



# **Application for reaccreditation of the Tinbergen Institute MPhil in Economics**

February 2014

Erasmus University Rotterdam  
University of Amsterdam  
VU University Amsterdam



## Administratieve gegevens

### Instelling

Naam instelling	Erasmus Universiteit Rotterdam
Status instelling	X bekostigd 0 rechtspersoon voor hoger onderwijs
Resultaat instellingstoets kwaliteitszorg	0 n.v.t. X positief (UvA, EUR) 0 positief onder voorwaarden 0 negatief X nog niet afgerond (VU)

### Opleiding

Naam opleiding in Centraal Register Opleidingen Hoger Onderwijs (CROHO)	Tinbergen Institute Master of Philosophy in Economics (research)
ISAT-code CROHO	60162
Oriëntatie en niveau opleiding	WO master (research)
Aantal studiepunten	120 ECTS
Variant(en)	Voltijd
Eventueel nieuwe naam	
Afstudeerrichtingen	Economics, Econometrics, Finance
Eventueel nieuwe afstudeerrichtingen	
Opleidingslocatie(s)	Amsterdam en Rotterdam
Eventueel andere opleidingslocatie(s)	
Bijzonder kenmerk	

### Overig

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#### Eventuele opmerkingen

Deze aanvraag wordt ingediend door de Erasmus Universiteit Rotterdam, mede namens de Universiteit van Amsterdam en de Vrije Universiteit Amsterdam

## Tabellen wo-master

Tabel 1: Rendement

Cohort	2009	2010	2011
Rendement	81,6%	83,8%	85,2%

Tabel 2: Docentkwaliteit

Graad	MA	PhD	BKO
Percentage	100 %	98 %	63 %

Tabel 3: Student-docentratio collegejaar 2012/13

Ratio	4,64 fte onderwijsinzet (exclusief teaching assistants) / 48 studenten (1 <sup>e</sup> en 2 <sup>e</sup> jaars)
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Tabel 4: Contacturen

Studiejaar	1	2
Contacturen per week	12,3	5,3

### Eventuele toelichting

Instellingstoets kwaliteitszorg Erasmus Universiteit Rotterdam.

Besluit NVAO:

[http://search.nvao.net/files/526a773072caf\\_besluit%20EUR%20%20Instellingstoets%20kwaliteitszorg.pdf](http://search.nvao.net/files/526a773072caf_besluit%20EUR%20%20Instellingstoets%20kwaliteitszorg.pdf)

Rapport van de commissie van de Instellingstoets 2013:

[http://search.nvao.net/files/526a773072caf\\_rapport%20EUR%20%20Instellingstoets%20kwaliteitszorg.pdf](http://search.nvao.net/files/526a773072caf_rapport%20EUR%20%20Instellingstoets%20kwaliteitszorg.pdf)

Rapport van de commissie Instellingstoets 2012:

[http://search.nvao.net/files/526a77ff001f6\\_rapport%20EUR%20Instellingstoets%20kwaliteitszorg.pdf](http://search.nvao.net/files/526a77ff001f6_rapport%20EUR%20Instellingstoets%20kwaliteitszorg.pdf)

Instellingstoets kwaliteitszorg Universiteit van Amsterdam

Besluit NVAO:

[http://search.nvao.net/files/51d2972650418\\_besluit%20UvA%20Instellingstoets%20kwaliteitszorg.pdf](http://search.nvao.net/files/51d2972650418_besluit%20UvA%20Instellingstoets%20kwaliteitszorg.pdf)

Rapport van de commissie Instellingstoets:

[http://search.nvao.net/files/51d2972650418\\_rapport%20UvA%20Instellingstoets%20kwaliteitszorg.pdf](http://search.nvao.net/files/51d2972650418_rapport%20UvA%20Instellingstoets%20kwaliteitszorg.pdf)

De instellingsaccreditatie van de Vrije Universiteit Amsterdam is in procedure.

## List of abbreviations

BA:	Bachelor
DSF:	Duisenberg school of finance
EUR:	Erasmus University Rotterdam
GRE:	Graduate Record Examinations
IELTS:	International English Language Testing System
KNAW:	Royal Netherlands Academy of Arts and Sciences
MPhil:	Master of Philosophy (Research master, 120 ECTS program)
MSc:	Master of Science (usually a 60 ECTS year program)
NVAO:	The Accreditation Organization of the Netherlands and Flanders
PhD:	Doctor of Philosophy
TI:	Tinbergen Institute
TOEFL:	Test of English as a Foreign Language
UvA:	University of Amsterdam
VU:	VU University Amsterdam

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## Introduction

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The Tinbergen Institute Master of Philosophy (MPhil) in Economics program is the joint program in economics, econometrics and finance of Erasmus University Rotterdam, University of Amsterdam and VU University Amsterdam. It is organized by and at Tinbergen Institute (TI), the graduate school and research institute in economics of these three universities. Tinbergen Institute was formally accredited as a research school (in Dutch: *onderzoeksschool*) by the KNAW in 1996, 2001, 2006 and 2010. The TI MPhil program was accredited by the NVAO in 2003 and 2009. In 2011 TI was awarded the NWO Graduate Program block grant.

Tinbergen Institute's activities are fully dedicated to enhancing research and graduate training at the three participating economics faculties, but are organized at arm's length from these faculties. Tinbergen Institute has its own Board, directors and staff, as well as its own Examination Board, Educational Board and Admission Board. Tinbergen Institute's Board selects faculty members, based on their academic merit, to be involved in the Institute as research fellows. TI's Director of Graduate Studies (DGS) draws up the curriculum of the TI research masters' program. Tinbergen Institute has its own offices and classrooms in Rotterdam and Amsterdam, and dedicated budgets for seminars, conferences, MPhil scholarships and lecturer compensation. An organization chart of the governance of TI's educational program is given below.

For its quality assurance, TI is subject to the rules and regulations of Erasmus University. This includes regular midterm reviews of the research masters' program. The most recent midterm review dates from 2011.

The MPhil in Economics primarily aims to prepare students for PhD research in economics, econometrics and finance. To this end, it attracts and selects students from the international pool of potential PhD students in economics, and offers them two years of PhD-level coursework and research training. The program provides students with ample opportunity to explore the wide variety of research groups and researchers in the three faculties participating in Tinbergen Institute before they settle down for MPhil thesis research. At the faculties, PhD positions are allocated to the graduates of the TI MPhil program; this allows graduates, under certain limitations, to transfer to a PhD position with a supervisor of their choice. These limitations include the student's performance (a minimum grade for the MPhil thesis), financial constraints of the faculties and the distribution of PhD positions over research groups and supervisors within the faculties.

The subsequent pages of this report will reflect upon the TI MPhil program in line with the NVAO assessment framework for the limited program assessment for research masters' programs (November 2011). Chapter 1 explicates the intended learning outcomes of the TI program.

Chapter 2 elaborates upon how the TI MPhil program enables the students to accomplish the learning outcomes. This chapter also summarizes how students and lecturers are selected and how the program is embedded in an excellent research environment where students have ample opportunities to attend seminars, workshops and conferences. Chapter 3 reflects upon the achieved learning outcomes, reporting on how the MPhil theses are valued in the discipline, and how the MPhil graduates perform in the PhD track.

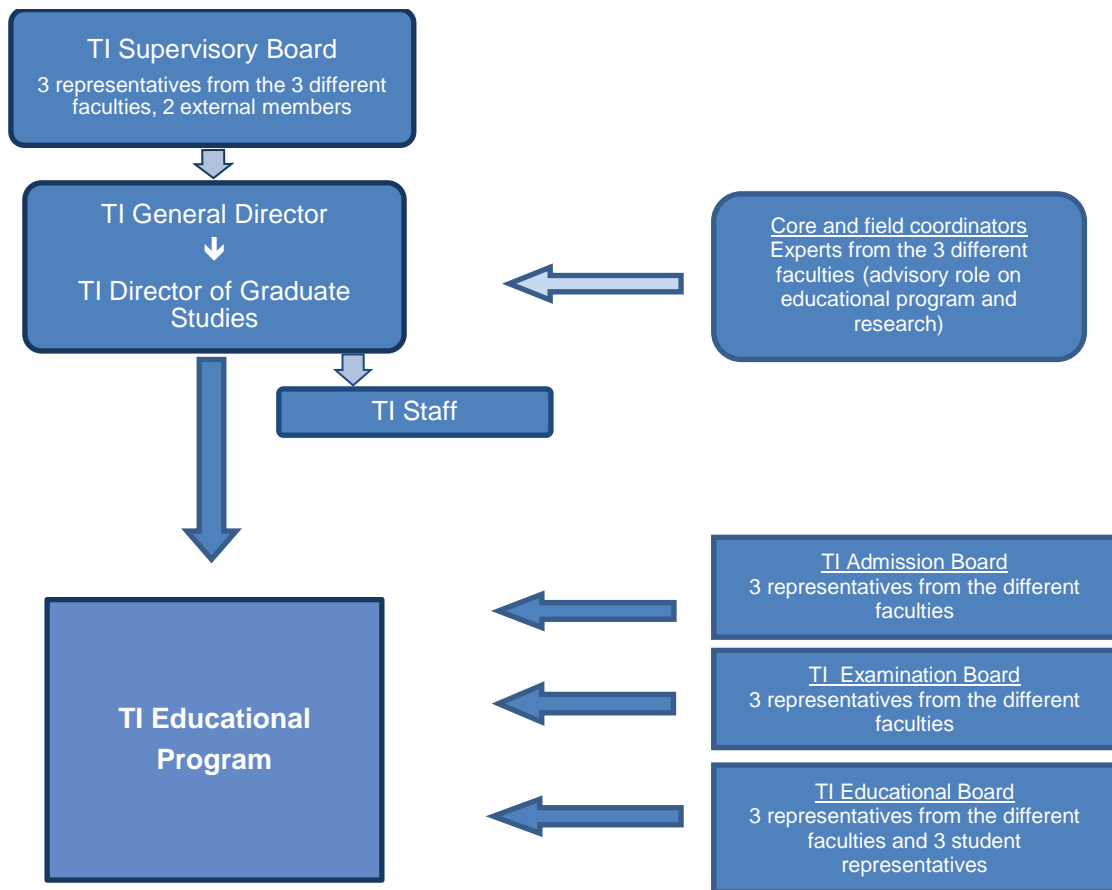
Chapter 4 discusses how Tinbergen Institute has responded to the outcomes of the KNAW/NVAO assessment of 2009 and of the mid-term review of 2011. Attention is also given to a survey we held among TI MPhil graduates in June 2013 and to the rating of the TI MPhil program in the 'Keuzegids Masters 2013'.

While pooling the resources of three economics faculties ensures that the TI program can be organized to best serve the training of research students, there may be some threats and pitfalls that are an inherent part of an inter-university, small-scale research masters' program. This document therefore concludes with a chapter (Chapter 5) summarizing these potential challenges.

Details and statistics on the MPhil program in the years 2008-2013 are provided in the Appendices. Appendix I reflects upon the domain-specific requirements; Appendix II outlines the TI research environment; Appendix III provides statistics on student inflow; Appendix IV contains the complete 2013/14 program brochure with course descriptions and literature; also in this Appendix are the Academic and Examination Regulations and the matrix with the learning outcomes of the TI program and TI courses, as well as the program's learning outcomes compared to the Dublin descriptors. Appendix V provides statistics on the student outflow. Appendix VI provides an external assessment of TI's research quality (November 2010) by a peer review committee chaired by Sir Richard W. Blundell, Professor at University College London and Research Director at the Institute for Fiscal Studies. Appendix VII gives the advice of the assessment committee of the Royal Netherlands Academy of Arts and Sciences (KNAW) for the accreditation in 2009. Appendix VIII gives the report of the 2011 midterm review. Appendix IX gives the results of a survey held by TI under MPhil graduates in June 2013. The last Appendix (X) gives a list of MPhil theses for the cohorts 2010 and 2011.

**Diagram 1. Governance of TI's educational program**

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Note to Diagram 1: The members of the Admission Board, the Examination Board and the Educational Board are all appointed by the respective Dean of their faculty. Student members of the Educational Board are elected by the students and appointed by the Dean of the faculty where they are enrolled. Internal members of the Supervisory Board are appointed by the Dean of the secretary faculty (currently ESE-EUR), after a binding nomination of the Dean of the faculty he/she is representing. The two external members are appointed by the secretary faculty in consultation with the other Deans and the Chair of the Supervisory Board.

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## 1. Learning outcomes and domain-specific requirements

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*The intended learning outcomes of the program have been concretized with regard to content, level and orientation; they meet international requirements.*

The MPhil program primarily serves to train students for PhD research in economics, econometrics and finance in the three faculties participating in the institute. The learning outcomes are directly related to this objective. Appendix I evaluates how the learning outcomes of the TI program measure up against the requirements of other international graduate programs in the same field.

### 1.1. Learning outcomes

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TI's MPhil in Economics is a research training that meets the standards of the best international graduate schools in economics, within the Dutch institutional setting, leading to an accredited masters' diploma (MSc). The program aims to offer a research training equivalent to that in the first two years of the PhD programs in the top US economics faculties. This implies a first year of rigorous and common training in the core subjects and tools of economics— microeconomics, macroeconomics or finance, and econometrics— at a high level that can only be managed by a tightly selected group of students. In the second year, students specialize in their choice from the institute's many fields of research through field course work and MPhil thesis research. The MPhil program is connected to three-year PhD research employment positions in the three participating faculties. The MPhil program is also a fine preparation for research positions or a PhD elsewhere.

Excellent bachelor students with sufficient quantitative training and motivation for exploring a career in scientific research can apply directly to the MPhil program. In practice, a fair share of students enrolls in the MPhil after having completed a masters' program elsewhere.<sup>1</sup> Regular one-year masters' programs usually differ from the MPhil program in both content and level, and few of the students who already hold a masters' degree find any of the MPhil coursework repetitive.

The objectives of the Tinbergen Institute MPhil in Economics are all derived from TI's role as a supplier of research training for prospective PhD students. Since the majority of the students who complete the TI program continue in a PhD position at one of the faculties participating in TI, the main stakeholders of the program are the (prospective) PhD supervisors, the research fellows of the three faculties participating in TI. TI's research fellows are selected researchers with excellent international credentials, appointed at the three faculties. Apart from being the PhD supervisors, they also act as lecturers in the TI MPhil program, are represented in TI's governing and advisory

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<sup>1</sup> Recently, the tuition fees for Dutch and EEA students enrolling in a second masters' program in the Netherlands were drastically raised, which makes this route less attractive.

Boards and act as core and field coordinators in the educational program. As a result, the level and design of the TI program always reflect the views of the main stakeholders of the program.

The TI MPhil program aims at:

- giving students a thorough knowledge of economic principles, economic theory, quantitative methods for theoretical and empirical research, and empirical and experimental economics;
- providing students with a rigorous training in these subjects, allowing them to participate in and contribute to the scientific discussion in economics at the very highest level; and
- preparing them to successfully write and defend a PhD thesis and be fully part of the international community of scholars in economics.

We specifically translate these objectives into the learning outcomes in Table 1.

## **Diagram 2. Learning outcomes of the Tinbergen Institute MPhil in Economics**

<b>Students who successfully complete the MPhil in Economics should:</b>	
i.	have an understanding of the core of economics— microeconomics, macroeconomics or finance, and econometrics— that allows them to: <ul style="list-style-type: none"><li>a. broadly read and understand the current scientific literature in economics and follow scientific debates across the economic sciences, and</li><li>b. successfully embark on independent study of at least one specialized field of economic research;</li></ul>
ii.	have a sufficiently deep understanding of one field of economic research to allow them: <ul style="list-style-type: none"><li>a. to actively participate in current scientific debates in this field and</li><li>b. to contribute original research to this field, initially under academic supervision;</li></ul>
iii.	be able, initially under academic supervision, to write research papers in economics that can be submitted to an international, peer-reviewed journal for publication;
iv.	be able to present and defend their research to an audience of academic researchers;
v.	have developed an attitude to independently keep track of the developments in one field of specialization and to embark on independent study in this field.

The learning outcomes of the TI MPhil program are included in the Academic and Examination Regulations, and fit into the Dutch qualifications framework and correspond with the Dublin descriptors for the masters' level (see Appendix IV for the learning objectives for the courses and a detailed comparison of the learning outcomes of the MPhil program with the Dublin Descriptors).

## **1.2. Domain-specific requirements**

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The MPhil program aims to prepare students for PhD thesis research in economics, econometrics and finance. Therefore, each of the learning outcomes of Table 1 should be compared to the domain's standards or requirements for PhD students trained in other international graduate

programs. In order to specify the domain-specific requirements connected to our learning objectives, we compared them to the first two years of PhD programs in economics in the US and in top European research masters' programs with a similar ambition. Similar to the TI MPhil program, all of these programs require that students master a common core of economics, specialize in (at least) one field and are able to write and defend a research paper. A more detailed comparison can be found in Appendix I.

## 2. Teaching-learning environment

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*The curriculum, staff and program-specific services and facilities enable the incoming students to achieve the intended learning outcomes.*

Tinbergen Institute pursues the learning outcomes formulated in Table 1 by:

- following the educational principles underlying the educational program;
- attracting and selecting excellent students in the international market for PhD students;
- offering students the following:
  - a rigorous first-year program of core courses in microeconomics, macroeconomics or finance, and econometrics;
  - choice from a wide range of specialized field courses and field paper options in the second year;
  - ample opportunity to attend seminars, workshops and conferences and meet researchers throughout the MPhil program, so that they can make well-informed choices of fields and thesis advisors, and formulate feasible and promising MPhil (and PhD) research plans;
  - ample time, in their second year, to write a research paper— the MPhil thesis— under the supervision of one or more of Tinbergen Institute's research fellows;
  - having students present both their initial MPhil thesis research plans and their final thesis in public seminars at Tinbergen Institute;
  - excellent facilities and support in a small-scale program;
- enlisting the best researchers from the three participating faculties and renowned outside experts to teach the courses;
- ensuring that a number of PhD employment positions are available in the faculties to accommodate the PhD thesis plans of the MPhil graduates who found a match with a supervisor.

This section reviews these aspects of the MPhil program, starting with the educational principles of TI, in subsection 2.1. Subsequently, subsection 2.2 describes TI's recruitment and admissions procedure. Subsection 2.3 outlines the two-year MPhil curriculum. An overview of the quality and expertise of the lecturers teaching in the program appears in subsection 2.4. Subsection 2.5 provides an overview of TI's research environment, while subsection 2.6 explores the measures taken by TI to maximize students' interaction with the research environment. Subsection 2.7 describes the excellent facilities and support available to students in a small-scale program, and subsection 2.8 reviews the employment opportunities available to PhD students.

## 2.1. Educational principles

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Several educational principles underlie Tinbergen Institute's MPhil in Economics:

- TI aims to provide an international and stimulating environment, with students and lecturers from all over the world;
- TI seeks to submerge students from the start into an active research environment with access to seminars, conferences and lectures by international scientists;
- TI introduces students to current research and research options at the faculties participating in TI;
- TI ensures that lecturers in the program are top scientists in their field (TI research fellows);
- TI encourages stimulating collaboration among students by offering office space at TI's premises.

More specifically, the educational principles of each year of the MPhil program are as follows:

In year 1:

- TI provides formal lectures throughout the year, supported by tutorials, concluded by a sit-in examination;
- TI aims to teach students the core of economics, irrespective of their often diverse backgrounds and ultimate fields of research;
- TI provides the basic tools needed for modern economic research;
- TI maintains a policy of intense examinations with no re-examinations in the same year and of having homework assignments to stimulate students to study regularly;
- TI lectures are offered in small groups (max.30);
- TI stimulates students to explore their interests and options.

In year 2:

- TI offers a broad range of field courses, reflecting the research groups at the faculties participating in TI, allowing students to specialize within their field of interest;
- TI stimulates working groups with active student participation;
- TI builds upon the newly acquired knowledge and skills of year 1;
- TI teaching occurs in small groups, usually 5-10 students;
- TI allows for diversity in teaching and assessment methods;
- TI stimulates students to be active and self-guiding in selecting a research topic for the MPhil thesis and addressing potential supervisors;
- TI stimulates students to set up a research project and to write a research paper, under experts' supervision.

## 2.2. Attracting and selecting students

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Recruitment of good students in a competitive market is a key task for any graduate school in economics. At Tinbergen Institute, the connection of the MPhil program with PhD positions in the faculties is important for the competitiveness of the MPhil program in the international market for PhD students. Another key instrument in the recruitment of good students is a scholarship fund allocated by the three participating faculties. The availability of scholarships guarantees a

rigorously selected population of students that can handle the PhD-level research training that the MPhil program seeks to offer.

For the academic year 2014/15, the total budget for scholarships amounts to K€ 530. On top of this budget the faculties have promised to compensate for three years the high tuition fee for students already holding a Dutch master degree. Full scholarships include a waiver of the tuition fee and a monthly allowance of € 1.040 per month for living expenses. In the second year the monthly allowance is somewhat lower (€ 940 per month), with the opportunity for additional funding through research and/or teaching assistantships.

The Duisenberg school of finance, a joint initiative of Tinbergen Institute, the three TI faculties and the Dutch financial sector, has allocated an additional scholarship fund for MPhil and PhD students with a specialization in finance, initially (in 2009 and 2010) for an annual inflow of eight students, and since 2014 for an annual inflow of two students.

Over the last five years, TI has been able to steadily increase the quantity of the applications from 115 in 2008 to 241 in 2013. Also the quality of the applicants has risen, as is demonstrated by the test scores. Student inflow fluctuated between 38 in 2009 and 26 in 2013. Appendix III gives details on student recruitment, the admissions procedure and requirements, and the actual inflow of students.

Admission decisions are based on information commonly used in international PhD admissions: undergraduate performance; GRE scores; proof of English proficiency, such as TOEFL and IELTS scores; CVs; reference letters; and a statement of purpose. Students should be strongly motivated to pursue a PhD, preferably at Tinbergen Institute. Successful applicants usually are in the top 10% of their class and typically perform among the top-10% of test-takers on the quantitative part of the GRE test.

All application files are thoroughly assessed and ranked by the members of TI's Admission Committee. Application files are distributed among the Admission Committee members, each assessing the files in their own field of expertise. The Admission Committee members comment in an electronic evaluation database on the applicant's undergraduate performance, reputation of the institute where the applicant took the undergraduate education, the applicant's position in class and the tenor of the recommendation letters. In a lengthy meeting, the Admission Committee members discuss and coordinate the ranking of the applicants. In the end it is the TI Admission Board, with representatives from the three faculties, that takes the final decision in the selection process and that decides on the awarding of scholarships.

The outcome of the admission procedure is regularly reviewed by comparing the initial ranking of applicants with their actual performance in the program. The results of the reviews have been used to further fine-tune the selection procedure. Currently, TI is keeping track of MPhil graduates' further careers in order to prepare a more elaborate review process of the admission procedure, which will take into account not only the performance in the MPhil program, but also the success rates during the PhD stage and the academic record in terms of academic publications in the subsequent (academic) career. A project like this will become feasible in a couple of years when more students who have completed the five-year MPhil-PhD track have had the time to develop their own research agenda and to work on scientific publications.

### **2.3. A rigorous two-year curriculum**

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Table 2 provides a schematic overview of the MPhil program, and its place in Tinbergen Institute's graduate program. A detailed description of the program can be found in the annual study guide (see Appendix IV).



### The first year of the program

In the first year of the MPhil program students have to complete 56 ECTS of core courses, spread across Microeconomics (20 ECTS), Macroeconomics (16 ECTS), and (Advanced) Econometrics (20 ECTS), one field course (3 ECTS) and the MPhil seminar series (1 ECTS). Students who choose the Finance specialization replace 8 ECTS Macroeconomics with 8 ECTS Finance (two course blocks); students with a strong background in econometrics replace Econometrics with Advanced Econometrics (12 ECTS) and Mathematics I with Measure Theory and Stochastic Processes (4 ECTS). Attendance at courses and seminars is mandatory. Each of the course sequences is taught in five 4 ECTS units (“blocks”) of eight weeks, with seven weeks of lectures, frequent (graded) homework assignments, weekly tutorials to review homework, and sit-in written exams in the eighth week of each block.

**Diagram 3. Outline of the MPhil in Economics program**

Year 1	Core sequence Microeconomics  (20 ECTS)	Core sequence Macroeconomics  (16 ECTS)  or Macroeconomics (8 ECTS) and Finance (8 ECTS)	Core sequence (Advanced) Econometrics  (20 ECTS)	One field course  (3 ECTS)	Exploration of research groups and researchers; matching to MPhil (and PhD) thesis advisor:	MPhil Seminar Series  (1 ECTS)
Year 2	Field courses and papers					<ul style="list-style-type: none"> <li>• regular and on-demand advisory meetings with DGS</li> <li>• research seminars, workshops and conferences</li> <li>• bilateral meetings with research fellows</li> </ul> (no credits)
	Major field  At least four field courses (3 ECTS each), possibly including one field paper	Other  Up to six field courses (3 ECTS each) from the other majors				
	(Total ten field courses = 30 ECTS)					
	MPhil thesis (in major field) <ul style="list-style-type: none"> <li>• presentation plan in MPhil Thesis Workshop</li> <li>• writing a research paper under supervision of one or more research fellows</li> <li>• public defense of the final draft</li> </ul> (30 ECTS)					
Years 3–5	<u>MPhil graduates who wish to continue for a PhD only:</u>  PhD thesis research on three-year employment positions (possibly building on MPhil thesis; MPhil thesis advisor is preferably also PhD thesis advisor)					

Throughout their stay at Tinbergen Institute, students have access to the institute's wide array of research seminars, workshops and conferences. There are also research events organized specifically for MPhil students. Throughout year one, all first-year students are obliged to attend the MPhil seminar series organized by research fellows representing the various research programs and groups connected to the institute. These seminars allow students to explore potential supervisors and fields of specialization, and allow research fellows to meet the students who are about to enter the research phase of their studies.

In July of each year, the Examination Board formally advises all students on continuation in the program, the Admission Board communicates second-year funding offers, and the DGS allocates the next year's (paid) core teaching assistantships. The Examination Board's advice follows the MPhil's Academic and Examination Regulations, which strongly discourage continuation if students have passed less than 48 ECTS credits at the end of their first year. The Admission Board has usually allocated full second-year funding to all students who have passed the core with a grade point average of 7.00 or higher, and to some students who did not. Continuation decisions and the allocation of scholarships and teaching assistantships are all discussed in the end-of-year meeting with the DGS.

The Director of Graduate Studies (DGS) meets with all students individually at least three times during the first year. The intake meeting follows up on information provided by students on research interests during the admissions procedure. Students are pointed toward the faculty's research groups and fellows with aligned interests. They are informed that they should grasp the opportunity to explore Tinbergen Institute's research options, and that they are welcome to contact research fellows at their own pace. They are invited to ask the DGS for help in contacting professors whenever they like. Follow-up interviews with the DGS halfway the first academic year and at the end of the academic year discuss among other things the development of students' research interests and progress in the core courses.

Tinbergen Institute regularly reviews the curriculum in order to adjust to recent developments in the discipline. As of 2012 a change in the macroeconomics core courses has been implemented. In the existing program no models that included a financial sector were discussed, while the financial crisis of 2008-2010 made it clear that the macro economy was heavily influenced by the financial sector. Hence, it was decided to replace the course in International Economics by a course that considered financial frictions in the global economy, with special attention to the concept of financial fragility and the macroeconomic causes and consequences of financial crises.

In 2012 it became clear that the Duisenberg school of finance (DSF) would no longer be able to fund the MPhil and PhD program as generously as before. This implied, among other things, that fewer MPhil and PhD students could be funded from DSF grants, and that fewer courses specifically targeted to finance students could be given. Hence, from 2012 the four specific core courses for the finance students ("Derivatives pricing", "Asset pricing 1 and 2" and "Corporate Finance") were replaced by two courses on asset pricing and corporate finance. Next to these two courses, finance students have to follow the first macroeconomics course and the macroeconomics course considering financial frictions. Currently, all students who do not major in macroeconomics are allowed to follow the two finance courses instead of "Macroeconomics 2 and 3".

In 2013 the microeconomic core sequence was evaluated. The main objectives of this assessment were to compare the TI core microeconomic sequence with that of other graduate programs in the US and Europe, evaluate the structure, content and teaching methods of the core micro sequence, evaluate the covered topics in relation with the other core and field courses of the MPhil program, and to design a core micro sequence which is instrumental for the majors that

students are offered in their second year. This assessment is currently underway (it will be finalized in March 2014) but the likely outcome is that the main topics will be taught in a more logical way— taking into account the structure of the macro sequence. For instance, knowledge of general equilibrium is instrumental for the “Macro 1” course of block II. More time will be devoted to teaching alternative approaches to traditional microeconomics by having a full core course on behavioral economics. The aim is to present alternative approaches in order to encourage students to develop diversity in their approach to research.

### **The second year of the program**

The second year of the MPhil program allows students to acquire the necessary specialized training in their research fields of interest. Since Tinbergen Institute is a joint venture of three schools of economics, TI can offer a wide array of field courses, allowing students to specialize in virtually any field of economics, econometrics and finance. At the start of the second year, students choose a major field from

- a. Econometrics
- b. Empirical Microeconomics
- c. Macroeconomics, Monetary Economics, and International Economics
- d. Applied Microeconomics
- e. Behavioral Economics
- f. Public Policy
- g. Finance

Over the years a divergence has arisen between research fields in TI’s research program and specialization fields for MPhil students. Moreover, the research fields were redefined in July 2012. Because of this, the major fields in the second year are currently under revision. The intention is to align the fields more closely with the eight research groups within Tinbergen Institute. This structure will help applicants and MPhil students to understand the structure of TI and the interconnection between its research and educational sides. As of September 2014, the major fields listed above will be replaced by the following research majors:

- a. Econometrics and Operations Research
- b. Labor, Health, Education and Development
- c. Behavioral and Experimental Economics
- d. Macroeconomics and International Economics
- e. Finance
- f. Organizations and Markets
- g. Cooperative Behavior, Strategic Interaction and Complex Systems
- h. Spatial, Transport and Environmental Economics.

Students have to complete 30 ECTS of specialized coursework, taking at least four courses in their major field. In 2013/14, over 40 distinct field courses were offered—each of them 3 ECTS. In addition, core courses can be taken for field credits (3 ECTS) in the second year by students who did not take these courses in their first year.

All field courses have regular lectures. Most are taught in the same eight-week block format as the core courses— although courses taught by guest lecturers are usually more intensive. Field courses often involve practical work, short presentations and (graded or non-graded) assignments. They all have a final exam, which may either be a sit-in written exam, a take-home assignment, an oral examination or an essay assignment.

Field courses rarely involve a full paper assignment. In order to compensate for this deficiency, students have the option to write a short (3 ECTS) field paper. The field paper option allows students to independently explore some research options or highly specialized bodies of literature in the context of a small and flexible course unit. This is a nice complement to the more rigorously

organized field coursework. A field paper should always be connected to one of the field courses chosen by the student and will be graded by that course's lecturer. However, it counts as a separate course and does not substitute for the course's examination.

As an extra, Tinbergen Institute offers students the opportunity to attend the annual lecture series, which features top international academics. These lecture series offer three days of lectures around a current topic, in combination with consultations with the speaker. The lecture series usually also attract PhD students from other renowned graduate schools in Europe. Since 2009, three lectures are organized annually: one in economics, one in econometrics and one in finance. The econometrics lectures are organized in close cooperation with Princeton University Press and the EUR Econometric Institute. An overview of all lectures since 2008 is included in Appendix II.

During the course of the second year, students continue to explore their research options by attending seminars, talking to research fellows, and seeking advice from the DGS and others. In principle, all TI research fellows from EUR, UvA and VU are available for MPhil thesis supervision. During the fall of the second year, students are expected to report the name of their MPhil thesis advisor to the institute, or to seek the DGS's help in finding one. Students who have not reported to the institute by December 1 are called in for a progress interview with the DGS.

Once matched to an academic advisor, students start working on their first major research paper, the 30 ECTS MPhil thesis. The MPhil thesis, within the student's major field, should have the format and size of a research paper that can be submitted to an international, peer-reviewed journal in economics. However, advisors are instructed that students only have half a year to work on their thesis and that they should expect a good first, but not a final, draft of such a paper. The draft should have sufficient quality to be publishable in such a journal after further polishing.

Students are required to submit a short MPhil thesis proposal, using a standard form, to the DGS by December of the second year, and to present their plans for the MPhil thesis, and a possible continuation in a PhD employment position, in the two-day MPhil Thesis Workshop halfway the second year. Tinbergen Institute subsequently coordinates the (preliminary) allocation of PhD employment positions at the faculties to students who have expressed interest in such positions.

After finishing the thesis, students should defend it in a public one-hour seminar at the institute before a thesis committee consisting of the MPhil supervisor and two other research fellows of the institute— one of whom at least is from another university than the supervisor(s). When the thesis is ready to be defended, the advisor informs Tinbergen Institute, and the institute organizes the seminar, informs the student and committee of further procedures, and publicly announces the seminar. A grade is awarded to the MPhil thesis at the end of the seminar.

Students who are not ready to defend their thesis by July 1 should report their progress to Tinbergen Institute before that date. Students who indicate that they are experiencing problems, and students who fail to report to the institute, are again invited for a meeting with the DGS. The Academic and Examination Regulations (included in Appendix IV) strongly discourage students taking more than 30 months to complete the MPhil program.

Surveys among current and former students, as well as comments from MPhil and PhD thesis supervisors, have brought to light that there is a wish to develop the students' writing skills in an early stage, in order to equip them to make a better start on the writing of their MPhil and PhD thesis. This is consistent with the advice of the midterm review committee (see below). Tinbergen Institute is currently exploring the possibilities to introduce a mandatory writing course in the first year of the program in connection with the writing of a field paper at the end of the first year. TI is also developing a module about Academic Integrity as a compulsory course for MPhil students, and including a dilemma game. The subject 'integrity' will also be integrated in research methods courses of the MPhil program.

All individual courses, exams and lecturers are evaluated by Tinbergen Institute as a standard routine. The outcomes of the evaluations are a fixed point on the agenda of the Educational Board. As a rule, 50% of the Educational Board consists of student representatives, appointed by the students after an election under the supervision of the student council. Exam evaluations are also presented to the members of the Examination Board at the end of each course block (eight weeks).

On top of the regular course evaluations organized by TI, the student council organizes an annual student review of the program by year. Students are invited to bring up any topic that may arise: course quality, work load, facilities, the social program, staff support and so forth. The outcomes of the students' review are elaborately discussed in the Educational Board meetings, and where appropriate, immediate action is taken by TI staff and the DGS.

## 2.4. Lecturers

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Tinbergen Institute can draw on the best researchers from the three participating universities to teach in the MPhil program and to supervise MPhil theses. Apart from rare (and understandable) exceptions, only research fellows (some 150 in 2014), researchers who are selected from the three faculties, are hired to teach in the TI MPhil program. The selection of research fellows is based on quality standards for research as set by TI: a minimum of publication points over a five-year period. Publication points are earned through publishing articles in peer-reviewed journals or through writing or contributing to books. The number of points for each publication is based on the journal impact, as measured by the Eigenfactor score.

See Appendix II for selection criteria for research fellows and an overview of lecturers in the program in the past period, including the lecturer's qualifications.

Expert research fellows act as core and field coordinators and also advise the DGS on the program's content and staffing. As a consequence of the alignment of the major fields in the second year with the TI research groups (see above), the coordinators of the research groups are now also appointed as field coordinators. This will guarantee that the latest developments in research are incorporated into the program, that the best lecturers are selected and that the teaching methods are adequate for achieving a higher degree of independence and creativity of students.

A flexible system of lecturer compensation provides the DGS with considerable freedom to invite research fellows and guest lecturers to teach in the MPhil program, and ensures that these fellows and guests have proper incentives to accept such invitations. The fact that teaching research students is relatively attractive for professional reasons further improves the institute's position in attracting the best lecturers to teach in the MPhil. In addition, Tinbergen Institute has dedicated budgets to attract renowned guest lecturers to teach specialized courses in their fields of research.

## 2.5. Research environment

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The MPhil in Economics program is organized and governed by Tinbergen Institute, the graduate school and research institute in economics of Erasmus University Rotterdam, University of Amsterdam and VU University Amsterdam. Tinbergen Institute was formally accredited as a research school (in Dutch: *onderzoeksschool*) by the KNAW in 1996, 2001, 2006 and 2011. The most recent, 2011, accreditation was, in part, based on the 2010 external audit of the institute by the Blundell Committee. Both the external audit and the accreditation procedure of the KNAW

considered the performance of Tinbergen Institute as an integrated research institute and graduate school, and paid ample attention to the central role of the MPhil program in Economics in the graduate school. Therefore, the most recent KNAW accreditation by itself provides evidence of a proper embedding of the MPhil in Economics in a high-quality research environment.

About the quality of the research environment at TI, the Blundell Committee commented:

*“The research is of an internationally outstanding quality. It has a clear vision and is highly relevant to the needs of society”* (p. 8, Evaluation report of the International Peer Review Committee, November 2010).

In the assessment of the TI research groups, the Blundell Committee concluded in all cases that:

*“The research group performs very good to excellent overall.”* (p. 23-30, Evaluation report of the International Peer review Committee, November 2010).

Grades awarded for quality, productivity, relevance and viability for each research group varied between 4 and 5 (on a scale of 1-5) with an average just below 4.5). This ensures that the TI MPhil program is embedded in an excellent research environment. For the full report of the Blundell Committee, see Appendix VI. Detailed information on selection criteria for research fellows and the individual research quality of all key figures and lecturers in the program is presented in Appendix II.

A second recent acknowledgement of the quality of Tinbergen Institute’s research environment is the judgment of the NWO committee that advised awarding Tinbergen Institute a block grant of K€ 800 for 5 PhD positions:

*“The program and the researchers involved are of a very good scientific level.”*  
(quoted in a letter by NWO to Tinbergen Institute, dated 25 August 2011).

## **2.6. Interaction of MPhil students with the research environment**

Tinbergen Institute does all it can to maximize students’ interaction with the research environment.

At TI’s premises, where MPhil students have their offices, a wide array of research seminars, workshops and conferences is organized by the TI research groups. An overview of all activities organized at TI Amsterdam and Rotterdam during the academic year 2012/13 can be found in Appendix II. Throughout their stay at Tinbergen Institute, students are stimulated to engage in these research activities and to get in contact with the various research groups and individual fellows in order to explore research options.

During the first year, students are obliged to attend the MPhil seminar series. In these seminars, researchers from the three faculties give a presentation on their own research topics. This seminar series intends to give students an overview of ongoing research projects within the TI research groups. Also, researchers have the opportunity to scout potential PhD students in an early phase.

The first-year core courses provide students with the basic tools needed for modern economic research. Many of the institute’s research fellows are involved in determining the exact contents of the core, to ensure that it teaches the theory and tools needed in current academic research.

The field courses provide students with specialized courses taught by experts in their fields. The field paper option provides students with the opportunity to write small research papers under the supervision of one of those experts.

Last but not least, half of the second year (30 ECTS) is dedicated to a major research project, the MPhil thesis and its public defense. MPhil theses are supervised by TI research fellows, selected researchers from the three faculties who meet TI's criteria for good research. This ensures expert supervision by renowned researchers with an excellent track record.

## **2.7. Excellent facilities and support in a small-scale program**

Tinbergen Institute has its own offices in Rotterdam and Amsterdam, and budgets for seminars, conferences and lecturer compensation. The university at which the students are registered, EUR, UvA or VU, provides assistance with the necessary immigration procedures and housing. TI reimburses travel costs for TI coursework, and provides selected students with scholarships.

MPhil students are provided with excellent material facilities: office space with the necessary ICT facilities at the institute in Amsterdam and Rotterdam and dedicated classrooms at TI Amsterdam. The good atmosphere at TI and the 24/7 opening hours make it attractive for students (MPhil and PhD) to spend their working hours at TI. Right from the start, students form a closely-knit year group and are stimulated to work together on homework assignments. On a day-to-day basis, students in different stages of the MPhil or PhD program meet and exchange information, which helps them to make well-informed decisions on the selection of research topics and supervisors. To enhance the social cohesion among students, Tinbergen Institute (financially) supports a social program organized by the student council. An integral part of the social program is the introduction weekend for first-year students in September of each year. During the past years, activities such as skating, a talent show, a chess match and participation in the Zuidas run have been subsidized by TI.

TI's MPhil program is a small-scale program with an annual inflow of 25-35 students that allows for intensive counseling and monitoring by the DGS of all individual students. At the start of the academic year, all first-year students have an intake interview with the Director of Graduate Studies. During the intake interview, the DGS and the student discuss which track (economics, econometrics or finance) fits the student's background and interests. In follow-up interviews, halfway the first academic year and at the end of the academic year, the student's progress in the core courses is discussed. Logs of the interviews with the DGS and students' progress in the program are carefully recorded in TI's data system.

In July of each year, the Examination Board issues a formal advice on continuation in the program to all first-year students. In general, only students who have earned 48 ECTS or more by July 1 in the first year are advised to continue in the program.

During the second year, the DGS watches closely the progress the students make in finding a match with an MPhil (and potentially PhD) thesis supervisor. Students who have not found a supervisor by December 1 in the second year of the program will be contacted by the DGS and will be assisted in finding a supervisor.

Two educational officers and an admissions officer manage the information flow to and from students. Like the DGS, they have an open-door policy and are available for students with questions or concerns at any time.

The structure of the TI curriculum, the close supervision of the students' progress in combination with the generous student facilities, all contribute to the success of the program: dropout rates are relatively modest, and dropping out rarely occurs in year 2 of the program. Other evidence of the program's success is the duration until the degree (on average between 24 and 25.7 months for the year groups 2007-2011). For more details on the outflow, see Appendix V.

## 2.8. PhD employment positions

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The MPhil program is connected to PhD employment positions offered by the three participating faculties to students who graduate in the TI MPhil program. These positions are usually not earmarked for particular supervisors or projects, but can be allocated to matches between students and supervisors as they arise during the course of the MPhil program. In addition, in the beginning of the second year in the program, students are informed on externally funded PhD projects (funded by NWO, EU, Netspar or other parties) available at the three faculties. Last but not least, supervisors and students are stimulated by their faculties and by Tinbergen Institute to apply for the NWO research talent program.

Tinbergen Institute makes it clear from the start that TI does not and cannot guarantee a PhD position to all students who complete the MPhil program. Some students do not manage to find a match with a PhD supervisor within TI, despite the assistance of the Director of Graduate Studies. These students involuntarily leave the program and do not continue in a PhD track at TI. For statistical details, see Appendix V.

Intake of PhD students fluctuates across faculties and across years, depending on the research interests of students and the available budgets. In case of financial constraints at one of the faculties, usually the others help out by offering additional PhD positions to accommodate the MPhil graduates. Also in this respect, students benefit from the fact that TI is a long-standing cooperation between three partners, complementing each other when necessary.

## 3. Assessments and achieved learning outcomes

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*The program has an adequate assessment system in place and demonstrates that the intended learning outcomes are achieved.*

This chapter reflects upon the assessment methods and on the achieved learning outcomes. How are the MPhil theses valued in the discipline, and how do the MPhil graduates perform in the PhD track?

### 3.1. Assessments

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#### Examination Board

Tinbergen Institute has its own Examination Board, which consists of three members from the three different faculties who are appointed by their respective Deans. The Examination Board is supported by a secretary to the Board (a TI staff member). Currently, Tinbergen Institute is



considering whether some form of compensation for the members of the TI Examination Board is appropriate, now that the workload for the Board members has increased under the new law.

The Examination Board's main task is to determine in an objective and expert manner whether a student fulfils the conditions for obtaining the degree, as defined in the course and examination regulations. As a result, the Examination Board supervises all aspects of the quality assurance of the examinations. The Board issues guidelines for adequate testing, and ensures that the *Academic and Exam Regulations* are properly implemented. It also issues a recommendation to each first-year student regarding continuation into the second year of the program, grants permission for exemptions and deviations from the curriculum and imposes measures in case of fraud and plagiarism.

The TI management has the obligation to provide the Examination Board with all information needed to perform its tasks properly. Therefore, after each eight-week course block, the Director of Graduate Studies presents exam results (grades) as well as the outcome of exam evaluations including the individual student comments to the Examination Board. Moreover, a sample of the MPhil theses for each cohort is reviewed by the Examination Board in order to ensure that TI MPhil graduates have indeed achieved the program's learning outcomes.

### **Assessment policy**

In the first year of the program the main focus is to transfer knowledge of a common core of economic principles. First-year course blocks involve seven weeks of lectures and tutorials, followed by a summative sit-in examination in the eighth week. Graded homework assignments (which comprise 20% of the final grade conditional upon a minimum grade for the sit-in written exam) form part of all first-year core courses. Regular assignments and tutorials allow students to deepen their understanding of the course material and to get more out of the lectures; they also induce students to study the course material from the start of the course (instead of only preparing for the exam).

To reflect the fact that the program is geared towards carefully selected students, no retakes are scheduled. Students who fail an exam are supposed to take the course again in the next year. Only under exceptional circumstances (e.g. verifiable illness of a student) will the Examination Board consider granting students a retake during the same academic year. Another reflection of the high ambitions of the program is the limited validity of the examination results: examination results are valid for 29 months. The intention of these stipulations is twofold: it is meant to familiarize students with a work pace required for a successful PhD track; it also urges students who are making little progress to leave the program.

Within each core course sequence (microeconomics, macroeconomics, econometrics (including mathematics and statistics)) a compensation rule applies (one '5' is compensated by a '7' or higher within a sequence). In a program without retakes, the compensation rule protects students with an overall good performance from getting stuck in the program due to an incidental failure. The compensation rule is justified by the intense assessment of the course material during the first year: each 4 ECTS course block is examined in a sit-in examination in combination with regular graded homework assignments. In order to prevent students with poor results lingering in the program, the compensation rule does not apply across years for students who do not comply with the minimum ECTS requirement for the first year, as determined in the OER.

In the second year, the main focus is to teach students to formulate research questions and to translate these into an appropriate research strategy. Second-year courses cover advanced research methods, advanced theory and specialized applied research, and are taught by leading experts. Teaching and assessments methods vary between field courses, but all field courses have seven weeks of lectures and typically involve practical work, short student presentations and assignments. Assessment methods are a combination of class participation, presentations in class, essay assignments and take-home- or sit-in examinations. This variety of teaching and

assessment methods fits in well with the varied and advanced nature of field coursework. It forces students to develop and apply advanced knowledge and research skills. Also for field courses, no retakes are scheduled.

The MPhil thesis is the final examination of the MPhil program and is meant to provide evidence that the student has achieved the learning outcomes of the TI MPhil program. The MPhil thesis can be considered as an integrative assessment in which students integrate all learning outcomes.

The thesis is a (good first draft of) a proper research contribution to the field that can be submitted to an international, peer-reviewed journal in economics. Considering the weight and importance of the MPhil thesis, the grading procedure is surrounded by several checks and balances. The MPhil thesis and presentation are judged by three senior academics, research fellows of the institute constituting the student's MPhil thesis committee. As a rule, each MPhil thesis committee has at least one member from a different faculty than the thesis supervisor. Moreover, the thesis defense is organized and announced as a public seminar. This provides independent checks on the grading of each thesis. All reviewers use the assessment form (enclosed in Appendix IV), which provides a clear overview of the criteria to be used to grade the MPhil thesis. Important criteria are: the student's self-guidance, knowledge of the subject area and use of literature, subject outline and research strategy, research approach and methodology, presentation of results (also oral presentation during the public defense), substantiation of conclusions and potential for publication.

The committee members are carefully instructed that they should judge the thesis as a (good first draft of a) proper research contribution to the field, which can be submitted to an international, peer-reviewed journal in economics. Because the committee members are, as a rule, research fellows, they are invariably active researchers with considerable publication experience who are well able to make this judgment. Moreover, a sample of the MPhil theses by year is reviewed by the Examination Board in order to establish the level of the theses, which is the final examination of the TI program.

## **3.2. Achieved learning outcomes**

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The TI MPhil program primarily serves to prepare students for PhD research in economics, econometrics and finance. This is reflected in the demanding curriculum, in the thorough selection of students and lecturers, in the interaction with the TI research environment and in the program's learning outcomes. The knowledge and skills acquired in the program all converge in the final examination, the MPhil thesis. The first examination of whether the TI MPhil graduates indeed have achieved the program's learning outcomes therefore starts with the MPhil thesis.

An inquiry among MPhil alumni has disclosed that almost 80% of the MPhil theses will be or have been included in the PhD thesis (after polishing). Not all students continue in the same research topic for their PhD, so 80% is a high score and clear evidence that the level of the MPhil thesis meets the standards of the TI program. Other findings: 76% of the MPhil theses were presented in an (international) conference; 53% of the MPhil theses were submitted to an international refereed journal; half of these are still under revision and the other half have been accepted for publication, partly by outstanding journals like the *Journal of Econometrics*, the *European Economic Review*, the *Economics of Education Review*, *Journal of Forecasting*, *Journal of Economic Dynamics and Control*, *Journal of Risk and Uncertainty*, *Review of Economics and Statistics*, and *Games and Economic Behavior* (see Appendix V for full titles). The percentage of MPhil theses accepted for publication will certainly rise in the future, since many of the students who responded to the inquiry are recent graduates who did not yet have a chance to start to transform their MPhil thesis into a paper that might be submitted to a journal.

The percentage of MPhil graduates continuing in a PhD track is on average 94.5% for the cohorts 2005-11. This high rate indicates that the TI MPhil graduates are well prepared for PhD research and sought after by PhD supervisors. Most of the students who complete the program find a match at one of the three faculties and end up in a PhD track within Tinbergen Institute. Few opt for a PhD position outside TI (although TI has no formal instruments to prevent students from leaving Tinbergen Institute after the MPhil graduation). All in all, the TI program seems to fulfill its mission to select and train students for PhD research. For details on outflow of the TI MPhil program, see Appendix V.

Tinbergen Institute's role is limited in the PhD phase: PhD students are appointed at the faculties and progress monitoring is a task of the faculties. Very few students defend their PhD thesis within 36 months; the score after 48 months (four years) is between 50 and 60%. Part of the delay can be explained by the fact that we measure the duration until the date of the actual PhD defense ceremony (and not until submission of the manuscript to the reading committee, as is often done in other universities) and precisely preparing the thesis for printing and scheduling the defense may take many months. Another reason for delays is that a rather high percentage of students find a job before they defend their PhD thesis.

Delay in PhD thesis completion is a common problem for universities and does not only involve PhD students coming from TI. Figures for TI MPhil graduates are slightly better than for their PhD colleagues at the faculties coming from a regular MSc program. Currently, the faculties are developing plans to offer PhD students a course that is designed to help them to work more effectively. Also, the PhD monitoring at the faculties has been improved— for example, by the appointment of a PhD Director at the Economics faculty of Erasmus University. Tinbergen Institute will offer a writing course as a mandatory part of the MPhil program, which will facilitate student effectiveness in the MPhil as well as in the PhD phase of their studies.

It is still early to say whether the subsequent cohorts will perform better. A positive signal are the low dropout rates for the TI students in the PhD phase: thus far, only five students out of the 150 who started a PhD track have dropped out in the PhD phase. Appendix V gives the success rates for MPhil students in the PhD track and the duration until the PhD defense.

A small percentage of the MPhil graduates (5.5%) do not start in a PhD track. In many cases this has been a deliberate choice based on the student's preference or personal circumstances. In rare cases a student does not manage to find a match with a supervisor at TI or elsewhere, and leaves academia involuntarily. More than half of the graduates who leave the program with an MPhil degree have been appointed in a research position, usually within the government or financial sector, or as a consultant.

Although outside the scope of this report, it is worth mentioning that Tinbergen Institute keeps track of the alumni's careers after the PhD defense. The first results indicate that some 70% of the TI MPhil-PhD alumni have their first job in academia. This is a high percentage compared to the 52% for the PhD alumni who did not start with the TI research masters' program but come out of a one-year MSc program.

Tinbergen Institute has set up a program to improve the position of TI PhD students on the competitive international job market. Especially among Dutch students and supervisors, it is crucial to raise the awareness of the importance of a thorough preparation for the international job market. Good placement of PhD students is not only beneficial for the students but also reflects on Tinbergen Institute: a good placement record will attract more and better students to the TI MPhil program. Tinbergen Institute has appointed a Placement Director, who organizes a training program for students who are in the final year of the PhD appointment. This training includes general guidance in the do's and don'ts, mock interviews and training in presentation techniques. The program also includes presentations by successful alumni, who report on their experience on the international job market to an audience of MPhil and PhD students. Tinbergen Institute has

dedicated a separate budget to cover the travel costs for students who attend the international job market events. TI also supports the application process by taking care of the dispatch of the recommendation letters.

## **4. Results of the previous NVAO accreditation, the mid-term review of the MPhil program and the outcome of an alumni survey**

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Below is a summary of how TI responded to the outcome of accreditations and surveys since 2008.

### **Report of the Royal Netherlands Academy of Arts and Sciences (KNAW) for the NVAO accreditation, 2009**

The assessment committee of the Royal Netherlands Academy of Arts and Sciences submitted a very positive advice about the TI research masters to the NVAO in January 2009 (see Appendix VII). Though the committee stated that the marks 'good' and 'excellent' are quite rare, the committee assessed the TI MPhil program as 'excellent' on five aspects and 'good' on 13. All in all, the report gave TI no reason to implement any adjustments to the program.

### **Report of the mid-term review committee, 2011**

For its quality assurance, TI is subject to the rules and regulations of Erasmus University. This includes regular midterm reviews of the research masters' program. The last midterm review dates from 2011. The full report of the midterm review committee is included as Appendix VIII (in Dutch).

The first recommendation of the review committee is that rules and regulations of the MPhil program should be imposed more strictly. More stringency will lead to more transparency for TI students and TI staff. As is discussed below, the small-scale setting may indeed lead to an informal atmosphere and to insufficient attention for strict rules. The review committee had no concerns that the informal atmosphere had led to serious abuse, but was referring to for instance too much flexibility in responding to requests of students to switch courses or to adjourn a class. This observation was immediately acknowledged by the management of TI, and more stringency in rules and regulations is now gradually being imposed. The review committee also recommended introducing a check on plagiarism and using Blackboard more intensely than was done until then. The plagiarism check is now a routine practice for paper and thesis supervisors, and is dealt with at the university of the MPhil thesis supervisor with the software provided by the university. The use of Blackboard is promoted among the lecturers and is even better facilitated by the TI support staff than it was in 2011.

The review committee missed two elements of the Dublin descriptors in the learning outcomes as defined by TI: TI does not mention presentation skills as a formal part of the educational program, and TI does not formally assess whether students have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous. We think that both the presentation skills and the learning skills are part of the educational program but agree that both skills could have been mentioned more explicitly, as has been done in the adjusted version of the learning outcomes as presented in chapter 1.

To start with the learning skills: the TI program stimulates students to take initiative in selecting and addressing potential supervisors for their MPhil and/or PhD thesis. Students have to come up with their own research ideas and 'sell' these to research fellows. In the second-year courses, students are stimulated to develop their own views by giving their opinion on scientific papers that are discussed during the class. This all culminates in the design and writing of the MPhil thesis: a largely self-directed achievement. The grade for the MPhil thesis reflects the student's study and working skills, as is stated in the assessment form (see Appendix IV).

Presentation skills are trained in many of the second-year courses when students present their essays or research plans, or comment upon papers of others. Presentation skills are also trained by the students, who act as teaching assistants. Most TI students in the second year have a small appointment as teaching assistant in the TI program and teach the tutorials connected to the first-year core courses. Teaching assistant selection is based on their grade for the course they teach. A mandatory training in didactical skills is provided by Erasmus University. Presentation skills count for 15% of the final grade for the MPhil thesis (see assessment form). In the PhD stage, a condition for TI funding is that students practice their presentation skills in PhD seminars or brown bag seminars, prior to presenting their work at an international conference. In the final stage of the PhD, presentation skills are trained again as part of the job market preparation.

The last and important recommendation of the midterm review committee was to make clear in an early stage how many PhD positions are provided by the three partner faculties for graduates of the TI program. The immediate cause for this recommendation was recent financial constraints at one of the faculties, which led to a cut down in PhD vacancies. Strictly spoken, this issue lies beyond the reach of TI. However, the Director of Graduate Studies is putting a lot of effort into gathering information and advising the students at the start of year 2, in order to enable the students to make informed decisions on their future career.

### **Survey among all MPhil graduates, 2013**

In June 2013, Tinbergen Institute held a survey among its MPhil graduates. TI was interested to hear from its former students how they experienced the MPhil/PhD track and to what extent they considered that the MPhil program successfully prepares students for PhD research and other (research) positions inside or outside academia. The opinion of former students is complementary to the course evaluations; former students are in a good position to evaluate the program from a distance and have experience as PhD student. The survey inquired about the contents of the educational program, skills, broadness (as opposed to focus from the start), level, work load, facilities and student life at TI. The response rate to the survey was 66%; respondents came from all cohorts. The survey was anonymous. A summary of the results of the survey is included in Appendix IX.

The most important outcome of the survey is that a majority of the respondents (88%) would apply again for the TI MPhil program with the information and experience they have today. When asked to comment on their reply, the respondents mentioned (among other things) how they benefitted in their further career from the solid educational background acquired at TI and how they valued the pleasant and friendly atmosphere at TI.

A second important outcome of the survey is that a large majority of the graduates (93%) value the fact that TI's research masters' program offers a solid first year with mandatory coursework on the core subjects in economics. This is an important finding, since now and then TI encounters debate on the design of the program from PhD supervisors who prefer a narrower and more focused course program, where students are allowed to specialize in their field of interest already in the first year. This approach is more in line with the four-year PhD programs: PhD students start immediately after their MSc in a PhD program and take a limited set of courses in direct connection with their PhD research. This is not the approach TI and other renowned international PhD programs advocate, and this is supported by many of the graduates.

