legal practice), and between different research methodologies. Research in business schools is usually supported by methodologies based on in-depth and close observation of complex business situations that are not always appreciated in the economic sciences. This is not the place to settle the debate, but universities should be aware of this debate. They should also be aware that when they combine both domains in one faculty, they put together different research traditions, different publication outlets, different peer groups, etc.

Even if the decision is to organize both domains in the same faculty, different structures are possible. In our limited sample we observed quite different structures with on the one hand Erasmus University where research (and teaching) is separated into two research schools, while at Tilburg University research is jointly organized but where teaching at the post-experience level is outside the normal university structure.

2.11. Spearheads or wide spectrum

In any research environment a debate on two different management approaches exists which we found also at the various universities in this sample. For instance in the VU self-evaluation report we found the following statement: *“The Faculty does not aim at research excellence in a small number of fields. This would suppress the natural adjustment mechanism whereby researchers apply themselves to new promising research questions and achieve excellence”*. In the same report we find a strong view on how resources should be allocated: *“Allocate resources on the basis of proven quality not on selected spearheads”*. This view might seem to be in contrast with the view of the board of the same university that favours a focus on selected topics in an interdisciplinary research institute, but it is clear that to have an international impact most universities have to identify some spearheads in which they concentrate resources. On the other hand, with a view on their teaching programmes, universities cannot afford to neglect doing research on a wide spectrum of issues, because there must always be a clear link between teaching and research in academic programmes. There are good examples of institutes that succeed in combining both objectives.

2.12. Fundamental and applied research

In most Schools we found a mixture of fundamental and applied research, but the weight given to and the attitude towards applied research in individual programmes and Schools differed. Applied research sometimes seems to be regarded as taking time away from fundamental research, but in other cases a more balanced view towards applied research is present. Some institutes not only define applied research explicitly as part of their mission, but they regard the interaction between professional practice and academic research as a source of inspiration and motivation for fundamental research. In such cases, applied research can help to diversify the source of revenues, contributing to the viability of the School or programme. In general however, Faculty management policies seem to be tilted towards fundamental research.

2.13. Relationship with teaching

Some faculties stimulate research by reducing the teaching load of particularly productive researchers. Care must be taken that this does not have a negative impact on the quality of teaching. At least one faculty has a different approach: everybody has the same teaching load. The importance of teaching and the interaction between teaching and research must be taken into account not only at the undergraduate level or at the PhD or MPhil levels, but also at post-experience levels.

2.14. Research output in other fields (e.g. health care)

In our interviews some complaints were voiced that not all research was equally recognized, especially the research in related, quite often more applied fields (health care, information management systems, etc.). The Committee believes that sufficient flexibility in the list of targeted journals should be maintained so that excellent research in related fields can be recognized. We realize that this requires special effort as evaluation committees have to venture into unknown territory.

ASSESSMENTS PER INSTITUTE AND PER PROGRAMME

3. Faculty of Economics and Business, University of Groningen

Introduction

Research in the Faculty of Economics and Business (FEB) in Groningen is organised in the research institute SOM¹. SOM is also the Graduate School of the FEB and is responsible for the Honours Bachelor, the Research Master, and the PhD programmes in Economics and Business.

Currently, SOM has five research programmes:

- International Economics, Business & Management
- Economics, Econometrics & Finance
- Marketing
- Operations Management & Operations Research
- Human Resource Management & Organizational Behaviour.

In addition, Economics and Business research at the University of Groningen is conducted in two research programmes under development, which have not yet been admitted as official SOM programmes:

- Business & Information Systems
- Management Accounting.

One new research programme has recently been proposed:

- Interaction & Innovation.

Mission & Goals

The mission of the SOM research institute is:

- To stimulate mono-disciplinary and interdisciplinary fundamental and applied research, meeting international standards, related to the firm in its economic environment;
- To provide high-level MSc and PhD programmes in this field.

The most important objective of the policy of SOM, according to the self-evaluation, is to improve the quality of research.

The Committee found that SOMS mission and goals had successfully directed the school through major reorganisation, growth and greater research quality. However, the mission statement of SOM is rather bland and does not identify the unique strengths of SOM. Nevertheless SOM appear to have achieved a high level of buy in and consistency across its programmes. More than any other school reviewed, SOM can present itself as the research arm of a full range business school well served to meet the needs of business and students as well as the academic community.

¹ OM was founded in 1994, with participation from the Faculties of Economics, Management & Organization, and Spatial Sciences. At the time, the acronym SOM stood for “Systems, Organization and Management”. In 2003, the Faculty of Spatial Sciences terminated its participation in SOM. The acronym SOM was kept, but not the full name.

Leadership

The ultimate responsibility for the management of the Faculty of Economics and Business lies with the Faculty Board. The Faculty Board decides on the start or termination of research programmes (on the advice of the SOM Board) and appoints the SOM Board, the directors of the research programmes, and the SOM director. Most other decisions concerning research are delegated to the SOM Board that decides on admission criteria and on admission of researchers to SOM as well as (termination of) their status. The SOM Board is composed of the vice-dean of research, a researcher proposed by the directors of the research programmes and a third person proposed by the Faculty Board.

The SOM-director:

- is director of the Research Master in Economics and Business, and of the SOM PhD programme in Economics and Business, and is responsible for the Bachelor Honours programme;
- is responsible for the implementation of decisions of the SOM Board;
- takes part in all selection committees for positions at the level of (adjunct) professor;
- advises the Faculty Board on proposals for internal promotions;
- is in charge of the SOM bureau.

The directors of the research programmes are accountable to the SOM Board. Each programme director is in charge of the positioning, profile and content of the programme and the quality of its research. The programme director decides on admission of researchers with a SOM status into the programme, and on the allocation of research time to the researchers in the programme.

The programme directors are members of the scientific committee of SOM, which is responsible for decisions concerning approval of PhD research proposals and provides advice to the SOM Board on all matters relating to research.

A SOM Advisory Board gives general policy advice and acts as a sounding board for strategic plans for the SOM Board. Its members are Prof. M. Dekimpe (Tilburg University), Prof. R. van Dierdonck (University of Ghent), Prof. R. van der Ploeg (Oxford University), Prof. J.-C. Thoenig (École Normale Supérieure de Cachan, GAPP), Prof. E. Jehn (Leiden University), Prof. D. Jorgenson (Harvard University), Prof. R.D. Galliers (Bentley College), and Prof. S. Llewellyn (Manchester Business School).

The rapid development and restructuring since 2006 show the strengths of SOM's recent leadership. Not only has the school progressed and heightened its academic goals but also the programmes are coherent and committed to SOM's direction. The documentation provided in the self-evaluation document does not provide a clear insight into the strength of the leadership within SOM. This implies that recent successes have been achieved through personal leadership and communications rather than formal processes. This is strength as long as the leader necessary insight and character to direct the school appropriately.

Strategy & Policy

The most important objective of the policy of SOM, according to the self-evaluation, is to improve upon the quality of research. Four instruments are used for this purpose:

- Admission criteria,
- Restructuring of SOM,
- Regular assessments,
- An active policy to recruit high-quality staff.

Admission criteria provide staff of the FEB with incentives and guidance. They also serve as an annual quality check for staff with SOM status. By making the admission criteria stricter over time and by giving a higher reward for publications in high-quality journals, SOM aims to improve the quality of research.

An applicant for SOM status must hold a PhD degree, do research that fits into one of the SOM research programmes, and have a minimum number of 5 SOM credit points, measured over a (moving) period of four years. SOM grants credit points for activities that are considered to be vital for high-quality research, such as successful supervision of PhD students, publications in international, peer-reviewed (top) journals, and editorships of a journal. The requirements for SOM fellowship have been made more stringent over the years. Publications in economics and business science journals only yield credit points if the journal is on the list of admitted journals. Publications in journals in other fields (like health care) may be granted points by the SOM director, provided that the journal has an impact factor higher than 0.3. The SOM scientific committee will evaluate the list of high-quality journals annually. Directors of research programmes may propose changes.

Each year the performance of all SOM researchers is assessed. If a researcher no longer meets the criteria, he or she is informed that the criteria should be met within two years; otherwise the status of SOM (associate) fellow will be terminated. In the years 2004-2007, around 10 (associate) fellows have lost their SOM status. In the past, research in SOM was grouped into themes that loosely connected researchers working in (sometimes very) different areas. In 2006 it was decided to restructure SOM and to create a limited number of research programmes in fields in which the FEB aims to excel. Important decision-making powers have been transferred to the directors of these programmes. In 2006, four programmes were created:

- Human Resource Management & Organizational Behaviour
- Economics, Econometrics & Finance
- Marketing
- International Economics, Business & Management.

In 2007 the Faculty Board added one programme:

- Operations Management and Operations Research.

Presently, two programmes are under development: Management Accounting, and Business & Information Systems. In 2011 at the latest it will be decided whether they will be admitted to SOM.

Regular assessments by external reviewers of (proposed) research programmes can contribute to sufficient selectivity with respect to research programmes. As part of the renewal of the accreditation by the KNAW in 2003, a peer review committee was asked to assess the quality of SOM's research. In 2004 there was an assessment of SOM researchers involved in the

SOM Research Master programme. For results, see below under ‘Academic reputation’. The assessments are used to guide decisions by the SOM and Faculty Boards concerning the recognition of new SOM research programmes and the allocation of funds among the research programmes.

The Committee perceives that, like SOM’s mission and goals, the strategy is largely instrumental being based on a series of clear metrics and allowing new programmes, such as Business & Information Systems, Management Accounting and Interaction and Innovation, to try to grow and prove their worth. If this entrepreneurial model is to continue, it may be worth seeding more programmes with the expectation that a few will succeed. It may also be worth developing a set of goals that could guide the seeding of new programmes and that support a more clearly defined direction of SOM.

Resources, Funding Policy & Facilities

The institute has provided the following overview of the personnel resources, in full-time equivalents (fte) research time.²

SOM	2001	2002	2003	2004	2005	2006	2007
Tenured Staff	25.9	26.1	27.1	28.2	31.7	32.9	32.3
Non-tenured staff	0.8	1.8	1.8	1.4	2.4	5.1	6.6
PhD students	31.0	35.7	37.9	42.2	48.3	55.7	60.8
Total research staff	57.8	63.7	67.0	72.3	82.9	94.0	99.8
Supporting staff	2.9	2.9	2.9	2.9	3.6	3.6	3.4
Total staff	60.6	66.5	69.7	74.7	86.0	97.3	103.1

Table 1a. Research staff at institutional level

	2001	2002	2003	2004	2005	2006	2007
<i>International Economics, Business & Management</i>							
Tenured staff	6.5	6.5	6.75	6.85	7.7	7.9	6.3
Non-tenured staff	0.8	1.6	1.0	-	0.6	3.2	3.6
PhD students	6.92	7.79	9.22	11.88	14.59	16.65	18.61
Total research staff	14.22	15.89	16.97	18.73	22.89	27.75	28.21
<i>Economics, Econometrics & Finance</i>							
Tenured staff	9.5	9.5	9.2	9.3	9.2	10.4	9.9
Non-tenured staff	-	0.2	0.7	0.7	0.7	0.7	1.0
PhD students	8.73	10.68	10.79	10.02	13.15	13.55	15.26
Total research staff	18.23	20.38	20.69	20.02	23.05	24.65	26.16
<i>Marketing</i>							
Tenured staff	2.9	2.9	2.8	2.7	3.3	3.5	4.3
Non-tenured staff	-	-	0.1	0.7	1.1	0.9	1.5
PhD students	5.88	6.22	5.95	6.73	6.48	8.03	8.79
Total research staff	8.78	9.12	8.85	10.13	10.88	12.43	14.59

² As explained, SOM has been restructured. In Tables 1a and 1b, staff members who are currently in the various programmes have been allocated accordingly if they were on the payroll of the University in the years under consideration, even though the current programmes were either (very) different from previous SOM themes, or even non-existing at the time.

<i>Operations Management & Operations Research</i>							
Tenured staff	5.8	6	7.1	7.1	8.7	8.3	8.4
Non-tenured staff	-	-	-	-	-	0.3	0.5
PhD students	6.13	6.77	8.14	8.47	8.24	9.34	10.97
Total research staff	11.93	12.77	15.24	15.57	16.97	17.95	19.87
<i>Human Resource Management & Organizational Behaviour</i>							
Tenured staff	1.2	1.2	1.2	2.25	2.8	2.8	3.4
Non-tenured staff	-	-	-	-	-	-	-
PhD students	3.37	4.25	3.84	5.06	5.84	8.1	7.14
Total research staff	4.57	5.45	5.04	7.31	8.64	10.9	10.54

Table 1b. Research staff at research programme level

The University funds the majority of tenured staff. Non-tenured staff is mostly post-docs. Supporting staff consists of the SOM bureau (director, PhD coordinator, Research Master coordinator, research coordinator, and secretaries). There has been an increase in total research fte in the period under review, largely due to an increase in the number of PhD students. While the SOM criteria have become stricter over time, there has been an increase in the number of tenured staff members who meet these criteria and who have therefore been admitted to SOM.

Due to difficulty to fill vacancies in various fields, the FEB has introduced a tenure track system as an active policy to recruit high-quality staff. The tenure track system is a career path for new researchers who, if followed successfully, will quickly lead to a full professorship. It is governed by a careful selection policy. New staff members in SOM's research programmes are only hired under the tenure track system. A limited number of existing staff members have been given the opportunity to enter the tenure track system. Two female staff members have been appointed as recipients of Rosalind Franklin fellowships. According to the rules of this programme, these staff members are not formally appointed at FEB. The University of Groningen offers this fellowship programme in order to increase the presence of women at the highest levels of the institution. Two more positions will be filled in the future, along with twenty positions at other faculties.

The SOM Board has taken some measures aiming to increase the number of externally funded PhD students. PhD students are stimulated to submit their research proposal to NWO. If they are able to acquire funding by NWO and finish their thesis within four years, they can become a SOM post-doc for one year. Supervisors are also given incentives to submit an application. If a submitted PhD proposal is funded, the supervisor will receive an additional PhD position financed by the FEB. If the proposal is not funded but considered as eligible for funding by NWO, the proposal will be funded by the FEB and the PhD student is offered additional funds for travel purposes. Applicants for VENI or VIDI grants are supported in the writing of their proposal and receive training when invited for an interview. SOM has also taken measures to increase the number of PhD projects funded by business, by matching projects that were partly externally funded. There is also stimulation to apply for funding by the European Union.

Funding	2001	2002	2003	2004	2005	2006	2007
Direct Funding (%)	91	88	88	88	86	80	73
Research funds (%)	3	3	3	4	4	5	5
Contracts (%)	6	9	9	8	10	16	22

Table 2. Funding and expenditure at institutional level

Since 2001 SOM has made steady progress in diversifying its income base away from an almost complete reliance on fee income (Table 2). Growth has been helped by the willingness to award tenured positions based on soft income, such as contracts and “research funds”. However, like other Dutch research programmes, it is competing globally without the endowment income that enriches leading business schools in the world.

The FEB provides staff members with ICT and library facilities. Also, there is a new laboratory, as research in management is increasingly relying on experimental methods for understanding the fundamental underpinnings of the behaviour of consumers, markets, managers, and teams in organisations. The new lab includes 2 special video rooms for team observations and systematic coding of interactions, 8 cubicles for examining controlled decision-making behaviour and 20 portable laptop computers for portable lab space or field research. SOM stimulates participation of researchers in international conferences where it has an excellent profile.

The Committee found some variability in the quality and productivity of SOM’s programmes where the strength of the programmes does not align with their growth or scale. This suggests a need for greater intervention by SOM’s director in those areas that have not responded so well to strategic incentives. There is also an opportunity for the whole of SOM to learn from excellence where it has been achieved.

Academic Reputation

The Royal Netherlands Academy of Arts and Sciences (KNAW) accredited SOM for the first time in May 1998. This accreditation was renewed in December 2003, after the Faculty of Spatial Sciences terminated its participation. The Netherlands-Flemish Accreditation Organisation (NVAO) accredited the SOM Research Master programme in 2004.

As part of the renewal of the accreditation by the KNAW in 2003, a peer review committee was asked to assess the quality of SOM’s research. The report of this committee stated: “The committee is ... quite confident that SOM’s overall productivity can be labelled sufficient to good according to VSNU standards. Individual productivity of some fellows is even considered to be ‘excellent’.” In 2004 there was an assessment of SOM researchers involved in the SOM Research Master programme. As only excellent researchers may take part in a Research Master programme, the Board of the University decided that an additional assessment of the quality of the research groups involved in the programme was necessary.

The QANU Review Committee found the academic reputation of programmes ranged from excellent to very good with none falling below that very high standard. Marketing in particular retained academic excellence through changes in senior staff and continued growth. The excellent performance of the Human Resource Management & Organisational Behaviour Group shows signs of a good return on investment by SOM.

Societal Relevance

The self-evaluation provided by SOM contains no information on any assessment of the management and facilities by the members of the institute. The “internal evaluation” offered in A.11 appears to be an assessment by the management itself.

As to ‘external validation’, no information was provided at the institute level but the Committee’s assessment of SOM’s individual programmes shows the excellent relevance of all its programmes to be Groningen’s strengths. This clean run of excellent relevance scores gives

SOM unique opportunities as one of Europe's leading business schools. Allied to the cohesion within its programmes and SOM's full range coverage, their remarkable relevance give SOM a position and a level of achievement that could be a foundation for clear goals and strategies that differentiate it from other research institutes in the Netherlands.

Balance of Strengths & Weaknesses

The policy initiatives to increase research quality together with strong leadership are strengths of the school. These have helped give SOM a profile of activities consistent with being a full range school. There is a strong increase in research funding by the European Union and businesses. This access to wider funding complements the schools excellent research relevance. The school has been remarkably successful reorganising to create a range of programmes that are internally consistent and outward looking. The marketing programme is a clear beacon of strength of SOM and the reputation of Dutch business research generally.

SOM's strengths include a widely recognised Research Master programme, a good system for monitoring PhD students and a new tenure track system are, as well as increased internationalisation (including a double degree PhD programme with the Graduate University of the Chinese Academy of Sciences). There has also been an increase in distinguished foreign researchers and academic publications.

Weaknesses or opportunities exist in the variable quality and productivity of the programmes mentioned above. On research quality none fall below very good but some programmes are trailing relative to the excellent standard being achieved elsewhere in The Netherlands. However, in a European context, all programmes are amongst the top few in their field.

Opportunities are some vacancies at the level of full professorships, and the Rosalind Franklin fellowships. The outstanding relevance of SOM's programmes give it an advantage in further diversifying income sources from the EU and business. There is also an opportunity to pioneering a wider tradition of fund raising to start the long haul towards raising endowments from wealthy alumni and business people.

For some time student funding is likely to be the main income stream for the school, yet RUG's international attractiveness is limited by its lack of international accreditation and the higher fee income that this can bring. Many European schools have amassed considerable experience in this area so the school has many examples to follow.

The new research programmes, which have been proposed, are opportunities, but they will only be admitted as SOM programmes if they show sufficient potential and output.

Major threats for SOM are similar to those faced by other leading research institutes in the Netherlands. The first is its dependence on fee income for most of its activities when the world recession could result in funding being cut, particularly for MSc students. Would SOM be able to compete internationally, in terms of marketing and facilities, if full economic fees had to be charged? A second vulnerability is the dependence of SOM's international reputation on a relatively small number of senior staff. Loss of a few staff could be critically damaging. Since SOM lacks the financial resources to pay full international salaries and its excellent staff are hugely visible internationally, it is imperative that SOM provides the work and social advantages to counterbalance the lower incomes they are able to offer. The overall reputation depends to some extent on the outstanding marketing group. Since this is an academic discipline

where there is a global shortage of world-class staff and where salaries are particularly high, SOM needs a strategy for retaining and building upon that group's outstanding strength.

Groningen University - Assessments per programme

The Committee assessed the following programmes of the Faculty of Economics and Business Science at the Rijksuniversiteit Groningen (RUG):

	Quality	Productivity	Relevance	Viability
SOM research programmes				
International Economics, Business & Management	4	4.5	5	4
Economics, Econometrics and Finance	4	4.5	5	4
Marketing	5	5	5	4
Operations Management & Operations Research	4	3.5	5	4
Human Resource Management & Organizational Behaviour	4.5	4	5	4

The detailed assessments per programme follow in the next section of this report.

The Committee also assessed three programmes that are newly proposed and/or under development. The assessments of these programmes were reported separately to the Board of SOM.

International Economics, Business & Management

Programme number:	RUG 1 (SOM 1)		
Programme director:	Prof. dr. H.W.A. Dietzenbacher		
Research staff 2007:	6.3 tenured, 28.21 total fte		
Assessments:	Quality:		4
	Productivity:		4.5
	Relevance:		5
	Viability:		4

Short description

The research in International Economics, Business & Management (IEB&M) deals with the multinational firm in a globalising world. In international economics, the changing surroundings of today's multinational firms are studied. International business and management is concerned with the strategic choices and the internal structure of the firm in response to its changing environment (e.g. the market in which it operates).

Quality

The research program has original elements in combining various related aspects, and makes contributions to knowledge of significant impact, especially in development and dissemination of international data. Several high quality publications are submitted. Prominence in the business field is challenged by personnel discontinuity.

Productivity

The number of researchers has grown substantially over the assessment period, in line with number and quality of publications and with PhD production.

Relevance

The research program is substantially applied and highly relevant and visible especially as regards advancement of knowledge in the form of data set preparation, and its dissemination both through data set publication and e.g. journal editorships.

Viability

Viability is challenged by recent very fast growth in some of the subprograms, but not in the business-oriented subprogram.

Conclusion

The assessment is very positive, especially as regards highly visible and relevant research and dissemination activities, but the program may need to be reconfigured in light of the relatively limited coherence of its elements and of their different speed of development.

Economics, Econometrics and Finance

Programme number:	RUG 2 (SOM 2)		
Programme director:	Prof. dr. J.L. Moraga-Gonzalez		
Research staff 2007:	9.9 tenured, 26.16 total fte		
Assessments:	Quality:	4	
	Productivity:	4.5	
	Relevance:	5	
	Viability:	4	

Short description

Research in the programme Economics, Econometrics and Finance covers economic analysis (microeconomics and macroeconomics), quantitative economics (econometrics and statistics) and finance. The use of economics and econometrics models forms the core of the research methodology and the character of the research is both theoretical and empirical. To a considerable extent, the Institute takes on policy-oriented questions.

The current research of the *microeconomics* group combines topics from microeconomic theory, industrial organisation, public economics, auction theory, environmental economics and energy economics.

The *macroeconomics* group works on various fields, including public economics, monetary economics, financial economics, the analysis of business cycles, and financial crises. The research of the group of *econometricians* at the Institute ranges from pure econometrics theory to applied econometrics in various economics fields, including finance, banking, macroeconomics, regional economics, energy economics and sport economics. In *finance*, one of the empirical research lines is performance measurement of asset portfolios and the empirical relation between earnings forecasts and asset prices. There are ongoing empirical studies in the area of corporate finance. Another theme of interest is the connection between finance and corporate social responsibility.

Quality

The output produced over the evaluation period and submitted for evaluation includes articles in high quality international journals in fields ranging from econometrics to public economics, environment economics, industrial organization, and to some extent finance. This diversity indicates that the group is very solid but rather heterogeneous. Some positive and negative trends are also visible in the submitted output, as strands of research appear to wax and wane in turn.

Productivity

The programme members are able to produce a substantial number of international refereed publications, as well as a steady and large number of PhD theses. The group does not seem to suffer from a lack of PhD candidates inflow, which is particularly valuable given the intense international competition among PhD programs. The Committee would like to encourage the group to continue on this path.

Relevance

The research group produces a good mix of theoretical and empirical work that contributes nicely to the development of economic knowledge. Particularly notable is the fact that the

group members are able to secure a sizeable amount of external funding: this is a very good sign that the issue and results are appreciated by and visible to outside researchers and practitioners.

Viability

The group has undertaken a series of important reforms, the effects of which are not yet completely visible. A new incentive scheme has been designed to enhance research quality. There is also a clear refocus on microeconomic theory as a common ground for the different research lines. The Committee feels that this emphasis on a clear “economic” identity is likely to help the group attract new people, and is confident about the viability of the programme.

Conclusion

This is a group under reform that is moving from a collection of high quality but rather dispersed research to a more focused group centred around microeconomics and econometrics. This approach appears very suitable to increase the impact and visibility of the research output within the scientific community. The Committee would like to encourage the group members to increase further the quality of publications towards top economics journals, and to concentrate more on journals visible in fields targeted by the group’s agenda while maintaining suitable strength in all the sub-fields of the discipline covered by the group (e.g. Macroeconomics).

Marketing

Programme number:	RUG 3 (SOM 3)		
Programme director:	Prof. dr. T.H.A. Bijmolt		
Research staff 2007:	4.3 tenured, 14.59 total fte		
Assessments:	Quality:	5	
	Productivity:	5	
	Relevance:	5	
	Viability:	4	

Short description

Central research themes of the Research Programme Marketing (RPM) are customer relationship management, effectiveness of marketing instruments (in particular promotions, pricing, loyalty programmes, and advertising), retailing, pharmaceutical marketing, and consumer behaviour. Research methods (e.g. econometrics, mixture models, meta-analysis, agent-based modelling) form a major component and is the central subject of many research projects conducted within the RPM.

Quality

The quality of RPM's output in top journals remained strong throughout the review period. This has continued while the group's total tenured and non-tenured staff has almost doubled. A particular indication of broadening strength is the group's recent output in consumer behaviour that adds a new strand to its tradition strength in marketing science.

Productivity

A noticeable feature of the group is their growing output in strong international journals alongside their headline top journals. Another sign of the group's energy is a steady increase in non-tenured staff and the number of PhD students throughout the period.

Relevance

Much of the group's research is with and for business, where they show the ability to convert practical applications of their science into publications in the top journals. Embracing consumer behaviour and marketing science is likely to enrich both traditions. Of particular significance are the fifteen companies that subscribe to the Customer Insights Centre (CIC) that provide a direct bridge into the corporate world.

Viability

RPM is a well managed group whose steady growth allied with its productivity and breadth point to a viable future. However, the group remains small compared with others within RUG and internationally. This makes it vulnerable for staff losses due to retirement or to people taking remunerative positions elsewhere in the world. At time of this review, the RPM group has an opportunity to make further appointment that could provide a firm foundation for its future.

Of some concern is the group's excessive dependence on direct funding by fte's. CIC has somewhat redressed this balance but, like elsewhere in the Netherlands, there is lack of endowments to fund research positions. In general, consideration may also be given to diversifying the sources of funding.

Conclusion

RPM would be a jewel in any university's crown yet is small and vulnerable. It should be encouraged to grow from its current position of great strength diversifying into further areas, such as innovation, and be early beneficiaries of endowment income that the University must pursue in order maintain its global standing.

Operations Management & Operations Research

Programme number:	RUG 4 (SOM 4)		
Programme director:	Dr. J.T. van der Vaart		
Research staff 2007:	8.4 tenured, 19.87 total fte		
Assessments:	Quality:	4	
	Productivity:	3.5	
	Relevance:	5	
	Viability:	4	

Short description

Operations Management & Operations Research (OPERA) focuses on decision making related to production, services and logistic operations within profit as well as non-profit organisations. Research within the programme includes modelling, analysis, design/improvement, and planning & control at several levels of aggregation.

OPERA has three main research themes: Planning & Control, Coordination, and Operations Research. There are also connections between the three themes (e.g. application of OR techniques in quantitative logistics; application of the travelling salesman problem in health care; application of mixed integer programming in planning of food processing industries).

In *Planning & Control*, OPERA aims at developing decision making concepts in industries facing new opportunities and threats. The central paradigm in the research is to link characteristics of the production system to the design of planning & control. Domain knowledge of the application areas is combined with the use of recent theoretical models from related fields, such as HRM, Business Administration, Manufacturing Engineering, and quantitative research methods. The subjects covered range from scheduling, release methods, inventory control, layout planning, intermediate storage, team composition and task allocation to dual resource constrained planning.

In *Coordination*, the contingencies of coordination in operations and supply chains are investigated, i.e., internal and external coordination. Specific attention is paid to the role of the human actors involved in coordination. Subjects are the role of the actors involved in customer order and production order processing, the organisational setting of coordination, coordination of manufacturing and sales, buyer-focused operations and contextual factors of supply chain integration.

Operations Research focuses on areas that provide important mathematical foundations for Operations: quantitative logistics and combinatorial optimisation, integer programming, stochastic programming, and game theoretic analysis.

Quality

The group made impressive progress. Positive trend in quality is unquestionably present. Among other things, the focus was improved. This focus can best be described as Supply Chain Management. The fact that the third theme (Operations Research) is focused on Logistics contributes to the general focus. Also the new theme, on hospital logistics, fits very well in the chosen focus.

Opera is the only programme in all the research programmes under review that credibly offers a holistic answer to the problems in the field of Operations Management and by extension Supply Chain Management. The programme deals at the same time with fundamental issues and offers an innovative perspective. The group masters different research methodologies.

The changes made in the structure have resulted in a more effective management of the programme and a greater coherence of the programme. The interaction between teaching and research is well explained.

Productivity

The programme went through a difficult transition period, but it is undeniable that the quality and the quantity of the output have increased since 2004. However, the current output in terms of publications, is still rather low, especially in the top journals. PhD students and PhD theses are at a good level.

Relevance

This is no doubt the strongest aspect of the programme. The research centres for instance are an effective way to transfer the know-how to the real world and vice versa. They succeed in getting increasingly funding from other sources. They have developed structural relationships with the real world.

Viability

The group has reached the critical mass level. They are well embedded in and respected by the international Operations Management community. The most critical issue will be to keep or even increase the focus, which is one of their explicitly stated goals. The recent or in the near future planned retirement of staff must be carefully managed. The outcome of the process will be very instrumental to safeguard the coherence of the programme. It is encouraging to hear that recently an expert in closed loop supply chains, inventory control and sustainability was hired.

Conclusion

This is a well managed and coherent group that is well respected in the European academic community in the domain of Operations Management. It has good contacts with industry and non profit organisations (e.g. hospitals). The expectation is that the efforts of the past will soon result in an increased research (publication) output. The replacement of four faculty members should be an opportunity but should be managed carefully.

Human Resource Management & Organizational Behaviour

Programme number:	RUG 5	
Programme director:	Prof. dr. H.B.M. Molleman	
Academic staff 2007:	3.4 tenured; 10.54 total	
Assessment	Quality	4.5
	Productivity	4
	Relevance	5
	Viability	4

Short description

The programme is focussed around four clearly-articulated and linked research themes. These are leading-edge themes, dealing with issues where significant contributions to the research literature can be made. The group's research programme appears to be flexible in that new topics are developed within the themes. The overall impression is of a well conceived, focussed and programmatic research stream.

Quality

The programme has made very good progress during the review period. The programme is now well focussed, international collaborations have been established and high-impact research outputs are being produced. The research team have published a significant number of papers in the very top journals in the field (most notably *Academy of Management Journal*), and other esteem factors such as journal editorial board memberships indicate a visible international profile. The stated goal to be one of the top 10 research groups in HRM/OB in Europe is a challenging one, but given the achievements of the group this appears to be feasible.

Productivity

For a relatively small and recently-established programme, research productivity has been reasonably high. The group has produced a steady stream of research publications, with a growing emphasis on international journals and a significant number of top journal publications since 2004. In addition, the group produces a significant number of practitioner publications and there are several initiatives underway to disseminate research findings to practitioners through their "expertise centre", seminars and consultancy. The group has produced a reasonable number of PhD graduates (one or two per year), and the development of a research master programme in HRM/OB promises to increase the group's ability to recruit excellent research students.