Other important findings: 61% of the students think that the TI program prepares students well to select a topic for PhD research, and 67% of the students experienced the transfer from the MPhil into the PhD as a smooth transition. Students who did not experience the transfer as smooth often report causes that are beyond the control of Tinbergen Institute.

The survey investigated whether graduates had missed training in practical skills. Many of the respondents felt that an academic writing course would have benefitted them in the MPhil stage as well as in the PhD stage. Tinbergen Institute is currently introducing an academic writing course as a compulsory element of the program, in combination with the writing of a paper for a field course in the student's field of interest (see also subsection 2.3).

### **Keuzegids Masters 2013**

The Keuzegids Masters 2013 rates TI's MPhil program as a top rated research masters' program in economics in the Netherlands. The Keuzegids assessed all master programs in the Netherlands on criteria such as the quality of the educational program, quality and level of the lecturers, exams and facilities. The assessments in the Keuzegids are based on the evaluations of students and educational experts. TI's MPhil program is listed twice: as an UvA program (75 points out of a maximum score of 100), and as a VU program (88 points) and is the only research masters' in economics in the Netherlands that scores above 80 points. This exceptional score merits a quality seal as 'top rated program'. The MPhil program is particularly praised for its high educational level, quality of the teaching staff and training in academic research.

## **5. Possible challenges and pitfalls for an inter-university, small-scale research masters' program**

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Since Tinbergen Institute is a cooperation of the faculties of economics of three universities, it can offer an MPhil program at a scale and level that could not have been offered by any of its founding universities on its own. Tinbergen Institute can select the best teachers and researchers of three faculties to play an active role in the MPhil program. Moreover, at times when one of the three universities temporarily cannot fund enough PhD positions, the other universities typically jump in by extending their number of available PhD positions. However, being a 'joint venture' also brings its own problems.

In order to anticipate potential frictions, the TI General Director and the TI Director of Graduate Studies stay in close contact with the Deans of the three faculties participating in Tinbergen Institute. Twice a year a formal meeting with the three Deans and the two TI Directors is held. In order for each party to keep up-to-date with the interests and wishes of the others, short lines of communication and frequent informal contacts between all parties involved are essential. Moreover, a representation of key researchers of the faculties in TI's advisory boards and governing board, appointed by the Deans of their respective faculties, is another guarantee that TI keeps a close eye on the interests of its main stakeholders and sponsors, the research fellows and the faculties.

The TI MPhil program is expected to supply selected and trained PhD students to three economics faculties. Since the MPhil students develop their own PhD thesis plans and are autonomous in addressing potential supervisors, it is important for researchers and research groups of the three faculties to have visibility in the TI MPhil program. All researchers want to come into contact with the potential PhD students. However, this is not always easy to achieve. On the one hand, given the large number of different research groups in the three faculties, it is difficult to give students enough exposure to all of these groups through specific field courses. Moreover, in order to gain visibility, many TI fellows want to influence the content of the MPhil program. Also, there are research areas (e.g. regional economics and operations research) that

are specific to one of the three universities. Such groups also tend to feel not very well served by the TI MPhil program.

There is no consensus on the appropriate training path that MPhil students should go through to become independent researchers. This has led to a wide variety in what research masters' programs in economics offer in the second year. Also within TI, being a collaboration of three universities, some PhD supervisors advocate more interactive teaching methods in order to stimulate creativity and self-directedness, while others prefer to transfer more theory and knowledge in the second year of the program in order to equip students for independent research. To find a good balance between the teaching standards that are required to be offered by a top international MPhil program, and the specific views in terms of content and teaching methods that individual TI fellows put forward, remains a challenge for the DGS.

An important focus for TI is how to preserve the long-run support for the joint program from the three partners. The three faculties generously invest in the educational program that TI offers with the aim to provide excellent graduate training. However, the relative autonomy of the students in the MPhil program leads to two distributional problems: the distributions over the research groups and supervisors within the faculties (see above), and the distribution between the three faculties. MPhil students as well as PhD students— and especially the international students— are inclined to prefer Amsterdam over Rotterdam as their domicile. As a consequence, students spend their working hours more at TI Amsterdam and are more connected to the UvA and VU researchers. This leads to an uneven distribution of the PhD students between the faculties to the degree that the Erasmus faculty in the past years hired more external PhD students than PhD students from the TI MPhil program. The distributional issues are always on the agenda of the TI management, and are being discussed with the Deans of the three faculties on a regular basis.

Only a small number of students from the partner faculties apply for admission to the TI program. The inflow in the program of Dutch students in general is small: very few Dutch students seem to be prepared to take up the challenge of a demanding two-year program. The high tuition fee (€ 12,000) for Dutch students enrolling in a second Dutch master's program may also make the TI MPhil less attractive (although TI compensates the high tuition fee for talented students with a tuition fee waiver or a full scholarship). Another cause for the lack of interest from students from the three faculties might be that students lack stimulation from their professors at the faculty to join the TI MPhil program. Although some faculty members actively push the best students to apply for the TI program, others prefer the most talented students to take the local MSc programs in order to keep them for the faculty. Sending talented students to TI is viewed by them as 'losing' students to TI or to one of the other faculties.

The MPhil program is small compared to other master's programs offered at the three universities. This small scale has a number of advantages such as the personal attention that can be offered to each individual student and more in general a very pleasant informal atmosphere between the staff members, the teachers and the students. However, the small scale also may imply a less stringent approach to formal rules in comparison to what is done in programs of a larger scale. An example in this respect is the plagiarism check of MPhil theses and field papers. Tinbergen Institute was late in implementing the official check on plagiarism compared to other bachelors' and masters' programs of the three economics faculties participating in Tinbergen Institute. This can be justified by the fact that at TI supervisors intensely monitor the thesis-writing process and are continuously in close interaction with the student. This leaves little to no room for plagiarism. Moreover, the plagiarism would most likely come to the surface during the defence of the MPhil thesis in front of a committee of three TI fellows, or in a later stage during the writing of the PhD thesis under the same supervisor. Still, TI is aware of the fact that imposing and enforcing formal rules is a necessity that is, in the long run, in the best interest of lecturers, students and the MPhil program as a whole.

Since 2008 TI has had a special finance track, sponsored by the Duisenberg school of finance (DSF). Until the end of 2013 TI received almost M€2.5 from DSF. The money was used for extra

courses in finance, more MPhil scholarships and more PhD positions at the universities. DSF is sponsored by the financial industry and government bodies like the Dutch Central Bank (DNB). Due to the economic crisis, however, DSF was no longer able to pay the originally agreed amounts of money to TI, which meant that the special finance track had to be scaled down in the number of separate courses and student inflow. Although TI is very happy with the amount received from DSF, this also indicates that external money is less stable than funding from the universities.



## Appendix I

### Domain-specific requirements

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The MPhil program aims to prepare students for PhD thesis research in economics, econometrics and finance. This ambition is translated into the learning outcomes in Table 1.

**Table 1. Learning outcomes of the Tinbergen Institute MPhil in Economics**

<b>Students who successfully complete the MPhil in Economics should:</b>	
i.	have an understanding of the core of economics— microeconomics, macroeconomics or finance, and econometrics— that allows them to <ol style="list-style-type: none"> <li>a. broadly read and understand the current scientific literature in economics and follow scientific debates across the economic sciences, and</li> <li>b. successfully embark on independent study of at least one specialized field of economic research;</li> </ol>
ii.	have a sufficiently deep understanding of one field of economic research to allow them <ol style="list-style-type: none"> <li>a. to actively participate in current scientific debates in this field and</li> <li>b. contribute original research to this field, initially under academic supervision;</li> </ol>
iii.	be able, initially under academic supervision, to write research papers in economics that can be submitted to an international, peer-reviewed journal for publication;
iv.	be able to present and defend their research to an audience of academic researchers;
v.	have an attitude to independently keep track of the developments in one field of specialization and to embark on independent study in this field.

The program's intended learning outcomes should be confronted with the domain's standards or requirements for PhD students trained in other international graduate programs. In order to specify the domain-specific requirements connected to our learning objectives, we compared to the first two years of undivided PhD programs in economics in the US and in top European research masters' programs

with a similar ambition. In particular, as international benchmarks, we looked at two world-class US PhD programs.

- Harvard University's PhD in Economics program <http://economics.harvard.edu/pages/program-overview>
- the University of Chicago's PhD in Economics program [http://economics.uchicago.edu/graduate/program\\_requirements.shtml](http://economics.uchicago.edu/graduate/program_requirements.shtml)

and two of Europe's best research masters' programs in economics,

- London School of Economics' MRes in Economics program <http://www.lse.ac.uk/economics/prospectiveStudents/researchProgrammes/PhDRoutesAndCoursework.aspx>
- Oxford University's MPhil in Economics program <http://www.economics.ox.ac.uk/index.php/Graduate/mphil-in-economics>

These four schools are among the world's greatest centres for economic research and teaching and as such they constitute an excellent benchmark to verify if the learning objectives of the TI MPhil program tie in with the international requirements.

The first requirement connected to learning objective (i) in Table 1 is that MPhil students master a common core of economics, irrespective of their often diverse backgrounds and ultimate fields of research. This ensures that students embark on their PhD research and subsequent academic career with a sufficiently broad understanding of economics to broadly follow academic discourse in economics and to initiate independent study of the domain's specialized fields of research. There is broad agreement in the economic sciences on a core of microeconomics, macroeconomics, and econometrics; and specialized economic research, reading, and debate usually requires broad knowledge of these core courses. All top PhD programs in economics, including the Harvard and Chicago ones, teach a core sequence of courses in microeconomics, macroeconomics, and econometrics in one way or the other, usually covering the entire first year as in our MPhil in Economics. The same is true for the LSE and Oxford research masters' programs. This core of microeconomics, macroeconomics and econometrics also applies for the finance specialization. See for instance the LSE, where the core macroeconomics and microeconomics sequences of the first year of the research masters' in Finance are identical to the ones of the first year of the research masters' in Economics.

Knowledge of the economics core may foster independent study in specialized fields of research, but is, by itself, not sufficient to actively debate and carry out research at the frontier of the economic sciences. The second requirement connected to learning objective (ii) is that students further specialize in one field of economic research is part of the second-year requirements of many of the best international PhD programs in economics, including those of Harvard and Chicago. It is also shared with the research masters' programs of LSE and Oxford. A focus on one major allows students to sufficiently deepen their knowledge to actively participate in economic research.

The requirements related to learning objectives (iii and iv) in Table 1 are that students are able to write research papers and to present and defend their research work are natural goals of any research training and are obviously shared with all undivided PhD programs. In fact, Harvard's and Chicago's PhD programs and LSE's and Oxford's research masters' programs all explicitly require students to produce a research paper as part of their second-year requirements. Tinbergen Institute similarly requires students to write a major research paper, the MPhil thesis. The standards for the MPhil thesis are high: the MPhil thesis is a (good first draft of) a proper research contribution to the field that can be submitted to an international, peer-reviewed journal in economics.

## Appendix II Research Environment

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1. Research environment
2. Key appointments at Tinbergen Institute
3. Lecturers and guestlecturers
4. Fellows: awards, grants, honors of all TI fellows since 2008
5. TI Journal ranking and admission criteria fellows
6. Overview of editorial positions of TI research fellows
7. Research groups: cooperation agreements
8. Research activities academic year 2012-2013



## 1. Research environment

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The NVAO guidelines stipulate that a key requirement for the accreditation of a research master program is that the program is embedded in an excellent scientific research. This requires the presence of an excellent and high quality research environment and a solid embedding of the MPhil program in this academic research context.

In this appendix we will provide information and other data that will prove that the MPhil program is supported by outstanding researchers; that lecturers are selected out of a pool of excellent researchers from the three economic schools participating in TI; that guest lecturers are renowned experts in their fields. We used the following sources of information:

- We identified key players in the MPhil program and listed their current positions, 5 key publications since 2000, supervised PhD theses and editorial positions in journals on the TI ranking list;
- Lecturers: provide information on the number of TI research fellows involved in teaching; the number of lecturers with a University Teaching Qualification 'BKO'; number of supervised PhD students; explanation of admission criteria for TI research fellows and the new TI journal list: a classification of journals in the field of economics, econometrics and finance;
- Guest lecturers;
- TI fellows: information about awards, grants and prizes (NWO, ERC etc.);
- TI fellows: information about editorial positions;
- TI research groups and fellows: information about cooperation agreements with international organizations and institutes;
- Sample list of all research activities in the academic year 2012-2013;
- For an additional overview and description of the TI research environment, we would also like to refer to the Blundell report (2010) that is attached in a separate appendix.

Students in the TI's program work in a stimulating, lively and informal research environment: at both locations, in Amsterdam and Rotterdam, seminar series and workshops are organized. Also, international guest lecturers visit the institute for extensive periods of time to collaborate with colleague researchers and interact with students. TI encourages students to participate in all research activities. A sample list of all research activities in the academic year 2012-2013 is included.

TI would like to emphasize three educational events that merit special mention: the Tinbergen Institute Lectures in Economics, the Tinbergen Institute Lectures in Finance and the Princeton University Press Lectures. The three lectures are an integral part of the TI educational program. Students take exams and receive credits for the TIL. Since 2006 TI organizes the annual TIL in economics: a world-class scholar teaches an intensive advanced MPhil course on a topic that appeals to many of the institute's students, PhD candidates and fellows. The MPhil students also benefit greatly from the consultations sessions with the lecturer. In recent years the following renowned scholars delivered the TIL in economics 2013: Elhanan Helpman (Harvard University) on foreign trade and foreign direct

investments, in 2012 Matthew Jackson (Stanford University) gave an analysis of social and economic networks, in 2011 Xavier Gabaix (NYU Stern School of Business) discussed the origins of economic fluctuations, 2010 David Card (University of California – Berkeley) discussed labor economics, in 2009 Susan Athey (Harvard University) lectured on market design.

In 2009, Tinbergen Institute started the TI Lectures in Finance to emphasize the new finance track and highlight our cooperation with the Duisenberg School of finance. Sweder van Wijnbergen (UvA) delivered the first TIL in finance on the financial crisis. Darrell Duffie (Stanford) discussed dark markets in the finance lectures in 2010. In 2011, Bengt Holmstrom (MIT) discussed liquidity and financial crises. Hersh Shefrin (Santa Clara University) will give the 2014 TIL in finance on psychology across the financial landscape.

A third annual event offering students the opportunity to meet world-class international researchers is the Princeton University Press (PUP) lectures. TI organizes these lectures in collaboration with the Econometric Institute of the Erasmus University Rotterdam. These econometrics lectures cover a wide range of topics. In 2009, Peter Rossi (University of Chicago) delivered the PUP Lectures on semi-parametric Bayesian inference. Francis Diebold (University of Pennsylvania) and Glenn Rudebusch (Federal Reserve Bank, San Francisco) held the PUP lectures in 2010 and discussed yield curve modeling and forecasting. In 2011, Jerry Hausman (MIT) discussed modeling heterogeneity in econometric models. Frank Schorfheide (University of Pennsylvania) delivered the PUP Lectures in 2012 on DSGE models. In 2013, Mark Watson (Princeton University) discussed low frequency in econometrics. Adrian Pagan (University of Sydney) and Don Harding (La Trobe University) will deliver the PUP Lectures in 2014 on the econometric analysis of recurrent events in macroeconomics and finance.

## **2. Key appointments at Tinbergen Institute**

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We listed the key players in TI's educational program and the role they play in the MPhil program. In this appendix you will find a listing of all the key players, organized by their role in the various boards of TI, including a short curriculum vitae, 5 key publications and the names of PhD students they supervised.

Key appointments in TI's MPhil program are:

- Member of the Supervisory Board
- General Director and Directors of Graduate Studies
- Member of the Admission Board
- Member of the Educational Board
- Member of the Examination Board
- Coordinator of core or field courses
- Lecturer

### **Supervisory Board of Tinbergen Institute**

Tinbergen Institute is a research school in economics, econometrics and finance established by the economic departments of the Erasmus University Rotterdam, University of Amsterdam and VU

University Amsterdam. The Royal Netherlands Academy of Arts and Sciences (KNAW) officially accredited the Tinbergen Institute in 1996, 2001, 2006 and 2011. The mission of TI is twofold:

1. to offer an MPhil program and PhD education in economics, econometrics and finance that can meet the highest international standards to attract the finest and brightest students in the Netherlands and abroad; and
2. to facilitate and stimulate fundamental and applied research that can compete with the highest international scholarly standards in these fields.

Tinbergen Institute is governed by a supervisory board consisting of five members, 3 internal members and 2 external members. Internal members are appointed by the Dean of the secretary faculty (currently ESE-EUR), after a binding nomination of the Dean of the faculty he/she is representing. The two external members are appointed by the secretary faculty in consultation with the other Deans and the Chair of the Supervisory Board. The external members have a strong affiliation with academia, hold at least a PhD but are employed outside the university. The board decides upon the main policy issues of TI and sets the admission criteria for research fellows.

#### Current members:

Prof. C.N. Teulings (Chair, since 2011)

Dr. A. Italianer (2011 - )

Prof. D. Webbink (2012 - )

Prof. J.L. Moraga-González (2012 - )

Prof. H.P. Boswijk (2009 - )

#### Former members:

Prof. E.T. Verhoef (2008 – 2012)

Prof. J.M.G. Frijns (2005 – 2011)

Dr. J.J.M. Kremers (2002 – 2011)

Prof. C.G. de Vries (2003 - 2012 )

#### Current members:

##### **Coen N. Teulings (Chair)**

Coen Teulings is professor of economics at the University of Cambridge, with a part-time affiliation as professor of economics at the University of Amsterdam. Teulings is a fellow of the Tinbergen Institute, IZA (Bonn), CESifo (Munich), and CEPR (London). Prior positions include the head of department of income policy at the Ministry of Social Affairs, the director of the Tinbergen Institute (1998-2004) and later the director of the SEO Economic Research. From 2006 to 2013, professor Teulings was the director of the CPB Netherlands Bureau for Economic Policy Analysis. He studied economics at the University of Amsterdam and obtained his doctorate in 1990.

#### *Key Publications*

Buhai, S., Portela, M.A., Teulings, C.N., van Vuuren, A.P. (2013), Returns to tenure or seniority?, *Econometrica*, forthcoming.

Portela, M., R. Alessie, C.N. Teulings (2010), Measurement error in education and growth regressions. *The Scandinavian Journal of Economics*, 112(3), 618-39.

Gautier, P.A., Teulings, C.N., van Vuuren, A.P. (2010), On-the-job search, mismatch and efficiency. *Review of Economic Studies*, 77(1), 245-72.

Gautier, P.A., Svarer, M., Teulings, C.N. (2010), Marriage and the city: Search frictions and sorting of singles, *Journal of Urban Economics*, 67(2), 206-18.

Gautier, P.A., Svarer, M., Teulings, C.N. (2009), Sin City? Why is the divorce rate higher in urban areas? *The Scandinavian Journal of Economics*, 111(3), 439-56.

Gautier, P.A., Teulings, C.N., (2009), Search and the city, *Regional Science and Urban Economics*, 39(3), 251-65.

Bovenberg, A.L., Teulings, C.N., (2009), Rhineland exit? *International Tax and Public Finance*, 16(5), 710-26.

#### *PhD defenses supervised*

Buhai, S., Erasmus University Rotterdam (November 27, 2008)

Portela, M., University of Amsterdam (April 10, 2007)

Müller, G., Erasmus University Rotterdam (April 13, 2006)

Kula, G., Erasmus University Rotterdam (February 6, 2004)

van der Ende, M.A., University of Amsterdam (June 30, 1997)

#### **Alexander Italianer (Member)**

Alexander Italianer has been director General Competition of the European Commission since February 2010. Before this, he had been deputy secretary-general in charge of the better regulation agenda and chairman of the Impact Assessment Board since 2006. Prior to that, he worked in the cabinets of President Santer, commissioner Verheugen, commissioner Telička and President Barroso, and was also director for International Economic and Financial Affairs between 2002 and 2004. He holds a graduate degree in econometrics and a PhD in economics from the University of Groningen, and was a research associate at the Catholic University of Leuven before joining the European Commission in 1985.

#### **H. Dinand Webbink (Member)**

Dinand Webbink is a professor in Policy Evaluation with specific focus on Health, Education and Strategic Philanthropy at the Erasmus School of Economics, Erasmus University Rotterdam. His work focuses on empirical analysis of the effect of policy intervention in education, health and philanthropy. He has published articles in several academic journals such as *Review of Economics and Statistics*, *Journal of Health Economics*, *Economica*, *Economics of Education Review* and the *Journal of Population Economics*. He is fellow of TI, TIER, CPB, IZA and ECSP. Webbink holds a PhD in economics from the University of Amsterdam (1999).

#### *Key Publications*

Plug, E., Webbink, H.D., Martin, N.M. (2014), Sexual Orientation, Prejudice and Segregation. *Journal of Labor Economics*, forthcoming.



Webbink, H.D., Vujic, S., Koning, P., Martin, N.G. (2013), Why are criminals less educated than non criminals? *Journal of Law, Economics, and Organization*, 29(1), 115-44.

Webbink, H.D., Martin, N.G., Visscher P.M. (2011), Does teenage childbearing reduce investment in human capital? *Journal of Population Economics*, 24(2), 701-30.

Webbink, H.D., Martin, N.G., Visscher, P.M. (2010), Does education reduce the probability of being overweight, *Journal of Health Economics*, 29(1), 29-38.

Leuven, E., Lindahl, M., Oosterbeek, H., Webbink H.D. (2007), The effect of extra funding for disadvantaged students on achievement, *Review of Economics and Statistics*, 89(4), 721-36.

### **José Luis Moraga-González (Member)**

José Luis Moraga is a professor of Microeconomics at the Department of Economics of VU University Amsterdam and a professor of Industrial Organization at the Department of Economics, Econometrics and Finance, of University of Groningen. Moraga also worked as a part-time professor at the Department of Economics of IESE Business School, and as an associate professor at the department of economics of the Erasmus University Rotterdam. He obtained a PhD in Economics from University Carlos III Madrid in 1997. He is a fellow of TI, CEPR, the Center PPSRC at IESE Business School, SOM, Casino and ENCORE. Moraga was the recipient of a Marie Curie Excellent Grant (2007-2011) and is currently a member of the Editorial Board of the *Journal of Industrial Economics*, the *International Journal of Industrial Organization*, and the *Spanish Economic Review*.

#### *Key Publications*

Moraga, J.L., Petrikaite, V. (2013), Search costs, demand-side economies and the incentives to merge under Bertrand competition, *The Rand Journal of Economics*, 44 (3), 391-424.

Haan, M.A., J.L. Moraga (2011), Advertising for attention in a consumer search model, *The Economic Journal*, 121(552), 552-79.

Goyal, S., Konovalov, A. and Moraga, J.L. (2008), Hybrid R&D, *Journal of the European Economic Association*, 6-6, 1309-38.

Janssen, M.C.W., Moraga, J.L. (2004), Strategic pricing, consumer search and the number of firms, *Review of Economic Studies*, 71, 1089-1118.

Goyal, S., van der Leij, M.J., Moraga, J.L. (2006), Economics: An emerging small world, *Journal of Political Economy*, 114(2), 403-12.

#### *PhD defenses supervised*

Petrikaite, V., University of Groningen (May 24, 2012)

van Eijkel, R., University of Groningen (June 9, 2011)

van der Made, A., University of Groningen (January 21, 2010)

Overvest, B., University of Groningen (September 24, 2009)

Wildenbeest, M.R., Erasmus University Rotterdam (June 21, 2007)

### **H. Peter Boswijk (Member)**

Peter Boswijk is professor of Financial Econometrics at the University of Amsterdam since 1999. In 2009 he became the research director of the Amsterdam School of Economics, University of Amsterdam. He obtained a PhD in Econometrics cum laude in 1992 from the University of Amsterdam. Boswijk has had visiting positions at the New York University, University of Aarhus, University of California – San Diego and the University of Oxford. He is the associate editor of the Journal of Time Series Analysis (2013–).

#### *Key publications*

Boswijk, H.P., Klaassen, F. (2012), Why frequency matters for unit root testing in financial time series, Journal of Business & Economic Statistics, 30(3), 351-57.

Boswijk, H.P., van der Weide, R. (2011), Method of moments estimation of GO-GARCH models, Journal of Econometrics, 163(1), 118-26.

Boswijk, H.P. (2010), Nuisance parameter free inference on cointegration parameters in the presence of a variance shift, Economics Letters, 107(2), 190-93.

Boswijk, H.P., Franses, P.H.B.F., van Dijk, D.J.C. (2010), Cointegration in a historical perspective, Journal of Econometrics, 158(1), 156-59.

Boswijk, H.P. (2010), Mixed normal inference on multicointegration, Econometric Theory, 26(5), 1565-76.

Boswijk, H.P., Hommes, C.H., Manzan, S. (2007), Behavioral heterogeneity in stock prices, Journal of Economic Dynamics and Control, 31(6), 1938-1970.

Boswijk, H.P., Doornik, J.A. (2006), Distribution approximations for cointegration tests with stationary exogenous regressors, Journal of Applied Econometrics, 20(6), 797-810.

Boswijk, H.P., Franses, P.H.B.F. (2005), On the econometrics of the Bass diffusion model, Journal of Business & Economic Statistics, 23(3), 255-268.

#### *PhD defenses supervised*

Stakenas, P., University of Amsterdam (November 21, 2012)

Gao, Z., University of Amsterdam (May 29, 2012)

Zu, Y., University of Amsterdam (January 19, 2012)

van der Weide, R., University of Amsterdam (March 8, 2012)

Schrager, D.F., University of Amsterdam (February 9, 2007)

van der Ploeg, A.P.C., University of Amsterdam (February 10, 2006)

Griffioen, G.A.W., University of Amsterdam (March 3, 2003)

van der Sluis, P.J., University of Amsterdam (October 7, 1999)

#### Former members:

##### **Erik T. Verhoef**

Erik Verhoef is a professor of Spatial Economics (2002) at the Department of Spatial Economics, VU University Amsterdam. He is an editor (with M. Fosgerau) of the Economics of Transportation, and member of the editorial boards of the Journal of Urban Economics, Papers in Regional Science, and

Journal of Transport Economics and Policy (until 2012); and associate editor of Networks and Spatial Economics and Journal of Regional Science. Verhoef was awarded an Advanced ERC Grant for the research project OPTION (Optimizing Policies for Transport: Accounting for Industrial Organization in Network Markets) in 2010. In that year he became elected fellow of the Regional Science Association International. He holds a PhD in economics from the VU University Amsterdam (1996).

#### *Key Publications*

Silva Montalva, H.E., Verhoef, E.T. (2013), Optimal pricing of flights and passengers at congested airports and the efficiency of atomistic charges, *Journal of Public Economics*, 106, 1-13.

Lindsey, C.R., van den Berg, V.A.C., Verhoef, E.T. (2012), Step tolling with bottleneck queuing congestion, *Journal of Urban Economics*, 72(1), 46-59.

van den Berg, V.A.C., Verhoef, E.T. (2011), Winning or losing from dynamic bottleneck congestion pricing? The distributional effects of road pricing with heterogeneity in values of time and schedule delay, *Journal of Public Economics*, 95(7-8), 983-92.

Brueckner, J.K., Verhoef E.T. (2010), Manipulable congestion tolls, *Journal of Urban Economics*, 67(3), 315-21.

Verhoef, E.T. (2010), Congestion pricing, slot sales and slot trading in aviation, *Transportation Research Part B*, 44, 320-29.

#### *PhD defenses supervised*

Behrens, C.L., VU University Amsterdam (September 9, 2013)

Peer, S., VU University Amsterdam (April 22, 2013)

Koster, P.R., VU University Amsterdam (January 16, 2012)

van den Berg, V.A.C., VU University Amsterdam (June 8, 2011)

Brander, L., VU University Amsterdam (June 22, 2011)

Tseng, Y.Y., VU University Amsterdam (November 24, 2008)

Ubbels, B., VU University Amsterdam (September 27, 2006)

Rodenburg, C., VU University Amsterdam (December 23, 2005)

Wang, S., VU University Amsterdam (January 20, 2004)

de Blaeij, A.T., VU University Amsterdam (April 3, 2003)

#### **Jean Frijns**

Jean Frijns was professor in Investments (Beleggingsleer) at the VU University Amsterdam (since 1995). In the 1980s he was vice director of the CPB (Netherlands Bureau for Economic Policy Analysis) and in 1988 started working for ABP. Until 2005 he was Chief Investment Officer and member of the ABP Executive Board. From 2005 to 2008 chairman of the Corporate Governance Code Monitoring Committee (Commissie-Frijns).

#### *PhD defenses supervised*

Kocken, T., VU University Amsterdam (December 11, 2006)

Steenkamp, T.B.M., VU University Amsterdam (May 27, 1998)

### **Jeroen J.M. Kremers**

Mr Kremers has been Head of Global Country Risk at the Royal Bank of Scotland Group since March 2009, and joined the ABN AMRO Managing Board July 1, 2009. He began his career in 1986 as an Economist for the International Monetary Fund in Washington DC. In 1989 he became Senior Economist at the Netherlands Ministry of Finance, and in 1992, deputy director for Financial and Economic Policy. He then moved to become director for Financial Markets in 1997 and in addition was appointed Deputy Treasurer General. He also was a professor of Economics at Erasmus University Rotterdam from 1991 until 2003. In 2003, Mr Kremers left the Ministry and was elected Executive Director of the International Monetary Fund, representing a constituency of 13 European countries. He remained there until 2007, when he moved to ABN AMRO to become Head of Group Public Affairs. He left ABN AMRO in 2008 and in 2009 moved to Royal Bank of Scotland. Kremers hold a doctorate from Oxford University (1985).

### **Casper G. de Vries**

Casper de Vries holds the chair of Monetary Economics at the Erasmus School of Economics, Erasmus University Rotterdam, and co-heads the risk management program at the Duisenberg School of Finance. Casper de Vries is a member of the EMU Monitor group and he has served as vice dean of research and education at the Erasmus School of Economics. His graduate training was at Purdue University after which he has held positions at Texas A&M University and KU Leuven. He has had visiting positions at Chapman University, Indiana University, Purdue University, the University of Bonn, K.U. Leuven; he is academic consultant for pension funds and central banks. Casper de Vries is a fellow of TI and CESifo. He is a member of editorial board of the *Annals of Finance*, the *Journal of Risk* and the *German Economic Review*. Casper de Vries holds a PhD in economics from Purdue University (1983). His research interests are focused on international monetary issues, like foreign exchange rate determination and exchange rate risk, the issues surrounding the Euro, financial markets risk, risk management and systemic risk. In his research on financial risks, he has specialized in calculating the risks on extreme events by means of statistical extreme value analysis. Other research interests are applied game theory; in particular contest and auction theory which can be applied to the theory of lobbying. He has published widely in leading internationally refereed journals.

#### *Key Publications*

De Haan, L.F.M., de Vries, C.G., Zhou, C. (2013), The number of active bidders in internet auctions, *Journal of Economic Theory*, 148(4), 1726-36.

Slijkerman, J.F., Schoenmaker, D., de Vries, C.G. (2013), Systemic risk and diversification across European banks and insurers, *Journal of Banking & Finance*, 37(3), 773-85.

Mikosch, T., de Vries C.G. (2013), Heavy tails of OLS, *Journal of Econometrics*, (172) 2, 205-21

Hyung, N., de Vries, C.G. (2012), Simulating and calibrating diversification against black swans, *Journal of Economic Dynamics & Control*, 36(8) Special Issue: SI, 1162-75.

Baye, M.R., Kovenock, D., de Vries C.G. (2012), The Herodotus paradox, *Games and Economic Behavior*, 74(1), 399-406.

Hartmann, P., Straetmans, S., de Vries, C.G. (2004), Asset market linkages in crisis periods, *The Review of Economics and Statistics*, 86, 313-26.

#### *PhD defenses supervised*

Moore, K., Erasmus University Rotterdam (December 16, 2013)

Sun, P., Erasmus University Rotterdam (October, 25, 2013)  
van Oort, M.R.C., Erasmus University Rotterdam (October 24, 2013)  
Zenhorst, J., Erasmus University Rotterdam (December 13, 2012)  
Bijkerk, S.H., Erasmus University Rotterdam (December 20, 2012)  
Di Cesare, A., Erasmus University Rotterdam (December 20, 2012)  
Wong, A., Erasmus University Rotterdam (January 29, 2009)  
Zhou, C., Erasmus University Rotterdam (November 13, 2008)  
Babus, A.M., Erasmus University Rotterdam (May 22, 2008)  
Slijkerman, J.F., Erasmus University Rotterdam (September 14, 2007)  
Beirut, B.K., Erasmus University Rotterdam (February 16, 2006)  
Li, D., Erasmus University Rotterdam (October 14, 2004)  
Vinhas de Souza, L.M., Erasmus University Rotterdam (April 3, 2003)  
van Foreest, P.W., Erasmus University Rotterdam (November 22, 2002)  
Caserta, S., Erasmus University Rotterdam (October 4, 2002)  
Cumperayot, P.J., Erasmus University Rotterdam (June 27, 2002)  
Groen, J.J.J., Erasmus University Rotterdam (October 19, 2000)  
Groenendijk, P.A., Erasmus University Rotterdam (December 16, 1999)  
Dijkstra, B., University of Groningen (June 22, 1998)  
Straetmans, S.T.M., Erasmus University Rotterdam (May 8, 1998)  
Gielens, G., KU Leuven, Belgium (February 27, 1996)  
Stork, P.A., Erasmus University Rotterdam (April 28, 1994)  
Dewachter, H., KU Leuven, Belgium (June 22, 1993)  
Meyermans, E., KU Leuven, Belgium (November 6, 1992)  
Zhang, Z., KU Leuven, Belgium (July 8, 1991)

## **General Director and Directors of Graduate Studies**

The General Director and Director of Graduate Studies (DGS) share responsibility for TI's graduate program. The DGS determines the content and structure of the MPhil program in consultation with core and field coordinators.

### General Directors:

Prof. B. Visser (since 2011)

Prof. H.K. van Dijk (2008-2010)

### Directors of Graduate Studies:

Prof. M. Giuliadori (since 2013)

Prof. A.R. Soetevent (2010-2013)

Prof. E.J.S. Plug (2008-2009)

Prof. A.C.F. Vorst (DGS for the finance track, 2010-2013)

Prof. A. Lucas (DGS for the finance track, 2008-2009)

### **Bauke Visser (General Director)**

Bauke Visser, the TI general director since January 2011, is a professor of economics at the Erasmus School of Economics. He studied econometrics at the University of Groningen, and holds a PhD in economics (1998) from the European University Institute in Florence, Italy. After a period at Royal Dutch Shell, he joined the Erasmus School of Economics in 2000.

### *Key Publications*

Crutzen, B.S.Y., Swank, O.H., Visser, B. (2013), Confidence management: On interpersonal comparisons in teams, *Journal of Economics & Management Strategy* 22, 744-67.

Visser, B., Swank, O.H. (2013), Is transparency to no avail? Committee decision-making, pre-meetings, and credible deals, *The Scandinavian Journal of Economics* 115(4), 967-94.

Dominguez Martinez, S., Swank, O.H., Visser, B. (2008), In defense of boards, *Journal of Economics & Management Strategy*, 17(3), 667-82.

Visser, B., Swank, O.H. (2007), On committees of experts, *Quarterly Journal of Economics*, 122, 337-72.

### *PhD defenses supervised*

Steffens, P.H., Erasmus University Rotterdam (November 10, 2011)

Dominguez Martínez, S., Erasmus University Rotterdam (April 26, 2007)

### **Herman K. van Dijk (Former General Director and Honorary Research Fellow)**

Herman van Dijk is affiliated with the Faculty of Economics and Business Administration, VU University Amsterdam, as professor of econometrics and also as professor emeritus with the Econometric Institute, Erasmus University Rotterdam. He was director of the Tinbergen Institute, Director of the Econometric Institute, and professor of Econometrics with a Personal Chair at Erasmus

University Rotterdam. He has been a visiting Fellow and a visiting professor at Cambridge University, the Catholic University of Louvain, Harvard University, Duke University, Cornell University, and the University of New South Wales. He is Fellow of the International Society of Bayesian Analysis, Senior Fellow at the Rimini Center for Economic Analysis, and Honorary Fellow of the Tinbergen Institute. He has extensive experience as a (co-)manager and coordinator of research initiatives and conferences. He is the co-founder of the EC2 meetings of European econometricians; cofounder of the European Seminar on Bayesian Econometrics (ESOB) and cofounder of the Econometric and Tinbergen Institute lectures that are published by Princeton University Press.

He received the Savage Prize for his PhD dissertation and is listed in the Journal Econometric Theory in the Econometricians Hall of Fame amongst the top ten European econometricians. His research interests cover a range of topics in econometrics with as common theme: Simulation-based Bayesian Econometric Techniques for Inference, Forecasting and Decision analysis. He serves on the Editorial Board of major journals in econometrics.

#### *Key Publications*

Zellner, A. (posthumously), Ando, T., Basturk, N., Hoogerheide, L., van Dijk, H.K. (2014), Bayesian analysis of instrumental variables models: Acceptance-rejection within direct Monte Carlo, *Econometric Reviews*, 33, 3-35.

Billio, M., Casarin, R., Ravazzolo, F., van Dijk, H.K. (2013), Time-varying combinations of predictive densities using nonlinear filtering, *Journal of Econometrics*, 177(2), 213-32.

Strachan, R., van Dijk, H.K. (2013), Evidence on features of a DSGE business cycle model from Bayesian model averaging, *The International Economic Review*, 54(1), 385-402.

Hoogerheide, L., Opschoor, A., van Dijk, H.K. (2012), A class of adaptive importance sampling weighted EM algorithms for efficient and robust posterior and predictive simulation, *Journal of Econometrics*, 171(2), 101-20.

Hoogerheide, L.F., Ravazzolo, F., van Dijk, H.K. (2012), Backtesting value-at-risk using forecasts for multiple horizons – A comment on the forecast rationality tests of A.J. Patton and A. Timmermann, *Journal of Business and Economic Statistics*, 30(1), 30-33.

#### *PhD defenses supervised*

Ceyhan, P., Erasmus University Rotterdam (September 4, 2014)

Gatarek, L.T., Erasmus University Rotterdam (May 8, 2014)

Ravazzolo, F., Erasmus University Rotterdam (November 23, 2007)

Hoogerheide, L.F., Erasmus University Rotterdam (June 29, 2006)

van Oest, R.D., Erasmus University Rotterdam (February 3, 2005)

Bos, C.S., Erasmus University Rotterdam (September 13, 2001)

Groen, J.J.J., Erasmus University Rotterdam (October 19, 2000)

Paap, R., Erasmus University Rotterdam (November 27, 1997)

Hoek, H., Erasmus University Rotterdam (June 13, 1997)

Kleibergen, F.R., Erasmus University Rotterdam (September 15, 1994)

Urbain, J.P., Université de Liege, Belgium (1992)

### **Massimo Giuliadori (Director of Graduate Studies Economics and Econometrics Tracks)**

Massimo Giuliadori is a professor of Empirical Macroeconomics at the University of Amsterdam and the TI Director of Graduate Studies for the economics and econometrics track. He holds a PhD from the University of Glasgow (Scottish Doctoral Programme, 2003). He is a research fellow of the Tinbergen Institute since 2005.

#### *Key Publications*

Beetsma, R.M.W.J., Giuliadori, M. (2011), The effects of government purchases shocks: Review and estimates for the EU, *The Economic Journal*, 121(550), F4-F32.

Beetsma, R.M.W.J., Giuliadori, M. (2010), The macroeconomic costs and benefits of the EMU and other monetary unions: An overview of recent research, *Journal of Economic Literature*, 48(3), 603-41.

Beetsma, R.M.W.J., Giuliadori, M., Wierdsma, P. (2009), Planning to cheat: EU fiscal policy in real time, *Economic Policy*, 24, 753-804.

Beetsma, R.M.W.J., Giuliadori, M., Klaassen, F.J.G.M. (2008), The effects of public spending shocks on trade balances and budget deficits in the European Union, *Journal of the European Economic Association*, 6(2-3), 414-23.

Beetsma, R.M.W.J., Giuliadori, M., Klaassen, F.J.G.M. (2006), Trade spillovers of fiscal policy in the European Union: A panel analysis, *Economic Policy*, 640-87.

### **Adriaan R. Soetevent (Former Director of Graduate Studies Economics track)**

Adriaan Soetevent is a professor of Microeconomics of the University of Groningen. From 2010 to 2013 he was Director of Graduate Studies of the Economics track and professor of Empirical Microeconomics at the University of Amsterdam. He is an associate editor of *De Economist* and an associate fellow of TI and ACLE. He received his PhD in economics (cum laude) in 2004 from the University of Groningen.

#### *Key Publications*

Soetevent, A.R., Haan, M.A., Heijnen, P. (forthcoming), Do auctions and forced divestitures increase competition? Evidence for retail gasoline markets, *Journal of Industrial Economics*.

Onderstal, A.M., Schram, A.J.H.C., Soetevent, A.R. (2013), Bidding to Give in the Field, *Journal of Public Economics* 104, 72-85.

Kuhn, P., Kooreman, P., Soetevent, A.R., Kapteyn, A. (2011), The effects of lottery prizes on winners and their neighbors: Evidence from the Dutch Postcode Lottery, *American Economic Review*, 101(5), 2226-47.

Soetevent, A.R. (2011), Payment choice, image motivation and contributions to charity: Evidence from a field experiment, *American Economic Journal: Economic Policy*, 3(1), 180-205.

Hinloopen, J., Soetevent, A.R. (2008), Laboratory evidence on the effectiveness of corporate leniency programs, *RAND Journal of Economics*, 39(2), 607-16.

### **Erik Plug (Former Director of Graduate Studies)**

Erik Plug is Professor of Economics at the University of Amsterdam. Previously, he was Director of Graduate Studies of the Tinbergen Institute and held positions at Erasmus University Rotterdam and



Wageningen University. Erik studied econometrics and graduated in 1992 at the University of Amsterdam. At the same university he obtained his PhD in 1997. His recent work is published in among others American Economic Review, Industrial and Labor Relations Review, Journal of Economic Literature, Journal of Labor Economics, Journal of Political Economy, and the Quarterly Journal of Economics. His current research interests relate to family, education and labor economics.

#### *Key Publications*

Plug, E.J.S., de Haan, M., Rosero, J. (forthcoming), Birth order and human capital development: Evidence from Ecuador, *Journal of Human Resources*.

Plug, E.J.S., Webbink, D., Martin, N. (2014), Sexual Orientation, Prejudice, and Segregation, *Journal of Labor Economics*, 32(1), 123-59.

de Haan, M., Plug, E. (2011), Estimating intergenerational schooling mobility on censored samples: Consequences and remedies, *Journal of Applied Econometrics*, 26(1), 151-66.

Holmlund, H., Lindahl, M., Plug, E. (2011), The causal effect of parents' schooling on children's schooling: A comparison of estimation methods, *Journal of Economic Literature* 49(3), 615-51.

Bjorklund, A; Lindahl, M., Plug, E., (2006), The origins of intergenerational associations: Lessons from Swedish adoption data, *Quarterly Journal of Economics*, 121(3), 999-1028.

#### *PhD defenses supervised*

Buser, Th., University of Amsterdam (September 4, 2012)

de Haan, M., University of Amsterdam (December 4, 2008)

#### **Ton Vorst (Former Director of Graduate Studies Finance track)**

Ton Vorst was full professor in quantitative risk management at the department of Finance at VU University Amsterdam and a professor at the Duisenberg school of Finance. Ton Vorst was also the Director of Graduate Studies for Finance at the Tinbergen Institute (until December 2013). He was head of the VU Amsterdam School of Finance and Risk Management and was full professor in Finance at Erasmus University Rotterdam before joining VU University Amsterdam in 2006 on a part-time basis. From 2000 until the end of 2009 he was Executive Vice President at ABNAMRO and later on RBS, responsible for quantitative risk management. He is currently senior advisor to ABNAMRO. He is a fellow of TI and an associate editor of the *Journal of Derivatives* and has held 8 other associate editorships at international academic journals in the past. Ton Vorst holds a PhD in Mathematics from the University of Utrecht (1978).

#### *Key Publications*

Houweling, P., Vorst, A.C.F. (2005), Pricing default swaps: Empirical evidence. *Journal of International Money and Finance*, 24(8), 1200-25.

Gondzio, J., Kouwenberg, J.H.M., Vorst, A.C.F. (2003), Hedging options under transaction costs and stochastic volatility, *Journal of Economic Dynamics and Control*, 27(6), 1045-68.

Kemna, A.G.Z., Heijnen, R., Vorst, A.C.F. (1994), Analysis of the term structure of implied volatilities, *Journal of Financial and Quantitative Analysis*, 29(1), 31-51.

Boyle, P.P., Vorst, A.C.F. (1992), Option pricing in discrete time with transaction costs, *The Journal of Finance*, 47, 271-94.

Kemna, A.G.Z., Vorst, A.C.F. (1990), A pricing method for options based on average asset values. *Journal of Banking and Finance*, 14(1), 113-29

### *PhD defenses supervised*

van der Voort, M.F.A., Erasmus University Rotterdam (October 24, 2008)

Gutkowska, A.B., Erasmus University Rotterdam (October 6, 2006)

Mentink, A.A., Erasmus University Rotterdam (December 1, 2005)

Veld-Merkoulova, Y., Erasmus University Rotterdam (October 2, 2003)

Houweling, P., Erasmus University Rotterdam (October 3, 2003)

Menkveld, A.J., Erasmus University Rotterdam (April 25, 2002)

Kouwenberg, R., Erasmus University Rotterdam (June 15, 2000)

Oldenkamp, B., Erasmus University Rotterdam (January 28, 1999)

Moraleda Novo, J.M., Erasmus University Rotterdam (June 26, 1997)

Martens, M.P.E., Erasmus University Rotterdam (June 19, 1997)

de Laat, E.E.A., Erasmus University Rotterdam (January 23, 1997)

Mercurio, F., Erasmus University Rotterdam (September 26, 1996)

Cheuk, H.F., Erasmus University Rotterdam (September 19, 1996)

Donders, M.W.M., Erasmus University Rotterdam (September 5, 1996)

Pelsser, A.A.J., Erasmus University Rotterdam (January 18, 1996)

Heynen, C.C.J.M., Erasmus University Rotterdam (February 17, 1995)

de Munnik, J.F.J., Erasmus University Rotterdam (December 17, 1992)

### **André Lucas (Former Director of Graduate Studies Finance track)**

Andre Lucas is full professor at the department of Finance at VU University Amsterdam. He obtained his PhD (1996) in Econometrics at Erasmus University Rotterdam. For the period 2010-2015, professor Lucas has been awarded the prestigious VICI grant for senior researchers by the Dutch national science foundation (NWO) for his research on time varying parameter models and inherent model uncertainty in financial econometrics and risk management.

### *Key Publications*

Creal, D.D., Schwaab, B., Koopman, S.J., Lucas, A. (2014) Observation driven mixed-measurement dynamic factor models with an application to credit risk, *Review of Economics and Statistics*, forthcoming.

Creal, D.D., Koopman, S.J., Lucas, A. (2013), General autoregressive score models with applications, *Journal of Applied Econometrics*, 28(5), 777-95.

Botshekan, M., Kraeussl, R.G.W., Lucas, A. (2012), Cash flow and discount rate risk in up and down markets: What is actually priced? *Journal of Financial and Quantitative Analysis*, 47(6), 1279-1301.

Koopman, S.J., Lucas, A., Schwaab, B. (2012), Dynamic factor models with macro, frailty and industry effects for U.S. default counts: The credit crisis of 2008, *Journal of Business and Economic Statistics*, 30(4), 521-32.

Creal, D.D., Koopman, S.J., Lucas, A. (2011), A dynamic multivariate heavy-tailed model for time-varying volatilities and correlations, *Journal of Business and Economic Statistics*, 29(4), 552-63.

#### *PhD defenses supervised*

Zhang, X., VU University Amsterdam (February 11, 2013)

Scharth Pinto, M.S.F.P., VU University Amsterdam (December 17, 2012)

Botshekan, M., VU University Amsterdam (December 6, 2012)

Wang, T., VU University Amsterdam (September 17, 2012)

Konijn, S.J.J., VU University Amsterdam (November 2, 2011)

Lee, K.M.C., VU University Amsterdam (June 10, 2011)

Schwaab, B., VU University Amsterdam (January 17, 2011)

Banachewicz, K., VU University Amsterdam (June 16, 2009)

Monteiro, A., VU University Amsterdam (October 27, 2008)

van der Wel, M., VU University Amsterdam (December 1, 2008)

Siegmann, A.H., VU University Amsterdam (January 7, 2003)

## **Members of the Admission Board**

The admission board reviews the applications of prospective students who would like to attend the MPhil program and decides on the admission of students and their possible funding. The scholarship budget is made available by the three economics departments of TI. The admission board consists of representatives of the three faculties, appointed by their respective Deans. The board was established in 2004.

#### Current members:

Prof. R. Sloof (since 01/01/2013) - UVA

Prof. J.L. Moraga-González (since 01/06/2012) - VU

Prof. R. Paap (since 01/01/2014) - EUR

#### Former members:

Prof. H. Oosterbeek (until 2012) - UVA

Prof. E.T. Verhoef (until 2012) - VU

Prof. D.J.C. van Dijk (until 2013) - EUR

Current members:

**Randolph Sloof**

Randolph Sloof is professor of Organizational Economics at the University of Amsterdam. His main research interests lie in the fields of organizational economics, experimental economics and behavioral economics. His research typically combines applied game theory modeling with rigorous empirical testing by means of laboratory experiments. Randolph Sloof teaches courses in Organizational Economics and Contract Theory at the MSc and PhD level. Within the University of Amsterdam he is heading the Markets & Organizations section. Randolph is a TI alumnus and obtained his PhD in 1997 with a thesis on game theoretic models of the political influence of interest groups.

*Key publications*

Oosterbeek, H., Sloof, R., Sonnemans, J. (2011), Rent-seeking versus productive activities in a multi-task experiment. *European Economic Review*, 55 630-643.

Sloof, R., Sonnemans, J. (2011), The interaction between explicit and relational incentives: An experiment. *Games and Economic Behavior*, 73 573-594.

de Haan, T., Offerman, T., Sloof, R. (2011), Noisy signaling: Theory and experiment. *Games and Economic Behavior*, 73 402-428.

Goeree, J., Offerman, T., Sloof, R. (2013), Demand Reduction and Preemptive Bidding in Multi-Unit License Auctions. *Experimental Economics*, 16 52-87.

Maximiano, S., Sloof, R., Sonnemans, J. (2013), Gift exchange and the separation of ownership and control. *Games and Economic Behavior*, 77 41-60.

*PhD defenses supervised*

de Haan, T. University of Amsterdam (July 5, 2012)

**Jose L. Moraga-González**

(See Supervisory Board for cv, publications and PhD defenses supervised)

**Richard Paap**

Richard Paap is professor in Econometrics at Econometric Institute, Erasmus School of Economics. He obtained his PhD at the same school in 1997 on the topic Bayesian analysis of Markov Switching models. He has several publications in econometric, statistical and economic journals and is coauthor of two econometric textbooks.

*Key Publications*

Groen, J.J.J., Paap, R., Ravazzolo, F. (2013), Real-time inflation forecasting in a changing world, *Journal of Business & Economic Statistics*, 31, 29-44.

Fok D., Paap, R., van Dijk, B. (2012), A rank-ordered logit model with unobserved heterogeneity in ranking capabilities, *Journal of Applied Econometrics*, 27, 831-46.

Van Nierop, E., Bronnenberg, B., Paap, R., Wedel, M., Franses, P.H.B.F. (2010), Retrieving Unobserved Consideration Sets from Household Panel Data, *Journal of Marketing Research*, 47, 63-74.

Paap, R., Segers, R., van Dijk, D.J.C. (2009), Do leading indicators lead peaks more than troughs?, *Journal of Business & Economics Statistics*, 27, 528-43.

Fok, D., Paap, R. (2009), Modeling category-level purchase timing with brand-level marketing variables, *Journal of Applied Econometrics*, 24, 469-89.

#### *PhD defenses supervised*

Salimans, T., Erasmus University Rotterdam (May 23, 2013)

Cakmakli, C., Erasmus University Rotterdam (January 26, 2012)

Baştürk, N., Erasmus University Rotterdam (November 4, 2010)

van Dijk, A., Erasmus University Rotterdam (July 2, 2009)

#### Former Members

#### **Hessel Oosterbeek**

Hessel Oosterbeek is a full professor at the University of Amsterdam in 2000. He is a research fellow of TI since 1993, a fellow of CESifo, and of the Amsterdam Institute for International Development (AIID). He holds a PhD in economics from the University of Amsterdam (1992).

#### *Key Publications*

Buser, T., Niederle, M., Oosterbeek, H. (forthcoming), Gender, competitiveness and career choices, *Quarterly Journal of Economics*.

Fredriksson, P., Öckert, B., Oosterbeek, H. (2013), Long-term effects of class size, *Quarterly Journal of Economics*, 128, 249-85.

Leuven, E., Sonnemans, J.H., Oosterbeek, H., van der Klaauw, B. (2011), Incentives versus sorting in tournaments: Evidence from a field experiment, *Journal of Labor Economics*, 29, 637-58.

Leuven, E., Oosterbeek, H., van der Klaauw, B. (2010), The effect of financial rewards on students achievement: Evidence from a randomized experiment, *Journal of the European Economic Association*, 8(6), 1243-65.

Leuven, E., Lindahl, M., Oosterbeek, H., Webbink, H.D. (2007), The effect of extra funding for disadvantaged students on achievement, *Review of Economics and Statistics*, 89(4), 721-36.

#### *PhD defenses supervised*

Rosero Moncayo, J.A., University of Amsterdam (September 27, 2012)

Buser, T., University of Amsterdam (September 4, 2012)

van Ewijk, R., University of Amsterdam (October 20, 2009)

Maximiano, S., University of Amsterdam (February 23, 2007)

Waterreus, J.M., University of Amsterdam (September 5, 2003)

Leuven, E., Erasmus University Rotterdam (May 19, 1994)

### **Erik T. Verhoef**

(See Supervisory Board for cv, publications and PhD defenses supervised)

### **Dick J.C. van Dijk**

Dick van Dijk is a professor of Econometrics at Erasmus University Rotterdam. In 2007 he became a member of the Erasmus Research Institute of Management ERIM Program Advisory Committee and of the TI MPhil Admissions Board. President of the Society for Nonlinear Dynamics and Econometrics (SNDE), 2005 - 2006. From 2003-2005 he was an associate director of ERIM. 2004-2006 he was a member of the VCW (the ESE Committee of Research). He graduated in 1999 cum laude at Erasmus University Rotterdam. Grants were received for a EUR research fellowship and a NWO research fellowship.

#### *Key Publications*

Bataa, E., Osborn, D.R., Sensier, M., van Dijk, D.J.C. (2013), Structural breaks in the international dynamics of inflation, *Review of Economics and Statistics* (95), 646-59.

Diks, C., Panchenko, V., van Dijk, D.J.C. (2011), Likelihood-based scoring rules for comparing density forecasts in tails, *Journal of Econometrics* (163), 215-30.

Paap, R., Segers, R., van Dijk, D.J.C. (2009), Do leading indicators lead peaks more than troughs? *Journal of Business and Economic Statistics* (27), 528-43.

Swanson, N.R., van Dijk, D.J.C. (2006), Are statistical reporting agencies getting it right? Data rationality and business cycle asymmetry, *Journal of Business and Economic Statistics*, (24), 24-42.

Giordani, P., Kohn, R., van Dijk, D.J.C. (2007), A unified approach to nonlinearity, structural change, and outliers. *Journal of Econometrics* (137), 112-33.

#### *PhD defenses supervised*

Opschoor, A., Erasmus University Rotterdam (February 20, 2014)

Scholtus, M.L., Erasmus University Rotterdam (February 27, 2014)

Raviv, E.R., Erasmus University Rotterdam (March 14, 2014)

Bannouh, K., Erasmus University Rotterdam (January 11, 2013)

Cakmakli, C., Erasmus University Rotterdam (January 26, 2012)

Exterkate, P., Erasmus University Rotterdam (December 13, 2011)

Sokolinskiy, O., Erasmus University Rotterdam (September 23, 2011)

Markwat, T.D., Erasmus University Rotterdam (March 17, 2011)

Noordegraaf – Eelens, L.H.J., Erasmus University Rotterdam (October 19, 2010)

Baştürk, N., Erasmus University Rotterdam (November 4, 2010)

Wong, A.S.K., Erasmus University Rotterdam (January 29, 2009)

Schauten, M.B.J., Erasmus University Rotterdam (April 17, 2009)

de Zwart, G.J., Erasmus University Rotterdam (June 26, 2008)

Pooter, M.D. de, Erasmus University Rotterdam (September 27, 2007)

Watkins Fassler, K., Erasmus University Rotterdam (May 10, 2007)

## **Members of the Examination Board**

The Examination Board's main task is to determine in an objective and expert manner whether a student fulfils the conditions for obtaining the degree as defined in the course and examination regulations. The Examination Board issues guidelines for adequate testing, ensures that the *Academic and Exam Regulations* are properly implemented, grants permission for exemptions and deviations from the curriculum and imposes measures in case of fraud and plagiarism. The Examination Board consists of representatives of the three faculties who are appointed by their respective Deans.

### Current members:

Prof. C.A.A.M. Withagen (since 01/07/2008) - VU (Chair)

Prof. A.J.H.C. Schram (since 01/07/2011) - UVA

Prof. D.J.C. van Dijk (since 01/03/2011) - EUR

### Former members

Prof. J. Hartog (until 01/07/2011) - UVA

Prof. M.C.W. Janssen (until 01/03/2011) - EUR

### Current members:

#### **Cees A.A.M. Withagen**

Cees Withagen (1950) got his master's degree (cum laude) at Tilburg University in 1974 in econometrics with a specialization in mathematical economics. In 1984 he got his PhD degree (cum laude) also at Tilburg University. Currently, he is professor of Environmental Economics at VU University Amsterdam, department of Spatial Economics in the Faculty of Economics and Business Administration. He is also fellow of Tinbergen Institute and CentER (Tilburg University).

#### *Key Publications*

van der Ploeg, F.R., Withagen, C.A.A.M. (2014), Growth, renewables and the optimal carbon tax, *International Economic Review* 55, 283-311.

Mitra, T., Asheim, G.B., Buchholz, W., Withagen, C.A.A.M. (2013), Characterizing the sustainability problem in an exhaustible resource model, *Journal of Economic Theory*, 148, 2164-82.

van der Ploeg, F.R., Withagen, C.A.A.M. (2012), Is there really a green paradox? *Journal of Environmental Economics and Management*, 64, 342-63.

Benckroun, H., Withagen, C.A.A.M. (2012), On price taking behavior in a nonrenewable resource cartel-fringe game, *Games and Economic Behavior* 76(2), 355-74.

van der Ploeg, F.R., Withagen, C.A.A.M. (2012), Too much coal, too little oil, *Journal of Public Economics*, 96(1-2), 62-77.

*PhD defenses supervised*

Edens, B., VU University Amsterdam (November 12, 2013)

Bogmans, C., Tilburg University (June 1, 2011)

Halsema, A.N., VU University Amsterdam (February 15, 2011)

Mulatu, A., VU University Amsterdam (January 29, 2004)

Noailly, J., VU University Amsterdam (October 31, 2003)

Vellinga, N., Tilburg University (March 3, 1999)

**Arthur J.H.C. Schram**

Arthur Schram is professor of experimental economics at the Amsterdam School of Economics of the University of Amsterdam. His research interests include experimental economics, public economics, political economics, industrial organization and behavioral economics. From 1998-2007 Arthur Schram was founding co-editor of *Experimental Economics*. He became a TI fellow in 1996.

*Key Publications*

Brandts, J., Reynolds, S.S., Schram, A.J.H.C. (forthcoming), Pivotal suppliers and market power in experimental supply function competition, *The Economic Journal*.

Großer, J.W., Schram, A.J.H.C. (2010), Public opinion polls, voter turnout and welfare: An experimental study, *The American Journal of Political Science*, 54, 700-17.

Ule, A., Schram, A.J.H.C., Riedl, A., Cason, T. (2009) Indirect punishment and generosity towards strangers, *Science*, 326, 1701-03.

Seinen, I., Schram, A.J.H.C. (2006), Social status and group norms: indirect reciprocity in a mutual aid experiment, *European Economic Review*, 50, 581-602.

Großer, J.W., Schram, A.J.H.C. (2006), Neighborhood information exchange and voter participation: An experimental study, *American Political Science Review*, 100/2, 235-248.

*PhD defenses supervised*

Gillet, J., University of Amsterdam (April 12, 2012)

Tyszler, M., University of Amsterdam (February 3, 2012)

Großer, J.W., University of Amsterdam (May 24, 2006)

Ule, A., University of Amsterdam (June 7, 2005)

Wit, J.N.M., University of Amsterdam (April 22, 1997)

Offerman, T.J.S., University of Amsterdam (September 9, 1996)



## **Dick J.C. van Dijk**

(See Admissions Board for cv, publications and PhD defenses supervised)

### Former members

#### **Joop Hartog**

Joop Hartog (1946) is emeritus professor of economics at the University of Amsterdam, where he has been appointed in 1981. He got his economics education at the Netherlands School of Economics (now Erasmus University Rotterdam) and at Queens University in Kingston, Canada. He started his professional career at Erasmus University, where he also got his PhD. He is specialized in labor economics, and he published, alone or with co-authors, some ten books, about a hundred articles in international journals and over a hundred contributions to books and journals in Dutch. He co-founded the Journal Labour Economics and for almost 15 years wrote columns for Dutch newspapers. He was a member of several government advisory committees, including the Council of Economic Advisors. He held visiting positions in many places, including Stanford, the World Bank, Peking University and Harvard. In 2001, he was appointed as a member of the Royal Dutch Academy of Sciences KNAW.

#### *Key Publications*

Hartog, J., Sun, Y., Ding, X. (2010), University rank and bachelor's labour market positions in China, *Economics of Education Review*, 29(6), 971-79.

Hartog, J., van Praag, C.M., van der Sluis, J. (2010), If you are so smart, why aren't you an entrepreneur? Returns to cognitive and social ability: Entrepreneurs versus employees, *Journal of Economics and Management Strategy*, 19(4), 947-89.

Hartog, J., Zorlu, A. (2009), How important is homeland education for refugees; economic position in the Netherlands, *Journal of Population Economics*, 22(1), 219-46.

Diaz Serrano, L., Hartog, J., Skyt Nielsen, H. (2008), Compensating wage differentials for schooling risk in Denmark, *Scandinavian Journal of Economics*, 110 (4), 711-31.

Teulings, C.N., Hartog, J. (1998), *Corporatism or competition? Labour contracts, institutions and wage structures in international comparison*, Cambridge: Cambridge University Press, reprinted as paperback 2007.

#### *PhD defenses supervised*

van Welie, E.A.A.M., University of Amsterdam (July 3, 2013)

Kastoryano, S.P., University of Amsterdam (April 24, 2013)

Mazza, J., University of Amsterdam (March 23, 2012)

de Jong, J.P.J., University of Amsterdam (November 27, 2007)

van der Sluis, J., University of Amsterdam (April 20, 2007)

Zijl, M., University of Amsterdam (June 20, 2006)

Raita, S.M., University of Amsterdam (December 7, 2005)

Levin, J.D., University of Amsterdam (October 23, 2002)

Jonker, N., University of Amsterdam (June 13, 2001)

de Beer, P.T., University of Amsterdam (June 5, 2001)

Webbink, H.D., University of Amsterdam (September 2, 1999)

Ranasinghe, M.D.A.L., University of Amsterdam (September 2, 1999)

Cabral Vieira, J.A., University of Amsterdam (April 23, 1999)

van der Ende, M.A., University of Amsterdam (June 30, 1997)

Folkertsma, C.K., University of Amsterdam (June 12, 1996)

Verhage K.G., Leunis W.P., University of Amsterdam (April 25, 1996)

van Praag, C.M., University of Amsterdam (February 22, 1996)

van den Berg, J.E., University of Amsterdam (November 29, 1995)

Haagsma, R., University of Amsterdam (November 27, 1995)

van Tulder, F.P., University of Amsterdam (October 25, 1994)

Maassen van den Brink, H., University of Amsterdam (June 17, 1994) Cum laude

Mekkelholt, E.W., University of Amsterdam (October 29, 1993)

Kee, P.T.J.G., University of Amsterdam (October 15, 1993)

Groot, W.N.J., University of Amsterdam (May 6, 1992)

Oosterbeek, H., University of Amsterdam (January 31, 1992)

Elhorst, J.P., University of Amsterdam (December 20, 1990)

de Braekeleer, F., University of Amsterdam (December 10, 1990)

Teulings, C.N., University of Amsterdam (May 2, 1990)

de Beus, J.W., University of Amsterdam (December 15, 1989)

van Eck, R., University of Amsterdam (October 13, 1989)

Kazemier, B., University of Amsterdam (October 13, 1989)

van Ophem, J.C.M., University of Amsterdam (May 12, 1989)

van de Stadt, H., University of Amsterdam (June 10, 1988)

Evers, G., University of Amsterdam (June 1986)

van der Veen, A., University of Amsterdam (June 1986)

### **Maarten C.W. Janssen**

Maarten Janssen was Director of the Tinbergen Institute from 2004 to 2008. For six years now he has been working as University Professor for Microeconomic Theory at the University of Vienna, Austria. Since 2011 he is also a Visiting Research Professor, Higher School of Economics Moscow.

### *Key Publications*

Janssen, M.C.W., S. Roy, Competition, Signaling and Disclosure, *Economic Journal* (Forthcoming).

Janssen, M.C.W., A. Parakhonyak (2013), Price matching guarantees and consumer search, *International Journal of Industrial Organization*, 31(1), 1-11.

Janssen, M.C.W., V.A. Karamychev, E. Maasland (2012), Auctions with flexible entry fees: A note, *Games and Economic Behavior*, 72(2), 594-601.

Janssen, M.C.W., P. Pichler, S. Weidenholzer (2011) Oligopolistic markets with sequential search and production cost uncertainty, *Rand Journal of Economics* 42(3), 444-70.

Dubovik, A., M.C.W. Janssen (2012), Oligopolistic competition in price and quality, *Games and Economic Behavior*, 75(1), 120-38.

### *PhD defenses supervised*

Voogt, B., Erasmus University Rotterdam (June 14, 2012)

Dittmer, D., University of Vienna (May 2011)

Vikander, N.E., Erasmus University Rotterdam (March 31, 2011)

Dubovik, A., Erasmus University Rotterdam (December 3, 2010)

Rauch, F., University of Vienna (September 2010)

Parakhonyak, A., Erasmus University Rotterdam (June 16, 2010)

Faber, R.P., Erasmus University Rotterdam (April 27, 2010)

Ficco, S.S., Erasmus University Rotterdam (May 25, 2007)

van der Noll, R., Erasmus University Rotterdam (October 5, 2006)

Aydinonat, N.E., Erasmus University Rotterdam (September 16, 2004)

Mendys, E., Erasmus University Rotterdam (September 26, 2003)

van Reeve, P.A., Erasmus University Rotterdam (May 1, 2003)

Karamychev, V.A., Erasmus University Rotterdam (May 3, 2002)

Marks, P.K., Erasmus University Rotterdam (June 20, 2002)

Sweegers, J.F.M., Erasmus University Rotterdam (October 1, 1998)

### **Members of the Educational Board**

The educational board gives solicited as well as unsolicited advice to the Supervisory Board of the Tinbergen Institute on all matters relating to the educational program. The educational board has 6 members; 3 students elected by students in annual elections, and 3 research fellows, one for each participating economics department. The Educational Board organizes its two regular meetings around the semi-annual MPhil evaluation meetings organized by the Students' Council. This provides

students with a channel to voice their concerns about the MPhil program. Students may also contact the Educational Board directly with general concerns about the educational program.

Current members:

Prof. B. van der Klaauw (since 01/02/2011 - VU (Chair)

Prof. T.J.S. Offerman (since 01/11/2009) - UVA

Prof. D. Fok (since 01/02/2011) - EUR

Former members:

Prof. H.P. Boswijk (until 01/11/2009) - UVA

Prof. B. Visser (until 01/02/2011) - EUR

Current members:

**Bas van der Klaauw (chair)**

Bas van der Klaauw is professor of economics at the VU University Amsterdam. He is a research fellow of the Tinbergen Institute and IZA and is affiliated with the CEPR and IFAU (Uppsala). He obtained his PhD from the VU University Amsterdam (2000). Bas van der Klaauw has published in *Journal of Econometrics*, *Journal of Business and Economic Statistics*, *Journal of Public Economics*, and *Journal of Labor Economics*. He joined IZA as a Research Fellow in May 2004.

*Key Publications*

van der Klaauw, B., J. van Ours (2013), Carrot and stick: How reemployment bonuses and benefit sanctions affect exit rates from welfare, *Journal of Applied Econometrics*, 28, 275-96.

Bolhaar, J., M. Lindeboom, B. van der Klaauw (2012), A dynamic analysis of the demand for health insurance and health care, *European Economic Review*

Gautier, P., B. van der Klaauw (2012), Selection in a field experiment with voluntary participation, *Journal of Applied Econometrics*

Leuven, E., H. Oosterbeek, B. van der Klaauw (2010), The effect of financial rewards on students' achievement: Evidence from a randomized experiment, *Journal of the European Economic Association*

Lindeboom, M., A.L. Nozal, B. van der Klaauw (2009), Parental education and child health: Evidence from a schooling reform, *Journal of Health Economics*, 28, 109-31.

*PhD defenses supervised*

Bolhaar, J.A., VU University Amsterdam (March 25, 2010)

Lena Nozal, A., VU University Amsterdam (March 30, 2007)

**Theo J.S. Offerman**

Theo Offerman is professor of Behavioral Game Theory at the University of Amsterdam (since 2005). He is a research fellow of the Tinbergen Institute and CESS, and an associate editor of *Games and Economic Behavior* and member of the editorial board of *Experimental Economics*. He was a visiting

professor at NYU. Offerman holds a PhD in experimental economics from the University of Amsterdam (1996).

#### *Key Publications*

Nosenzo, D., T.J.S. Offerman, M. Sefton, A. van der Veen (forthcoming), Encouraging compliance: Bonuses versus fines, *Journal of Law, Economics and Organization*.

Goeree, J.K., T.J.S. Offerman, and R. Sloof (2013), Demand reduction and preemptive bidding in license auctions, *Experimental Economics*, 16, 52-87.

Haan, T. de, T.J.S. Offerman and R. Sloof (2011), Noisy signaling: Theory and experiment', *Games and Economic Behavior*, 73, 402-28.

Hu, A., T.J.S. Offerman and L. Zou (2011), Risk preferences and premium auctions', *Journal of Economic Theory*, 146, 2420-39.

Offerman, T.J.S., J.H. Sonnemans, G. van de Kuilen and P.P. Wakker (2009), A truth-serum for non-Bayesians: Correcting proper scoring rules for nonlinear risk attitudes, *Review of Economic Studies*, 76, 1461-89.

#### *PhD defenses supervised*

de Groot Ruiz, A., University of Amsterdam (September 14, 2012)

de Haan, T., University of Amsterdam (July 5, 2012)

van der Veen, A., University of Amsterdam (February 28, 2012)

Hu, X. (Audrey), University of Amsterdam (September 22, 2010)

### **Dennis Fok**

Dennis Fok is an endowed professor of applied econometrics at the Econometric Institute, the Erasmus School of Economics (ESE). His special interest is in modelling unobserved heterogeneity, panel models, marketing econometrics, and non-linear models. Professor Fok's research has been published widely in peer-reviewed academic journals including, among others, the *Journal of Marketing Research*, *Marketing Science*, the *Journal of Econometrics*, and the *Journal of Applied Econometrics*.

#### *Key Publications*

Horváth, Cs., D. Fok (2013), Moderating factors of immediate, gross, and net cross-brand effects of price promotions, *Marketing Science*, 32 (1), 127-52.

Peers, Y., D. Fok, P.H.B.F. Franses (2012), Modeling seasonality in new product diffusion', *Marketing Science*, 31(2), 351-64.

Fok, D., R. Paap, and B. van Dijk (2012), A rank-ordered logit model with unobserved heterogeneity in ranking capabilities, *Journal of Applied Econometrics*, 27(5), 831-46.

van Everdingen, Y., D. Fok, S. Stremersch (2009), Modeling global spill-over of new product takeoff, *Journal of Marketing Research*, 46(5), 637-52.

Fok, D., R. Paap (2009), Modeling category-level purchase timing with brand-level marketing variables, *Journal of Applied Econometrics*, 24, 469-89.

### *PhD defenses supervised*

Salimans, T., Erasmus University Rotterdam (May 23, 2013)

### Former members:

#### **H. Peter Boswijk**

(See Supervisory Board for cv, publications and PhD defenses supervised)

#### **Bauke Visser**

(See General Directors for cv, publications and PhD defenses supervised)

### **Coordinators core or field courses**

Since 2004, the DGS is supported by a selection of research fellows who serve as core course and field course coordinators. Core and field coordinators are experts in their fields and experienced supervisors of international PhD students. They advise the DGS in the choice of course subjects and lecturers.

#### Coordinators Core Courses:

Prof. G. van der Laan (Microeconomics)

Prof. T.J.S. Offerman (Microeconomics)

Prof. P.A. Gautier (Macroeconomics)

Prof. S.J. Koopman (Econometrics)

Prof. E.C.P. Perotti (Finance)

Prof. A.C.F. Vorst (Finance)

#### Coordinators Field Courses:

Prof. H.P. Boswijk (Econometrics)

Prof. P.H.B.F. Franses (Econometrics)

Prof. B. van der Klaauw (Empirical Microeconomics)

Prof. H. Oosterbeek (Empirical Microeconomics)

Prof. C.G. de Vries (Macroeconomics, monetary and international economics)

Prof. T.J.S. Offerman (Behavioural Economics)

Prof. O.H. Swank (Applied Microeconomics)

Prof. CA.A.M. Withagen (Economic Policy)

Dr. R. Calcagno (Finance)

Prof. I. Dittmann (Finance)

Prof. E.C.P. Perotti (Finance)

Coordinators Core Courses:

**Gerard van der Laan (Microeconomics)**

Gerard van der Laan is a full professor (1988) in Mathematical Economics and Head of the Department of Econometrics and Operations Research at the VU University Amsterdam. He obtained a PhD in Mathematics (in 1980) from VU University Amsterdam. Van der Laan is a fellow of TI and NIAS. He published about 75 papers on (dis)equilibrium theory, computation of fixed points, economic equilibria, evolutionary behavior, non-cooperative and cooperative game theory in international journals as Journal of Mathematical Economics, Mathematical Programming, Mathematics of Operations Research, Econometrica, SIAM Journal on Optimization, Journal of Economic Theory, Economic Theory, Games and Economic Behavior, International Journal of Game Theory, Social Choice and Welfare and others. Recently he is also involved in water allocation problems, which resulted in a publication in Journal of Environmental Economics and Management. He was elected fellow of the Econometric Society in 2013.

*Key Publications*

Van den Brink, R., G. van der Laan, V. Vasil'ev, Constrained core solutions for totally positive games with ordered players, forthcoming in International Journal of Game Theory.

Van den Brink, R., G. van der Laan, N. Moes, A strategic implementation of the average tree solution for cycle-free graph games, forthcoming in Journal of Economic Theory.

Van den Brink, R., G. van der Laan, N. Moes (2012), Fair agreements for sharing international rivers with multiple springs and externalities, Journal of Environmental Economics and Management, 63, 388-403.

Herings, P.J.J., G. van der Laan, A.J.J. Talman (2008), The average tree solution for cycle-free graph games, Games and Economic Behavior, 62, 77-92.

Van der Laan, G., A.J.J. Talman, Z. Yang (2007), A vector labeling method for solving discrete zero point and complementarity problems, SIAM Journal on Optimization, 18, 290-308.

*PhD defenses supervised*

Moes, N., VU University Amsterdam (January 11, 2013)

Katsev, I.V., VU University Amsterdam (December 15, 2009)

Kamphorst, J.J.A., VU University Amsterdam (November 4, 2005)

Pruzhansky, V., VU University Amsterdam (March 2, 2005)

van Veelen, C.M., VU University Amsterdam (April 20, 2004)

Tieman, A.F., VU University Amsterdam (June 22, 2000)

Cornet, M., VU University Amsterdam (March 24, 1998)

Venniker, R.J.G., VU University Amsterdam (June 18, 1997)

Bolt, W., VU University Amsterdam (March 3, 1997)

Houba, H., Tilburg University (December 22, 1994)

Hofkes, M.W., VU University Amsterdam (May 30, 1991)

Cornielje, O.J.C., VU University Amsterdam (October 3, 1990)

Jurriens, P., VU University Amsterdam (June 12, 1987)

### **Theo J.S. Offerman (Microeconomics)**

(See Educational Board for cv, publications and PhD defenses supervised)

### **Pieter Gautier (Macroeconomics)**

Pieter Gautier is a full professor of economics at the VU University Amsterdam. He worked as a postdoc at VU University Amsterdam, CPB Economic Policy Analysis 1997-99 and as a NWO postdoc at TI Amsterdam and Erasmus University Rotterdam. Later he moved back to VU University Amsterdam and worked as an assistant / associate professor. He has received a VIDI scholarship and he is currently a fellow of TI, IZA, CEPR, CESifo and SAM. Gautier was a visiting professor/scholar at Georgetown University, MIT and the University of Toulouse. He is an associate editor of the Journal of the European Economic Association.

#### *Key Publications*

Albrecht, J., P.A. Gautier, S. Vroman (2012), A Note on Peters and Severinov, "Competition among Sellers who offer Auctions instead of Prices" *Journal of Economic Theory*, 147, 389-92.

Gautier, P.A., B. van der Klaauw (2012), Selection in a field experiment with voluntary participation, *Journal of Applied Econometrics*, 27, 63-84.

Gautier, P.A., C.N. Teulings, A.P. van Vuuren (2010) On-the-job search, mismatch and efficiency, *Review of Economic Studies*, 77(1), 245-72.

Albrecht, J., S. Vroman (2006), Equilibrium directed search with multiple applications, *Review of Economic Studies*, 73, 869-91.

Gautier, P.A., C.N. Teulings (2006), How large are search frictions?, *Journal of the European Economic Association*, 4(6), 1193-1225.

Teulings, C.N., P.A. Gautier (2004), The right man for the job, *Review of Economic Studies*, 71, 553-80.

#### *PhD defenses supervised*

Wolthoff, R.P., VU University Amsterdam (November 13, 2008)

### **Siem J. Koopman (Econometrics)**

Siem Jan Koopman is professor of econometrics at the VU University Amsterdam and research fellow at the Tinbergen Institute, both since 1999. Furthermore, he is a visiting researcher at the European Central Bank (Financial Research) and, from September 2013, a long term visiting professor at CREATES, University of Aarhus. He held positions at the London School of Economics and Political Science between 1992 and 1997 and at the CentER (Tilburg University) between 1997 and 1999. In 2002 he visited the US Bureau of the Census in Washington DC as an ASA / NSF / US Census / BLS Research Fellow. Further, he was a Fernand Braudel Senior Fellow at the Department of Economics,



European University Institute, Florence, Italy, in 2010. His PhD is from the LSE (1992). He fulfills editorial duties at the Journal of Applied Econometrics and the Journal of Forecasting.

#### *Key Publications*

Creal, D.D., B. Schwaab, S.J. Koopman, A. Lucas (2014), Observation driven mixed-measurement dynamic factor models with an application to credit risk, Review of Economics and Statistics, forthcoming.

Koopman, S.J., A. Lucas, B. Schwaab (2012), Dynamic factor models with macro, frailty, and industry effects for U.S. default counts: the credit crisis of 2008, Journal of Business and Economic Statistics, 30, 521-32.

Creal, D.D., S.J. Koopman, A. Lucas (2011), A Dynamic Multivariate Heavy-Tailed Model for Time-Varying Volatilities and Correlations, Journal of Business and Economic Statistics, 29, 552-63.

Koopman, S.J., A. Lucas, B. Schwaab (2011), Modeling frailty-correlated defaults using many macroeconomic covariates, Journal of Econometrics, 162, 312-25.

Koopman, S.J., M.I.P. Mallee, M. van der Wel (2010), Analyzing the Term Structure of Interest Rates using the Dynamic Nelson-Siegel Model with Time-Varying Parameters, Journal of Business and Economic Statistics, 28, 329-43.

#### *PhD defenses supervised*

Zhang, X., VU University Amsterdam (February 11, 2011)

Scharth Pinto, M.S.F.P., VU University Amsterdam (December 17, 2012)

Janus, P., VU University Amsterdam (February 16, 2012)

Hindrayanto, A.I.W., VU University Amsterdam (September 7, 2011)

Schwaab, B., VU University Amsterdam (January 17, 2011)

Jungbacker, B., VU University Amsterdam (November 18, 2010)

Lee, K.M., VU University Amsterdam (May 4, 2010)

Dordonnat, V., VU University Amsterdam (September 4, 2009)

Vujic, S., VU University Amsterdam (May 7, 2009)

van der Wel, M., VU University Amsterdam (December 1, 2008)

Bijleveld, F., VU University Amsterdam (November 4, 2008)

Francke, M.K., VU University Amsterdam (March 7, 2006)

Luginbuhl, R., VU University Amsterdam (March 2, 2001)

#### **Enrico C. Perotti (Finance)**

Enrico Perotti is professor of international finance and chair of the finance group at the University of Amsterdam. His research in banking and corporate finance, organization theory, political economy, legal and financial history has appeared in top journals, such as The American Economic Review, Journal of Political Economy, and the Journal of Financial Economics. He is a fellow of TI, CEPR and a European Economic Association Fellow. Professor Perotti has held visiting appointments at MIT,

Oxford, London Business School, London School of Economics, IMF and CEU. He acted as consultant to the EC, IMF, FSB, World Bank and as senior advisor on Macro Prudential policy at DNB. In 2011-12 he visited as Houblon Normal Fellow the Financial Stability department at the Bank of England. Since 2012 he advises the ECB on banking regulation and financial stability. He directs since 1998 the Amsterdam Center for International Finance (CIFRA). He holds a PhD in finance from MIT (1990).

#### *Key Publications*

Perotti, E.C., J. Suarez (2011), A Pigouvian Approach to Liquidity Regulation, *International Journal of Central Banking*, 7(4), 3-41.

Hellmann, T., E.C. Perotti (2011), Circulation of Ideas in Firms and in Markets, *Management Science*, 57(10), 1813-26.

Perotti, E.C., E.L. von Thadden (2006), The political economy of corporate control, *Journal of Political Economy*, 114(1), 145-74.

Biais, B., E.C. Perotti (2002), Machiavellian privatization, *American Economic Review*, 92(1), 240-58.

Perotti, E.C., K.E. Spier (1993), Capital structure as a bargaining tool *American Economic Review*, 83(5), 1131-41.

#### *PhD defenses supervised*

Bersem, M.R.C., University of Amsterdam (June 8, 2012)

Vorage, M.W., University of Amsterdam (March 25, 2011)

Wu, H.T., University of Amsterdam (July 6, 2010)

Ratnovski, L., University of Amsterdam (March 25, 2008)

Vlahu, R.E., University of Amsterdam (March 25, 2008)

Feijen, E.H.B., University of Amsterdam (June 22, 2006)

Schindele, I., University of Amsterdam (May 20, 2005)

Rossetto, S., University of Amsterdam (November 29, 2002)

Shemetilo, D., CERGE-EI, Czech Republic (December 13, 1996)

#### **A. (Ton) C.F. Vorst (Finance)**

(See Director of Graduate Studies for cv, publications and PhD defenses supervised)

#### Field courses:

#### **H. Peter Boswijk (Econometrics)**

(See Supervisory Board for cv, publications and PhD defenses supervised)

#### **Philip Hans B.F. Franses (Econometrics)**

Philip Hans Franses is a professor of applied econometrics and a professor of marketing research at the Erasmus School of Economics (ESE). He is the dean of the ESE. Professor Franses was elected

in 2011 as member of the Royal Netherlands Academy of Arts and Sciences. In 2012 he received an honorary doctorate from Chiang Mai University in Thailand. He is a fellow of TI and ERIM. He holds a PhD in Econometrics from Erasmus University Rotterdam (1991).

*Key Publications*

"Periodicity and stochastic trends in economic time series", Oxford: Oxford University Press, 1996;

"Time series models for business and economic forecasting", Cambridge: Cambridge University Press, 1998; Translated into Chinese;

"Nonlinear time series models in empirical finance", Cambridge: Cambridge University Press, 2000 (with Dick van Dijk);

"Quantitative models in marketing research", Cambridge: Cambridge University Press 2001 (with Richard Paap);

"A concise introduction to econometrics: an intuitive guide", Cambridge: Cambridge University Press 2002; Translated into Chinese and Italian.

*PhD defenses supervised*

Lede, N.M., Erasmus University Rotterdam (December 19, 2013)

Mees, H., Erasmus University Rotterdam (August 28, 2012)

Legerstee, R., Erasmus University Rotterdam (May 10, 2012)

Peers, Y., Erasmus University Rotterdam (December 2, 2011)

Vlam, A.J., Erasmus University Rotterdam (December 1, 2011)

Lam, K.Y., Erasmus University Rotterdam (April 14, 2011)

Noordegraaf – Eelens, L.H.J., Erasmus University Rotterdam (October 19, 2010)

Hernandez Mireles, C., Erasmus University Rotterdam (June 28, 2010)

van Dijk, A., Erasmus University Rotterdam (July 2, 2009)

Segers, R., Erasmus University Rotterdam (January 29, 2009)

van Diepen, M., Erasmus University Rotterdam (January 22, 2009)

Non, M.C., Erasmus University Rotterdam (November 28, 2009)

Prins, R., Erasmus University Rotterdam (May 23, 2008)

Knapp, S., Erasmus University Rotterdam (January 25, 2007)

Vroomen, B., Erasmus University Rotterdam (November 9, 2006)

Tsolakis, S., Erasmus University Rotterdam (June 9, 2005)

Kippers, J., Erasmus University Rotterdam (September 9, 2004)

Fok, D., Erasmus University Rotterdam (November 6, 2003)

Wuyts, S., Erasmus University Rotterdam (March 27, 2003)

van Nierop, E., Erasmus University Rotterdam (December 20, 2002)

Jonker, J.J., Erasmus University Rotterdam (September 19, 2002)

de Bruin, P., Erasmus University Rotterdam (September 10, 2002)

Dekker, D., Erasmus University Rotterdam (September 24, 2001)

Verhoef, P., Erasmus University Rotterdam (September 20, 2001)

Lint, L.J.O., Erasmus University Rotterdam (March 22, 2001)

van Dijk, D.J.C. Erasmus University Rotterdam (September 16, 1999)

Veenstra, A., Erasmus University Rotterdam (June 6, 1999)

Kuiper, E., Erasmus University Rotterdam (December 22, 1994)

### **Bas van der Klaauw (Empirical Microeconomics)**

(See Educational Board for cv, publications and PhD defenses supervised)

### **Hessel Oosterbeek (Empirical Microeconomics)**

(See Admissions Board for cv, publications and PhD defenses supervised)

### **Casper G. de Vries (Macroeconomics, monetary and international economics)**

(See Supervisory Board for cv, publications and PhD defenses supervised)

### **Theo J.S. Offerman (Behavioural Economics)**

(See Educational Board for cv, publications and PhD defenses supervised)

### **Otto H. Swank (Applied microeconomics)**

Otto Swank is professor of microeconomics, in particular organizational economics, at the department of economics, Erasmus University Rotterdam. He is also the director of the department of economics at the Erasmus School of Economics.

#### *Key Publications*

Kamphorst, J.J.A., O.H. Swank (2013), When Galatea cares about her reputation: How having faith in your workers reduces their motivation to shine, *European Economic Review*, 60, 91-104.

Dominguez Martinez S., O.H. Swank (2009), A simple model of self-assessment, *The Economic Journal*, 119(539), 1225-41.

Visser B., O.H. Swank (2007), On committees of experts, *The Quarterly Journal of Economics*, 122(1), 337-72.

Dur, A.J., O.H. Swank (2005), Producing and manipulating information, *The Economic Journal*, 115, 185-99.

B.D. Peletier, A.J. Dur, O.H. Swank (1999), Voting on the budget deficit: Comment, *The American Economic Review*, 1377-81.

### *PhD defenses supervised*

Dominguez Martinez, S., Erasmus University Rotterdam (April 26, 2007)

Delfgaauw, J., Erasmus University Rotterdam (January 18, 2007)

Wrasai, P., Erasmus University Rotterdam (December 22, 2005)

Beniers, K.J., Erasmus University Rotterdam (September 1, 2005)

### **Cees A.A.M. Withagen (Economic Policy)**

(See Examination Board for cv, publications and PhD defenses supervised)

### **Riccardo Calcagno (Finance)**

After having worked for 10 years as a university professor at Tilburg University and VU University Amsterdam, Riccardo Calcagno joined EMLYON Business School in January 2011 as an associate professor of Corporate Finance. His research covers different topics: from corporate governance to mergers and acquisitions, to the design of optimal managerial compensation. He is currently focusing on the study of the consequences of financial illiteracy of households on their investment choices. Riccardo Calcagno successfully defended his dissertation at the UC Louvain (2001).

#### *Key Publications*

Calcagno, R., Y. Kamada, S. Lovo and T. Sugaya (forthcoming). Asynchronicity and coordination in common and opposing interest games, *Theoretical Economics*.

Calcagno, R., E. Fornero and M. Rossi (2009), The effect of house prices on household savings, *Journal of Real Estate Finance and Economics*, 39, 284-300.

Calcagno, R., L. Renneboog (2007), The incentive to give incentives: on the relative seniority of debt claims and managerial compensation, *Journal of Banking and Finance*, 31, 1795-1815.

Calcagno, R., S. Lovo (2006), Bid-Ask Price Competition with Asymmetric Information between Market Makers, *Review of Economic Studies*, 73, 329-55.

Calcagno, R., W. Wagner (2006), Dispersed initial ownership and the efficiency of the stock market under moral-hazard, *Journal of Mathematical Economics*, 42, 36-45.

### **Ingolf Dittmann (Finance)**

Ingolf Dittmann is professor in Finance at Erasmus University Rotterdam with research interests in Corporate Finance, Corporate Governance, Executive Compensation, and Behavioral Finance. He received his PhD from Dortmund University and his Habilitation (a 2nd German degree) from Humboldt-Universität zu Berlin, Germany. He also spent one year as a visiting scholar at the University of California at San Diego. His research has been published in leading international journals including the *Journal of Finance*, the *Review of Finance*, and the *Journal of Econometrics* and has won several best-paper awards. Ingolf Dittmann is member of the Tinbergen and the ERIM research institutes. He chaired the research project "Explaining Stock Options in Executive Compensation" that is financed by a NWO Vidi (2006-2010) grant, and "Inferring Preferences from Managerial Compensation Data" that is financed by a NWO Vici (2013-2017) grant.

### *Key Publications*

Dittmann, I., E. Maug, O. Spalt (2010), Sticks or carrots? Optimal CEO compensation when managers are loss-averse, *Journal of Finance*, 65(6), 2015-50.

Dittmann, I., E. Maug, C. Schneider (2010), Bankers on the boards of German firms: What they do, what they are worth, and why they are (still) there, *Review of Finance*, 14(1), 35-71.

Dittmann, I., N. Ulbricht (2008), Timing and wealth effects of German dual class stock unifications, *European Financial Management*, 14(1), 163-96.

Dittmann, I., E. Maug (2007), Lower salaries and no options? On the optimal structure of executive pay, *Journal of Finance*, 62(1), 303-43.

Dittmann, I., C.W.J. Granger (2002), Properties of nonlinear transformations of fractionally integrated processes, *Journal of Econometrics*, 110(2), 113-33.

### *PhD defenses supervised*

Zhang, D., Erasmus University Rotterdam (June 7, 2012)

Lamp, F.H., Erasmus University Rotterdam (June 14, 2011)

Yu, K.C., Erasmus University Rotterdam (November 3, 2011)

### **Enrico C. Perotti (Finance)**

(See core course coordinators for cv, publications and PhD defenses supervised)

### 3. Lecturers

The Director of Graduate Studies invites the best researchers and lecturers from the three participating department to teach in TI's MPhil program. In the academic years from 2008 until 2014, a vast majority of all core courses and of all field courses were taught by TI research fellows. Students can only address research fellows for MPhil thesis and paper supervision. Below you will find more detailed information on the lecturers in the MPhil program: their title, university affiliation, TI fellowship, University Teaching Qualification (BKO) and number of PhD theses supervised. Tinbergen Institute does not have a policy concerning BKO-qualifications and relies in this respect on the faculties. The faculties usually exempt senior and very experienced lecturers from the obligation to obtain a BKO. The BKO qualification of lecturers who left EUR, UvA or VU and are now appointed at other universities is unknown.

Title	Name	Last name	Affiliation	Research Fellow	BKO	# PhD theses supervised
Dr.	M. (Mikhail)	Anufriev *	UvA	X	X	—
Dr.	T. (Te)	Bao *	UvA			—
Prof.	E.J. (Eric)	Bartelsman	VU	X		2
Prof.	A. (Alessandro)	Beber *	UvA	X		—
Prof.	R.M.W.J. (Roel)	Beetsma	UvA	X	X	4
Dr.	H.G. (Hans)	Bloemen	VU	X	X	—
Dr.	C.S. (Charles)	Bos	VU	X	X	—
Prof.	H.P. (Peter)	Boswijk	UvA	X	X	8
Dr.	M.J. (Marcel)	Boumans	UvA	X	X	—
Dr.	F. (Frode)	Brevik	VU		X	—
Dr.	J. (Jan)	Brinkhuis	EUR		Ex.	—
Dr.	B.A. (Bjorn)	Brügemann	VU	X		—
Prof.	R. (Riccardo)	Calcagno *	VU	X		—
Prof.	G. (Giuseppe)	Dari-Mattiacci	UvA	X		2
Prof.	J.B. (John)	Davis *	UvA	X		4
Prof.	H.L.F. (Henri)	de Groot	VU	X	X	4
Dr.	M. (Monique)	de Haan *	UvA	X		—
Prof.	R.A. (Ruud)	de Mooij *	EUR	X		1
Prof.	C.G. (Casper)	de Vries	EUR	X	Ex.	25
	J. (Joris)	de Wind	UvA			—
Prof.	W.J. (Wouter)	den Haan *	LSE	X		9
Prof.	I. (Ingolf)	Dittmann	EUR	X	Ex.	3
Prof.	J.J.A.G. (Joost)	Driessen *	UvA	X		3
Prof.	C.T.M. (Chris)	Elbers	VU	X		2
Dr.	R. (Reyn)	Ewijk *	VU			—
Prof.	G. (Giovanni)	Facchini *	EUR	X		5
Prof.	C. (Chaim)	Fershtman	EUR	X		4
Prof.	D. (Dennis)	Fok	EUR	X	Ex.	1
Prof.	P.H.B.F. (Philip Hans)	Franses	EUR	X	Ex.	28

Title	Name	Last name	Affiliation	Research Fellow	BKO	# PhD theses supervised
Prof.	P.A. (Pieter)	Gautier	VU	X		1
Dr.	E. (Erasmus)	Giambona	UvA	X	X	—
Prof.	M. (Massimo)	Giuliodori	UvA	X	X	—
Dr.	S. (Sebastian)	Gryglewicz	EUR	X	X	—
Dr.	C. (Carmine)	Guerrero	UvA		X	—
Prof.	J.W. (Jan Willem)	Gunning	VU	X	Ex.	26
Prof.	J. (Joop)	Hartog	UvA	X	Ex.	35
Dr.	C. (Christiaan)	Heij	EUR		Ex.	—
Prof.	J. (Jeroen)	Hinloopen	UvA	X	X	2
Dr.	S. (Stefan)	Hochguertel	VU	X	X	—
Prof.	C.H. (Cars)	Hommes	UvA	X	X	14
Dr.	L.F. (Lennart)	Hoogerheide	VU	X		—
Dr.	H.E.D. (Harold)	Houba	VU	X	X	—
Prof.	B. (Bas)	Jacobs	EUR	X	Ex.	2
Prof.	M.C.W. (Maarten)	Janssen	EUR	X		15
Dr.	V.A. (Vladimir)	Karamychev	EUR	X	X	—
Prof.	J.F. (Jan)	Kiviet	UvA	X		7
Prof.	F.J.G.M. (Franc)	Klaassen	UvA	X	X	—
Prof.	F.R. (Frank)	Kleibergen	Brown/UvA	X		6
Prof.	S.J. (Siem Jan)	Koopman	VU	X		13
	D. (Dávid)	Kopányi	UvA			—
Dr.	A. (Alex)	Kriwoluzky *	UvA			—
Dr.	T. (Tomislav)	Ladika	UvA			—
Prof.	R.J.A. (Roger)	Laeven	UvA		X	7
Prof.	M. (Maarten)	Lindeboom	VU	X	X	8
Prof.	N.-P. (Nils-Petter)	Lundborg *	VU	X		1
Dr.	D. (Domenico)	Massaro	UvA			—
Dr.	M. (Michael)	Massmann	VU	X	X	—
Dr.	K. (Konstantinos)	Mavromatis	UvA			—
Prof.	A.J. (Albert)	Menkveld	VU	X		—
Prof.	J.L. (José Luis)	Moraga-González	VU	X		5
Prof.	O. (Owen)	O'Donnell	EUR	X	Ex.	3
Prof.	T.J.S. (Theo)	Offerman	UvA	X	X	4
Dr.	A.M. (Sander)	Onderstal	UvA	X	X	—
Dr.	M. (Marius)	Ooms	VU		X	—
Dr.	R.H. (Remco)	Oostendorp	VU	X		—
Prof.	H. (Hessel)	Oosterbeek	UvA	X	X	6



Title	Name	Last name	Affiliation	Research Fellow	BKO	# PhD theses supervised
Prof.	R. (Richard)	Paap	EUR	X	Ex.	4
Dr.	J. (Joana)	Pereira *	EUR			–
Prof.	E.C. (Enrico)	Perotti	UvA	X	X	9
Dr.	F. (Florian)	Peters	UvA		X	–
Prof.	E.J.S. (Erik)	Plug	UvA	X	X	2
Dr.	S. (Steven)	Poelhekke	VU	X	X	–
Dr.	L.C.G. (Lorenzo)	Pozzi	EUR	X	Ex.	–
Prof.	M.P. (Menno)	Pradhan	VU	X	X	–
Dr.	W.E. (Ward)	Romp	UvA	X	X	–
Dr.	Z. (Zacharias)	Sautner	UvA	X	X	–
Prof.	A. (Andreas)	Schabert *	UvA	X		5
Prof.	A.J.H.C. (Arthur)	Schram	UvA	X	X	6
Dr.	P. (Petr)	Sedlacek *	UvA			–
Prof.	R. (Randolph)	Sloof	UvA	X	X	1
Prof.	A.R. (Adriaan)	Soetevent *	UvA	X	X	–
Dr.	J.H. (Joep)	Sonnemans	UvA	X	X	2
Dr.	P.J.C. (Peter)	Spreij	UvA/Science			–
Prof.	C.A. (Christian)	Stoltenberg	UvA	X	X	–
Prof.	O.H. (Otto)	Swank	EUR	X	Ex.	4
Prof.	J. (Job)	Swank	EUR			1
Dr.	A. (Aljaz)	Ule	UvA		X	–
Dr.	M.J. (Martijn)	van den Assem	EUR	X	Ex.	–
Dr.	J.R. (Rene)	van den Brink	VU	X		–
Prof.	B. (Bas)	van der Klaauw	VU	X	X	2
Prof.	G. (Gerard)	van der Laan	VU	X	Ex.	13
Prof.	F. (Rick)	van der Ploeg	VU	X	Ex.	13
Prof.	D.J.C. (Dick)	van Dijk	EUR	X	Ex.	15
Prof.	H.K. (Herman)	van Dijk	EUR/VU	X		11
Prof.	E.K.A. (Eddy)	van Doorslaer	EUR	X	Ex.	7
Dr.	K.J. (Kees Jan)	van Garderen	UvA		X	–
Prof.	D.P. (Daan)	van Soest *	VU	X		2
Prof.	C.M. (Matthijs)	van Veelen	UvA	X	X	–
Prof.	S.J.G. (Sweder)	van Wijnbergen	UvA	X	Ex.	9
Prof.	F.A.A.M. (Frans)	van Winden	UvA	X	Ex.	18
Prof.	M.H. (Michel)	Vellekoop	UvA		X	–
Prof.	E.T. (Erik)	Verhoef	VU	X	X	10

Title	Name	Last name	Affiliation	Research Fellow	BKO	# PhD theses supervised
Prof.	P. (Patrick)	Verwijmeren	EUR	X	X	–
Prof.	B. (Bauke)	Visser	EUR	X	Ex.	2
Dr.	V. (Vladimir)	Vladimirov	UvA			–
Prof.	A.C.F. (Ton)	Vorst	VU	X	Ex.	17
Dr.	F.O.O. (Florian)	Wagener	UvA	X	X	–
Prof.	P.P. (Peter)	Wakker	EUR	X	Ex.	21
Prof.	C.A.A.M. (Cees)	Withagen	VU	X	Ex.	6
Dr.	R.C.J. (Remco)	Zwinkels	EUR	X	X	–

\*Lecturers no longer affiliated with one of the TI economics faculties (EUR, UvA, VU)  
Ex. = Exempted from the BKO obligation by the faculty

### Guest Lecturers

The Director of Graduate Studies has an annual budget of K €30 allocated for guest lectures. Guest lecturers are listed below. A separate budget is available for the TI lectures in Economics, Econometrics and Finance (see above).

Title	Name	Last name	Organization	# PhD theses supervised
Prof.	B. (Bruno)	Biais	Université Toulouse I	16
Prof.	L. (Lawrence)	Christiano	Northwestern University	15
Prof.	A. (Amil)	Dasgupta	London School of Economics	–
Prof.	D. (Dominique)	Demougin	University of Liverpool	–
Prof.	T. (Thierry)	Foucault	HEC Paris	5
Prof.	M. (Michel)	Juillard	Université de Paris VIII	1
Prof.	G. (Geert)	Ridder	USC	9
Prof.	F. (Frank)	Schorfheide	University of Pennsylvania	8
Prof.	J. (Joel)	Sobel	University of California - SD	25

## **4. Fellows: awards, grants, honors of all TI fellows since 2008**

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### **Tinbergen Institute**

2011-2015: Block grant (€ 800,000) of NWO Graduate Program from the Netherlands Organization for Scientific Research (NWO) for the employment of 5 PhD candidates.

### **Abbring, J.A.**

2005-2010: Member of the Young Academy (De Jonge Akademie) of the Royal Netherlands Academy of Arts and Sciences (KNAW).

### **Adema, Y.**

2008 - : Research fellow Netspar, Tilburg University

### **Arping, S.A.**

2010: Ross Best Paper Award 2010, Finance Research Letters

### **Assem, M.J. van den**

2011: Top Lecturer Award Erasmus School of Economics (ESE)

### **Bago d' Uva, T.**

2010-2012: VENI grant from the Netherlands Organization for Scientific Research NWO (€ 250,000)

2009: Top Talent Researcher award, Erasmus School of Economics (€ 10,000)

### **Baillon, A.**

2012: ERIM Award for Outstanding Performance by a Young Researcher

2010: Erasmus School of Economics Top Talent Researcher

2010: Veni Grant (€ 250,000) from the Netherlands Organization for Scientific Research (NWO)

### **Baltussen, G.**

2010 - : ERIM Fellow

**Bartelsman, E.J.**

2013-2014: Visiting Research Fellow, European Central Bank

2012-2013: Research Fellow, DG ECFin, European Commission

2007-2008: Member of the Netherlands Council of Economic Advisors (REA)

Member Mngt Cmt of EU COST Network IS0701 Firm Dynamics

Fellow IZA, Bonn

Netherlands Science Foundation, NWO/SZW, 2010-2012, 'The effect of labor market institutions on technology adoption'

**Basturk, N.**

2012: IEEE CIFEr, New York, USA, 'Best Student Paper Award' for the working paper 'A multi-covariate semi-parametric conditional volatility model using probabilistic fuzzy systems'

2010-2014: Post-doctoral position under an NWO grant, working with Prof. Herman K. van Dijk.

**Beetsma, R.M.W.J.**

2012-2017: Pensionfund provider MN, the Netherlands (€900,000)

2010-2012: Netspar theme grant (€72,261)

2010-2011: MN Services project (€52,500)

2008-2011: MN Services project (€225,000)

2007-2010: Netspar theme grant (€292,500)

Fellow CEPR, CESifo, Kiel Institute of World Economics

**Bekkum, S. van**

2012: Outstanding Paper Award 2012 (Eastern Finance Conference; \$1,000)

2010: Niels Stensen International Post-Doc Stipend 2010 (Niels Stensen Foundation; \$100,000)

2010: Best PhD Paper (Runner-Up Prize) Travel Grant 2010 (Australasian Finance and Banking Conference; \$2,000)

2008: Robert H. McGuckin III Fellowship (The Conference Board 2008; \$10,000)

**Berg, G.J. van den**

Fellow of IFAU (Uppsala), IFS (London), INSEE-CREST (Paris), CEPR (London), IZA.

2004- : IZA Program Director for "Evaluation of Labor Market Programs".

**Berg, V.A.C. van den**

2012-2017: Joint Research Projects NSFC-NOW (The Application of Operations Research in Urban Transport): Private roads in mixed private-public networks: co-author (the PI's are Erik Verhoef and Xiaoning Zhang) (€260,000 + RMB 800,000)

**Blasques, F.**

2012-2013: SWIFT Institute Grant for research on network liquidity effects

2012-2012: Banco de Portugal Visiting Researcher Grant

2008-2011: METEOR Doctoral Research Grant

**Bleichrodt, H.**

2014-2019: Research Excellence Initiative, Erasmus University (€1,000,000)

2014-2017: Netherlands Organisation for Scientific Research (NWO): Open competition PhD grant (€200,000)

2011-2014: Netherlands Organisation for Scientific Research (NWO): Open competition PhD grant (€200,000)

2007-2013: Vernieuwingsimpuls VICI (€1,250,000)

**Booij, A.S.**

2009: Subsidy for running a field experiment for the improvement of student choice in higher education (administered by Surfspot Foundation, 2009) (€56,000)

**Boot, A.W.A.**

2011: Winner 'Pierson Penning

Member Royal Netherlands Academy of Arts and Sciences (KNAW)

2008: President European Finance Association

Honorary Professor University of Ljubljana

Fellow CEPR

**Bos, C.S.**

2005-2008: VENI grant (€200,000) by NWO

**Bosker, M.**

2011: Martin Beckmann RSAI (Regional Science Association International) Award for the Best Paper in Papers in Regional Science published in 2010.

2010: Competitive travel grant, Econometric Society World Conference, Shanghai

2008: RSAI (Regional Science Association International) Dissertation Award for the best dissertation in Regional Science in 2008.

2008: Selected attendee, 3rd Nobel Laureate Meeting in Economic Sciences, Lindau, Germany

Fellow Oxcarre, CEPR, Research Institute for History and Culture, UU.

**Boswijk, H.P.**

2011–2015: NWO MaGW Open Competition Grant for PhD Project “Likelihood-based Inference in Dynamic Panel Data Models with Endogenous Covariates” (€208,193) (with Dr. Maurice Bun).

2006–2009: Netspar Research Theme Grant for “Market Consistent Valuation of Insurance Products”, €1,000,000 (co-applicant; principal applicant: Prof. Antoon Pelsser).

**Broda, S.A.**

2006-2009: Swiss National Science Foundation Grant No. 503242 (42,260 CHF p.a.)

2010-2012: Lecturer of the Year: Master in International Finance, University of Amsterdam

**Brügemann, B.A.**

Fellow IZA

**Bun, M.J.G.**

2011: Co-applicant of NWO grant (MAGW Open Competition) for project titled ‘Likelihood-based inference in dynamic panel data models with endogenous covariates’ (main applicant: Peter Boswijk).

2010: NWO VIDI grant (nr 452-10-015, budget: €750,000) for project titled ‘Causal inference with panel data’.

2008: Co-applicant of NWO grant (MAGW Open Competition) for project titled ‘Latent organisations in the Dutch film industry’ (main applicant: Nachoem Wijnberg).

**Burger, M.J.**

2012: Erasmus University Research Award (awarded once a year for highest excellence in research; one young scholar is chosen as recipient across all disciplines)

**Buser, T.**

2009-2012: Speerpunt Behavioural Economics funding for laboratory sessions and field surveys for several projects (total value of €15,850)

2010: Econometric Society Travel Grant for World Congress (\$1,000)

2009: C. Willems Stichting Travel Grant for visit to Stanford University (€1,200)

2007-2009: Tinbergen MPhil Scholarship (€25,400)

**Colantone, I.**

2009: Top Lecturer Erasmus School of Economics, Erasmus University

**Crutzen, B.**

2012: Associate fellow of ECARES (European Centre for Advanced Research in Economics and Statistics) at the Universite Libre de Bruxelles, Belgium

2011-2012: Winner, Lecturer of the Year Award, IBEB programme (student's association award)

2009-2010: Winner, Top Lecturer award, Erasmus School of Economics (ESE Faculty award).

2009-2010: Winner, Lecturer of the Year Award, IBEB programme (student's association award)

2008-2009: Winner, Top Lecturer award, Erasmus School of Economics (ESE Faculty award).

**Dari-Mattiacci, G.**

2012: Marie Curie grant for a two-year post doc position

2012: Becker Friedman Institute fellowship – University of Chicago

2010-2013: Board member of the Italian Society of Law and Economics (SIDE-ISLE)

2007-2011: VIDI grant from the Netherlands Organization for Scientific Research NWO (€800,000)

**Dekker, R.**

2012: Awarded Top Senior Researcher by the Erasmus School of Economics, Erasmus University Rotterdam

2012- : Fellow of the ISIR society

2000- : Member scientific board ERIM

**Delfgaauw, J.**

2011: NWO Open Competitie grant for the project 'Incentives at Work' (€200,000)

2010: Erasmus School of Economics Top Talent Researcher Award (€10,000)

2010: Erasmus School of Economics Top Lecture Award

**Dellaert, B.G.C.**

2012- : Member Netspar Partner Research Council

2010- 2013 Co-chair 9th triennial invitational choice symposium, with Bas Donkers.

2012: Netspar Medium Vision Research grant, "Interactive pension communication and decision

making”, with Bas Donkers (€ 250,000).

2011: Netspar Small Vision Research grant, “Measuring risk profiles for pensions,” with Jordana Liberali (€ 50,000).

2008: Netspar research grant “Supporting Consumer Pension Decision-Making Online” with Bas Donkers and Gerald Häubl (€ 499,000).

2006- : Member supervisory board ISAM (previously EC<sup>3</sup>MA)

2006- : Member of the board of overseers of the Advanced Multi-Disciplinary Facility for Measurement and Experimentation in the Social Sciences – MESS (funded by the Dutch Science foundation NWO)

Fellow ERIM; Fellow Netspar

### **Dijk, D.J.C. van**

Fellow ERIM

### **Dijk, H.K. van**

Elected Fellow of the International Society of Bayesian Analysis

Elected Senior Fellow at the Rimini Center for Economic Analysis

Econometricians Hall of Fame amongst top ten European econometricians

Honorary Fellow of the Tinbergen Institute

Fellow of Journal of Econometrics

Grant from Dutch Organization of Research (NWO) for Supervision of Postdoctoral Position

### **Dijkgraaf, E.**

Fellow ENCORE

### **Diks, C.**

2011-2014: co-applicant with Cars Hommes: FP7-EU-collaborative project Complexity Res. Initiative for Systemic Instabilities (CRISIS) (coord. D. Delli-Gatti, UCSC, Milano)

2010-2013: co-applicant with Cars Hommes: grant Dutch Science Foundation (NWO) Understanding financial instability through complex systems (+ Dutch Central Bank)

### **Diris, B.**

2012: Honourable mention Christian Huygensprijs (PhD thesis was one of the four best PhD theses in econometrics in the Netherlands, 2008 - 2011)

2011: Netspar PhD thesis award (€ 3,000)



2011: Research grant, Inquire Europe (€ 10,000)

2011: Commonfund prize EFA Stockholm (€ 3,000)

**Dittmann, I.**

2013-2017: Chair research project "Inferring Preferences from Managerial Compensation Data" that is financed by a NWO VICI grant (€ 1,400,000)

2006-2010: Chair research project "Explaining Stock Options in Executive Compensation" that is financed by a NWO VIDI grant (€ 790,000)

**Dobbelaere, S.**

2013-2014: Total factor productivity: Measurement, determinants and effects Research Grant - National Bank of Belgium (NBB, Brussels) (€ 30,000)

2010-2012: SEEK (Strengthening Efficiency and Competitiveness in the European Knowledge Economies) Research Grant - Centre for European Economic Research (ZEW, Mannheim) (€ 159,999)

Fellow IZA

**Donkers, A.C.D.**

2012: Netspar Medium Vision Research grant, "Interactive pension communication and decision making", with Benedict Dellaert (€ 250,000).

2008: Netspar research grant "Supporting Consumer Pension Decision-Making Online" with Benedict Dellaert and Gerald Häubl (€ 499,000).

Fellow Netspar

Extramural fellow CentER

**Doorslaer, E. van**

Adjunct Professorship at the Centre for Health Economics Research and Evaluation of the University of Technology (Sydney)

One of the founders of the MSc in Health Economics offered by the Erasmus University.

Health economics consultant to the World Bank, WHO and UNICEF

**Dur, R.**

2010: Research grant Stichting Management Studies (€ 70,000)

2008: Top Talent Research award 2012 of the Erasmus School of Economics

Fellow IZA, CESifo

**Elbers, C.**

Fellow EUDN, AIID

**Florax, R.**

Fellow SEA, WASS

**Fok, D.**

2013 and 2011: Top Lecturer Award (Tinbergen Institute, MPhil program)

2011: ERIM Top Article Award (€2,500)

2010: NWO Open Competition 2010 (funding for a PhD student, co-applicant with R. Paap)

2008 and 2009: Top Talent Researcher Erasmus School of Economics (€10,000)

**Franses, P.H.B.F.**

2012: Honorary doctorate from Chiang Mai University in Thailand.

2011: Member of the Royal Netherlands Academy of Arts and Sciences (KNAW)

Fellow ERIM

**Gabarro Bonet, M.**

2010-2011: Caja Madrid Foundation Fellowship. Fundacion Caja Madrid

**Garcia Gomez, P.**

2012-2014: VENI grant from the Netherlands Organization for Scientific Research NWO (€250,000)

**Gautier, P.**

Fellow of IZA, CEPR, CESifo and SAM

**Geweke, J.**

Fellow, American Statistical Association

Fellow, Econometric Society

**Giambona, E.**

2012: Best Paper Award — AREUEA International Meetings

2011: Best Paper Award — FMA European Meetings

2010: RERI Grant — "The Real Effects of Leverage: Theory and Experimental Evidence"

2008: Outstanding Referee Service Award — Real Estate Economics

**Goos, P.**

2011: Top Senior Researcher award Erasmus School of Economics

2011: Microsoft Research Distinguished Visiting Fellowship for attending the Design of Experiments Research Programme at the Isaac Newton Institute for Mathematical Sciences, Cambridge, U.K.

**Groot, H. de**

2012: Best Lecturer Award Faculty of Economics and Business Administration, VU University Amsterdam.

Fellow Ecorys, CPB

**Gryglewicz, S.**

2012: ERIM Top Article Award

2011: Erasmus Trustfonds Research Visit Grant, 2011

**Guerrierro, C.**

2013: ACLE “Empirical Legal Studies” grant, “Formal and Informal Laws,” 2013.