Relevance

The research themes have high relevance in both academic and practitioner terms. However, one gets the impression that the main focus of the group is increasingly on academic research and publication. If the impact of the group's work is to be maximised, it is important that the practitioner work is seen as complementary to rather than competing with the academic programme. This suggests that the group needs to look for complementarities between academic and practitioner impact, and to maintain its commitment to the "expertise centre" and similar initiatives.

Viability

The impression gained is of an active and cohesive research group. Given the progress that has been made, along with the recent initiatives to increase funding from business and research contracts, the prospects for long-term viability appear good. In the period to 2007, the top journal publications were produced mainly by two or three group members, and the relatively small size of the group and the potential for key members to be “poached” by others made the programme appear to some extent vulnerable. However, there has been a steady growth in the size of the group since 2001 and the recent new hires reported to us by the programme director (Walter, Nijstad, Ryan, 2 new Assistant Profs, 2 post docs, and 2 new PhD positions) will do much to reinforce the quality, vitality and viability of the group, not least because of the strong top-tier publication records of some of those recruited.

4. Faculty of Economics and Business Administration, VU University Amsterdam

Mission & Goals

The Faculty Economics and Business Administration (or FEWEB, the acronym for the Dutch name) states as its research mission: “to make high-quality contributions, both theoretical and empirical, in the fields of economics, econometrics and business taught by FEWEB.”

This statement informs the following stances:

- FEWEB does not aim at research excellence in a small number of selected fields. The Faculty is convinced that allocating research resources to a set of predetermined fields would suppress the natural adjustment mechanism whereby researchers apply themselves to new promising research questions and achieve excellence.
- Instead, FEWEB allocates resources on the basis of proven quality. The main instrument for this is the allocation of research time on the basis of publication records.
- (The Board of VU University does not share this standpoint: it favours a focus on selected topics studied in interdisciplinary research institutes.)
- Staff appointed to teach a new field may not yet have a strong research record. In this case the FEWEB Board may give temporary support to develop a research position in the field.
- FEWEB considers it highly desirable that students are taught by staff members with strong research qualifications.

The Committee accepts that the approach taken by FEWEB is a reasonable strategy and that significant progress has been made in its implementation. Although it has not been uniformly successful, it has produced some very strong research units and allowed research staff to participate well in the teaching programme. There is little evidence from elsewhere that the alternative strategy of interdisciplinary research units would have been more successful, and the committee encourage the faculty to continue on its current trajectory.

Leadership

All the important decisions at FEWEB are taken by the Faculty Board. The Board consists of the Dean of the faculty, the Research Director, the Teaching Director, and a student (non-voting member). The board is assisted by the Management Director of the faculty, who is the head of the faculty's office. The board is accountable to the Executive Board (College van Bestuur) of VU University.

The 8 departments of FEWEB each have a Head of Department, who organises and coordinates the activities of the department. The Faculty Board appoints the Heads of Department and determines their tasks. Each department has at least one research programme.

Currently there are 12 research programmes. The Faculty Board appoints a programme leader for each research programme. Research programmes are formed on the initiative of researchers. The Board plays only a limited role in the process, ensuring sufficient homogeneity. The Meeting of Programme Leaders, chaired by the Research Director, advises the Faculty Board on the faculty's research and judges the design of the research programmes.

The Committee notes that the management and leadership structure is generally effective in allowing high quality work to be undertaken, with research agendas being determined locally. The management process appears to give the necessary support without being obstrusive.

Strategy & Policy

FEWEB's strategy and policy centre around stimulating high-quality research. In order to achieve this, research funding is allocated on the basis of measured research output. The system focuses on quality rather than quantity of research.

Single-authored publications in highly regarded journals and monographs published by highly regarded publishers yield more points than co-authored publications or publications in less well-regarded periodicals. Only the five best-scoring publications in the preceding five years are counted for each researcher. A new journal and publisher list was established in 2003/2004 and updated in 2007. Where applicable, the list follows the journal list of the Tinbergen Institute. Publications in non-listed journals and on divergent subjects are treated with some flexibility.

In response to the national research assessments in August 2002 (Economics) and December 2002 (Business Administration and Management), several research programmes of the faculty were changed, both in content and in name. One research programme got relatively low marks and was therefore stopped in 2002. Most of the researchers of this programme were able to participate in other research programmes. The next most important change was the split of the Dynamic Organisations and Markets programme – which was too heterogeneous – into three more focused programmes: Strategic Entrepreneurship, Marketing Strategy, and Human Resources.

The 2002 review committee argued that some of the research groups were too small. The Faculty Board, however, does not see this as a primary concern, since small research groups are not more expensive than large research groups. The faculty attaches great value to research homogeneity, and the small groups consistently score better (in terms of e.g. publications in top journals) than most of the larger groups.

In 2002, the committee also criticised the recruitment procedures in use. Recruitment of researchers has since been improved by the introduction of the tenure track system. In addition, FEWEB has abandoned the policy whereby the number of professorships was fixed for each field. In the present system, an excellent staff member can become a professor, irrespective of the field in which he or she works.

FEWEB collaborates with the Erasmus University Rotterdam and the University of Amsterdam in the Tinbergen Institute, the graduate school in economics, econometrics and finance. This facilitates the recruitment of PhD students. Establishing a similar research and graduate school for Business Administration and Management is seen as a priority by the Board. Collaboration is sought with the Erasmus University Rotterdam and the University of Amsterdam. Participation in such a graduate school is expected to improve the recruitment of researchers and PhD students and to stimulate high quality research in this field.

Regarding the development of the strategy and policy, the Committee remarks that the highly structured research time allocation system seems to have been very effective in promoting the production of high quality work in many areas. However, it notes that some groups have

been less effective than others, in part due to problems of staff recruitment and retention in a competitive market place, and suggests that senior management review the less successful programmes with a view to determining how they can be improved, rather than merely allowing research time allowances to be cut. We realize that there are other mechanisms already in place. The Tinbergen Institute is a valuable resource for mainstream economics, but does require to be supplemented with similar support for other subject areas

Resources, Funding Policy & Facilities

The Department has provided the following overview of the personnel resources, in full-time equivalents (fte) research time. PhD students are counted as 0.7 fte research time.

Research staff at institutional level in fte							
	2001	2002	2003	2004	2005	2006	2007
Tenured staff	25.76	26.80	28.64	29.24	33.86	32.27	32.04
Non-tenured staff	13.46	13.17	12.85	12.40	12.47	13.96	22.69
PhD students	24.72	28.65	24.53	25.99	26.08	28.73	26.92
Total research staff	63.85	68.62	66.02	67.63	72.41	74.96	81.65
Supporting staff	15.96	17.16	16.51	16.91	18.10	18.74	20.41
Total staff	79.81	85.78	82.53	94.54	90.51	93.70	102.06

The changes in research staff are mostly due to changes in research funding and contract research, and to the introduction of the tenure track system. This explains the substantial rise of non-tenured staff in 2007.

The following overview gives the data provided by the Department for each of the programmes in this review.

In 2002 the VU University introduced a new allocation model to determine the direct funding of research and teaching activities for the different faculties. For faculties with teaching activities leading to the MSc degree, the policy is to allocate approximately 35% of direct funding for research activities. The remaining 65% is then used for teaching activities. Although the total direct funding of the faculty was initially not influenced by this new model, the share of research funding in to total funding decreased dramatically: from 44.0% in 2001 to 34.4% in 2002. There has been a slight readjustment in the last few years.

Over the years 2001-2007 FEWEB has grown, mainly as a result of the start of the Business Administration programme. During this period, the faculty has adjusted the expenditure in research and teaching activities according to the policy of the university.

To facilitate externally funded research, FEWEB maintains an institute. This institute, the Amsterdam Institute for Business and Economic Research (AMBER), has a small administrative staff. It helps researchers with funding applications, maintains financial records and handles personnel matters. The use made of these facilities is rather uneven. Regional Economics, Accounting and Development Economics have very substantial external funding, most other groups have very little.³

³ The Accounting department channels much of its external funding through another institute, the Amsterdam Research Center in Accounting. The Development Economists channel part of it through AMBER, but a larger part through the Amsterdam Institute for International Development.

The Committee notes that resources are generally quite tight, although fairly and sensibly allocated. However, the faculty is less well resourced than some of its competitors in the Netherlands, perhaps partly due to the diversion of funds to other faculties. Adequate resourcing will be a necessary condition to keep up with the improvements that have taken place elsewhere, and to remain internationally competitive.

	2001	2002	2003	2004	2005	2006	2007
Programme Strategic and Cooperative Decision Making							
Tenured staff	1.41	0.89	0.9	0.85	1.41	1.18	1.81
Non-tenured staff	0	0	0	0	0	0.25	0
PhD students	1.63	2.1	1.4	0.94	0	0	0
Total research staff	3.04	2.99	2.3	1.79	1.41	1.43	1.81
Programme Time Series Econometrics							
Tenured staff	1.37	1.2	1.72	1.62	1.87	1.8	1.8
Non-tenured staff	0.33	1	1.36	1.34	1	1	1.84
PhD students	1.81	1.58	1.63	2.45	3.26	2.57	2.1
Total research staff	3.51	3.78	4.71	5.41	6.13	5.37	5.74
Programme Applied Labour Economics							
Tenured staff	5.8	4.77	3.93	3.43	4.92	5.22	5.47
Non-tenured staff	1.8	2	0	1.18	1.37	1.9	5.54
PhD students	2.1	2.56	2.22	2.09	3.62	4.73	4.14
Total research staff	9.7	9.33	6.15	6.7	9.91	11.85	15.15
Programme Farms and Firms							
Tenured staff	1.07	1.17	1.85	2.1	2.26	2.2	1.68
Non-tenured staff	1.8	1.8	1.71	0.95	1.1	0.96	2.1
PhD students	1.33	2.74	2.42	2.1	1.75	1.05	0.7
Total research staff	4.2	5.71	5.98	5.15	5.11	4.21	4.48
Programme Spatial, Transport and Environmental Economics							
Tenured staff	4.67	4.45	5.16	5.19	5.44	5.44	5.62
Non-tenured staff	6.55	5.42	4.92	4.4	3.58	4.77	6.77
PhD students	10.24	11.06	7.72	9.38	7.48	8.49	9.14
Total research staff	21.46	20.93	17.8	18.97	16.5	18.7	21.53
Programme Finance and Banking							
Tenured staff	1.57	2.08	2.13	3.56	3.24	3.48	3.44
Non-tenured staff	1.47	0.47	0.72	0.55	0.4	0.4	0.13
PhD students	1.4	1.64	2.16	2.1	2.33	2.27	2.1
Total research staff	4.44	4.19	5.01	6.21	5.97	6.15	5.67
Programme Operations Research and Information Technology							
Tenured staff	1.3	1.43	1.69	2.02	2.2	2.2	2.2
Non-tenured staff	0	0	0	0	0.42	0	0
PhD students	1.1	0	0	0.53	0.93	1.4	1.63
Total research staff	2.4	1.43	1.69	2.55	3.55	3.6	3.83

	2001	2002	2003	2004	2005	2006	2007
Programme Accounting and Decision Making							
Tenured staff	2.65	2.65	2.58	2.76	2.36	2.36	2.36
Non-tenured staff	0.53	0.53	0.1	0.57	2.25	2.4	3
PhD students	1.84	1.96	0.93	0.99	0.7	1.4	1.4
Total research staff	5.02	5.14	3.61	4.32	5.31	6.16	6.76
Programme Strategic Entrepreneurship							
Tenured staff			1.11	1.36	1.31	1.15	2.12
Non-tenured staff			0.72	0.23	0.09	0.4	0.63
PhD students			0	0	0	0	0
Total research staff			1.83	1.59	1.4	1.55	2.75
Programme Marketing Strategy							
Tenured staff			1.26	1.28	1.49	1.72	1.74
Non-tenured staff			0.36	0.82	0.89	1.06	1.75
PhD students			2.26	2.59	1.96	2.19	1.43
Total research staff			3.88	4.69	4.34	4.97	4.92
Programme Human Resources							
Tenured staff			1.05	1.19	1.59	1.62	1.02
Non-tenured staff			0.27	0	0	0.4	0.53
PhD students			0.38	0	0.23	0.93	1.4
Total research staff			1.7	1.19	1.82	2.95	2.95
Programme Information Systems for Organisational Networks							
Tenured staff	2.26	3.33	2.21	2.27	2.33	2.98	2.47
Non-tenured staff	0.89	1.17	0.69	0.36	0.37	0.42	0.4
PhD students	1.69	3.21	2.92	2.33	3.33	3.21	2.39
Total research staff	4.84	7.71	5.82	4.96	6.03	6.61	5.26

Research staff at research programme level

Academic Reputation

According to the self-evaluation report, FEWEB researchers have a very good academic reputation. Various individual researchers score well on national and international publication and citation rankings, and have gained prizes and honorary positions. Several younger researchers have been awarded prestigious grants. The Tinbergen Institute, the graduate school in which FEWEB collaborates with the Erasmus University Rotterdam and the University of Amsterdam, was evaluated recently by the Jorgenson Committee, which praised its high quality.

The Committee congratulates the faculty on the success of many of its members and notes that the research time allocation system has driven some of this improvement. However, further attention needs to be paid to supporting the development of research programmes in areas where there are successful teaching programmes but less successful research activity. Although programmes centred around economics are generally doing well, the picture in other areas of business and administration is more patchy and requires attention.

Societal Relevance

The self-evaluation states that external collaboration has not only reduced the reliance on direct government funding, but also generally had a positive effect on the quality of the research

by giving access to information which is otherwise not easily available. This, in turn, can facilitate new collaborative arrangements.

There is no systematic evaluation of the effects of collaboration and dissemination of research results outside the scientific community. The Department points out large differences between research programmes with respect to the relevant external stakeholders. Some individuals or groups, according to the self-evaluation report, are consulted frequently by media and policy makers.

The Committee suggests that mechanisms for assisting in improving communication with relevant stakeholders are developed centrally.

Balance of Strengths & Weaknesses

According to the self-evaluations report, FEWEB produces high-quality research across a wide range of fields and enjoys an excellent academic reputation, thus attracting promising researchers and PhD students. The performance of some departments is lower than the rest. The new leadership in the Strategy and Accounting groups is expected to lead to improvement.

Only a few groups have succeeded in procuring substantial amounts of external funding. Incentives for attracting such funding, created by the Faculty Board, so far have not been very successful. Attempts to create an outstanding PhD school in the fields of marketing, strategy and accounting, analogous to the Tinbergen Institute, have not yet succeeded.

As an opportunity, the location of FEWEB's offices on Amsterdam's "South axis" (Zuidas) is mentioned. Many financial institutions have their offices or headquarters in this area. The Tinbergen Institute itself and the new Duisenberg School of Finance are expected to relocate to this area in a few years.

Some Economics and Business faculties at other Dutch universities (without Science departments) are able to offer better salaries and other conditions than FEWEB. In an increasingly competitive academic job market, this constitutes a threat despite the Faculty's good reputation.

In the longer term, the FEWEB Faculty Board intends for the emphasis to shift from publications in top journals to the impact of researchers' publications. The question is how this impact could be improved.

The Committee suggests that this area is specifically addressed and that the relationship between teaching, research, societal impact and available resources reviewed. In some areas teaching loads seem high in relative to some other institutions. This may require the allocation of seedcorn funding to stimulate a step change in activity.

VU Amsterdam - Assessments per programme

The Committee assessed the following programmes of the Faculty Economics and Business Administration at VU University Amsterdam:

	Quality	Productivity	Relevance	Viability
VU1: Strategic and Cooperative Decision Making	4.5	4	4	4
VU2: Time Series Econometrics	4.5	4.5	5	4.5
VU3: Applied Labour Economics	5	4.5	5	5
VU4: Farms and Firms: The Microeconomics of Poverty, Risk and Development	4.5	4.5	5	4.5
VU5: Spatial, Transport and Environmental Economics	4	5	5	4.5
VU6: Finance and Banking	4	4.5	4.5	3.5
VU7: Operations Research and Information Technology	4	3	4	-
VU8: Accounting and Decision Making	3	3	3.5	3
VU9: Strategic Entrepreneurship	3	3	3.5	4
VU10: Marketing Strategy	4	3.5	3.5	3
VU11: Human Resources	3.5	3.5	4	4
VU12: Information Systems for Organisational Networks	3	3	4	4

The detailed assessment per programme follows in the next section of this report.

Strategic and Cooperative Decision Making

Programme number:	VU 1		
Programme director:	Prof. dr. ir. G. van der Laan		
Research staff 2007:	1.81 tenured, 1.81 total fte		
Assessments:	Quality:	4.5	
	Productivity:	4	
	Relevance:	4	
	Viability:	4	

Short description

This programme focuses on situations involving at least two interacting decision makers with possibly diverging interests. In competitive or strategic situations, decision makers can negotiate what to do, but enforceable binding agreements are not possible. Non-cooperative game theory provides a framework to analyse such situations. In cooperative situations, enforceable binding agreements between the decision makers are possible. Such allocation problems can be modelled by cooperative games.

Applications of strategic decision making include auction theory, strategic voting, trade and quota negotiations, signalling and reputation. Applications of cooperative decision making include cost allocation problems, allocation of bankruptcy deficits, optimal assignment problems, water distribution problems and matching opportunities. Cooperative game theory also provides tools to solve problems in social choice, voting situations and multi-criteria analysis.

Quality

The group appears to be doing rigorous high quality and high impact research. Evidence of the quality of this research work is to be found in the number of A level publications, including top international publications produced by the group.

Productivity

As mentioned above, productivity in terms of publications has been high. However, dissemination of the research stream in terms of PhD dissertations has been relatively low during the period of study (2001-2007). This may be due to a bottleneck in the pool of MPhil students available from the Tinbergen Institute. The Committee commends the program leadership for having managed to attract two new PhD students more recently.

Relevance

While most of the work carried out in this group might appear to have fairly limited immediate relevance – at least as a final output – for society, the Committee is confident that the theoretical relevance of the work – in terms of how useful it is for other academics building on it – is very high. In fact, the stated strategy of the group is to focus on advancing theory, not on applying these developments. This appears to play into the group's strengths and the Committee feels this is a sensible use of resources.

Viability

The Committee initially had some concern with the long term viability of this program because of declining staffing and limited PhD activity during the study period. However, a recent

and significant increase in the amount of “fte’s” devoted to research as well as the recent joining of two new PhDs with NWO grants make us much more confident for the future.

Conclusion

The Committee commends the Strategic and Cooperative Decision Making research group for the high quality of its work and its success in terms of publishing the results of this work in top quality journals. The Committee encourages the group leadership to continue devoting attention and efforts to attracting a steady flow of PhD students as well as new junior faculty in order to guarantee the long-term viability of the group.

Time Series Econometrics

Programme number:	VU 2		
Programme director:	Prof. dr. S.J. Koopman		
Research staff 2007:	1.80 tenured, 5.74 total fte		
Assessments:	Quality:	4.5	
	Productivity:	4.5	
	Relevance:	5	
	Viability:	4.5	

Short description

The programme aims to develop theoretical, empirical and computational innovations in time series econometrics. Many research activities are concerned with the development of classical and Bayesian methods for the analysis of time series. The programme also focuses on numerical issues and the implementation of econometric methods in computing environments.

The theoretical and computational developments are integrated in empirical studies of volatility modelling in financial markets, analyses of dynamics in credit ratings and default data, measurement of business cycles, studies of the relationships between economic variables and crime, seasonal adjustment and modelling of hourly electricity loads and spot prices.

In addition to publishing in leading journals, the programme also aims to give short courses elsewhere, to write textbooks and to develop user-friendly software products with hands-on user guides.

Quality

This group has established itself as a significant contributor to the development of an important class of time series methods within the period of this review. Prior to 2001 the econometrics group that focused on theory at VU was heavily oriented towards microeconometrics. Since 2001 there has been a successful change of emphasis. A particular strength of the group is its expertise in state space methods and it is a real international leader in the development of these methods and their applications. There are good contributions to theory and interesting applications. Its work is published in high quality international statistics and econometrics journals.

Productivity

The group produces a high volume of good quality papers published in top international journals. It has attracted international visiting researchers and developed a distinctive international profile and presence. Like many other theory groups it has had some difficulty in attracting the flow of PhD students that would be desirable. The group has made good progress towards the end of the review period in increasing funding from external sources. The group has active collaborations with the finance group.

Relevance

The group does high quality theoretical work that leads directly to development of new time series methods and to new understanding of the performance of established methods. This work is relevant to researchers and professional economists doing applied time series analysis. The group also addresses particular applied problems relevant to policy makers in the public

and private sector. The advanced text on state space methods produced by the programme director is a standard text on the subject and very widely cited.

Viability

Many members of the research group are at quite early stages in their careers working in a research area where there are many interesting contributions still to be made. The group has constructive research plans to extend its interests into multivariate time series models and to the study of ultra-high frequency data such as arises in financial data. There is some danger that the group could become too dependent on continuing success in the state space methods area and on the contributions of its most senior staff. However there are plans to extend the group's interests and there was a post-review-period appointment outside the state space methods field so there seems to be little need for real concern on this count.

Conclusion

This group has successfully built up a good reputation in time series methods during the period of the review. Care needs to be taken to ensure that too much of the responsibility is not placed on a few shoulders in the group. The plans for some diversification of interests and for a new appointment are welcomed. Attention should be given to increasing the flow of high quality PhD students and this may involve some reconsideration of the institutional arrangements and the relationship with the Tinbergen Institute.

Applied Labour Economics (ALERT)

Programme number:	VU 3
Programme director:	Prof. dr. M. Lindeboom
Research staff 2007:	5.47 tenured, 15.15 total fte
Assessments:	Quality: 5
	Productivity: 4.5
	Relevance: 5
	Viability: 5

Short description

The applied micro-econometrics research programme used to be called Applied Labour Economics, but since it has been extended to include health economics, the acronym ALERT is used.

The programme has two main sub themes:

- Labour Economics, consisting of two lines of research: i) Research that seeks to bridge the gap between micro- and macroeconomic approaches in order to gain a better understanding of the working of the labour market. The behaviour of all agents who are active on a given labour market is taken as a starting point to assess the effect of the institutional setting on the functioning of this market. A substantial part of this project is devoted to the adequate design and the evaluation of policy interventions on the labour market. ii) Research into innovative activity undertaken by individuals and organisations, bringing about technological advancement which leads to productivity growth.
- The Economics of Health, Work and Ageing. This project focuses on issues where labour economics and health economics interact, such as retirement, consumption and wealth; the dynamic interrelation between health, work and income; health, health inequality and socioeconomic status; and the effect of economic conditions on mortality.

Quality

The ALERT group is consistently highly ranked in international comparisons. It delivers high quality work addressing practical policy relevant economic problems of great importance to society using cutting edge econometric techniques. Their main emphasis is applied economics but the ALERT group have done good work in econometric theory and in the development of econometric methods, particularly in the area of the analysis of duration data. The applied work done by the group benefits from the strengths in econometric theory of many members of the group. The group publishes in leading field journals in economics and makes good contributions to the very top international core journals too.

Productivity

The group produces high volumes of good quality research. It raises substantial amounts of external research funding. The group has built strong international connections in part through its participation in a number of European EU funded networks. This is of great benefit to junior staff and students. Senior staff make significant contributions to the international academic profession through positions on editorial boards of international journals. The group trains a relatively small number of PhD students.

Relevance

Much of the research of the group is on problems of direct interest to policy makers in government or the private sector. The econometric theory work done by the group is aimed at solving particular applied problems.

Viability

Maintaining momentum in the face of senior staff turnover is a challenge facing the group. The PhD intake rate needs improving without sacrificing quality.

Conclusion

This is a high quality group with a good international presence doing relevant applied work. It faces challenges in maintaining its position in the light of staff turnover but is working in an area that is attractive to many researchers with expanding research and funding opportunities.

Farms and Firms: The Microeconomics of Poverty, Risk and Development

Programme number:	VU 4	
Programme director:	Prof. dr. J.W. Gunning	
Research staff 2007:	1.68 tenured, 4.48 total fte	
Assessments:	Quality:	4.5
	Productivity:	4.5
	Relevance:	5
	Viability:	4.5

Short description

The programme has addressed six key issues in the economics of development:

- the scope for sustainable land use in areas with rapid population growth;
- economic effects of migration, both within developing countries and internationally;
- the microeconomics of manufacturing firms;
- statistical extrapolation techniques for “poverty mapping”;
- the ability of rural households to grow out of poverty in situations of risk;
- statistical impact evaluation of policy interventions.

Over the years the focus has shifted from the first three to the last three topics. The approach is strongly empirical, using survey data (for individual households or firms) for micro-econometric testing. Involvement in the collection of such data and in the design of the survey instruments is an important and distinguishing part of the programme.

Quality

The group engages in data design and collection as well as in statistical analysis. As a result it has a distinctive profile, characterized by originality as well as coherence. By its nature much of the work is published in journals and other outlets which development professionals follow, but the group has scored some big hits in the top academic journals and looks set to continue those successes. This is a group doing high quality applied economics research and disseminating its results in an entirely suitable manner.

Productivity

The group does high quality, mainly empirical, development economics work. Its results are published in entirely suitable outlets. The work is clearly professionally done and notice is taken of it. The output of the group is impressive and its visibility is ensured by well developed international connections. PhD numbers are fairly high, but can probably be increased even further.

Relevance

The work done by this group is intimately connected with important issues faced by policy makers dealing with development economics problems. The work of the group is grounded in theory and uses data obtained in the field to test hypotheses and measure the magnitudes of effects knowledge of which is essential for the proper formulation of economic and social policy. The group generates a respectable amount of external research funding.

Viability

The group is distinguished from many other similar groups by its expertise in microeconomic analysis of survey data. To continue to establish its position it may benefit from increased contact and co-operation with groups engaged in related methodological and applied research, and from increase in the number of PhD students without deterioration in quality.

Conclusion

This is a relatively small group focused on microeconomic issues arising in the economics of development. It is well known internationally and publishes a good volume of research. Importantly, that research has real impact, as it deals with crucially important problems in development economics and delivers answers that have implications for policy.

Spatial, Transport and Environmental Economics

Programme number:	VU 5		
Programme director:	Prof. dr. P. Nijkamp (until 2002), Prof. dr. P. Rietveld (since 2003), Prof. dr. J. van den Bergh (until September 2007) and Prof. dr. C. Withagen		
Research staff 2007:	5.62 tenured, 21.53 total fte		
Assessments:	Quality:	4	
	Productivity:	5	
	Relevance:	5	
	Viability:	4.5	

Short description

This research programme addresses four interrelated themes from an economic perspective: spatial dynamics, land use, transport and the environment.

Spatial dynamics research focuses on the role of knowledge creation and knowledge spillovers in the development of regions. Also, institutional and cultural differences between regions and their contribution to variation in regional and national growth and trade are analysed.

Land use is studied in urban and rural areas. Issues such as the realization of agglomeration benefits (positive externalities) and degradation of quality of landscapes by fragmentation and reduction of open space (negative externalities) are addressed. Research in this field is supported by rapid developments in geo-information science.

Transport research focuses on problems of congestion and unreliability in transport networks. The contributions of pricing strategies, public or private supply of infrastructure and information provision to reduce congestion and uncertainty are analyzed.

Environmental economics addresses economic aspects of environmental problems, environmental policy and sustainable development. The latter concerns innovations for and transition to sustainable systems (notably energy and transport), construction of sustainability indicators, and use of non-renewable resources.

Quality

The programme is original in addressing aspects of related subfields using a variety of different technical approaches. This approach challenges coherence but makes it possible to make significant contributions at the subfield level. The publication strategy has impact at that level, where researchers appear prominent, rather than at the level of standard international and general-interest research outlets.

Productivity

The orientation of the programme targets specific journals, rather than highly visible programmes; the volume of output is very substantial in terms of publications and PhDs.

Relevance

The research submitted is effectively disseminated in the relevant, mostly local areas, and produces highly relevant applied knowledge as well as fundamental tool-based advances in the specific field.

Viability

The group is suitably sized and well organized. High turnover in leadership roles, as well as maintenance of a coherent stream of research in disparate sub-areas, may to some extent challenge the programme's long-run viability.

Conclusion

The research group's unique characteristics in terms of field coverage, combined with the technical proficiency of its senior researchers, warrant a very positive evaluation. The reviewers recommend continued attention to coordination issues across the research areas targeted by the programme, and to the attraction and retention of suitable personnel at all levels, from leadership to PhDs.

Finance and Banking

Programme number:	VU 6
Programme director:	Prof. dr. A. Lucas
Research staff 2007:	3.44 tenured, 5.67 total fte
Assessments:	Quality: 4
	Productivity: 4.5
	Relevance: 4.5
	Viability: 3.5

Short description

The research programme in Finance and Banking focuses on three core areas: risk management and banking, market microstructure, and corporate finance. It investigates the workings and design of financial markets, the measurement and management of financial risks in both the corporate and financial sector, and the financing decision process in corporations in its interplay with financial markets.

Quality

The quality is promising, but can be improved further. A potential issue is that in the past, the best publications of the programme were in econometrics and operations research, rather than in finance (although a change is to be noticed in 2007 with more finance-oriented publications).

Productivity

Production has to move from professional publications to high level academic publications. There is a clear trend towards more academic publications. This has to be strengthened. Also, the number of PhD theses is a bit low, and volatile. The programme leaders might think about ways to ensure a steady stream of PhD students.

Relevance

This group exhibits a good span of the standard finance research agenda (corporate finance, microstructure, banking), although asset pricing is missing. The Committee feels that this is not an issue yet: the group should aim at consolidating existing fields, before thinking about broadening the research topics. A concern is that some key contributions are not in finance. This is not in line with the clear focus of the research topics.

Viability

The research activity relies on a small number of people. The group has to grow to insure against departures. There is also a potential concern that the faculty staff splits in two groups: one with research-active faculty, and another one with teaching-faculty.

Conclusion

The programme is on the verge of becoming internationally visible in finance. The quantity and quality of publications in finance must continue to increase. The university has a clear policy towards enhancing research. It is important however to support further the programme, to give more research time to faculty staff, and to hire new high potential tenure-track young scholars.

Operations Research and Information Technology

Programme number:	VU 7	
Programme director:	Prof. dr. H.C. Tijms	
Research staff 2007:	2.20 tenured, 3.83 total fte	
Assessments:	Quality:	4
	Productivity:	3
	Relevance:	4
	Viability:	-

Short description

This programme is concerned with the following broad research questions:

- What are practical approaches for stochastic networks?
- How can the efficiency of simulation for rare events in availability and reliability systems be increased?

The enormous increase in computational power of computers in recent years has caused a shift of focus towards simulation and algorithms, including issues of practical implementation. Algorithms that were developed in the group many years ago receive renewed attention with emphasis on the implementation aspects. Fundamental research themes are gradient optimization and optimization of general Markov chains, analysis of non-Markovian queues, on-line algorithms for routing in telecommunication problems with partial information, and simulation of rare events in teletraffic, using the principle of entropy.

Quality

The work done by the group is generally of good quality. Some of the members of the group are internationally well known in the field and some of their books well received. However, the number of publications in top international journals is limited. One of the reasons mentioned is that the work of the group is quite often published in journals outside the fields of economics or management.

Except for some collaboration with some Korean partners, there appears to be no or few institutional cooperation with foreign institutions. From reading the self assessment report and interviewing the programme leader we get a picture of a rather isolated group.