2011: “Hans-Jürgen-Ewers-Prize” for Applied Research in Infrastructure Economics, Berlin University of Technology, 2011.

Fellow Duisenberg School of finance

**Gunning, J.W.**

2011: member executive board Royal Netherlands Academy of Arts and Sciences (KNAW)

2008: Elected member of the Netherlands Royal Academy of Arts and Sciences (KNAW)

2000-2013: Director Amsterdam Institute for International Development

Fellow EUDN, FERDI, CERDI, CSAE

**Hartog, J.**

2009: Stichting GAK, Uitkeringgebruik door immigranten, with A. Zorlu (€26,000)

2007-2010: NWO, Education and risk (PhD position J. Mazza) (€176,714)

2006: Joop Hartog Dissertation Prize, bi-annual prize for best PhD thesis, Faculty of Economics and Business, University of Amsterdam, to honour his 25th anniversary at the University of Amsterdam

2001: Elected member Royal Dutch Academy of Arts and Sciences (KNAW)

**Heidergott, B.**

Fellow EURANDOM

**Hering, L.**

2009-2010: Max Weber Fellow at the European University Institute in Florence

2008-2009: Doctoral Scholarship, CREST-INSEE, Paris

**Hessels, J.**

2004- : Member ERIM

**Heuvel, W.**

2008-2011: VENI grant from the Netherlands Organization for Scientific Research NWO (€208,000)

**Hobijn, B.**

2010: Senior research adviser Federal Reserve Bank San Francisco

**Hochguertel, S.**

2012-2013: Economic Policy Research Network, Research Grant, Copenhagen, Denmark, joint with Mette Ejrnæs

2012-2013: Netspar Theme Grant, "Pensions, Savings, and Retirement Decisions II"; co- applicant (PI: Rob Alessie, Adriaan Kalwij)

2011-2012: Velux Visiting Professor Scholarship, Villum Fondet, Denmark

2009: Nordic Tax Research Council, research grant, joint with Henry Ohlsson

2007-2010: Netspar Theme Grant, "Pensions, Savings, and Retirement Decisions"; co- applicant (PI: Rob Alessie, Arthur van Soest)

**Hommes, C.**

2012-2015: FP7-EU-coll. project Macro-Risk Assessment and Stab. Policies w. New Early Warning Signals (RASTANEWS) (P.Tirelli, Bicocca Milano)

2011- : FuturICT EU Flagship Pilot (coord. D. Helbing, ETH; S. Bishop, UCL), Dutch National Representative

2012-2014: Grant Institute New Economic Thinking on "Heterogeneous Expectations and Financial Crises (HExFiCs)

2011-2014: FP7-EU-collaborative project Complexity Res. Initiative for Systemic Instabilities (CRISIS) (coord. D. Delli-Gatti, UCSC, Milano)

2010-2013: grant Dutch Science Foundation (NWO) Understanding financial instability through complex systems (+ Dutch Central Bank) (€959,430)

2008-2011: FP7-EU-collaborative project Monetary and Fiscal Policy with heterogeneous agents (POLHIA) (coordinator D. Delli-Gatti, UCSC, Milano)

2005-2008: FP6-EU Complex Markets STREP-grant (M. Salmon, Warwick, UK)

### **Hoogerheide, L.**

2010: *Lecturer of the Year 2009-2010* for the *Econometrics and Management Science* programme at the Erasmus School of Economics.

2009: VENI grant from the Netherlands Organization for Scientific Research NWO (€ 250,000)

### **Jacobs, B.**

2013: The paper "Optimal Redistribution and Monitoring of Labor Effort" (joint with Floris Zoutman) has been awarded the 2013 Young Economist Award of the International Institute of Public Finance.

2010-: Open Competition Grant An Applied General Equilibrium Analysis of Capital Income Taxation in the Netherlands (€ 150,000)

2008-2013: VIDI grant NWO Skill Formation in Distorted Labor Markets (€ 600,000)

Fellow Netspar, CESifo

Academic Partner CPB

### **Janssens, W.**

2013-2015: Research grant "Family planning and women's empowerment in Mozambique" from the Netherlands Organization for Scientific Research (NWO-Wotro) / PopDev (€ 320,000) and UAFC Joint Programme (€ 160,000)

2011-2014: Research grant "Financial and health diaries in Nigeria and Kenya" from PharmAccess Foundation (€ 260,000)

2010-2014: VENI grant from the Netherlands Organization for Scientific Research (€ 250,000)

2010-2011: Research grant "The demand for health insurance in microcredit groups" from the Micro Insurance Innovation Facility / ILO (\$ 30,000)

2010-2011: Research grant "Acceptability and impact of female condoms in Nigeria, Cameroon and Zimbabwe" from UAFC Joint Programme (€ 115,000)

2009-2012: Research grant "Health and migration in Nigeria" from the Agence Francaise de Developpement and PopPov/Hewlett Foundation (€ 88,000)

### **Jong, M. de**

2013: Netherlands Organization for Scientific Research VIDI grant (€ 800,000)

2010: Christiaan Huygens Award

2009: VENI grant from the Netherlands Organization for Scientific Research (€ 250,000)

2009: Johannes Cornelis Ruigrok Award

**Kamphorst, J.**

2012: 'Top Lecturer Award' 2012 (Erasmus School of Economics) (€ 10,000)

**Karreman, B.**

2010: Winner of the Top Lecturer Award, Erasmus School of Economics

2010: Winner of the Lecturer-of-the-Year Award (students' choice), Erasmus School of Economics (€ 10,000)

Fellow ERIM

**Kervel, V. van**

2013: QUANTVALLEY /FdR "Quantitative Management Initiative (QMI)" (€ 5,000)

2011: Columbia University Chazen Institute Visiting Scholar (US \$ 8,000)

2011: CentER international visit grant for Columbia University (€ 5,000)

**Keyzer, M.A.**

This overview lists the projects, positions held, memberships of boards and committees, and advisory work done by Prof. Keyzer in the period 2009 - 2013 as Professor in Mathematical Economics and director of the Centre for World Food Studies SOW-VU, VU University.

*Project leader / Coordinator of the projects:*

2013: Modeling Policy Coherence for Development: technical offer. Project to evaluate the impact of the Netherlands' policies in Ghana, funded by Netherlands Ministry of Foreign Affairs (IOB) (€ 75,240)

2013: Towards Concerted Sharing: Development of a Regional Water Economy Model in the Jordan River Basin. Project funded by The Swedish Institute for Development Cooperation Agency (SIDA) (€ 875,000)

2013: Vulnerability and Poverty Analysis Platform for Mozambique. Project funded by the World Food Programme (\$ 187,900)

2012: China's Agriculture and Climate Chance. Project funded by the Center for Chinese Agricultural Policy (CCAP) (\$ 50,000)

2012: China's Agricultural Transition. Project funded by the Netherlands Ministry of Foreign Affairs (€ 67,000)

2012: Food Security Research Dissemination. Project funded by the Netherlands Ministry of Economic Affairs (€ 24,900)

2010-2012: Chinese Lessons for Africa. Project co-funded by the International Food Policy Research Institute (IFPRI) and SOW-VU (€ 90,000)

2011-2012: Prospects of the Farming Sector and Rural Development in Ukraine. Project with IEF-NASU, Kiev (Institute for Economics and Forecasting of the Ukrainian National Academy of Sciences), funded by Joint Research Centre of the EU (€ 60,000)

2010: CLIMAFRICA Climate Change Predictions in Sub-Saharan Africa: Impacts and Adaptations, funded by the 7th Framework Programme of the EU (€ 3,496,000 of which € 149,400 for SOW-VU)

2010: Poverty Analysis in Mozambique. Project funded by Netherlands Embassy in Mozambique (€ 113,900)

2009: Improving drought resilience of pastoral systems in the Afar State in Ethiopia. Project funded by OFID (OPEC Fund for International Development) (\$ 150,000)

2009-2010: Analysis of socio-economic factors directly or indirectly related with land degradation (LADA). Project funded by FAO (€ 25,000)

2007-2010: Chinese Agricultural Transition: Trade, Social and Environmental Impacts (CATSEI). Project funded by the EU (€ 874,000)

Fellow AIID, Amsterdam International Institute for Development, VU University and University of Amsterdam, Member of The Royal Holland Society of Sciences and Humanities (Koninklijke Hollandsche Maatschappij der Wetenschappen)

*Positions held, memberships of boards and committees, and advisory work 2009 – 2013:*

Extraordinary Professor at the Centre for Chinese Agricultural Policy (CCAP) of the Chinese Academy of Sciences; Member of the Strategic Advisory Council of the International Food Policy Research Institute (IFPRI); member Board of Academic Advisors (BAA) of the Center for Chinese Agricultural Policy (CCAP); Member of the Steering Committee of the AGRODEP Modeling Consortium; Member of the Editorial Board of Food Security; Member editorial board 'De Economist; Member of advisory committees to the Netherlands Ministry of Foreign Affairs and the Ministry of Economic Affairs; Regular advisor of international organizations; Fellow AIID, Amsterdam International Institute for Development, VU University and University of Amsterdam; Fellow NAKE, Network of Quantitative Economics; Member of The Royal Holland Society of Sciences and Humanities (Koninklijke Hollandsche Maatschappij der Wetenschappen)

### **Kippersluis, H.**

2013: VENI grant from the Netherlands Organization for Scientific Research NWO (€ 250,000)

2012: ESE Top Lecturer Award

2011: KVS Medal, Honorary Mention

2010: ESE Top Talent Researcher

2010: Netspar PhD Thesis Award

### **Kiviet, J.**

2009: Member of the Royal Netherlands Academy of Arts and Sciences (KNAW)  
Fellow Journal of Econometrics

### **Klaauw, B. van der**

Fellow CEPR

2008: ERC starting grant

**Koellinger, P.**

2013: Swedish Research Council grant, co-investigator, together with Daniel Benjamin, David Cesarini, Magnus Johannesson, and Peter Visscher (€ 800,000)

2012: Top Talent Research award 2012 of the Erasmus School of Economics (€6,250)

2011: Söderberg Foundation grant, co-investigator, together with Daniel Benjamin, David Cesarini, and Magnus Johannesson (€ 400,000)

2011: National Institute of Health OBSSR grant, co-investigator, together with Daniel Benjamin and David Cesarini (€ 50,000)

2011: DFG grant for project "The sader, the wiser? Mood, overconfidence, and uncertainty preferences", together with Theresa Michl and Arnold Picot (€ 100,000)

2011: Awards for best paper in conference and in the track behavioral economics and neuroeconomics at the NeuroPsychoEconomics Conference, together with Theresa Michl and Arnold Picot

2010: NSF Eager Grant, co-investigator, together with Daniel Benjamin and David Cesarini (€ 50,000)

2009: EARIE 2009 Young Economist Essay Award for "Entrepreneurship, firm formation and organizational design", together with Christian Roessler

**Koning, P.**

2006 -2009: Hennisman prize for best article in De Economist

Fellow IZA

**Koopman, S.J.**

2010: Fernand Braudel Senior Fellow at the Department of Economics, European University Institute, Florence, Italy,

**Koster, P.**

2011- : Winner of the Senior Prize of the Young Researchers 2011 Paper Competition of the Hamburg Aviation Conference for the paper 'Travel time variability and airport accessibility' (written together with Eric Kroes and Erik Verhoef). This concerns a competition for young researchers in the field of aviation economics and management (€ 1,000)

**Koster, H.**

2013- : Data-without-boundaries grant (EU funded) for project "Job Mobility And Productivity: Are Job-Hoppers More Productive?" – with Rosa Sanchis-Guarner (LSE) (€ 2,700)

2012- : LSE STICERD grant for project "The Determinants of Residential Vacancy Rates" – with Paul Cheshire (LSE) and Christian Hilber (LSE) (€ 4,800)

**Laan, G. van der**

2011: NWO 'Cascade dynamics on interaction networks' (€ 208,193)



2009: NWO 'Hierarchical networks in economics and game theory' (€ 198,000)

2008: NWO 'Cooperative decision making in water allocation problems' (€ 186,995)

Fellow CenterER, NIAS, Econometric Society

### **Leung, E.**

2012: Limperg Scholarship - funding for international research visit to University of Chicago, Booth School of Business (€ 10.000)

2012: Learning Impact Leadership Award for iStar e-learning project

2011: Innovation in Accounting History Education Award (Academy of Accounting Historians) for iStar e-learning project

2009: Netherlands Organisation for Scientific Research (NWO) Graduate Program Grant

### **Lin, C.**

2012: Nominated for John A. Doukas Ph.D. Best Paper Award, 2012, EFMA

### **Lindeboom, M.**

Programme on health economics, € 1,000,000, sponsored by Netspar (Netherlands program for the study of pensions and aging), joint with Eddy van Doorslaer, Erasmus University Rotterdam  
Health and Income, Work and Care Across the life cycle II, € 500,000, Sponsored by Netspar (Netherlands program for the study of pensions and aging), joint with Eddy van Doorslaer, EUR

### **Lindner, I.**

2011-2015: NWO Grant for one PhD position for 4 years (€ 250,000)

### **Lucas, A.**

2010-2015: VICI grant for senior researchers by the Dutch national science foundation (NWO) (€ 1,500,000)

NWO (€ 134,800) Research Talent Grant for Falk Brauning (TI MPhil), Andre Lucas (principal applicant) for 3 years PhD research on "Interbank Relationship Lending: What Can We Learn from the Crisis?"

SYstemic Risk TOMography (SYRTO) EC Grant, together with prof. Siem Jan Koopman (TI fellow) (€ 500,000) This is part of a larger Grant to a network of five European Universities in which VU University Amsterdam participates.

### **Maas, V.**

Fellow ERIM

### **Markiewicz, A.**

2008: Distinguished CESifo Affiliate Prize in Macro, Money & International Finance for the paper: Model Uncertainty and Exchange Rate Volatility (€2,000)

Fellow CESifo, ERIM

**McAleer, M.**

Fellow Academy of the Social Sciences in Australia

**Menkveld, A.J.**

2012: American Finance Association (AFA) Paper "Does Algorithmic Trading Improve Liquidity?" finalist for 2011 Smith Breeden Prize.

2010-2015: VIDI grant from the Netherlands Organization for Scientific Research (NWO) (€800,000)

2008: VU talent grant (€1,000,000) received after reaching the final round of the EU ERC starting grant competition. Personal grant to fund 5 year research program.

**Montone, M.**

2013: ERIM Associate Member

**Moraga-González, J.L.**

2007-2011: Marie Curie Excellence Grant (€1,200,000), Team Leader.

CEPR, the Center PPSRC, IESE Business School, SOM, CESifo and ENCORE

**Motchenkova, E.**

2013-2014: External Funding for the project "Impact Evaluation of Financial Literacy Project for Russian Government", Title: RUSSIA: Financial Education and Financial Literacy Project (€15,000)

2011-2012: TILEC Research Grant on "The law and economics of online search and search advertising", Tilburg, the Netherlands (€15,000)

Research Fellow of Tilburg Law and Economics Center (TILEC), Tilburg University

**Neckermann, S.**

Fellow ZEW, CREMA

2013: Best Paper Award for "Creativity and Incentives" at the Personalökonomisches Kolloquium, Tuebingen, Germany, Feb 20/21 (€3,000)

2012: Best Paper Award The Social Dimension of Organizations by UniCredit for "Employee Recognition and performance – a field experiment" at the Workshop Social Dimension of Organizations, Central European University, Budapest, April 27/28. (€5,000)

2011-2014: Grant Wissenschaftsökonomie "Efficient Incentives in Academia – An experimental investigation" (€350,000). Bundesministerium für Bildung und Forschung (ministry for education and research)

2011-2012: SEEK Grant „Strengthening Efficiency and Competitiveness in the European Knowledge Economies“ (€140,000) State of Baden-Württemberg

2008: Handelsblatt Fellowship for 3rd Lindau Nobel Laureates Meeting in Economics

**Nijkamp, P.**

President Governing Board Netherlands Research Council (NWO) (2002-2008)

Fellow Royal Belgian Academy of Science and Arts

Member Advisory Board of the Negev Center, Ben Gurion University, Beer-Sheva, Israel

Member Board Western Regional Science Association, USA

Member International Advisory Committee of the Jan Tinbergen Educational Foundations Trust, Rohtak, India

Member Scientific Committee Center for Regional Economics, Transport and Tourism, Bocconi University, Milano, Italy

Life Member of Indian Regional Science Association, Calcutta, India

Life Member of Regional Science Association International, Urbana-Champaign, USA

**O'Donnell, O.**

2008-present: NETSPAR Research Fellow

2009-present: Kenneth J. Arrow Award Committee, International Health Economics Association

2010-2011: US National Institute of Aging Project Grant, Senior Researcher

2009-2013: EU Framework Programme 7 Project Grant, Joint Project Leader (€2,885,767)

2006-2012: NETSPAR Theme Grants, Senior Researcher (€1,500,000)

2009-2011: WHO Scientific Resource Group on Health Equity Analysis and Research

**Offerman, T.**

2009: Excellence in Refereeing Award, American Economic Review

CESS Fellow

**Onderstal, S.**

Fellow ENCORE, ACLE

**Oostendorp, R.**

Fellow, AIID, CSAE

Research Associate. Centre for the Study of African Economies, University of Oxford

Resource Person. African Economic Research Consortium

**Oosterbeek, H.**

Fellow CESifo, AIID, Program manager TIER-UvA

**Ourti, T. van**

2012-2014: "International variation in the socioeconomic health gradient: do the Institutional arrangements matter?" doctoral fellowship financed by AXA Research Fund (€ 120,000)

2010-2015: "From Understanding to Reducing Health Disparities: A Model-Based Evaluation" financed by US National Institute on Aging (together with Eddy van Doorselaer, Owen O'Donnel and Hans van Kippersluis)

2009-2012: "Income, health and work across the life cycle II" financed by NETSPAR (together with Teresa Bago d'Uva, Pilar Garcia Gomez, Eddy van Doorselaer, Owen O'Donnel, Hans van Kippersluis, Maarten Lindeboom en Bas van der Klaauw)

2009 and 2011: Top Talent Researcher of Erasmus School of Economics (each € 10,000)

2006-2009: "Income, health and work across the life cycle" financed by NETSPAR

**Paap, R.**

2013: Distinguished Author of the Journal of Applied Econometrics since 2013.

2012: Top Senior Researcher of the Erasmus School of Economics 2012.

2010-2012: NWO (Netherlands Organization for Scientific Research) Free Competition Grant for PhD Project Semi- and Nonparametric Bayesian Inference

**Pels, E.**

Highly Cited Author Award, Journal of Urban Economics, for the paper "The economics of airport congestion pricing", co-authored with Erik Verhoef, which was one of the 10 most cited articles 2004-2008 published in the Journal of Urban Economics, 2009.

**Pennings, E.**

Adjunct professor at University of Suriname and Shanghai University of Finance and Economics (SUFU)

**Perotti, E.C.**

2011: Houblon-Normal Fellowship, Bank of England

2010-2012: Advisor, MacroPrudential Policy, De Nederlandsche Bank

2008-2012: Duienberg School of Finance, Research Director

Fellow CEPR, European Economic Association

**Ploeg, R. van der**

Co-Investigator, Advanced Grant for 'Combating Climate Change: The Political Economy of Green Paradoxes', European Research Council (2011-16) With C. Withagen.

**Plug, E.**

2009-2011: Socio-economic determinants of cancer: Twin, adoptee and family based evidence from the Cancer Registry of Norway. The Research Council of Norway. (3,300,000 NOK) (with Edwin Leuven and Marte Rønning).

2004-2008: VIDI grant to study the underlying factors of intergenerational mobility of schooling and income. The Netherlands Organisation for Scientific Research (NWO) (€ 600,000)

**Poelhekke, S.**

2013: Consultancy World Bank (\$ 10,500)

2012: KVS/ESB award (best paper in economics by Dutch economists 2012, Royal Economics Association Netherlands (KVS), for "Bank Intermediation of Foreign Direct Investment".

2009: Best Paper Award, INFER Annual Conference, for "Urban Growth and Uninsured Rural Risk: Booming Towns in Bust Times".

2008: European University Institute grant for completion of the PhD, 2007-2008 (€ 30,000)

Fellow OxCarre, CESifo

**Praag, C.M.**

2008- : Academic Director of Amsterdam Center of Entrepreneurship

2010- : Adjunct Professor of Entrepreneurship Statistics Norway, Oslo, Norway

Fellow IZA, ACLE

**Ridder, A.**

2011- : Board Netherlands Society of Statistics and Operations Research (VvS+OR)

**Rietveld, P. †**

Member of the Royal Netherlands Academy of Arts and Sciences (KNAW)

Member of Academia Europaea

Fellow RSAI, KiM

**Rohde, K.**

2013: Top Talent Researcher Award 2012, Erasmus School of Economics (€ 10,000)

2012: Top Talent Researcher Award 2011, Erasmus School of Economics (€ 10,000)

2012: Top Lecturer Award 2011, Erasmus School of Economics (€ 10,000)

2011: Top Talent Researcher award 2010, Erasmus School of Economics (€ 10,000)

2009: Vereniging Trustfonds, Erasmus Universiteit Rotterdam, travel grant (€ 1,500)

2009: Top Talent Researcher award 2008, Erasmus School of Economics (€ 10,000)

2008: VENI grant from the Netherlands Organization for Scientific Research NWO (€ 208,000)

**Romp, W.**

Fellow Netspar

**Rouwendaal, J.**

Fellow CPB, Netspar

**Salle, I.**

2013: IdEX thesis award (€ 1,500)

**Sautner, Z.**

2013: Research Grant from the Investor Responsibility Research Center (IRRC) Institute, (\$ 25,000) (with Martijn Cremers and Ankur Pareek)

**Schinkel, M.**

Fellow ASCOLA, ACLE, ENCORE, CRESSE Associate

**Schram, A.**

Netherlands' Organization for Scientific Research (NWO) grant for project "The co-evolution of social behavior and social institutions: A combined theoretical and experimental approach" (with M. Egas, A. Riedl, and M. Sabelis) Salle, I. (€ 450,000)

**Seldeslachts, J.**

2011-2013: EU Marie Curie Career Development Grant (€ 176,000)

**Sisak, D.**

2010: SNSF (Swiss National Science Foundation) visiting scholar fellowship UC Berkeley,

Berkeley, USA

**Sloof, R.**

Fellow ACLE

**Soetevent, A.**

2010: Outstanding referee award 2010, Journal of Economic Dynamics and Control

2009: Speerpunt Behavioral Economics (€ 14,000) (with Sander Onderstal and Arthur Schram)

2007-2010: Research Grant NWO Vernieuwingsimpuls: (€ 208,000)

Fellow ACLE, ENCORE

**Stoltenberg, C.**

2012: Van der Schroeff Price, Best Teacher award (2<sup>nd</sup> place, UvA)

2011: Distinguished Teacher Award UvA

**Stougie, L.**

2010-2017: Member of the Executive Board and of the General Board Position at: Landelijk Netwerk Mathematische Besliskunde (LNMB).

2010: Site leader of VU/CWI of the INRIA associated Team Project: Mathematical and algorithmic investigation symbiosis Functie bij: VU University and CWI, Amsterdam.

2008-2012: Member of Academic Advisory Board Position at: Eugene Lawler Graduate School of Computer Science, Waterford, Ireland.

2008-2013: Member of the Scientific Board Position at: Lorentz Centre, Leiden.

**Stremersch, S.**

2012: Erasmus Research Excellence Grant for marketing and innovation

2012-2013: Erasmus Holding research grant for research on marketing of innovations

2012: ERIM research grant for research on innovation

2011: ERIM research grant for research on product category formation

2011: Erasmus University grant for research on marketing of innovations

2008: Marketing Science Institute (MSI) research grant for international research on patient-physician relationships

2008: CHEB research grant for international relationships

2008: KNAW grant for international travel.

**Teulings, C.N.**

Fellow IZA (Bonn), CESifo (Munich), and CEPR (London)

**Tham, W.W.**

2012: Top Talent Researcher grant of the Erasmus School of Economics

2010-2012: Marie Curie FP7 Fellowship (€ 160,000)

**Thurik, A.R.**

2013: Grant to set up a centre for studying biology and economic behavior (with colleagues from the Erasmus University Rotterdam) (€ 680,000)

Academic Director Erasmus Center for Entrepreneurship

Scientific adviser at Panteia, Zoetermeer

Member scientific advisory board, German Institute for Economic Research

Visiting professor GSCM Montpellier Business School, France

Director/Founder Center for Advanced Small Business Economics (CASBEC)

Fellow TI, ERIM

**Tol, R.S.J.**

2010: Member of Academia Europaea

2007-2010: Global Trade Analysis Project (GTAP) Research Fellow

**Tuinstra, J.**

Fellow of the Amsterdam Center for Law & Economics (ACLE)

Fellow of the Economics Network for COmpetition and REgulation (ENCORE)

**Veelen, M. van**

2012: Member De Jonge Akademie (KNAW)

**Veenman, D.**

2012-2014: VENI grant from the Netherlands Organization for Scientific Research (€ 250,000)

2012: ERIM Award for Outstanding Performance by a Young Researcher (€ 2,500)

Member of the Scientific Committee of the European Accounting Association



**Ven, J. van de**

2006-2009: VENI grant from the Netherlands Organization for Scientific Research project title 'Rewards, Feedback, and Motivation: A Game-theoretic Analysis' (€ 200,000)

**Verhoef, E.T.**

2010: Advanced ERC Grant for the research project OPTION (Optimizing Policies for Transport: Accounting for Industrial Organization in Network Markets) (€ 2,500,000)

2010: Fellow of the Regional Science Association International.

**Verschoor, W.**

Member of the Supervisory Board of Optimix Investment Funds N.V., Amsterdam, the Netherlands.  
Advisor Capital Management, Stichting Pensioenfund Atos Origin, Utrecht, the Netherlands.

Member of the Advisory Board for the Global Finance Forum, Chur, Switzerland.

Fellow ERIM

**Verwijmeren, P.**

2014-2016: ARC grant with Balachandran et al., (AUD \$ 180,000)

2013-2018: Research Excellence Initiative Grant (€ 2,000,000) (together with Dick van Dijk)

2013: VIDI grant from the Netherlands Organization for Scientific Research NWO (€ 800,000)

2013: Outstanding Performance by a young Researcher Award, ERIM

2013: Ranked in top 3 finance & accounting researchers in the Netherlands (ESB Economentop 40)

2013-2018: Member of the Young Erasmus Network

2012: Top Talent Researcher Award, Erasmus School of Economics

2012 and 2011: Dean's Certificate for Research Excellence, University of Melbourne

2010: Faculty Research Grant, on the project: "Matching sources and uses of funds" (AUD \$ 12,837) University of Melbourne

2010: Melbourne Early Career Researcher Grant, on the project: "Patterns in demand for speculation and insurance in options markets" (AUD \$ 20,017)

2010 Best Paper Award, Finance and Corporate Governance Conference, for the paper: "Do option markets undo restrictions on short sales? Evidence from the 2008 short-sale ban"

2008-2009: ERIM Dissertation Award

2008: Faculty Research Grant, on the project: "The effects of hedge funds on security design and shareholder wealth" (AUD \$ 9000) University of Melbourne

**Visser, B.**

2010: NWO (Dutch National Science Foundation) € 200,000 to finance PhD student

2008: Fernand Braudel senior fellowship European University Institute, Florence (Italy)

**Vorst, A.C.F.**

Consultant on modeling for ABN AMRO Risk Management

Member of the Board of ABN AMRO Pensionfund

Chairman of the Investment Committee of ABN AMRO Pensionfund

Member of the Investment Committee of the Nedloyd Pension Fund

**Vries, C.G. de**

CESifo

**Wagener, F.**

2010 and 2011: Outstanding referee award, Journal of Economic Dynamics and Control

**Wakker, P.**

2013: Frank P. Ramsey Medal. Highest award of INFORMS Decision Analysis Society.  
Fellow Econometric Society

**Watanabe, M.**

2012- : VIDI grant from the Netherlands Organization for Scientific Research (NWO) (€ 800,000)

2009-2012: Ramon y Cajal Fellowship, Spanish government

2006-2009: Juan de la Cierva Fellowship, Spanish government

**Webbink, H.D.**

Fellow of TIER, CPB, IZA and ECSP

**Wel, M. van der**

2012-2014: VENI grant from the Netherlands Organization for Scientific Research (€ 250,000)  
Fellow CREATES, TI, ERIM

Nominated for Top Talent Researcher 2011 at the Erasmus School of Economics (one of 12 nominees)

**Winden, F.A.A.M. van**

Co-founder CREED (1991-2011)

Founding co-director Tinbergen Institute and former member of the board

Fellow of CEPR, CESifo, TI

2010: Invited associate editor Journal of Economic Psychology

Member Scientific Advisory Board at the Max Planck Institute for Research on Collective Goods in Bonn since 2011

2011: Visitor's grant NWO-JSPS 2010: Brain & Cognition Grant for Summer School in Cognitive Science (co-applicant) (€29,896)

2007-2008: Pilot Project Cognition Program "Never trust a stranger – Novel model-based fMRI approaches in linking economic decision making to trust and social affective ties" (joint with Richard Ridderinkhof; post-doc and material budget)

2004-2008: Research Network grant for programme ENABLE: The European Network for the Advancement of Behavioural Economics (coordinator/project director; MRTN-CT-2003-505223) (€1,500,000)

#### **Withagen, C.A.A.M.**

2011: ERC Advanced Grant for 'Combating Climate Change: The Political Economy of Green Paradoxes', 2011 (€2,700,000).

2009: Several grants for EAERE (up to €100,000)

#### **Zwan, P. van der**

Fellow ERIM

#### **Zwinkels, R.**

2010 and 2012: Nominated for Teacher of the Year Erasmus School of Economics

2009: International Business Review best paper award 2008

2008: Research grand from Paul Woolley Centre for Capital Market Dysfunctionality

Fellow ERIM (€3,500)

Associate fellow of the Auckland Centre for Financial Research (New Zealand)

## 5. TI Journal ranking and admission criteria fellows

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### Admission criteria for TI research fellows

Research fellow of TI are outstanding researchers selected from the three departments participating in TI. Tinbergen Institute's Board determines the admission criteria and decides on the appointment of researchers to TI. As part of its mission to stimulate high quality research, TI defines quality standards for researchers in the areas of economics, econometrics and finance at the Erasmus School of Economics of Erasmus University Rotterdam, the Faculty of Economics and Business Administration of VU University Amsterdam and the Faculty of Economics and Business of the University of Amsterdam. Those who meet TI's quality standards can become TI research fellow.

Since 2012 TI established new rules and requirements concerning eligibility for the various TI fellowships and the application and evaluation procedure. Compared to the fellow requirements that have been in place over the past years, the new rules differ in a number of important ways. These differences reflect both changes taking place in the participating schools and a desire to found the requirements on a different basis. One of the most important changes at the participating schools is the growing presence of tenure track positions. This has led to a re-definition of the TI candidate fellowship and the abolition of the junior fellowship. A second important change is the growing importance of the international job market in the school's hiring process. To be successful in the international market a further emphasis on research impact and quality is key.

From July 1, 2012 on, TI adopted the Article Influence Score (AIS) to measure journal impact and evaluated researchers on the basis of the impact of at most five publications. The majority of these publications should be articles of a new TI journal list, while the minority may be journal articles in other peer reviewed journals or (contributions to) books. Current research fellows (with the exception of candidate and honorary fellows) were appointed until December 31, 2016. For reappointment in 2017, the new criteria will apply. Since July 1, 2012, new applicants for TI research fellowships qualified based on the new criteria. Until December 31, 2014, new applicants who meet the 'old' criteria also qualify for TI research fellowship. Applications for junior fellowship will be accepted until December 31, 2014 while the junior fellowship category will be abolished on December 31, 2016. The fellowship of current candidate fellows will be continued until December 31, 2016.

#### *Admission criteria for candidate fellows are:*

The candidate fellowship intends to include young researchers in the TI community. Candidate fellows will be actively involved in organizing, e.g., the TI seminar series and are invited to participate in TI activities.

To be admitted as a candidate fellow, a researcher should:

- have a PhD;
- hold a junior position with a designated research task (e.g., postdoc or (un-)tenured assistant professorship);
- be appointed for at least 0.2 fte at one of the Schools;
- be conducting research that fits into one of the 8 TI research groups.

Candidate fellowships last for a maximum of 6 years. If a researcher becomes an associate or full professor during that period, he or she automatically loses the candidate fellowship. In case of pregnancy during her candidate fellowship, the candidate fellow can request an extension of her fellowship for one year per pregnancy.

*Admission criteria for research fellows are:*

To be admitted as a research fellow, a researcher should:

- have a PhD;
- have a position with a designated research task;
- be appointed for at least 0.2 fte at one of the Schools;
- be conducting research that fits into one of the 8 TI research groups;
- meet the requirements based on publications and/or citations.

In case of pregnancy during her fellowship, the fellow can request a 20% reduction in the threshold value of publication points and citation score. The TI Board decides whether this request will be honored.

*Publications/citations requirements for research fellows:*

#### Publications

1. Anyone applying for a TI research fellowship should submit at least two and at most five publications from a five-year period. These publications taken together should yield at least five publication points. The five-year period is either the five calendar years prior to the year of application or the five calendar years including the year of application.
2. Publication points are earned through publishing articles in peer reviewed journals or through writing or contributing to books.
3. The majority of publications that are submitted for admission should be articles in journals that are part of the TI journal list defined below. In particular, if a researcher submits five publications, a minimum of three publications have to be articles in journals on the TI journal list. If a researcher submits two articles, both should have been published in a journal on the TI journal list.

#### Journal articles

1. Journal articles have to be published in peer reviewed journals that have an Article Influence Score (AIS). These Scores are published by ISI web of Knowledge and by Eigenfactor.org.
2. Articles in the papers and proceedings section or issue of a journal, comments, replies, letters to the editor etc. and articles of less than six pages will not be considered.
3. TI distinguishes between journals that are part of the TI journal list and those that are not part of the TI journal list.
4. The TI journal list consists of - all peer reviewed journals that are part of the subject categories "Economics" and "Business, Finance" as published by the ISI Web of Knowledge and that have an AIS; - selected Marketing journals (see Appendix II); - selected Operations Research journals (see Appendix II);
5. A minority of the publications that an applicant submits may be published in journals that are not part of the TI journal list.

### Score of a Journal and Publication Points

The number of publication points P of an article depends on the journal's score S and on the number of co-authors N.

### Score of a Journal

The score S of a journal is determined as follows:

1. For a journal for which a positive AIS is reported for each of the years 2007 – 2010, its score S equals its mean AIS over this four-year period. The journal's score applies to any article published in that journal in the period 2011 to 2016. At the end of 2016, the score of a journal will be updated and fixed for the next period.
2. For some journals, there may not be four years with an AIS. For any such journal, annually, a (new) score S can be calculated based on the average AIS of the most recent four-year period (where a zero AIS does not count towards the average), and this score can be used for any publication in that journal by the applicant as part of the application procedure. For example, if the AIS of a journal equals two in 2007 and 2008, but there are no AIS for 2009 and 2010, then the journal's score equals two. Once a positive AIS has been reported for four consecutive years, the average AIS will be considered the journal's score S until the end of 2016. This procedure facilitates the inclusion of new journals in the TI list.

### Publication Points

The number of publication points P of an article is determined as follows (recall that N is the number of co-authors)

$$P = S \times (1.25) \text{ if } N = 0 \quad P = S \text{ if } N = 1 \quad P = S \times (1 - (N-1) \times 0.10) \text{ if } 1 < N \leq 10, \quad P = 0 \text{ if } N > 10$$

#### *(Contributions to) books*

1. The score S of a book is fixed at one (1). The score S of a contribution to a book (e.g., a chapter in an edited volume) is fixed at a half (1/2). A contribution to a book should be at least fifteen pages long. Only publications with a selected list of high-quality academic publishing houses will be considered. Book editing does not yield publication points.
2. The publication points one obtains with a (contribution to a) book is determined by the same formula that determines the publication points of a journal article.
3. Books and contributions to books may contribute for a maximum of two points (40%) to the required publication points.

#### Citations

Publication points may be partly replaced by citations that appear in the Social Science Citation Index. A researcher meets the admission requirements with at least 2.5 publications points and at least 400 citations according to the SSCI.

### **TI Journal ranking**

The TI Journal list consists of:

1. All peer reviewed journals in the subject categories "Economics" and "Business, Finance" that have an AIS. These subject categories can be found on the ISI Web of Knowledge website.

2. The Marketing journals that are part of the TI list are:

- International Journal of Research in Marketing;
- Journal of Marketing;
- Journal of Marketing Research;
- Marketing Science.

3. The Operations Research journals that are part of the TI list are:

- European Journal of Operational Research;
- Journal of the Operational Research Society;
- Mathematics of Operations Research;
- Operations Research;
- Operations Letters.

## TI Journal List

The journals with an AIS publication score of zero (0) have been deleted from the list.

Journal	2007	2008	2009	2010	count	sum	average
Q J ECON	11.241	11.978	11.686	11.688	4	46.593	11.6
J POLIT ECON	9.181	8.821	9.928	10.735	4	38.665	9.7
J ECON LIT	8.347	8.852	8.274	8.25	4	33.723	8.4
ECONOMETRICA	7.208	7.243	7.715	8.812	4	30.978	7.7
J FINANC	0	0	7.571	7.477	2	15.048	7.5
J FINANC	5.727	6.005	7.571	7.477	4	26.78	6.7
REV ECON STUD	6.651	6.321	6.272	7.189	4	26.433	6.6
REV FINANC STUD	0	0	0	6.583	1	6.583	6.6
J FINANC ECON	5.123	5.237	6.499	5.923	4	22.782	5.7
REV FINANC STUD	4.145	4.3	6.318	6.583	4	21.346	5.3
J ECON PERSPECT	4.6	5.34	5.428	5.88	4	21.248	5.3
J ECON GROWTH	4.94	6.629	5.545	3.47	4	20.584	5.1
AM ECON REV	4.747	4.668	5.087	5.599	4	20.101	5.0
J ACCOUNT ECON	7.824	3.364	3.556	3.967	4	18.711	4.7
REV ECON STAT	3.555	3.887	4.348	4.9	4	16.69	4.2
BROOKINGS PAP ECO AC	3.644	4.172	3.085	3.858	4	14.759	3.7
J LABOR ECON	2.999	3.222	3.293	5.209	4	14.723	3.7
EXP ECON	0	0	3.037	3.822	2	6.859	3.4
J ACCOUNT RES	4.142	3	2.642	3.284	4	13.068	3.3
AM ECON J-MICROECON	0	0	0	2.906	1	2.906	2.9
RAND J ECON	2.646	2.908	2.824	3.147	4	11.525	2.9
J MONETARY ECON	2.564	3.227	2.694	3.002	4	11.487	2.9
AM ECON J-ECON POLIC	0	0	0	2.774	1	2.774	2.8
J EUR ECON ASSOC	0	0	0	2.739	1	2.739	2.7
J ECONOMETRICS	2.951	2.284	2.657	3.016	4	10.908	2.7
ECON J	2.897	2.628	2.575	2.57	4	10.67	2.7
ANNU REV ECON	0	0	0	2.613	1	2.613	2.6
J INT ECON	2.071	2.581	2.436	3.001	4	10.089	2.5
J BUS ECON STAT	2.513	1.966	2.549	2.804	4	9.832	2.5
J HUM RESOUR	1.855	2.214	2.634	3.004	4	9.707	2.4
ECON POLICY	1.868	2.68	2.312	2.795	4	9.655	2.4
J FINANC QUANT ANAL	2.192	2.129	3.011	2.291	4	9.623	2.4
INT ECON REV	2.248	2.153	2.331	2.689	4	9.421	2.4
J LAW ECON	2.396	2.031	2.383	2.401	4	9.211	2.3
J ECON THEORY	2.41	2.221	2.134	2.409	4	9.174	2.3
ACCOUNT REV	2.357	2.146	2.119	2.201	4	8.823	2.2
J LAW ECON ORGAN	2.343	1.774	2.185	2.263	4	8.565	2.1
J PUBLIC ECON	2.026	1.975	2.133	2.336	4	8.47	2.1
REV ECON DYNAM	1.729	1.911	2.284	2.282	4	8.206	2.1
J APPL ECONOMET	0	0	1.851	2.172	2	4.023	2.0
REV ACCOUNT STUD	0	2.095	2.141	1.792	3	6.028	2.0
AM ECON J-APPL ECON	0	0	0	1.976	1	1.976	2.0
J IND ECON	1.969	1.696	2.004	2.22	4	7.889	2.0
GAME ECON BEHAV	1.879	2.079	1.912	1.817	4	7.687	1.9
J ECON GEOGR	1.728	1.854	1.672	1.987	4	7.241	1.8



<b>Journal</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>count</b>	<b>sum</b>	<b>average</b>
J MONEY CREDIT BANK	1.353	2.093	1.928	1.75	4	7.124	<b>1.8</b>
J HEALTH ECON	1.734	1.866	1.732	1.743	4	7.075	<b>1.8</b>
J APPL ECONOM	1.926	1.595	0	0	2	3.521	<b>1.8</b>
WORLD BANK ECON REV	1.916	1.906	1.565	1.65	4	7.037	<b>1.8</b>
WORLD BANK RES OBSER	1.925	1.788	1.82	1.365	4	6.898	<b>1.7</b>
J DEV ECON	1.564	1.549	1.835	1.867	4	6.815	<b>1.7</b>
REV ENV ECON POLICY	0	0	1.242	2.083	2	3.325	<b>1.7</b>
EUR ECON REV	1.702	1.539	1.605	1.626	4	6.472	<b>1.6</b>
FINANC STOCH	1.498	1.181	1.682	2.016	4	6.377	<b>1.6</b>
MATH FINANC	1.62	1.471	1.333	1.892	4	6.316	<b>1.6</b>
J FINANC MARK	1.631	1.411	1.923	1.258	4	6.223	<b>1.6</b>
FINANC MANAGE	1.697	1.468	2.127	0.828	4	6.12	<b>1.5</b>
J RISK UNCERTAINTY	1.623	1.525	1.478	1.317	4	5.943	<b>1.5</b>
ECONOMET THEOR	1.399	1.311	1.582	1.541	4	5.833	<b>1.5</b>
J ENVIRON ECON MANAG	1.405	1.392	1.414	1.606	4	5.817	<b>1.5</b>
J ECON MANAGE STRAT	1.613	1.397	1.053	1.734	4	5.797	<b>1.4</b>
J FINANC INTERMED	1.352	1.072	1.618	1.752	4	5.794	<b>1.4</b>
J URBAN ECON	1.339	1.256	1.429	1.743	4	5.767	<b>1.4</b>
J CORP FINANC	1.242	1.292	1.61	1.333	4	5.477	<b>1.4</b>
ECONOMET REV	0	0	0	1.346	1	1.346	<b>1.3</b>
ECONOMET J	0	0	0	1.253	1	1.253	<b>1.3</b>
SCAND J ECON	1.264	1.414	1.014	1.134	4	4.826	<b>1.2</b>
J ECON BEHAV ORGAN	1.091	1.284	1.209	1.149	4	4.733	<b>1.2</b>
J ECON SURV	1.075	1.147	1.219	1.281	4	4.722	<b>1.2</b>
OXFORD ECON PAP	1.05	1.322	1.339	0.946	4	4.657	<b>1.2</b>
CONTEMP ACCOUNT RES	1.374	1.065	0.945	1.215	4	4.599	<b>1.1</b>
J POLICY ANAL MANAG	1.035	0.956	1.094	1.512	4	4.597	<b>1.1</b>
HEALTH ECON	1.018	1.083	1.237	1.12	4	4.458	<b>1.1</b>
WORLD DEV	1.065	1.148	1.039	1.193	4	4.445	<b>1.1</b>
ECON SOC	1.275	0.983	1.118	1.067	4	4.443	<b>1.1</b>
IND CORP CHANGE	1.329	0.984	1.13	0.962	4	4.405	<b>1.1</b>
ECON GEOGR	1.125	1.217	0.983	1.073	4	4.398	<b>1.1</b>
OXFORD B ECON STAT	0.881	1.037	1.153	1.225	4	4.296	<b>1.1</b>
INT J IND ORGAN	0.863	1.056	1.154	1.167	4	4.24	<b>1.1</b>
J COMP ECON	0.974	1.122	0.968	1.081	4	4.145	<b>1.0</b>
J RISK	0	0	0	1.029	1	1.029	<b>1.0</b>
RESOUR ENERGY ECON	1.138	1.069	0.934	0.937	4	4.078	<b>1.0</b>
ENERG J	0.881	0.886	1.261	1.034	4	4.062	<b>1.0</b>
ECON DEV CULT CHANGE	0.835	0.89	1.19	1.143	4	4.058	<b>1.0</b>
J POLICY REFORM	0	0.993	0	0	1	0.993	<b>1.0</b>
OXFORD REV ECON POL	0.761	1.045	0.878	1.252	4	3.936	<b>1.0</b>
VALUE HEALTH	0	0	1.014	0.942	2	1.956	<b>1.0</b>
LABOUR ECON	0.865	1.018	1.07	0.954	4	3.907	<b>1.0</b>
J ECON HIST	0.797	1.085	0.983	0.977	4	3.842	<b>1.0</b>
PHARMACOECONOMICS	0	0	0.893	1.027	2	1.92	<b>1.0</b>
REG SCI URBAN ECON	0.846	0.975	0.973	1.028	4	3.822	<b>1.0</b>
ECON INQ	0.959	0.902	0.9	1.058	4	3.819	<b>1.0</b>
ECONOMICA	0.742	0.801	1.004	1.27	4	3.817	<b>1.0</b>

<b>Journal</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>count</b>	<b>sum</b>	<b>average</b>
J ECON DYN CONTROL	0.88	0.902	0.999	0.877	4	3.658	<b>0.9</b>
INT J FORECASTING	0.834	0.735	1	1.05	4	3.619	<b>0.9</b>
ENERG ECON	0.825	0.857	0.954	0.979	4	3.615	<b>0.9</b>
LAND ECON	0.958	0.821	0.975	0.848	4	3.602	<b>0.9</b>
ECON THEOR	0.768	0.843	0.961	1.019	4	3.591	<b>0.9</b>
J POPUL ECON	0.87	0.849	0.912	0.866	4	3.497	<b>0.9</b>
J INT MONEY FINANC	0.755	0.814	0.874	0.953	4	3.396	<b>0.8</b>
ECOL ECON	0.768	0.756	0.866	0.975	4	3.365	<b>0.8</b>
ECON EDUC REV	0.671	0.792	0.69	1.079	4	3.232	<b>0.8</b>
CAN J ECON	0.69	0.815	0.684	1.012	4	3.201	<b>0.8</b>
EXPLOR ECON HIST	0.57	1.012	0.661	0.945	4	3.188	<b>0.8</b>
REV INT POLIT ECON	0.702	0.696	0.811	0.94	4	3.149	<b>0.8</b>
IMF STAFF PAPERS	0.708	0.897	0.76	0.746	4	3.111	<b>0.8</b>
ENVIRON RESOUR ECON	0.702	0.671	0.852	0.825	4	3.05	<b>0.8</b>
JCMS-J COMMON MARK S	0.68	0.807	0.688	0.852	4	3.027	<b>0.8</b>
J ECON PSYCHOL	0.626	0.66	0.741	0.953	4	2.98	<b>0.7</b>
FOOD POLICY	0.523	0.632	0.989	0.83	4	2.974	<b>0.7</b>
J BANK FINANC	0.783	0.568	0.779	0.8	4	2.93	<b>0.7</b>
ECON HIST REV	0.581	0.939	0.602	0.8	4	2.922	<b>0.7</b>
EUR FINANC MANAG	0	0	0	0.73	1	0.73	<b>0.7</b>
FED RESERVE BANK ST	0	0	0.836	0.599	2	1.435	<b>0.7</b>
FED RESERVE BANK ST	0	0	0.836	0.599	2	1.435	<b>0.7</b>
INT J GAME THEORY	0.442	0.543	0.831	1.052	4	2.868	<b>0.7</b>
J REGIONAL SCI	0.676	0.592	0.751	0.823	4	2.842	<b>0.7</b>
AM J AGR ECON	0.681	0.672	0.746	0.659	4	2.758	<b>0.7</b>
ASTIN BULL	0	0	0	0.682	1	0.682	<b>0.7</b>
ANNU REV FINANC ECON	0	0	0	0.678	1	0.678	<b>0.7</b>
ANNU REV FINANC ECON	0	0	0	0.678	1	0.678	<b>0.7</b>
WORK EMPLOY SOC	0.58	0.767	0.773	0.575	4	2.695	<b>0.7</b>
FINANC ANAL J	0.459	0.784	0.717	0.733	4	2.693	<b>0.7</b>
MACROECON DYN	0.788	0.656	0.498	0.745	4	2.687	<b>0.7</b>
REAL ESTATE ECON	0.489	0.541	0.89	0.733	4	2.653	<b>0.7</b>
FEM ECON	0.629	0.464	0.737	0.78	4	2.61	<b>0.7</b>
ECON TRANSIT	0.606	0.727	0.846	0.413	4	2.592	<b>0.6</b>
SPAN ECON REV	0	0	0	0.646	1	0.646	<b>0.6</b>
INT TAX PUBLIC FINAN	0.634	0.6	0.736	0.598	4	2.568	<b>0.6</b>
J DEV STUD	0.656	0.645	0.587	0.676	4	2.564	<b>0.6</b>
AUDITING-J PRACT TH	0.581	0.578	0.737	0.657	4	2.553	<b>0.6</b>
SOC CHOICE WELFARE	0.578	0.444	0.662	0.854	4	2.538	<b>0.6</b>
J MATH ECON	0.622	0.664	0.611	0.622	4	2.519	<b>0.6</b>
KYKLOS	0.692	0.544	0.632	0.641	4	2.509	<b>0.6</b>
QUANT FINANC	0	0.512	0.667	0.687	3	1.866	<b>0.6</b>
J TRANSP ECON POLICY	0.7	0.593	0.628	0.56	4	2.481	<b>0.6</b>
ACCOUNT ORG SOC	0.617	0.55	0.599	0.712	4	2.478	<b>0.6</b>
CLIOMETRICA	0	0	0	0.617	1	0.617	<b>0.6</b>
EUR REV AGRIC ECON	0.482	0.625	0.7	0.642	4	2.449	<b>0.6</b>
INSUR MATH ECON	0.488	0.586	0.593	0.78	4	2.447	<b>0.6</b>
J REGUL ECON	0.528	0.676	0.673	0.533	4	2.41	<b>0.6</b>

<b>Journal</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>count</b>	<b>sum</b>	<b>average</b>
J OPER RISK	0	0	0	0.6	1	0.6	<b>0.6</b>
STUD NONLINEAR DYN E	0.703	0.518	0.566	0.599	4	2.386	<b>0.6</b>
WORLD ECON	0.476	0.671	0.569	0.652	4	2.368	<b>0.6</b>
J PROD ANAL	0.561	0.538	0.56	0.708	4	2.367	<b>0.6</b>
REV INCOME WEALTH	0.51	0.548	0.543	0.751	4	2.352	<b>0.6</b>
THEOR DECIS	0.484	0.492	0.533	0.815	4	2.324	<b>0.6</b>
PUBLIC CHOICE	0.518	0.467	0.508	0.775	4	2.268	<b>0.6</b>
SMALL BUS ECON	0.425	0.391	0.631	0.726	4	2.173	<b>0.5</b>
J RISK INSUR	0.296	0.515	0.471	0.883	4	2.165	<b>0.5</b>
REV IND ORGAN	0.512	0.452	0.689	0.45	4	2.103	<b>0.5</b>
REV WORLD ECON	0.411	0.528	0.39	0.768	4	2.097	<b>0.5</b>
J EVOL ECON	0.561	0.567	0.479	0.487	4	2.094	<b>0.5</b>
SOUTH ECON J	0.435	0.51	0.516	0.618	4	2.079	<b>0.5</b>
ECON PHILOS	0.63	0.464	0.346	0.636	4	2.076	<b>0.5</b>
CHINA ECON REV	0.547	0.535	0.484	0.473	4	2.039	<b>0.5</b>
ECON LETT	0.469	0.515	0.483	0.556	4	2.023	<b>0.5</b>
EMPIR ECON	0	0	0	0.5	1	0.5	<b>0.5</b>
INT J FINANC ECON	0.529	0.523	0.451	0.492	4	1.995	<b>0.5</b>
POST-SOV AFF	0.73	0.586	0.329	0.35	4	1.995	<b>0.5</b>
INF ECON POLICY	0.348	0.381	0.624	0.634	4	1.987	<b>0.5</b>
J FOREST ECON	0	0	0	0.495	1	0.495	<b>0.5</b>
FISC STUD	0.329	0.378	0.537	0.711	4	1.955	<b>0.5</b>
CAMB J ECON	0.406	0.438	0.518	0.573	4	1.935	<b>0.5</b>
NATL TAX J	0.536	0.399	0.539	0.459	4	1.933	<b>0.5</b>
AUST J AGR RESOUR EC	0.401	0.566	0.455	0.511	4	1.933	<b>0.5</b>
INT LABOUR REV	0	0	0	0.481	1	0.481	<b>0.5</b>
NEW POLIT ECON	0	0.392	0.492	0.552	3	1.436	<b>0.5</b>
J HOUS ECON	0.404	0.615	0.501	0.368	4	1.888	<b>0.5</b>
J MACROECON	0.418	0.504	0.357	0.594	4	1.873	<b>0.5</b>
AGR ECON-BLACKWELL	0.567	0.363	0.362	0.548	4	1.84	<b>0.5</b>
J AGR ECON	0.373	0.434	0.504	0.522	4	1.833	<b>0.5</b>
J BUS FINAN ACCOUNT	0	0	0	0.443	1	0.443	<b>0.4</b>
SCOT J POLIT ECON	0.416	0.355	0.542	0.422	4	1.735	<b>0.4</b>
REV DEV ECON	0	0	0	0.423	1	0.423	<b>0.4</b>
REV AGR ECON	0	0.449	0.412	0.4	3	1.261	<b>0.4</b>
J AFR ECON	0.349	0.302	0.522	0.486	4	1.659	<b>0.4</b>
CESIFO ECON STUD	0	0	0	0.408	1	0.408	<b>0.4</b>
CONTEMP ECON POLICY	0.407	0.43	0.411	0.353	4	1.601	<b>0.4</b>
J REAL ESTATE FINANC	0.279	0.432	0.469	0.415	4	1.595	<b>0.4</b>
J ECON	0.403	0.443	0.386	0.349	4	1.581	<b>0.4</b>
ECON REC	0.258	0.404	0.482	0.388	4	1.532	<b>0.4</b>
J INST THEOR ECON	0.262	0.422	0.489	0.342	4	1.515	<b>0.4</b>
J JPN INT ECON	0.26	0.373	0.299	0.58	4	1.512	<b>0.4</b>
INT REV LAW ECON	0.385	0.23	0.501	0.351	4	1.467	<b>0.4</b>
GENEVA RISK INS REV	0.12	0.384	0.645	0.313	4	1.462	<b>0.4</b>
EUROPE-ASIA STUD	0.389	0.396	0.298	0.367	4	1.45	<b>0.4</b>
ECON DEV Q	0.381	0.258	0.314	0.479	4	1.432	<b>0.4</b>
PORT ECON J	0	0	0	0.346	1	0.346	<b>0.3</b>

<b>Journal</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>count</b>	<b>sum</b>	<b>average</b>
PAC ECON REV	0	0	0	0.312	1	0.312	<b>0.3</b>
CAN J AGR ECON	0	0.269	0.31	0.353	3	0.932	<b>0.3</b>
J AGR RESOUR ECON	0.264	0.25	0.397	0.331	4	1.242	<b>0.3</b>
ECON MODEL	0.28	0.325	0.285	0.345	4	1.235	<b>0.3</b>
MANCH SCH	0.307	0.361	0.256	0.293	4	1.217	<b>0.3</b>
B INDONES ECON STUD	0.188	0.28	0.256	0.489	4	1.213	<b>0.3</b>
ANNU REV RESOUR ECON	0	0	0	0.303	1	0.303	<b>0.3</b>
TIJDSCHR ECON SOC GE	0.241	0.278	0.339	0.353	4	1.211	<b>0.3</b>
JPN ECON REV	0.248	0.379	0.232	0.343	4	1.202	<b>0.3</b>
APPL ECON	0.263	0.289	0.331	0.306	4	1.189	<b>0.3</b>
OPEN ECON REV	0.267	0.32	0.277	0.27	4	1.134	<b>0.3</b>
FUTURES	0.256	0.279	0.31	0.24	4	1.085	<b>0.3</b>
J FUTURES MARKETS	0.204	0.209	0.356	0.295	4	1.064	<b>0.3</b>
J PORTFOLIO MANAGE	0.212	0.272	0.291	0.228	4	1.003	<b>0.3</b>
J POLICY MODEL	0.197	0.198	0.268	0.278	4	0.941	<b>0.2</b>
ABACUS	0	0	0	0.235	1	0.235	<b>0.2</b>
FINANZARCHIV	0	0	0	0.234	1	0.234	<b>0.2</b>
FINANZARCHIV	0	0	0	0.234	1	0.234	<b>0.2</b>
JPN WORLD ECON	0.221	0.144	0.229	0.263	4	0.857	<b>0.2</b>
J APPL ECON	0.085	0	0	0.34	2	0.425	<b>0.2</b>
AM J ECON SOCIOL	0.185	0.142	0.291	0.232	4	0.85	<b>0.2</b>
DEFENCE PEACE ECON	0.191	0.133	0.218	0.274	4	0.816	<b>0.2</b>
ECONOMIST-NETHERLAND	0.11	0.165	0.174	0.35	4	0.799	<b>0.2</b>
EMERG MARK FINANC TR	0.193	0.249	0.173	0.15	4	0.765	<b>0.2</b>
INVEST ECON-SPAIN	0	0	0	0.179	1	0.179	<b>0.2</b>
APPL ECON LETT	0.157	0.168	0.215	0.158	4	0.698	<b>0.2</b>
J MEDIA ECON	0.155	0.106	0.229	0.192	4	0.682	<b>0.2</b>
DEV ECON	0.133	0.155	0.113	0.242	4	0.643	<b>0.2</b>
POST-COMMUNIST ECON	0.206	0.14	0.126	0.131	4	0.603	<b>0.2</b>
INT J TRANSP ECON	0	0	0	0.145	1	0.145	<b>0.1</b>
J ECON EDUC	0.095	0.139	0.13	0.214	4	0.578	<b>0.1</b>
INDEP REV	0	0	0	0.142	1	0.142	<b>0.1</b>
HACIENDA PUBLICA ESP	0	0	0	0.138	1	0.138	<b>0.1</b>
J ECON ISSUES	0.091	0.126	0.14	0.189	4	0.546	<b>0.1</b>
EUR J HIST ECON THOU	0	0	0	0.135	1	0.135	<b>0.1</b>
EASTERN EUR ECON	0.122	0.117	0.144	0.119	4	0.502	<b>0.1</b>
J ECON POLICY REFORM	0	0.118	0.135	0.114	3	0.367	<b>0.1</b>
J POST KEYNESIAN EC	0.103	0.076	0.16	0.125	4	0.464	<b>0.1</b>
S AFR J ECON	0.09	0.098	0.125	0.151	4	0.464	<b>0.1</b>
AM ECON J-MACROECON	0	0	0	0.101	1	0.101	<b>0.1</b>
DESARROLLO ECON	0.126	0.073	0	0	2	0.199	<b>0.1</b>
JAHRB NATL STAT	0.069	0.041	0.103	0.165	4	0.378	<b>0.1</b>
GENEVA PAP R I-ISS P	0.036	0.064	0.136	0.127	4	0.363	<b>0.1</b>
TRANSFORM BUS ECON	0	0	0	0.08	1	0.08	<b>0.1</b>
REV ECON POLIT	0	0	0	0.072	1	0.072	<b>0.1</b>
INZ EKON	0	0	0	0.071	1	0.071	<b>0.1</b>
FINANC UVER	0.077	0.073	0.051	0.078	4	0.279	<b>0.1</b>
HITOTSUB J ECON	0.008	0.065	0.087	0.111	4	0.271	<b>0.1</b>
REV ECON APL-SPAIN	0	0	0	0.056	1	0.056	<b>0.1</b>