Productivity

The publication output in general and publication output in top international journals in particular are rather low. There has been an increasing trend towards 2005-06 but one has not been able to sustain this trend in the last year. The PhD output, both in terms of PhD students as in PhD theses, is very low. The reasons mentioned are not very convincing.

Relevance

In line with the comments made in a previous review, the group is concerned about the effects of collaboration and dissemination of research results outside the scientific community, although this was not fully clear from some statements in the text. There is no income from contract research.

Viability

The research group is rather small and one of the key persons is soon to retire. There is the clearly stated objective to move the research which traditionally has been positioned towards the fundamental side of the spectrum towards more the applied side of the spectrum. However, it is not made clear how this will be accomplished. Generally there is no action plan defined that describes how the group will deal with such weaknesses as PhD candidates or diversification in revenue streams. As stated before there is no income from contract research. In the past years however some steady income from other research funds has been obtained.

Conclusion

The group seems to lack a clear strategy. What do they consider to be the mission? Which goals do they want to achieve? How will they do this? What resources (including managerial and other human resources) are required?

Accounting and Decision Making

Programme number:	VU 8
Programme director:	Prof. dr. T.L.C.M. Groot
Research staff 2007:	2.36 tenured, 6.76 total fte
Assessments:	Quality: 3
	Productivity: 3
	Relevance: 3.5
	Viability: 3

Short description

This research programme has three sub-programmes.

Financial Accounting considers (1) the development of financial reporting practice in interaction between reporting companies and users of financial statements; and (2) the development of the institutional framework of financial reporting, including accounting standards and the auditing profession.

Management Accounting & Control looks at organisations' internal reporting systems and tries to answer three questions: (1) What information do firms use to measure and assess performance of their units and managers? (2) What management control systems are being developed in non-profit and governmental organisations and how effective are they? (3) What role does accounting information play in strategic alliances between independent companies?

Auditing investigates how auditors verify corporate accounting data and how this leads to a final judgement about the quality of the financial statements. Audit quality is the main theme in this sub-programme: the quality of auditors' judgements and the quality of audit programmes.

Quality

We found that the performance was rather disappointing with only a small amount of work published in good international journals. We saw a slow positive trend, however. This is a small group spread over three distinct fields with a few key people publishing in high quality journals.

Productivity

The overall productivity is reasonable, but is primarily in lower level and practitioner journals. PhD numbers are modest. The group needs to be more ambitious in aiming to place its output in international journals.

Relevance

There is a strong focus on producing practically relevant work, mainly in Dutch language and in books and practitioner journals. The balance between pure and applied work is strongly biased towards the applied side.

Viability

The three areas of concentration represent a sensible strategy, although further attention might be paid to the focus within each area. External funds stem from post-graduate teaching and grants, and are entirely used for academic research. There are positive signs for the future.

Conclusion

There is evidence that the group has a capability for top quality work, but this needs to be spread more widely and to achieve greater volume. It may be that the strategies of each of the research groups would benefit from greater focus.

Strategic Entrepreneurship

Programme number:	VU 9
Programme director:	Prof. T. Elfring
Research staff 2007:	2.12 tenured, 2.75 total fte
Assessments:	
	Quality: 3
	Productivity: 3
	Relevance: 3.5
	Viability: 4

Short description

The programme in its present form evolved in January 2007 out of the discontinued Strategy and Organization programme 2003-2006. (Dr. B. Bossink was interim programme leader during that period.) It was originally started as a teaching group.

The research programme looks at entrepreneurial and innovative efforts and their effect on firms' performance. It addresses the processes used by individuals and groups to identify innovation opportunities, focusing on alliances and social capital. In particular, projects focus on the initiation, daily management and performance effects of collaborative endeavours. Research on the effects of entrepreneurs' networks is expected to lead to theory development on business-to-business relationships as well as managerially relevant knowledge.

Quality

The research domain this programme claims to be addressing appears to be somewhat scattered, covering a relatively broad range of loosely related areas such as Strategy, Organisation, Entrepreneurship, Innovation, Knowledge management, Interorganisational relationships and alliances. We believe this somewhat scattered research program reflects the transition the group has been through over the last few years and we would expect a more focused research agenda to emerge in the near future, leading to quality publications.

Productivity

Research productivity, especially in terms of high level academic contributions, has been fairly low during the period under study (2001-2007). It appears most of the work done was practitioner oriented. The change in orientation toward more academic research and the recent focus on high quality publications has begun to produce results and should result in a significant improvement in productivity in the near future.

Relevance

While a lot of the publications presented for the entire review period are primarily relevant to practitioners, the Committee feels their academic relevance – i.e. their value for other researchers to build future research on – is more limited. Again, we expect the change in orientation to significantly increase the academic relevance of the work coming out of the group in the near future.

Viability

The post-transition leadership of the programme appears to have been able to attract new faculty to the group, which significantly improves its future viability. In particular, more faculty with a clear academic orientation should make it possible to attract more PhDs. In turn, these new PhDs should contribute to enhancing the research focus and output of the group.

Conclusion

The Committee believes the change in orientation of the group should result in higher quality and more abundant output. While it is still too early to assess the results of this major change in strategy, we are optimistic about the potential for the future. The Committee recommends the group carefully examine the scope of the research areas it covers and consider focussing its more than what appears to be currently the case.

Marketing Strategy

Programme number:	VU 10	
Programme director:	Prof. dr. R.T. Frambach	
Research staff 2007:	1.74 tenured, 4.92 total fte	
Assessments:	Quality:	4
	Productivity:	3.5
	Relevance:	3.5
	Viability:	3

Short description

This research programme investigates how organisations can develop superior customer value in markets characterised by dynamic exchange relationships, and how this affects their performance. The programme started in 2003 and is still growing. It has three main research themes:

- Innovation, covering firms' capabilities to successfully develop and market innovative products and services, as well as customers' assimilation of innovations;
- Research methods.

Quality

The Marketing Strategy programme is very good. Its output in "A journals" is largely from people with minimal funded participation in the programme. However, the group has a credible output in "B Journals" many of which are highly regarded internationally. Noticeable among these is the programme's strength in innovation, an area that is neglected by strong marketing groups within the Netherlands.

Productivity

The small number of tenured staff attached to the programme means that it is stretched and very dependent upon its leader. It shows signs of increased productivity since its inception in 2003, particularly in "other journals". Lacking its own PhD-programme, the number of PhD-students and completions is small.

Relevance

The output of "professional publications" shows the relevance of the programme's output but the number of these has declined in recent years. There is also little sign of the programme's ability to attract research funds or contracts.

Viability

The programme is almost wholly supported by direct funding from fte's. Since its inception it has grown successfully against the overpoweringly strong and world-class marketing research programmes at Erasmus, Groningen and Tilburg. These three programmes are a magnet for strong faculty, PhD-students and funding. To survive against these, VU's programme needs to differentiate itself from the powerful incumbents by focussing on an area, such as innovation. However, even though the programme is focussed it is small and could be critically damaged by the loss of its leader.

Conclusion

VU's Marketing Strategy programme has survived by focussing on innovation, an area neglected by major incumbents in the marketing field. Such a tight focus is probably necessary to survive but the group is below critical mass and too dependent on the retention of a few staff. To become sustainable it needs investment to support further growth, particularly in strengthening cadre senior researchers.

Human Resources

Programme number:	VU 11
Programme director:	Prof. dr. P.G.W. Jansen
Academic staff 2007:	1.02 tenured; 2.95 total
Assessment	Quality 3.5
	Productivity 3.5
	Relevance 4
	Viability 4

Short description

This is a well-focussed programme, that has “careers” as the central theme, with two sub themes of diversity and learning. Discussion with the programme director clarified that the careers theme will be maintained as the primary focus of the programme. There also seems to be an element of focus on professional service firms in much of the work, which reflects the focus of the business administration programmes at VU.

Quality

The research is of scientific and practical merit, as the learning and diversity themes are the subject of lively academic debate and are of current interest to practitioners. However, the output in top-tier journals is limited to a relatively small number of papers in the *Journal of Organizational Behavior* and the *Journal of Vocational Behavior*. The number of OB/HRM journals judged as A or B in the VU journal list is limited, but this probably does not fully explain the relatively modest progress with top-tier publications. Developing the output of top-tier international publications must be a key priority for the programme in the coming period.

The reputation of the programme is primarily national, with some international-level impact on the careers literature. Relatively speaking, international collaborations appear to be somewhat limited, with most collaborations being within the Netherlands. This is another area where the group could seek to strengthen their profile in the next few years.

Productivity

Until 2005, the majority of the group’s published output was in professional publications. There has been a trend growth in the number of international journal publications since the programme was founded in 2003, but there has been less growth in top-tier and A and B-rated journal papers, at least until 2007. The programme is graduating about one PhD student per year. There are currently just three PhD students, although given that the group has just one full professor and one associate, this is probably reasonable.

Relevance

The group is working hard to disseminate their research findings to the practitioner community. Whilst they have prioritised international academic papers over professional journals in recent years, this has apparently been compensated by speaking to professional meetings and by networking. The recent emphasis on international journal papers is appropriate, and the group need to find complementarities in producing academic and professional impact. An international quality research programme with strong practical implications is surely the way forward.

Viability

In 2007, the group included just one full and one associate professor, with the majority of staff at relatively junior levels. The input of tenured staff increased during 2003 to 2006, but fell back again in 2007, and the main growth in staffing has come from non-tenured staff. The group appeared to be heavily reliant on the programme leader. For example, he has been closely involved in the supervision of all doctoral students, who rely on his “personal network” of contacts. Whilst this may constitute effective and resourceful leadership, the very heavy reliance on a single senior colleague raises concerns about the long-term sustainability of the programme. There may also be concerns about the vitality and flexibility of the programme in the absence of new blood. There is a need to consider the recruitment and development of senior colleagues, and there was a suggestion from the programme director that this is now being addressed. The effective implementation of the tenure track system, along with effective mentoring and staff development are likely to be important in underpinning the long term viability and vitality of the programme.

Throughout the review period, the programme has been funded entirely from direct funding fte's. It was reassuring to hear from the programme director that this provides a sound and reliable resource base, given the popularity of HRM/OB classes in VU's educational programmes, and that funding for research projects/ collaborations is now being sought. It was also reassuring to find that the programme receives significant support from external organizations, although to date this has been entirely non-financial.

Conclusion

The group would be advised to seek to further diversify their sources of funding in the medium term, to include both research funds and corporate support. This would allow for additional staffing and would also demonstrate the (financial) value of the group's work.

Information Systems for Organisational Networks

Programme number:	VU 12
Programme director:	Prof. dr. Y.H. Tan (Information Management and overall coordination), Prof. dr. M. Huysman (Knowledge and Organization), Dr. I. Vis (Logistics).
Research staff 2007:	2.47 tenured, 5.26 total fte
Assessments:	Quality: 3
	Productivity: 3
	Relevance: 4
	Viability: 4

Short description

In this programme, research is conducted on networks that are established to deal with increasingly fast changes in the world of business and services. There are three sub-groups, each with their own research area:

- *Information Management.* The research of this group focuses on the role of information systems that enable the exchange of information between organisations. In particular, it investigates how inter-organisational control procedures can be designed for these systems, and has developed a design methodology which supports the design process of control procedures. Research is also conducted on the impact of system characteristics on online purchase decision making.
- *Knowledge & Innovation* investigates knowledge processes (such as learning, networking, problem solving and innovation) within and between organisations and their consequences for organisational support. The focus is on informal communities and networks. Ongoing research projects address knowledge diffusion in inter-organisational networks, knowledge management within and between organisations, and online knowledge-sharing practices.
- *Distribution and Supply Chain Logistics.* This research mainly focuses on the design and optimisation of inbound and outbound logistics processes for shippers and service providers. Research is conducted on new planning and control concepts for internal logistics processes, design principles for supply chains that have to deal with unexpected large events such as natural disasters, collaboration in demand-driven supply chains, strategic purchasing and e-procurement, and multi-item inventory systems with an order-based service level.

Quality

The programme was started formally in 2003 based on the hiring of 3 research-oriented faculty around the theme of IS for network organizations; each of them is forming a small group by now. Each came with their own subtopic, the linkages among these topics are being built. In the reporting period, the quality and quantity of international publications has developed to a good level but still needs further significant growth (in the oral presentation evidence was given that improvements are indeed to be expected). The group gets heavily involved in community building for their rather new field, and in this manner achieves significant impact. The director has already achieved a very prominent position at a European level, the other two subtopic leaders are also making good progress.

Productivity

Publication productivity of the group is getting better but is not quite yet at an internationally competitive level; a high number of local and professional publications indicates useful output for the local and practitioner communities. Productivity in PhD graduation needs improvement which is not surprising as the new faculty only recently obtained funding for their own PhD students. Most of the research results are apparently produced by the rather small group of new research faculty. Broadening of the research culture would be desirable but seems to be hard given high teaching loads.

Relevance

The research theme is highly relevant and growing further in importance. In the area led by Tan, this relevance has already materialized in several projects, including leadership of a major and prestigious EU project and numerous industry contacts. In other areas, impact is being achieved in terms of successful conference organization or business cooperation. The group is also unusually active in community building, so further broadening of relevance can be expected.

Viability

Recent hires indicate that the School is willing to invest in research in this field. The funding basis from the teaching side appears to be good but long-term viability of research in this department will also depend on getting a higher share of faculty involved in research.

Conclusion

Overall, the group is on an upward trajectory and the strategy of the School to strengthen research in this department is beginning to pay off. The status of the group can already now be judged to be satisfactory to good, but more importantly the trend especially including 2008 is clearly upwards. So, in the next assessment, a better grading can be expected provided the School keeps up the willingness for upfront investment, and the group itself can activate other income streams, such as NWO funding. Management attention must remain focussed on increasing very good and top publications, and on further increasing coherence among the three subtopics.

5. Faculty of Economics and Business, University of Amsterdam

Research within the Faculty of Economics and Business at the University of Amsterdam is conducted in the Amsterdam Business School - Research Institute (ABS-RI) and the Research Institute Economics & Econometrics Amsterdam (RESAM).

5.1. The Amsterdam Business School - Research Institute

Mission & Goals

The mission of the Amsterdam Business School - Research Institute (ABS-RI) is stated as: to stimulate the publication of internationally recognised research across a broad range of business disciplines and to increase academic excellence while retaining and building on the existing national and international presence.

The Amsterdam Business School (ABS) aims to provide research-based education. This does not require all staff to be renowned researchers or all teaching modules to be based on research. It does require that the Institute publishes respectable research across the broad spectrum of business disciplines and has areas of excellence.

In the Strategy section of the self-evaluation report, there is also mention of the ABS mission of contributing to the societal debate and providing guidelines for management practice and policy making. This societal function is seen as one of two equally important pillars on which government support to universities rests, the contribution to the international academic debate being the other.

The Committee recognizes that the mission and goals are clearly stated. However, the Committee fears that the goals might lack focus for a young business school, given the local, national and international competitive environment. The Committee suggests that UvA-ABS should be more clearly differentiated from other institutions to guarantee some long term sustainability.

Leadership

The Research Director of the Institute reports to the Director of the Amsterdam Business School, who in turn reports to the Dean of the Faculty of Economics and Business. There is a structured system with a regular 'staffing meeting', involving the Director of ABS (Prof. dr. A. Hodgson, replacing Prof. dr. B. Rees during his sabbatical), the Research Director of ABS-RI (Prof. dr. A. Kolk), the chair of the Department of Business Studies (Prof. dr. Michael Ellman) and the department section heads, presently also the Research Programme Directors. In this setting all policies related to staff and relevant developments within ABS are discussed, and areas for improvement and development are identified.

The Committee feels that UvA-ABS benefits from an effective leadership, and that the management structure is sound and professional.

Strategy & Policy

When ABS-RI was created in 2002, the three present research programmes (Corporate Finance and Financial Systems; Accounting, Organisations and Society; and Information Management) were already in place. Efforts have been made to strengthen research in the field of Management.

A research programme on Human Resource Management and Organisational Behaviour was not put forward for assessment by the Committee, as it is considered an emerging programme. Since the second half of 2007, steps are being taken towards the formation of a research programme on Strategy and Marketing. A few researchers in this area are currently still subsumed under the old research programmes.

The aims of the ABS's personnel policy for academic staff are: a) to assist in the achievement of the aims of the ABS, 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 ABS provides attractive employment (salary, expenses, leave, computers, office space, secretariat, promotion criteria, good management) and academic (PhD students, seminars, colleagues) conditions.

Recruitment of good, fulltime academics with developed research capacities forms the main ingredient of the Institute's strategy to improve research quality and output. In recent years, so the self-evaluation report states, the recruitment of research staff has become more targeted. Requirements are a strong research record, a PhD degree, and a substantial list of good international refereed publications.

Finance remains the strongest area of ABS in terms of research as well as staff recruitment. Despite this unbalance, the institute would like to position itself as a broader business school. Difficulties are mentioned with respect to the recruitment of researchers in the fields of Accounting and Strategy/ Organisation/Marketing, due to the department's reputation of being teaching oriented. Good results were obtained more recently, but recruitment remains difficult.

In late 2006, staff was appointed in a department section on Human Resource Management and Organisational Behaviour. The concomitant research programme is considered an emerging programme. A section in the field of Strategy & Marketing needs further strengthening in terms of faculty.

In order to counter a shortage of good PhD students, ABS is establishing an MPhil programme.

Although since 2002 there has been a focus on increasing international refereed publications, the intention has been to preserve the Institute's strengths in more applied, usually nationally oriented research. This research has provided valuable links to practitioners, which can help to attract (post)graduate students and external research funding. At the same time, these links were and are considered important for achieving the ABS mission of contributing to the societal debate and providing guidelines for management practice and policy making.

In general, the ABS management and staff members view research programmes as a pragmatic tool to collect, evaluate and present research, not as a guide for the actual research work, as this is something that competent researchers tend to decide for themselves.

Researchers with output in good international refereed journals are allocated 50% of their time for research, the other 50% is filled by teaching. Management duties, if substantial, are deducted from staff members' teaching time.

The Committee considers that the development of the strategy and policy is particularly clear and effective. It is well aligned with the mission and goals, and very realistic, considering the difficulty to develop several departments at the same time. UvA-ABS manages to balance the

support among the different groups. One potential concern, that relates to what was mentioned before, is that the strategy is a bit generic, which makes it harder to build the UvA-ABS brand.

Resources, Funding Policy & Facilities

The Department has provided the following overview of the personnel resources, in full-time equivalents (fte) research time. [Note: non-tenured staff numbers include PhD students.]

Research staff at institutional level (<i>three research programmes</i>)							
	2001	2002	2003	2004	2005	2006	2007
Tenured staff	8.59	9.19	8.83	7.53	8.78	8.71	8.62
Non-tenured staff	8.11	9.87	11.10	8.99	9.08	10.57	12.04
PhD students	7.61	9.37	9.85	6.84	6.50	6.04	6.58
Total research staff	16.70	19.06	19.93	16.52	17.86	19.28	20.66
Supporting staff	–	0.20	0.20	0.20	0.20	0.20	0.20
Total staff	16.70	19.26	20.13	16.72	18.06	19.48	20.86

Research staff at institutional level (<i>including newly established research programmes in 2007</i>)							
	2001	2002	2003	2004	2005	2006	2007
Tenured staff	8.59	9.19	8.83	7.53	8.78	8.71	13.54
Non-tenured staff	8.11	9.87	11.10	8.99	9.08	10.57	18.54
PhD students	7.61	9.37	9.85	6.84	6.50	6.04	9.99
Total research staff	16.70	19.06	19.93	16.52	17.86	19.28	32.08
Supporting staff	0.00	0.20	0.20	0.20	0.20	0.20	0.20
Total staff	16.70	19.26	20.13	16.72	18.06	19.48	32.28

Research staff at programme level

Accounting, Organisations & Society							
	2001	2002	2003	2004	2005	2006	2007
Tenured staff	3.36	3.14	2.78	2.25	3.23	3.13	3.06
Non-tenured staff	3.37	4.40	5.05	2.60	3.18	4.26	4.52
PhD students	3.37	4.40	5.05	1.80	2.00	2.09	1.58
Total research staff	6.73	7.54	7.83	4.85	6.41	7.39	7.58
Corporate Finance & Financial Systems							
Tenured staff	2.61	3.66	3.96	3.52	3.82	4.26	3.70
Non-tenured staff	3.15	3.88	4.55	5.75	5.70	5.71	6.75
PhD students	2.65	3.38	3.30	4.40	4.30	3.35	4.40
Total research staff	5.76	7.54	8.51	9.27	9.52	9.97	10.45
Information Management							
Tenured staff	2.62	2.39	2.09	1.76	1.73	1.32	1.86
Non-tenured staff	1.59	1.59	1.50	0.64	0.20	0.60	0.77
PhD students	1.59	1.59	1.50	0.64	0.20	0.60	0.60
Total research staff	4.21	3.98	3.59	2.40	1.93	1.92	2.63

ABS-RI is largely funded by regular government funding through allocation by the Faculty of Economics and Business (FEB) and ABS. The funding of FEB by the university is mostly based on results in education: faculties are paid per credit earned by students, on top of which a fixed percentage for research is added. Within FEB, allocation of funds to the institutes is based on expectations in expenditures, the major expenditure for these research institutes being research time.

Within ABS the number of research faculty, and therefore the budget, has grown significantly over the past few years. Some researchers and research projects are paid by external bodies such as the Netherlands Organisation for Scientific Research (NWO) or other parties like the European Union. For researchers in Business Studies it remains rather difficult to obtain NWO funding. However, ABS has become more successful in attracting other research funding in recent years.

The Committee sees several potential issues in terms of resources to sustain the development of the school. First, the lag in resource allocations might hamper the implementation of the school strategy. Second, there is a concern that resources are too limited, given the cross-subsidization within the University with science and medicine faculties. A lot of resources have to be dedicated to several goals at the same time, which questions the feasibility of the whole plan. A positive aspect is that the allocation of resources among research programmes is reasonable and well executed. The Committee suggests now to build up in non-evaluated programmes to have a viable business school.

Academic Reputation

The Amsterdam Business School as a whole was assessed by the EQUIS⁴ peer review team in late 2006 and gained EQUIS accreditation. The panel report praised ABS's strong faculty management system with clear performance expectations, review cycles and reward systems. The quality of research output was rated 'above standard'. ABS's strength in Finance research was mentioned as both an asset and a weakness, making it hard for ABS to form a well-rounded business school. PhD activity was mentioned as an area of weakness.

In addition to the EQUIS review, the self-evaluation report mentions some prizes won by PhD students and researchers, and staff participation on editorial boards or as (associate) journal editors.

The Committee notes that academic reputation is still heterogeneous across the different programmes: some, like the finance programme, have very high reputation, while others are not well known yet. Another weakness is the small number of PhD theses produced. This is another way to increase academic reputation. On that respect, the Committee considers that the initiative to start UvA-ABS's own PhD programme in management is welcome.

Societal Relevance

The self-evaluation states that certain research areas within ABS attract attention outside academia. First and foremost, several researchers in the finance programme are active as policy advisors for national and international institutions. In other areas, research on corporate re-

⁴ EQUIS, European Quality Improvement System, describes itself as the leading international system of quality assessment, improvement, and accreditation of higher education institutions in management and business administration.

sponsibility reporting and on business and climate change has attracted outside interest. The Committee values the practical relevance of the research carried out at UvA-ABS, even in the non-evaluated programmes. One potential weakness is the rather low number of professional publications. Knowledge is usually disseminated in the press on specific issues (for instance on Corporate Social responsibility, on financial issues). If UvA-ABS's aim is to become a broad business school, dissemination of knowledge should be more spanned across disciplines.

Balance of Strengths & Weaknesses

Strengths listed in the self-evaluation are the UvA's standing in general, links to the Amsterdam School of Economics and the Tinbergen Institute, the research-driven culture of both the University and the Department, and a successful staff recruitment policy. Alongside the strong Finance research programme, increasing quality and quantity of research output in other areas is mentioned.

Weaknesses are the lack of a PhD programme in Business, difficulties in funding PhD positions and less than competitive staff remuneration. Also, ABS branding is said to be relatively underdeveloped.

Opportunities mentioned are Amsterdam being an attractive location, the University Board's support for growth of ABS, growing interest from international students, and an increasing interest in some of ABS's research topics.

As threats, the Department sees the increased competition for internationally-oriented staff, and a decrease in government support for universities. Also, there is increased competition in order to publish in leading journals.

Some strategy choices based on the SWOT analysis are described in the self-evaluation report: building a PhD programme (together with an MPhil programme), continuing an active recruitment programme, strengthening the programmatic nature and visibility of ABS research, and efforts to increase funds.

The Committee agrees with the SWOT analysis performed in the self-evaluation report. One additional strength is the good management of the necessary flexibility in resources to recruit and retain faculty staff, and the system of compensation across the research units. The Committee would like to advise the school to build more contract research as a source of revenues. This could be a way to secure stable resources that can be used for human resource management.

University of Amsterdam - Assessments per programme

The Committee assessed the following programmes of the Amsterdam Business School - Research Institute of the Faculty of Economics and Business at the University of Amsterdam:

	Quality	Productivity	Relevance	Viability
UvA1: Accounting, Organisations & Society	3.5	4	4	4
UvA2: Corporate Finance & Financial Systems	5	4.5	5	4
UvA3: Information Management	3	3	4	3.5

The detailed assessment per programme follows in the next section of this report.

Accounting, Organisations & Society

Programme number:	UvA 1		
Programme director:	Prof. dr. F. Hartmann (2001-2003), Prof. dr. A. Kolk (2001-2004), Prof. dr. W. Rees (2004), Prof. dr. A. Hodgson (2005-2006), Prof. dr. B. O'Dwyer (2005-2007).		
Research staff 2007:	3.06 tenured, 7.58 total fte		
Assessments:	Quality:	3.5	
	Productivity:	4	
	Relevance:	4	
	Viability:	4	

Short description

This research programme focuses on accounting in the broadest sense. It is distinctly and deliberately interdisciplinary in nature. Research themes are addressed for their societal as well as theoretical importance, thus helping to provide guidelines for accounting and accountability practice and policymaking. There are two key research themes and a third emerging theme:

- *Governance, Accountability and Sustainability.* Subjects include social and ethical accounting and reporting; the impact of internationalisation on governance, accountability and sustainability; and multinational companies' approaches to climate change.
- *Financial accounting and capital markets.* This theme focuses on empirically assessing the impact of financial accounting on financial decision-making and vice versa. Recent popular research subjects include insider trading; returns, earnings and market efficiency; and accounting data and financial analysts and qualitative management forecasts.
- *Management Accounting.* In this emerging research theme, subjects include customer profitability analysis; the design of incentives and rewards systems; and the role of personality characteristics and cognitive biases in economic decision-making processes.

Quality

A variable performance over the period of the exercise, with a relatively small number of top quality publications. The work is also spread across several areas and has suffered from staff turnover. However, there are indications that recent appointments are beginning to bear fruit and that the unit is on an upward trend.

Productivity

A reasonable level of overall productivity, but only limited impact on top level journals. A good number of PhD students and completed dissertations have been produced. Also attention is given to practical relevance.

Relevance

A good balance between fundamental and applied research, as befits a group situated in a financially-oriented capital city.

Viability

Staff turnover has been a problem and it is recognized that this is a difficult area to recruit in. However, some good senior appointments have been made and the effects are becoming ap-

parent; extra resources are being made available to supplement the staff numbers and reduce teaching loads.

Conclusion

It has been a turbulent period for the unit but it has produced some good work and has the potential to continue on the upward trajectory that has now been established.

Corporate Finance & Financial Systems

Programme number:	UvA 2	
Programme director:	Prof. dr. E.C. Perotti	
Research staff 2007:	3.70 tenured, 10.45 total fte	
Assessments:	Quality:	5
	Productivity:	4.5
	Relevance:	5
	Viability:	4

Short description

Having started out in 1992 with a strong but narrow base in theoretical research on corporate finance and banking, the programme has since complemented this research topic by strong empirical research. The programme has also broadened its focus to other important financial issues: asset pricing, investments, private equity, international markets and real estate.

Quality

This programme has become during the assessment period an internationally visible group. The publications stemming from the programme are of very high quality, and spread among a larger number of researchers, which increases overall quality.

Productivity

The overall productivity is very good, especially referring to academic publications. The Committee feels that the number of PhD theses is still a bit low compared to the reputation of the programme. Efforts could be made to attract more PhD students.

Relevance

The research projects developed in the programme have both academic and practical relevance. The group is very visible in professional publications, and has significant activity towards talking to, and advising, policy makers.

Viability

The programme has shown great vitality to attract and promote young researchers. Many tenure-track positions have been filled during the assessment period, and some of the non-tenured people have been promoted to tenured position. This shows the group ability to retain talented young scholars. At the same time, the number of senior faculties has decreased. This might be a concern for the future.

Conclusion

This programme is on the right track. To improve further and ensure viability, recruitments at senior level and at PhD level have to be strengthened.

Information Management

Programme number:	UvA 3		
Programme directors:	Prof. dr. R.E. Maes and dr. A. Huizing (both 2001-2007).		
Research staff 2007:	1.86 tenured, 2.63 total fte		
Assessments:	Quality:	3	
	Productivity:	3	
	Relevance:	4	
	Viability:	3.5	

Short description

Research in the Information Management programme is directed towards two interrelated core concepts:

- ‘information and communication’ as intermediary, mediating concepts bridging [the gap between] business and information technology, and
- ‘architecture and infrastructure’ as similar concepts bridging [the gap between] the strategic and operational levels of organisational attention.

This is contrasted with traditional research in Information Management, which looks mainly at the technologies involved and the direct link between business and information technology. The programme aims for conceptual and practical development of the two key areas, using a common frame of reference. For a full comprehension of information management, according to the participants, it has to be studied interdependently at the strategic, (infra-)structural and operational level and from the point of view of business, information/communication and technology.

Quality

The research directions exposed in the self-evaluation sound fairly general. It is appreciated that the research focus has been made much more specific by approval of the Center for Service Sciences, and the new efforts regarding IT entrepreneurship (SPACE Center); this can be expected to increase the unique identity of the group as well as its coherence. In terms of existing publication quality and research results, the situation is very good in certain areas but only satisfactory to good in others. There is some concern that the (internationally very visible) leader of the group has only a rather small part-time appointment.

Productivity

An emphasis on high-quality publication is being established but has not really been achieved in full. Concerning PhD completions, many of the concerns expressed in the previous assessment have been resolved, as existing lecturers/assistant professors completed their theses, some of them with very good success, as evidenced by two awards.

Relevance

The group does industrially relevant work, as evidenced by contracts and dual-PhD candidates. The balance is clearly still more on applied than on fundamental research, so emphasis is more on knowledge dissemination and implementation than on advancement. The two recently approved centres (after the end of the evaluation period) are expected to further strengthen the already good relevance of the work done.

Viability

For much of the reporting period, viability was severely threatened due to university-internal financial problems concerning the service relationships with another Faculty. It was reported in the interviews that most of the issues have now been resolved, resulting in a larger budget and a more solid situation.

Conclusion

During much of the evaluation period, the group has lived through a very difficult time but there are marked improvements during the last year of the reporting period.

5.2. The Research Institute Economics & Econometrics Amsterdam

Mission & Goals

The Research Institute Economics & Econometrics Amsterdam (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.

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 ensure ASE's research funds are spent efficiently.

The mission statement clearly indicates the general orientation of RESAM, which is to promote economic research. The Committee however fears that such a statement remains a bit vague to provide guidance for RESAM members, and to ensure visibility at the Institute level. Maybe some statement about RESAM's goals with respect to interventions in the public debate, or contributions to economic decision making could clarify RESAM's positioning.