## 6. Overview of editorial positions of TI research fellows

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### BEE

Bleichrodt, H.	Journal of Health Economics	Associate Editor
	Theory and Decision	Coordinating Editor
	Management Science	Associate Editor
	Decision Analysis	Associate Editor
	European Economic Review	Associate Editor
	Medical Decision Making,	Editorial Board
	Health Economics	Editorial Board
Offerman, T.J.S.	Games and Economic Behavior	Associate Editor
	Experimental Economics	Member of Editorial Board
Rohde, K.	Journal of Economic Behavior & Organization	Associate Editor
Schram, A.	Experimental Economics	Founding Editor
Sonnemans, J.	Quantitative Finance	Member of Editorial Board
	Journal of Economic Psychology	Member of the Board
	European Economic Review	Associate Editor
Wakker, P.	Decision Analysis	Member of Editorial board
	Journal of Mathematical Psychology	Member of Editorial board
	Journal of Risk and Uncertainty	Member of Editorial board
	Theory and Decision	Member of Editorial board
Winden, F. van	Public Choice	Member of Editorial board

### CSC

Diks, C.	Studies in Nonlinear Dynamics and Econometrics	Associate Editor
Hommel, C.	Journal of Economic Dynamics and Control	Editor

	Macroeconomic Dynamics	Associate Editor
	Computational Economics	Associate Editor
	Journal of Nonlinear Science	Associate Editor
	Journal of Economic Behaviour & Organization	Associate Editor
	Journal of Economic Interaction & Coordination	Associate Editor
	Complexity Economics	Associate Editor
Houba, H.	E-conomics	Associate Editor
Wagener, F.	Review of Behavioral Economics	Associate Editor
<b>ECTOR</b>		
Boswijk, H.P.	Journal of Time Series Analysis (2013–)	Associate Editor
Dijk, D.J.C. van	Journal of Applied Econometrics	Associate Editor
	International Journal of Forecasting	Associate Editor
	Applied Economics	Associate Editor
Dijk, H.K. van	Journal of Applied Econometrics	Co-Editor
	Econometric Institute/Princeton University Press lectures	Co-Editor
	Journal of Econometrics	Associate Editor
	Econometric Reviews	Associate Editor
	Journal of Computational Economics	Associate Editor
	Econometrics Letters	Associate Editor
	The Oxford Handbook of Bayesian Econometrics	Co-editor
	CSDA Annals of Computational and Financial Econometrics	Managing Guest-Editor
	Computational Statistics and Data Analysis	Member of Editorial Board
Fok, D.	International Journal of Research in Marketing	Member of Editorial Board
Franses, P.H.B.F.	Statistica Neerlandica	Editor-in-chief

	Quantitative Methods for Applied Economics and Business Research	Editor
	Quantitative Marketing and Economics	Associate Editor
	Marketing Science	Associate Editor
	Journal of Economic Surveys	Associate Editor
	International Journal of Research in Marketing	Member of Editorial Board
Geweke, J.	Journal of Applied Econometrics Advisory/Consulting	Editor
	Journal of Econometrics	Co-Editor
	Journal of Financial Econometrics	Advisory/Consulting Editor
Koopman, S.J.	Journal of Applied Econometrics	Member of Editorial Board
	Journal of Forecasting	Member of Editorial Board
Magnus, J.	Econometric Exercises	Editor
	Computational Statistics and Data Analysis	Member of Editorial Board
Paap, R.	Computational Statistics and Data Analysis	Associate Editor
	Statistica Neerlandica	Associate Editor
Stougie, L.	Surveys in Operations Research & Management Science	Editorial Board
	ICST Transactions on Algorithms Engineering	Editorial Board
	Wireless Sensor Networks	Editorial Board
Wagelmans, A.	Computers & Operations Research	Member advisory Board
	International Journal of Inventory Research	Member Editorial Board
	Naval Research Logistics	Associate Editor
	Statistica Neerlandica	Associate Editor
Janssen, M.C.W.	Journal of Economic Behavior and Organization	Member of Editorial Board
	Journal of Economic Methodology	Member of Editorial Board
<b>FIN</b>		
Boot, A.W.	Journal of Financial Intermediation	Associate Editor

	Journal of Corporate Finance	Associate Editor
	Multinational Finance Journal	Associate Editor
	European Financial Management	Associate Editor
	Journal of Financial Stability	Associate Editor
	Review of Finance	Advisory Editor
	Journal of Financial Regulation and Compliance	Member of editorial Board
	Maandschrift voor Accountancy en Bedrijfseconomie Member	Editorial Board
	Economisch Statistische Berichten	Member editorial advisory Committee
	Economic and Business Review Member International	Editorial Board
Giambona, E.	Journal of Real Estate Finance and Economics	Editor (Special Issue)
Menkveld, A.	Journal of Derivatives	Advisory Board Member
Perotti, E.	Journal of Corporate Finance	Associate Editor
	Review of Finance	Associate Editor
	Pacific-Basin Finance Journal	Associate Editor
	Journal Emerging Market Finance	Associate Editor
	International Review of Finance	Associate Editor
	Financial Letter Research	Associate Editor
Assem, M. van den	Journal of Economic Behavior & Organization	Editor (special issue)
Veenman, D.	European Accounting Review	Editorial Board member
	Accounting and Finance	Editorial Board member
Vorst, A.	Journal of Derivatives	Associate Editor
<b>LHED</b>		
Gunning, J.W.	World Bank Economic Review	Member of Editorial Board
	Revue d'Économie du Développement	Member of Editorial Board
	Journal of African Economies	Managing Editor



Hartog, J.	Economics of Education Review	Member Editorial Board
	Journal of Happiness and Development	Member Editorial Board International
Koning, P.	Tijdschrift voor overheidsfinancien	Editor
	TPEdigitaal	Editor
Lindeboom, M.	Health Economics	Associate Editor
	Nordic Journal of Health Economics	Member Editorial Board
O'Donnell	Journal of Health Economics	Associate Editor
	Health Economics	Associate Editor
Oosterbeek, H.	Economics of Education Review	Associate Editor, member of Editorial Board
	Effective Education	Member of Editorial Board
Berg, G.J. van den	The Economic Journal	Joint Managing Editor
	Journal of Econometrics	Co-Editor
Doorslaer, E. van	Journal of Health Economics	Associate Editor
	Health Economics	Associate Editor
	Journal of Health Services Research and Policy	Editorial Committee
	Population Health Metrics	Editorial Board Member
	Netspar	Editorial Board
<b>MIE</b>		
Beetsma, R.	Netspar Chairman	Editorial Board
	CESifo Economic Studies	Associate Editor
	European Economic Review	Associate Editor
	Journal of Economic Literature	Board of Editors
Gautier, P.	Journal of the European Economic Association	Associate Editor
Jacobs, B.	FinanzArchiv	Associate Editor

Teulings, C.N.	Norwegian Center of Taxation Economisch Statistisch Berichten	Member advisory Board Member Editorial advisory Board
Vries, C.G. de	Annals of Finance	Member of Editorial Board
	Journal of Risk	Member of Editorial Board
	German Economic Review	Member of Editorial Board
<b>OM</b>		
Boumans, M.	Journal of the History of Economic Thought	Co-Editor
	The Journal of Economic Methodology	Associate Editor, member Editorial Board
	Revue de Philosophie Économique	Member scientific committee
	Erasmus Journal for Philosophy and Economics	Member advisory Board
Dari-Mattiacci, G.	International Review of Law and Economics	Co-Editor
Jong, M. de	Journal of Marketing Research	Member Editorial Board
	Marketing Science	Member Editorial Board
	International Journal of Research in Marketing	Associate Editor
Dellaert, B.	International Journal of Electronic Commerce	Member of Editorial Board
	International Journal of Research in Marketing	Member of Editorial Board
	Journal of Choice Modelling	Member of Editorial Board
	Journal of Information Technology & Tourism	Member of Editorial Board
Donkers, A.C.D.	International Journal of Research in Marketing	Associate Editor
Hinloopen, J.	Review of Industrial Organization	Editorial Board member
Maas, V.	European Accounting Review	Editorial Board member
Moraga, J.L.	Journal of Industrial Economics	Associate Editor
	International Journal of Industrial Organization	Associate Editor
	Spanish Economic Review	Associate Editor
Pennings, E.	Technovation	Area Editor

Stremersch, S.	International Journal of Research in Marketing	Editor
	Marketing Science	Editorial review Board
	Journal of Marketing Research	Editorial review Board
	Journal of Marketing	Editorial review Board
Thurik, A.R.	Small Business Economics	Associate Editor
Praag, M. van	Small Business Economics	Associate Editor

## **STEE**

Nijkamp, P.	Member Editorial Boards of:
	Economic Modelling
	Annals of Regional Science
	Geographical Analysis
	Network Economics and Spatial Theory
	Regional Studies
	Environment & Planning C
	Studia Regionalia
	International Journal of Development Planning Literature
	Ecological Economics
	Indian Journal of Regional Science
	Geographical Systems
	Impact Assessment and Project Appraisal
	Applied Economic Geography
	Netherlands Journal of Housing and the Built Environment
	Studies in Regional Science
Journal of Environmental Law and Policy	
Socio-Economic Planning Studies	
Journal of Contingencies and Crisis Management	
Journal of Transportation and Statistics	
International Journal of Environment and Pollution	

International Journal of Technology Management  
 European Economic Review  
 European Journal of Infrastructure and Transport  
 Growth and Change  
 International Journal of Environmental Technology and Management  
 Journal of Transport Geography  
 Investigaciones Regionales  
 International Journal of Revenue Management  
 Scienze Regionali

Ommeren, J.N. van	Economics of Transportation	Member of Editorial Board
Tol, R.	Energy Economics	Editor
	Economics, the e-journal	Associate Editor
Ploeg, R. v.d.	CESifo Economic Studies	Co-Editor
	Special Issue on Resource Rich Economies	Co-Editor
	Member Editorial Boards of:	
	Journal of Environmental Economics and Management	
	International Review of Environmental and Resource Economics	
	Journal of Natural Resources Policy	
	Environmental Innovations and Societal Transitions	
	Environmental Economics and Policy	
	Oxford Economic Papers	
	FinanzArchiv	
	Journal of Common Market Studies	
	Journal of Financial Economic Policy	
	Journal of Financial Policy	
	Journal of Cultural Economics	
	Journal of Economics	
	mejudice.nl	

	De Economist	
Verhoef, E.T.	Economics of Transportation,	Editor
	Journal of Urban Economics	Member of Editorial Board
	Journal of Transport Economics and Policy	Member of Editorial Board
	Papers in Regional Science	Member of Editorial Board
	Networks and Spatial Economics	Associate Editor
	Journal of Regional Science	Associate Editor
Withagen, C.	Journal of Economic Dynamics and Control	Associate Editor
	European Economic Review	Associate Editor
	Environmental and Resource Economics	Scientific Advisory Board
	Special issue of Scandinavian Journal of Economics on Distributional Issues of Climate Change	Guest Editor
	The open-access, open-assessment E-journal	Associate Editor Economics
	Letters in Spatial and Resource Sciences	Associate Editor
	Journal of Environmental Economics and Management	Editorial Board

## 7. Cooperation Agreements Research Groups

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The academic research environment of TI is divided into 8 research groups who collaborate actively with their national and international academic partners. For each TI research group a list of institutional linkages is provided:

### **BEE**

The Behavioral and Experimental Economics (BEE) group was founded in 1991 at the University of Amsterdam. It is one of the first centers for experimental and behavioral economics in Europe. The group has an influential position in this field in the Netherlands and Europe. At Erasmus University Rotterdam, the group started with the arrival of Peter Wakker and Han Bleichrodt in 2005, and has since then expanded to include many other researchers. This part of the group focuses on decision under risk and uncertainty, and intertemporal choice.

The CREED group Annual PhD and academic staff exchange meeting with the University of East Anglia, Norwich, the University of Nottingham in the U.K. and with New York University, U.S. Joint authorships with the University of Wisconsin in the U.S. and with the Universidad Autonoma in Barcelona, Spain.

### **CSC**

Cooperative Behavior, Strategic Interaction and Complex Systems (CSC) research group focuses on: (non-)cooperative game theory; nonlinear dynamics and complex systems; bounded rationality, learning and heterogeneous expectations; dynamic models of collective behavior and social networks; dynamic optimization.

CeNDEF at the University of Amsterdam works together with the Department of Economics, University of Wisconsin – Madison, U.S. Project leaders Cars Hommes and William Brock.

The CSC group via CeNDEF is a partner in the EU FP7 CRISIS project “Complexity Research Initiative for Systemic Instabilities” (<http://www.crisis-economics.eu/home>) and collaborates with 12 Partners: University of Oxford, U.K.; University of Amsterdam; City University London, U.K.; Università Cattolica del Sacro Cuore, Italy; Centra de Recerca en Economia Internacional, Barcelona, Spain; Universitat Pompeu Fabra, Barcelona, Spain; Medical University of Vienna, Austria; AITIA, Budapest, Hungary; Università di Palermo, Italy; CEA, Aix-en-Provence, France; Università Politecnica delle Marche, Ancona, Italy; Scuola Normale Superiore, Pisa, Italy

The CSC group via CeNDEF is a partner in the EU FP7 Rastanews project “Macro-Risk Assessment and Stabilization Policies with New Early Warning Signals” (<http://www.rastanews.eu/?p=rastanews>) and collaborates with 12 partners: Università degli Studi di Milano – Bicocca, Italy (Project Coordinator); Istituto per gli Studi di Politica Internazionale, Italy (research unit: European Programme); Fondation Nationale des Sciences Politiques, France (research unit: OFCE); University of Amsterdam (research unit: CENDEF); Università Politecnica delle Marche, Italy; Università Cattolica del Sacro Cuore, Italy; Katholieke Universiteit Leuven, Belgium; Polski Instytut Spraw Międzynarowych, Warsaw, Poland; University of Pécs, Hungary; Brunel University London, U.K.; Rupprechts-Karls-Universität Heidelberg, Germany (research unit: Alfred-Weber-Institut); Queen Mary and Westfield College, University of London, U.K.

The CSC group via CeNDEF is a partner in the INEXC: International Network of Expectations Coordination (<http://www.expectational-coordination.com/>) that is sponsored by Institute of New Economic Thinking (INET) and collaborates with 12 partners: New York University, USA; Columbia University, USA; Stanford University, USA; Princeton University, USA; College de France, Paris,

France; University of Zurich, Switzerland; Barcelona Graduate School of Economics, Spain; Universidad de Chile, Chile; University of Oregon, Eugene, USA; Peking University, China; The Hebrew University, Israel; University of Tokyo, Japan.

## **ECTOR**

Econometrics and Operations Research (ECTOR). TI benefits from a strong Dutch tradition in econometrics. The first Nobel prize winner (together with Ragnar Frisch) in Economics was Jan Tinbergen. He worked at the precursor of the Erasmus School of Economics. Today, the Netherlands is one of the few countries in which it is possible to obtain a Bachelor's degree in Econometrics. Thanks to the large number of fellows in this group and the advanced undergraduate level of econometrics training, TI's Graduate School offers an Advanced Econometrics track. Research interests include time series econometrics, panel data, Bayesian econometrics, applied econometrics and econometric methodology. Applications can be found in areas as diverse as monetary economics, labor economics, marketing and asset pricing. Some fellows in this group focus on operations research.

Fellow Siem Jan Koopman (VU) collaborates as a long term Visiting Professor with CREATES, University of Aarhus, Denmark. The Center for Research in Econometric Analysis of Time Series, CREATES, is a research unit at School of Business and Social Sciences, hosted by the Department of Economics and Business from Aarhus University (Department of Economics and Business) and the University of Copenhagen (Department of Mathematical Statistics).

Fellows Peter Boswijk (UVA), Jan Kiviet (UVA) and Herman van Dijk (EUR/VU) are members of the standing committee of the (EC)<sup>2</sup> Euroconference Series. EC-squared is a series of annual international conferences on research in quantitative economics and econometrics, launched in 1990. The acronym (EC)<sup>2</sup> stands for European Conferences of the Econom[etr]ics Community. Its main aim is to maintain and extend an adequate forum for both senior and junior European researchers in quantitative economics and econometrics to discuss the progress and results of their research: <http://www.uclouvain.be/en-272921.html> This consortium collaborates with the following partners: University of Toulouse, France; University College London, U.K.; K.U. Leuven, Belgium; Carlos III University, Madrid, Spain; University of Florence, Italy; University of Aarhus, Denmark; Trinity College, Dublin, Ireland; University of Oxford, UK; GREQAM, Marseille, France; European University Institute, Italy; University of Southampton, U.K.; CREST, Paris, France; University of Nottingham, U.K.; Università degli Studi di Bologna, Italy; Università degli Studi "Tor Vergata", Rome, Italy; University of Copenhagen, Denmark; University of North Carolina, USA; Science Po, France; University of Algarve, Faro, Portugal; Marmara University, Istanbul, Turkey; Université de Genève, Switzerland; University of Oxford, U.K.; University of Cambridge, U.K.; Stockholm School of Economics, Sweden; University of Maastricht.

## **FINANCE**

The Finance research group at TI spans many of the core fields in finance: asset pricing, corporate finance, financial econometrics, market microstructure, and financial institutions.

Fellows Andre Lucas (VU) and Siem Jan Koopman (VU) through the Faculty of Economics and Business are participating together with the department of Econometrics in the EU consortium working on the SYstemic Risk TOMography (SYRTO) grant together with the universities of Athens, Brescia, Venezia, and Paris (I): <https://sites.google.com/site/robertosavonaunibs/syrto-project>

## **LHED**

Labor, Health, Education and Development (LHED): a large group of fellows works in different areas of labour, health, education and development.

Fellows Eddy van Doorslaer (EUR) and Maarten Lindeboom (VU) through the Erasmus School of Economics and the Faculty of Economics and Business jointly coordinate a research theme on "Income, health and labor across the life cycle" funded by the NETSPAR Research Programme of the University of Tilburg. Participating institutions are Erasmus University Rotterdam, VU University Amsterdam and University of Mannheim:

[http://www.netspar.nl/research\\_projects\\_theme\\_projects\\_health\\_and\\_income.htm](http://www.netspar.nl/research_projects_theme_projects_health_and_income.htm)

Funding: € 1,000,000 (2009 - )

Eddy Van Doorslaer is also coordinating a European Union 7th Framework project titled 'Health Equity and Financial Protection in Asia' (HEFPA, 2009-): <http://www.bmg.eur.nl/english/hefpa/>. This project is a collaboration between 5 European Institutions, the World Bank and 6 Asian Institutes (Cambodia, China, Indonesia, Philippines, Thailand and Vietnam): Institute of Health Policy and Management, Erasmus University Rotterdam; Institute of Tropical Medicine Antwerp, Belgium; University of Macedonia, Economic and Social Sciences, Greece; International Institute of Social Studies, Erasmus University Rotterdam; Oxford University, U.K.; World Bank Development Research Group, USA; Centre for Advanced Studies, Cambodia; Shandong University, China; SMERU Research Institute, Jakarta, Indonesia; University of the Philippines, Philippines; International Health Policy Programme, Thailand; Centre for Community Health Strategy, Vietnam.

Fellow Roy Thurik (Erasmus University Rotterdam) directs CASBEC, the Centre for Advanced Small Business Economics that is a joint effort of the Erasmus School of Economics of the Erasmus University Rotterdam and Panteia/EIM Business and Policy Research in Zoetermeer to conduct and support research and education in the area of small business economics and related fields like entrepreneurship, industrial organisation and development economics. CASBEC is based within the department of Applied Economics. It employs PhD students, student assistants, post-docs, regular researchers and guest lecturers. It has close and established links to researchers of the RSM Erasmus University Rotterdam, of the Free University in Amsterdam and the Institute of Development Strategies at Indiana University. Its collaborators are involved in many educational efforts and courses at Erasmus University Rotterdam. CASBEC was established in 1988.

## **MIE**

Fellows in the Macroeconomics and International Economics group (MIE) carry out research on growth, innovation, international trade and factor mobility, the role of economic geography, banking and monetary economics, and fiscal policy.

MIInt (UvA) is cooperating with: Tel-Aviv University, Israel; University of Oxford, U.K.; University of Cologne, Germany; Princeton University, USA; University of St Andrews, Scotland; European University Institute Florence, Italy; University of Warwick, U.K.; London School of Economics, U.K.; University of Alicante, Spain; University of Bonn, Germany; University of Chicago, USA; University of Minnesota, USA; University of Pennsylvania, USA; University of Basel, Switzerland; IMF, European Commission; ECB, German Ministry of Finance, Germany; Central Bank of Pakistan, Pakistan; OECD; BIS; Bank of England, U.K.; Federal Reserve Bank of Minneapolis, USA; World Bank; Central Bank of Chile, Chile.

## **OM**

The Organizations and Markets (OM) group spans many areas in (applied) microeconomics, including the economics of organizations, industrial organization, entrepreneurship, innovation, and auctions. Some fellows in this group approach consumer behavior and product innovation from a quantitative marketing perspective.

Fellow Philipp Koellinger through the Amsterdam Business School of the University of Amsterdam Koellinger is one of the principal investigators and co-founders of the Entrepreneur Consortium and the Social Science Genetic Association Consortium. The SSGAC is a cooperative enterprise among medical researchers and social scientists that coordinates genetic association studies for social science outcomes and provides a platform for interdisciplinary collaboration and cross-fertilization of



ideas. The SSGAC also tries to promote the collection of harmonized and well-measured phenotypes. Funding: € 800.000.

Partners: New York University, USA and Cornell University, USA.

## STEE

The Spatial, Transport, Environmental Economics research group (STEE) addresses four themes: urban and regional dynamics, land use, transportation, and environment and resources. Many fellows combine policy research with fundamental research.

Fellow Erik Verhoef through the Faculty of Economics and Business of the VU University Amsterdam is a member (2011 - ) of the Executive Committee of ITEA: International Transport Economics Organization: <http://www.iteaweb.org/>

Eric Verhoef coordinates the I-Prism research project "Innovative Pricing for Sustainable Mobility": <http://www.feweb.vu.nl/nl/afdelingen-en-instituten/spatial-economics/projects/i-prism/index.asp>

Partners: VU University Amsterdam; Delft University of Technology; University of Groningen

Fellow Cees Withagen through the Faculty of Economics and Business of the VU University Amsterdam is founding member European Association of Environmental and Resource Economists

Cees Withagen is the project coordinator with fellow Rick van der Ploeg of the ERC – Advanced Grant: GP - Combating Climate Change: Political economy of Green Paradoxes (2011-2016):

<http://www.feweb.vu.nl/nl/afdelingen-en-instituten/spatial-economics/projects/gp/index.asp>

Partners: VU University Amsterdam and University of Oxford, U.K.

Fellow Henri de Groot through the Faculty of Economics and Business of the VU University Amsterdam coordinates SPARD"project: "Spatial Analysis of Rural Development Measures:

<http://project2.zalf.de/spard/partners.php>

Partners: VU University Amsterdam; Leibniz-Centre for Agricultural Landscape Research, Germany; LEI: Stichting Dienst Landbouwkundig Onderzoek; Università di Bologna, Italy; Austrian Institute of Technology, Austria; Institute Nationale de la Recherche Agronomique, France; University of Edinburgh, U.K.; University of Ljubljana, Slovenia; Institute of Prospective Technological Studies, EU

Fellow Peter Nijkamp through the Faculty of Economics and Business of the VU University Amsterdam coordinates the "Migrant Diversity and Regional Disparity in Europe" project:

<http://www.norface-migration.org/currentprojectdetail.php?proj=5> The project aims to improve understanding of the impact of cross-border population flows into, within and out of Europe on regional socio-economic development and disparity.

Partners: VU University Amsterdam; Institute for Employment Research (IAB), Germany; University of Essex, U.K.; University of Tartu, Estonia; Labour Institute for Economic Research, Finland

Fellow Peter Nijkamp through the Faculty of Economics and Business of the VU University Amsterdam participates in the project: "Uni-metrics: Value Metrics and Policies for a Sustainable University Campus": <http://www.uni-metrics.polito.it/> UNI-metrics is a multi-disciplinary project which is based on a working hypothesis that "value-based metrics" can be found and interoperated in the intersection between actors, buildings and cities, and be integrated in policy-making. It is a EU project financed by the European Commission under the 7th Framework Program within the Marie Curie Actions IRSES-International Research Staff Exchange Scheme.

Partners: Politecnico di Torino, Italy; Cambridge University, U.K.; VU University Amsterdam; Hokkeido University, Japan

## **8. Research activities academic year 2012-2013**

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### **Tinbergen Institute Amsterdam**

#### **2012**

Fri 24 Aug: Robert Smith (University of Michigan, USA) A Fictitious Play Approach to Complex Systems Optimization. Amsterdam Econometrics Seminars and Workshop Series

Tue 4 Sep: Natalya Martynova (University of Amsterdam) Internal Asset Transfers and Risk Taking in Financial Conglomerates. PhD Lunch Seminars

Wed 5 Sep: Stefan Nagel (Stanford University, USA) Sizing Up Repo. DSF/TI Finance Research Seminars

Tue 11 Sep: Suzanne van der Ster (Erasmus University Rotterdam) Mixed-criticality scheduling of sporadic task systems on a single machine. PhD Lunch Seminars

Wed 12 Sep; Denis Gromb (INSEAD) The Dynamics of Financially Constrained Arbitrage. DSF/TI Finance Research Seminars

Mon 17 Sep: Pedro Cantos Sanchez (University of Valencia, Spain) Competition and Horizontal Integration in Maritime Freight, Spatial Economics Seminar

Tue 18 Sep: Harry van der Weijde (VU University Amsterdam) Competition in multi-modal transport networks with unpriced roads: a dynamic approach. PhD Lunch Seminars

Wed 19 Sep: Gordon Phillips (University of Maryland, USA) The Stock Market, Product Uniqueness, and Comovement of Peer Firms. DSF/TI Finance Research Seminars

Thu 20 Sep: Christoph Brunner (University of Heidelberg, Germany) Premium Auctions and Risk Preferences: An experimental Study. CREED Seminars

Tue 25 Sep: Erzo Luttmer (Dartmouth College, USA) The Welfare Cost of Perceived Policy Uncertainty: Evidence from Social Security. Labour Seminars

Tue 25 Sep: Noemi Peter (University of Amsterdam) The effect of sibling sex composition on education and family formation. PhD Lunch Seminars

Wed 26 Sep: Daniel Ferreira (LSE) A Model of the Evolution of Executive Labor Markets. DSF/TI Finance Research Seminars

Tue 2 Oct: Tomasz Makarewicz (University of Amsterdam) Initial Predictions in Learning-to-Forecast Experiment. PhD Lunch Seminars

Tue 2 Oct: Katja Kaufmann (Bocconi University, Italy) Returns to the Quality of Higher Education in the Marriage Market. Labour Seminars

Fri 5 Oct: Roberto Pancrazi (University Warwick, U.K.) Effects of Banks and Household's Optimism on Collateralized Debt: The Case of Home Equity Extraction. Macro Seminars

Mon 8 Oct: Vincent Martinet (INRA, Nanterre) Trade-offs between food production and biodiversity conservation: some economic aspects. Spatial Economics Seminar

Tue 9 Oct Kevin Lang (Boston University, USA) The Evolution of the Black-White Test Score Gap in Grades K-3: The Fragility of Results. Labour Seminars

Tue 9 Oct: Paul Muller (VU University Amsterdam) Childcare subsidies and labour supply: evidence from a large Dutch reform. PhD Lunch Seminars

Wed 10 Oct: Joey Engelberg (Rady UC San Diego, USA) Anchoring and the Cost of Capital. DSF/TI Finance Research Seminars

Thu 11 Oct: Marie Claire Villeval (GATE, University of Lyon, France) Moral hypocrisy, power and social preferences. CREED Seminars

Mon 15 Oct: Achim Czerny (WHU — Otto Beisheim School of Management) Airport Peak-load Pricing Revisited: The Case of Dynamic and Coarse Tolls. Spatial Economics Seminar

Tue 1 Oct: Ioannis Tikoudis (VU University Amsterdam) On revenue recycling and the welfare effects of second best congestion pricing in a monocentric city. PhD Lunch Seminars

Tue 16 Oct: Tessa Bold (Frankfurt University, Germany) Interventions and Institutions: Experimental Evidence on scaling up education reforms in Kenya. Labour Seminars

Wed 17 Oct: David Sraer (Princeton University, USA) Why have real estate prices become so correlated? Financial Globalization and real estate price synchronization. DSF/TI Finance Research Seminars

Mon 22 Oct: Jean-Laurent Rosenthal (California Institute of Technology, USA) Adapting Law to Fit the Facts: the GmbH, the SARL, and the Organization of Small Firms in Germany and France, 1892-1930. ACLE Law & Economics Seminars

Tue 23 Oct: Mariya Melnychuk (University of Alicante, Spain) Depression and Willingness to Invest in Risky Financial Assets. PhD Lunch Seminars

Tue 23 Oct: Istvan Barra (VU University Amsterdam) Bayesian analysis of nonlinear, non-Gaussian state space models: the joint independent Metropolis-Hastings method. PhD Lunch Seminars

Wed 24 Oct: Anjan Thakor (Olin Business School) The Dark Side Of Liquidity Creation: Leverage and Systemic Risk. DSF/TI Finance Research Seminars

Thu 25 Oct: Neil Oliver (MIT, Cambridge, USA) Decentralized mechanisms for selfish scheduling. Amsterdam Econometrics Seminars and Workshop Series

Fri 26 Oct: Pieter Gautier (VU University Amsterdam) Simultaneous Search and Network Efficiency. Economics Colloquia on Friday

Mon 29 Oct: Charles Mason (University of Wyoming, USA presently visiting professor at Oxford University) Uranium and Nuclear Power: The Role of Exploration Information in Framing Public Policy. Spatial Economics Seminar

Tue 30 Oct: Susanna Loeb (Stanford University, USA) How teacher turnover harms student achievement. Labour Seminars

Tue 30 Oct: Xiye Yang (University of Amsterdam) Leverage effect estimation with high-frequency data. PhD Lunch Seminars

Wed 31 Oct: Clemens Sialm (University of Texas, McComb School of Business, USA) Home Bias and Local Contagion: Evidence from Funds of Hedge Funds. DSF/TI Finance Research Seminars

Fri 2 Nov: Andrew Pua (University of Amsterdam) Responses to the Incidental Parameter Problem. Amsterdam Econometrics Seminars and Workshop Series

Tue 6 Nov: Daan in't Veld (VU University Amsterdam) Behavioural heterogeneity and the financial crisis. PhD Lunch Seminars

Tue 6 Nov: Marianne Simonsen (Aarhus University, Denmark) Long-term Consequences of ADHD Medication Use for Children's Human Capital Development. Labour Seminars

Wed 7 Nov: Gideon Saar (Johnson Cornell University, USA) Hidden Liquidity: Some new light on dark trading. DSF/TI Finance Research Seminars

Thu 8 Nov: Aniol Llorente-Saguer (Max Planck Institute, Germany) Divided Majority and Information Aggregation: Theory and Experiment. CREED Seminars

Thu 8 Nov: Phung Duc Tuan (Tokyo Institute of Technology, Japan) Taylor Series Expansion for Markovian Retrial Queues. Amsterdam Econometrics Seminars and Workshop Series

Fri 9 Nov: Giampiero Gallo (University of Florence, Italy) Common Dynamics in Volatility: an Additive Common Component vMEM Approach. Amsterdam Econometrics Seminars and Workshop Series

Fri 9 Nov: SaangJoon Baak (Waseda University, Japan) Expectation Formation Functions and Price Dynamics: An Application to the U.S. Hog Market. Economics Colloquia on Friday

Mon 12 Nov: Antoine d'Autume (Sorbonne and Paris School of Economics) The behavior of a competitive extraction firm: avoiding the most rapid approach. Spatial Economics Seminar

Tue 13 Nov: Rujie Wang (VU University Amsterdam) Transport density and urban agglomeration economies: a meta-analysis. PhD Lunch Seminars

Tue 13 Nov: Ellen Meara (Dartmouth University, USA) The FDA and ABCS: Unintended Consequences of Antidepressant Warnings on Human Capital. Labour Seminars

Wed 14 Nov: Michael Johannes (Columbia University Business School, USA) Volatility around the clock: Bayesian modeling and forecasting of intraday volatility in the financial crisis. DSF/TI Finance Research Seminars

Mon 19 Nov: Stephen Machin (University College London) Hate Crime in the Wake of Terror Attacks: Evidence From 7/7 and 9/11. ACLE Law & Economics Seminars

Tue 20 Nov: Henrik Kleven (London) The Effect of Property Taxes on the Housing Market: Evidence from Notches in the UK Stamp Duty (joint with Michael Best). Labour Seminars

Tue 20 Nov: Xiaoyu Shen (VU University Amsterdam) Two term structures of volatility. PhD Lunch Seminars

Wed 21 Nov: Daniel Paravisini (Columbia University Business School, USA) The Information and Agency Effects of Scores: Randomized Evidence from Credit Committees. DSF/TI Finance Research Seminars

Fri 23 Nov: Mike Elsby (University of Edinburgh, U.K.) Fixed Adjustment Costs and Aggregate Fluctuations. Macro Seminars

Fri 23 Nov: Sophie Bureau (University Catholique de Louvain, Belgium) Heterogenous Agents in the FX Market: A Matter of Time Horizon? Economics Colloquia on Friday

Mon 26 Nov: Jacques Poot (NIDEA, University of Waikato, New Zealand) The Lucrative Impact of Trade-Related Infrastructure in Open Economies: Meta-Analytic Evidence. Spatial Economics Seminar

Tue 27 Nov: Jonathan Skinner (Dartmouth University, USA) Physician Beliefs and Patient Preferences: A New Look at Supplier-Induced Demand. Labour Seminars

Tue 27 Nov: Arturas Juodis (University of Amsterdam) Cointegration Testing in Panel VAR Models Under Partial Identification and Spatial Dependence. PhD Lunch Seminars

Wed 28 Nov: Johan Walden (University of California Berkeley, USA) Trading, profitability, and volatility in a dynamic information network model Amsterdam DSF/TI Finance Research Seminars

Thu 29 Nov: Andreas Ortmann (University of New South Wales, Australia) Understanding social impact bonds: An experimental investigation. CREED Seminars

Fri 30 Nov: Giulia Iori (City University London) Network Analysis of the e-Mid Interbank Market during the Subprime Crisis. Economics Colloquia on Friday

Tue 4 Dec: Konrad Buchardi (Stockholm IIES, Sweden) The Economic Impact of Social Ties. Labour Seminars

Tue 4 Dec: Lukasz Marc (VU University Amsterdam) The Causal Links Between Aid and Government Expenditures. PhD Lunch Seminars

Wed 5 Dec: Zhiguo He (University of Chicago, USA) Endogenous Liquidity and Defaultable Bonds. DSF/TI Finance Research Seminars

Fri 7 Dec: Paolo Zeppini (TU Eindhoven) A Percolation Model of Innovations Diffusion and Competition. Economics Colloquia on Friday

Tue 11 Dec: Marius Zoican (VU University Amsterdam) Routing Decisions in Fragmented Limit Order Markets. PhD Lunch Seminars

Tue 11 Dec: Rosa Ferrer (Barcelona, Spain) Gender Gaps in Performance: Evidence from Young Lawyers. Labour Seminars

Fri 14 Dec: Workshop on: Economic Theory and Game Theory

Fri 14 Dec: Christian Hellwig (Toulouse School of Economics, France) Hayek vs Keynes: Dispersed Information and Market Prices in a Price-Setting Model. Macro Seminars

Mon 17 Dec: Maarten Bosker (Erasmus University Rotterdam) A life aquatic. Flood risk and the Dutch housing market. Spatial Economics Seminar

Tue 18 Dec: Maria Gheorg (Erasmus University Rotterdam) Modelling trends in quality of life using generalized additive models for location, scale and shape: Did quality of life improve just as much as mortality in the Netherlands? PhD Lunch Seminars

Tue 18 Dec: Martin Halla (Linz, Austria) The Social Gradient in the Impact of the Chernobyl Accident: The Case of Austria. Labour Seminars

## **2013**

Fri 11 Jan: Ethan Ilzetzki (London School of Economics, U.K.) Has the International Transmission of US Policy Shocks Changed? Macro Seminars Amsterdam

Mon 14 Jan: Youngsub Chun (Seoul National University, Korea) Demand operators and the Dutta-Kar rule for minimum cost spanning tree problems

Thu 17 Jan: Michael Kosfeld (Goethe University Frankfurt) The Dark Side of Solidarity CREED Seminars Amsterdam

Mon 28 Jan: Imran Rasul (London School of Economics, U.K.) Can Basic Entrepreneurship Transform the Economic Lives of the Poor? ACLE Law & Economics Seminars Amsterdam

Mon 28 Jan: Roberto Bonfatti (University of Nottingham, U.K.) An Economic Theory of Resource Dependence and War Spatial Economics Seminar

Tue 29 Jan: Lisette Swart (VU University Amsterdam) Irrational Financial Decision Making? Evidence From a Field Experiment in Rural Nigeria. PhD Lunch Seminars

Wed 30 Jan: Bernd Irlenbusch (University of Cologne, Germany) Moral Hypocrisy and the Use of (Un)Fair Procedures CREED Seminars

Mon 4 Feb: Ralph de Haas (European Bank for Reconstruction and Development) Microfinance, Poverty and Education Spatial Economics Seminar

Fri 8 Feb: Jan Kiviet (Nanyang Technological University (Singapore) and University of Amsterdam) Robust Empirical Inference Built on Non-orthogonality Conditions. Amsterdam Econometrics Seminars and Workshop Series

Tue 12 Feb: Mark Kagan (VU University Amsterdam) Climate Skepticism in the Face of Catastrophe PhD Lunch Seminars

Mon 18 Feb: Stefan Heblich (University of Stirling, U.K.) Why are educated and love-risking persons more mobile across regions? Spatial Economics Seminar

Tue 19 Feb: Aaron Kamm (University of Amsterdam) A Simultaneous Analysis of Turnout and Voting Under Proportional Representation: Theory and Experiments. PhD Lunch Seminars

Wed 20 Feb: Bernd Schwaab (European Central Bank) The yield impact of central bank asset purchases: the case of the ECB's Securities Markets. DSF/TI Finance Research Seminars

Thu 21 Feb: Shaul Shalvi (Ben Gurion University, Israel) Cheating for our loved ones: Oxytocin drives group supporting dishonesty. CREED Seminars

Fri 22 Feb: Michael Massmann (VU University Amsterdam) Strong Consistency of the Least-Squares Estimator in Simple Regression Models with Stochastic Regressors, with an Application to Economic Learning Models. Amsterdam Econometrics Seminars and Workshop Series

Mon 25 Feb: Elena Carletti (European University Institute, Florence, Italy) Credit Market Competition and Liquidity Crisis. ACLE Law & Economics Seminars

Mon 25 Feb: Steven Brakman (University of Groningen) Geographic Concentration of Cross Border Mergers & Acquisitions in the United States. Spatial Economics Seminar

Tue 26 Feb: Arturas Juodis (University of Amsterdam) First Difference Transformation in Panel VAR models: Robustness, Estimation and Inference. PhD Lunch Seminars

Wed 27 Feb: Peter Feldhütter (London Business School, U.K.) New evidence on the credit spread puzzle. DSF/TI Finance Research Seminars

Wed 27 Feb: Matthias Kredler (University of Madrid, Spain) Inequality and Asset Prices. Macro Seminars

Fri 1 Mar: Peter Schotman (Maastricht University) The Volatility of Long-Term Bond Returns: Persistent Interest Shocks and Time-Varying Risk Premiums. Amsterdam Econometrics Seminars and Workshop Series

Tue 5 Mar: Eszter Czibor (University of Amsterdam) The impact of gender role expectations on the choice to compete an experimental design. PhD Lunch Seminars

Wed 6 Mar: Alexander Guembel (Toulouse School of Economics, France) DSF/TI Finance Research Seminars

Thu 7 Mar: Rob Fairlie (University of California, USA) and Sander Hoogendoorn (University of Amsterdam). Double Organizations and Markets seminar

Fri 8 Mar: Karim Abadir (Imperial College, U.K.) Estimating variance matrices. Amsterdam Econometrics Seminars and Workshop Series

Mon 11 Mar: Christopher Costello (UCLA Santa Barbara, USA/Montpellier, France) Partial Enclosure of the Commons. Spatial Economics Seminar

Thu 14 Mar: Dan Levin (Ohio State University, USA) Separating Insight from Bayesian Updating: An Experimental Investigation. CREED Seminars

Fri 15 Mar: Tassos Magdalinos (Southampton, U.K.) Econometric Inference in the Vicinity of Unity. Amsterdam Econometrics Seminars and Workshop Series

Fri 15 Mar: Russell Cooper (EUI Florence, Italy) Deposit Insurance and Orderly Liquidation without Commitment: Can we Sleep Well? Macro Seminars

Mon 18 Mar: Tom Davidoff (Sauder School of Business/University of British Columbia, Canada) Tax Reform and Sprawl in the US. Spatial Economics Seminar

Tue 19 Mar: Yuyu Zeng (VU University Amsterdam) Asymmetric Nash Solutions in the River Sharing Problem. PhD Lunch Seminars

Wed 20 Mar: Jens Suedekum, (University of Duisburg, Germany) The Rise of the East and the Far East: German Labor Markets and Trade Integration. Spatial Economics Seminar

Wed 20 Mar: Jose Luis Peydro (Pompeu Fabra, Barcelona, Spain) Macroprudential Policy, Countercyclical Bank Capital Buffers and Credit Supply: Evidence from the Spanish Dynamic Provisioning Experiments. DSF/TI Finance Research Seminars

Fri 22 Mar: Árpád Ábrahám (EUI Florence, Italy) Efficient Risk Sharing with Limited Commitment and Storage. Macro Seminars

Tue 26 Mar: Lukáš Tóth (University of Amsterdam) Prioritizing in Government Agencies: Performance Effects of Budget Cuts and Institutional Mergers. PhD Lunch Seminars

Wed 27 Mar David Thesmar (HEC Paris, France) Housing Collateral and Entrepreneurship. DSF/TI Finance Research Seminars

Tue 2 Apr: Anita Kopanyi-Peuker (University of Amsterdam) Does the fear of exclusion improve team-production? PhD Lunch Seminars

Tue 2 Apr: Alessandro Tarozzi (Universitat Pompeu Fabra, Barcelona, Spain) Micro-loans, Insecticide-Treated Bednets and Malaria: Evidence from a Randomized Controlled Trial in Orissa (India). Labour Seminars

Wed 3 Apr: Marcin Kacperczyk (New York University Stern School of Business, USA) Do Security Analysts Discipline Credit Rating Agencies? DSF/TI Finance Research Seminars

Thu 4 Apr: Wouter Dessein (Columbia University Business School, USA) and Silvia Dominguez-Martinez (University of Amsterdam). Double Organizations and Markets seminar

Fri 5 Apr: Cornelis (Kees) Osterlee (CWI Amsterdam) Accurate and Efficient Techniques for Pricing Derivatives and for Computing Risk Measures. Amsterdam Econometrics Seminars and Workshop Series

Tue 9 Apr: Ceren Ozgen (VU University Amsterdam) Sorting out the impact of cultural diversity on innovative firms. An empirical analysis of Dutch micro-data. PhD Lunch Seminars

Tue 9 Apr: Joost de Laat (Worldbank, USA) Joint Liability, Asset Collateralization, and Credit Access: Evidence from Rainwater Harvesting Tanks in Kenya. Labour Seminars

Wed 10 Apr: Scott Weisbenner (University of Illinois, USA) How University Endowments Respond to Financial Market Shocks: Evidence and Implications. DSF/TI Finance Research Seminars

Fri 12 Apr: Russell Davidson (McGill University, Canada) Bootstrap Tests for Overidentification in Linear Regression Models. Amsterdam Econometrics Seminars and Workshop Series

Mon 15 Apr: Michele Polo (Bocconi University, Italy) Antitrust, Legal Standards and Investment. ACLE Law & Economics Seminars

Mon 15 Apr: Klaus Zimmermann (University of Bonn/IZA Berlin, Germany) Diaspora Economics. Spatial Economics Seminar

Tue 16 Apr: Marcin Zamojski (VU University Amsterdam) / Violeta Misheva (Erasmus University Rotterdam). Double PhD Lunch Seminar

Tue 16 Apr: Caterina Calsamiglia (Barcelona GSE, Spain) The Illusion of School Choice: Evidence from Barcelona. Labour Seminars

Wed 17 Apr: Frederik Schlingemann (University of Pittsburgh, USA) Does stock liquidity affect the incentives to monitor? Evidence from corporate takeovers. DSF/TI Finance Research Seminars

Thu 18 Apr: Alexander Sebald (University of Copenhagen, Denmark) Guilt Aversion, Stakes, and Individual Heterogeneity. CREED Seminars

Fri 19 Apr: Jenny Castle (Oxford University, U.K.) Semi-automatic Non-linear Model Selection Amsterdam Econometrics Seminars and Workshop Series

Mon 22 Apr: Alberto Alesina (Harvard University, USA) Ethnic Inequality. ACLE Law & Economics Seminars

Mon 22 Apr: Shelby Gerking (University of Central Florida, USA) Pareto Efficiency in Intra-household Resource Allocation. Spatial Economics Seminar

Tue 23 Apr: Martin Adler (VU University Amsterdam) / Rutger Poldermans (University of Amsterdam). Double PhD Lunch Seminar

Wed 24 Apr: Sergei Daydenko (Rotman School of Management) Insolvency, Illiquidity and the Risk of Default. DSF/TI Finance Research Seminars

Fri 26 Apr: Fernando Vega-Redondo (European University Institute, Florence, Italy) / Sergio Currarini (Universita di Venezia, Italy) Double CREED/CeNDEF seminar Economics Colloquia on Friday

Fri 26 Apr: Martin Weidner (UCL, U.K.) Incidental Parameter Bias in Panel Quantile Regressions. Amsterdam Econometrics Seminars and Workshop Series

Thu 2 May: Massimo Motta (ICREA-Universitat Pompeu Fabra and Barcelona GSE) and Evgenia Motchenkova (VU University Amsterdam). Double Organizations and Markets seminar



Mon 6 May: Karen Pittel (CESifo Munich, Germany) Improving Global Public Goods Supply Through Conditional Transfers \_ The International Adaptation Transfer Riddle. Spatial Economics Seminar

Tue 7 May: Lucyna Gornicka (University of Amsterdam) and Sandra Vriend (VU University Amsterdam). Double PhD Lunch Seminar

Tue 7 May: Petra Persson (Columbia University, USA) Social Insurance and the Marriage Market. Labour Seminars

Wed 8 May: Stijn van Nieuwerburgh (NYU Stern School of Business, USA) Firm Volatility in Granular Networks. DSF/TI Finance Research Seminars

Tue 14 May: Tomasz Makarewicz (University of Amsterdam) and Florian Sniekers (University of Amsterdam) Double PhD Lunch Seminar

Tue 14 May: Marco Manacorda (LSE, U.K.) Social Assistance and Formal Labor Market Participation. Labour Seminars

Wed 15 May: Philip Strahan (Carroll School of Management Boston College, USA) Exporting Liquidity: Branch Banking and Financial Integration. DSF/TI Finance Research Seminars

Wed 15 May: Pasquale Commendatore (University of Naples Federico II, Italy) Economic Integration and Agglomeration in a Customs Union in the Presence of an Outside Region. TI Complexity in Economics Seminars

Tue 21 May: Barry Weingast (Stanford University, USA) ACLE Spring Meeting 2013. ACLE Law & Economics Seminars

Tue 21 May: Martijn Kobus (VU University Amsterdam) and Matthias Weber (University of Amsterdam) Double PhD Lunch Seminar

Wed 22 May: H. Allen Klaiber (Ohio State University, USA) Recovering Household Valuation of Urban Heat Islands in the Presence of Omitted Variables Across Spatial Scales. Spatial Economics Seminar

Wed 22 May: Kenneth Ahern (University Of California Los Angeles, USA) Network Centrality and the Cross Section of Stock Returns. DSF/TI Finance Research Seminars

Wed 22 May: Jaromir Kovarik (University of the Basque Country, Spain) Client-Prostitute Networks: Searching for Key Players. TI Complexity in Economics Seminars

Thu 23 May: James Albrecht (Georgetown University, USA) Efficient Entry in Competitive Search with Nonrival Meetings and Asymmetric Information. Organizations and Markets Seminars

Fri 24 May: Tommaso Monacelli (Bocconi University, Italy) Taxes vs. Government Spending: Welfare and the Zero Lower Bound. Macro Seminars

Mon 27 May: Corrado di Maria (University of Birmingham, U.K.) Should we be worried about the Green Paradox? Announcement Effects of the Acid Rain Program. Spatial Economics Seminar

Tue 28 May: Harry van der Weijde (VU University Amsterdam) and Alexandros Dimitropoulos (VU University Amsterdam) Double PhD Lunch Seminar

Tue 28 May: Tuomas Pekkarinen (Aalto University, Finland) Educational Choices and Information on Labor Market Prospects: Evidence from a Randomized Field Experiment. Labour Seminars

Fri 31 May: Andreas Pick (Erasmus University Rotterdam) Forecasting with Markov Switching Models. Amsterdam Econometrics Seminars and Workshop Series

Tue 4 Jun: Lydia Geijtenbeek (University of Amsterdam); Hugo Silva Montalva (VU University Amsterdam); Boris van Leeuwen (University of Amsterdam); Nadine Ketel (University of Amsterdam and VU University Amsterdam); Dennis Bonam (VU University Amsterdam) PhD Lunch Seminar Marathon

Tue 4 Jun: Steven Stillman (University of Otago, New Zealand) Does Homeownership Improve Personal Wellbeing? Labour Seminars

Wed 5 Jun: Semyon Malamud (Swiss Finance Institute, Switzerland) Decentralized Exchange. DSF/TI Finance Research Seminars

Thu 6 Jun: Todd Zenger (Olin Business School, USA) and Chih-Mao Hsieh (University of Amsterdam) Double Organizations and Markets Seminar

Fri 7 Jun: Alain Hecq (Maastricht University) Testing for Common Cycles in Non-Stationary VARs with Varied Frequency Data. Amsterdam Econometrics Seminars and Workshop Series

Mon 10 Jun: Juan Pablo Rud (University of London, U.K.) Modern Industries, Pollution and Agricultural Productivity: Evidence from Ghana. Spatial Economics Seminar

Tue 11 Jun: David Kopanyi (University of Amsterdam) and Rutger Poldermans (University of Amsterdam) Double PhD Lunch Seminar

Fri 14 Jun Christiaan van der Kwaak (University of Amsterdam) Long Term Government Debt, Financial Fragility and Sovereign Default Risk. Macro Seminars

Fri 14 Jun: Ted Hill (Georgia Institute of Technology and California Polytechnic State University, USA) Recent Advances in the Evidence, Theory and Applications of Benford's Law.

Mon 17 Jun: Tim Willems (University of Oxford, U.K.) Optimal Learning on Climate Change: Why Climate Skeptics Should Reduce Emissions. Spatial Economics Seminar

Tue 18 Jun: Ioannis Tikuodis (VU University Amsterdam) and Sylvia Bleker (VU University Amsterdam) Double PhD Lunch Seminar

Thu 20 Jun: Joaquin Sanchez Soriano (Miguel Hernandez University of Elche, Spain) How to allocate Profits in an Internet TV System? A Game Theoretical Answer

Thu 20 Jun: Gary Charness (UC Santa Barbara, USA) Let's talk: How Communication affects Contract Design. CREED Seminars

Tue 25 Jun Maria Dementyeva (VU University Amsterdam) Regulation of Road Accident Externalities: Analytical Model with Endogenous Speed and Safety Technology Choice. PhD Lunch Seminars

Tue 25 Jun: Patrick Puhani (IZA, Germany) Labor Supply Effects of Changes in Pensions' Regression Discontinuity Evidence from Low-Skilled Workers. Labour Seminars

## **Tinbergen Institute Rotterdam**

### **2012**

Tue 4 Sep: Giorgio Brunello (University of Padova, Italy) The Causal Effect of Education on Health: What is the Role of Health Behaviors? Health Economics Seminars

Tue 4 Sep: Michael Brennan (UCLA, USA) Capital Asset Pricing with a Stochastic Horizon. Erasmus Finance Seminars

Tue 11 Sep: Henri Servaes (LBS) How do Industry Peers respond to Control Threats? Erasmus Finance Seminars

Tue 18 Sep: David Thesmar (HEC) Why did Real Estate Prices become so Correlated? Erasmus Finance Seminars

Fri 21 Sep: Allen Berger (University of Southern Carolina, USA) The Roles of Corporate Governance in Bank Failures during the Recent Financial Crisis. Erasmus Finance Seminars

Fri 21 Sep: Augustin Landier (Toulouse) The (Ir)Resistible Rise of Agency Rents. Micro Seminars

Wed 26 Sep: Raghavendra Rau (University of Cambridge, U.K.) How do Serial Acquirers choose the Method of Payment? Erasmus Finance Seminars

Tue 2 Oct: Dario Pozzoli (University of Aarhus, Germany) Does Mother Know Best? Parental Discrepancies in assessing Child Functioning Health Economics Seminars

Tue 9 Oct: Joey Engelberg (UNC) Anchoring and the Cost of Capital. Erasmus Finance Seminars

Tue 16 Oct: Torben Andersen (Northwestern University, USA) Parametric Inference and Dynamic State Recovery from Option Panels. Erasmus Finance Seminars

Thu 18 Oct: Matthew Spiegel (Yale University, USA) Human Capital and the Structure of the Mutual Fund Industry. Erasmus Finance Seminars

Fri 19 Oct: Klaus Broesamle (Hertie School of Governance, Berlin) Misery as a stepping stone: Whether and why natural disasters accelerate diplomats' careers. Micro Seminars

Tue 23 Oct: Florian Mayneris (Universite Catholique de Louvain) and Thomas Chaney (Toulouse School of Economics) Workshop 'International Trade and Development'. Rotterdam International Trade and Development Workshops

Thu 25 Oct: Olivier Herlem (Erasmus University Rotterdam) instelling Informational Lobbying: When Complex Issues are made Simple. PhD Lunch Seminars

Tue 30 Oct: Amanda Kowalski (Yale University, USA) Mandate-Based Health Reform and the Labor Market: Evidence from the Massachusetts Reform. Health Economics Seminars

Tue 30 Oct: Clemens Sialm (Texas A&M University, USA) Spillover Effects in Mutual Fund Companies. Erasmus Finance Seminars

Tue 6 Nov: Ellen Meara (Dartmouth College, USA) The FDA and ABCs: Unintended Consequences of Antidepressant Warnings on Human Capital. Health Economics Seminars

Tue 6 Nov: Gideon Saar (Cornell University, USA) Low Latency Trading. Erasmus Finance Seminars

Thu 8 Nov: Wei Li (Erasmus University Rotterdam) Identifying Monetary Policy Rules with General Equilibrium Constraints. PhD Lunch Seminars

Tue 13 Nov: Anthony Lynch (NYU Stern, USA) Does Mutual Fund Performance vary over the Business Cycle? Erasmus Finance Seminars

Wed 14 Nov: Remco Zwinkels (Erasmus University Rotterdam) On the Style Switching Behavior of Mutual Fund Managers. Brown Bag Seminars in Finance

Thu 15 Nov: Justinas Brazys (Erasmus University Rotterdam) The Time-Varying Reaction of High Interest Rate Currencies to Economic News. PhD Lunch Seminars

Thu 15 Nov: James Mitchell (Warwick Business School, U.K.) Recalibrated Opinion Pools. Rotterdam Seminars Econometric Institute

Tue 20 Nov: Russ Wermers (University of Maryland, USA) Runs on Money Market Mutual Funds. Erasmus Finance Seminars

Tue 20 Nov: Loriane Py (Banque de France) and Yoichi Sugita (Stockholm School of Economics) instlling Workshop 'International Trade and Development'. Rotterdam International Trade and Development Workshops

Thu 22 Nov: Guangyao Zhu (Erasmus University Rotterdam) Expectations of Executive Risk-taking and Preferences: Evidence from CEO Stock Grants. PhD Lunch Seminars

Mon 26 Nov: Neil Ericsson (Federal Reserve Board, USA) Detecting Crises, Jumps, and Changes in Regime. Rotterdam Seminars Econometric Institute

Tue 27 Nov: Andrew Ellul (Indiana University, USA) IPOs and Employment. Erasmus Finance Seminars

Wed 28 Nov: Mathijs Cosemans (Erasmus University Rotterdam) Ownership Composition, Liquidity and Liquidity Risk. Brown Bag Seminars in Finance

Thu 29 Nov: Jonathan Skinner (Dartmouth College, USA) Physician Decisions, Supplier-Induced Demand, and Healthcare Efficiency. Health Economics Seminars

Thu 29 Nov: Robin Zoutenbier (ESE, EUR) Intrinsic Motivations of Public Sector Employees: Evidence for Germany. PhD Lunch Seminars

Fri 30 Nov: Mitchel Hoffman (Yale University, USA) The Value of Hiring through Referrals. Micro Seminars

Tue 4 Dec: Zhiguo He (University of Chicago, USA) Endogenous Liquidity and Defaultable Bonds. Erasmus Finance Seminars

Wed 5 Dec: Jerry Parwada (University of New South Wales, Australia) Where do Hedge Fund Managers come from? Past Employment Experience and Managerial Performance

Thu 6 Dec: Dennis Karstanje (Erasmus University Rotterdam) Common Factors Driving Commodity Prices. PhD Lunch Seminars

Tue 11 Dec: Joel Peress (INSEAD) The Media and the Diffusion of Information in Financial Markets: Evidence from Newspaper Strikes. Erasmus Finance Seminars

Wed 12 Dec: Peter Schotman (Maastricht University) The Volatility of Long-Term Bond Returns: Persistent Interest Shocks and Time-Varying Risk Premiums. Macro and Money Seminars

Thu 13 Dec: Rogier Potter van Loon (Erasmus University Rotterdam) Beyond Chance? The Persistence of Performance in Online Poker. PhD Lunch Seminars

Fri 14 Dec: Nelson Mark (University of Notre Dame, USA) Third-Country Effects on the Exchange Rate. Macro and Money Seminars

Fri 14 Dec: Alberto Sole-Olle (Barcelona) Partisan Targeting of Inter-Governmental Transfers & State Interference in Local Elections: Evidence from Spain. Micro Seminars

Tue 18 Dec: Peter Feldhutter (LBS) New Evidence on the Credit Spread Puzzle. Erasmus Finance Seminars

Wed 19 Dec: Michael Koetter (Frankfurt School of Finance) Bank Executive Compensation and Systemic Risk. Macro and Money Seminars

Thu 20 Dec: Michiel Souverijn (Erasmus University Rotterdam) Biased Supervision. PhD Lunch Seminars

## 2013

Tue 1 Jan: Carmit Segal (University of Zurich, Switzerland) Morale, Relationships, and Wages: An Experimental Study. Micro Seminars

Thu 10 Jan: Eran Raviv (Erasmus University Rotterdam) Prediction Bias Correction for Dynamic Term Structure Models. PhD Lunch Seminars

Thu 17 Jan: Hale Koc (Erasmus University Rotterdam) Educational Disparities in Breast Cancer Screening: Evidence from the United States and The Netherlands. PhD Lunch Seminars

Fri 18 Jan: Zach Sautner (University of Amsterdam) Contracting between Firms: Empirical Evidence. Micro Seminars

Thu 24 Jan: Xuedong Wang Segmented Markets, Bond Risk Premia, and Inflation. PhD Lunch Seminars

Thu 24 Jan: Georgios Efraimidis (University of Southern Denmark) Stemming the Big Crash: A Triple Hazard Analysis of Price and Sales Crashes of New Products. Seminars Econometric Institute Rotterdam

Thu 31 Jan: Xiaoyu Shen (VU University Amsterdam) Two Volatility Term Structures. PhD Lunch Seminars

Thu 31 Jan: Wedun Wang (Tilburg University) Concept-based Bayesian Model Averaging and Growth Empirics. Rotterdam Seminars Econometric Institute

Thu 7 Feb: Ivan Lyubimov (Erasmus University Rotterdam) Extractive Institutions, Closed Borders and Economic Development. PhD Lunch Seminars

Fri 8 Feb: Michel Marechal (UZH, Switzerland) Does Professional Culture influence Dishonesty? Evidence from the Banking Industry. Micro Seminars

Mon 11 Feb: Stephanie Rosenkranz (USE) Law of the Few: Theory and Experiment. Research on Monday Rotterdam

Thu 14 Feb: Sander Renes (Erasmus University Rotterdam) The Distortive Effects of Career Concerns, an Experimental Study on Risk Taking in "Large" Tournaments. PhD Lunch Seminars

Fri 15 Feb: Andreas Lange (University of Hamburg, Germany) Social Preferences of Clinicians: Evidence from Experiments in Tanzania. Micro Seminars

Mon 18 Feb: Helena Schmidt (Institute of Molecular Biology and Biochemistry, Medical University of Graz, Austria) On the Intersection of Biology and Economics: A Focus on Telomeres. Health Economics Seminars

Thu 21 Feb: Umut Keskin The Characterizing Non-Classical Models of Intertemporal Choice by Present Values. PhD Lunch Seminars

Fri 22 Feb: Daniel Ferreira (London School of Economics, U.K.) Competition and Organizational Change. Micro Seminars

Mon 25 Feb: Marco Sahm (TU Munchen, Germany) The Contest Winner: Gifted or Venturesome? Research on Monday Rotterdam

Tue 26 Feb: Javier Arroyo (University of Madrid, Spain) Histogram Time Series Forecasting. An Application in Finance. Rotterdam Seminars Econometric Institute

Thu 28 Feb: Zara Sharif (Erasmus University Rotterdam) Do More Powerful Interest Groups have a Disproportionate Influence on Policy? PhD Lunch Seminars

Tue 5 Mar: Chiara Canta - CORE (Universite Catholique de Louvain, Belgium) Efficiency, Access, and the Mixed Delivery of Health Care Services

Tue 5 Mar: Johannes van Biesebroeck (Cath. University Leuven, Belgium) and Kurt Schmidheiny (University of Basel, Switzerland). Workshop International Trade and Development

Tue 5 Mar: Philippe Mueller (London School of Economics, U.K.) Hedging in Fixed Income Markets. Erasmus Finance Seminars

Mon 11 Mar: Giacomo Pasini (Venezia, Italy) Household Debt and Social Interactions. Research on Monday Rotterdam

Tue 12 Mar: Miriam Wuest (SFI and Aarhus University, Denmark) Can Caesarean Section improve Child and Maternal Health? Health Economics Seminars

Wed 13 Mar: Bent E. Sorensen (University of Houston, USA) How do Politicians save? Buffer Stock Management of Unemployment Insurance Finance. Macro and Money Seminars

Thu 14 Mar: Heiner Schmittiel (ESE, EUR) Paid to quit. Research on Monday Rotterdam

Tue 19 Mar: Andrei Malenko (MIT, USA) Means of Payment and Timing of Mergers and Acquisitions in a Dynamic Economy. Erasmus Finance Seminars

Thu 21 Mar: Barbara Sadaba (Erasmus University Rotterdam) Did the Financial Crisis cause a Regime Shift in Euro Area Government Bond Risk Pricing? PhD Lunch Seminars

Mon 25 Mar: Marie Claire Villeval (GATE) Social Network, Peer Pressure, and Labor Supply. Research on Monday Rotterdam

Tue 26 Mar: Jun Qian (Boston College, USA) Does the Market Understand Rating Shopping? Predicting MBS Losses with Initial Yields. Erasmus Finance Seminars

Thu 28 Mar: Maaïke Stoel (University Groningen) The elasticity of taxable income in The Netherlands. PhD Lunch Seminars

Tue 2 Apr: Jennifer Huang (CKGSB) Optimal Liquidity Policy. Erasmus Finance Seminars

Tue 2 Apr: Evgeny Lyandres (Boston University, USA) Investment and Operating Strategies of Public and Private Firms: Theory and Evidence. Erasmus Finance Seminars

Thu 4 Apr: Amaresh Tiwari (Univ. of Liege, Belgium) Non-Linear Panel Data Models with Expected a posteriori Values of Correlated Random Effects. Rotterdam Seminars Econometric Institute

Thu 4 Apr: Jan Tichem (Erasmus University Rotterdam) Screening for Altruistic Supervisors. PhD Lunch Seminars

Mon 8 Apr: Sigrid Suetens (Tilburg University) Guilt Aversion, Stakes, and Individual Heterogeneity. Research on Monday Rotterdam

Tue 9 Apr: Saumitra Jha (Stanford University GSB, USA) Trade, Institutions and Ethnic Tolerance: Evidence from South Asia. Rotterdam International Trade and Development Workshops

Wed 10 Apr: Buhui Qiu (Erasmus University Rotterdam) Acquirer Organization Capital and Acquisition Performance. Brown Bag Seminars in Finance

Mon 15 Apr: Sujoy Mukerji (University of Oxford, U.K.) Ordering Ambiguous Acts. Research on Monday

Tue 16 Apr: Tarun Chordia (Emory University, USA) Trends in the Cross-Section of Stock Returns. Erasmus Finance Seminars

Wed 17 Apr: Marno Verbeek (Erasmus University Rotterdam) The Convexity and Concavity of the Flow-Performance Relationship for Hedge Funds. Brown Bag Seminars in Finance

Thu 18 Apr: Luc Bauwens (Louvain, Belgium) Dynamic Conditional Correlation Models for Realized Covariance Matrices. Rotterdam Seminars Econometric Institute

Thu 18 Apr: Pinar Ceyhan (Erasmus University Rotterdam) Posterior-Predictive Evidence on US Inflation using Phillips Curve Models with Non-Filtered Time Series. PhD Lunch Seminars

Fri 19 Apr: Alexander Sebald (University of Copenhagen, Denmark) Personality and Conflict in Principal-Agent Relations based on Subjective Performance Evaluations. Micro Seminars

Mon 22 Apr: Ralph Koijen (University of Chicago, USA) The Cost of Financial Frictions for Life Insurers. Research on Monday

Tue 23 Apr: Hitoshi Shigeoka (Simon Fraser University, Canada) School Cutoff Dates, and the Timing of Births. Health Economics Seminars

Tue 23 Apr: Nicolae Garleanu (UC Berkeley, USA) Financial Entanglement: A Theory of Incomplete Integration, Leverage, Crashes, and Contagion. Erasmus Finance Seminars

Wed 24 Apr: Kai Li (UBC, Canada) Investor Myopia and CEO Turnover: Evidence from Private Firms. Erasmus Finance Seminars

Thu 25 Apr: Bert de Bruijn (Erasmus University Rotterdam) A Stochastic-Mean Duration Dependent Markov Switching Model. PhD Lunch Seminars

Wed 1 May: Norman Schurhoff (HEC Lausanne) Dealer Networks: Market Quality in Over-The-Counter Markets. Erasmus Finance Seminars

Mon 6 May: Henrik Kleven (London School of Economics, U.K.) Market Responses to Transaction Taxes: Evidence from Notches and Stimulus in the UK. Research on Monday

Tue 7 May: Raman Uppal (EDHEC, U.K.) Comparing Different Regulatory Measures to Control Stock Market Volatility. Erasmus Finance Seminars

Wed 8 May: Patrick Verwijmeren (Erasmus University Rotterdam) Hole in the Wall. Brown Bag Seminars in Finance

Mon 13 May: Emily Owens (Cornell University, USA) Your Friends and Neighbors: Localized Economic Development, Inequality, and Criminal Activity. Research on Monday

Tue 14 May: Supon Limwattananon (International Health Policy Program, Khon Kaen University, Thailand) and Sven Neelsen (iBMG, Erasmus University Rotterdam) Consumption Smoothing of Health Shocks under Universal Coverage. Health Economics Seminars

Tue 14 May: Philip Strahan (Boston College, USA) Exporting Liquidity: Branch Banking and Financial Integration. Erasmus Finance Seminars

Thu 16 May: Sanne Blauw (Erasmus University Rotterdam) Using Copulas to deal with Endogeneity in Development Economics. PhD Lunch Seminars

Thu 16 May: Christian Hafner (UC Louvain, Belgium) An Almost Closed Form Estimator for the EGARCH Model. Seminars Econometric Institute

Fri 17 May: Robin Cubitt (The University of Nottingham, U.K.) Discriminating between Models of Ambiguity Attitude: An Experimental Test. Micro Seminars

Tue 21 May: Sait Ozturk (Erasmus University Rotterdam) Intraday Price Discovery in Fragmented Markets: A State Space Approach. PhD Lunch Seminars

Tue 21 May: Mauricio Avendano (The London School of Economics and Political Science, U.K. and the Harvard School of Public Health, USA) Economic Cycles, Unemployment and Health: A Cross-National Study. Health Economics Seminars

Tue 21 May: John Morgan (UC Berkeley, USA) On the Merits of Meritocracy. Research on Monday

Wed 22 May: David Stolin (TBS) Frenemies: How do Financial Firms vote on their Own Kind. Brown Bag Seminars in Finance

Thu 23 May: Albert Lee Chun (University of Aarhus, Denmark) A Forward-Looking Model of the Term Structure of Interest Rates. Seminars Econometric Institute

Fri 24 May: Marciano Siniscalchi (Northwestern University, USA) A Revealed-Preference Theory of Sequential Rationality. Micro Seminars

Mon 27 May: Raicho Bojilov (Ecole Polytechnique, France) Incentives to work or Incentives to quit? Research on Monday

Tue 28 May: Pedro Santa-Clara (The Nova School of Business and Economics, Portugal) Beyond the Carry Trade: Optimal Currency Portfolios. Erasmus Finance Seminars

Thu 30 May: Dinand Webbink (Erasmus University Rotterdam) How much do Children learn in Education Systems around the World? Seminars Econometric Institute

Thu 30 May: Zara Sharif (Erasmus University Rotterdam) The Optimal Lobbyist. PhD Lunch Seminars

Mon 3 Jun: Nikos Nikiforakis (University of Melbourne, Australia, Max Planck Institute for Research on Collective Goods, Germany) Competitive Pressure and Exploitation: An Experiment. Research on Monday

Tue 4 Jun: Amit Goyal (HEC, University of Lausanne, Switzerland) Cross-Sectional Asset Pricing with Individual Stocks: Betas versus Characteristics. Erasmus Finance Seminars

Wed 5 Jun: Mike Mao (Erasmus University Rotterdam) Country-Specific Attention and Security Returns. Brown Bag Seminars in Finance

Thu 6 Jun: Stefano Grassi (Aarhus University, Denmark) Testing for Level Shifts in a potentially Long Memory Framework: A State-Space Approach. Seminars Econometric Institute

Mon 10 Jun: Robert Gibbons (MIT Sloan School of Management, USA) What do Managers do? Exploring Persistent Performance Differences among seemingly Similar Enterprises. Research on Monday



Mon 10 Jun: Katya Malinova (University of Toronto, Canada) Do Retail Traders suffer from high Frequency Traders? Erasmus Finance Seminars

Tue 11 Jun: Laura Starks (The University of Texas at Austin, USA). Erasmus Finance Seminar

Thu 13 Jun: Olivier Herlem (Erasmus University Rotterdam) The Lobby and the Activist. PhD Lunch Seminars

Thu 13 Jun: Paolo Parente (University of Exeter, U.K.) A Kernel Based Bootstrap Method for Dependent Processes. Seminars Econometric Institute

Mon 17 Jun: Paul de Grauwe (London School of Economics, U.K.) Fragility of the Eurozone and Fiscal Implications of OMT. Research on Monday

Thu 20 Jun: Giovanni Mellace (University of St. Gallen, Switzerland) Relaxing Monotonicity in the Identification of Local Average Treatment. Seminars Econometric Institute

Thu 20 Jun: Eran Raviv (Erasmus University Rotterdam) Forecasting Electricity Spot Prices using Model Averaging. PhD Lunch Seminars

Mon 24 Jun: Anke Gerber (Universitaet Hamburg, Germany) Strategic Choices for Redistribution and the Veil of Ignorance: Theory and Experimental Evidence. Research on Monday

Tue 25 Jun: Nicolas Bouckaert (Center for Economic Studies, K.U. Leuven, Belgium) Differing Types of Medical Prevention Appeal to Different Individuals. Health Economics Seminars

Wed 26 Jun: Volodymyr Lugovsky Geography of Export Prices and Importer-Exporter Income Differences. Rotterdam International Trade and Development Workshops

Fri 5 Jul: Petra Nieken (Universitaet Bonn, Germany) Hidden Benefits of Reward. A Field Experiment on Motivation and Monetary Incentives. Micro Seminars

## Conferences, Lectures, Workshops: 2012-2013

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### TI Economics Lectures 2013

3-5 Jun Elhanan Helpman (Harvard University, USA)

1. Recent Development in International Trade and Foreign Direct Investment
2. Sectoral Trade
3. Monopolistic Competition
4. Firm Heterogeneity
5. Multinational Corporations
6. Trade and Inequality

### TI Econometrics Lectures 2013 (together with Princeton University Press and Econometrics Institute EUR)

May 22-23: Mark Watson (Princeton University, USA):

1. Some Problems and Models
2. Isolating Low-Frequency Variability
3. Application 1: HAC Inference  
Application 2: Testing Models of Low-Frequency Variability
4. Nuisance Parameters
5. Application 3: Cointegration
6. Application 4: Long-run Prediction

### 8th Tinbergen Institute Conference, 2013 First European Workshop on Entrepreneurship Economics

15-16 November 2013

Key note speakers: Thomas F. Hellmann (Sauder School of Business – University of British Columbia, Canada) and William Kerr (Harvard Business School, United States)

### 18 Dec 2012 Tinbergen Institute Workshop on Industrial Economics. Speakers:

Jaap Abbring (University of Tilburg); Jeffrey Campbell (Federal Reserve Bank of Chicago, USA); Otto Toivanen (KU Leuven, Belgium); Pieter Gautier (VU University Amsterdam); Bart Bronnenberg (Tilburg University); Jose Luis Moraga (VU University Amsterdam); Frank Verboven (KU Leuven, Belgium); Jean-Pierre Dube (University of Chicago, USA); Oleksandr Shcherbakov (University of Mannheim, Germany).

### 10 Jan 2013 Research Group Strategic and Cooperative Decision Making Workshop on Decision Making in Water Problems. Speakers:

Bart van den Boom (VU University Amsterdam); Maria Gomez Rua (Universidade de Vigo, Spain); Stefan Ambec (Toulouse School of Economics); Roy Brouwer (VU University Amsterdam); Fioravante Patrone (University of Genoa, Italy).

### 17-18 January 2013: Workshop on Dynamic Models driven by the Score of Predictive Likelihoods. Speakers:

Drew Creal (Booth Business School University of Chicago, USA); Andrew Harvey (University of Cambridge, U.K.); Giampiero Gallo (University of Florence, Italy); Xin Zhang (Sveriges Riksbank, Central Bank of Sweden, Stockholm); Pawel Janus (UBS Zurich, Switzerland); Philipp Andres (Cambridge University, U.K.); Ryoko Ito (Cambridge University, U.K.); Francisco Blasques (VU University Amsterdam); Erkki Silde (VU University Amsterdam); Bernd Schwaab (European Central Bank, Germany); Kris Boudt (KU Leuven, Belgium & VU University Amsterdam); Jiangyu Ji (VU University Amsterdam); Marcin Zamojski (VU University Amsterdam); Siem Jan Koopman (VU

University Amsterdam); Francesco Calvori (University of Florence, Italy); Stephen Thiele (Cambridge University, U.K.); Andre Lucas (VU University Amsterdam).

**15 -17 Apr 2013 Workshop Program: E Pluribus Prosperitas: The Economics of Cultural Diversity. Speakers:**

M. Rose Olfert (University of Saskatchewan, Canada); Gil S. Epstein (Bar-Ilan University); Ira N. Gang (Rutgers University, USA); Klaus F. Zimmermann (Bonn University, Free University Berlin, Renmin University of China Beijing); Ceren Ozgen (VU University Amsterdam); Stephan Brunow (Institute for Employment Research IAB); Bastian Stockinger (IAB); Annie Tubadji (Regensburg University, Germany); Peter Nijkamp (VU University Amsterdam); Brian Osoba (Central Connecticut State University, USA); Karima Kourtit (VU University Amsterdam); Daniel Arribas-Bel (VU University Amsterdam); Anette Haas (Institute for Employment Research IAB), Michael Lucht (IAB); Norbert Schanne (IAB); Max Nathan (London School of Economics, U.K.); Peter Mulder (VU University Amsterdam); Jacques Poot (Waikato University, VU); Mark Partridge (Ohio State University, USA); Mathias Sinning (Australian National University); Ingo Isphording (Ruhr-University Bochum, Germany); Sebastian Otten (Ruhr-University Bochum, Germany); Giovanni Peri (University of California, Davis, USA); Barry R. Chiswick (George Washington University, USA); Mariya Aleksynska (International Labor Organization); Masood Gheasi (VU University Amsterdam); Annie Tubadji (Regensburg University, Germany); Bastian Stockinger (Institute for Employment Research IAB); Tiit Tammaru (University of Tartu, Estonia); Ott Toomet (University of Tartu, Estonia); Kadri Leetmaa (University of Tartu, Estonia); Amelie F. Constant (Temple University, George Washington University, USA); Thomas de Graaff (VU University Amsterdam); Wim Bernasco (Netherlands Institute for the Study of Crime and Law Enforcement NSCR, VU University Amsterdam); Joop Hartog (University of Amsterdam); Aslan Zorlu (University of Amsterdam); Peter Nijkamp (VU University Amsterdam); Jörg Hüttermann (Max Planck Institute, Germany); Sören Petermann (Max Planck Institute, Germany); Karen Schönwälder (Max Planck Institute, Germany); Jessie Bakens (VU University Amsterdam).

**May 24-25 2013: Workshop Forecasting Structure and Time Varying Patterns in Economics and Finance. Speakers:**

Adrian Pagan (The University of Sydney, Australia); Fabio Canova (European University Institute, Italy); Frank Diebold (University of Pennsylvania, USA); John Geweke (University of Technology Sydney, Australia and Erasmus University Rotterdam); Domenico Giannone (Université Libre de Bruxelles – ECARES, Belgium); Andrew Harvey (Cambridge University, U.K.); Siem Jan Koopman (VU University Amsterdam); Barbara Rossi (ICREA-Pompeu Fabra University, Spain); Neil Shephard (Oxford University, U.K.); Mark Watson (Princeton University, USA); Herman van Dijk (Erasmus University Rotterdam and VU University Amsterdam)

**27-28 May 2013: The 15th Tinbergen Institute Workshop Anniversary: Knowledge & Diamonds Forever. Presenters:**

Peter Nijkamp (VU University Amsterdam); Karima Kourtit (VU University Amsterdam); Roger Stough (George Mason University, USA); Bob Stimson (The University of Queensland, Australia); Ake Andersson (Jönköping International Business School, Sweden); Marina van Geenhuizen (Delft University of Technology); Michael Carroll (Bowling Green State University, USA); Eduardo Haddad (Univ.de São Paulo, Brazil); Brunow (Institute for Employment Research, Nuremberg, Germany); Belal Fallah (Ohio State University Columbus, USA); Mark Partridge (Ohio State University Columbus, USA); Dan Rickman (Ohio State University Columbus, USA); Andrea Caragliu (Politecnico di Milano, Italy); Yuyuan Wen (Renmin Univ.of China, Beijing, China); Ron Bosschma (Utrecht University); Teresa de Noronha Vaz (University of Algarve, Portugal); Neil Lee (London School of Economics, U.K.); Andres Rodriguez-Pose (London School of Economics, U.K.); Stefan Groot (VU University Amsterdam); Henri de Groot (VU University. Amsterdam); Rachel Franklin (Ohio State Univ. Columbus, USA); Alessandra Faggian (Ohio State Univ. Columbus, USA); Marlon Boarnet (University of Southern California, Los Angeles, USA); Vicente Royuela (University de Barcelona, Spain); Robert Kloosterman (University of Amsterdam); Fernando Sanz-Gracia (VU University Amsterdam); Daniel Arribas-Del (VU University Amsterdam); Hans Koster (VU University Amsterdam); Amit Batabyal (Rochester Institute of Technology, USA); Hans Westlund (Jönköping International Business School,

Sweden); Chiara Del Bo (Università degli Studi di Milano, Italy); Claude Thill (Charlotte, USA); Eveline van Leeuwen (VU University Amsterdam).

**6 - 8 Jun 2013: European Research Workshop in International Trade (ERWIT). Presenters:**

Alan Deardorff (University of Michigan, USA); William Ethier (University of Pennsylvania, USA); Ray Riezman (The University of Iowa, USA); Paola Conconi (Université Libre de Bruxelles, Belgium); Swati Dhingra (London School of Economics, U.K.); Andreas Moxnes (Dartmouth College, USA); Dalia Marin (University of Munich, Germany); Raphael Auer (Swiss National Bank, Switzerland); Gino Gancia (CREI, Barcelona GSE, Spain); Kala Krishna (Pennsylvania State University, USA); Shang-Jin Wei (Columbia University Business School, USA); Daniel Bernhofen (University of Nottingham, U.K.); Maarten Bosker (Erasmus University Rotterdam); Klaus Desmet (Universidad Carlos III, Spain); Francesc Ortega (Queens College CUNY, USA); Paula Bustos (Universitat Pompeu Fabra and Barcelona GSE, Spain).

**21–22 Jun 2013: Workshop on Panel Data. Presenters:**

Jorg Breitung (University of Bonn, Germany); Geert Dhaene (KU Leuven, Belgium); Jean Marie Dufour (McGill University, Canada); Kaddour Hadri (Queen's University Belfast, U.K.); Arturas Juodis (University of Amsterdam); Jan Kiviet (University of Amsterdam, NTU); Siem Jan Koopman (VU University Amsterdam); Rutger Poldermans (University of Amsterdam); Andrew Pua (University of Amsterdam); Tom Wansbeek (University of Groningen); Frank Windmeijer (University of Bristol, U.K.).

**19 Jul 2013: Workshop on Perturbation Analysis Techniques for the Analysis of Stochastic Models:**

Karim Abbas (University of Bejaia, Algeria); Felisa Vazquez-Abad (Hunter College of the City University of New York, USA); Haralambie Leahu (VU University Amsterdam); Charlotte Bech (VU University Amsterdam); Alexia Bolotaki (VU University Amsterdam).

**23-24 Aug 2013: ABEE Symposium 2013 (Amsterdam Symposium on Behavioral and Experimental Economics). Speakers:**

Isabelle Brocas (University of Southern California, USA); Carsten de Dreu (University of Amsterdam); John O'Doherty (California Institute of Technology, USA); Charles Noussair (Tilburg University); Arno Riedl (Maastricht University); Jack Vromen (Erasmus University Rotterdam); Nadège Bault (University of Amsterdam); Thomas Buser (University of Amsterdam); Boris van Leeuwen (University of Amsterdam); Jona Linde (University of Amsterdam); Jeroen van de Ven (University of Amsterdam); Frans van Winden (University of Amsterdam).

## **Appendix III**

### **Student inflow**

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1. Recruitment and applications
2. Admission criteria and the selection procedure
3. Details of inflowing students



## Appendix III

### Student inflow

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#### 1. Recruitment and applications

Recruitment of good students in a competitive market is an important task for a graduate school in economics. For Tinbergen Institute, the main marketing channel is the TI website ([www.tinbergen.nl](http://www.tinbergen.nl)). The recently restyled website provides detailed information on the content and level of the educational program, the student facilities, the research options within the three faculties participating in Tinbergen Institute and the institute's research activities. The website mentions TI's selling points (demanding program, many field courses, PhD research positions at the three faculties, job placement prospects, lively research environment) and illustrates these with personal stories of former and current students. The website lists the requirements for admission to the MPhil program and gives applicants the possibility to directly contact staff members and members of the student council in case they have any specific questions. All in all, the website gives a fair impression of what TI has to offer and is the most important tool to attract students for the TI MPhil program.

A second marketing channel is an annual information brochure which gives factual information about the MPhil program but also contains a number of personal stories written by MPhil and PhD students. This brochure is mailed to TI alumni who are in the position to scout ambitious and talented students. This brochure is also sent to the international offices of the home universities of former and current TI students. The marketing departments of EUR, UvA and VU universities use this brochure to promote Tinbergen Institute on educational fairs worldwide.

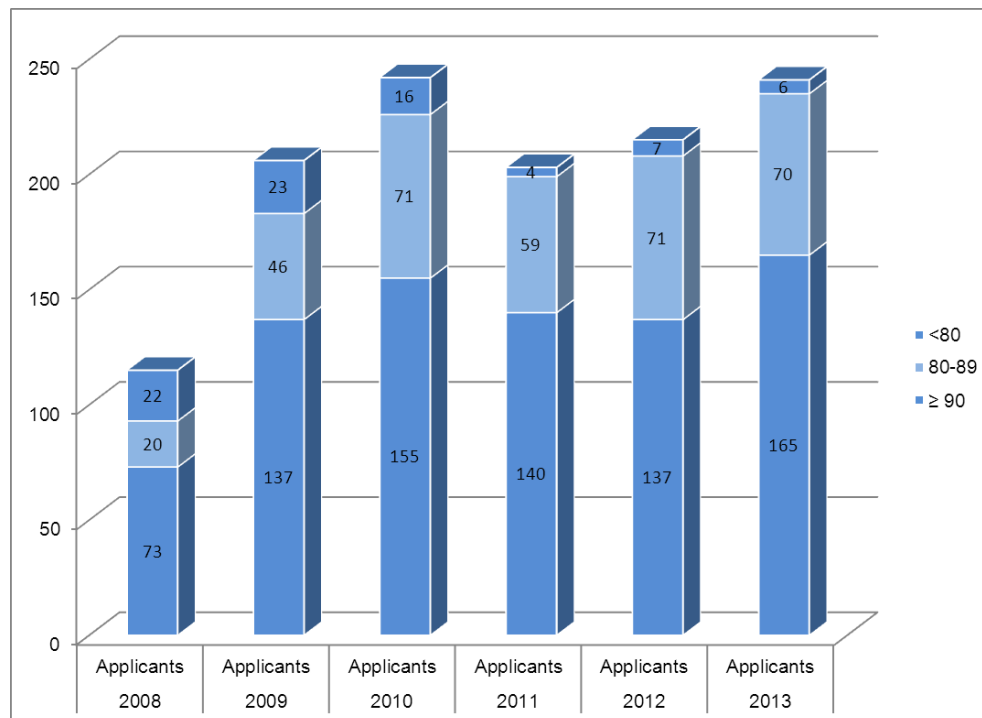
The many research fellows of TI are TI's ambassadors at the economics faculties of EUR, UvA and VU: they are in the position to guide the top bachelor students in their faculties who may be interested in an academic career to the TI MPhil program. To promote the MPhil/PhD track at the faculties, Tinbergen Institute organizes a bachelor course for students in the honors track of the three faculties. In this course, research fellows from the three faculties give an introduction to a research topic that they are currently working on. These presentations, supported by recent journal articles for homework, are meant to persuade talented students from the three faculties to opt for a challenging PhD-level master program and for a subsequent academic career. On top of this, TI gives presentations at the universities at the regular information days for bachelor students.

The faculties participating in TI have allocated to TI a budget for a scholarship program, amounting to K€530 for the academic year 2013/14, which allows TI to run its own scholarship program. Scholarships are always awarded based on merit. A full scholarship covers the tuition fee, costs for health insurance and living expenses. A partial scholarship covers the tuition fee and a monthly contribution towards costs for health insurance. Students with a good performance in the program (GPA >7) usually are awarded a scholarship for the second year. In the academic year 2013/14, 85%

of the second-year students have a full TI scholarship and 14% have a partial scholarship (tuition fee waiver and costs for health insurance). The generous scholarship program and the availability of PhD positions in the faculty for graduated MPhil students allow Tinbergen Institute to compete successfully on the international market for talented and ambitious PhD students in economics.

Since 2008, the number of applicants for TI's MPhil program has doubled: from 115 in 2008 to 241 in 2013. The steady rise in the number of applicants seems to drop in 2011. This drop was partly caused by the new policy to reject applicants with far too low GRE scores in an early stage. These application files are no longer evaluated by the Admission Board and are no longer included in our statistics.

**Table 1. Number of applicants 2008-2013, with score on the quantitative part of the GRE**



## 2 Admission criteria and the selection procedure

Tinbergen Institute's admission decisions are based on information commonly used in international graduate schools: undergraduate performance, GRE scores, proof of English proficiency, such as TOEFL and IELTS scores, reference letters, CV and a statement of purpose. Students should be strongly motivated to pursue a PhD, preferably at Tinbergen Institute.

The basic condition for students to enter the program is a firm quantitative background. Therefore, the first requirement for all applicants is to submit an official score report for the general Graduate Record Examination (GRE) test. Successful applicants typically perform among the top 10% of test takers on the quantitative part of this test.

Fluency in English is a second necessary condition for admission to the program. Evidence of fluency in spoken and written English is required from all applicants whose native language is not English. An exception is made for students holding a degree from a Dutch university or from an institution at which English is the language of instruction. Tinbergen Institute requires the following scores on language test: at least 600 on the paper-based TOEFL, 250 on the computer-based TOEFL, 100 on the internet-based TOEFL or 7 on the IELTS test.



Undergraduate performance is a third important element of the application file. All students who enter the TI MPhil program should at least have completed a bachelor's program, preferably a program with a quantitative orientation like economics, econometrics, mathematics or physics. Preference is given to students who hold degrees from a reputable university. Performance in the program preceding the TI MPhil program is carefully considered by the Admission Committee. The very different grading scales used internationally make this a complex and difficult task. When provided, relative performance (position in class or year) is a useful indication of the applicant's qualities. Successful TI applicants usually are in the top 10% of their class.

Students in a PhD-level program should show capacity for higher academic performance. Assessment of this capacity is based on two letters of recommendation, preferably written by lecturers or researchers who know the applicant's performance in the academic setting from their own experience. Some students include examples of undergraduate research in their application file. A written statement of purpose should show the applicant's strong motivation to pursue a PhD at Tinbergen Institute.

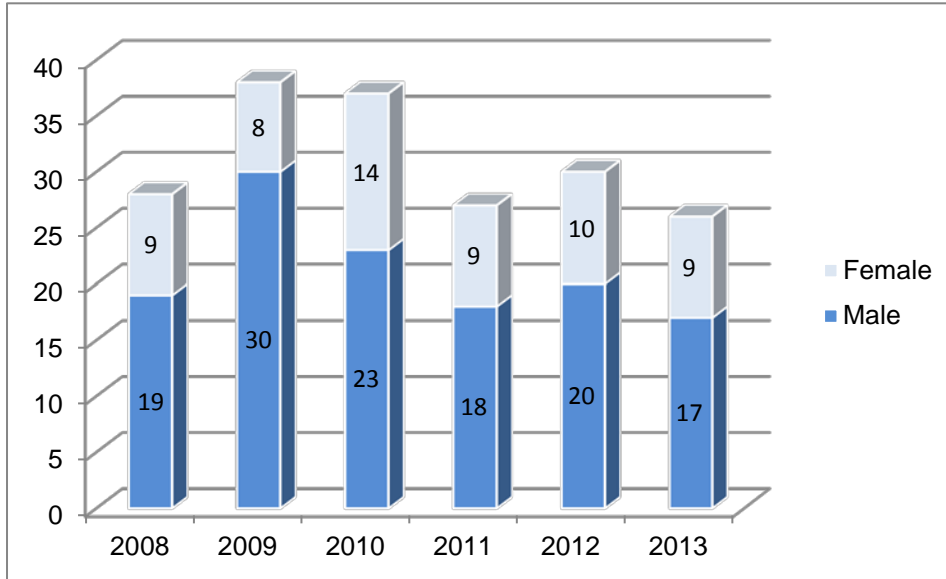
Selection of MPhil students for the program is an elaborate and thorough process which involves annually some ten TI research fellows. Application files are carefully assessed and ranked by the members of TI's Admission Committee. Each Admission Committee member assesses the files in his/her own field of expertise. The applicant's undergraduate performance, reputation of the institute where the applicant took the undergraduate education, the applicant's position in class and the tenor of the recommendation letters are assessed. In a lengthy meeting the Admission Committee members discuss and coordinate the ranking of the applicants. In the end it is the TI Admission Board, with representatives from the three faculties, that takes the final decisions on the admissions and the awarding of the TI scholarships.

The outcome of the admission procedure is regularly reviewed by comparing the initial ranking of applicants with their actual performance in the program. The results of the reviews have been used to further fine-tune the selection procedure. The application data of students who entered the program, together with the performance of students in the TI program, is an important source of information for all involved in the selection process.

### **3 Details of inflowing students**

TI aims at an annual inflow of 25-35 students with a maximum of 40. In the years 2008-2013, the annual student inflow fluctuated between 26 and 38. As demonstrated in table 2, the student inflow peaks in the years 2009 and 2010, with an inflow of 38 and 37 students respectively, but drops again in subsequent years. The relatively high inflow in 2009 and 2010 was facilitated by additional monies allotted for scholarships and PhD salaries, provided by the Duisenberg school of finance, with the goal of creating more research capacity in the field of finance. Unfortunately, Duisenberg school was unable to sustain the MPhil/PhD program in finance at the originally intended level due to shrinking financial contributions from its partners. The number of positions sponsored by the Duisenberg school dropped from eight in 2009 and 2010, to three in 2011 and two from 2014 on.

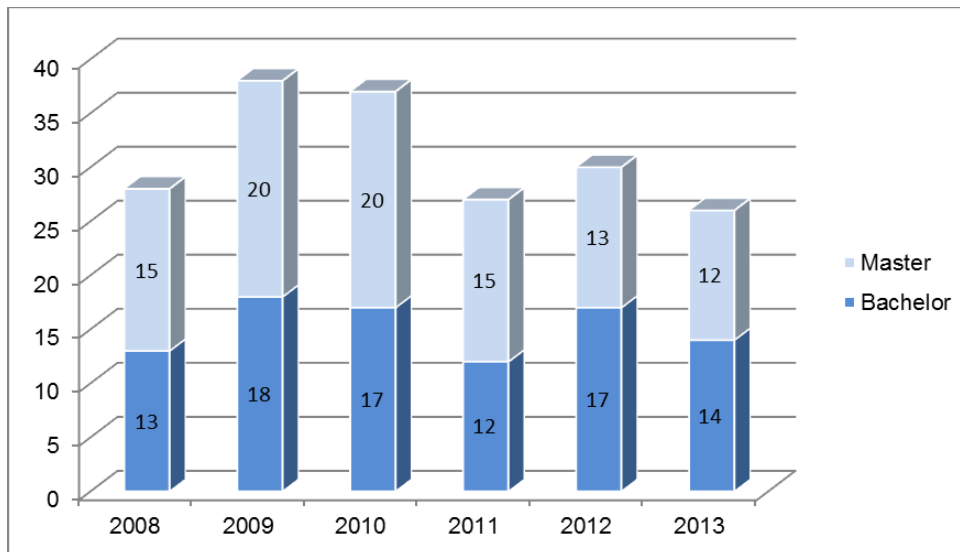
**Table 2. Number of inflowing male/female students for the years 2008-2013**



Roughly 50% of the students enter TI with a regular one-year MSc degree. TI's coursework is at a higher level than the courses of the regular MSc programs, and TI students already holding an MSc degree do not find the TI courses repetitive.

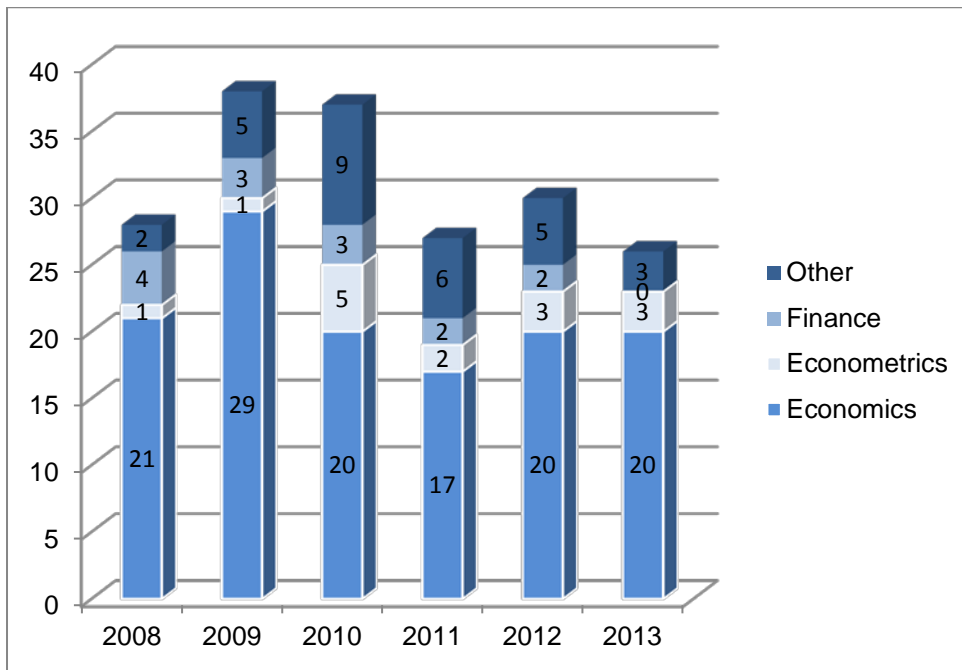
Recent legislation by the Dutch government has considerably raised the tuition fees for students already holding a Dutch master degree. This new legislation may induce Dutch students to start the TI MPhil program immediately after completion of the bachelors program.

**Table 3. Degree (bachelor/master) of inflowing students for the years 2008-2013**



Most students in the TI MPhil program have completed a bachelors or masters program in economics before coming to TI. Others have graduated in a finance or econometrics program. Details on previous education of TI students can be found in table 4 below.

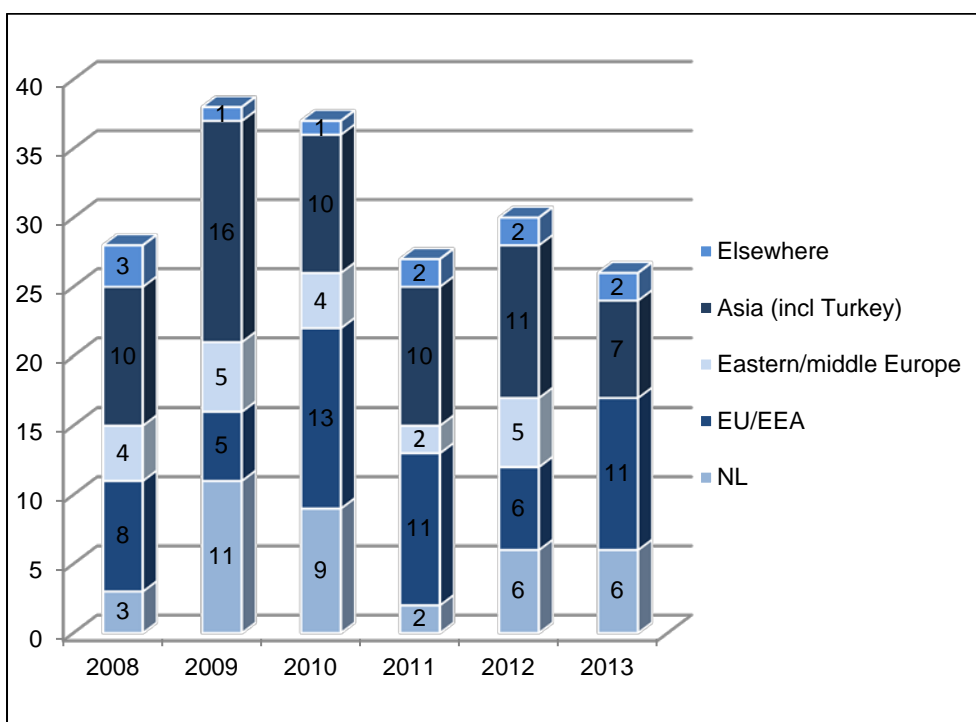
**Table 4. Completed educational program before coming to Tinbergen Institute, for inflowing students for the years 2008-2013**



The category 'other' comprises: Statistics, Mathematics, Physics and Astronomy, Liberal Arts (University College), Computer sciences, Social Sciences, Business Administration.

Citizenship of TI students is indicated in Table 5.

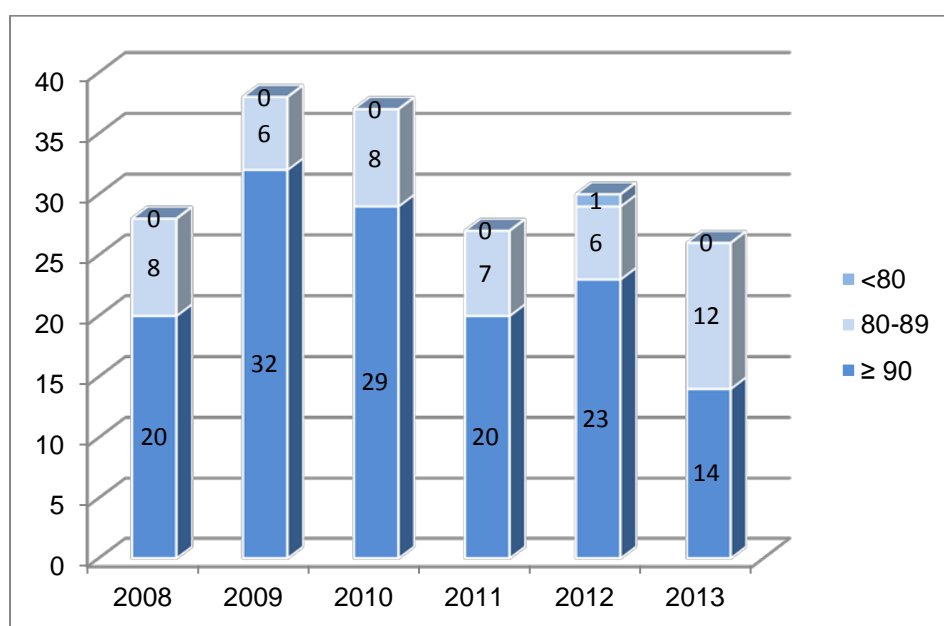
**Table 5. Citizenship of inflowing students for the years 2008-2013**



### Meeting the TI admission criteria

In order for a student to be successful in the TI MPhil program, a firm quantitative background is an absolute condition. TI uses as a first indication of a student's quantitative skills the score on the quantitative part of the GRE general test. Table 6 below shows the test scores of inflowing students for the years 2008-2013. TI aims at students in the top-10% of the test takers. Margins in the test results are very small: test takers with 0 mistakes in the test usually are classified in the top 6-8%, students with 2 or 3 mistakes fall into the category just below the top 10%. This explains why TI also considers students with scores between 80-89% for admission to TI.

**Table 6. GRE scores of inflowing students on the quantitative part of the general record test for the years 2008-2013**



An excellent command of English is crucial to follow TI's program successfully. Therefore, TI has set minimum standards for English proficiency for all students. Table 7 below shows that out of a total of 186 admitted students for the years 2008-2013, 77 were exempted from an English proficiency test because they held a degree from a Dutch university or of an institution where English is the language of instruction, or because English is their native language. Of the remainder, 106 students met the minimum test results for English proficiency tests and three did not comply with the standard set by TI. The test results of these three students were marginally below the TI requirements.

**Table 7. English proficiency of TI students for the years 2008-2013**

	2008		2009		2010		2011		2012		2013	
	#	Average score	#	Average score	#	Average score	#	Average score	#	Average score	#	Average score
Exempted from language test	10		19		15		12		10		11	
≥ 100 TOEFL internet based	11	110	16	107,5	20	109,2	13	106,3	12	109,3	14	109,2
≥ 250 computer based TOEFL test	1	280										
≥ 600 paper based TOEFL test			1	603								
≥ 7 IELTS test	5	7,3	2	7,5	2	8,3	1	7	7	7,7	1	7,5
Below TI's criteria*	1	97					1	97	1	6,5		

Undergraduate performance of the applicants is always carefully considered by the Admission Board. Successful TI applicants usually are in the top 10% of their class. Students who enter the program have to present to the TI staff their original diploma and the final grade list of the program they completed before coming to TI. Copies of the original documents are kept in the student records.

Grading systems differ significantly from country to country and listing grades earned by TI students in the bachelors or master's program (BA or MSc) program they completed in their home country before coming to TI does not seem to be a fruitful approach. Instead, we asked our current and former students to translate their grades to the Dutch scale 1-10. The students' response to the request was 50%. A check of the reported grades showed that students made a fair estimation of their performance. The results of the students' response is given in Table 8 below.

**Table 8. Average of TI students' performance in bachelors and one-year master's programs translated to the Dutch scale 1-10, as reported by the students, cohorts 2008-2013.**

	BA		MSc	
	GPA	BA thesis	GPA	MSc thesis
2008	8,5	8,3	8,8	9,0
2009	8,1	8,3	8,8	9,1
2010	8,6	9,1	8,8	8,8
2011	8,9	9,2	8,3	8,4
2012	8,7	8,9	8,8	8,8
2013	8,5	9,0	8,6	8,7



## **Appendix IV**

### **Program of the Tinbergen Institute MPhil in economics**

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1. Program of the Graduate School: MPhil and PhD program in Economics, Econometrics and Finance 2013/2014
2. Academic and Examination Regulations Tinbergen Institute Master of Philosophy in Economics, June 18, 2013
3. Assessment report Tinbergen Institute master's thesis
4. Matrix learning outcomes and courses; Dublin descriptors related to the learning outcomes of the TI MPhil program
5. Overview of published MPhil theses







## Program of the Graduate School

MPhil and PhD program in  
Economics, Econometrics and Finance 2013/2014

February 2014



Erasmus University Rotterdam  
Erasmus School of Economics



University of Amsterdam  
Faculty of Economics and  
Business



VU University Amsterdam  
Faculty of Economics and  
Business Administration



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**Visit the Tinbergen Institute Homepage:**

**[www.tinbergen.nl](http://www.tinbergen.nl)**

## **Preface**

It is a pleasure to welcome you to a new year of graduate studies at the Tinbergen Institute, the graduate school and research institute of the economics faculties of the Erasmus University Rotterdam, the University of Amsterdam, and the VU University Amsterdam. The Tinbergen Institute offers two years of intensive coursework and research in its MPhil program, connected to PhD positions at the three economics faculties participating in the institute.

The MPhil program is a two-year research master in economics, econometrics and finance that is fully dedicated to preparing students for PhD thesis research. In its first year students receive rigorous training in the core of economics, econometrics and finance. In its second year students specialize in their choice from the institute's many fields of research through field course work and MPhil thesis research. The MPhil program provides MPhil students with ample opportunity to explore the wide variety of potential PhD advisors and research fields in the three faculties before they commit to a PhD research position in one of them.

A unique feature of the MPhil program is that first year students have the possibility to specialize. Students with a strong background in econometrics can choose the advanced econometrics track and take a course on measure theory and stochastic processes in the first block. Students who aim to pursue a major in finance take the finance track and substitute in their first-year two courses in macroeconomics by two courses in finance. In this way, Tinbergen Institute offers research training in finance in line with the PhD training in finance offered in top business schools.

TI offers an extensive formal job market training to PhD students. This training program consists of workshops where students learn how to prepare for the academic job market, followed by mock interviews in which students learn to present themselves and their research in front of a committee. This training program will be further extended this year.

The Duisenberg school of finance, a joint initiative of the Dutch financial sector and a number of Dutch universities, provides a small number of scholarships and finances PhD positions in the area of finance.

Finally, we would like to draw your attention to the annual Tinbergen Institute Lectures. We have found five leading researchers willing to give the Lectures on Economics (June 2014), Econometrics (June 2014) and Finance (January 2014).

The Economics Lecture will be taught by Jon Levin and Liran Einav (both Stanford University) on Markets with Asymmetric Information.

Adrian Pagan (University of Sydney) and Don Harding (University of La Trobe) will teach the Econometrics Lectures on The Econometric Analysis of Recurrent Events in Macroeconomics and Finance.

The Finance Lectures will be given by Hersh Shefrin (Santa Clara University) on Psychology across the Financial Landscape.

Amsterdam, July 2013

Massimo Giuliadori and Ton Vorst  
*Directors of Graduate Studies*



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## 1. Introduction

Tinbergen Institute (TI) was founded in 1987. It is the graduate school and research institute in economics, econometrics and finance of the Erasmus School of Economics of Erasmus University Rotterdam, the Faculty of Economics and Business Administration of VU University Amsterdam, and the Faculty of Economics and Business of the University of Amsterdam.

The **TI Graduate School** offers two years of intensive PhD-level coursework in its Master of Philosophy (MPhil) program connected to three years of PhD thesis research. Tinbergen Institute offers separate economics, econometrics and finance tracks of its graduate program. The basic structure and regulations for the three tracks are similar.

1. The MPhil track in Economics is a research master in economics (including econometrics and financial economics) and prepares students for a PhD in economics. Its first year offers rigorous training in the core subjects of economics: microeconomics, macroeconomics, and econometrics. In its second year, students specialize in their choice from the institute's many fields of research through field course work and MPhil thesis research.
2. The MPhil track in Econometrics offers students with a strong background in econometrics an advanced econometrics track, in combination with a rigorous training in the core subjects of economics or finance. In the second year, students in this track specialize in econometrics.
3. The MPhil track in Finance focuses on a PhD in finance. Its first year concentrates on core courses in asset pricing and corporate finance, microeconomics and econometrics. In its second year, students complete a selection from a wide range of specialized courses in finance and economics, and write an MPhil thesis.

All MPhil tracks are variants of the Tinbergen Institute Master of Philosophy in Economics program, which has been accredited by the Accreditation Organisation for the Netherlands and Flanders (NVAO). Among other things, this ensures that all MPhil graduates obtain the rights connected to the legally-protected MSc degree. All courses are taught in English and mostly on the institute's premises in Amsterdam and Rotterdam. Students can also participate in a broad range of related activities organized by and at the institute, such as reading groups, seminars, workshops and conferences. Details about the contents of both programs and admission requirements follow in later sections of this brochure.

The MPhil program's high standards are guaranteed by selecting teaching staff from the best researchers of the three economics faculties participating in the institute and by inviting internationally renowned experts to serve as guest lecturers in their fields of research. The program's high quality is also maintained by carefully selecting only the best students from a large international pool of applicants. Each year up to around 30-35 students are admitted to the TI MPhil program. Altogether, some 220 MPhil and PhD students are currently affiliated to the institute.

Students who have completed the institute's MPhil program should have a thorough, up-to-date knowledge of the theory, empirics, and econometric methodology of Economics, Econometrics and Finance, respectively. They should be able to read and understand top academic journals and to contribute to scientific discussions. Students should have sufficient knowledge, insight, and skills to carry out independent research in economics or finance, initially under appropriate academic supervision. The MPhil thesis, which serves as the final exam of the MPhil program, is a first test of this. It should be written as a research paper that can be submitted to an international, peer-reviewed journal. It is supervised by a research fellow of the institute, and can serve as a starting point for the PhD program.

The MPhil program is fully dedicated to preparing students for PhD thesis research in the three faculties participating in the institute. Students who successfully complete the MPhil program usually transfer to the PhD program. The PhD program takes three years and leads to a PhD degree. These three years are primarily spent on writing research papers for the PhD thesis and on participation in conferences, workshops, and seminars. In addition, PhD students can (optionally) follow additional courses from the institute's MPhil program or from the programs of the national educational networks. Also, the formal and informal research and training networks in which the institute and its research fellows participate facilitate longer study visits abroad.

The **TI Research Institute** aims to stimulate fundamental and applied research in economics at the three participating universities and to organize an excellent research training environment for the institute's students. The research program consists of eight themes, covering the whole spectrum of economic analysis, from theoretical research to empirical analysis and econometric methods:

- Econometrics and Operations Research
- Finance
- Labor, Health, Education, and Development
- Macroeconomics and International Economics
- Behavioral and Experimental Economics
- Organizations and Markets
- Spatial, Transport and Environmental Economics
- Cooperative Behavior, Strategic Interaction and Complex Systems.

The cooperation between the three economics faculties in the institute offers many benefits. The best economists from the three participating universities are affiliated to TI as research fellows. TI offers them facilities for organizing conferences and seminars, and for inviting foreign guest researchers for short or long stays. TI has offices in both Amsterdam and Rotterdam, including seminar rooms and a dedicated support staff. The graduate (MPhil and PhD) students and many postdocs also have their own shared office space. The research atmosphere is active and lively.

Small-scale locations and the informal atmosphere at TI contribute to a wealth of contacts between students, teachers, research fellows, and visitors. The MPhil students often collaborate on various assignments and become a close-knit group. Yet, they also enjoy regular contacts with more senior (PhD) students and postdocs. At both locations (Amsterdam and Rotterdam), weekly student lunch seminars are organized; during these seminars students present their work and discuss their progress.

To disseminate research results and to enhance discussion among colleagues, Tinbergen Institute publishes a discussion paper series. See [www.tinbergen.nl/discussionpapers/](http://www.tinbergen.nl/discussionpapers/)

## 2. Description Tinbergen Institute's MPhil/PhD program

*Note: Up-to-date information on the application procedure for enrolment in September 2014 will be published at [www.tinbergen.nl](http://www.tinbergen.nl) in September/October 2013.*

All prospective students who take the MPhil program should apply following the procedure outlined in Section 2.1.1, and should meet the admission requirements of Section 2.1.2.<sup>1</sup> The MPhil program is fully dedicated to preparing students for three-year PhD thesis research employment positions in the three faculties participating in TI (see Section 2.2).