Leadership

The Dean of the Faculty of Economics and Business (FEB) has the final authority on all research-related and other matters in RESAM. The Dean can formally or informally delegate whatever he wishes. So far delegation of research responsibilities within the Amsterdam School of Economics (ASE) has only been informal. The Director of RESAM is a member of the management team of ASE. There is no document clearly defining the duties, authority and responsibilities of the Director. Decisions regarding the size of the Institute's budget and the allocation of that budget are made in the management teams of the Faculty and of the Amsterdam School of Economics. Formally the Dean of the FEB takes the final decisions.

The Research Institute Economics & Econometrics Amsterdam currently covers nine research programmes as well as SEO. Each research programme has a programme leader. These programmes are regarded as the natural units of organisation of the research conducted in RESAM. Research agendas are primarily defined at the level of research groups, with an important role for the programme leaders and other senior researchers. The management style of programme leaders and other faculty members is described in the self-evaluation report as "laissez-faire". This style is considered the most suitable one in an academic environment with intrinsically motivated and highly creative professionals. There is an external scientific committee, with professors J. van Benthem, B. Wolfe, and until recently H. Don as members.

SEO⁵, a contract research institute in applied economics, is legally independent from the university. It is governed by a seven-member Executive Board. The Dean of FEB (Tom Wansbeek) and the Vice-Dean of ASE (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.

⁵ SEO stands for "Stichting voor Economisch Onderzoek", which is Dutch for Foundation for Economics Research. Until 2005, the full name was used; now only the acronym remains.

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 and for the SEO academic research programme lies with the Director.

The Committee recognizes that the RESAM director does not have much authority and power to enforce decisions in line with the Institute's mission. Currently, the Institute is functioning as a shell that gathers relatively independent research groups. The Committee encourages the Faculty and RESAM members to engage a discussion about giving a more formal function to the director, for leadership to be more effective.

Strategy & Policy

Formerly, all research in the Faculty of Economics and Business fell under RESAM. Nowadays this Institute no longer covers the fields related to Business Studies (which include Finance), as it was believed that research and publication traditions in economics and business are too different to include them in the same institute.

Currently the Research Institute Economics & Econometrics Amsterdam covers nine relatively homogenous research groups, which (with one exception, according to the self-evaluation) share a common research culture. There are no plans to change the current coverage of research areas. However, new areas are constantly explored and the institute's organisation can accommodate this. Potentially promising new areas are expected to first secure a period of research funding from external funding agencies (NWO, EU), after which they may be incorporated in RESAM's research programme.

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.

RESAM's main steering mechanism is its system of allocating research time. Researchers can earn up to 0.5 fte of research time, based on publications in journals and books during the previous three years. The system differentiates by quality of journals and number of co-authors, and the requirements have gradually become more stringent.

Together with the Economics departments of the VU University Amsterdam and the Erasmus University Rotterdam, the UvA participates in the Tinbergen Institute. This involves the Amsterdam School of Economics, plus the Finance group of the Amsterdam Business School. The Tinbergen Institute is a graduate school and a base for many joint research activities. Since 2002, it is conveniently located in the same building complex as ASE. The Tinbergen Institute has played an important role in setting higher standards for research. Qualification as a fellow of TI is based on publications in international journals and (possibly) citation scores. At ASE, TI-fellows automatically earn the maximum research time of 0.5 fte. As a recent policy, new faculty-members only get tenure when they qualify as a (junior) fellow of TI or another recognised research school. A proposal by RESAM's Director that only fellows of a recognised

research school be allowed to obtain research time, was not supported by a majority of the programme leaders. Neither was a proposal to differentiate research time so that excellent researchers would 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).

The Board of the UvA recently announced that its departments should identify at most three research groups as spearheads. Spearhead programmes will receive extra funding. At the level of ASE this would imply that at most two of its programmes are awarded this special status. This policy is not viewed as preferable by RESAM.

Regarding the development of the strategy and policy, the Committee remarks that the Institute has successfully implemented a research time allocation strategy to enhance the quality of the research output. The Committee would like to encourage the Institute on this way, for instance by introducing the possibility for the very best researchers to earn more than 50% of research time. This would give researchers more attractive research conditions, increase incentives to publish in highest ranked journals, and make the Faculty more competitive to attract new members. Regarding the spearhead programmes strategy, the Committee feels that this could give the Institute a more distinctive identity, but raises concerns about whether this covers all fields of excellence of the Institute.

Resources, Funding Policy & Facilities

The Department has provided the following overview of the personnel resources, in full-time equivalents (fte) research time. [Note: non-tenured staff numbers include PhD students.]

Research staff at institutional level

RESAM	2001	2002	2003	2004	2005	2006	2007
Tenured staff	39.14	48.14	51.65	54.63	53.87	50.87	46.06
Non-tenured staff	26.83	30.45	33.41	28.61	33.62	33.89	43.00
PhD students	14.85	16.68	18.59	18.11	20.54	16.48	15.98
Total research staff	65.97	78.59	85.06	83.24	87.49	84.76	89.06
Supporting staff	0.8	0.6	0.6	0.6	0.6	0.6	0.6
Total staff	147.59	174.46	189.31	185.19	196.12	186.60	194.70

Research staff at institutional level excluding SEO

RESAM	2001	2002	2003	2004	2005	2006	2007
Tenured staff	20.75	25.36	26.05	25.44	24.83	24.58	25.78
Non-tenured staff	25.83	29.45	32.61	27.81	31.09	27.76	31.67
PhD students	13.85	15.68	17.79	17.31	19.74	15.60	14.99
Total research staff	46.58	54.81	58.66	53.25	55.92	52.34	57.45
Supporting staff	0.8	0.6	0.6	0.6	0.6	0.6	0.6
Total staff	47.38	55.41	59.26	53.85	56.52	52.94	58.05

According to the self-evaluation report, RESAM so far has chosen to have no say in the allocation of external research funds and contracts. The teaching load, which is reported to be heavier than at many other Dutch and European universities, makes it difficult to attract and retain excellent researchers. The budget for attending conferences is reported to be low, allowing for one conference visit per person per year.

Research staff at programme level							
	2001	2002	2003	2004	2005	2006	2007
UvA-Econometrics							
Tenured staff	3.66	5.13	4.69	3.65	3.79	3.59	3.79
Non-tenured staff	2.20	1.50	3.05	2.47	2.71	2.67	2.50
PhD students	1.40	1.15	1.80	1.50	1.80	2.20	2.50
Total research staff	5.86	6.63	7.74	6.12	6.50	6.26	6.29
Operations Research							
Tenured staff	1.66	1.50	2.01	2.35	1.94	2.00	2.00
Non-tenured staff	0.00	0.15	0.68	1.08	1.08	1.15	1.17
PhD students	0.00	0.15	0.68	1.08	1.08	1.15	1.17
Total research staff	1.66	1.65	2.69	3.43	3.02	3.15	3.17
Equilibrium, Expectations, Dynamics							
Tenured staff	1.42	1.96	1.91	2.50	3.30	2.60	2.95
Non-tenured staff	5.20	5.51	6.00	4.00	2.40	2.83	5.85
PhD students	2.80	2.90	3.00	2.60	1.80	1.90	2.00
Total research staff	6.62	7.47	7.91	6.50	5.70	5.43	8.80
Actuarial Science							
Tenured staff	1.02	1.06	1.63	1.34	1.48	1.80	2.27
Non-tenured staff	0.20	1.47	1.96	1.98	1.33	0.86	2.83
PhD students	0.20	0.82	0.96	1.01	1.21	0.72	1.68
Total research staff	1.22	2.53	3.59	3.32	2.81	2.66	5.10
The Transformation of Europe							
Tenured staff	3.04	2.89	2.46	3.05	3.67	4.26	4.18
Non-tenured staff	4.34	5.27	6.33	5.13	6.05	4.64	3.33
PhD students	1.96	2.41	2.95	2.97	3.44	2.65	1.05
Total research staff	7.38	8.16	8.79	8.18	9.72	8.90	7.51
Human Capital							
Tenured staff	5.21	7.08	7.44	6.59	4.01	4.05	4.19
Non-tenured staff	8.24	11.49	11.04	7.70	8.21	7.91	5.76
PhD students	3.51	5.05	5.85	4.35	5.38	4.08	2.10
Total research staff	13.45	18.57	18.48	14.29	12.22	11.96	9.95
History and Methodology of Economics							
Tenured staff	1.72	1.72	1.76	1.81	1.72	1.75	1.67
Non-tenured staff	1.33	0.85	0.10	0.92	2.21	2.18	2.30
PhD students	1.33	0.85	0.10	0.50	0.60	0.60	0.44
Total research staff	3.05	2.57	1.86	2.73	3.93	3.93	3.97
Experimental and Political Economics							
Tenured staff	3.02	4.02	4.15	4.15	3.20	3.14	3.24
Non-tenured staff	4.32	3.21	3.45	4.53	7.10	5.52	7.48
PhD students	2.65	2.35	2.45	3.30	4.43	2.30	3.60
Total research staff	7.34	7.23	7.60	8.68	10.30	8.66	10.72
Industrial Economics, Competition & Antitrust							
Tenured staff					1.72	1.39	1.49
Non-tenured staff							0.45
PhD students							0.45
Total research staff					1.72	1.39	1.94
SEO							
Tenured staff	18.39	22.78	25.60	29.19	29.04	26.29	20.28
Non-tenured staff	1.00	1.00	0.80	0.80	2.53	6.13	11.33
PhD students	1.00	1.00	0.80	0.80	0.80	0.88	0.99
Total research staff	19.39	23.78	26.40	29.99	31.57	32.42	31.61

There is only around one PhD student per full professor. It is stated that ASE is keen to have a good number of PhD students, yet there has been a drop in their number. Causes mentioned are a vacancy stop, and disappointing numbers of graduates from the Tinbergen Institute's MPhil programme. The TI MPhil programme has been in existence for five years. Applicants for directly funded PhD positions in ASE can now only come from this programme, which among others provides them with a broader economics background. Enthusiasm for this arrangement is mixed. The information and communications technology services at ASE are described as sub-standard. The Committee reckons that there is no proper funding policy at the Institute level, probably because of a lack of free resources to allocate to serve specific purposes. One possibility could be to introduce a central tax on funds raised by programmes to have more flexibility and reallocation power. That could also clarify the Institute objective regarding the SEO group.

Academic Reputation

The self-evaluation states that Economics at the UvA has worldwide ranking positions of 37th and 45th. Various faculty members hold editorial positions. Also, the percentage of applications for NWO funding which are approved is well above average. ASE has organised several conferences.

The Committee recognizes that the academic reputation of several research groups is very good. The Committee would like to encourage the Institute to exploit more this in order to build a stronger collective identity and reputation.

Societal Relevance

According to the self-evaluation report, some research groups make regular contributions in national and local media. ASE organises seminars for alumni and an annual event linked to the government's budget proposals.

The Committee notes that most research groups have an explicit objective to be relevant to society, through the development and diffusion of research, as well as discussions with the industry.

Balance of Strengths & Weaknesses

As strengths, the Institute mentions a good spread in research programmes between traditional fields and new promising areas; a strong international reputation, successful research funding acquisition, and the participation in the Tinbergen institute as well as its MPhil programme. In the SEO, ASE has a well-functioning institute for commissioned research. Weaknesses are the aforementioned high teaching load, and low visibility on the international job market.

Opportunities are an upcoming retirement wave, allowing for the employment of ambitious young faculty members, and new budget room to employ some postdocs. Threats that are mentioned are reduced funding due to expansion of the Amsterdam Business School, unclear choices regarding the position of the MPhil programme, rising international competition in attracting students and faculty members, and the University's plan to define spearhead programmes. Also the badly functioning ICT support is considered a threat.

The Committee feels that there are definitely opportunities for RESAM to develop, based on the solid reputation of the research groups. One concern might be whether the Institute will be able to exploit these opportunities. For instance, more coordination would be needed to

be more visible and successful on the international job market. The current structure of the Faculty is more driven by teaching needs than by research needs. The Institute should try and find ways to have more decision power at the ASE level, and possibly at the FEB level.

University of Amsterdam - Assessments per programme

The Committee assessed the following programmes of the Research Institute in Economics & Econometrics at the University of Amsterdam:

	Quality	Productivity	Relevance	Viability
UvA4: Econometrics	4	4	3.5	3.5
UvA5: Operations Research	3.5	3.0	4	3.5
UvA6: Equilibrium, Expectations & Dynamics	4.5	4.5	5	5
UvA7: Actuarial Science	4	4	5	3.5
UvA8: The Transformation of Europe	4	4	5	4.5
UvA9: Human Capital	4.5	4	5	4.5
UvA10: History & Methodology of Economics	3.5	4	3	3.5
UvA11: Experimental & Political Economics	5	4.5	5	4.5
UvA12: Industrial Economics, Competition & Antitrust	5	4.5	5	4.5
UvA13: SEO	-	-	-	-

The detailed assessment per programme follows in the next section of this report.

Econometrics

Programme number:	UvA 4
Programme director:	Prof. dr. J.F. Kiviet
Research staff 2007:	3.79 tenured, 6.29 total fte
Assessments:	Quality: 4
	Productivity: 4
	Relevance: 3.5
	Viability: 3.5

Short description

The programme focuses on 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 such as: weak instruments, invalid instruments, factor models and volatility clustering.

Quality

This moderate sized group does high quality research in econometric theory. It has produced important results on estimation and inference in dynamic econometric models, including models used widely in time series analysis and panel data models. It has made good contributions to the theory of inference more widely for example studying asymptotic approximate properties of a variety of econometric procedures. The research results are published in good quality international field journals. During the review period the group's work has not featured extensively in the highest ranking international journals. Over the period of the review it has become increasingly difficult to publish in those journals on the topics studied by the group.

Productivity

The group produces a good volume of research results and publications. The group did generate significant research funding through much of the review period but this has fallen off near the end of the period as funding for pure theory work has become more difficult to obtain. The group has a good but not very substantial international presence. The group has a relatively small flow of completing PhD students.

Relevance

The research of the group is mainly focussed on pure econometric theory and while it is application driven there seems to be not very extensive contact with researchers outside the group working in applied economics and applied econometrics within RESAM or at the Tinbergen Institute. The research group is not very extensively engaged with practitioners in the private or public sectors.

Viability

The group now finds it difficult to obtain funding for research in econometric theory and has to rely on funds that are allocated to it in consequence of its teaching activities. The group finds it difficult to attract PhD students. The pool of econometrics oriented students from which it would naturally draw PhD entrants is smaller than in the past due to changes in the organisation of Masters level courses. The group has seen little staff turnover during the review period. However with the departure of a senior member for an administrative role there is to be a new appointment at the junior level.

Conclusion

The group does high quality research in econometric theory. It might consider a slight broadening of its interests towards one or two areas where there are likely to be expanding research opportunities during the next few years. The group faces challenges in raising new funding to support its valuable research activities. It would benefit from an increased flow of high quality PhD students and attention should be paid by all concerned to the problems that theory oriented groups like this face in recruiting suitable students.

Operations research

Programme number:	UvA 5		
Programme director:	Prof. dr. N.M. van Dijk		
Research staff 2007:	2.00 tenured, 3.17 total fte		
Assessments:	Quality:		3.5
	Productivity:		3
	Relevance:		4
	Viability:		3.5

Short description

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

Quality

The mission of the programme is formulated in very broad terms, which does not help to make the programme coherent. There has been a shift from a more theoretical approach in operations research towards a more applied approach almost operations management.

We find little international cooperation. One member of the group is well reputed internationally and has contributed to the development of the field.

The group seems to have developed some special expertise in particular application fields such as blood banks. Also worth mentioning is the combination of Operations Research and Simulation. This seems like a promising area where the group can acquire some distinctive expertise.

Productivity

There was a hiring stop until 3 years ago, so that few PhD theses have been finalized. This is also reflected in the number of international publications. This number dropped to 3 in 2005, but the number has in the meantime recovered to an average of 10 over the last two years. It should be noted however that publication in the top international journals are still rare. Overall is the per capita output, as it is today, not acceptable.

Relevance

As mentioned earlier there has been a (rather successful) shift towards more applied research. The group seems to have found the right balance between fundamental and applied research. The income from contract research, although still limited, is steadily growing. There are a number of interesting collaborations with external organisations. They quite often serve as the starting point of the research.

Viability

It is our belief that the research group is too small to have a real impact. The members of the group have spread themselves too thinly. We support therefore the request of the programme

leader to increase the research staff. It is encouraging to hear that recently two new group members have been recruited. This will have a positive effect on the programme's viability. The score given to the programme was based on the situation as described in the self-evaluation report.

Conclusion

Two senior members of the group will retire which is recognized as a threat but at the same time as an opportunity. In the meantime two new faculty members have been hired which should help to invigorate the group and strengthen the positive trend. In addition three PhD students have graduated or will graduate in the near future. These are all hopeful signs that the recovery can be sustained and support the expectation that quality and especially quantity of research output will increase.

Equilibrium, Expectations & Dynamics

Programme number:	UvA 6		
Programme:	Programme directors: Prof. dr. C.H. Hommes (2001-2007), dr. F.O.O. Wagener (2007).		
Research staff 2007:	2.95 tenured, 8.80 total fte		
Assessments:	Quality:	4,5	
	Productivity:	4,5	
	Relevance:	5	
	Viability:	5	

Short description

In this programme, dynamic economic processes are investigated based on the assumption that real economic agents are only boundedly rational. Models are developed featuring agents with different degrees of rationality. In order to discipline these models, their behavioural assumptions are tested empirically and experimentally.

The five research themes are: Equilibrium theory, Game theory & Industrial organisation, Expectations and learning, Nonlinear economic dynamics, and Dynamic optimisation.

Quality

The programme's research adopts highly original approaches and is at the same time very impressive in its ability to relate to other more standard strands of research on the same issues. The group and the director are undoubtedly worldwide prominent in their area. The impact of their work is slightly limited not by its quality, which is very high, but by its relatively unusual (as well as highly original) character.

Productivity

Productivity is more than satisfactory according to all criteria except perhaps involvement with PhD training, which however is growing. One should of course take into consideration that only in 2005 three associate professors were added to the team. International refereed journal articles are numerous; the top portion of that output segment in terms of impact is concentrated in a small number of visible journals where the programme's type of research has found a stable niche.

Relevance

The programme studies important issues in a productive and insightful way, using and developing novel tools for analysis. The group has proved able to write on a variety of increasingly relevant topics, as well as to raise very substantial amounts of external research funds.

Viability

The programme is developing strongly and can rely on a sizable group of mature and committed researchers. Its research approach has proved very productive, also as regards flexibility and willingness to adopt novel research methods and to relate its results to those obtained by other approaches.

Conclusion

The group has been able to establish itself solidly in a specific area and is developing very fruitful projects on highly topical current issues. The committee commends the programme's efforts to test and validate results from mathematical models and encourages it to continue to do so, also through contacts with research groups adopting different approaches to similar research issues.

Actuarial Science

Programme number:	UvA 7		
Programme directors:	Prof. dr. H. Wolthuis (–2002), prof.dr. R. Kaas (2003–2007), prof. dr. A. Pelsser (2008–).		
Research staff 2007:	1.85 tenured, 5.10 total fte		
Assessments:	Quality:	4	
	Productivity:	4	
	Relevance:	5	
	Viability:	3.5	

Short description

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.

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 complete and incomplete markets.

Quality

The Committee feels that the group produces high-quality research in the specific field of actuarial science. The approach of the group, as is common in many groups studying actuarial science, emphasises mathematical and probabilistic aspects of the subject and does not have a close connection with economic or social science. It is difficult to assess this group in the context of a review of economics and business research when it is more closely related in its aspirations and outcomes to departments in the field of applied mathematics. For example a serious concern is that the publications it is natural for his group's research to appear in do not figure on the standard economics and business publication lists.

Productivity

While the Committee views the research output as significant, one concern can be raised about the low number of PhDs produced. Recently, the group has successfully attracted a number of new PhDs thanks to the obtaining of a NETSPAR grant: the number of theses is thus likely to increase soon. The Committee would like to encourage the group to sustain such fundings, in order to maintain a high flow of PhD theses.

Relevance

The Committee considers that the Actuarial Science group provides relevant research that improves the training of graduate students in the field. The group also interacts actively with the profession, which is particularly important in this field.

Viability

The Committee feels that the group relies a lot on external research funding. While the previously obtained grant is certainly a sign of vitality, it also shows how crucial such financing is for the group. Securing funding and inflows of PhD students will be crucial for the future. The ability of the group to attract and retain faculty is also a possible issue.

Conclusion

The group is visible in the actuarial science field. It is however a little bit isolated with respect to the other groups at RESAM. The Committee suggests that more fruitful interactions and joint research are undertaken with relevant other research groups. This might help the group fulfil some of its research agenda that is at the frontier between finance, economics, and applied mathematics.

The Transformation of Europe

Programme number:	UvA 8
Programme director:	Prof. dr. R. Beetsma
Research staff 2007:	4.38 tenured, 7.51 total fte
Assessments:	Quality: 4
	Productivity: 4
	Relevance: 5
	Viability: 4.5

Short description

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.

Research themes include the macroeconomics of pensions, business cycles, macro-labour economics, the monetary transmission mechanism, fiscal policy and exchange rate economics.

Quality

The programme has experienced a transformation of its own research style and direction over the assessment period, and across its sub-programmes. Overall, it has produced an increasingly solid stream of highly competent and visible output, some of which has appeared in high-impact visible outlets in the fields of macroeconomics and policy.

Productivity

All productivity indicators, including the number of international refereed publications, are highly satisfactory with the possible exception of PhD student numbers which have declined somewhat over the assessment period. The group is very active in the new MPhil-based recruitment system for the PhD program, however, and its overall performance in terms of PhD theses defended is high over all the assessment period.

Relevance

The programme has increasingly oriented its research towards highly relevant topics. As a result of this orientation and of its competence, the programme has been able to build intense and fruitful contacts with international policy institutions as well as to raise substantial outside funding.

Viability

The group has experienced a very positive evolution over the assessment period, successfully reshaping the research orientation of pre-existing programmes merged into it. Recent changes in leadership may perhaps imply some changes in research style. Care may be necessary in accommodating such changes in a relatively small, and very vital, research group.

Conclusion

Over the assessment period the group's research has evolved fruitfully in terms of the quality, quantity, and visibility of its research. The Committee is confident that it will continue to develop successfully, and to this end recommends that the programme steers its future path so

as to build on its existing strengths at the same time as it exploits contacts with similar groups elsewhere and with other groups within the University.

Human Capital

Programme number:	UvA 9		
Programme director:	Prof. dr. J. Hartog		
Research staff 2007:	4.19 tenured, 9.95 total fte		
Assessments:	Quality:		4.5
	Productivity:		4
	Relevance:		5
	Viability:		4.5

Short description

This programme investigates the economic role of human capital. The stock of human capital can be enlarged by deliberate investment, in schooling, education and training, in health, in information. Investment decisions require comparison of costs and benefits. The research focuses on the investment decisions of individuals, households, firms, institutions (such as schools) and the government, and on the consequences of the decisions, both for the agents and for society at large.

Quality

Over the assessment period the group has produced highly competent research, mostly empirical in character and focused on problems arising in the areas of health and labour economics and the economics of education. It publishes its work in good quality international field journals in economics and has had success in placing good papers in the leading core international journals. As its research progresses the group may benefit from additional econometric input which could come from appointments to the group or from collaboration with the econometrics group.

Productivity

This moderately sized group publishes a substantial volume of research results in good journals. The group has good international connections and is well engaged with international academic activities for example through work on the editorial boards of international journals. Given the attractiveness to students of the applied economics problems studied by the group it should be possible and it would be desirable to increase the number of PhD students.

Relevance

The research of the group focuses on many problems of interest to policy makers, particularly in the public sector. The group is well engaged with policy makers and social science practitioners, and has an excellent record of research fund raising. Efforts are made to deliver the work of the group to non-academic audiences in an accessible way. The group performs a service in assembling interesting data resources.

Viability

There are clear and imaginative plans for the future development of the group whose research will be greatly stimulated by its involvement in the new large scale survey in Africa. Funding has been running at a relatively high level and looks set to continue. The group would benefit from an increase in the number of PhD students and from appointment of new young researchers.

Conclusion

This group is making good progress with its mainly empirically driven research agenda. Its research could benefit from sharper focus and deeper methodological content. In this respect additional econometric input would be useful and could come from suitable new appointments to the group or from collaboration with the econometrics group. The labour intensive applied research of the group will benefit from attracting a higher flow of good quality PhD students.

History & Methodology of Economics

Programme number:	UvA 10		
Programme directors:	Prof. dr. J.B. Davis (2002–2007), dr. G.A.T.M. Reuten (2002–2005), dr. ir. M.J. Boumans (2006–2007)		
Research staff 2007:	1.67 tenured, 3.97 total fte		
Assessments:	Quality:	3.5	
	Productivity:	4	
	Relevance:	3	
	Viability:	3.5	

Short description

This research programme investigates the mutual connections in economics between theorizing, modelling, and policy application, in order to explain research strategies and methods of explanation in past and current economics. Researchers examine the changing research strategies and methods of explanation as employed in the history of economics up to the present.

Quality

The quality of the research output over the assessment period is somewhat difficult to assess in terms of the standard assessment criteria, because the publications submitted have a different scope and character from those of other units being assessed. While the researchers are prominent as members of the relatively small worldwide group of researchers in their specific field, the top publications in book form do not have broad visibility and substantial impact in terms of references and readership.

Productivity

A reasonable number of publications are listed, but the main indicator cited in the evaluation protocol (international refereed academic publications per full-time equivalent tenured staff) is very low, and PhD student numbers are also modest.

Relevance

It is true that the programme's approach would be very relevant to current developments in the Economics discipline and in the economy, and the Committee would welcome research of this type to have real and practical impact on the way economic research is actually done. However, there is little evidence that the research group has made progress in that respect, for example in the form of publications in mainstream journals or of joint work with researchers in applied or experimental economics.

Viability

This is a small programme with few relatively permanent members and some valuable external contacts. Most of the output submitted was authored by a small number of full professors who have left, or have a foreign affiliation and a <0.2 appointment. Since replacement in a rather narrow and nonstandard field may prove to be difficult, viability of the programme is not completely assured.

Conclusion

The programme's research is meant to lie in the area between economics and philosophy of science, but its small size and tendency to interact with similarly oriented researchers elsewhere (rather than with economists or philosophers) endanger its visibility and impact prospects.

Experimental & Political Economics

Programme number:	UvA 11
Programme director:	Prof. dr. F. van Winden
Research staff 2007:	3.24 tenured, 10.72 total fte
Assessments:	Quality: 5
	Productivity: 4.5
	Relevance: 5
	Viability: 4.5

Short description

The programme investigates the behavioural determinants and consequences of economic decision making. The three projects are:

- *Economics of political decision making*, which is related to public choice and a recent upsurge in political economics.
- *Bounded rationality and institutions*, which takes into account the bounds on rationality generated by the nature of cognition and emotion, and the influence of institutions. The project fits into the new field of behavioural economics.
- *Experimental economics*, in conjunction with the first two projects: laboratory experimentation is taken as a complementary research method for the exploration of models focusing on fundamental behavioural mechanisms.

Quality

The programme's experimental orientation and familiarity with theoretical issues has made it possible to place influential articles in highly visible publication outlets.

Productivity

The programme's productivity indicators are all satisfactory. Its excellent score in terms of international refereed publications is balanced in overall performance by relatively low PhD student output (also due to recent restructuring of the programme around the Tinbergen Institute's MPhil programme).

Relevance

While the programme's approach and results are currently mostly at the fundamental level, its research topics and methods attract very substantial outside funding and can potentially influence mainstream Economics research as well as other fields of social and human sciences.

Viability

The programme has stable and suitable size and structure, and a well-diversified portfolio of research issues and research tools.

Conclusion

This is a focused and successful program that is well positioned to develop further, exploiting synergies between its sub-groups and other disciplines.

Industrial Economics, Competition & Antitrust

also referred to as Industrial Organisation, Competition Policies & Regulation

Programme number:	UvA 12
Programme director:	Prof. dr. P.J.G. van Cayseele
Research staff 2007:	1.49 tenured, 1.94 total fte
Assessments:	
Quality:	5
Productivity:	4.5
Relevance:	5
Viability:	4.5

Short description

The programme investigates 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. Applied oligopoly theory, field experiments and laboratory experimentation are used as research methods.

In 2002 three faculty members moved from the department of Finance & Organisation (that was then abolished) to the department of Economics. The current programme started in 2005.

Quality

This is a small research group which has been in operation since 2005 and so has only 2 years of data in the review period. Nevertheless it is clear that the group is doing high quality research, publishing a substantial proportion of its works in good quality international journals, and scoring an impressive number of hits in the AA top core international journal list of the Tinbergen Institute. The group casts its research net widely with interesting work on networks and social interactions as well as auction theory and its applications and other more traditional topics in IO.

Productivity

The group is highly productive in generating research ideas, taking research to a successful conclusion and publishing in good quality journals. It has made a good start at raising money through external research contracts which have the potential to add lustre to the reputation of the research group.

Relevance

The group does good quality analytic economics research on topics of direct relevance to policy makers and other decision makers. Group members undertake advisory work in the public and the private sectors.

Viability

This is a small group, recently formed, and with good prospects of further growth. There is a recent appointment (post 2007) of an assistant professor and recruitment of a new PhD student, the latter funded by a new external grant. The group is well connected nationally and internationally and has an interesting research agenda in an area which is likely to attract new resources.

Conclusion

This newly formed group is performing well and making great progress. It is clear that it should expand if it is to fulfil its potential.

SEO Economic Research

Programme number:	UvA 13	
Programme directors:	Prof. dr. H. Keuzenkamp (2000–2004), prof. dr. C. Teulings (2004–2006), prof. dr. J. Theeuwes (2006–present).	
Research staff 2007:	3.79 tenured, 6.29 total fte	
Assessments:	Quality:	(not scored)
	Productivity:	(not scored)
	Relevance:	(not scored)
	Viability:	(not scored)

Short description

Researchers at SEO Economic Research spend most of their time on contract research and contract acquisition, and spend an average of 8% of their time on academic research. The research topics change over time. At present, SEO consists of five research sections, organised along fields of applied economic research.

- *Labour Economics & Education* specialises in research on labour markets, labour market policy, schooling and training.
- *Health Economics & Social Security* analyses developments in healthcare and social security, with research often shaped by the highly regulated nature of these two sectors.
- *Regulation & Competition Policy* is concerned with the design, analysis and evaluation of competition and government intervention.
- *Industrial Economics* combines findings obtained from research at the sector and individual company levels, starting with the question of how companies relate to one another within their own industry.
- *Aviation Economics* advises governments, airlines, airports, financial institutions and other interested parties on the economic issues related to aviation.

SEO is investing in building a section in applied financial economics.

Conclusion

The Committee finds that this research unit cannot be assessed on the basis of the standard protocol used for the evaluation of the other units in this review. Over the assessment period, only a small number of publications have appeared in visible outlets, mostly of limited originality, with some exceptions (resulting from the short time spent at the institute by a former director). Some of the publications do appear to be competent academic implementations of novel results from contract research by permanent researchers, and this is an indication that the commendable effort to stimulate scientific research has not only theoretical but also practical relevance at this research unit.