Tinbergen Institute offers prospective students the possibility to apply to the tracks in Economics, Econometrics or Finance. Admission and enrolment occurs in one of the three tracks. The choice of track will be made after the intake interview with the Director of Graduate Studies (Economics- or Econometrics track) or before the start of block III (Finance track).

Students with a strong background in Econometrics who wish to specialize in Econometrics are advised to apply for the Econometrics track. After the first year, students in the Econometrics track still have the opportunity to switch to the Economics track.

Students who are interested in a PhD in finance should choose the MPhil track in Finance. They will substitute the first-year courses Macroeconomics II and III with core courses in Asset Pricing and Corporate Finance. This, together with completing a major in Finance in the second year, will optimally prepare these students for a PhD in finance.

As the core courses of the other track can be selected as field courses within the student's own track in the second year, the program also offers ample flexibility for students who want to engage in a PhD in the intersection between the three fields.

It is not possible to apply to the institute for direct admission to three-year PhD research positions, or to skip the first (core) year of the MPhil program, based on earlier coursework at other institutions. MPhil courses are at an advanced, PhD level, and are challenging even to students who already hold advanced master degrees. TI facilitates students who nevertheless believe there is overlap with earlier coursework in two ways:

- a. Admitted students who have successfully completed PhD coursework in economics at other institutions can earn exemptions for the 20 ECTS MPhil in Economics core sequences in Microeconomics, Macroeconomics, and (Advanced) Econometrics by passing the institute's Qualifying Exams in these sequences in the summer prior to enrolment. Students interested in this option should notify the institute when applying.
- b. Alternatively, in the case of overlap between individual MPhil courses and earlier coursework, exemptions from class attendance and homework assignments, but not from final exams, may be granted. This will be determined in an intake interview with the (appropriate) Director of Graduate Studies at the start of the academic year.

There are other ways to participate in the institute's educational program:

- a. The TI Fast Track route allows selected MSc students in Econometrics at EUR, UvA or VU to participate in courses offered by TI in their MSc year and to complete the full MPhil requirements in one additional year after having completed the MSc. (For more details see section 3.3.4)
- b. PhD students appointed directly by the TI faculties on four-year PhD contracts with as starting date September 1st 2013 or later need to obtain their TI Research Qualification in order to be entitled to TI facilities as training for the job market and an additional travel budget to participate in an international job market event (usually the ASSA meetings in the US). For more information on the TI Research Qualification see Appendix I.
- c. PhD students appointed directly by the TI faculties on four-year PhD contracts before September 1st 2012 are strongly advised to participate in separate courses within their research field but are also encouraged to qualify for the TI Research Qualification (see

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<sup>1</sup> This includes prospective students who have external funding for a PhD program. If admitted, the Director of Graduate Studies (DGS) will assist such students in meeting the requirements of the external funding organization (such as finding a PhD thesis supervisor, etcetera).

Appendix I).

- d. Individuals not affiliated to TI and who do not intend to pursue a PhD at TI may apply to participate in a selection of MPhil courses (Section 3.2.2).

## **2.1 MPhil program**

### **2.1.1 Application procedure**

Applications for September 2014 enrolment will be taken from September 2013 and should be submitted using the online application form at [www.tinbergen.nl](http://www.tinbergen.nl).

The application deadlines for enrolment in September 2014 are February 1, 2014 (all), April 1, 2014 (all), and June 1, 2014 (EEA<sup>2</sup> and Swiss nationals only). Application files that are complete by these deadlines will be processed in February, April, and June, respectively. All applicants are advised to submit their application by the early, February 1 deadline, because slots in the program and funding opportunities are limited. In any case, non-EEA/non-Swiss nationals should apply before the April 1 deadline.

The institute and the international offices of the participating universities will help students who are admitted with immigration procedures, financial arrangements (see also 2.1.3 and 2.1.4), housing etcetera.

Questions about and comments on the application procedure should be directed to the Admissions Officer/Graduate School Coordinator at [applications@tinbergen.nl](mailto:applications@tinbergen.nl).

### **2.1.2 Admission requirements**

The MPhil program is a selective program geared towards excellent students who want to pursue a PhD in economics, econometrics or finance at TI. Admissions are highly selective and competitive. A maximum of around 35 students may enrol each year. Students are selected by the institute's Admission Board in a rigorous and careful process according to the following guidelines:<sup>3</sup>

1. Students must have at least a Bachelor's diploma, preferably in economics, econometrics, mathematics, or physics. The Bachelor's program should be completed before the start of the MPhil program.
2. GRE (Graduate Record Examination): Recent GRE General Test results are required from all (including Dutch) applicants. Scores that are more than five years old on the admission deadline are not valid and will not be considered. Successful applicants typically perform among the top-10% of test-takers on the quantitative part of the GRE; applicants with a Q score below 160 (tests taken on or after August 1, 2011) or 750 (tests taken prior to August 1, 2011) will not be considered. Tinbergen Institute's code number for the GRE is 3811.

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<sup>2</sup> EEA countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Republic of Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and United Kingdom.

<sup>3</sup> Details of these and other regulations concerning the MPhil program can be found in the program's Academic and Examination Regulations, which is available from the institute's intranet. In case of conflicts between this brochure and the Academic and Examination Regulations, the text of the Academic and Examination Regulations is binding.

3. An excellent command of English is crucial. Students whose native language is not English are therefore required to demonstrate English proficiency in one of two ways:
  - a. by holding a degree from a Dutch university or an institution at which English is the language of instruction, or
  - b. by scoring at least 600 on the paper-based Test of English as a Foreign Language (TOEFL), 250 on the computer-based TOEFL, 100 on the internet-based TOEFL or 7 on the IELTS (International English Language Testing System) test. Scores that are more than two years old on February 1, 2014 are not valid and will not be considered. TI's code number for the TOEFL is 3811.

Note: Chinese nationals should meet the institute's TOEFL iBT or IELTS requirement, because this is a condition for obtaining a NUFFIC Certificate.

Chinese nationals are required to register with the NUFFIC in Beijing to obtain a NUFFIC Certificate.<sup>4</sup>

4. Students should be strongly motivated to pursue a PhD in economics, econometrics or finance at the institute. Such motivation will be assessed by a written statement of purpose.
5. Applications should include at least two letters of recommendation supporting the capability and aspirations of the applicant

Other admission criteria being equal, preference is given to candidates who show capacity for higher academic performance.

### 2.1.3 Tuition fees

In the master phase of the program a tuition fee is charged to all students. Tuition fees are due until all MPhil examinations, including the MPhil thesis, are passed. The tuition fees are determined annually by the Dutch government and the universities.

Tuition fees for MPhil students

The annual tuition fee for the academic year 2013-2014 is € 12,000 for non-EEA students and for students who completed a Dutch master program before coming to TI.

The low annual tuition fee ('*wettelijk collegegeld*') is € 1,835 for the academic year 2013-14.

You meet the criteria for a low tuition fee if:

- you are a national of an EEA country, AND
- do not hold a Dutch master degree.

Holding a Dutch master degree?

Tinbergen Institute recognizes that talented students who already earned a Dutch master degree may be discouraged by the high tuition fee. Hence, Tinbergen Institute will offer financial assistance, under certain conditions, to students holding a Dutch master degree and facing problems because of the high fees.

Please note:

that all TI scholarships (partial and full scholarships) include a tuition waiver for university registration for the year for which the scholarship is awarded.

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<sup>4</sup> This document provides an assessment of the candidate's English language proficiency (based on the IELTS test) as well as of the educational degrees and diplomas that are required to gain admission to the MPhil program. For detailed information about the NUFFIC Certificate see [www.nesochina.org](http://www.nesochina.org).

### 2.1.4 Funding

Government support is available for some groups of MPhil students:

- a. Full-time students who are Dutch nationals and are under 30 years of age may be eligible for government support (“*studiefinanciering*”) in the form of a performance grant, a loan, and a public-transport card (see [www.ib-groep.nl](http://www.ib-groep.nl)).
- b. The same scheme is open for select groups of nationals of other countries (see [www.ib-groep.nl](http://www.ib-groep.nl) > International visitors > Study grants).
- c. Finally, EEA and Swiss nationals may be eligible for tuition fee restitution by the government (see [www.ib-groep.nl](http://www.ib-groep.nl) > International visitors > Study in the Netherlands > grant for tuition or course fees).

The institute supports students with various facilities, such as office space at TI in Rotterdam or Amsterdam and reimbursement of travel expenses between Amsterdam and Rotterdam for MPhil coursework. Details are given in the separate brochure “Facilities - Funding – Refunding. Information for MPhil and PhD students”, which is available from the institute’s intranet.

In addition, the institute offers a limited number of scholarships to MPhil students. Applicants who want to compete for a TI scholarship should indicate this on the online application form (see Section 2.1.1).

Finally, additional funding is offered by the institute and the faculties through research and/or teaching assistantships. These jobs offer valuable teaching and research experience and are suitable for second-year students. The program’s second year leaves ample time for MPhil thesis research, which could be connected to a research assistantship. The core (first-year) program leaves little or no time for any jobs.

Because the institute’s resources are limited, prospective students are advised to apply for external funding as well (see e.g. [www.grantfinder.nl](http://www.grantfinder.nl)).

## 2.2 PhD program

Students who perform well in the MPhil program usually transfer to the three-year PhD program. Students are assisted in the transition to the PhD program and in finding one or more PhD thesis supervisors with whom they prepare a PhD thesis proposal. Ideally, but not necessarily, the MPhil thesis will be the basis of the PhD thesis proposal and the MPhil thesis supervisor will be a PhD thesis supervisor. The main PhD supervisor (the “*promotor*”) should be a full professor in one of the three economics faculties.

Students admitted to the PhD program are typically employed by this faculty as a PhD researcher (“*promovendus*”). This is a full-time position that comes with all the benefits of employment, including a good salary. Thus, such PhD students are fully funded.

After completion of the MPhil program, students have complied with all coursework requirements of the graduate program and typically spend most or all of their time on PhD research. Nevertheless, students are most welcome to participate in additional field courses during the later (PhD) years of their studies at the institute. PhD students should register for courses using the online registration form available on TI’s intranet. No costs will be charged for PhD students who have transferred from the MPhil program.

In addition, students may attend courses offered by national educational networks such as the LNMB ([www.lnmb.nl/](http://www.lnmb.nl/)), participate in national and international workshops, etcetera.

*Some external educational activities involve fees, substantial travel, and other costs. Note that costs are reimbursed according to the regulations and procedures outlined in the separate brochure for TI students “Facilities- Funding –Refunding. Information for MPhil and PhD students” that is available from the institute’s intranet.*

### **2.2.1 Job market training**

Tinbergen Institute offers a number of facilities to PhD students in their final year who are about to enter the (international) academic job market. TI organizes a series of workshops and mock interview sessions to assist PhD students in successfully preparing for the academic job market in general and in particular for the job market at the ASSA meetings (Philadelphia, PA, January 3-5, 2014). Students interested in the mock interviews should attend the workshops as well. It is possible to participate in the workshops without subscribing for the interview sessions. Interested students may sign up for the workshops and interview sessions by sending an email to Arianne de Jong (A.dejong@tinbergen.nl). Details will be announced on the website and emailed to all job market candidates on the TI website.

### **2.2.2 TI Job market candidates website**

One simple way to improve your visibility to potential employers is uploading your profile on the institute's website of job market candidates. TI constructs a personal job market webpage if you provide us with the relevant information (send an email to A.dejong@tinbergen.nl).

### 3. The MPhil program in 2013/2014

#### 3.1 Course calendar 2013/2014

All regular TI courses are taught in blocks of eight weeks, with one 2.5-hour lecture in each of the first seven weeks; the eighth week of each block typically serves as an exam week. Attendance to core and field courses is mandatory. Attendance is registered via attendance sheets. In addition, first-year (core) courses have weekly one-hour tutorials, taught by a teaching assistant, in which students work on and discuss homework assignments. Attendance of the MPhil seminar series is mandatory for first year MPhil students.

Intensive TI field courses, marked with a "\*" in Section 3.4.1, and external courses have different formats (see the field course schedule for details).

The schedule for 2013/2014 is

<b>Block I Week 36-43</b>	<b>Block II Week 44-52</b>	<b>Block III Week 1-9</b>	<b>Block IV Week 10-17</b>	<b>Block V Week 18-25</b>
Sep 2-6	Oct 28-Nov 1	Dec 30-Jan 3 <i>Christmas Holidays</i>	Mar 3-7	April 28-May 2
Sep 9-13	Nov 4-8	Jan 6-10	Mar 10-14	May 5-9
Sep 16-20	Nov 11-15	Jan 13-17	Mar 17-21	May 12-16
Sep 23-27	Nov 18-22	Jan 20-24	Mar 24-28	May 19-23
Sep 30-Oct 4	Nov 25-29	Jan 27-31	Mar 31-Apr 4	May 26-30 <i>Ascension Day</i>
Oct 7-11	Dec 2-6	Feb 3-7	Apr 7-11	Jun 2-6
Oct 14-18	Dec 9-13	Feb 10-14	Apr 14-18 <i>Good Friday</i>	Jun 9-13 <i>Whit Monday</i>
Oct 21-25 <i>Exams</i>	Dec 16-20 <i>Exams</i>	Feb 17-21	Apr 21-25 <i>Easter Monday Exams</i>	Jun 16-20 <i>Exams</i>
	Dec 24-28 <i>Christmas Holidays</i>	Feb 24-28 <i>Exams</i>		

#### 3.2 Registration for and withdrawal from courses

##### 3.2.1 TI MPhil students

First-year MPhil students do not have to register for core courses and the MPhil seminar series, they do have to register for the course they choose from the first-year field course program by means of the online registration form.

Second- and higher-year MPhil students should register for field courses (and core courses they have to retake) using the online course registration form before August 15, 2013. To prevent oversubscriptions, all second-year MPhil students can register for at most 11 field courses (excluding first-year field courses they have to retake). MPhil students must ask the (appropriate) Director of Graduate Studies for permission to change their selection of courses by sending an



email to [courses@tinbergen.nl](mailto:courses@tinbergen.nl) (see Section 3.4). These requests should be made at least two weeks before the start of the block in which the course takes place.

MPhil students who would like to withdraw from courses should notify Carine Horbach by email ([courses@tinbergen.nl](mailto:courses@tinbergen.nl)) no later than Sunday after the first lecture (all TI courses except intensive field courses) or the day of the first lecture (intensive TI field courses, marked with “\*” in Section 3.4.1, only).

### **3.2.2 External participants in MPhil courses**

Under certain conditions and subject to approval by the Director of Graduate Studies, individuals not affiliated to the Tinbergen Institute are allowed to attend MPhil courses. External participants pay € 1,500 for a core course (one block of 8 weeks including one exam week; TI1301–TI1308) and € 1,250 for a field course (one block of 8 weeks including one exam week; TI1311 and up).

Prospective external participants should register for courses (only the courses with a TI course code) using the online course registration form for external students, and follow further instructions given there. External applicants will only be admitted if they meet some equivalent of the TI course entrance criteria. Capacity restrictions apply to all courses, and are particularly relevant for core courses. To ensure course availability, external applicants should register for MPhil courses as early as possible (and preferably respect the August 15, 2013, deadline for MPhil and PhD students), but ultimately two weeks before the start of the block in which the course takes place.

External participants who would like to withdraw from courses should notify Carine Horbach by email ([courses@tinbergen.nl](mailto:courses@tinbergen.nl)) no later than Sunday after the first lecture (all TI courses except intensive field courses) or the day of the first lecture (intensive TI field courses, marked with “\*” in Section 3.4.1, only). Fees will be charged in case of late withdrawal.

TI also offers tailor-made course packages to selected partners. Please contact Carine Horbach at [courses@tinbergen.nl](mailto:courses@tinbergen.nl) for details.

### **3.3 First year of the MPhil program**

In the first year of the MPhil program students have to complete 60 ECTS<sup>5</sup>. The first year Economics, Econometrics and Finance programs include 14 core courses (56 ECTS), 1 field course (3 ECTS) and the MPhil seminar series (1 ECTS).

At the start of the academic year, students choose one of the tracks: Economics, Econometrics or Finance (students interested in Finance have until the end of block II to decide). To a certain extent, some exchange between the tracks is possible.

Students in the Econometrics track take Advanced Econometrics instead of Statistics and Econometrics and Measure Theory and Stochastic Processes instead of Mathematics I. Other students have the option to replace Statistics and Econometrics with Advanced Econometrics and/or Measure Theory and Stochastic Processes with Mathematics I. This choice will be discussed during the intake interview with the Director of Graduate Studies at the start of the academic year.

Students in the Finance track take the finance core courses Asset Pricing and Corporate Finance Theory instead of Macroeconomics II and III. Other students have this option as well, although students who wish to major in macroeconomics are advised to take Macroeconomics II and III.

Within the field course program all students can choose 1 field course out of a selection of field courses organized in block V (listed in Section 3.3.1). The field courses are chosen at the progress meeting with the DGS in January.

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<sup>5</sup> Here, “ECTS” refers to course credits according to the European Credit Transfer System.

All first-year students have to attend the MPhil seminar series. Tinbergen research fellows (including aspirant, junior and senior fellows) are scheduled in a weekly seminar series that runs jointly with first-year core and field courses. Per seminar two fellows have about one hour to introduce themselves, to give a short overview of their research interests, and present a recent paper. These seminars allow students to explore potential supervisors and fields of specialization, and vice versa, allow potential supervisors to scout talented students.

At predetermined times throughout the first year, the DGS interviews students to discuss their progress in the program. July of each year, the institute's Examination Board issues a formal advice on continuation in the program to all first-year students. In general, only students who have earned 48 core ECTS or more by July 1 of the first year (July 1, 2014 for the 2013 cohort) and who attended the MPhil seminars are advised to continue in the program (see Section 3.3.6 for information on grading, credits, and retakes in the core). In any case, students will only be admitted to second-year field courses when they have earned 48 core ECTS and meet any additional entrance requirements specific to each field course (see Section 4.3).

### 3.3.1 MPhil track in Economics

The standard track of the MPhil in Economics 1<sup>st</sup> year consists of the following courses:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1301/I	Microeconomics I (Individual Decision Making)	Karamychev/Van der Laan	4	I
TI1301/II	Microeconomics II (Game Theory)	Wakker	4	II
TI1301/III	Microeconomics III (Information and Behavioral Economics)	Wakker/Offerman	4	III
TI1301/IV	Microeconomics IV (General Equilibrium and Welfare)	Van der Laan	4	V
TI1301/V	Microeconomics V (Contract Theory)	Sloof	4	IV
TI1302/I	Macroeconomics I (Dynamic Stochastic General Equilibrium Models)	Brügemann	4	II
TI1302/II	Macroeconomics II (Macroeconomic Policy)	Stoltenberg	4	III
TI1302/III	Macroeconomics III (Frictions and Resource Allocation)	Bartelsman/Gautier	4	IV
TI1302/IV	Macroeconomics IV (Financial Frictions in Macroeconomics)	Van Wijnbergen	4	V
TI1303/I	Mathematics I	Wagener	4	I
TI1303/II	Mathematics II and Principles of Programming in Econometrics	Brinkhuis/Bos	4	I
TI1304	Statistics	Spreij	4	II
TI1305/I	Econometrics I	Fok	4	III
TI1305/II	Econometrics II	Hoogerheide	4	IV

Students with a sufficient background in statistics and econometrics (see Section 3.6) can replace Statistics and Econometrics with:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1306/I	Advanced Econometrics I	Massmann	4	II
TI1306/II	Advanced Econometrics II	Van Garderen	4	III
TI1306/III	Advanced Econometrics III	Koopman	4	IV

Students with a sufficient background in mathematics (see Section 3.6) have the option to replace Mathematics I with:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1308	Measure Theory and Stochastic Processes	Spreij	4	I

Students who are interested in finance can substitute the first-year courses Macroeconomics II and III with core-courses in Asset Pricing and Corporate Finance:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1307/I	Asset Pricing	Laeven	4	III
TI1307/II	Corporate Finance Theory	Vladimirov	4	IV

In block V two core courses are compulsory and students choose one field course out of the following:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1331	International Economics	Klaassen	3	V
TI1352	Experimental Economics	Sonnemans	3	V
TI1361	Industrial Organization	Moraga	3	V
TI1364	Public Finance	Jacobs	3	V
TI1378	Behavioral Finance	Peters/V.d. Assem/ Zwinkels	3	V
TI1345	Markets with Asymmetric Information (TI Economics Lectures 2014) <sup>6</sup>	Levin/Einav	3	V

Section 4.1 explains course codes and Section 4.2 provides course details. Section 4.2 does not explicitly state the core courses' entrance requirements. However, later course blocks often build on earlier course blocks within, and occasionally across, each of the four core sequences: Microeconomics (TI1301), Macroeconomics (TI1302), Econometrics (TI1303+TI1304+TI1305), and Advanced Econometrics (TI1303+TI1306). See also Section 3.6 on academic preparations for the core.

Chronologically, by eight-week course blocks, this gives:

<u>Block</u>	<u>Microeconomics</u>	<u>Macroeconomics</u>	<u>Econometrics or Advanced Econometrics</u>	<u>Seminar</u>
I	Micro I (Ind. Decision)		Math I or Measure Theory Math II & Princ. of Programming	Seminar
II	Micro II (Game Theory)	Macro I (DSGE Models)	Statistics or Adv. Ectr. I	Seminar
III	Micro III (Information)	Macro II (Policy) or Asset Pricing	Ectr. I or Adv. Ectr. II	Seminar
IV	Micro V (Contract Theory)	Macro III (Frictions) or Corporate Finance	Ectr. II or Adv. Ectr. III	Seminar
V	Micro IV (GE & Welfare)	Macro IV (Financial	Field	Seminar

<sup>6</sup> First year students wishing to attend the TI Economics Lectures need to receive formal approval from the DGS at the progress meeting in January. Approval will be based on performance in the first two blocks.

		Frictions)		
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### 3.3.2 MPhil track in Econometrics

The MPhil in Econometrics 1st year track consists of the following courses:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1301/I	Microeconomics I (Individual Decision Making)	Karamychev/Van der Laan	4	I
TI1301/II	Microeconomics II (Game Theory)	Wakker	4	II
TI1301/III	Microeconomics III (Information and Behavioral Economics)	Wakker/Offerman	4	III
TI1301/IV	Microeconomics IV (General Equilibrium and Welfare)	Van der Laan	4	V
TI1301/V	Microeconomics V (Contract Theory)	Sloof	4	IV
TI1302/I	Macroeconomics I (Dynamic Stochastic General Equilibrium Models)	Brügemann	4	II
TI1302/II	Macroeconomics II (Macroeconomic Policy)	Stoltenberg	4	III
TI1302/III	Macroeconomics III (Frictions and Resource Allocation)	Bartelsman/Gautier	4	IV
TI1302/IV	Macroeconomics IV (Financial Frictions in Macroeconomics)	Van Wijnbergen	4	V
TI1303/II	Mathematics II and Principles of Programming in Econometrics	Brinkhuis/Bos	4	I
TI1308	Measure Theory and Stochastic Processes	Spreij	4	I
TI1306/I	Advanced Econometrics I	Massmann	4	II
TI1306/II	Advanced Econometrics II	Van Garderen	4	III
TI1306/III	Advanced Econometrics III	Koopman	4	IV

Students who are interested in finance can substitute the first-year courses Macroeconomics II and III with core-courses in Asset Pricing and Corporate Finance:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1307/I	Asset Pricing	Laeven	4	III
TI1307/II	Corporate Finance Theory	Vladimirov	4	IV

In block V two core courses are compulsory and students choose one field course out of the following:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1331	International Economics	Klaassen	3	V
TI1352	Experimental Economics	Sonnemans	3	V
TI1361	Industrial Organization	Moraga	3	V
TI1364	Public Finance	Jacobs	3	V
TI1378	Behavioral Finance	Peters/V.d. Assem/ Zwinkels	3	V

TI1345	Markets with Asymmetric Information (TI Economics Lectures 2014) <sup>7</sup>	Levin/Einav	3	V
TI1315	The Econometric Analysis of Recurrent Events in Macroeconomics and Finance (TI Econometrics Lectures 2014)	Pagan/Harding/H.K. van Dijk	3	V

Section 4.1 explains course codes and Section 4.2 provides course details. Section 4.2 does not explicitly state the core courses' entrance requirements. However, later course blocks often build on earlier course blocks within, and occasionally across, each of the four core sequences: Microeconomics (TI1301), Macroeconomics (TI1302), Econometrics (TI1303+TI1304+TI1305), and Advanced Econometrics (TI1303+TI1306). See also Section 3.6 on academic preparations for the core.

Chronologically, by eight-week course blocks, this gives:

<u>Block</u>	<u>Microeconomics</u>	<u>Macroeconomics</u>	<u>Advanced Econometrics</u>	<u>Seminar</u>
I	Micro I (Ind. Decision)		Measure Theory Math II & Princ. of Programming	Seminar
II	Micro II (Game Theory)	Macro I (DSGE Models)	Adv. Ectr. I	Seminar
III	Micro III (Information)	Macro II (Policy) or Asset Pricing	Adv. Ectr. II	Seminar
IV	Micro V (Contract Theory)	Macro III (Frictions) or Corporate Finance	Adv. Ectr. III	Seminar
V	Micro IV (GE & Welfare)	Macro IV (Financial Frictions)	Field	Seminar

### 3.3.3 MPhil track in Finance

The track of the MPhil in Finance consists of the following courses:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1301/I	Microeconomics I (Individual Decision Making)	Karamychev/Van der Laan	4	I
TI1301/II	Microeconomics II (Game Theory)	Wakker	4	II
TI1301/III	Microeconomics III (Information and Behavioral Economics)	Wakker/Offerman	4	III
TI1301/IV	Microeconomics IV (General Equilibrium and Welfare)	Van der Laan	4	V
TI1301/V	Microeconomics V (Contract Theory)	Sloof	4	IV
TI1302/I	Macroeconomics I (Dynamic Stochastic General Equilibrium Models)	Brügemann	4	II
TI1307/I	Asset Pricing	Laeven	4	III
TI1307/II	Corporate Finance Theory	Vladimirov	4	IV

<sup>7</sup> First year students wishing to attend the TI Economics Lectures or the TI Econometrics Lectures need to receive formal approval from the DGS at the progress meeting in January. Approval will be based on performance in the first two blocks.

TI1302/IV	Macroeconomics IV (Financial Frictions in Macroeconomics)	Van Wijnbergen	4	V
TI1303/I	Mathematics I	Wagener	4	I
TI1303/II	Mathematics II and Principles of Programming in Econometrics	Brinkhuis/Bos	4	I
TI1304	Statistics	Spreij	4	II
TI1305/I	Econometrics I	Fok	4	III
TI1305/II	Econometrics II	Hoogerheide	4	IV

Students with a sufficient background in statistics and econometrics (see Section 3.6) can replace Statistics and Econometrics with:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1306/I	Advanced Econometrics I	Massmann	4	II
TI1306/II	Advanced Econometrics II	Van Garderen	4	III
TI1306/III	Advanced Econometrics III	Koopman	4	IV

Students with a sufficient background in mathematics (see Section 3.6) can replace Mathematics I with:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1308	Measure Theory and Stochastic Processes	Spreij	4	I

In block V two core courses are compulsory and students choose one field course out of the following:

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
TI1331	International Economics	Klaassen	3	V
TI1352	Experimental Economics	Schram	3	V
TI1361	Industrial Organization	Moraga	3	V
TI1364	Public Finance	Jacobs	3	V
TI1376	Market Microstructure	Menkveld/Foucault	3	V
TI1378	Behavioral Finance	Peters/V.d. Assem/ Zwinkels	3	V
TI1345	Markets with Asymmetric Information (TI Economics Lectures 2014) <sup>8</sup>	Levin/Einav	3	V

Chronologically, by eight-week course blocks, this gives:

<u>Block</u>	<u>Microeconomics</u>	<u>Macroeconomics</u>	<u>Econometrics or Advanced Econometrics</u>	<u>Seminar</u>
I	Micro I (Ind. Decision)		Math I or Measure Theory Math II & Princ. of Programming	Seminar
II	Micro II (Game Theory)	Macro I (DSGE Models)	Statistics or Adv. Ectr. I	Seminar

<sup>8</sup> First year students wishing to attend the TI Economics Lectures need to receive formal approval from the DGS at the progress meeting in January. Approval will be based on performance in the first two blocks.

III	Micro III (Information)	Asset Pricing	Ectr. I <i>or</i> Adv. Ectr. II	Seminar
IV	Micro V (Contract Theory)	Corporate Finance	Ectr. II <i>or</i> Adv. Ectr. III	Seminar
V	Micro IV (GE & Welfare)	Macro IV (Financial Frictions)	Field	Seminar

### 3.3.4 TI Fast Track for MSc students econometrics at EUR, UvA and VU

In the TI Fast Track students in an MSc econometrics at the EUR, UvA or VU take the full first year TI program but replace the TI econometrics standard core courses with the departmental econometrics courses and meet the Micro I-IV requirements by passing a Qualifying Exam. Fast Track students take the second year of the MPhil program together with the regular TI students. The TI Fast Track leads to an MPhil degree. The table below gives an overview of the course work related to the Fast Track.

MSc student		MSc student		MPhil student		TOTAL ECTS
Year 1	ECTS	April Year 1	ECTS	Year 2	ECTS	
Departmental MSC Econometrics		Qualifying Exam Micro I-IV	16	Specialized coursework	30	
Macro core sequence (optional 2 finance courses)	16	Exemption core sequence Econometrics (Standard track)	20	MPhil thesis	30	
Measure Theory and Stochastic Processes	3	Exemption MPhil Seminar Series	1			
Microeconomics V	4					
	23		37		60	120

Continuation to the second year of the Fast Track is based on progress in the first year. Conditions for Fast Track students for continuation to the second year:

- MSc degree with weighted average grade of 7.50 or higher (for the ECTS in the MSc taken at the sending department);
- At least an 8.00 for the MSc-thesis;
- Having passed the QE Micro exam;
- Having passed the TI Macro core sequence.

Fast Track students who continue to the second year will be enrolled as MPhil student. They will have the status of MPhil students and have the same rights and obligations as MPhil students in the regular program.

General conditions Fast Track:

- The departments preselect students eligible for Fast Track;
- All names of selected Fast Track students should be submitted to TI by Oct. 1, 2013, together with a complete application file identical to the files submitted by candidates for the regular TI MPhil program (<http://www.tinbergen.nl/admission-requirements/>);
- TI does not adapt its course schedule to accommodate Fast Track students;
- TI does not award any other degree than the current MPhil degree;
- The tariffs for departmental MSc students to participate in TI core and field courses are identical to the tariffs the departments pay for their PhD students who take courses at TI (see appendix I);
- In the second year the departments pay the usual fee for MPhil students.

### **3.3.5 Seminars**

Tinbergen Institute organizes the MPhil seminar series. In these (weekly) seminars of two hours Tinbergen fellows (including senior, junior and aspirant fellows) will introduce themselves, give a short overview of their research interests, and present a recent paper. The seminar series is mandatory for all first year students. The seminar aims to (a) raise the visibility of all fellows, not only the visibility of those that teach in the first year; (b) bring students into contact with contemporary research; and (c) improve the matching process between student and prospective supervisor, as students get a better perspective of what TI fellows do. Seminar series take time and effort for which students receive 1 ECTS. The MPhil seminar series is obligatory. Students are allowed to miss maximum two 1-hour presentations. Participation will be checked through participation lists. Signing off for fellow students is considered fraud and will disqualify the signee for the 1 ECTS.

### **3.3.6 Grading, credits, and retakes in the core**

All core courses are graded on a 0-10 scale, where 0 is reserved for students who have not really participated, 1 indicates very poor performance, 6 is the lowest passing grade, and 10 refers to outstanding performance.<sup>9</sup>

All core course blocks will be concluded by a sit-in examination. Apart from the sit-in examination, results of homework assignments form part of the examination and may contribute to the final grade for a course block. If the grade for the sit-in examination is below 4.5, the grade for the sit-in examination (rounded off) is the final grade for the course block. If the grade for the sit-in examination is 4.5 or more, the final grade for the course block is composed of the average grade for the homework assignments (20%) and the grade for the sit-in examination (80%).

Exams are typically graded within 15 days, and before July 1. Students can review their graded exam papers at the local TI secretariat for up to four weeks after receiving their grade.

Students obtain 4 ECTS credits for each core course block that they have passed (grade 6 or up). Within each four or five block core course sequence, students may compensate at most one 5 with a 7 or higher within the same sequence. Core sequences are: Microeconomics, Macroeconomics/Finance, Econometrics and Advanced Econometrics.

First year core and -field exams cannot be retaken. Students should retake, in their second year, all course blocks for which they have not obtained credits in their first year. The compensation rule does not apply across years for students who have not earned 48 ECTS of first year's credits or more by July 1 of the first year and/or have not completed the seminar series. For other students, the compensation rule applies across years: Students can compensate a 5 in one year with a 7 in another year. Students cannot resit any examination that they have already passed.

All credits expire 29 months after the date of the exam in which they were earned.

## **3.4 Second year of the MPhil program**

This section focuses on the second year of the MPhil program.

Students should comply with the field-course requirements of the academic year that coincides with their second year in the program. Thus, the rules in this section apply to the 2012 cohort of MPhil students.

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<sup>9</sup> Dutch grades are supposed to reflect performance according to some external standard and are not fully calibrated to reflect relative performance in the class. Therefore, Dutch grades do not correspond directly to ECTS grades (which are defined in terms of class percentiles). This being said, it is not uncommon to grade in two rounds and partially adjust first-round grades if these are considered to be too low.



In the MPhil program's second year, students have to choose a major field (i.e. pass 4 field courses within the same field). Fields in 2013/14 are:

1. Econometrics
2. Empirical Microeconomics
3. Macroeconomics, Monetary Economics, and International Economics
4. Applied Microeconomics
5. Behavioral Economics
6. Public Policy
7. Finance

Students who wish to graduate in the Econometrics track should choose the Econometrics track in the first year (see above) and take their major in econometrics; students who wish to graduate in the Finance track should choose the Finance track in the first year (see above) and take their major in finance.

In principle, all major options are open as long as students meet the entrance requirements determined for field courses within that major.

In the second year, students have to

- (i) complete 30 ECTS of specialized coursework, taking at least 4 courses in their major field (the "field requirement").

Courses in each of the seven fields that count towards the fields requirement (field courses) are listed in Section 3.4.1. Students have the option to substitute a short (3 ECTS) field paper for a course (see Section 3.4.2). The remaining course credits can be obtained by following any other field courses listed in Section 3.4.1 (excluding field papers) or external courses and workshops not listed in Section 3.4.1 (see Section 3.4.4).

*Field courses may be cancelled if less than five (internal and external) students sign up. To limit uncertainty about field-course offerings to a minimum, there are strict rules for registration by TI students (Section 3.2.1). MPhil students are only allowed to register for a field course or paper if they have completed 48 core ECTS and meet the specific entrance requirements for that field course (see Section 4.3) and if they have completed the MPhil seminar series. At a minimum, students should register for a full program of field courses, that is a program that satisfies the requirements stated above. At a maximum, students should register for at most 11 field courses (or the field course equivalent of 33 ECTS). Students need approval from the Director of Graduate Studies to sign up for or withdraw from field courses after the initial registration.*

The number of TI credits (typically 3 ECTS) allocated to a (field) course may not coincide with the number of credits allocated to the same course in external programs. This holds, for example, for courses shared with the Duisenberg program and with the EUR/UvA/VU programs. This also holds for TI core courses followed as field courses by students for whom this course was not part of their standard core: the course load in these cases is 3 ECTS.

The philosophy underlying this is that we require students to take 10 different courses in their second year to specialize in their areas of interest as well as to broaden their perspective. To avoid any discussion about the relative load of different credits in different programs, we adopt a simple uniform policy of allocating 3 ECTS to every field course, thus effectively forcing students to take a fixed *number* of courses.

- (ii) write and publicly defend an MPhil thesis.

The MPhil thesis (30 ECTS; see Section 3.4.6) is the final examination of the MPhil program.

*The thesis can only be defended if all other course work has been completed and field papers are handed in (and graded).*

Students who are not able to finish the MPhil program before the end of their second year can register with their university for a third year to complete the MPhil program. However, students are strongly advised to avoid such an extension, because it complicates the matching to PhD employment positions and requires the payment of tuition fees for a third year (see Section 2.1.3). In any case, all students are advised to complete the program within 30 months after enrolment (before February 28, 2015, for the 2012 cohort). It is impossible to complete the program later, because all credits expire 29 months after the corresponding exam.

TI organizes one graduation ceremony each year, usually in November.

### 3.4.1 Field courses

Course codes marked by “\*” refer to intensive courses, in various formats. See the field course schedule for details.

#### 1. Econometrics

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
PA1310	Paper in Econometrics		3	
TI1311	Advanced Time Series Econometrics	Boswijk/ D. van Dijk/Franses	3	II
TI1312	Computational Econometrics	Paap	3	III
TI1313*	Topics in Advanced Microeconometrics	Ridder	3	V
TI1314	Advanced Microeconometrics	Kleibergen	3	II
TI1315*	The Econometric Analysis of Recurrent Events in Macroeconomics and Finance (TI Econometrics Lectures 2014)	Pagan/Harding/H.K. van Dijk	3	V
(TI1306/I	Advanced Econometrics I	Massmann	3	II
TI1306/II	Advanced Econometrics II	Van Garderen	3	III
TI1306/III	Advanced Econometrics III	Koopman	3	IV) <sup>10</sup>
TI1321/I	Applied Microeconometrics I: Basic Techniques	Lindeboom/ Van der Klaauw	3	I
TI1321/II	Applied Microeconometrics II: Empirical Treatment Evaluation	Van derKlaauw	3	II

#### 2. Empirical Microeconomics

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
PA1320	Paper in Empirical Microec.		3	
TI1321/I	Applied Microeconometrics I: Basic Techniques	Lindeboom/ Van der Klaauw	3	I
TI1321/II	Applied Microeconometrics II: Empirical Treatment Evaluation	Van der Klaauw	3	II

<sup>10</sup> TI1306 (Advanced Econometrics) can be followed for field credits (3 ECTS) by students who have not taken Advanced Econometrics as part of their core.

TI1322	Labor Economics	Bloemen/ Hochguertel	3	II
TI1323	Economics of Education	Oosterbeek/Plug	3	IV
TI1324	Health Economics	O'Donnell/ Van Ewijk/Lindeboom	3	III
TI1325	Development Economics	Oostendorp/Pradhan	3	III
TI1345*	Markets with Asymmetric Information (TI Economics Lectures 2014)	Levin/Einav	3	V

3. Macroeconomics, Monetary Economics, and International Economics

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
PA1330	Paper in Macroeconomics, ...		3	
TI1331	International Economics	Klaassen	3	V
TI1332	Exchange Rates	De Vries	3	I
TI1333	The Macroeconomics of Pensions and Ageing	Beetsma/Romp		IV
TI1334	Applied Macroeconometrics	Giuliodori/ Mavromatis/Pozzi	3	I
CE1335* <sup>11</sup>	Monetary Policy at the Zero Lower Bound	Campbell	3	III
TI1336	Numerical Methods	Den Haan	3	IV
TI1325	Development Economics	Oostendorp/Pradhan	3	III
TI1373	Financial Crises	Van Wijnbergen	3	II

4. Applied Microeconomics

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
PA1340	Paper in Applied Microeconomics		3	
TI1341	Advanced Industrial Organization	Fershtman/Hinlopen	3	II
TI1342	Law and Economics	Dari-Mattiacci/ Guerrero	3	I
TI1343	Advanced Game Theory: Applications of Bargaining and Network Theory	Van den Brink/Houba	3	II
TI1344	Communication in Complex Organizations	Sobel	3	I
TI1345*	Markets with Asymmetric Information (TI Economics Lectures 2014)	Levin/Einav	3	V

5. Behavioral Economics

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
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<sup>11</sup> Course organized by CentER

PA1350	Paper in Behavioral Economics		3	
TI1351	Risk and Rationality	Wakker	3	II
TI1352	Experimental Economics	Sonnemans	3	V
TI1353	Evolutionary Game Theory	Van Veelen	3	III
UA1354	Nonlinear Economic Dynamics	Hommel/Kopányi/ Massaro	3	I
UA1355	Bounded Rationality	Massaro	3	II

6. Public Policy

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
PA1360	Paper in Public Policy		3	
TI1361	Industrial Organization	Moraga	3	V
TI1362	Environmental and Resource Economics	Withagen/V.d. Ploeg/Poelhekke	3	II
TI1363	Spatial and Transport Economics	De Groot/Verhoef	3	III
TI1364	Public Finance	Jacobs	3	V

7. Finance

<u>Code</u>	<u>Course name</u>	<u>Lecturer(s)</u>	<u>ECTS</u>	<u>Block</u>
PA1370	Paper in Finance		3	
TI1371	Institutions and Financial Structure	Perotti	3	III
TI1372	Dynamic Corporate Finance	Gryglewicz	3	I
TI1373	Financial Crises	Van Wijnbergen	3	II
TI1374	Empirical Corporate Finance	Sautner et al	3	II
TI1375	Banking	Perotti	3	I
TI1376	Market Microstructure	Menkveld/Foucault	3	V
TI1377*	Psychology across the Financial Landscape (TI Finance Lectures 2013)	Shefrin	3	III
TI1378	Behavioral Finance	Peters/V.d. Assem/ Zwinkels	3	V
DSF1381 <sup>12</sup>	Credit Risk Management	Norden	3	IV
DSF1382	Market & Systemic Risk Management	De Vries	3	III

9. Other courses

TI1391	The History of Modern Macroeconomics	Boumans	3	IV
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<sup>12</sup> Courses organized by the Duisenberg school of finance and scheduled independently from TI.

Students in the second year of the program may also choose core courses as field courses that they did not take in their first year. The course load for each course will be 3 ECTS. This offers students ample flexibility to engage in a PhD in the intersection between fields. For example, a finance student interested in macro-finance can choose to take the core courses of macro from the Economics track into his menu of field courses.

### **3.4.2 Field papers**

Regular TI field courses are assessed by an exam and/or take home assignments, but not full papers. Instead, second-year MPhil students have the option to write a short field paper for 3 ECTS field course credits. A field paper is an original theoretical or empirical contribution (size 15-20 pages). The paper is connected to a field course that the student has passed, but stands on its own and is an extension of material taught in the course. The lecturer of the field course grades the field paper.

Students should register for a field paper at the start of the year, but do not have to commit to a topic or course for the paper. Instead, students should contact the lecturer during the course to agree on a paper topic and deadline. Students should report the course and lecturer for which they write their field paper to Carine Horbach ([courses@tinbergen.nl](mailto:courses@tinbergen.nl)) as soon as possible, and never later than block IV, so that the institute can arrange the registration of the field paper's grade.

Papers can only be written for courses with TI codes 1311 and up. For practical reasons, field papers cannot be written for courses taught by external lecturers.

### **3.4.3 Seminars**

Apart from the MPhil seminar series organized for first year students, the institute's fellows and students organize a wide variety of seminar series. Student participation in seminars is highly recommended, but not rewarded with course credits. Seminar schedules can be found at [www.tinbergen.nl](http://www.tinbergen.nl).

### **3.4.4 Other courses and workshops**

Courses organized by other graduate schools or by inter-university networks such as the LNMB (see [www.lnmb.nl](http://www.lnmb.nl)) may qualify for field credits in the MPhil program. Students who want to follow courses that are not listed in Section 3.4.1 for credits should contact the Director of Graduate Studies in advance.

*Some courses and workshops involve fees, substantial travel, and other costs. Note that costs are reimbursed according to the regulations and procedures outlined in the separate brochure "Facilities - Funding – Refunding. Information for MPhil and PhD students" that is available from the institute's intranet.*

### **3.4.5 Matching to an MPhil thesis and possible PhD thesis supervisor**

Ideally, second-year students match up with an MPhil thesis supervisor before December 1.

To support the matching process, the institute complements the first year's seminar series (see Section 3.3.5) with information about existing PhD proposals that are originally granted for four-year PhD positions.

MPhil students should bear in mind that the MPhil thesis is a first step towards a PhD thesis. Students are advised to check with their prospective MPhil thesis supervisor under what conditions

they can transfer to a paid PhD position with that same supervisor. Together, the three faculties have a number of three-year PhD employment positions available to offer to students who successfully complete the MPhil program. However, this does not guarantee that all students find a match with a supervisor. Also, for distributional reasons it may be harder to transfer with one supervisor in one departmental research group than with another supervisor in another group. Formalities concerning the possible transfer to a PhD position will be arranged in the MPhil Thesis Workshop on March 4 and 6, 2014 (see Section 3.4.6).

Students should inform TI as soon as they have found an MPhil thesis supervisor by sending an email to [mphilthesis@tinbergen.nl](mailto:mphilthesis@tinbergen.nl). Students who have not found a supervisor by December 1 will be contacted by the Director of Graduate Studies. Of course, students should contact the Director of Graduate Studies before December 1 if they need help in finding a supervisor.

### **3.4.6 MPhil thesis**

Half of the second year of the MPhil program is devoted to writing a first major research paper, the MPhil thesis. The thesis is written under supervision of one of the institute's research fellows. It should be defended in a public one-hour seminar at the institute before a thesis committee consisting of the MPhil supervisor and two other research fellows of the institute.<sup>13</sup> A grade is awarded to the MPhil thesis at the end of the seminar. The thesis should have the format and size of a research paper that can be submitted to an international, peer-reviewed journal in economics. However, the committee should bear in mind that students only have half a year (30 ECTS) to work on their thesis. Therefore, the committee should expect a good first, but not a final, draft of such a paper. The draft should have sufficient quality to be publishable in such a journal after further polishing.

The MPhil thesis procedure is the following:

- I. **Supervisor and commitment (November-December)**
  1. Second-year students should have found a thesis supervisor before December 1, 2014.
  2. Students and supervisors are requested to fill out the PhD proposal form (attached) and email the form to [mphilthesis@tinbergen.nl](mailto:mphilthesis@tinbergen.nl) before January 5, 2014. The PhD transfer form and the student's grade list will be submitted to the supervisor's department.
- II. **MPhil thesis workshops (January)**
  3. The MPhil thesis workshop will be on Tuesday, March 4 and Thursday, March 6. All second-year students will get 15 minutes (including question-time) to present their MPhil thesis plans. The workshop is intended to help the student to get going with the thesis but is also used by TI to coordinate the allocation of the PhD positions available for TI MPhil students at the three university faculties.  
Departmental representatives may attend the MPhil Thesis Workshop to meet the PhD candidates. The university faculties will take tentative PhD funding decisions in the period following the Workshop. This may involve interviews with the students.
- III. **Defense (July/August)**
  4. As soon as the supervisor considers the thesis ready to be defended the supervisor informs TI by sending an email to [mphilthesis@tinbergen.nl](mailto:mphilthesis@tinbergen.nl). The Director of Graduate Studies will ask the supervisor to suggest possible committee members. At least one of the committee members should be affiliated to a different university than the supervisor. The DGS establishes the committee. If the thesis is not ready to be defended by July 1, the student informs TI about the thesis progress before that date.
  5. The student must send a final PDF of the thesis and a word document of the abstract

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<sup>13</sup> In exceptional cases, the committee may include members who are not research fellows of the institute.

to [mphilthesis@tinbergen.nl](mailto:mphilthesis@tinbergen.nl) and to the committee members well before the defense, but always before August 17, 23:59 hrs. The implication of not meeting this deadline is that you have to re-enrol at your host university.

6. The thesis can only be defended if all other course work has been completed and field papers are handed in (and graded).
7. The student sets a date for the defense seminar (after consultation with the supervisor and other committee members). The student is responsible too for booking a room at TIA or TIR. The student informs TI about date/time/location of the seminar. TI confirms the data concerning the seminar to the student and the committee and informs about further procedure. TI announces the seminar on the website.
8. All students should defend their thesis before September 1, 2013.
9. The seminar itself takes one hour:
  - 0-45" Presentation by the student (possibly interrupted by discussion);
  - 45-55" Comments and questions (by the committee in particular);
  - 55" All except the committee members leave the room;
  - 55-60" The committee decides upon the grade and completes the gradeform;
  - 60" The student is called back in and the grade is discussed.

### **3.4.7 Grading, credits, and retakes in the fields**

All field courses, field papers, and the MPhil thesis are graded on a 0-10 scale (see also Section 3.3.6).

Performance in field courses is assessed by a final (oral, take-home, or written sit-in) exam. Oral and written sit-in exams take place in the exam week; a take-home exam should have a deadline no later than three weeks after the course's final lecture. Home work assignments and class participation may contribute to the grade. See the individual courses' descriptions in Section 4.3 for details.

Exams are typically graded within 15 days, and before July 1. Students can review their graded exam papers at the local TI secretariat up to four weeks after receiving their grade.

Credits are obtained for a field course block, a field paper, or the MPhil thesis only if it is completed with a final grade of 6 or up. Failing grades cannot be compensated.

There are no scheduled retakes for exams for field courses with a TI code.

All credits expire 29 months after the date of the exam in which they were earned. Students cannot resit any examination that they have already passed.

## **3.5 The Academic and Examination Regulations and the MPhil's boards**

The MPhil's Academic and Examination Regulations provide details on the program's admission and examination procedures and can be downloaded from the institute's intranet.<sup>14</sup>

Here, we will provide some additional information on the Admission Board (Section 3.5.1), the Examination Board (Section 3.5.2), and the Educational Board (Section 3.5.3).

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<sup>14</sup> This brochure explains some of these regulations and also serves as an appendix to these regulations (that is, it is the "Study Guide" referred to in the regulations). In case of conflicts between this brochure and the Academic and Examination Regulations, the text of the Academic and Examination Regulations is binding.

### **3.5.1 Admission Board**

The Admission Board consists of representatives of the three faculties and the two Directors of Graduate Studies (DGS). The Admission Board decides on admissions to the program and on funding.

Current students will only have to deal with the Admission Board when it decides on second-year funding. At the end of the first year, the DGS will discuss second-year funding with all first-year students and propose funding arrangements to the Admission Board. Students should not contact the Admission Board directly.

### **3.5.2 Examination Board**

The Examination Board consists of representatives of the three faculties. The responsibilities and tasks of the Examination Board are explained in the Academic and Examination Regulations.

There are two reasons why a student may contact the Examination Board:

1. The Examination Board decides on deviations from the curriculum that may have a bearing on the diploma. Therefore, any request for replacement of parts of the curriculum through education provided by third parties, exemptions, postponement of deadlines, etcetera, should be sent to the Examination Board.
2. Students should try to settle disputes about examinations with the lecturer first, and contact the DGS if the dispute remains. Students may submit disputes that cannot be solved this way to the Examination Board for arbitration.

In both cases, an email to [examinationboard@tinbergen.nl](mailto:examinationboard@tinbergen.nl) suffices.

Reversely, the Examination Board will provide the student with formal study advice (see Section 3.3) and may take measures against a student in the case of fraud or misbehavior. Appeals against such decisions should be sent in writing to

Examination Board  
Tinbergen Institute  
Burg. Oudlaan 50  
3062 PA Rotterdam  
The Netherlands

To speed up this process, students should also send their appeal by email to [examinationboard@tinbergen.nl](mailto:examinationboard@tinbergen.nl).

### **3.5.3 Educational Board**

The Educational Board consists of three MPhil students and three TI fellows. The Directors of Graduate Studies are secretary to, but not members of, the Educational Board. The Educational Board provides advice, both solicited and unsolicited, to the Board of the Tinbergen Institute, the Faculty Boards and to the Faculty Councils on all matters concerning the educational program. It meets twice a year or more often if considered necessary by one or more of the members.

The Educational Board has decided to organize its two regular meetings around the half-yearly MPhil evaluation meetings organized by the Students' Council. This provides students with a channel to voice their concerns about the MPhil program. Students may also contact the Educational Board directly with general concerns about the educational program. Students should not contact the Educational Board to solve individual disputes that are in the domain of the Examination Board.



### 3.6 Academic preparations

Depending on their educational background, students may want to prepare academically for one or more core sequences before they come to TI.

#### 3.6.1 Microeconomics

Students lacking a strong background in economics will benefit from studying some undergraduate text book in intermediate microeconomics before they come to TI, such as

- Perloff, J.M. (2008), *Microeconomics* (Fifth Edition), Addison Wesley
- Frank, R. (2009), *Microeconomics and Behavior* (Eighth Edition), McGraw-Hill
- Pindyck, R. and D. Rubinfeld (2008), *Microeconomics* (Seventh Edition), Prentice Hall
- Varian, H.R. (2009), *Intermediate Microeconomics* (Eighth Edition), Norton
- Baye, M. (2006), *Managerial Economics & Business Strategy* (Fifth Edition), McGraw-Hill

#### 3.6.2 Macroeconomics

Students without a strong background in economics are advised to study some undergraduate macroeconomics texts before the start of Macroeconomics I in November, such as

- Mankiw, N.G. (2010), *Macroeconomics* (Seventh Edition), Worth
- Blanchard, O. (2008), *Macroeconomics* (Fifth Edition), Prentice Hall
- Burda, M. and Wyplosz, C. (2009), *Macroeconomics: A European Text* (Fifth Edition), Oxford University Press

and ideally also

- Weil, David N. (2008), *Economic Growth* (Second Edition), Addison Wesley.

#### 3.6.3 Asset Pricing and Corporate Finance

Students without a strong background in finance that want to specialise in finance are advised to study the following undergraduate finance texts in Corporate Finance, Financial Economics, and Financial markets:

- Berk, J., and P. DeMarzo (2007), *Corporate Finance*, Pearson International.
- Bodie, Z., A. Kane, and A. Marcus (2008) *Investments*, Wiley.

and ideally also

- Leroy, S.F., J. Werner, and S.A. Ross (2000), *Principles of Financial Economics*, Cambridge University Press.

#### 3.6.4 Mathematics

Mathematics I is an ambitious math refreshment course. This course should be useful to most students, but those with a very strong math background may be exempted from Mathematics I class attendance and home works (but not the exam). Mathematics II treats some methods of optimization and computer programming in econometrics.

All incoming students are supposed to be familiar with the basics of the usual maths courses for

undergraduate students in economics:

- a. Functions of one variable: linear functions, quadratic functions, polynomial functions, power functions, exponential functions, logarithmic functions, inverse functions.
- b. Differentiation: relation with tangent, rules for differentiation (including product rule, quotient rule, chain rule), linear approximation, Taylor approximation.
- c. Integration: indefinite and definite integrals, primitive of a function, relation with area.
- d. Linear equations: matrix and vector notation, Gaussian elimination, matrix multiplication, transpose.

Students lacking a strong math background should prepare before they come to TI, using any textbook on mathematics for economists that treats these topics, such as

- Sydsaeter, K. and Hammond, P. (2008), *Essential Mathematics for Economic Analysis* (Third Edition), Prentice Hall
- Simon, C. P. and L. E. Blume (1994), *Mathematics for Economists*, W. W. Norton & Company

or the textbooks on Calculus and Linear Algebra used for Mathematics I (see Section 4.2). One source of many useful exercises is:

- Van de Craats, J. and R. Bosch (2009), *Basisboek Wiskunde* (2<sup>e</sup> editie), Pearson ([staff.science.uva.nl/~craats/](http://staff.science.uva.nl/~craats/))

This Dutch-language book is useful for all who need to prepare for Math, including those who cannot read Dutch. It is very compact and the left-hand pages of this book give many exercises, mostly in terms of mathematical symbols so that there is no need to understand the accompanying Dutch text. However, this book does not contain exercises on vectors and matrices. Schaum's Outline books on *Calculus and on Linear Algebra (Vectors and Matrices)*, published by McGraw-Hill, contain many useful exercises as well.

(<http://www.mhprofessional.com/templates/index.php?cat=145>)

Finally, students are expected to have read

- *Matlab® 7, Getting started guide*  
[http://www.mathworks.com/help/pdf\\_doc/matlab/getstart.pdf](http://www.mathworks.com/help/pdf_doc/matlab/getstart.pdf)

before the start of the course Principles of Programming in Econometrics.

A short introductory lecture to the programming course (optional) will be organized in the last week of August for those students who are new to the subject or who would like to refresh their knowledge.

### 3.6.5 Econometrics

Students in the standard track should read Chapter 1 of the book used in this track's first course (TI1304),

- John A. Rice (1995). *Mathematical Statistics and Data Analysis*, 2nd Edition, Duxbury Press, ISBN: 0-534-20934-3 or 3rd Edition (2007), ISBN: 0-534-39942-8

before the start of Statistics and Econometrics in November.

The advanced track aims at students who already master econometrics at the level of the standard track.

## 4. Course descriptions

### 4.1 Course codes

Course code prefixes indicate how and by whom courses are organized:

TI	Courses organized by the institute at TIR or TIA
EU	Course at the Erasmus University Rotterdam (taught at its campus near TIR)
UA	University of Amsterdam MSc courses (taught at its campus)
DSF	Courses organized by Duisenberg school of finance
PA	Field paper
CE	Course organized by CentER

The numerical parts of the course codes reflect the academic year (first digit; 13 for 2013/2014, etcetera) and include a unique course or seminar number (last two digits; 00-09 are reserved for core courses and 10 and up for field courses).

### 4.2 Core courses

*This section does not explicitly state the core courses' entrance requirements. However, all students in core courses should have the academic background expected from a successful MPhil applicant (see Section 2.1.2) and, if necessary, prepare as suggested in Section 3.6. Moreover, note that later core course blocks often build on earlier course blocks within, and occasionally across, each of the core sequences: Microeconomics (TI1301), Macroeconomics (TI1302), Econometrics (TI1303/TI1308+TI1304+TI1305), Advanced Econometrics (TI1303/TI1308+TI1306)*

A core course block consists of 2.5 hours of weekly lectures with regular homework assignments and 1 hour tutorial, during 7 weeks. A teaching assistant (TA) gives the weekly tutorials and has a weekly office hour (time and place are announced in the first lecture).