The programme's large size and market position appears stable, and the Committee encourages the programme to continue focusing a portion of its efforts on scientific research, both as an output and especially as a contributing factor to the quality of its contract research. It is also recommended that the relationship between this and other units of the University be stable and, where useful, intense and fruitful.

6. Erasmus School of Economics, Erasmus University Rotterdam

Mission & Goals

The mission of the Erasmus School of Economics (ESE) is stated as follows:

“The Erasmus School of Economics is an internationally renowned institute that contributes scientific knowledge for future economic issues and aims to answer currently relevant issues of concern to government and firms. The focus of the ESE is on the creation, the dissemination and the application of scientific knowledge, all from an economic perspective. The ESE relies on the most recent insights in the discipline. It collaborates with international scientific partners, and it has local footings in business issues relevant to the unique position that the city of Rotterdam has as a hub of transport and industry. The ESE ensures working conditions that permit innovative scientific progress and it puts the academic education at the centre of its activities.”

At the research level, reference is made to the mission statements of the two research institutes in which ESE participates: the Tinbergen Institute and ERIM.

The Erasmus University Rotterdam participates in the Tinbergen Institute, together with the University of Amsterdam and the VU University. Its mission statement is: “The Tinbergen Institute aims to further improve the quality and international visibility of economic research at the three economic faculties it represents.”

To accomplish this, TI will:

- Facilitate and stimulate fundamental and applied economic research meeting the highest international standards in the four TI research themes.
- Offer an MPhil programme and PhD training in the four themes of the highest international standards in order to attract the best young scholars in The Netherlands and worldwide.

The Erasmus Research Institute of Management (ERIM) is the product of a collaborative effort within Erasmus University Rotterdam, by the ESE and the Rotterdam School of Management. “The mission of ERIM is to conduct scientific research that enables organisations to assess and improve their business processes in order to perform in a profitable and responsible way.”

The research focuses on intra-firm and inter-firm business processes and the role of data, information, information processing and knowledge in managerial decision making. The goals of ERIM are to make significant contributions to the body of knowledge in management and to offer a high quality doctoral programme.

The ESE has formulated the following medium-term objectives:

- be ranked in the top 30 in the world in at least two academic fields;
- be ranked in the top 10 in Europe in all academic fields;
- maintain top-three status in the Netherlands in each academic field as a minimum.

Given our current evaluation of the various groups in the School, the committee finds the first medium term objective rather modest and thinks ESE should be more ambitious.

Currently, the Erasmus University Rotterdam is discussing its long-term goals for 2013. The ESE has to submit its long-term goals and to specify how these goals fit in the overall long-term goals of the university. Broadly formulated, the vision for 2013 is that the ESE should be the natural choice for students, researchers, alumni, government, and business concerning fundamental development in economics and business.

The Committee is of the opinion that the missions of the School and of the two research institutes are very clear and serve as an effective guideline for the School. The committee was in particular impressed by the fact that the goals and mission of the School are widely shared amongst all the staff members we met. They appear not only to share the mission and expressed goals but also are strongly committed towards them.

The Committee had the following comments concerning participation in the Tinbergen Institute. The Committee supports this participation but wondered why “fostering collaboration between the three universities” is not defined as one of the objectives. Is this a missed opportunity? Also participation in this institute might create some confusion if not conflict, if the missions and strategy are not well aligned and if some of the policies of TI are too rigorously applied. This seems at this moment not to pose any major problem for ESE, but we heard some complaints from research groups in other universities related to the inflow of PhD students, the curriculum of the MPhil programme, the publication list, etc.

The structure of the ESE including the two research schools and the various business units is complex but manageable. ERIM seems to the committee an effective way of dealing with the dual need of differentiating and integrating economic and management oriented research.

Finally, although we welcome the strong mission statement connecting the School and the (business) community in the Rotterdam area, we were unable to identify any issue where the research groups were specifically relevant for the local area. Is this a politically inspired statement or is it real?

Leadership

The Dean's office establishes the ESE's strategy and policies, and oversees the implementation of these policies. The Dean is responsible for the overall performance of the Faculty, its representation and contacts with other institutions, marketing, the contacts with the office of the Chancellor, the Faculty's finances, fundraising, recruitment of senior researchers, and personnel management in general. The Deputy Dean (0.5 fte) is responsible for research and education activities.

At the management level, the departments, the education management, and the research institutes implement the policies they see fit for reaching the targets within the framework provided by the Faculty level. Each head of department is responsible for achieving academic and financial results as agreed upon in consultation with the Dean. The achievement of these results is periodically evaluated by the Dean and the director in question; if necessary, goals and policy are adjusted.

The Dean and Deputy Dean are supported by a management team consisting of the Director of Education and management staff in the Dean's Office. This team meets on a weekly basis to discuss important matters and to provide the Dean with advice. During these meetings strategic issues, budget matters, personnel and organisation, research and education are discussed.

The Research Advisory Board plays a only a minor role at ESE and is mainly used to advise on the allocation of PhD positions over the chairs.

The Committee commends the School for the remarkable turnaround. The strategic choices, described below, and the way they have been implemented have been fundamental in this turnaround. The committee was impressed by the personality of the management team of the school, in particular the dean who has a clear vision and a dynamic even charismatic personality.

Strategy & Policy

Already having downsized from 24 to 15 research programmes, after the 2002 assessment, the number of research programmes at ESE was further reduced to 6. Teaching and research were narrowed down to economics and business from a mono-disciplinary economics perspective. Management-oriented teaching programmes and multi-disciplinary management research were dropped or organized in the Rotterdam School of Management (RSM), which can be considered as a sister school of ESE within the Faculty. Formal research collaboration with third parties was discontinued where the economic discipline was not the main focus.

The six research programmes are completely aligned with the two research institutes ERIM and TI, in order to improve the quality of economic research and to provide a clear focus. These institutes are responsible for formulating and implementing research policies. The research programmes have the potential to produce marketable research and related teaching. All permanent faculty of the ESE has the obligation to teach and to be a fellow in one of the research institutes. Membership in the research institutes is contingent upon researchers publishing sufficient articles in journals listed on the institute's journal lists. In order to improve the ESE's impact and increase its international academic standing, efforts are made to attract and retain good staff members. A six-year tenure track system for junior faculty has been implemented, as well as a mature-talent programme, employing four mid-career female researchers each year. Attracting top senior researchers is a main target of the Dean of the ESE. Reward policies are sufficiently flexible to be able to attract good academic staff. In the view of the Committee the School's HR-policies regarding the academic staff are clear and well accepted by the research community.

Together with the two partner Faculties in the Tinbergen Institute, the Duisenberg School of Finance has been established, largely sponsored by the financial sector. This school will offer a separate MPhil track in finance and four honours programmes at the masters level. Outside the area of finance, the Dean of ESE has created endowed chairs to retain and attract top senior researchers. Extra funding is sought for this from alumni and business. The ESE has invested in the area of Health Economics, and formed an alliance with the ISS in The Hague to further research and education in Development Economics.

ERIM was evaluated in 2007 (internal mid-term review 2003-2006) and the Tinbergen Institute in 2005 (KNAW re-accreditation, review of the period 2000-2004). Assessments were positive; recommendations were made on the recruitment of students.

The School implemented the advice to reduce the number of research groups successfully. Unlike other faculties, they did not respond by merely putting groups together, but mainly by pruning out certain groups, selecting according to strict and coherent criteria based on a clear strategy and vision. This in itself increased homogeneity and reduced complexity. The emphasis on the mono-disciplinary economical research themes and moving the multi-disciplinary management themes to RSM, created focus within ESE and in the Faculty. It created focus on such things as publication list, type of research, reward and promotion, etc. It also facilitated

the access to the top journals which tend to favour mono-disciplinary research. By increasing the homogeneity and therefore comparability among the various groups some healthy peer pressure stimulates competition and helps to raise the ambition and quality. The improvement in research output (a tripling of output in top journals per fte over the review period) is impressive. We also noticed that the quality is universally high among the research groups.

This strategy is not without its risks. We are especially concerned about the monodisciplinarity. The interaction with other disciplines such as sociology, psychology, etc can in certain areas be very enriching and stimulating. A mono-disciplinary approach to business issues does not always correspond with the multidisciplinary of the problem. In other words, relevance might be a problem. More importantly maybe, is that a lot of interesting and important research is going on at the border between different disciplines. Moreover many even fundamental research funding agencies favour multidisciplinary research. This might be the reason why ESE is not satisfied with the income it is able to generate from these agencies.

Resources, Funding Policy & Facilities

The Department has provided the following overview of the personnel resources, in full-time equivalents (fte) research time.

Institutional level							
	2001	2002	2003	2004	2005	2006	2007
Tenured staff	14.75	15.56	15.59	15.87	15.96	15.29	15.44
Non-tenured staff	16.90	19.13	23.57	17.26	10.48	6.06	6.11
PhD students	34.36	33.07	35.93	39.93	33.71	42.06	51.68
Total research staff	66.01	67.76	75.09	73.06	60.15	63.01	72.82
Supporting staff ¹	pm	pm	pm	pm	pm	pm	pm
Total staff	66.01	67.76	75.09	73.06	60.15	63.41	73.22

About half of the ESE's budget comes from teaching-based funding from the Ministry of Education. The other half is largely generated by the ESE business units, the grants from NWO, KNAW and EU and the chairs with company-sponsored funding. The business units are private companies, kept at arm's length from the ESE, but headed by a professor who also holds a position in the Faculty. One example is the education centre for accountants, controllers and auditors ESAA. Business units also conduct applied and contract research for business and government agencies, notably the EU. Although the ESE has been successful in attracting funds from NWO's innovation impulse (Veni, Vidi and Vici scholarships), income from such grants has not yet met Faculty-set targets.

At the University library, the Erasmus Data Service Centre was established in 2006, at the initiative of the Finance, Accounting and International Markets programme. This centre has a team of five specialists. It provides access to financial and (since 2007) social science databases and gives individual support and workshops for students and staff of the Erasmus University Rotterdam. Another recent facility is the Erasmus Behavioural Lab. This is a joint facility of ERIM, the ESE, the Rotterdam School of Management, and the Institute of Psychology. It includes an eye-tracking lab with facilities and equipment for cognitive neuroscience research, two EEG-labs, and a range of autonomous measurement systems (i.e. skin conductance, heart rate).

¹ Research support staff is part of the Tinbergen Institute and the Erasmus Research Institute of Management. The ESE itself employs 1.0 fte on research supporting staff.

The Committee considers the School is well equipped. All staff members can receive reimbursements for travel expenses and attending conferences. In addition, for non-Dutch staff-members there is support in arranging visas, work permits, accommodation, etc. Its infrastructure is an asset for the School and helps to attract faculty. The reward system is sufficiently flexible to be able to reward good performance and to attract well qualified (foreign) faculty. The income streams are generally well balanced among the various sources, although the School complains about a lack of projects funded by the fundamental research agencies. The Committee agrees with this observation. Given the quality of the research and given its international reputation, the School should be able to have a higher share of NWO funding.

Research Programme Level							
	2001	2002	2003	2004	2005	2006	2007
Finance & Accounting and International Markets							
Tenured staff	5,00	5,80	5,80	5,73	5,79	4,44	4,12
Non-tenured staff	2,22	3,02	3,95	1,95	0,69	0,70	1,16
PhD students	11,69	13,43	14,04	15,81	12,16	11,04	11,33
Total research staff	18,92	22,25	23,79	23,49	18,63	16,18	16,61
Markets, Organisation and Government							
Tenured staff	1,92	2,34	2,50	2,50	2,43	3,17	3,23
Non-tenured staff	3,76	3,74	3,54	3,39	3,34	1,38	0,97
PhD students	5,70	6,70	8,37	7,74	6,19	7,26	9,77
Total research staff	11,38	12,78	14,41	13,63	11,97	11,82	13,97
Applied Economics							
Tenured staff	0,77	0,77	0,88	0,88	1,25	1,68	1,68
Non-tenured staff	2,84	2,62	2,10	1,46	1,42	1,14	1,59
PhD students	4,10	3,20	3,46	4,00	3,66	6,34	7,86
Total research staff	7,71	6,59	6,44	6,34	6,33	9,15	11,14
Econometrics							
Tenured staff	1,21	1,32	1,48	1,68	2,08	2,00	2,00
Non-tenured staff	1,70	1,63	3,97	3,55	2,79	1,29	1,33
PhD students	2,02	2,00	2,53	3,87	4,80	5,86	5,66
Total research staff	4,94	4,95	7,98	9,11	9,67	9,15	8,99
Marketing							
Tenured staff	1,16	0,92	0,52	0,67	1,00	1,30	1,64
Non-tenured staff	4,09	5,08	5,57	3,44	1,62	0,83	0,60
PhD students	4,14	2,54	1,20	3,20	2,66	3,93	8,47
Total research staff	9,38	8,54	7,29	7,31	5,29	6,06	10,71
Management Science							
Tenured staff	3,60	3,60	3,60	3,60	2,92	2,62	2,68
Non-tenured staff	2,02	1,77	2,80	1,98	0,52	0,72	0,46
PhD students	4,16	4,33	6,06	4,58	4,23	6,19	6,74
Total research staff	9,78	9,70	12,46	10,15	7,67	9,53	9,88
Discontinued programme²							
Tenured staff	1,09	0,81	0,81	0,81	0,49	0,08	0,08
Non-tenured staff	0,26	1,26	1,66	1,50	0,10	0,00	0,00
PhD students	2,54	0,87	0,26	0,74	0,00	1,44	1,84
Total research staff	3,89	2,95	2,73	3,04	0,59	1,52	1,92

² The increase of fte under the heading of the discontinued programme from 2005 onwards is explained by the fact that this heading is also used for the incubator programme on new research.

Academic Reputation

The self-evaluation states that where publications and citations are considered, Economics at the EUR does well in rankings compared to other Dutch universities. The international citation ratio and ERIM's publication output are also reported to be above average. Various awards and honours won by ESE staff members are listed. They even have a Nobel prize winner: Prof Clive Granger, who earned the Nobel Prize in Economics in 2003 when he was located at the University of California, San Diego. The School also succeeds in placing its PhD students at reputable institutions inside and outside the Netherlands. The School regularly loses (young) faculty members to other institutions, but they are also able to attract sufficient new blood to replace leavers.

As stated earlier, the Committee was impressed by the tripling of research output per fte over the review period. Most groups are without any doubt world class. And a group like the marketing group belongs to the top marketing groups in the world.

Societal Relevance

The self-evaluation states that applied research is nurtured at ESE. Applied research is mostly conducted in the "business units" mentioned under 'Resources, Funding Policy & Facilities'. Health economics and development economics, and in particular a cooperation with the Institute of Social Studies, are also mentioned as opportunity areas for ESE's external validation. The Committee was of the opinion that generally the output has a high societal impact. The significant amount of income from contract research and the success of the business units support this observation.

However, we refer back to the comments we made earlier related to the danger of mono-disciplinary research in certain areas. Also the School has to find ways to be more visible in public debates in the Netherlands, Europe and elsewhere.

Balance of Strengths & Weaknesses

Strengths mentioned in the self-evaluation report are: clearly focused research programmes; high quality and quantity of publications, also from young researchers; internationally visible expertise groups; and alignment of research groups with the research institutes TI and ERIM.

Weaknesses are: insufficient external funding and the fact that not all procedures and materials are available in English for foreign researchers and students. Researchers are encouraged to take part in public debates but at lower-than-desired levels and a wider dissemination of research outcomes.

As opportunities, eagerness to further improve academic standing is mentioned. There is also the wish to increase staff diversity, with regard to ethnic and cultural background and gender as well as nationality. Finally, in 2013 both the Erasmus University Rotterdam and ESE will have existed 100 years. This may offer possibilities for exposure and funding.

Threats mentioned are an abundance of regulations for hiring academic staff from outside the EU, and fierce competition for external funding.

The ESE is working on a coaching and supervision trajectory for candidates for external (NWO and EU) grants. Endowed chairs and the establishment of the Duisenberg School of Finance are also ways to boost external funding. As well, "Diamond Sponsorships" will be instigated,

giving institutes and companies privileged access to students via seminars, thesis projects and honours classes. The Dean's office is working on extra funding from alumni and businesses for hiring top senior researchers.

In the Committee's opinion, the School is well aware of its strengths and weaknesses and is acting accordingly. The opportunities are real. There are further opportunities for collaboration with other groups within the Tinbergen Institute. Additionally, in the current economic climate being close to a business school can be an advantage. For instance, management programmes might be less vulnerable than MSc programmes.

Erasmus University Rotterdam - Assessments per programme

The Committee assessed the following programmes of the Erasmus School of Economics at the Erasmus University Rotterdam:

	Quality	Productivity	Relevance	Viability
EUR1: Finance & Accounting and International Markets	4.5	5	4.5	3.5
EUR2: Markets, Organisation and Government	4.5	5	5	5
EUR3: Applied Economics	4	4.5	5	4
EUR4: Econometrics	5	4.5	5	4
EUR5: Marketing	5	5	4.5	4
EUR6: Management Science	4	4.5	5	4

The detailed assessment per programme follows in the next section of this report.

Finance & Accounting and International Markets

Programme number:	EUR 1		
Programme directors:	Prof. dr. I. Dittmann (current), prof. dr. G.T. Post, prof. dr. J. M. Viaene (current)		
Research staff 2007:	4.12 tenured, 16.61 total fte		
Assessments:	Quality:	4.5	
	Productivity:	5	
	Relevance:	4.5	
	Viability:	3.5	

Short description

Financial markets and national economies interact. This research programme investigates the interlinkages between finance, accounting, and macro and international economics. Its mission is to understand what exactly these links are, how they progress over time, how proper governance should reduce the likelihood of extreme events like crises, and how it can increase a fair distribution of income across the globe.

The current research programme is the product of a merger between two research programmes - Finance & Accounting and International Markets - that existed in 2001. The objective of this merger was to create the critical mass necessary to boost international visibility, and to align the research group with the Tinbergen Institute's structure.

Quality

Overall, the programme exhibits very high quality publications. However, the number of top and core international publications has decreased over the years. This might be the natural consequence of the departure of some researchers who are to be replaced in the future. The Committee feels that some attention has to be paid to that indicator.

Productivity

The overall productivity of the programme is very good. As for quality, the Committee noticed that the total productivity has decreased in the last years. This might be a concern that should be taken into account for the recruitment and promotion policy.

Relevance

The issues at the core of the programme are timely and important. They do have both academic and policy impact.

Viability

The size of the programme, measured by the number of fte researchers has decreased over the years. At the same time, the Committee has noticed few recruitments of new assistant professors (tenure-tracks). Recruitments will be a key issue for the future development of the programme. We were informed that since writing the self-evaluation report the research group has expanded considerably. Eleven appointments were made over the last 18 months.

Conclusion

The Committee feels that this is a very high quality programme, but has some concerns on future viability. The programme leaders might want to think about the following issues. First,

the programme, born from the merger of two research programmes, is not homogeneous yet. It still seems that two separate programmes, with distinct research activities and recruitment policy, co-exist. Second, the decrease in the programme size is not consistent with the original idea of the merger to gain critical size. However, given the recent increase in staff, this concern seems to be adequately addressed.

Markets, Organisation and Government

Programme number:	EUR 2
Programme:	Programme director: Prof. dr. M.C.W. Janssen
Research staff 2007:	3.23 tenured, 13.97 total fte
Assessments:	Quality: 4.5
	Productivity: 5
	Relevance: 5
	Viability: 5

Short description

This programme brings together research in the Economics of Organisation and in Industrial Organisation. The behaviour of a firm in the marketplace depends on the way it is organised internally, and market interaction may have an impact upon organisational design issues. Research in Economics of Organisation studies the structure of decision-making and implementation processes within an organization. Industrial Organisation studies strategic issues in license auction and in market interactions among firms, consumer search behaviour and its implications for market outcomes, network formation, and firms' decisions to relocate production to foreign countries.

Quality

Over the evaluation period the group has produced a sizable stream of applications to organizational and market phenomena of game theoretical and informational tools. The self-evaluation report convincingly argues that the program is coherent in terms of applying similar useful tools to different fields of enquiry. The program is indeed capable of producing output at the frontier of applications in specific fields, as evidenced by some high-impact publications in top general journals. Its only shortcoming in terms of quality and prominence is perhaps some lack of truly original tool development and issue discovery, as opposed to highly competent applications of existing tools to well-rehearsed issues.

Productivity

The group has been highly productive, especially in terms of internationally refereed journal articles. It has also been able to recruit suitable PhD students and to attract sizeable external funding.

Relevance

The issues addressed have both societal and practical relevance, and the program's approach has obtained results of interest from both policy and management perspectives.

Viability

Internal career progress is perhaps not as smooth as some may wish, but the group appears capable of attracting and developing talent. The group's personnel is more than sufficiently stable and focused on a well defined set of issues and economic approaches.

Conclusion

The program features a good portfolio of methodological tools and research issues, and its personnel and management are capable of producing a suitably large amount of quality research in its chosen fields. The Committee recommends continued application and refinement of the group's approach to research.

Applied Economics

Programme number:	EUR 3
Programme directors:	Prof. dr. E.K.A. van Doorslaer, prof. dr. A.R. Thurik, dr. E. Dijkgraaf
Research staff 2007:	1.68 tenured, 11.14 total fte
Assessments:	Quality: 4
	Productivity: 4.5
	Relevance: 5
	Viability: 4

Short description

In this programme, three applied areas are studied from the economics perspective:

- The *Entrepreneurship* sub-programme attempts to introduce the entrepreneurship ‘variable’ in existing fields such as occupational choice, economic growth, regional economics, industrial dynamics, economic policy, etc. It focuses on causes and consequences of entrepreneurship both at the aggregate level and at the micro (individual/firm) level.
- The *Policy* sub-programme focuses on the effects of policy instruments on welfare. Its three main topics are Tax incentives, Institutions, and Public finance. These topics are examined with respect to issues like environmental problems, globalisation and ageing.
- *Health Economics* was added in 2005. Research is conducted on five topics: International comparisons of equity in health and health care; Health, income and work across the life cycle; Valuation methods of health; Risk behaviour; and the Institutional setting of health care.

Quality

Over the assessment period the program’s research output, while of more than adequate and sometime very good quality, is highly heterogeneous in terms of field, approach, and international visibility. Overall, the programme’s output offers solid applications of frontier knowledge to specific areas.

Productivity

The output of the group has grown in line with its size over the assessment period and is very good in all respects, including PhD students and internationally refereed journal articles. While the impact of publications in the Health Economics area appears substantially larger than in other areas, this likely reflects differences across fields rather than differences across the programme’s areas relative to similar units in other institutions.

Relevance

The areas of research covered are highly relevant from the societal point of view, and the programme’s projects have important policy implications. Some of the contributions apply welfare-theoretical perspectives to specific practical issues and in this way the research balances fundamental and applied aspects.

Viability

The research program has been extensively restructured and expanded over the assessment period, to the point where the “Applied Economics” title may no longer convey a suitable impression of its contents. The Committee, while commending the program’s efforts to de-

velop an original and coherent research strategy, feels that more efforts will be needed for the programme's focus and approach to be fully successful.

Conclusion

The programme has proved very productive in terms of both quality and quantity of output while experiencing deep structural changes. The Committee recommends continued attention to focus and coherence in the development of the programme's research strategy and management.

Econometrics

Programme number:	EUR 4
Programme directors:	Prof. dr. H.K. van Dijk (2001-2003), prof. dr. P.H.B.F. Franses (2004-2005), prof. dr. H.K. van Dijk (2006-present)
Research staff 2007:	2.00 tenured, 8.99 total fte
Assessments:	Quality: 5
	Productivity: 4.5
	Relevance: 5
	Viability: 4

Short description

Research in this programme focuses on three themes:

- Development of dynamic econometric models with nonlinearities in the model specification and plausible restrictions in the parameter space.
- Advanced computational techniques that can handle such nonlinearities and restrictions in an efficient and reliable way.
- Discrete choice analysis at an individual level.

The aim of this programme is to provide econometric tools that lead to efficient forecasting of the level and risk of economic activities in macroeconomics and finance and lead to improvements in individual economic decision making in the field of marketing.

Quality

The Econometrics group is well known internationally and highly regarded. It has grown over the review period and this has been accompanied by a significant increase in the number of publications in good quality international journals. The research of the group is high quality with an impressive showing in the world's leading econometrics and statistics field journals.

Productivity

The group produces research results at a very good rate. It has a moderate sized PhD group. An increase in this the number of PhD students could bring intellectual benefits if it can be achieved without sacrificing quality. The group does not have a large volume of research funded under external research contracts but with its orientation towards econometric theory such funds are not easy to come by.

Relevance

The group does work that is important to econometric practitioners and forecasters. It also does applied research which is relevant to policy questions faced by government and industry.

Viability

The group has some very distinguished senior members. It will be important to keep refreshing the group with junior appointments. There may be some benefit in some diversification of interests and it is good to see that the group is planning developments in research on computational issues where it has experience and skills. The group would benefit from increased external research funding and more good quality PhD students.

Conclusion

This high quality theory oriented econometrics group faces a number of challenges in seeking increased external funding and more high quality PhD students. Its plans for development of its research interests are commended.

Marketing

Programme number:	EUR 5
Programme directors:	Prof. dr. P.H.B.F. Franses (2001-2003), prof. dr. S. Stremersch (2003-present), prof. dr. B.G.C. Dellaert (2006-present)
Research staff 2007:	3.4 tenured, 10.54 total fte
Assessments:	Quality: 5
	Productivity: 5
	Relevance: 4.5
	Viability: 4

Short description

This programme is geared towards research in marketing with a quantitative modelling orientation strongly influenced by the ESE's "mono-disciplinary economics perspective". There are three major research themes:

- *Technology and Life Sciences Marketing* addresses marketing problems that technology and life sciences companies face.
- Topics in *Decision-Making in Marketing* include research on behavioural decision making, salesperson decision making, and online marketing decision models.
- The *Marketing Models* theme is closely linked with research at the Econometric Institute. Advanced econometric models are developed and implemented, ranging from aggregate level models of sales or market shares to disaggregate level models of individual behaviour.

Quality

The group is arguably the largest and strongest in the world devoted to marketing science. Over the review period their output in top international journals has grown thanks to the increased penetration of the top marketing journals. The focus of the group on high quality is reflected in the reduced output in Dutch and other International Core Journals.

Productivity

Despite the decline in PhD theses and the output in lower quality media the productivity of the groups remains high thanks to their increased penetration of the very top quality journals in the discipline.

Relevance

The themes of "Technology and Life Sciences Marketing" and "Decision Making in Marketing" suggest opportunities for the group's relevance to practitioners. Care should be taken that a narrow focus on an economics perspective does not reduce their openness to wider ideas and the degree in which they are accessible for the business community and other academics to show interest in their work.

Viability

The viability of the group is increased by their success in gaining contract income their ability to break away from the limitations of the local academic pay scales. Simultaneously, there are signs of the declining vitality of the group in terms of the number of non-tenured staff, the insignificant income from research funds, exceptionally low number of PhDs being awarded and the overall decline in the number of research staff. The increase in the number of PhD students

in 2007 followed the appointment of an additional full professor in 2006 and has the potential to arrest this earlier decline. Care should be taken to ensure adequate supervision capacity.

Conclusion

The increasing cadre of tenured staff in this group is a great force in marketing science although its mono-disciplinary focus on a traditional economics perspective limits its capacity to engage in wider developments within marketing and perhaps also with the business community. The group have an opportunity to grow in strength following economics' own embrace of a wider social sciences perspective. The group must assure that the surge in the number PhD students is more than a blip and arrests the decline in their total number of research staff.

Management Science

Programme number:	EUR 6		
Programme directors:	Prof. dr. ir. D. Dekker, dr. ir. U. Kaymak, prof. dr. A.P.M. Wagelmans		
Research staff 2007:	2.68 tenured, 9.88 total fte		
Assessments:	Quality:		4
	Productivity:		4.5
	Relevance:		5
	Viability:		4

Short description

This research programme encompasses operations research, quantitative logistics, and computer science methods and applications in economics. The focus is on developments in transportation, logistics and supply chain management in interaction with decision support systems based on information and communication technology. The research on decisions support systems will increasingly focus on logistics. The group aims to make contributions to both management science and management practice.

The Committee remarks that the domains transportation, logistics and supply chain management fit naturally together and create a distinctive focus which could be described as quantitative logistics. The fourth domain (decision support systems) today is much less well integrated. The focus of the research programme and therefore its distinctiveness could be improved by having the decisions support system research focus on supply chain management applications. During the interviews it was emphasized that at this moment the ICT people involved in the group fitted very well in this perspective. A fifth research theme –health care logistics- has been set up last year. This theme has the potential to profit from synergies with the first three themes. In addition it provides an opportunity to carry out interdisciplinary type of research with the medical School.

Quality

The research group in general and some of the members in particular enjoy a high international reputation. This is confirmed by recent bibliometrics and the Interfaces studies. Some of the research (e.g. research on reverse logistics) is novel and at the same time revealing for the research community as for the business world. The group succeeds in having its research output published in leading international journals. Finally the group has succeeded in participating in international research networks with often well reputed partners.

Productivity

Looking at international journals only we see an upwards trend in publication output, while the human resources have been more or less steady. The number of PhD theses has decreased. We also note that publishing in the top international core journals is limited to 1 or none per year.

Evaluating the overall quality of the group we concluded that the overall productivity is good, but the aspiration level could be increased.

Relevance

The group succeeds in combining practical relevance with high (theoretical) quality. We find a right balance between fundamental and applied research. We find also an excellent combina-

tion between rigour and relevance. The research in reverse logistics has been revealing. A substantial (and increasing) part of the research funding is based on contract research which indicates that the business world is interested in co-operating with the group. However, it was stated that a significant part of this revenue flow was to support PhD research and therefore fitted better in the fundamental research category.

Viability

The total head count of the research staff has been slightly below 10 over the last two years. This is probably only just meeting the critical mass criterion given the rather broad focus of the research domains. We believe that a somewhat more homogenous focus, as was mentioned before, could help to sustain and improve the reputation of the group and the quality and distinctiveness of the research. The stream of revenues was seen as stable. However, the group received little money from external research (NWO) funds.

Conclusion

This is without doubt an excellent research group and internationally recognized as such. There is some room to improve the research output especially as far as publishing in the real top journals goes. The group might reconsider its strategy of covering a broad spectrum of domains versus a more focused spectrum.

7. Faculty of Economics and Business Administration, University of Tilburg

Introduction

All research at Tilburg's Faculty of Economics and Business Administration, with one exception, is conducted in the research institute CentER.⁶ The exception is Fiscal Economics. As this research is closely related to research in the Faculty of Law, it will be reviewed in that Faculty's assessment.

Mission & Goals

CentER is described as follows:

CentER is a world-class research institute that draws on the academic expertise of some of the most outstanding minds in the field of economics and business. With its international orientation, CentER offers an environment that fosters rigorous academic research across the entire spectrum of economics and business research, while its Master of Philosophy (MPhil) and PhD programmes in economics and business research prepare the next generation of economists and business researchers to meet the challenges of the economy of the future.

CentER's goal is to be an innovative research institute in Economics and Business Administration where excellent research can develop and prosper. It wishes to create a stimulating research environment where curious researchers can develop their research ideas and are supported in finding the answers to their research questions. In this fashion, CentER aims to stay at the European top 3 level and to reach a world top 20 level in both economics and business.

CentER focuses on fundamental research, although societally embedded research is encouraged as well. Societal developments and societal questions are an inspiration to our scholars, translating research topics to society.

CentER therefore has the following goals for the next five to ten years:

- Stay at the European top-3 level;
- Reach a position in the world top-20 level;
- Attract top scholars by offering a stimulating research environment;
- Facilitate research through excellent research facilities and relieving researchers of administrative tasks;
- Stimulate internationalization;
- Operate in an international network of top scholars;
- Educate talented scholars (the top scholars of the future) through an excellent MPhil and PhD programme;
- Place 15-20% of CentER graduates per year at a top institution.

The Committee commends the ambitious goals of the research institute, in particular as regards the international character of its reference frame and the mention of suitable intermediate targets, such as administration efficiency, excellence of research training.

⁶ Now the "Center for Research in Economics and Business", formerly Center for Economic Research.

Leadership

The Dean of the Faculty of Economics and Business Administration (FEB) is responsible for the whole faculty. He is supported by the Faculty Management Team, which is comprised of the Vice-Dean Education, the Vice-Dean Research, the Dean and the Director of the faculty. Under the faculty regulations, the Dean has delegated the management of the research institute and research school CentER to the Vice-Dean Research/Scientific Director of CentER. The Vice-Dean Research has authority over the whole school. If there is no separate Scientific Director, the Vice-Dean Research has authority over research; if there is, the Scientific Director has delegated authority and the tasks are divided between them.

CentER is governed by the Board of Directors. The CentER Directors are, in turn, assisted by various internal and external Scientific Councils, Boards and Committees.

The Programme Committees of the Graduate Programme in Economics, the Graduate Programme in Business and the Graduate Programme in Information Systems and Management advise the Directors of Graduate Studies on issues related to the Graduate School.

Research within each of the nine research programmes is coordinated by Research Coordinators. Research Coordinators and the Board of Directors meet four times per year in the Research Coordinators Team (RCT) Meeting. The RCT advises on all research policy matters. The Vice-Dean Research also forms part of the Faculty Management Team, thereby establishing the link with the Faculty of Economics and Business Administration. Research Coordinators are faculty members who are responsible for overseeing all aspects of their own research programmes. They manage the decision-making process within their own group and may appoint other members of their group to perform some of their tasks. Candidates are chosen by the Vice-Dean Research (and Scientific Director), in consultation with the RCT and the research group concerned. Since 2006, only research groups which carry out applied research have a separate Applied Research Coordinator. In groups carrying out little or no applied research, the Research Coordinator is responsible for applied research as well as fundamental research.

The Scientific Council is the primary academic adviser. It consists of nine people, who are not associated with Tilburg University. They are experts in their field, and represent each of the research areas covered by CentER. They oversee and evaluate research and graduate education at CentER. The members of the Scientific Council are appointed by the Vice-Dean Research (and Scientific Director), based on advice from the Research Coordinators Team.⁷

The Advisory Board of CentER is also the Advisory Board of the FEB and consists of nine prominent people from banking, industry and the public sector, who advise the CentER Board of Directors in strategic matters concerning links with non-academic organisations in society. In particular the Advisory Board plays an intermediate role in fundraising. It also advises CentER on the funding of research proposals out of the CentER Innovation Fund.

The Committee appreciates that research leadership is concentrated at the Dean's level but

⁷ Current members are Geert Bekaert, Columbia University Business School, New York; Richard Blundell, Institute for Fiscal Studies, London; Michael Bromwich, London School of Economics; Mathias Dewatripont, European Centre for Advanced Research in Economics and Statistics (ECARES), Brussels; Robert (Bob) Galliers, Bentley College, Massachusetts; Jone Pearce, University of California, Irvine; Rick van der Ploeg, Oxford University and European University Institute, Florence; Luc Van Wassenhove, INSEAD, Fontainebleau; and Michel Wedel, Robert H. Smith School of Business, University of Maryland, U.S.A.

implemented at multiple levels in the Institute. The reporting structure is in principle suitable for efficient division of management and control tasks. Its complex structure may but need not foster a suitably collegial atmosphere, however, and a large number of overlapping groups and the large size of main committees may hamper clear transmission and evaluation of performance indicators.

Strategy & Policy

In view of the mission of CentER to remain at a high research level, in Europe and world wide, there is an emphasis on research performance in personnel recruiting and evaluation. Rather than setting out long-term research lines, the funding allocation policy stimulates departments to find the best people available in all fields. The Faculty of Economics and Business (FEB) has procedures to safeguard, improve and monitor the quality of scientific output. Incentives are offered to researchers to strive for top quality in research. The quality of the weekly seminar series and international visitor programs is considered important. Since 2007, publications in top journals by CentER staff are not only rewarded, but also celebrated with flowers and champagne. So are top placements of CentER graduates.

The research programmes cover the sub-disciplines of FEB. According to the self-evaluation, the number and sizes of the research programmes are just right. Many researchers are a member of two research programmes.

The research focus at CentER is described as both knowledge and society driven. Many researchers build on their expertise in contract research and policy advice. Such projects are usually handled by CentERdata, a separate institute. However, since 2004 the CentER Applied Research Foundation (CentER AR) does form part of the FEB.

The research programmes take turns organising faculty seminars, held four times a year. Well-known researchers from all over the world are invited to present their latest work at CentER in such a manner that it can be understood by members of all nine research programmes. There is also a two-yearly Faculty Brainstorm Day, which yields input for the FEB's strategy.

Since the external evaluations covering the period 1996-2000 (on Management and Business Administration, and on Economics and Econometrics), improvements have been made at CentER to continue the policy of investing in quality. The Arie Kapteyn chair was created, the PhD programs were substantially restructured through the introduction of a MPhil programme, and the tenure track policy was improved. Various smaller research institutes were created within the FEB, to focus on specific research issues. The self-evaluation report states that excellent faculty members have been hired since 2001 in most groups, with special funding for recruiting in the areas of Accounting, Finance and Marketing.

In the internal mid-term evaluation in 2005, the research climate at CentER was praised. Challenges that were mentioned are geography, funding and institutional reforms. Since then, the Institute's goals have been clarified, researchers are encouraged to present themselves as belonging to CentER, and efforts have been made to improve international senior recruitment. The lack of appeal of Tilburg to international staff remains an issue. However, accommodations problems have been addressed and there is now an agency for improving the social surroundings for international visitors and their families.

Also, some journal lists have been amended and incentives have been introduced for researchers who acquire external funding.

The internal evaluation of research in 2005 and the internal evaluation of the CentER Graduate School in 2006 led to development of the document *Vision on the Research*. This document sets out the points of action that arose out of the strategic sessions of the CentER Directors in 2006-2007, along with CentER's new goals and a set of plans on how to reach these goals in the period 2007-2012.

The plans, according to the self-evaluation report, include extra funding for (senior) recruitment, introducing grants for young promising scholars, further investment in the CentER laboratory and datasets, relieving the administrative burden on research staff and improving the marketing and valorisation of research results. The roles of the Research and Educational Coordinators have been sharpened, extended and revised.

The Committee expresses a very favourable view of many aspects of the Institute's strategy and policy, especially as regards support and evaluation of young researchers and the development of a balance between research and research-oriented teaching at the graduate level. It appreciates submission of the outcome of, and reaction to, an internal evaluation and review exercise.

Regarding the development of strategy and policy, the Committee shares with internally appointed reviewers some concern with (1) the Institute's orientation, which could target some specific areas or sub-areas rather than the ambitious but somewhat ambiguous and often elusive goal of international excellence regardless of field and (2) the complex and sometimes not transparent organizational and "branding" structure of research, for example as regards multiple affiliations and funding sources.

Resources, Funding Policy & Facilities

The Institute has provided the following overview⁸ of the personnel resources, in full-time equivalents (fte) research time.

Research staff at institutional level

	2001	2002	2003	2004	2005	2006	2007
Institutional level							
Tenured staff	135.50	126.10	119.20	118.87	108.66	107.6	115.70
Non-tenured staff	37.90	41.20	54.70	66.65	66.90	54.41	54.00
Ph.D. students	66.40	80.10	95.90	82.20	72.50	65.70	74.40
Total research staff	239.80	247.40	269.90	267.72	248.06	227.71	244.10
Supporting staff	55.10	63.00	62.90	70.40	75.10	77.90	78.69
Total staff	294.90	310.40	332.80	338.12	323.16	305.61	322.79

Young faculty (at post-doctoral level) is hired almost exclusively through the tenure-track system. As a rule Tilburg does not hire its own Ph.D. students unless they have spent substantial time elsewhere.

CentER's human resources policy is aimed at stimulating faculty with potential, in particular young promising researchers at the start of their career and those who investigate questions

⁸ The first table lists the actual affiliations of all faculty and students with the FEB. The second table lists only the research fte allocated to individuals affiliated with CentER.

outside the core fields. A significant part of the research budget is allocated to departments on the basis of research output through measurement of impact-weighted publications and citations per individual. The policy aims at publications in the top five journals in each field. Productive researchers get extensive research time and limited teaching responsibilities. Incentives are offered to researchers who succeed in building successful networks, or win grants from the NWO and European Framework Programs. A researcher must meet a certain threshold regarding publications and citations in order to become a member of CentER or retain membership. About 68% of FEB faculty is currently associated with CentER.

In order to offer good support to researchers, administrative staff numbers at CentER have been raised. Investments are made in data, soft- and hardware to support heavy and complex computing, and library services. CentER has its own lab for experiments, which was renovated in 2005. The partner institute CentERdata also offers good facilities for data collection and experiments. An internet-based telepanel of 2000 households, managed by CentERdata, answers questions every weekend.

The Committee notes that the research staff has fluctuated (first up then down) over the evaluation period, also shifting its composition towards non-tenured personnel. It is very large and produces 0.4 top or very good publications/person/year.

Research staff at programme level

	2001	2002	2003	2004	2005	2006	2007
Accounting							
Tenured staff	1.03	1.00	1.65	1.80	1.93	1.93	2.43
Non-tenured staff	1.03	2.31	1.35	1.97	2.50	2.74	2.92
Ph.D. students	1.60	1.60	2.80	3.55	3.80	2.80	1.90
(sub) total research staff	3.66	4.91	5.80	7.32	8.23	7.47	7.25
CIS							
Tenured staff	1.86	1.86	1.86	1.71	1.71	1.76	2.49
Non-tenured staff	2.60	3.38	2.74	2.64	2.29	1.79	0.29
Ph.D. students	1.80	2.20	3.60	3.60	2.60	3.15	3.10
(sub) total research staff	6.26	7.44	8.20	7.95	6.60	6.70	5.88
Econometrics							
Tenured staff	3.95	3.53	3.22	2.94	2.24	2.82	3.62
Non-tenured staff	0.60	0.76	2.33	3.95	2.60	3.63	3.52
Ph.D. students	5.43	5.93	5.80	4.62	3.80	5.35	7.15
(sub) total research staff	9.98	10.22	11.35	11.51	8.64	11.80	14.29
Finance							
Tenured staff	3.73	3.74	3.63	3.45	3.50	4.43	5.16
Non-tenured staff	2.91	1.96	2.98	4.42	4.55	4.93	5.13
Ph.D. students	6.20	6.80	6.50	6.25	6.30	7.45	8.20
(sub) total research staff	12.84	12.50	13.11	14.12	14.35	16.81	18.49
Macroeconomics							
Tenured staff	7.39	6.56	5.78	5.62	5.52	5.36	5.73
Non-tenured staff	1.96	1.97	2.17	2.14	2.39	3.22	2.70
Ph.D. students	7.95	8.35	8.05	9.70	6.92	4.25	3.57
(sub) total research staff	17.30	16.88	16.00	17.46	14.83	12.83	12.00

Marketing							
Tenured staff	3.48	3.70	3.90	4.66	4.40	4.23	4.40
Non-tenured staff	1.80	1.58	3.10	2.80	3.45	4.20	4.23
Ph.D. students	2.35	3.95	6.60	6.70	5.65	4.10	3.30
(sub) total research staff	7.63	9.23	13.60	14.16	13.50	12.53	11.93
Microeconomics							
Tenured staff	6.02	7.67	6.56	6.77	6.71	8.45	8.23
Non-tenured staff	7.72	5.71	4.99	5.34	5.03	4.67	6.40
Ph.D. students	5.90	5.15	6.70	6.90	6.00	5.35	5.95
(sub) total research staff	19.64	18.53	18.26	19.01	17.74	18.47	20.58
Operations research							
Tenured staff	7.91	8.67	8.51	8.19	8.21	8.59	8.62
Non-tenured staff	0.36	0.36	0.94	2.04	2.67	1.41	1.22
Ph.D. students	3.76	6.56	7.88	8.28	8.08	6.40	5.16
(sub) total research staff	12.03	15.59	17.33	18.51	18.96	16.40	15.00
Organization							
Tenured staff	5.05	3.93	3.94	3.65	3.48	3.79	3.79
Non-tenured staff	1.14	1.36	1.49	2.50	2.02	0.63	1.47
Ph.D. students	4.55	6.05	7.05	6.25	4.20	2.60	2.65
(sub) total research staff	10.74	11.34	12.48	12.40	9.70	7.02	7.91
Total staff	100.08	106.64	116.13	122.44	112.55	110.03	113.33

Academic Reputation

The self-evaluation report states that Tilburg's Economics and Business research scored very well in several international bibliographic rankings. Also, researchers have won various prizes and awards.

The Committee notes that good rankings were earned in 2003, and for periods up to 2005.

Societal Relevance

The self-evaluation states that various CentER members write newspaper articles and appear on radio and TV. They also publish in professional publications outside their direct field of research. Several senior members are advisors to the Dutch government.

Twice a year, CentER issues *Centerpoint* Magazine, which is distributed amongst businesses and policy makers and contains details of CentER's activities and current research.

Sponsored chairs are seen as a way of strengthening contacts between the university and the business sector. There are also external PhD students and "dual PhD students", who, in addition to their research at CentER, are financed by a firm or government body because of its interest in the PhD student's research.

The Committee commends attention to media but notes that applied research of societal relevance is admittedly not a focus of the institute: the report (p.53) refers mostly to managerial consultancy-level projects, "system transformation in the healthcare industry."

Balance of Strengths & Weaknesses

As strengths, CentER's quality of research and international orientation are mentioned in the self-evaluation report. Also, CentER's financial situation is described as very healthy and the tenure track hiring system is working well. The combination of Economics and Business research in one faculty is working out well and the large faculty is able to exert influence on Tilburg University's policy.

Weaknesses are the salary levels, making it hard to compete with top universities abroad, and the lack of appeal of the city and university of Tilburg. The synergy between Economics and Business could be developed further. Also, student influxes are decreasing, due to a lack of financial incentives (according to the self-evaluation report).

Opportunities include a national interest in the knowledge-based society, leading to a willingness to invest in academic research, and a European focus on excellence and internationalisation. As a threat, the increased competition from other institutions, in Holland and abroad, is mentioned. Complex immigration legislation does not help. Also, funding tends to go towards the sciences rather than humanities, and to multi-disciplinary institutions.

Possible strategies include alliances with other institutes, and further efforts to attract and keep talented researchers.

The Committee finds that the institute has performed extremely well in terms of research output over the assessment period. It is noted that while some of the factors generating success are clearly identifiable in the report (such as the quantity and allocation mechanisms of funding), other factors may threaten the sustainability of the institute's growth model, in particular as regards the relationship between its funding allocation role and scientific direction of research themes that have become increasingly disparate over the assessment period. The intention "to concentrate not only on core research but also on societal relevant research", listed first among the "minor" adjustments envisioned to the strategy, gives an indication that the institute's leadership is aware of some of the challenges. In the Committee's view, however, the institute will probably need to make major choices in the future regarding the balance between different research goals and other aspects of its growth strategy.

Over the last few years the CentER umbrella has extended beyond its initial Economics and Econometrics focus. So far, the model has proved capable of fostering research excellence in all fields. However the very success of this strategy could create an incentive for the university's leadership to seek the transformation of Tilburg into a fully-fledged business school - in addition to its being a world-class economics department – which would require, among others, the creation of a large full-time 'flagship' MBA programme.

The Committee has noted that combining excellence in economics research with a business school structure and positioning appears to be extremely difficult, leading most other universities around the world to separate management research and education from their economics department, rather than attempting to combine them.

University of Tilburg - Assessments per programme

The Committee assessed the following programmes of the Faculty Economics and Business Administration at the University of Tilburg:

	Quality	Productivity	Relevance	Viability
UvT1: Econometrics	5	5	4	4.5
UvT2: Macroeconomics	4.5	5	4	2
UvT3: Microeconomics	5	5	5	4.5
UvT4: Accounting	4.5	4.5	4	4
UvT5: Computerized Information Systems	4.5	5	5	4
UvT6: Finance	5	5	5	4
UvT7: Marketing	5	5	5	4.5
UvT8: Operations Research	4.5	4.5	4	4
UvT9: Organization	5	5	4	4.5

The detailed assessment per programme follows in the next section of this report.

Econometrics

Programme number:	UvT 1		
Programme director:	Prof. dr. J. Magnus (–2003), Prof. dr. J. Einmahl (2004–)		
Research staff 2007:	3.62 tenured, 14.29 total fte		
Assessments:	Quality:	5	
	Productivity:	5	
	Relevance:	4	
	Viability:	4.5	

Short description

The Econometrics programme aims to contribute to the scientific discourse in econometrics and statistics at the highest level in both fundamental and applied research. There are four subprogrammes:

- Micro-econometrics (modelling individual or household behaviour and the consequences of behaviour on various markets: goods markets, labour markets, and financial markets)
- Macro-econometrics (national accounts estimation, with the purpose of improving the precision of the national accounts, in particular for developing countries)
- Time-series econometrics (special attention is devoted to uncertainty in econometric modelling)
- Econometric theory and statistics (theoretical research, with links with the other subprogrammes).

Quality

The econometrics group at Tilburg conducts research in diverse areas of econometric theory and its applications. The group blends interests in econometric theory and practice in a productive manner. The group is well known internationally and publishes significant research results in the leading international journals in econometrics and has impressive contributions appearing in the top international core journals. The Tilburg econometrics group has good strengths on the statistical side of the subject. This is reflected in top grade publications in international core statistics journals.

Productivity

The research productivity of the group is high. The research work done is of high quality and requires care and precision to develop. The group's volumes of output in statistics, econometric theory and applied econometrics journals is impressive. The group has a healthy PhD programme attracting a good proportion of international students.

Relevance

The group interacts well with economics researchers at Tilburg, particularly in the area of finance. It is on the international map and attracts visitors and it is a member of international networks, and so its work travels outside its own academic walls. It does applied econometrics research that is relevant to economic decision makers in the public and private sectors. The group has a healthy stream of contract research.

Viability

The group is well resourced. There are no signs of reductions in demand for the group's teaching services and demand seems to remain high for its PhD programme. There seem to be good prospects for continuing funding at the current level from external sources. There has been some staff turnover and recent appointments and a challenge to retain people who wish to build careers in the group and make desirable investments for its future.

Conclusion

This is a strong group with a significant international presence doing innovative research which it publishes in the best international journals. It will be good to maintain the group's mix of applied econometrics and theoretical statistics/econometrics. The main challenges are to maintain momentum and hire and retain world class talent who can make long term investments in the group.

Macroeconomics

Programme number:	UvT 2		
Programme director:	Prof. dr. L. Bovenberg (–April 2002), Prof. dr. J. van Ours (May 2002–December 2003), Prof. dr. S. Eijffinger (2004–2006), Prof. dr. H. Huizinga (2007–)		
Research staff 2007:	5.73 tenured, 12.00 total fte		
Assessments:	Quality:	4.5	
	Productivity:	5	
	Relevance:	4	
	Viability:	2	

Short description

The research in Macroeconomics focuses on applied theory and empirical examination of theories in five main areas: (i) *monetary policy*; (ii) *labour markets*; (iii) *fiscal policy*; (iv) *technological change and economic growth*; and (v) *development issues*. The programme has not formulated a formal strategy regarding research areas: there is no objection to any research area that a researcher wishes to pursue, providing that the output is high, and of good quality, and enables the researcher to keep the research time allocated to him or her.

Quality

The research submitted for evaluation is very original and is published in visible outlets. Its coherence is very limited, however, and makes contributions of disparate significance to an even more disparate set of fields. Directorship has been erratic in terms of turnover, reputation, and specialization.

Productivity

Quantitative indicators are very satisfactory as regards the impact and number of publications, and PhD production.

Relevance

The research submitted is of some relevance in some of its aspects, which however are rather heterogeneous. A number of the most visible publications make technical rather than substantial contributions, using peculiar microeconomic data and experimental methods to confirm basic insights.

Viability

Quick decline in total size, rapid director turnover, and especially the extremely limited coherence of the program's research directions with each other and with the program's "Macroeconomic" label lead the assessment panel to express very serious doubts as to its viability's persistence.

Conclusion

The programme, while successful in attracting high quality researchers and in producing good articles, has declined substantially in size and impact. It should be reconfigured so as to focus on the research areas in its description.

Microeconomics

Programme number:	UvT 3		
Programme director:	Prof.dr. E. van Damme (–August 2002), Prof. dr. J. Potters (September 2002–August 2004), Prof. dr. E. Bulte (September 2004–December 2006), Prof. dr. J. Boone (September 2007–)		
Research staff 2007:	8.23 tenured, 20.58 total fte		
Assessments:	Quality:	5	
	Productivity:	5	
	Relevance:	5	
	Viability:	4.5	

Short description

Ever since its origin, the Microeconomics programme has been strong in pure theory, particularly in mathematical economics and game theory. Over time this theoretical orientation has been complemented with more applied work.

The group is particularly active in (i) economic theory and game theory, (ii) industrial organization, (iii) health and labour economics, (iv) environmental economics, and (v) experimental economics. The focus on these fields is not due to deliberate policy, but developed out of shared interests of the researchers within the group and the presence of some prominent researchers in these subfields.

Quality

The microeconomics group has strengths in theory and in a number of applied areas. The group is well known internationally for its contributions in a number of these areas and it attracts distinguished visitors. It does high quality research which it publishes in the leading field journals in economic theory and applied economics and it makes good contributions in the top international core economics journals.

Productivity

The Tilburg microeconomics group engage actively in many international academic activities. Members of the group sit on the editorial boards of numerous international journals and they are well represented at international conferences. They have a good record in grant raising. The group engages in many research projects and produces a sizeable volume of research publications of good quality. The group graduates a very respectable number of PhD students.

Relevance

The group undertakes high quality theory research which feeds into many areas of applied economics. It disseminates its expertise through a variety of connections and collaborations. It does research involving applications of great interest to decision makers in the public and private sector. Its members advise on a variety of projects in which policy issues are to the fore, for example projects concerned with market organization and regulation.

Viability

The group seems to be well resourced as long as external research funding continues to flow as it did during the review period. There is likely to be continuing demand for the group's teaching services and continuing demand for its PhD programme which will secure a good

flow of income. If the group has a problem it is how to maintain momentum and continue to attract world class talent who will stay for the long term and make investments in the group accordingly.

Conclusion

This is a strong group with a significant international presence doing innovative research which it publishes in the best international journals. The main challenges are to maintain momentum and retain world class talent who can make long term investments in the group.

Accounting

Programme number:	UvT 4
Programme director:	Prof. dr. L.A.G.M. van Lent
Research staff 2007:	2.43 tenured, 7.25 total fte
Assessments:	Quality: 4.5
	Productivity: 4.5
	Relevance: 4
	Viability: 4

Short description

The Accounting programme has consciously adopted an economics perspective as the foundation of its research. Although the group believes (consistent with CentER philosophy) that it is best to hire excellent researchers and let them choose the topics they want to work on (as opposed to defining a theme that restricts researchers in their attention), group members are mostly involved in issues of performance management and incentives, corporate disclosure policy and tax.

The Accounting programme underwent a separate internal assessment in 2004, to determine whether the research quality was sufficient for inclusion of the Graduate Programme in Accounting into the Graduate Programme in Business. The peer report was positive in this regard.

The Accounting group has amended its top and very good journal list in order to adapt to the shifts in research areas within the Accounting field. The amended list has been in use since 2006.

Quality

An impressive performance, especially in the light of the modest starting position in 2001. In the past few years work of the highest quality has been produced with many members of the group being involved. The strategy and focus seem to indicate that this level of quality will continue to improve in future. The group is becoming a well-known player on the international scene

Productivity

A high level of productivity, especially given the focus on high quality outlets, with a good number of PhD students and completed dissertations.

Relevance

Although the focus of the group is on producing high quality basic research, it is strongly involved in policy relevant work and is able to combine these two streams in an impressive manner.

Viability

Funding still comes primarily from teaching-related sources, but attempts are being made to have greater diversification. The primary issue will be in the continued recruitment of high quality staff in a highly competitive environment.

Conclusion

An impressive turnaround which shows every sign of continuing into the future. It may be that some greater attention should be paid to strategic direction as the group continues to grow.

Computerized Information Systems

Programme number:	UvT 5
Programme director:	Prof. dr. M. Papazoglou (–2006), dr. M. Jeusfeld (2007–)
Research staff 2007:	2.49 tenured, 5.88 total fte
Assessments:	Quality: 4.5
	Productivity: 5
	Relevance: 5
	Viability: 4

Short description

The research conducted in the programme Computerized Information System (CIS) can be summarised as: “to explain, predict, design and develop, and thus improve, the impact of ICT on the performance of organisations and business networks”. Empirical research and design research on business information systems are jointly involved in activities such as modelling, design-oriented research and validation.

The programme aims at both medium-sized companies with network-based systems, and large organisations involved in international electronic business. Special empirical expertise is present in the area of service-oriented systems (“software as service”).

The CIS group was evaluated separately in 2006, following the recommendations of the internal peer committee in 2005. One point of concern was the group’s assertion that a regular scientific-journal-based evaluation of the CIS programme is not feasible, as important publications often occur in conference proceedings, due to rapid advances in the field. Since the 2006 evaluation, the CIS group has initiated the process for creating a new journal list, and made efforts to clarify common research objectives.

Quality

The group has done very well on international publications, and significantly improved their track record on top publications. Their successful effort to join the previously separate empirically oriented and design-oriented research groups on the common theme of service-oriented systems for agile business networks has strongly increased the impact; in this domain, the group is clearly among the strongest and most influential in Europe. These successes are even more impressive given the difficult financial situation the group has faced for several years due to declining student numbers. The new strategy of acquiring sponsored chairs and prestigious European grants such as Marie Curie has strengthened not just business relationships but also high-quality scientific results.

Productivity

The quality and productivity in publications is clearly leading among the evaluated IS/IM and even MS groups within the Netherlands and very strong in European comparison, especially given the small size of the group. The upward trend is highly appreciated. The number of completed PhD’s is good but could be increased further. It is appreciated that this has been hard due to severe teaching-related funding restrictions, so the successful move towards a higher share of NWO funding is considered very important. The link to regional and international business practice has been strengthened in comparison to the previous assessment by sponsored chairs, professional publications, and organization of important events.

Relevance

The group advances knowledge in the important new field of agile business networks. It is very well engrained in European research networks but also with industrial practice. Several faculty contribute in important roles such as editorships, conference organizers, sponsored chairs, joint projects with industry, and contract research for industry. The new Center for Service Sciences is expected to further improve the relevance, also by including international colleagues; cooperations within other departments in Tilburg are good and still improving. Technology transfer, applied research, and fundamental research are closely linked and profit from each other.

Viability

Viability of the group was severely threatened in the middle of the evaluation period, when some highly talented and internationally successful faculty members left due to a difficult financial situation. Fortunately, these positions could be refilled towards the end of the evaluation period by granting tenured associate professorships to two highly promising junior faculty. Viability in the short to medium term has also been strengthened by acquiring three sponsored chairs. So, overall the viability is assessed higher than at the last review. Nevertheless, given upcoming retirements, hiring a top researcher in the field of Information Management will be a critical success factor for long-term viability.

Conclusion

The CIS group has made significant further progress over the last assessment in terms of publication productivity and quality, as well as in the quality and quantity of research funding and industrial relevance. The group has achieved European leadership in their chosen focus area of service-oriented systems support for business networks; it is strongly encouraged to push this focus further.

On the side of publications, the emphasis on top quality publications should still be spread more broadly within the department, so the incentive strategy of Tilburg in this regard should be continued.

The somewhat problematic situation with technical facilities in the CIS group seems to be somewhat alleviated by starting the ERISS Center (European Research Institute in Service Science) but continues to need attention, as it is presently not fully competitive with computer science groups who work in similar areas. Hiring at the leadership level, as approved by the School in the field of Information Management, is important. Continuous rethinking of the educational strategy of the CIS group will be another important pre-requisite to maintain the financial foundation for the impressive momentum on the research side.

Finance

Programme number:	UvT 6
Programme director:	Prof. dr. B. Werker (–October 2003), Prof. dr. S. Ongena (November 2003–)
Research staff 2007:	5.16 tenured, 18.33 total fte
Assessments:	Quality: 5
	Productivity: 5
	Relevance: 5
	Viability: 4

Short description

Research in the Finance programme spans asset pricing, corporate finance and banking.

- In *asset pricing*, members focus on fund management, behavioural finance, high-frequency empirical asset pricing, risk factors, derivative pricing, and financial econometrics in general. Mutual funds, hedge funds, and institutional investors remain major research topics.
- In *corporate finance*, areas of intense interest currently include corporate governance (in particular managerial compensation) and market microstructure. Generally, the group is engaged in theoretical and empirical research across a wide range of topics.
- The focus of the *banking* research is mostly empirical in nature, with a special focus on relationship banking and banking sector risk. Other topics of particular interest include bank consolidation, bank competition and market entry, and banking sector distress.

Topics tackled are many and span the main areas of financial economics. The programme has no strategy in place concerning the choice of topics and corresponding recruitment of faculty, except the overriding focus on quality and a desire to foster organic growth of a critical mass of research within the confines set by the educational requirements.

Quality

This is an excellent, internationally competitive group, with a high number of top journal publications.

Productivity

The productivity of the group is very high. One strength of the programme is that academic publications are spread among a large group of researchers. This shows both that the group is well-balanced and not under the threat of a departure of a small number of people.

Relevance

The research topics undertaken in this programme have both academic and practical relevance. The programme is also involved in public private partnerships such as NETSPAR, which ensures dissemination of knowledge, and impact on real decisions.

Viability

The group has a sufficient size. However, the Committee has noticed a high number of departures and arrivals. Also, the percentage of tenured people is not very high, compared to similar programmes. This might reflect a difficulty in retaining senior people in the group.

Conclusion

This is a very high quality programme, with excellent output and joint collaborations. One potential concern might be the multi-affiliation of faculty recruited in the programme. It is not always clear to what extent a new recruitment will indeed contribute to the animation of the group. It is not always clear either to what extent the finance group has control over future recruitments.

Marketing

Programme number:	UvT 7		
Programme director:	Prof. dr. J.-B. Steenkamp (2001–April 2006), Prof. dr. R. Pieters (June 2006–)		
Research staff 2007:	4.40 tenured, 11.93 total fte		
Assessments:	Quality:	5	
	Productivity:	5	
	Relevance:	5	
	Viability:	4.5	

Short description

The three key areas of research in the Marketing programme are traditionally associated with different supporting disciplines, including sociology, psychometrics, behavioural decision theory and economics. In all three domains the focus is on gaining insight into the underlying, deeper processes of consumer, firm, and market behaviour to inform marketing decisions.

- Consumer behaviour (consumers' responses to advertising and other visual promotions, and consumer decision processes, including the influence of emotions and motivations)
- Marketing strategy (the role of trust and of social and economic satisfaction with respect to interorganisational relations in marketing channels)
- Marketing modelling (the impact of marketing strategies and tactics on consumer behaviour, including analyses at the market level, at the store or market segment level, and at the level of the household and individual).

Quality

The outstanding quality of this research group in marketing is best exemplified by their rising stream of outputs published in the discipline's very top international journals. At this very top level, the research group's output per fte is highest in the University's generally strong Faculty of Business and Business Administration. This they have maintained despite the loss of strong researchers to the US, since the group's international reputation and the research environment provided is sufficiently attractive for them to recruit exceptionally strong replacements. Prestige factors such as top journal editorial activities are very strong, indicating an international profile.

Productivity

In addition to the group's growing output in the very top international journals, their productivity is reflected in equally growing output in "other" international journals, many of which would be judged as top quality by many European universities. The group also have a credibly large and internationally recognised PhD programme.

Relevance

In addition to being of the highest academic quality, much of the group's research is meaningful to practitioners. This is helped by their output spanning marketing strategy as well as consumer behaviour and market modelling. Their continued ability to attract "research funds" shows their engagement with the national agenda.

Viability

Despite their strength, the group remains relatively small and is therefore vulnerable to the loss of senior staff. They also attract little “contract” income, although this is due to their preference for focusing on the highest-quality academic work. The group is truly world class and so competes with American business schools that have the large foundations and the freedom to fund research and pay far more than this group’s public income allows.

Conclusion

This research group is one of the strongest in the world. Its strategy of following the research focus of the excellent academics that it attracts works well although it may make them appear fickle if their direction changes excessively. To survive against wealthy international competitors the group needs to explore income sources beyond the state.

Operations Research

Programme number:	UvT 8		
Programme director:	Prof. dr. J. Kleijnen (–March 2002), Prof. dr. P. Kort (April 2002–June 2006), dr. E. van Dam (July 2006–)		
Research staff 2007:	8.62 tenured, 15.00 total fte		
Assessments:	Quality:	4.5	
	Productivity:	4.5	
	Relevance:	4	
	Viability:	4	

Short description

Research in this programme is conducted in five sub-fields, and frequently also across these fields.

- Stochastic operations research (service and manufacturing systems and their performance analysis, optimal design, control, and maintenance)
- Deterministic operations research (development and analysis of models for design and management of supply chains, including production, distribution, after-service, and recycling)
- Simulation (validation models for non-linear simulation models used to analyze complex problems)
- Combinatorial mathematics (tools for combinatorial problems in optimization and in the design and evaluation of deterministic simulation models)
- Game theory (allocation problems of jointly generated extra revenues, tackled by constructing corresponding cooperative games).

Quality

There is clearly a very strong research culture and respect for the research values in this group. The leader enjoys a high expert authority with his colleagues. The overall quality of the work is excellent. The academic international reputation of the leader and the group is unquestionable.

As stated in the self assessment report: “The OR group has managed to advance the disciplinary strength of its research base while simultaneously responding to contemporary issues in problems facing society.” However, there remains a clear focus on fundamental research and publishing in high quality journals. There are many formal and informal ties with the international research community at large and highly reputed internal institutions in particular. Publications are often together with international co-authors.

Productivity

Compared with their colleagues in other programmes at UvT the publication productivity in general and in top journals in particular is rather low. Part of it can be explained by the fact that two groups have been merged together and that one of the groups had less experience with publishing in high quality journals. We can expect an increase in the near future. Compared with their colleagues in the Management Science field in other universities, the productivity is high.

They have been able to attract a good number of PhD students leading to a steady flow of PhD theses.

Relevance

In response to comments made in a previous evaluation, the group put somewhat more emphasis on research that is directly applicable. Relevance seems to be defined as societal relevance and impact on the academic research community. In this sense it can be said that the research is not only rigorous but also relevant. However, so far we have not seen evidence that the research is really revealing for the corporate world. The balance still seems tilted towards fundamental research, but by broadening the scope to the global research community, the position at the more fundamental side of the research spectrum is balanced by other institutes that are positioned more towards the applied side. The consequence for a research group like this is that in order to stay societally relevant, it should remain open towards these other institutes

Viability

It is difficult to argue with success. The group has a clear research strategy and has implemented this strategy consistently. The size of the group in absolute terms meets our critical mass criterion. However, the scope of research interest is broad. They might spread themselves maybe a bit too thin.

There is steady and significant stream of income from research funds (NWO and KNAW). A small but steady percentage of the revenues are generated in from contract research, which includes EU framework projects.

Conclusion

This is no doubt a top research group with a top international position. They occupy a focused position up streams on the research-development-innovation supply chain. They should realise that even at the fundamental side of the spectrum, interaction with the end user might be stimulating in general and motivational for individual researchers.

Organization

Programme number:	UvT 9		
Programme director:	Prof. dr. H. Barkema (2001–March 2005), Prof. dr. X. Martin (March 2005–)		
Research staff 2007:	3.79 tenured, 7.91 total fte		
Assessments:	Quality:	5	
	Productivity:	5	
	Relevance:	4	
	Viability:	4.5	

Short description

Research in the Organization programme focuses on firms' strategic choices and performance, with particular emphasis on knowledge transfer as it pertains to corporate expansion, inter-firm collaboration, and organisational control and adaptation mechanisms.

The group's researchers draw on a variety of disciplines and theories, including transaction cost economics, organisational learning, and evolutionary economics and sociology. They focus on three related topics:

- corporate expansion and foreign market entry strategies and performance,
- organisational and technological learning and innovation within and across firms,
- organisational control and adaptation under uncertainty and upheaval.

Quality

The Committee was impressed by the quality of the research being conducted in the organization group. During the evaluation period, members of the group have managed to publish in the very top Strategy and Management journals.

Productivity

This focus on the foremost journals in the field has not hampered the group's ability to produce a significant and constant stream of articles in such journals. In this sense, the productivity of the group appears to be quite remarkable. The Committee has noted that the productivity of the group in terms of top quality publications seems to be greater in the field of Strategy and Organization than in the field of Operations Management.

Relevance

While most of the top quality work carried out in this group might appear to have fairly limited immediate relevance – at least as a final output – to business and more generally for society, the Committee is confident that the academic relevance of the work – in terms of how useful it is for other academics further building on it – is high. The stated strategy of the group is to focus on academic research, not on applied research.

Viability

The group is relatively small and the bulk of its research relies on a handful of talented individuals. This small size has led the group to admit only a small number of PhD students and to be somewhat vulnerable to staff turnover. Also, the rising levels of compensation for strong

research oriented faculty at leading business schools in North America and Europe create a challenge for the group when trying to hire new faculty.

Conclusion

The Committee was very impressed with the quality of research being carried out in the group as well as with the group's productivity in terms of top level publications. The objective to grow the size of the group in the future - which was mentioned during the interview phase of the assessment exercise - appears to be a positive move that should further establish the reputation of the group and guarantee its future viability. Rising compensation levels at competing institutions around the world create a challenge that will need to be addressed if the group is to continue attracting high calibre academics in the future.

Assessment of the UvT PhD programme

This is not a full evaluation of the Tilburg PhD programme according to the protocol, because the documentation was not submitted in the full form, but the Committee read the submission and spoke to a panel of six current PhD students and to the Programme Director. The two year MPhil (research master) programme has been accredited by the NVAO

There is every indication that this is an effective and well run programme which is well set to achieve its ambitious aims. It combines the necessary formality and rigour with a flexibility that recognizes that different students will have different needs. It allows both a 2+3 and a 1+3 year structure, depending on prior education, and also allows direct entry to the PhD itself for appropriately qualified students. The MPhil component is divided into several specializations, which enables students to combine a broad perspective on a subject (in year 1) with necessary education in specialist material (in year 2). There is also some preparation for teaching and a requirement to undertake course teaching (with a limit on the maximum hours allowable).

There is a diverse entry, split about 50:50 between Dutch and non-Dutch entrants, with around 20% being recruited from Tilburg first degree graduates. It is expected that around 80% of the entrants to the MPhil years will eventually go onto the PhD programme itself.

It appears well resourced, with students being effectively treated as employees. Dual supervision is desired and occurs frequently. Progress is subject to regular monitoring and completion rates are monitored, although the programme has not been running for long enough to be confident about completion rates.

There is encouragement and training for students nearing completion to compete for academic jobs on the international markets, although this is somewhat variable over subject areas. The aim of placing 15-20% of graduates at positions in top universities is beginning to be achieved.

The programme appears to maintain a good balance between efficiency and flexibility. The students appear to form a coherent group and to value the 'Tilburg experience'. The programme aims to 'remain in the Top 3 in Europe'. Whilst this is difficult to define, as programmes in business are separate from those in economics in many European countries, and there are different rankings in these two disciplines, it is well on track to becoming a highly respected player in the European market and is gaining visibility in the US, which it seeks to emulate.

Conclusion

The Committee is well satisfied with the way the programme is being developed and expanded, and is confident that, provided current standards and resourcing can be maintained as it expands, it is well set to achieve its ambitious aims.

8. Faculty of Economics and Business Administration, Maastricht University

Introduction

At the Faculty of Economics and Business Administration (FEBA) at Maastricht University, PhD education and most research are organised within the Maastricht Research School of Economics of Technology and Organizations (METEOR). Also part of the Faculty are the several research institutes, two of which, the Research Centre for Education and the Labour Market (ROA) and United Nations University-Maastricht Economic Research Institute on Innovation and Technology (UNU-MERIT), carry out most of the Faculty's contract research.

Mission & Goals

The mission statement offered in the self-evaluation report is as follows:

“Research contributes to the scientific value of the Faculty's education and innovation. Most of the research is organised within METEOR, whose mission is to generate and promote ideas that advance scientific economic and management knowledge and practices by:

- promoting and carrying out high-quality, internationally visible research in economics and business; and
- offering graduate education.”

This is accompanied by the following text:

“METEOR's research focuses on the firm and its environment. The central entity of research in METEOR is the internal and external functioning of business firms. In order to understand the functioning of firms in a complex environment, the firm is viewed as an open system. That is, firms depend on their environment for survival. For instance, firms compete for scarce resources in factor markets and for customers in product markets. Thereby, firms face two important challenges. First, they have to acquire and transform inputs into products and services in such a way that they are able to stand the test of competition in the market place. Secondly, changing market conditions imply that organizations continuously need to adapt the allocation of resources and internal processes. In order to face these challenges firms develop strategies. These strategies guide the behaviour of organizations in their search for an optimal fit between the external and internal environment. Consequently, METEOR views the firm both as an agent in a complex and changing environment as well as an organization of agents shaping market conditions and adapting to environmental changes.”

The Committee notes that METEOR is somewhat distinctive in terms of the multidisciplinary nature of most of the research programmes. This multidisciplinary approach is likely to be welcomed by funding bodies and provides an opportunity for METEOR to differentiate itself. The Committee feels that there is some unevenness in the extent to which research programmes are truly integrating across disciplines, although this is perhaps not surprising given the relatively recent establishment of some of the programmes.

In the Committee's view, METEOR's research mission, to focus on “the firm and its environment”, is rather broad. Whilst this is arguably descriptive of the scope of research currently conducted within METEOR, thought might be given to the articulation of a more specific statement to guide the future development of the programmes.

Leadership

The Dean, assisted by the Faculty Board, is responsible for all administrative, budgeting and academic affairs of the Faculty of Economics and Business Administration (FEBA). The Dean is appointed by the University Board and is employed as a full professor within the Faculty. In daily practice, responsibilities for research are delegated to the Associate Dean of Research and the Scientific Director of the Maastricht Research School of Economics of Technology and Organizations. The METEOR Management team consists of two more academic members and a Managing Director. The Associate Dean of Research is an advisor of the METEOR management team. METEOR has an advisory council, consisting of all METEOR fellows.

METEOR plays advisory and administrative roles within FEBA. It evaluates the research output of departments and individual researchers, selects PhD candidates and monitors their progress, and stimulates research through specific targeted actions. Moreover, it oversees administrative and budgetary decisions with respect to research funding. There are a number of research institutes within METEOR. Amongst these, MERIT and ROA are much larger than the others. Both have their own staff, a large proportion of which is financed by contract research. The directors also hold full professorships and as such are accountable to the Dean.

The Committee feels that the existence of the institutes within METEOR, particularly MERIT and ROA, provides a rather confusing picture, certainly at first sight. These two institutes were established early in the history of the Faculty, well before METEOR. They are now funded primarily by contract research, although it is suggested that both have always sought to integrate fundamental and contract research. Some of the other institutes were established after METEOR, "...to ensure the concentration of fundamental research and facilitate contract research and sponsorship". The Committee feel that this complex structure raises three possible concerns: First, there may be a danger of confusion in terms of the relative roles and mission of the various units (METEOR, programmes, institutes and departments), and this may be associated with problems of identity and "branding" when these various units interact with outside parties. Second, there is potential for duplication of administrative time and effort. Finally, and perhaps most importantly, there is a possible tension between the contract and fundamental research missions. The self evaluation suggests that METEOR focuses on fundamental research, but contracts appear to account for the great majority of income for some of the programmes within METEOR. Furthermore, some of the programme leaders specifically referred to a challenge in managing the tension between the two types of research and the need to do more to ensure that contracts support the fundamental research mission. The self assessment document notes, not unreasonably, that "the Faculty's approach has always integrated both fundamental and applied (contract) research". The Committee agrees that there are potential synergies here and also that contract research is one way to demonstrate relevance.

All this suggests that there is a need to further clarify the roles of the various units, especially with regard to contract research, and also to evaluate and clarify the relationship between contract and fundamental research. This may involve developing a more sophisticated and differentiated understanding of the nature of applied/contract research and of its potential contribution to the research mission of the Faculty. This is especially urgent in light of the need for the Faculty to further develop its relationships with the corporate world (as suggested by EQUIS) and the challenges posed by the likely future decline in direct funding.

These structural concerns aside, the leadership of METEOR appears to be effective and capable of decisive action. This was seen, for example, in the response to the temporary drop in

research productivity in 2002/03, which prompted the establishment of a review committee and the implementation of a series of reforms. Judging from the subsequent improvement in research productivity, these actions seem to have been successful and effective.

Strategy & Policy

According to the self-evaluation, the main research themes in the early years were labour and technology. The large institutes ROA and MERIT, focusing on those themes, were both founded at that time. With the start of METEOR in 1993, the research profile began to focus on the study of firm behaviour. The research school focused on financial, organisational and technological issues in business economics and business administration.

Six research programmes were defined in 2005, along thematic lines. Most research themes receive input from more than one department. As a result of the development from a strong business economics orientation, many programmes cannot be characterised as either business or economics, but cross the boundary between the two. Research at MERIT and ROA is to some degree integrated into the six research programmes.

Between 2007 and 2010, the Faculty will have additional direct funding of about €7 million under the Strategic Progressive Investment Themes (SPRINT) programme. This concerns one-time extra funding for projects that are promising with respect to academic performance as well as external funding, sponsorship and (to a lesser degree) contract research. SPRINT was motivated by the perceived need to increase research funding from external sources to counter the expected decrease in direct funding after 2010. The resources will be used to help build research groups in neuroeconomics and entrepreneurship.

Improving connections with the corporate world are described in the self-evaluation report as providing a “natural opportunity” for METEOR.

Internationalisation is ongoing in the Faculty’s education programmes. All teaching is in English, more than half of the student population is non-Dutch, the Faculty participates in extensive international student exchange networks, and international accreditations (EQUIS, AACSB and AMBA) have been acquired. In research, however, international exchange and collaboration are mostly undertaken at the level of individual faculty members through their own networks. The next step – according to the self-evaluation – is the further internationalisation of academic staff, of whom currently 45% has non-Dutch citizenship or a PhD from a university abroad. The Faculty has started more systematic recruitment on the international job market

The Faculty expects a strong growth in its PhD programme. The goal is to double the number of PhD defences to an average of 40 per year from 2011. This is to be based on increased external funding and is facilitated by the more structured PhD programme consisting of (one or) two years of MPhil coursework followed by three years of research.

For the long term, the Faculty of Economics and Business Administration is exploring collaboration with research clusters on health, medicine and life sciences at Maastricht University. Currently few UM researchers are working on the relevant economics and business research questions within these fields. The Faculty expects that its scattered research in these areas can be brought together in a new focused research programme, Business and Economics of Life Sciences.

Regarding the development of the strategy and policy, as explained above, the Committee feels that there is a need to address the tension between fundamental and contract research, with the aim of fully exploiting the potential synergies between the two.

Having said that the multi-disciplinary nature of METEOR's programmes is a distinctive feature with much to recommend it, the Committee is aware of the potential disadvantages of this approach, which must be guarded against. The committee had some concerns about the extent to which the programmes truly achieve an interdisciplinary approach. Whilst there is a rationale for each of the programme groupings, we heard statements that led us to question the real interdisciplinarity of the programmes, not least in the case of PhD projects, where the thesis would have to be defended in a single-discipline department. In some programmes there appears to be a dominant discipline, with colleagues being expected to align their research priorities with the dominant research agenda, rather than necessarily moving towards a true integration of disciplines. Some of the programmes appear to combine areas of strength with areas of relative weakness, and there is a danger that strong sub-groups may fail to achieve the visibility and recognition they deserve due to their being jointly evaluated along with weaker groups. None of this is to argue that the multidisciplinary structure is wrong or needs to be changed, but clearly there are potential challenges that the leadership of METEOR need to manage.

Resources, Funding Policy & Facilities

The Faculty has provided the following overview of the personnel resources, in full-time equivalents (fte) research time.

Research staff at institutional level

	2001	2002	2003	2004	2005	2006	2007
Full professor	11.5	12.3	11.8	11.1	11.6	12.9	14
Associate professor	7.9	9	9	9.3	9.5	9.6	9.5
Assistant professor	19.4	18.8	17.2	17.2	20.2	19.8	22.7
Researcher	8.2	10.8	12.2	11.2	10.6	6.7	9.3
PhD candidate	24.4	26.3	29.4	25.5	32.5	37	45
Total research staff	71.3	77.1	79.6	74.3	84.5	86	100.4
Contract researcher	20.3	21.8	21.5	18.3	16.2	13.4	14.3
Supporting staff	28.6	22.9	21.6	21.3	21.2	24.8	25.8
Total staff (excluding contract researchers)	99.9	100.1	101.2	95.6	105.6	110.8	126.2
Total staff (including contract researchers)	120.2	121.8	122.7	113.9	121.8	124.2	140.5

FEBA's employment records make no distinction between tenured and non-tenured faculty. For this reason, the last two lines in the table have been left empty.

The increase in the research input from 2005 is mainly the result of the expansion of the PhD programme. In 2007 the growth is also due to the first hirings under the SPRINT programme and the increase in externally funded positions.

Research staff at research programme level

	2001	2002	2003	2004	2005	2006	2007
Programme 1: Marketing & Supply Chain Management							
Full professor	1.4	1.4	1.4	1.4	1.4	1.5	1.6
Associate professor	0.6	1.4	1.4	0.9	0.9	0.9	0.9
Assistant professor	2	2	1.6	2.1	2.5	2.5	2.5
Researcher	0.7	1.4	1.4	0.7	0	0.7	2.1
PhD candidate	4.9	4.2	5.8	5.8	7.7	7.7	6.3
Total research staff	9.5	10.3	11.5	10.8	12.4	13.3	13.3
Programme 2: Accounting & Information Management							
Full professor	0.7	1.2	1	1.4	1.4	1.2	1.4
Associate professor	1.5	1.2	1.3	1.3	1.3	1.5	1.3
Assistant professor	4.1	3.7	3.2	2.4	2.6	1.9	2.3
Researcher	0.7	0.7	0.6	2	2.8	0	0
PhD candidate	0	1.4	2.1	2.1	3.5	3.2	4.1
Total research staff	7	8.1	8.1	9.2	11.6	7.8	9.1
Programme 3: Technology, Innovation and Industrial Dynamics							
Full professor	2.4	2.3	2.5	2.7	2.7	3.1	3.2
Associate professor	1.1	1.8	1.7	1.9	1.8	1.8	1.6
Assistant professor	2.3	1.4	1.4	1.4	1.4	1	1.4
Researcher	3.2	3.3	3.6	3.3	3	2.7	3.7
PhD candidate	4.9	6.7	6.2	6.5	5.2	3.2	3.3
Total research staff	13.8	15.4	15.31	5.7	14.2	11.8	13.1
Programme 4: The Development and Utilization of Human Resources							
Full professor	1.9	2	1.9	1.9	1.9	2.6	3.1
Associate professor	1.7	1.6	1.6	2.4	2.6	1.9	2
Assistant professor	4	3.6	3.2	3.6	3.3	2.5	2.9
Researcher	3.6	4.4	4	3.5	3.1	2.2	3.6
PhD candidate	4.1	4.3	4.2	2.8	3	4.4	4.4
Total research staff	15.2	15.9	14.9	14.2	13.9	13.7	15.8
Programme 5: Economic Theory, Behaviour, and Computing							
Full professor	2.8	3.2	3.1	1.9	2.2	2.2	2.2
Associate professor	1.3	1.2	1.2	1	1	1.8	2
Assistant professor	3.8	4.2	4.8	5.2	7.2	8.8	7.8
Researcher	0	1	2.7	1.7	1.7	1.2	0
PhD candidate	4.9	4.9	5.5	4.6	6	8.7	14.2
Total research staff	12.8	14.5	17.3	14.4	18.1	22.7	26.3
Programme 6: Econometrics, Finance and Monetary Economics							
Full professor	2.3	2.3	2.1	1.9	2	2.2	2.4
Associate professor	1.8	1.8	1.8	1.9	1.9	1.7	1.8
Assistant professor	3.3	3.8	3	2.6	3.2	3	5.8
Researcher	0	0	0	0	0	0	0
PhD candidate	5.6	4.9	5.6	3.6	7.1	9.8	12.7
Total research staff	12.9	12.8	12.5	10	14.2	16.7	22.7

Since 2004, the Faculty has adopted a tenure track system. Assistant professors are given a temporary appointment for a period of two times three years. An initial light review takes place

after the first three-year period and the tenure decision is taken at the end of the fifth year. For tenure, a faculty member must combine education and research. A minimal research requirement for tenure is eligibility for METEOR fellowship.

The graduate programme has changed due to the introduction and accreditation of the Research Masters (MPhil) in September 2004. Since 2005, the PhD programme has been gradually shifting to the new system of two years of coursework and three years of research.

The allocation model for direct funding to departments consists of a fixed part plus a variable part based on a department's performance in research and education. The research allocation has four elements:

- the quality-weighted sum of scientific publications;
- number of PhD defences;
- income earned from research funds (a 20% bonus on every euro from NWO, and 10% on other fundamental research sponsorship);
- a teaching load-based residual, which decreases euro for euro with increases in research-funding-based allocation in the previous item.

In response to the comment by the EQUIS peer review committee that "it might be desirable to focus efforts on specific areas," the Faculty states:

"It is certainly true that critical mass is required for funding in the larger, thematically defined research programmes. ... Yet the Faculty also needs quality research in all fields in which it offers master's programmes. Therefore it also maintains smaller research groups. Since student demands and research priorities change over time, universities are constantly looking for new opportunities. The Faculty also believes that researchers themselves are best equipped to set priorities. By rewarding output, the better groups automatically receive more funding and have the chance to grow stronger."

For the valuation of research output, all publications are assigned a classification. International journals are classified as either A (10 points), B (6 points), C (2 points) or D (0 points). The classification is updated occasionally, with the current one having been in place since 2004. In the 2004 changes, among others, all non-English-language journals were downgraded to D.

Part of METEOR's budget is used for targeted actions, such as bonuses for recruiting international faculty, for preparing and evaluating research funding proposals and for completed PhD theses to supervisors; training for PhD candidates; a visitors programme and seminar series; initial research endowments for newly hired assistant professors; further development of the research masters programmes; and international research visits by PhD candidates.

With respect to facilities, the Faculty strives to provide up-to-date research equipment, mainly in the form of soft- and hardware, suitable for the storage and treatment of large datasets. A laboratory has been installed to stimulate experimental research. Other facilities are also reported to be of good quality, especially after the renovation of the faculty building in 2003.

The Committee notes that the proportion of METEOR funding coming from contract research has increased over the review period, and that there is an anticipation of a further increase. In spite of this the number of contract research staff has fallen. This seems to be due

to the appointment of more qualified, higher cost research staff in recent times, in some cases reflected a trend towards higher-level projects.

There are, of course, long-standing examples within the Faculty of highly successful attempts to diversify research funding, not least in units such as MERIT. However, it appears that the further diversification of funding into second and third stream sources will be an important challenge facing METEOR in the future. An attendant challenge is to manage the impact of any increase in contract and company-led research on the research agenda and to ensure that the effects on the academic output of top-journal research are positive rather than negative.

Academic Reputation

The Faculty of Economics and Business Administration was accredited by EQUIS in 2005. FEBA was found to meet, and in some areas exceed, the EQUIS research standards. The self-evaluation states that all programmes regularly organise workshops and conferences, some of which are prestigious. Various FEBA researchers have won grants, awards and special memberships.

The Committee note that progress has been made in responding to the 2001 KNAW research school assessment, most notably in terms of developing the research degree programme along the American model. However, as discussed in this document, the Committee feels that efforts to “stimulate the integration both of themes and disciplines” need to be further reviewed. Also, the 2001 KNAW review recommended moving towards a citation-based measurement of research output. Follow-through on this recommendation apparently consisted of an adapted journal list, albeit based in part on journal citation analysis. METEOR might wish to give further consideration to using citations as an indicator of research quality.

The Committee noted that some programmes combine relatively strong and weaker groups together, making an overall evaluation difficult in some cases. Having said that, the Committee was generally very impressed by the quality of METEOR programmes, rating them as at least “very good”. The Committee feel that all programmes are at least internationally competitive, with some particular areas of international leadership. Very good progress is being made in increasing the number of publications in top-tier international journals, and programme leaders are committed to making further progress in this regard. There is, however, scope to strengthen some of the weaker areas and also to further develop the level of integration within programmes.

Societal Relevance

The self-evaluation states that the Faculty has been deepening its involvement in the business community and governance through its institutes (MERIT, ROA, LIFE, MAXX, MARC, ECCE, NSI), which serve as centres of excellence for applied research and consultancy in specific business areas or governmental activities. Also, there are several chairs sponsored by companies – to promote research in a particular field and/or industry.

According to the self-evaluation, there are many important questions for which the university has added value to business, while at the same time cooperation with business is needed for scientific progress, e.g. to collect appropriate data or to carry out field experiments. Furthermore, individual faculty members contribute to society through a wide range of activities, such as participating in governmental advisory boards, advisory boards of schools, societal associations, welfare institutes, etc. Faculty members also regularly write columns in local newspapers.

The Committee note that programmes within METEOR tend to demonstrate a high level of both academic and practical relevance. Links with the policy/practitioner communities are generally good and appear to have been improving.

Balance of Strengths & Weaknesses

Strengths mentioned in the self-evaluation are FEBA's innovative learning system, its thorough evaluation and quality control system and the international nature of its study programmes, student population, faculty members and partner institute networks. Also, its integration of fundamental and applied research and the integration of business and economics research, which have resulted in strong external research funding.

As weaknesses, fluctuations in research productivity and financial constraints are mentioned. Also, business and economics are reported to receive lower funding from NWO than other scientific areas, while in the future a larger percentage of funding is expected to come from NWO grants. Another concern is the low number of students entering the MPhil programme, which is supposed to prepare students for PhD work. Finally, staff at the senior level is less international than at other levels, and only 10% of full professors are women.

As an opportunity, the increasing emphasis on external research validation is mentioned. The Faculty has many connections to the community and the corporate world. FEBA intends to extend these connections, partly by strengthening communication and public relations policies. Also, the ROA and MERIT institutes can be integrated more into research programmes. There will be substantial additional direct funding in 2008-2010 as a result of the switch from one undergraduate education system to another, causing temporary higher numbers of graduates and thus a one-time raise in education-based funding. Under the SPRINT programme, this money will be invested in new, focused research opportunities with more external funding.

Although Maastricht attracts many international Bachelor students, these students often choose to pursue Master's studies elsewhere. Considerable investments have to be made to retain or attract good students. This situation leads to conservative staff hiring policies. No growth of financial resources is expected. Another threat mentioned by FEBA is competitor institutes copying its profile in education and research.

Adjusted strategies include strong research incentives and changes to the PhD programme, but also improved external communication of research, and larger-scale research proposals in order to secure more external funding. Measures to improve the influx of MPhil students include scholarships, marketing efforts, and collaboration with other programmes in Holland and abroad.

The Committee feels that METEOR has made significant progress in terms of developing research quality and productivity during the review period. There are some well-established areas of international leadership within METEOR, and in the coming period there are opportunities to build on areas of emerging strength. It appears that the institute has yet to make the most of the opportunities provided by the multidisciplinary potential of the programmes, and by the contract research activities of ROA and MERIT. A key issue for the future is managing the possible tensions and complementarities between contract/applied and academic/fundamental research.

Maastricht University - Assessments per programme

The Committee assessed the following programmes of the Faculty of Economics and Business Administration at Maastricht University:

	Quality	Productivity	Relevance	Viability
UM1: Marketing and Supply Chain Management	4.5	4.5	5	4
UM2: Accounting and Information Management	4.5	4	4	4.5
UM3: Technology, Innovation and Industrial Dynamics	4	5	5	4.5
UM4: Development and Utilization of Human Resources	4	4.5	5	4.5
UM5: Economic Theory, Behaviour and Computing	4.5	4.5	4	4.5
UM6: Finance, Econometrics and Money	4	4.5	5	4.5

The detailed assessment per programme follows in the next section of this report.

Marketing and Supply Chain Management

Programme number:	UM 1	
Programme director:	Prof. dr. J.C. de Ruyter	
Research staff 2007:	13.3 fte	
Assessments:	Quality:	4.5
	Productivity:	4.5
	Relevance:	5.0
	Viability:	4.0

Short description

This programme focuses on the delivery of services to customers, both end consumers and industrial customers. It explores the interactions between firms' business decisions and regulatory, legislative and consumer trends in the international (on- and offline) marketplace. Research is integrated from psychology, organisational behaviour, logistics, econometrics and economics. The programme also aims to develop new theories that cover the special requirements of service industries. This includes value-added services such as supply chain management, as well as the service characteristics and other aspects of value delivery to customers.

The programme is more focussed than many within METEOR and its focus on the value chain and service quality has an academic as well as operational logic. It also seems able to work well alongside other research programmes within the university.

Quality

The quality of the output of the group is excellent to very good depending upon the part of the broad programme of activities. The work on service marketing is world leading and is recognised through its publication in the world's leading marketing journals. Other parts of the programme lag a little behind this leading standard. Although the programme draws together areas of academic study that are often very separate, the originality of this value chain oriented approach is clear and gives the programme a distinct advantage. The overall international standing of their activities is greatly helped by the very visible and active programme director.

Productivity

The productivity in academic journals is excellent, particularly in marketing. Despite the recent large increase in the number of doctoral students, the number of PhD theses presented is low compared with the rest of METEOR and other marketing related groups within the Netherlands.

Relevance

The clear and logical focus of the group helps it make an excellent contribution to knowledge both academically and practically. The full practical potential of the group is now being realised through the growth in contracts income.

Viability

The strength of this programme is its director's leadership and personal research productivity. Beyond the programme's director, full professorial leadership is thin. There is strength at associate and assistant professor levels but these still need time to develop. Recent developments could put the programme at risk. The year 2007 saw a surge in doctoral students after years

with few PhD completions. These are matched by an equally sudden increase in part time professors. The programme would look more stable if this expansion was stage phased to allow the group to develop supervision experience.

Conclusion

The programmes focus upon service quality and the supply chain gives it an academic and practical advantage. The scope and focus of its research in service quality make the programme highly relevant to practitioners and academics of diverse backgrounds. The leadership of the programme is strong and that has allowed it to develop an excellent multi-disciplinary base. Some of the programme's output is internationally excellent, particularly in marketing. The scale of the programme and its breadth suggests the need for academic leadership across the whole range of disciplines that it encompasses. Although the programme has matured and progressed solidly, the recent sudden expansion of the doctoral programme, and the programme's overall dependence upon newly appointed full professors with minor obligations to the school, are significant threats.

Accounting and Information Management

Programme number:	UM 2	
Programme director:	Prof. dr. F. Moers	
Research staff 2007:	9.1 fte	
Assessments:	Quality:	4.5
	Productivity:	4
	Relevance:	4
	Viability:	4.5

Short description

This programme aims to provide insight into the role accounting and information technology play in organisations and markets. Its fundamental research is structured around two themes.

- In Accounting, Incentives and Governance, the main question is how issues of measurement, disclosure and assurance relate to hidden information and hidden action problems both within the firm, and between the firm and external parties. The three research domains are (i) Disclosure and discretion in financial reporting, (ii) Performance measurement and incentives, and (iii) Assurance and the auditor.
- Research in Information, Organizations and Society investigates the role of information technology (IT) within organisations and in networks between organisations. An important aspect is IT's impact on internal users (employees) and external users (e.g., consumers). There is a special focus on international and cross-cultural studies that examine the role of IT on globalisation.

In addition to fundamental research, the programme is involved in applied commissioned research on similar topics via its Maastricht Accounting, Auditing and Information Management Research Center (MARC).

Quality

A significant number of papers have been published in top journals in the field in each of the main areas of concentration. The Information Management work is well integrated into the accounting area, and good use is made of international visiting staff. The contribution of the department makes it visible at the international level.

Productivity

There is a strong stream of journal outputs and PhD students. However, more attention could be paid to placing more work in the better journals. Second stream funding is absent, although it could be used to increase productivity.

Relevance

Much of the work is relevant to the accounting community, although connections with practice and publicising the practical relevance of the work undertaken could be strengthened.

Viability

A strong group which is making good progress in recruiting and retaining high quality staff in a challenging environment.

Conclusion

The group is maintaining its visibility in an increasingly competitive environment. It makes good use of its international visiting staff, and has a good research environment including relevant databases. Although it has exported some good staff over the years it has replaced them with equally good appointees. The focus of the information management group on accounting and relevant IT issues helps increase the impact of the work undertaken.

Technology, Innovation and Industrial Dynamics

Programme number:	UM 3
Programme director:	Prof. dr. L.L.G. Soete
Research staff 2007:	13.1 fte (plus 8.9 fte UNU-MERIT contract research staff)
Assessments:	Quality: 4
	Productivity: 5
	Relevance: 5
	Viability: 4.5

Short description

The programme focuses on the broad role of technology and innovation in bringing about industrial, organisational and social change. It examines how individuals, organisations, institutions and countries can make better use of knowledge to enhance growth and development opportunities. The programme seeks to provide insight into the economic and organisational context within which innovation and technological change are created, adapted, selected, diffused and improved upon.

Research is organised around five themes, based on methodological approaches: empirically based, policy-based, and macro, sectoral and micro studies.

Quality

The research program produces a large and steady stream of output, often based on externally funded or contracted projects, that is coherent, original, and highly visible in its field, where the director and other researchers are very prominent. While the work is often not structured and rigorous enough to appear in the major publication outlets of the various disciplines, researchers affiliated with the research group and its networks work at or near the frontier in a variety of fields. The key publications offer examples that work based on the group's research perspective can appear in more general journals.

Productivity

The group is large and produces output commensurate to its size in terms of written material and PhD students, who are both input and outputs for contract research projects. While the research approach is not conducive to a large output in terms of international refereed journal articles, that productivity indicator appears more than satisfactory even though the outlets tend to be specific rather than general interest.

Relevance

The group addresses important issues in ways that have substantial impact in the policy community and are key reference points for similar research groups worldwide.

Viability

The group has been steady in terms of size and productivity over the review period. The organizational structure, while complex, appears to foster productive connections across disciplines and with the University. The large number of PhDs and other outputs may not be sustainable in the long run. As is the case for most if not all successful programs, attention will need to be paid to quality vs. quantity tradeoffs, and to generational replacement issues.

Conclusion

Since the research is carried out in a complex institutional context, featuring substantial connections to various outside entities as well as to University departments, it is not easy for the Committee to assess its large and varied output on the scale applicable to standard research units. The group and output submitted for evaluation are clearly large, stable, and very successful in terms of visibility, fundraising, PhD training, and publications in its field. The Committee recommends that the program should continue to operate its well-rehearsed approaches but should also consider diversification strategies, broadening and deepening contacts with research groups studying similar issues with different tools.

Development and Utilization of Human Resources (DUHR)

Programme number:	UM 4		
Programme director:	From 01/09/2005 until 31/12/2007: Prof. dr. A.H. Borghans; since 01/01/2008: Prof. dr. T.J. Dohmen		
Research staff 2007:	15.8 fte		
Assessment:	Quality	4	
	Productivity	4.5	
	Relevance	5	
	Viability	4.5	

Short description

This is a large and diverse programme, encompassing projects on labour economics, organizational behaviour and human resource management. This breadth might be taken to imply a lack of focus, although the self assessment suggests that the common themes are skills acquisition and utilisation, and how organisations stimulate employee commitment and engagement. The behavioural and economic perspectives are being combined in some of the newer projects, especially by the economists.

Quality

The diversity of the group makes the overall assessment of quality difficult, but there appears to be an improvement over time, evidenced by an increasing number of publications in top-tier journals in organizational behaviour and economics. However, the number of non-international refereed journal publications remains high and there is a strong emphasis on contract research, suggesting that there is scope to further increase the emphasis on research aimed at top-tier journals.

Productivity

The group has produced a steady flow of articles in international journals. The number of PhD supervisions and graduations is reasonable given the size of the group.

Relevance

A key aim of the group is to inform policy debates. Recent initiatives reflect this, bringing academics and practitioners together to focus on policy-relevant research. The high percentage of contract-research funding indicates relevance to policy makers and practitioners. There have been concerns about the tension between contract and fundamental research, and the group have worked to strengthen the link between the two. However, the group may need to exercise selectivity in their contract research commitments, so that synergies with fundamental research can be maximised.

Viability

Quality and productivity are improving and there appears to be a positive, team-based research culture, with a good mix of new and established researchers. Staffing is increasing, with significant new hires recently. There is no evidence of serious recruitment or retention problems.

Conclusion

This is an improving programme, with strengths in organisational behaviour and labour economics. Whilst there are some encouraging signs, it may be too early to assess the degree to

which DUHR will eventually produce a coherent *interdisciplinary* research programme. There have been three programme leaders since 2006, and whilst there is no sign that this has damaged the programme, care should be taken to ensure continuity.

Economic Theory, Behaviour and Computing

Programme number:	UM 5	
Programme director:	Prof. dr. R.J. Müller	
Research staff 2007:	26.3 fte	
Assessments:	Quality:	4.5
	Productivity:	4.5
	Relevance:	4
	Viability:	4.5

Short description

This research programme aims to create innovative models of economic systems, to explain and predict the behaviour of agents in such systems, and to bring about their computationally efficient evaluation and realisation. It combines methods from economic theory, behavioural and experimental economics and operations research.

Computational models, as developed in combinatorial optimisation and mathematical programming, allow the evaluation of complex systems and modelling of limited cognitive capacities of economic actors. Furthermore, they become part of economic systems, for example in combinatorial auction platforms and pricing systems.

The core topics of the programme are within the sub-fields of Microeconomics and Mathematical Economics, Operations Research and Behavioural Economics.

Quality

This research group covers a range of fields, and has significant international reputation. Over the assessment period it has produced many publications spanning a number of fields. The group publishes in the good quality international journals in the various fields in which it engages. There does not seem to be a great deal of published research that integrates the various fields covered by the group, but there are encouraging signs of integration in some PhD research.

Productivity

The group is doing a substantial amount of highly competent research which it publishes in good quality international journals. It supervises a good volume of PhD students who progress well to completion. Further efforts need to be made to improve the placement of the group's graduate students. It is good to hear that there is attention being paid to the structure of the Masters programme and the breadth and depth of education that it delivers.

Relevance

Although many of the research issues pursued by the group are in the domain of economic theory, the group has considerable external engagement and has had real success in bringing its expertise to bear on practical problems in industry. The fundamental theory work of the group is given prominence and brought to the attention of practitioners through conferences organised at UM.

Viability

The group is generating a good stream of external funding, and is engaging in research on topics where there are expanding opportunities for exciting new work. This relatively youthful group look set to make good progress

Conclusion

This is a large, growing, and rather heterogeneous research programme working on a wide range of associated research themes. As time passes it will be good to reap the benefits of having the various fields studied by the group in such proximity to each other. The group will benefit from enhancing its PhD programme with attention to upgrading the core training given at the entry level. The group is well placed to progress to the innovative research which regularly finds its way into the top 5 international core economics journals.

Finance, Econometrics and Money

also referred to as Econometrics, Finance and Monetary Economics

Programme number:	UM 6
Programme director:	Prof. dr. P.C. Schotman (2001–2005), Prof. dr. P.M.A. Eichholtz (2006–2007)
Research staff 2007:	22.7 fte
Assessments:	Quality: 4
	Productivity: 4.5
	Relevance: 5
	Viability: 4.5

Short description

This programme conducts empirical research in the finance and money fields and theoretical and applied research in time series, panel data and financial econometrics. Resources are concentrated on several research themes, including pensions, corporate governance and social responsibility, real estate, and art investment. Even so, the group holds that scientific curiosity can only be guided to some extent, and individual researchers should be able to determine the course of their own research to remain motivated and productive.

Quality

Very high quality research output is achieved in some domains covered by the program, in particular in the field of econometric theory where a small group of researchers working on mainly time series topics and issues have a prominent international profile. The Committee would like to encourage programme members to gain visibility in some other core fields of research, e.g. finance, by publishing in the most recognized journals. There is definitely the potential to achieve this in the programme.

Productivity

The productivity of the group is extremely good, both in terms of publications in internationally visible journals and in terms of number of PhDs output, which has been growing in the most recent years of the assessment period..

Relevance

The Committee appreciates the relevance of the research conducted here, both for the development of academic knowledge, and for the improvement of industry practices. The group makes a special effort at building links with industry, which translates into substantial academic and professional publications. It has proven able to increase the external part of its funding in the last years of the assessment period.

Viability

Over the assessment period, the programme demonstrates good vitality, both regarding recruitments of faculty members and PhDs, and regarding promotions of junior researchers. The Committee feels that the research model developed here is sustainable, and likely to grow.

Conclusion

The group has a clear and pragmatic strategy concerning the research agenda setting, and secures appropriate funding for its future development. Some effort towards producing publications in top field and general interest journals, exploiting the group's competence in empirical work, will strengthen its international competitiveness.

APPENDICES

Appendix A: Curricula vitae of the committee members

Roland Van Dierdonck, chairman of the Committee, is partner and professor of Vlerick Leuven Gent Management School and at Ghent University. He is Civil and Industrial Engineer (Ghent University) and Doctor in Business Administration, Harvard University (USA). He was an assistant-professor at IMD, Lausanne, visiting research scholar at the University of North Carolina, Chapel Hill (USA) and visiting professor at INSEAD (France) and Rotterdam School of Management (The Netherlands) and various other schools and universities. His main research interests are supply chain management, manufacturing strategy and service operations management.

Giuseppe Bertola is professor of Political Economics in the Faculty of Political Science, University of Turin. In 1997-2003 he was on leave as Full-time professor at the European University Institute and in 1989-93 he was Assistant Professor and Assistant Director of the International Finance Section, Princeton University. He was co-director of *Giornale degli Economisti e Annali di Economia*, Managing Editor of Economic Policy (2001-08) and has performed scientific advisory work for the European Commission, the European Central Bank, and other organizations. His research focuses on labour market and other institutions from an international comparative perspective, and particularly on their distributional impact and interaction with the European process of economic and monetary unification. His micro- and macroeconomic work also analyzes exchange rates and money-market institutional arrangements and empirical phenomena, interactions between growth and distribution, households' durable consumption and borrowing, and educational systems.

Catherine Casamatta is professor of Finance at the University Toulouse I, Institut d'Économie Industrielle (IDEI), and director of the École Doctorale Sciences de Gestion. She is Board Member of the French Finance Association (AFFI). Her research covers Corporate Finance Theory, Venture Capital, Investment Fund Management, Managerial Compensation.

Andrew Chesher is professor of Economics at University College London, and director of the Centre for Microdata Methods and Practice (CeMMAP). His research covers Econometric theory, methods and practice. He is Fellow of the Econometric Society, Fellow of the British Academy, Research Fellow IFS, Governor National Institute for Economic and Social Research, Visiting Professor University of Bristol.

Pierre Dussauge is professor of Strategic Management at HEC-Paris, one of the leading business schools in Europe. He has been a visiting professor of Corporate Strategy and International Business at the University of Michigan's Ross School of Business from 1991 to 2003; he has also had teaching assignments at INSEAD (Fontainebleau), IESE (Barcelona), at Tsinghua University (Beijing), etc. For the last few years, his research has focused on the topic of global strategic alliances. He has been a consultant or a management educator with a number of firms in Europe and in the US.

Matthias Jarke is head of the Fraunhofer-Institut für Angewandte Informationstechnik (FIT) and professor and head of Computer Science 5 (Information Systems) at RWTH Aachen University. He is founding director of the Bonn-Aachen International Center for Information Technology (B-IT), which is supported by RWTH Aachen University, University of Bonn and Fraunhofer Gesellschaft. He was President of the German Informatics Society (GI) from 2004-2007. He is coordinator of several European projects on Information System Engi-

neering and co-Founder of DFG-funded Collaborative Research Centers on Computers and Chemical Engineering (SFB 476 IMPROVE) and on Media and Cultural Communications (SFB/FK 427). Since 2006 he is Area Coordinator “Mobile Applications and Services” of the DFG-Exzellenzcluster UMIC at RWTH Aachen University.

David Otley is Distinguished Professor of Accounting and Management, Department Accounting and Finance, Lancaster University. He is Associate Dean for Finance & Resources, Management School. His research covers Management control systems, Behavioural aspects of management accounting, Managerial performance evaluation, Performance-related pay. Current research focus is on Performance management, Budgetary control and performance evaluation. He is President-Elect of the Management Accounting Section of the American Accounting Association.

John Saunders is professor of Marketing and executive director of Aston Business School, Birmingham. His research covers evolutionary marketing (the application of evolutionary theory to marketing), sustainable marketing and the future of marketing. He is editor of International Journal of Research in Marketing, President of the European Marketing Academy and Dean of the Chartered Institute of Marketing. He is also a Fellow of the Chartered Institute of Marketing (FCIM), the British Academy of Management (FBAM), the European Marketing Academy (FEMAC), Freeman of the City of London and Member of the Worshipful Company of Marketors. He served on the Business and Management Panel of Britain’s Research Evaluation Exercises (RAE) in 2001 and 2008, where he was deputy chair. He has chaired and been a member of numerous QAA, AACSB International and EQUIS panels, and has acted as a consultant to many companies, several business schools and universities.

Edward Snape is professor and head of the Department of Management at the Hong Kong Baptist University. His research covers Employee Commitments, Leadership, Service Climate and Service Quality, Employee Relations and Union Participation. His teaching includes Human Resource Management, Pay and Benefits, HR Planning, Organisational Behaviour. He is visiting professor at the School of Management, University of Bradford, associate editor of the International Journal of Management Reviews, member of the editorial advisory board of Employee Relations and Personnel Review, member of the British Academy of Management.

Appendix B: Explanation of the SEP-scores

<i>Excellent (5)</i>	Work is at the forefront internationally and will most likely have an important and substantial impact in the field. Group is considered an international leader.
<i>Very Good (4)</i>	Work is internationally competitive and is expected to make a significant contribution; nationally speaking at the forefront in the field. Group is considered international player, national leader.
<i>Good (3)</i>	Work is competitive at the national level and will probably make a valuable contribution in the international field. Group is considered internationally visible and a national player.
<i>Satisfactory (2)</i>	Work that is solid but not exciting, will add to our understanding and is in principle worthy of support. It is considered of less priority than work in the above categories. Group is nationally visible.
<i>Unsatisfactory (1)</i>	Work that is neither solid nor exciting, flawed in the scientific and or technical approach, repetitions of other work, etc. Work not worthy of pursuing.

Quality is to be seen as a measure of excellence and excitement. It refers to the eminence of a group's research activities, its abilities to perform at the highest level and its achievements in the international scientific community. It rests on the proficiency and rigour of research concepts and conduct; it shows in the success of the group at the forefront of scientific development.

Productivity refers to the total output of the group; that is, the variegated ways in which results of research and knowledge development are publicised. The output needs to be reviewed in relation to the input in terms of human resources.

Relevance is a criterion that covers both the scientific and the technical and socio-economic impact of the work. Here in particular research choices are assessed in relation to developments in the international scientific community or, in the case of technical and socio-economic impact, in relation to important developments or questions in society at large.

Vitality and feasibility. This dual criterion refers to the internal and external dynamics of the group in relation to the choices made and the success rate of projects. On the one hand, this criterion measures the flexibility of a group, which appears in its ability to close research lines that have no future and to initiate new venture projects. On the other hand, it measures the capacity of the management to run projects in a professional way. Assessment of policy decisions is at stake, as well as assessment of project management, including cost-benefit analysis.

Appendix C: Schedule of meetings

Monday, November 24, 2008			
nr.	time		
1	9:00	<i>EUR</i>	Finance & Accounting and International Markets
2	9:45	<i>EUR</i>	Marketing
3	10:30	<i>EUR</i>	Management Science
4	11:15	<i>RUG</i>	International Economics, Business & Management (IEB&M)
	12:00	lunch	
5	12:45	<i>RUG</i>	Marketing
6	13:30	<i>RUG</i>	Operations Management and Operations Research (OPERA)
7	14:15	<i>RUG</i>	Human Resource Management & Organizational Behavior
8	15:00	<i>UM</i>	Accounting & Information Management (AIM)
9	15:45	<i>UM</i>	Marketing & Supply Chain Management (MSCM)
10	16:30	<i>UM</i>	Technology, Innovation and Industrial Dynamics (TIID)
Tuesday, November 25, 2008			
nr.	time		
11	9:00	<i>UVA</i>	Accounting, Organisations and Society
12	9:45	<i>UVA</i>	Corporate Finance & Financial Systems
13	10:30	<i>UVA</i>	Information Management
14	11:15	<i>UVA</i>	Operations Research
	12:00	lunch	
15	12:45	<i>UVA</i>	Institute Management ABS-RI
	13:45	<i>break</i>	
16	14:00	<i>UvT</i>	Macroeconomics
17	14:45	<i>UvT</i>	Accounting
18	15:30	<i>UvT</i>	Computerized Information Systems
19	16:15	<i>UvT</i>	Finance
Wednesday, November 26, 2008			
nr.	time		
20	9:00	<i>UvT</i>	Marketing
21	9:45	<i>UvT</i>	Operations Research
	10:30	<i>break</i>	
22	11:00	<i>VU</i>	Spatial, Transport and Environmental Economics
23	11:45	<i>VU</i>	Finance and Banking
	12:30	lunch	
24	13:30	<i>VU</i>	Operations Research and Information Technology
25	14:15	<i>VU</i>	Accounting and Decision Making
26	15:00	<i>VU</i>	Marketing Strategy
27	15:45	<i>VU</i>	Human Resources
28	16:30	<i>VU</i>	Information Systems for Organisational Networks

Monday, May 4, 2009		
nr.	time	unit
1	9:00	VU 1. Strategic and Cooperative Decision Making
2	9:45	VU 2. Time Series Econometrics
3	10:30	VU 3. Applied Labour Economics / ALERT
4	11:15	VU 4. Farms and Firms
	12:00	<i>committee lunch</i>
5	12:45	VU 9. Strategic Entrepreneurship
6	13:30	Institute: FEWEB
7	14:15	EUR 2. Markets, Organizations and Government
8	15:00	EUR 3. Applied Economics
9	15:45	EUR 4. Econometrics
10	16:30	Institute: Erasmus School of Economics
Tuesday, May 5, 2009		
nr.	time	unit
11	9:00	UvA 12. Industrial Organisation, Competition Policies & Regulation (IO)
12	9:45	UvA 6. Equilibrium, Expectations & Dynamics (EED)
13	10:30	UvA 13. SEO Economic Research (SEO)
14	11:15	UvA 8. The Transformation of Europe (ToE)
	12:00	<i>committee lunch</i>
15	12:45	UvA 9. Human Capital (HUM)
16	13:30	UvA 10. History & Methodology of Economics (HME)
17	14:15	UvA 11. Experimental & Political Economics (EXP)
18	15:00	UvA 4. Econometrics (UvA-E)
19	15:45	UvA 7. Actuarial Science (ACT)
20	16:30	Institute: RESAM
Wednesday, May 6, 2009		
nr.	time	unit
21	9:00	UvT 1. Econometrics
22	9:45	UvT 3. Microeconomics
23	10:30	UvT 9. Organization
24	11:00	PhD-students
25	11:45	PhD training programme
	12:30	<i>committee lunch</i>
26	13:30	Institute: CentER
27	14:15	UM 4. Development and Utilization of Human Resources (DUHR)
28	15:00	UM 5. Economic Theory, Behavior and Computing (ETBC)
29	15:45	UM 6. Econometrics, Finance and Monetary Economics (FEM)
	16:30	committee meeting

Thursday, May 7, 2009		
nr.	time	unit
30	10:00	UM 1. Marketing & Supply Chain Management (MSCM)
31	10:45	UM 2. Accounting & Information Management (AIM)
32	11:30	UM 3. Technology, Innovation and Industrial Dynamics (TIID)
33	12:15	Institute: METEOR
	13:00	<i>committee lunch</i>
	14:00	committee meeting
34	15:45	RUG 1. Economics, Econometrics and Finance (IEEF)
35	16:30	RUG 8. Innovation & Interaction
36	17:15	Institute: SOM
Friday, May 8, 2009		
nr.	time	
	9:00	committee meeting

Appendix D: Response of the Erasmus School of Economics on the recommendations of the QANU-Research Review Economics & Business Sciences 2009



QANU
Commissie Economics & Business Science
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Ons kenmerk
O.OO&S/SvR/239.747

Uw kenmerk
2462/10108

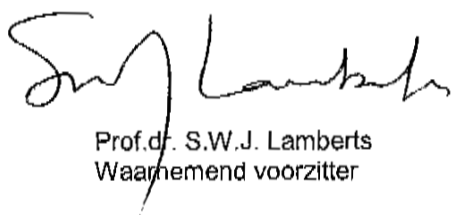
Datum
27 oktober 2009

Onderwerp
Rapport Economics & Business Science

In antwoord op uw brief van 24 september 2009 inzake het concept-rapport van de onderzoeksbeoordeling Economics & Business Sciences 2009, kunnen wij u mededelen dat wij dit rapport formeel accepteren.

Tevens doen wij u onze reactie op het rapport toekomen. Wij verwachten dat onze reactie opgenomen wordt in het definitieve rapport.

Het College van Bestuur van de Erasmus Universiteit Rotterdam,

A handwritten signature in black ink, appearing to read 'S.W.J. Lamberts', written in a cursive style.

Prof.dr. S.W.J. Lamberts
Waarnemend voorzitter

cc. Prof.dr. P.H.B.F. Franses
Mr. S.J. Krijger

First of all, we would like to thank the Peer Review Committee (PRC) for its thorough and conscientious evaluation process. In recognition, we would like to thank all the participants who have served on the Committee for their expertise and time. We strongly adhere to an international oriented peer-review process, as this is essential for ensuring research excellence.

The secretary of the QANU, R. Bennink, asked the ESE to comment on the question whether all research capacity at ESE is included in the self-assessment report over the period of 2001-2007. As stated in paragraphs A3 and A4 of that report, the policy of the ESE is to appoint only those staff members who already have obtained a doctoral degree and have the prospect of becoming a member at one of our Research Institutes (TI and/or ERIM). Only ESE staff who is member of the TI or ERIM gets a 0.4 fte research voucher from the dean. If they are not a member they have to earn research time along other ways. So, only those ESE members who get paid by the dean to do research are incorporated in the 6 programmes discussed (see page 25 of the self assessment report Part 1). Furthermore, we again would like to draw attention (in accordance with our earlier given comments on the first draft of the research review “Additional comments to the Draft research review Economics & Business Sciences 2009”) to the fact that at our university (EUR) the economic and management sciences are not organized within the same School. At the EUR these fields of expertise are embedded in two different Schools. There is the Erasmus School of Economics (doing research and teaching from the monodisciplinary economic perspective) and there is the Rotterdam School of Management (doing research and teaching from the multidisciplinary perspective of management). So, the RSM programmes are not included in our self-assessment report.

Furthermore, we would like to give a quick response on Part A of the Research Assessment of the PRC (assessment at the Institute level ESE-EUR).

1. Given the very supportive complimentary comment of the PRC, we propose to change the medium-term objective of the ESE “*be ranked in the top 30 in the world in at least two academic fields*” into “be ranked in the top 10 in the world in at least two academic fields”.
2. The Committee supports participation in the Tinbergen Institute but wondered why “fostering collaboration between the three universities” is not defined as one of the objectives. In our vision fostering collaboration between the three universities is an objective of the Tinbergen Institute itself. For the ESE the participation in the programs of TI implies that there can and will be collaboration between the fellows in the TI. It is not an objective as such for the ESE. Because we fully aligned our research programs with the programs of our two research institutes and because we are member of the Board of TI, we do not think there will be any conflicts.
3. The PRC was unable to identify any issue where the research groups were specifically relevant for the local area. The PRC has made us aware of the fact that indeed we could have been more specific about this issue in the report. Our strategy concerning this issue is the following. The ESE focuses on the development, dissemination and application of academic knowledge from an economic perspective. The School attaches

great importance to transferring knowledge to society and its effective use of academic knowledge in society. The School is still busy to re-establish its relationship with the local area (including the government and several ministries in The Hague). Management science, predicting and measuring the impact of decisions, health economics, and organization economics are in particular interesting research fields where we already have third stream research activities with governmental bodies and the local business communities.

4. The PRC is especially concerned about the monodisciplinarity approach of the ESE. We would like to give the following clarification regarding this subject. The ESE addresses its research and teaching from a fully economics perspective. The economics discipline has flourished in the past because of valuable input from mathematics, statistics, game theory, psychology and so on. Notwithstanding this input, the ESE believes there is an economics focus on real-world problems. Of course, our scholars participate in multidisciplinary projects, but always they carry along an economics focus to these projects.
5. The PRC is of the opinion that the ESE has to find ways to be more visible in public debates in the Netherlands, Europe and elsewhere. We remark that the ESE continually seeks to explain to the public-at-large why research undertaken by the institute is so relevant. With the creation of its website *EconomieOpinie.nl* in September 2007, the ESE initiated an opinion platform incorporating newsworthy scientific breakthroughs, views and topical articles relating to national as well as international economic issues. Articles are written by ESE economists anticipating or capitalizing on current issues. In this manner, the ESE provides a scientifically substantiated contribution to the political and social arena. Often, contributing researchers are invited to further illustrate their particular point(s) of view to the press or on radio and television programmes. This generates additional publicity for our School.

Finally we would like to respond on Part B of the Assessment of the PRC (assessment concerning the research programs of ESE-EUR).

1. With respect to the programme of “*Finance & Accounting and International Markets*” the Committee comments in its report that the merger of the two research programmes is not homogenous yet and that the programme size is not consistent with the original idea of the merger to gain critical size. ESE actively addresses the PRC’s concern by encouraging collaboration between the two former groups (Finance & Accounting on the one hand and International Markets on the other) with joint activities like research seminars, conferences, joint PhD supervisions, and joint teaching. We have already increased staff in the period between our report and today and are going to fill two remaining open positions in the coming months. As a result, the temporary decrease in staff around the time of the report will then be completely reversed.
2. ESE addresses to the comment of the PRC to keep attention to the focus and coherence in the development of the programme’s research strategy and management regarding the programme of “*Applied Economics*”. The research programme of Applied Economics could benefit from more focus and coherence, and we will therefore ensure that in the next evaluation period, this will be strengthened by the stimulation of the more successful programme parts and the discontinuation of the lesser successful research lines.

3. In the opinion of the PRC, the programme of “*Econometrics*” could benefit from increased external research funding and highly skilled PhD students. At the moment, the econometrics research group at ESE has become very active in obtaining VENI and VIDI scholarships for its members. It is to be expected that some members will also be actively involved in supervision of MPhil and PhD students where substantial external sponsor money is coming from the Duisenberg School of Finance. Moreover, more PhD students have recently shown interest in supervision from members of the econometrics group. Also the members of this group will actively present their research at courses for MPhil students in order to obtain more PhD students. In our opinion it is also very important that new senior members will be attracted to the group in the next few years and therefore addresses the opinion of the PRC.

4. In the committee’s review the PRC states, with respect to the “*Marketing*” group, that they have the opportunity to develop even more if they would expand its marketing science into a wider social science perspective. At the moment, the marketing group has indeed embarked on a track of high impact research with a focus towards relevance in both business and society. The main driver thereof is scientific maturation of researchers that still were quite young at the start year of the review (think of Lemmens, Donkers, Stremersch). There is clear evidence that the work the group does has societal impact. Franses has top advisory roles, e.g. is advisor of Organon and Philips and with all main charities of the Netherlands to increase donations from direct mailing campaigns, based on PhD research of Merel Van Diepen (published in JMR and IJRM). Verbeke has developed a consulting firm for sales recruitment and training based on a JMR article published in 2009. Dellaert is very involved in the scientific bodies in the Netherlands (NWO) and organizations that connect science and practice. Stremersch is involved as a consultant with many high tech (e.g. Alcatel-Lucent) and life sciences (Merck) based on his research in these two industries over the last ten years.

Overall, while the group will remain firmly anchored in the economics paradigm, it is clear that the group does account for a wider social sciences perspective. Dellaert, Donkers and Lourenco have well-developed knowledge on psychology and are associated with the behavioral modeling group. The work of Stremersch, Lemmens, Verniers, Verbeke and Gelper, typically also connects with fields such as sociology (e.g. see Stremersch’ work with Wuyts published in 2004 in JMR or his most recent work on networks with Goldenberg, Libai and Muller, forthcoming in *Marketing Science* in 2010). The group is firmly set to continue this growth pattern. An additional part-time full professor, Peter Goos, has been hired to start this year. Two visiting chairs have been appointed, Gerry Tellis and Roland Rust. We have also hired an additional assistant professor, Gui Liberali (from MIT), and have several additional open slots we are seeking to fill. This extends the total group’s size by 2-3 full time members.

Moreover, the committee questions the supervision capacity of this research group given the sudden doubling of PhD students. ESE addresses to this comment of the PRC as follows. We ended the review period with 11 PhD students in the marketing group (meaning 2-3 graduations every year), which is a lot, given international comparisons. At present, we have 12 PhD students in the programme divided as follows over prime advisors: 5 (Dellaert), 3 (Stremersch), 3 (Franses) and 1 (Verbeke). We extend to enlarge the programme probably by 2-3 students over the next two years, given additional supervisory capacity with Aurelie Lemmens (promoted to Associate Prof), Bas Donkers (also promoted to Associate Professor) and Peter Goos (joined as a Full Prof).