#### **TI1301/I MICROECONOMICS I (Individual Decision Making)**

*Lecturers:* Dr V. Karamychev (EUR) and Prof. G. van der Laan (VU)

*Short subject description:*

The course "Microeconomics I" is the fundamental microeconomics course which studies individual decision making.

*Course contents:*

Preferences, Consumer choice, Classical demand theory, Aggregate demand, Production, Choice under uncertainty.

*Course objective:*

After completing the course students will be able to:

1. Identify and explain economic concepts from the theory of individual decision making.
2. Compute individually rational behavior of an economic agent in any economic environment.
3. Identify potential links between different elements of individual behavior that follow from the theory.
4. Apply the theory of individual decision making to complex economic environments studied in later courses: under strategic interactions, in large populations with aggregation, in stochastic environments with uncertainty, etc.

*Literature:* A. Mas-Colell, M.D. Whinston, and J.R. Green (1995). *Microeconomic Theory*, New York: Oxford University Press

## **TI1301/II MICROECONOMICS II (Game Theory)**

*Lecturer:* Prof. P.P. Wakker (EUR)

*Short subject description:*

Classical game theory to analyze, mostly mathematically, strategic interactions, cooperatively or not, between two or more rational parties, mostly leading to equilibria.

*Course contents:*

Since the 1970s, questions about material supply and demand have become less central in economics, and questions about human interactions and information have become more central. Game theory provides the basic tools for investigating the societal inefficiencies due to selfish strategic behavior of individuals, and ways to minimize those inefficiencies. In its first years, game theory was purely theoretical, so as to develop its basic concepts. It was later extended to experimental economics, and nowadays its tools are used in virtually every economic discipline.

*Course objective:*

After having completed the course students:

- can use general techniques to determine outcomes, usually equilibria, in many strategic situations,
- can see through conflicts, incredible threats, possibilities for cooperation, bargaining, voting, proper incentives, moral hazard, and adverse selection,
- learn the subtle counterfactual reasoning typical of strategic interactions between two or more rational beings.

*Literature:*

Compulsory:

- Peter, Hans J.M. (2008). *Game Theory: A Multi-Leveled Approach*, Springer, Berlin (ISBN 978-3-540-69290-4. Most probably free (and legally!) downloadable from internet

Recommended (optional):

- Gibbons, Robert (1992). *A Primer in Game Theory*, Prentice-Hall, London; (Nice casual reading)
- Luce, R. Duncan & Howard Raiffa (1957). *Games and Decisions*, Wiley, New York. (Deepest book on game theory)
- Tadelis, Steven (2013). *Game Theory: An Introduction*, Princeton University Press, Princeton, NJ. (Very didactical, but too elementary for this course. Good background if this course is difficult)

## **TI1301/III MICROECONOMICS III (Information and Behavioral Economics)**

*Lecturers:* Prof. P.P. Wakker (EUR) and Prof. T.J.S. Offerman (UvA)

*Short subject description:*

Behavioral economics (increasing empirical realism using psychology) and information economics (strategic interactions under asymmetric information).

*Course contents:*

This course consists of two parts. The first two meetings deal with the behavioral revolution in economics, where differences between homo sapiens and homo economicus ask for a rewriting of individual risk behavior, individual intertemporal behavior, individual utility, and, thus, of virtually all economic models. The second part deals with informational asymmetries in economic relationships. In particular, in the last five meetings, we discuss models of informational asymmetry in strategic situations, including auctions, adverse selection, moral hazard, and signaling. We will observe that those models have broad applications. Bidders in auctions know more about their valuation than the seller does. When sellers in second-hand car markets have better information about their cars than buyers, only low quality cars may be offered for sale. Insured patients may

not take actions that reduce their personal health risks if insurance companies cannot observe those actions. Potential employees may obtain a diploma to signal their abilities that would otherwise be unobservable to future employers. Both theoretical models and their experimental tests will be central in this course.

*Course objective:*

Students can carry out empirical measurements, quantitative predictions, and economic applications of psychological insights (changing homo economicus into homo sapiens) into the area of their own research interest. In addition, students can analyze strategic situations that involve auctions, signaling, adverse selection, moral hazard, or other informational asymmetries.

*Literature:*

Compulsory:

- Wolfstetter, Elmar (1999 or second revised version 2002). *Topics in Microeconomics – Industrial Organization, Auctions, and Incentives*, Cambridge University Press, ISBN 0 521 64534 4.
- Selected papers

Recommended (optional):

Offerman:

- Salanie, Bernard (1997, or new edition 2005). *The Economics of Contracts: A Primer*. MIT Press
- Krishna, Vijay (2002, or second edition 2009). *Auction Theory*, Academic Press, San Diego

Wakker:

- Kahneman, Daniel (2011). *Thinking: Fast and Slow*, Penguin Books, London
- Thaler, Richard H. & Cass R. Sunstein (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*, Yale University Press, New Haven

## **TI1301/IV MICROECONOMICS IV (General Equilibrium and Welfare)**

*Lecturer:* Prof. G. van der Laan (VU)

*Short subject description:*

Micro IV is devoted to the examination of competitive markets from a general equilibrium perspective. Also some basic notions from cooperative game theory will be discussed.

It is a fundamental microeconomics course which studies the interdependency between individual decision making and market clearing price formation. From a methodological viewpoint, the general equilibrium approach views the economy as a closed and interrelated system in which the equilibrium values of all variables are simultaneously determined. This in contrast to the partial equilibrium approach, where all variables not directly related to the problem at hand are taken to be given. From a substantive viewpoint, general equilibrium theory is a theory of the determination of equilibrium prices and quantities in a system of perfectly markets. It attempts to predict the complete vector of final consumptions and productions from the fundamentals of the economy.

*Course contents:*

General equilibrium, Existence of equilibrium, Welfare properties, Uniqueness of equilibrium, Price adjustment, Market imperfection and externalities, Incomplete markets and inefficiency, Equilibrium and cooperative decision making.

*Course objectives:*

After taking the course the students will be able to:

- Identify and explain general equilibrium from the theory of individual decision making.
- Identify the necessary conditions for market efficiency and the factors that might lead to inefficiencies.
- Identify potential pitfalls for using applied general equilibrium models in complex economic environments.
- To recognize situations of cooperative decision making and its complementary approach

to decentralized decision making.

*Literature:* Mas-Colell, M.D. Whinston, and J.R. Green (1995). *Microeconomic Theory*, Oxford University Press, Part IV

### **TI1301/V MICROECONOMICS V (Contract Theory)**

*Lecturer:* Prof. R. Sloof (UvA)

*Short subject description:*

Contract theory deals with the question of how economic agents (optimally) structure contractual relationships in the presence of asymmetric information.

*Course contents:*

In Microeconomics III the standard models of moral hazard, adverse selection and signalling have already been discussed. This course continues the analysis of contracts in such settings by considering richer economic environments. Attention is given to (among other things): multidimensional incentive problems, contracts for teams, relational contracts, incomplete contracts, decision rights and authority, and asset ownership. These topics are approached by applying contract theory to problems in organizational economics, personnel economics and corporate finance.

*Course objective:*

After this course students are:

- Familiar with basic models and techniques used within contract theory
- Able to solve for the optimal contract in some standard contractual settings studied in the literature using game-theoretic techniques.
- Aware of the implications and limitations of contract theory for making sound empirical predictions

*Literature:*

Compulsory:

- Bolton, P. and M. Dewatripont, 2005, *Contract Theory*, The MIT press: Cambridge
- Selected papers

Recommended (optional):

- Laffont, J.J. and D. Martimort, 2002. *The theory of Incentives. The Principal-Agent Model*, Princeton University Press: Princeton
- Salanie, B., 2005. *The Economics of Contracts: A Primer*, The MIT press: Cambridge
- Selected papers

### **TI1302/I MACROECONOMICS I (Dynamic Stochastic General Equilibrium Models)**

*Lecturer:* Dr B. Brügemann (VU)

*Short subject description:* This course provides an introduction to stochastic neoclassical growth models. Mainstream macroeconomics builds on this class of models for many applications, including business cycles and growth.

*Course contents:*

This course introduces you to stochastic neoclassical growth models. These are basic models of the macroeconomy which build on general equilibrium theory. Standard consumer and producer theory is used to model the behaviour of households and firms. Markets are perfectly competitive and complete in these models, and typically bring about an efficient allocation of resources. In this sense there are no frictions or market failures. This class of models has been used to study a large variety of issues in macroeconomics, including business cycles, growth, and asset pricing. These models are useful for several reasons. First, they are useful in understanding the efficient

allocation of resources. Second, if in the context of a particular application the relevant empirical evidence appears inconsistent with an efficient allocation of resources, then the precise nature of the discrepancy can indicate what type of frictions ought to be included in the model. Third, elements of the neoclassical growth model are important building blocks of macroeconomic models with frictions. For example, so-called Dynamic Stochastic General Equilibrium (DSGE) models are a class of models that is widely used to study monetary and fiscal policy, and they are constructed by introducing a variety of frictions into basic stochastic neoclassical growth models. We will start by studying elements of general equilibrium theory needed for macroeconomics, with a focus on modelling dynamics and uncertainty. Having covered these basics, we will study different versions of the neoclassical growth model, specifically a version with infinitely-lived households and a version with overlapping generations of finitely-lived households. We will use these models to take a first pass at applications to business cycles, growth, and asset pricing. To study quantitative implications we need to solve the models numerically. You will practice basic techniques for doing so in problem sets, specifically dynamic programming and linearization. Mainstream macroeconomics has used neoclassical growth models as a starting point to investigate a large variety of research questions. This reliance on neoclassical growth models has sometimes prompted criticism. We will briefly examine such criticisms and proposed alternatives. The goal here is not to present alternatives in detail, but to use the perspective of critics to obtain a better appreciation of the strengths and limitations of the mainstream approach.

*Course Objective:*

After the course students are:

- familiar with elements of general equilibrium theory needed for macroeconomics;
- familiar with stochastic neoclassical growth models;
- able to numerically solve basic stochastic neoclassical growth models using dynamic programming or linearisation;
- aware of the strengths and limitations of the mainstream approach of using neoclassical growth models as a starting point for investigating a variety of research questions.

*Literature:*

- Acemoglu, D. (2008). *Introduction to Modern Economic Growth*, second edition, Princeton University Press
- Lecture notes, to be published on blackboard

**TI1302/II MACROECONOMICS II (Macroeconomic Policy)**

*Lecturer:* Dr C.A. Stoltenberg (UvA)

*Short course description:*

In Macroeconomic Policy, we study the optimality of fiscal and monetary policies in a general equilibrium context.

*Course contents:*

The course builds on Macroeconomics I and applies dynamic stochastic general equilibrium models to the analysis of monetary and fiscal policy. It consists of four main parts. In the first part, a basic competitive equilibrium framework is developed which serves as the main building block for the course. The second part focuses on the role of fiscal policy. Here, effects of government spending, the role of public debt, and optimal taxation under commitment will be discussed. The third part introduces money into the framework and derives principles for optimal monetary policy under perfectly flexible prices. Further, the issues of monetary policy implementation and the determination of the price level will be addressed. The last part extends monetary policy analysis to the case where prices are imperfectly flexible. Within this framework optimal monetary policy under commitment and discretion will be examined, and interactions between monetary and fiscal policy will be discussed

*Course objectives:*

In this class, students learn how to:

- solve dynamic stochastic general equilibrium models
- show whether a long-run equilibrium exists and is unique
- derive conditions for a unique set of stable equilibrium sequences
- formally compute optimal tax and monetary policies in general equilibrium models
- understand the economic mechanism why a certain policy is optimal.

*Literature:*

- Ljungqvist, L. and T.J. Sargent (2004). *Recursive Macroeconomic Theory*, Second Edition, Cambridge Massachusetts: The MIT Press
- Walsh, C.E. (2010). *Monetary Theory and Policy*, Second Edition, Cambridge Massachusetts: The MIT Press

**TI1302/III MACROECONOMICS III (Frictions and Resource Allocation)**

*Lecturers:* Prof. E.J. Bartelsman (VU) and Prof. P. Gautier (VU)

*Short subject description:*

This course extends macro models to analyze the effects of frictions in hiring and investment on firm dynamics and labor market outcomes.

*Course contents:*

Key macro indicators— unemployment, GDP, and productivity growth— may not follow the optimal paths determined in a frictionless economy. Recent models are much more careful in dealing with frictions agents face in reality, such as entry and exit fees, delays in finding transaction partners, information asymmetries, and limited contract enforcement. In this course, we explore the implications of heterogeneous agents facing various frictions that frustrate the allocation of resources in labor, capital and product markets.

By studying these models, students not only learn key aspects of three important topics in macroeconomics, namely labor market developments, business cycle analysis, and long-run growth, but also key building blocks that are useful by themselves.

We briefly discuss empirical regularities observed in the data regarding labor markets, firm demographics and productivity growth. After highlighting the difficulties of standard models to explain these regularities, we explore recent modifications. We start with growth models of heterogeneous firms and study the implications of frictions for static and dynamic efficiency.

Special attention will be paid to frictions in capital investment. Next, we turn to the labor market and discuss different ways to model how agents search, match, and bargain over prices. More specific examples are wage posting, Nash bargaining, and directed search.

*Course objective:*

- Understand and use the tools (game theory, dynamic programming) that are used in this literature.
- Learn how to formulate models that are rich in terms of the factors necessary to understand the key mechanisms for the questions at hand and abstract from irrelevant details.

*Literature:*

- Cooper, Russell W., and John C. Haltiwanger (2006). *On the Nature of Capital Adjustment Costs*, *The Review of Economic Studies* 73 (3) (July 1): 611–633, doi:10.1111/j.1467-937X.2006.00389.x
- Hopenhayn, Hugo A. (1992). *Entry, Exit, and Firm Dynamics in Long Run Equilibrium*, *Econometrica* 60 (5, pag. 1127-1150.): 1127–1150
- Mortensen, Dale T., and Christopher Pissarides (1994). *Job Creation and Job Destruction in the Theory of Unemployment*, *Review of Economic Studies* 61 (3(208)): 397–416
- Shimer, Robert (2005). *The Assignment of Workers to Jobs in an Economy with Coordination Frictions*, *Journal of Political Economy* 113 (5) (October 1): 996–1025, doi:10.1086/444551



## TI1302/IV MACROECONOMICS IV (Financial Frictions in Macroeconomics)

Lecturer: Prof. S.J.G. van Wijnbergen (UvA)

### Short subject description:

This course focuses on why finance and financial structure matters for macroeconomics.

### Course contents:

We draw on recent developments in microeconomic research on information asymmetries to introduce financial frictions in macroeconomics. We pay special attention to the concept of financial fragility and to the macroeconomic causes and consequences of financial crises.

### Course objective:

The course intends to introduce students to currently ongoing research on financial frictions and macroeconomics; after this course students should be able to actively take part in this research agenda.

### Literature:

- Brunnermeier, M., Th. Eisenbach and Y. Sannikov (2012), *Macroeconomics with Financial Frictions: a Survey*, NBER WP 18102
- Holstrom, B. and J. Tirole (1997). *Financial Intermediation, Loanable Funds and the Real Sector*, QJE
- Tirole, J. (2011). *Illiquidity and all its Friends*, JEL
- Brunnermeier, M. and M. Oehne (2013). *The Maturity Rat Race*, JoF
- Krugman, P. (1979). *A Model of Balance of Payments Crises*, JMCB
- Chang and Velasco (2001). *Financial Crises in Emerging Markets: a Canonical Model*, QJE
- Philippon, Th. (2010). *Debt overhang and Recapitalization in Closed and Open Economies*, IMF ER
- Acharya, V., I. Drechsler, P. Schnabl (2012). *A Pyrrhic Victory? Bank Bailouts and Sovereign Credit Risk*, NBER WP 17136
- Myers (1977). *Determinants of Corporate Borrowing*, JFE
- Homar, T. and S. van Wijnbergen (2013). *On Zombiebanks and Recessions after Systemic banking Crises*, TI WP 13-039
- Occhino, F. and A. Pescatori (2010). *Debt Overhang in a business cycle model*, WP 10/03R, Federal Reserve Bank of Cleveland
- Bernanke, B, M. Gertler and S.Gilchrist (1999). *The Financial Accelerator in a Quantitative Business Cycle framework*, in Taylor, J. and M. Woodford (eds), *Handbook of Monetary Economics*.
- Gertler, M. and P. Karadi (2011). *A Model of Unconventional Monetary Policy*, JME
- Kwaak, C. van der, S. van Wijnbergen (2013). *Financial Fragility, Sovereign Debt Default Risk and the Limits to Central Bank Bailouts*, TI WP 13-179
- Kwaak, C. van der, S. van Wijnbergen (2013). *Financial Fragility and the Fiscal multiplier*, TI WP 14-\*\*
- Cochrane, J. (2007). *Financial Markets and the Real Economy*, Ch.7 in Rajnish Mehra, (ed) *Handbook of the Equity Premium* Elsevier
- Benmelech, E. and N. Bergman (2012). *Credit traps*, AER
- Brunnermeier, M. and Y. Sannikov (2014). *A Macromodel with a Financial Sector*, forthcoming, AER
- Diamond, D. and R. Rajan (2012). *Illiquid Banks, Financial Stability and Interest rate policy*, JPE
- Woodford, M. (2011). *Simple Analytics of the Government Expenditure Multiplier*, AEJmacro
- Woodford, M. (2012). *Methods of Policy Accommodation at the Interest rate Lower Bound*, Jackson Hole Conference Volume, Federal reserve Bank of Kansas

- Lecture Notes

### **TI1303/I MATHEMATICS**

*Lecturer:* Dr ir F.O.O. Wagener (UvA)

*Short subject description:*

Mathematics I is a fast-paced refresher course of fundamental mathematical notions and techniques that are used ubiquitously in economics and finance.

*Course contents:*

Week 1: Linear equations, matrices and their determinants (ELA, chapters 1 and 2)

Week 2: Vector spaces and linear transformations (ELA, chapters 3, 4 and 8)

Week 3: Eigenvalues, eigenvectors and diagonalisation (ELA, chapters 5 and 7)

Week 4: Functions of several variables (CCM, chapters 3 and 5)

Week 5: Inverse and implicit functions and differentials (CCM, chapters 7, 8 and 9)

Week 6: Integration (CCM, chapters 10 and 11)

Week 7: Complex numbers and differential equations (CCM, chapters 12, 13 and 14)

ELA: Anton & Rorres, "Elementary Linear Algebra"

CCM: Binmore & Davies, "Calculus: Concept and Methods"

*Course objective:*

After this course, students are familiar with the basic notions of Linear Algebra – vector spaces, linear transformations and their matrices, as well as their most important properties – and their application to Multivariate Analysis. In particular, they are able to evaluate integrals of functions of several variables, manipulate implicitly defined functions and solve linear differential equations.

*Literature:*

- Howard Anton and Chris Rorres (2005). *Elementary Linear Algebra with Applications* (9<sup>th</sup> edition), Wiley
- Ken Binmore and Joan Davies (2001). *Calculus, Concepts and Methods*, Cambridge University Press

### **TI1303/II MATHEMATICS II AND PRINCIPLES OF PROGRAMMING IN ECONOMETRICS**

*Lecturers:* Dr J. Brinkhuis (EUR, Mathematics II) and Dr C.S. Bos (VU, Principles of Programming in Econometrics)

*Note: This course consists of two separate parts, on the mathematics of optimization (Brinkhuis) and principles of programming in Econometrics (Bos), that are jointly examined. The final mark consists of 55% exam on Mathematics II, 20% homework exercises on the topic of Mathematics II (if 4.5 or more on sit-in exam), and 25% take-home exam on Principles of Programming in Econometrics.*

#### **Mathematics II**

*Short course description:*

Mathematics II studies all optimization methods.

*Course contents:*

This course starts with a brief review of finite dimensional optimization: necessary and sufficient conditions of optimization (stationary, Lagrange, KKT), existence of solutions (Weierstrass) and sensitivity analysis (shadow price). Then indefinite dimensional optimization is discussed: the three methods of dynamic optimization: 1) Calculus of Variation (Euler-Lagrange, transversality), 2) Optimal Control (Pontryagin's Maximum Principle, Hamiltonians), 3) Dynamic Programming

(Bellman). Finally an introduction is given to stochastic dynamic optimization and to dynamic and stochastic games.

*Course objectives:*

The course intends to teach the students what are the standard methods of optimization (static/dynamic, discrete/continuous, deterministic/stochastic) and how to use these.

*Literature:*

- Jan Brinkhuis and Vladimir Tikhomirov (2005). *Optimization: Insights and Applications*, Princeton University Press (ISBN-13:978-0-691-10287-0 or ISBN-10:0-691-10287-2)
- Syllabus

### **Principles of Programming in Econometrics**

*Short subject description:*

This course provides a primer to students on how to tackle in general a programming problem in Econometrics.

*Course contents:*

During three consecutive days, the basics of programming in Econometrics are explained. This course discusses general concepts of programming, how to proceed from a set of equations via an algorithm to a valid program, robustness of programming, and other more practical topics related to Econometrics.

The course is split between a theoretical and a practical part. The theoretical part assumes a matrix-oriented programming language. It is not immediately related to a specific programming environment, though examples will be given in Matlab. The practical part of the course necessarily focuses more on the syntax of Matlab itself. Students are expected to have read the 'Matlab Primer' before the start of the course.

*Course objective:*

After the course students are able to analyze the programming problem they have at hand, to split the task into smaller subtasks and define clearly the dependencies between the tasks. They have learned how to structure their program, and how to choose wisely the data structure that is helpful in solving the problem.

*Literature:* Matlab Primer (2013), Mathworks,  
[http://www.mathworks.com/help/pdf\\_doc/matlab/getstart.pdf](http://www.mathworks.com/help/pdf_doc/matlab/getstart.pdf)

### **TI1304 STATISTICS**

*Lecturer:* Dr P.J.C. Spreij (UvA)

*Short subject description:*

The course starts off with the very first principles of probability and quickly passes on to essential statistical techniques. Estimation and testing theory will be reviewed, including maximum likelihood estimators, likelihood ratio test and (least squares) regression.

*Course contents:*

In the course we treat the following topics.

Sample spaces, probability measures, distribution functions, random variables with discrete and continuous distributions, functions of random variables, multivariate distributions, random vectors, independent random variables, conditional distributions, functions of random vectors and their distributions, expectation and variance, covariance and correlation, the law of large numbers, central limit theorem, chi-square and t-distributions, estimation, method of moments, maximum likelihood, large sample theory, confidence intervals, Cramer-Rao bound, hypothesis testing, Neyman-Pearson paradigm, likelihood ratio tests, confidence intervals, linear regression, least squares estimation of regression parameters, testing regression hypotheses.

*Course objective:*

After the course students will be able to apply fundamental techniques needed for statistical inference. They will also be in the position to continue study and research on a more advanced level.

Information will also become available on [staff.science.uva.nl/~spreij/onderwijs/TI/statistics.html](http://staff.science.uva.nl/~spreij/onderwijs/TI/statistics.html)

*Literature:* John A. Rice (1995). *Mathematical Statistics and Data Analysis*, 2nd Edition, Duxbury Press, ISBN: 0-534-20934-3 or 3rd Edition (2007), ISBN: 0-534-39942-8

## **TI1305/I ECONOMETRICS I AND TI1305/II ECONOMETRICS II**

*Lecturers:* Prof. D. Fok (EUR, part I) and Dr L. Hoogerheide (VU, part II)

*Short subject description:*

This course provides knowledge on the quantitative analysis of economic data.

*Course contents:*

In this course we provide an understanding of basic econometric methods. Knowledge of these methods allows one to understand modern empirical economic literature and to perform one's own analysis of economic and business data. The technique of regression is discussed, as well as various extensions that are needed in concrete applications to deal with, for example, heteroskedasticity, endogeneity, non-linearities, and time series aspects. Furthermore an introduction to discrete choice modeling is given. The main emphasis of the course is on the interpretation of models and outcomes of estimation and testing procedures. The students practice this themselves by analyzing economic and business data by means of the econometric software package EViews and by interpreting and extending formulae for basic models and concepts.

*Course objectives:*

After this course students will be able to apply econometric techniques to answer empirical questions and will be able to critically evaluate econometric models.

*Literature:*

Compulsory:

- C. Heij, P.M.C. de Boer, P.H. Franses, T. Kloek, and H.K. van Dijk (2004). *Econometric Methods with Applications in Business and Economics*, Oxford University Press, Oxford (ISBN:0-19-926801-0)

Recommended:

- M. Verbeek (2004). *A Guide to Modern Econometrics* (3<sup>rd</sup> edition), Wiley
- J.M. Wooldridge (2000). *Introductory Econometrics, a Modern Approach* (4<sup>th</sup> edition), South Western College Publishing
- Ruey S. Tsay (2005). *Analysis of Financial Time Series* (2<sup>nd</sup> edition), Wiley, Chapter 2
- Walter Enders (2010). *Applied Econometric Time Series* (3rd edition), Wiley. (ISBN: 0-470-50539-7)

## **TI1306/I ADVANCED ECONOMETRICS I**

*Lecturer:* Dr M. Massmann (VU)

*Short subject description:*

Advanced Econometrics I covers numerical and inferential aspects of least-squares estimation of the regression model.

*Course contents:*

The course considers chapters 1-7 of Davidson & MacKinnon's textbook. First, ordinary least squares estimation of the simple linear regression model is examined in detail from a numerical as

well as a statistical point of view. Hypothesis testing, both asymptotic and simulation-based, is also considered in this context. Subsequently, the setting is generalised to non-linear least squares and generalised least squares to accommodate the non-linear regression model and the generalised linear regression model, respectively. Theoretical exercises are discussed throughout this course. Concepts are illustrated by means of simulations and empirical applications, using the Ox programming environment.

*Course objective:*

The regression model is the workhorse of modern econometrics and, by the end of this course, students will have gained a thorough understanding of the theory behind least squares estimation and inference in all its facets. This will have set the scene for the more general models and estimators to be covered in Advanced Econometrics II.

*Literature:* R. Davidson and J.G. MacKinnon (2004). *Econometric Theory and Methods*, OUP

## **TI1306/II ADVANCED ECONOMETRICS II**

*Lecturer:* Dr K.J. van Garderen (UvA)

*Short subject description:*

Advanced Econometrics II develops the necessary theory for understanding core econometric techniques based on regression, GMM and likelihood methods.

*Course contents:*

The course considers chapters 8-12 of Davidson & MacKinnon's textbook dealing with Instrumental Variables, Generalized Method of Moments and Likelihood based techniques. Modeling approaches, estimation and testing methods are developed and asymptotic techniques and finite sample properties are discussed.

*Course objective:*

Obtaining a deep understanding of econometric theory and the practice of producing econometric inference especially with respect to the specification, estimation, and testing of models for linear and nonlinear relationships by least-squares, instrumental variables and GMM or likelihood based techniques.

*Literature:*

Compulsory: R. Davidson and J.G. MacKinnon (2004). *Econometric Theory and Methods*, OUP  
Recommended: Additional reading from books and papers

## **TI1306/III ADVANCED ECONOMETRICS III**

*Lecturer:* Prof. S.J. Koopman (VU)

*Short subject description:*

This course discusses advanced models and methods for the econometric dynamic analysis of economic and financial time series and panels of time series.

*Course contents:*

Several major advances in time series econometrics and likelihood-based inference have occurred in the past years. These advances have provided a major breakthrough in the modeling of time series using advanced up-to-date econometric methodologies. The first part of the course aims to provide a thorough understanding of linear time series models, unobserved components, state space, the Kalman filter, signal extraction and forecasting. It further discusses how these innovative econometric time series methods can be implemented in studies relevant for macroeconomics, microeconomics and finance. The course also pays attention to multivariate and dynamic factor models. The second part of the course extends the methodologies to nonlinear and non-Gaussian time series models. It requires additional concepts such as observation driven and

parameter driven models. Various empirical illustrations are discussed in economics and finance.

*Course objective:*

Students will receive a good training in dynamic econometrics, the modeling of economic and financial time series using advanced techniques.

*Literature:*

Compulsory:

- Durbin, J. and Koopman, S.J. (2012). *Time Series Analysis by State Space Methods*, Second Edition, Oxford University Press

Recommended:

- Brockwell, P.J. and Davies, R.A. (1987). *Time Series: Theory and Methods*, New York: Springer-Verlag
- Harvey, A.C. (1989). *Forecasting, Structural Time Series Models and the Kalman filter*, Cambridge University Press
- Shumway, R.H. and Stoffer, D.S. (2000). *Time Series Analysis and Its Applications*, New York: Springer-Verlag

## **TI1307/II ASSET PRICING**

*Lecturer:* Prof. R.J.A. Laeven (UvA)

*Short subject description:*

Asset Pricing is concerned with determining the value of uncertain future payoffs.

*Course contents:*

This course provides an introductory yet comprehensive and rigorous treatment of both the theory and related empirical evidence of modern asset pricing.

It covers the following topics:

1. Expected utility, risk aversion and single period portfolio choice;
2. Mean-variance analysis and CAPM;
3. Empirical evidence and testing the CAPM;
4. Multifactor pricing models;
5. Discount factors, mean-variance and Hansen-Jagannathan frontiers and multi period consumption and portfolio choice;
6. Stochastic discount factors and no arbitrage;
7. Derivatives and utility indifference pricing.

*Course objective:*

Students who successfully complete this course will have an in-depth overview of both the theory and related empirical evidence of modern asset pricing and will be able to address asset pricing issues from a broad perspective.

*Literature:*

Selected chapters from:

- CLM: Campbell, J.Y, A.W. Lo, and A.C. MacKinlay (1997), *The Econometrics of Financial Markets*. Princeton University Press.
- C: Cochrane, J. (2005), *Asset Pricing* (revised edition). Princeton University Press.
- P: Pennacchi, G. (2008) *Theory of Asset Pricing*. Addison-Wesley.
- Selected articles.
- Lecture notes and other material, to be made available via Blackboard.

## **TI1307/III CORPORATE FINANCE THEORY**

*Lecturer:* Dr V. Vladimirov (UvA)

*Short subject description:*

Corporate finance is the area of finance dealing with monetary decisions made by business enterprises and the tools and analysis used to make these decisions.

*Course contents:*

This course covers core and new topics in corporate finance theory with an emphasis on introducing the microeconomic tools needed to address open research questions and discussing. Students are expected to be familiar with basic notions in finance and game theory. Some basic knowledge of contract theory is an advantage, but the course will be largely self-contained in this respect. The main focus of the lectures will be on financial contracting under asymmetric information and incomplete contracts. Further topics may include real options and dynamic financial contracting.

For each topic there will be some recommended and/or required literature to accompany the lectures. A detailed list of reading assignments will be available at the start of the course. Readings will be based mostly on articles, there is no required textbook. The textbook closest to the material covered in class is Tirole "The Theory of Corporate Finance", Princeton University Press, 2006.

*Course objective:*

Students will become aware of the basic principles and issues in corporate finance as well as of the tools needed to address these issues. This should give them first basis to do own research in the field, both theoretical as well as empirical.

*Literature:*

Core readings are marked with an (\*).

Basic tools of financial contracting and security design:

- Tirole (2006). *The Theory of Corporate Finance*, Princeton University Press, Chapters 3.2 -- 3.4, 3.7, and 6 (\*)
- Bernanke and Gertler (1989). *Agency costs, net worth, and business fluctuations*, American Economic Review 79, 14-31
- Innes (1990). *Limited liability and incentive contracting with ex-ante action choices*, Journal of Economic Theory 52, 45-67
- Fudenberg and Tirole (1992). *Game Theory*, MIT Press, Chapter 11.2
- Leland and Pyle (1977). *Informational asymmetries, financial structure, and financial intermediation*, Journal of Finance 18, 371-387
- Myers and Majluf (1984). *Corporate financing and investment decisions*, Journal of Financial Economics, 13, 187-221
- Nachman and Noe (1994). *Optimal design of securities under asymmetric information*, Review of Financial Studies 7, 1-44

Incomplete Contracting:

- Bolton and Dewatripont (2005). *Contract Theory*, The MIT Press, Chapters 11.3 and 12.4 (\*)
- Aghion and Bolton (1992). *An incomplete contracts approach to financial contracting*, Review of Economic Studies, 473-494
- Dewatripont and Tirole (1994). *A theory of debt and equity: diversity of securities and manager-shareholder congruence*, Quarterly Journal of Economics, 1027-1054
- Bolton and Scharfstein (1996). *Optimal debt structure and the number of creditors*, Journal of Political Economy 104, 1-25 (\*)
- Gertner, Scharfstein and Stein (1994). *Internal vs. external capital markets*, Quarterly Journal of Economics 109, 1211-1230
- Inderst and Müller (2003). *Internal vs. External Financing: An Optimal Contracting Approach*, Journal of Finance 58, 1033-1062
- Inderst and Faure-Grimaud (2005). *Conglomerate entrenchment and external finance*, American Economic Review 95, 850-861 (\*)
- Schmidt, Klaus (2003). *Convertible securities in venture capital*, Journal of Finance 58, 1139-1166 (\*)

## TI1308 MEASURE THEORY AND STOCHASTIC PROCESSES

*Lecturer:* Dr P.J.C. Spreij (UvA)

*Short subject description:*

The course aims at making students familiar with the mathematical fundamentals of measure theory, stochastic processes and stochastic integrals. This is a crash course, highlighting the main principles, not an in depth treatment of the theory.

*Course contents:*

Sigma-algebras, measure, integration w.r.t. a measure, limit theorems, product measure and integration, change of measure, conditional expectation; Heuristic construction of Brownian motion, martingale property and quadratic variation; construction of the Itô integral, fundamental properties (Itô isometry); Itô rule (in one and more dimensions), stochastic product rule, Lévy's characterization of Brownian motion; absolutely continuous change of measure, Girsanov's theorem, martingale representation theorem; and if time permits stochastic differential equations, diffusions and partial differential equations, Feynman-Kaç formula.

*Course objective:*

After the course students will be familiar with elements of measure theory, stochastic processes and stochastic integrals at a basic level and ready to apply these for instance to models used for derivative pricing.

*Literature:* Steve Shreve (2004). *Stochastic Calculus for Finance II, Continuous-Time Models*, Springer ([www.springer.com/mathematics/quantitative+finance/book/978-0-387-40101-0](http://www.springer.com/mathematics/quantitative+finance/book/978-0-387-40101-0))

### 4.3 Field courses

*Note that, in addition to the specific entrance requirements for each field course, all courses require that students have completed at least 48 ECTS of the core (see Section 3.3) and have completed the MPhil seminar series.*

Field courses consist of 2.5 hours of weekly lectures in small groups, where students and lecturers closely interact.

## TI1311 ADVANCED TIME SERIES ECONOMETRICS

*Lecturers:* Prof. H.P. Boswijk (UvA), Prof. D.J. van Dijk (EUR) and Prof. P.H.B.F. Franses (EUR)

*Short subject description:*

This course focuses on modern techniques in time series econometrics, with applications in macroeconomics, finance and marketing.

*Course contents:*

The following topics will be covered: GARCH modelling, realized volatility, nonlinear regime-switching models, large-scale factor models, and forecast combination and evaluation. For each topic, theoretical aspects of the time series models and techniques are discussed. The application of these models in different areas is illustrated by means of recent journal articles and working papers, and a number of practical homework assignments.

*Course objective:*

After the course, students will be able to understand the main time series models and techniques, to critically assess articles and working papers that use such techniques, and to apply and extend them in their own research.

*Literature:*



- Franses, P.H. and D. van Dijk (2000). *Nonlinear Time Series Models in Empirical Finance*. Cambridge: Cambridge University Press
- Hamilton, J.D. (1994). *Time Series Analysis*. Princeton: Princeton University Press (Chapter 22)
- Selected articles and working papers

*Course entrance requirements:*

Required: Statistics and Econometrics (TI1204+TI1205)

Recommended: Advanced Econometrics (TI1206)

*Assessment:* Sit-in written exam (75%) and homework assignments (25%).

## **TI1312 COMPUTATIONAL ECONOMETRICS**

*Lecturer:* Prof. R. Paap (EUR)

*Short subject description:*

It is important for advanced econometric and applied economic researchers to have basic knowledge of simulation methods. This course is to provide a practical introduction into the use of advanced simulation methods.

*Course description:*

The course will start with a simple introduction into the basics of simulation methods, including standard sampling techniques and the constructing of a data generating process. In the remainder of the course we will deal with topics like, simulation of critical values of non-standard tests, the design of power studies, construction of the small sample distribution of an estimator using bootstrap, impulse/response analysis, the simulation of forecast densities and forecasts and simulated maximum likelihood and related techniques. Finally, we consider Markov Chain Monte Carlo methods including the Gibbs sampler, the Metropolis-Hasting algorithm and data augmentation techniques.

*Course objective:*

After the course the students are able to interpret the results of simulation based inference and to apply simulation methods in applied economic research.

*Literature:*

- Slides
- Greenberg, E. (2013). *Introduction to Bayesian Econometrics*, Cambridge University Press, 2<sup>nd</sup> edition, Chapters 1-7
- Cameron, A.C. & Trivedi, P.K. (2005). *Microeconometrics*, Cambridge University Press, Cambridge, Chapters 10-13 + 15.7+15.8+18.5
- Selected papers

*Course entrance requirements:* Econometrics I and II (TI1205/I+II)

*Assessment:* Sit-in written examination (100%).

## **TI1313 TOPICS IN ADVANCED MICROECONOMETRICS**

*Lecturer:* Prof. G. Ridder (USC)

*Short subject description:*

In this course we will study advanced topics in micro-econometrics. The emphasis is not on technique but on concepts. Of course, technical issues cannot be completely avoided.

*Course contents:*

Topics that will be covered are (not all will be covered each year) (i) discrete choice models and their application to modeling markets for heterogeneous products, (ii) dynamic programming models of individual behavior, (iii) empirical models of auctions, (iv) estimation of treatment effects.

*Literature:* Lecture notes and selected papers.

*Course entrance requirements:*

Required: Statistics and Econometrics (TI1204+TI1205)

Recommended: Advanced Econometrics (TI1206/TI1306), Applied Microeconometrics (TI1321)

*Assessment:* Take-home exam.

## **TI1314 ADVANCED MICRO ECONOMETRICS**

*Lecturer:* Prof. F. Kleibergen (Brown Un.)

*Short subject description:*

This course is an advanced graduate micro-econometrics course. The emphasis is on weakening the assumptions of commonly used econometric estimation methods like maximum likelihood and the generalized method of moments (GMM).

*Course contents:*

For maximum likelihood methods that are employed to analyze limited dependent variables, we discuss semi-parametric methods which allow one to replace sometimes restrictive distributional assumptions on the errors. For GMM, which is already a semi-parametric estimation method, we discuss how to replace the Jacobian identification method. The resulting GMM procedures are so-called weak instrument robust and we discuss several papers in this area. We also discuss linear and non-linear panel data methods which are commonly applied. Here we focus on the identification of the parameters with a special emphasis on linear dynamic panel data models.

Topics: semi-parametric estimation, (linear dynamic) panel data models, weak instruments in linear instrumental variables regression models and GMM, empirical likelihood methods. The list of papers covered is stated below.

*Course objective:*

This course gets students acquainted with econometric methods that work under less stringent assumptions than maximum likelihood, the more common econometric method. These methods allow one to analyze a wide range of applications under more general conditions.

*Literature:*

- Newey, W.K. and D. McFadden. *Large Sample Estimation and hypothesis testing*, Handbook of Econometrics, Chap. 36., Vol. 4, Eds: R.F. Engle and D. MacFadden
- Powell, J.L. *Estimation of Semiparametric Models*, Handbook of Econometrics, Chap. 41, Vol. 4, Eds: R.F. Engle and D. MacFadden
- Arellano, M. and B. Honore. *Panel date models: Some recent developments*, Handbook of Econometrics, Chap. 53, Vol. 5, Eds: J.J. Heckman and E. Leamer
- Nelson, C.R., and R. Startz (1990). *Some Further Results on the Exact Small Sample Properties of the Instrumental Variables Estimator*, *Econometrica*, 4, 967-976
- Bekker, P. (1994). *Alternative Approximations to the Distributions of Instrumental Variable Estimators*, *Econometrica*, 62, 657-681
- Staiger, D, and J. H. Stock (1997). *Instrumental Variables Regression with Weak Instruments*, *Econometrica*, 65, 557-586
- Stock, J.H. and J.H. Wright (2000). *GMM with Weak Identification*, *Econometrica*, 68, 1055-1096
- Kleibergen, F. (2002). *Pivotal statistics for testing structural parameters in instrumental variables regression*, *Econometrica*, 2002, 1781-2003
- Moreira, M.J. (2003). *A conditional likelihood ratio test for structural models*, *Econometrica*, 71, 1027-1048

- Andrews, D.W.K, M.J. Moreira and J.H. Stock (2006). *Optimal Two-sided invariant similar tests for instrumental variables regression*, *Econometrica*, 2006, 74, 715-752.
- Kleibergen, F. (2005). *Testing parameters in GMM without assuming that they are identified*, *Econometrica*, 73, 1103-1123.
- Kleibergen, F. (2005). *Generalizing weak instrument robust IV statistics towards multiple parameters, unrestricted covariance matrices and identification statistics*, Forthcoming in the *Journal of Econometrics*
- Kleibergen, F. (2008). *Size correct subset statistics for the linear IV regression model*, Brown University
- Kleibergen, F. and S. Mavroeidis (2008). *Inference on subsets of parameters in GMM without assuming identification*, Brown University
- Newey, W. and R.J. Smith (2004). *Higher order properties of GMM and Generalized Empirical Likelihood Estimators*, *Econometrica*, 74, 219-255

*Course entrance requirements:* Statistics and Econometrics (TI1204+TI1205)

*Assessment:* Take-home exam.

### **TI1315 THE ECONOMETRIC ANALYSIS OF RECURRENT EVENTS IN MACROECONOMICS AND FINANCE (TI Econometrics Lectures 2014)**

*Lecturers:* Prof. A. Pagan (University of Sydney), Prof. D. Harding (University of La Trobe) and Prof. H.K. van Dijk (EUR)

*Course description:*

Annual PhD lectures organized by the Tinbergen Institute and the Econometric Institute at EUR, in cooperation with Princeton University Press.

Further course details will be published on the TI website.

### **TI1321/I APPLIED MICROECONOMETRICS I: BASIC TECHNIQUES**

*Lecturers:* Prof. M. Lindeboom (VU) and Prof. B. van der Klaauw (VU)

*Short subject description:*

This course focuses on drawing inference from cross-sectional, panel and longitudinal data using techniques that are frequently used in applied econometric research.

*Course contents:*

We consider limited dependent variable models, maximum likelihood estimation, quantile regression, panel data models and duration analysis. The limited dependent variable models discussed during the course are binary choice models, Tobit models, sample selection models, and switching regression models. Furthermore, we consider random and fixed effects linear models, dynamic panel data model, GMM estimation and fixed-effect logit estimation. The final lectures of the course are devoted to introducing duration models and discussing the specification, identification and estimation of these models. In particular, we consider both single-spell and multiple-spell duration models. With respect to the latter we discuss stratified partial likelihood estimation and other fixed-effect techniques. During the course applications of the different methods are discussed, mainly in the fields of labor economics, health economics, and the economics of education.

*Course objective:*

The key objective of the course is applying microeconomic techniques rather than deriving econometric and statistical properties of estimators. After the course student should be able to decide about the appropriate model, apply the estimation method correctly, and they should be able to interpret the estimation results.

*Literature:*

Compulsory: Cameron, A.C. and P. Trivedi (2005). *Microeconometrics: Methods and Applications*, Cambridge University Press

Recommended: Wooldridge, J.M. (2001). *Econometric Analysis of Cross section and panel data*, MIT Press

During the lectures slides will be provided and papers will be discussed.

*Course entrance requirements:* Statistics and Econometrics (TI1204+TI1205)

*Assessment:* Sit-in written exam (75%) and three take-home assignment (25%). The take-home assignments will involve related empirical exercises.

## **TI1321/II APPLIED MICROECONOMETRICS II: EMPIRICAL TREATMENT EVALUATION**

*Lecturer:* Prof. B. van der Klaauw (VU)

*Short subject description:*

This course focuses on estimating causal effects using econometric techniques that are frequently applied in treatment evaluation literature.

*Course contents:*

Many empirical questions in economics depend on causal effects of programs or policies. Estimation of treatment effects using social experiments, natural experiments, and field experiments will be discussed. We introduce the potential outcome model and discuss the definition of different treatment effects such as average treatment effect, average treatment effect on the treated, quantile treatment effects and local average treatment effects. We consider instrumental variable estimation, regression discontinuity designs, difference-in-differences, methods to estimate dynamic treatment effects and partial identification methods. The emphasis of the course is on identification, estimation and interpretation rather than a thorough treatment of the asymptotic properties of the estimators. During the course applications of the different methods are discussed, mainly in the fields of labor economics, health economics, and the economics of education.

*Course objective:*

The key objective of the course is to learn student how to estimate causal effects from micro data. Student should understand the consequences of various identifying assumptions and should be able to decide about the appropriate evaluation approach.

*Literature:*

Compulsory: Cameron, A.C. and P. Trivedi (2005). *Microeconometrics: Methods and Applications*, Cambridge University Press

Recommended: Wooldridge, J.M. (2001). *Econometric Analysis of Cross Section and Panel data*, MIT Press

During the lectures slides will be provided and papers will be discussed.

*Course entrance requirements:*

Required: Statistics and Econometrics (TI1204+TI1205)

*Assessment:* Sit-in written exam (75%) and three take-home assignments (25%). The take-home assignments will involve related empirical exercises.

## **TI1322 LABOR ECONOMICS**

*Lecturers:* Dr H.G. Bloemen (VU) and Dr S. Hochguertel (VU)

*Short subject description:*

Part I covers empirical applications (with, where appropriate, theoretical foundations) of

microeconomic models of labor supply.

Part II focuses on the empirical implementation and estimation of structural job search models.

*Course content:*

Understanding the mechanisms and assessing the empirical importance of features of the labor market is of eminent importance to economists.

The first part (Hochguertel) covers various models of labor supply, ranging from individual to household, from static to intertemporal models. Interactions with tax and benefit systems will be emphasized. The second part (Bloemen) deals with structural microeconomic applications of job search models. It covers the classical job search model, models with on-the-job search, matching-bargaining, and equilibrium search models.

Both parts also pay attention to methods of estimation for various models. The outcomes of several empirical studies will be discussed.

*Course Objective:*

Overall objective of the course is to introduce the student to a couple of selected and important strands in the vast empirical microeconomic literatures on labor economics. We focus on salient aspects of labor supply and job search.

Upon completion of the course, the student will

- Have gained substantive insights in the economic motivation and modeling of labor supply responses to changes in wages, taxes, policies, and to income shocks
- Know of important subareas in the domain of the labor supply literature (among which, female labor supply or household labor supply) and some of the main empirical and theoretical issues
- Know of pertinent approaches to structural econometric work to estimate various labor supply elasticities, and be able to discuss alternative identification strategies in natural experiment settings
- Be able to understand the link between theory and empirical implementation and appreciate some of the challenges in bringing theoretical reasoning to bear on economic data.
- Be able to recognize the specific econometric problems that emerge in implementing structural job search models.
- Be able to express the tight relationship between the economic model and the likelihood function.
- Be familiar with the implementation of specific extensions, for instance endogenous search intensity or non-wage characteristics
- Be able to extend the standard job search model with on-the-job search, estimation with unobserved heterogeneity and multiple spell data.
- Be aware of the empirical implications of including firm and worker heterogeneity in equilibrium search models.

*Literature:* Selected papers.

*Course entrance requirements:*

Required: Microeconomics I (TI1201/I), Macroeconomics III (TI1202/III), Statistics and Econometrics (TI1204+TI1205)

*Assessment:* Sit-in written examination (75%), participation and homework assignments (25%).

## **TI1323 ECONOMICS OF EDUCATION**

*Lecturers:* Prof. H. Oosterbeek (UvA) and Prof. E.J.S. Plug (UvA)

*Short subject description:*

This course discusses recent developments in the empirical analysis of economics of education.

*Course content:*

Papers on various topics including the demand for education, returns to education, school choice and competitions, intergenerational mobility and peer effects.

*Course objective:*

After the course students have up-to-date knowledge of important research issues in the economics of education and they are aware of the importance of identifying assumptions.

*Literature:* Selected papers.

*Course entrance requirements:*

Required: Applied Microeconometrics I (TI1321/I)

Recommended: Labor Economics (TI1322)

*Assessment:* Participation in class (50%), final paper (50%).

### **TI1324 HEALTH ECONOMICS**

*Lecturers:* Prof. O.A. O'Donnell (EUR), Dr R.J.G. van Ewijk (University of Mainz) and Prof. M. Lindeboom (VU)

*Short subject description:*

Health is strongly correlated with socioeconomic characteristics such as education, income and wealth. Understanding these correlations is a major challenge for economics and other social sciences. This course explores the nature, causes and consequences of the association between health and socioeconomic factors.

*Course Contents:*

The course starts with the description of health inequalities and the normative distinction between fair and unfair health inequality drawing on models of equality of opportunity in health. Causality in the direction from socioeconomic factors to health is considered within the framework of the Grossman model of health capital. Exploring causality from health to income involves examination of the role of health in employment and retirement decisions, while allowing for the possibility that work impacts on health. The hypothesis that health and socioeconomic outcomes in adult life and old age result from long run mechanisms that originate very early in life is explored before turning attention to socioeconomic differences in health behaviour, such as smoking.

*Course objective:*

The intention is to familiarise students with the core economic literature on the causes and consequences of socioeconomic differences in health. On completion of the course, students should have the ability to evaluate both normative approaches to the distribution of health and positive models of health behaviour. They should be able to appraise the validity of evidence on the causal relationships between health and socioeconomic factors. A further objective is to improve students' ability to present a concise, clear written argument or critique of literature.

*Literature:* Selected papers.

*Course entrance requirements:* Microeconomics (TI1201), Applied Microeconometrics (TI1321)

*Assessment:* Take-home exam.

### **TI1325 DEVELOPMENT ECONOMICS**

*Lecturers:* Dr R. Oostendorp (VU) and Prof. M.P. Pradhan (VU)

*Short subject description:*

This course provides an advanced treatment of a number of core issues in Development

Economics.

*Course contents:*

In the course the following topics are covered: 1) welfare, poverty and worldwide inequality, (2) development and risk, (3) development and informality, (4) the use of randomized trials in development, and (5) the search for the drivers of development – institutions, human capital, foreign aid, poverty traps and chance.

*Course objective:*

This course familiarizes students with a number of core issues in Development Economics. After the course, students should demonstrate knowledge and understanding of the economic principles underlying these core issues. Also they should have developed a good understanding of available empirical strategies to analyze these issues in practice and to have the ability to derive the policy implications from the theoretical and empirical analyses.

*Literature:* Selected papers.

*Course entrance requirements:* Microeconomics I (TI1201/I), Macroeconomics I (TI1202/I), Statistics + Econometrics (TI1204+TI1205)

*Assessment:* Oral exam or sit-in written examination (depending on student numbers, 75%) and class participation and student assignments/presentations (25%).

### **TI1331 INTERNATIONAL ECONOMICS**

*Lecturer:* Prof. F.J.G.M. Klaassen (UvA)

*Short subject description:*

International Economics is concerned with economic relations between (inhabitants of) different countries. This course studies basic topics (foundations) of modern international macroeconomics.

*Course contents:*

International interdependencies have long been important for economic policy, and globalization has further strengthened that relevance. This holds not only for small open economies, such as the Netherlands, but also for Europe and worldwide. This course provides basic insights to better understand such interdependencies.

The key feature of international macro, as it is practiced nowadays, is the use of solid micro foundations from which aggregate, macroeconomic relations are derived. This leads to the view of the current account as a vehicle for intertemporal trade, driven by optimizing behavior of agents. The micro-foundations approach also influences the other topics in the course, such as sustainability of foreign debt, the role of tradables versus nontradables for real exchange rates and the current account, interest rate parities, nominal exchange rates and speculative attacks, and the impact of nominal rigidities on exchange rates. In addition to studying theories, students have to write a short academic essay in which they apply a theory to a real-life event.

*Course objective:*

After the course students will better understand the impact of foreign countries on the domestic economy, and they will have some tools to incorporate these interdependencies in economic models. The course also intends to further develop the students' academic writing skills.

*Literature:* Obstfeld, M. and K. Rogoff (1997). *Foundations of International Economics*, MIT Press (OR)

*Course entrance requirements:* None

*Assessment:* Sit-in written examination (80%) and homework assignments (20%).

## TI1332 EXCHANGE RATES

Lecturer: Prof. C.G. de Vries (EUR)

### Short subject description:

The course studies foreign exchange rates theoretically and empirically, both in macroeconomic and finance contexts.

### Course contents:

The advanced course on open economy macroeconomics and international finance builds on the strong ties between empirical and theoretical results that are exemplary for the developments in the field. Due to the availability of rich data sets on exchange rates, theories are frequently subjected to tests and new theories have developed out of observed empirical facts. Thus the study of international monetary economics offers a rare instance for combining empirical and theoretical research methodologies. There are several challenging academic puzzles in international financial economics, like the home country (trade and investment) bias, the forward premium puzzle and the exchange rate disconnect (excessive forex volatility vis a vis the fundamentals).

The field is alive with many great practical policy questions. For example, the euro crisis can be seen as stemming from the fact that internally the euro countries are back on Frankfurt virtual gold, but lack the necessary adjustment mechanisms for this fixed exchange rate mechanism. Other issues are: What are the long-term implications of sustained United States current account deficits and Asian current account surpluses? Will global imbalances persist? How will the European financial mess and fiscal austerity affect the world economy? How to speculate against a country under fixed exchange rates and is this good or bad? Is the increasingly globalized market place affecting the nature of the propagation of business cycles? How do currency crises arise and what can we do about them? Should central banks use sterilized intervention to lean against the wind? Which exchange rate mechanism is optimal? How does the exchange rate risk contribute to internationally diversified portfolios?

To address these issues we first construct the standard forex model of freely floating currencies. It is shown how empirical results have contributed to development of the core model. Subsequently the model is put on a rigorous footing and several theoretical extensions are covered. Once one has a firm understanding, we can turn to policy issues, both along the macro dimension and the finance dimension. Lastly, we enter into some projects for further research. The course is based on lecture notes, current working papers and the book by Mark. Participants are expected to do an empirical project to complete the course work. Some technical assignments are handed out and students present in each lecture part of the material to be covered.

### Course objective:

Students acquire the modern theory of exchange rates and are able to develop their own empirical analysis of foreign exchange rates.

### Literature:

#### Compulsory:

- Nelson C. Mark (2001). *International Financial Economics, theory and econometric methods*, Blackwell
- Lecture Notes
- Selected papers:
  - Meese, R.A. and K. Rogoff (2005). *Empirical exchange rate models of the seventies, do they fit out of sample?*, Journal of International Economics 14, 3-24
  - Engel, C. and K.D. West (2005). *Exchange rates and fundamentals*, Journal of Political Economy, 113, 485- 517
  - Sarno, L. and E. Sjoli (2009). *The feeble link between exchange rates and fundamentals: Can we blame the discount factor?* Journal of Money Credit and Banking 41, 437-442
  - Molodtsova, T and D.H. Papell (2009). *Out of sample exchange rate predictability with Taylor rule fundamentals*, Journal of International Economics 77, 167-180
  - Bergin, P.R. (2003). *Putting the new open economy macroeconomics to a test*,



Journal of International Economics 60, 3-34

Recommended (optional):

- Walsh, C.E. (2010). *Monetary Theory and Policy*, MIT Press
- Additional papers to be distributed

*Course entrance requirements:*

Required: Microeconomics I (T11201/I), Macroeconomics I+ II (T11202/I+II), Econometrics (T11205)

Recommended (optional): Microeconomics IV (T11201/IV), Macroeconomics IV T11202/IV), Asset pricing (T11207/I)

*Assessment:* Homework assignments (25%), presentations and participation (25%), empirical term paper (25%), take home exam (25%).

### **T11333 THE MACROECONOMICS OF PENSIONS AND AGEING**

*Lecturers:* Prof. R.M.W.J. Beetsma (UvA) and Dr W. Romp (UvA)

*Short subject description:*

This course explores the macroeconomic consequences of different pension arrangements and population ageing.

*Course contents:*

Driven by the ongoing ageing process, many countries (re)design their pension system. Changes in the roles of the public and private pension pillars and the government's tax-transfer system impact both the distribution of resources and the way risks are shared among groups (such as various generations or income classes). Redistribution involves predictable shifts in resources, while risk sharing refers to unanticipated changes in the distribution of resources. Redistribution and risk sharing implied by the pension system generate important feedback effects on the economy as a whole. In this course we will analyse the macroeconomic aspects of ageing and differences in pension systems. Particular attention will also be paid to the financial and political sustainability of specific pension arrangements.

*Course objective:*

- By the end of this course, students can identify the main causes and quantitative demographic effects of the ageing process in the Western World.
- Students understand the pros and cons of various types of pension design and how these pension systems help to absorb and share ageing and financial shocks.
- Students are able to use the various overlapping generations models to provide a formal qualitative analysis of the various transmission channels through which ageing and pensions affect the government budget constraint, economic performance and labour market performance.

*Literature:*

Compulsory (preliminary – subject to potential changes):

- Heijdra, B.J. (2009). *Foundations of Modern Macroeconomics*, Oxford University Press. Chapters 16 and 17
- Lindbeck, A. and M. Persson (2003). *The Gains from Pension Reform*, Journal of Economic Literature 41, 74-112
- Sinn, H.W. (2000). *Why a Funded System is Useful and Why it is Not Useful*, International Tax and Public Finance 7, 389-410
- Heijdra, B.J. and W.E Romp (2009). *Retirement, pensions, and ageing*, Journal of Public Economics, 93, 586-604
- Börsch-Supan, A., Ludwig, A. and J. Winter (2006). *Ageing, Pension Reform and Capital Flows: A Multi-Country Simulation Model*, Economica 73, 625-658
- Beetsma, R. and A.L. Bovenberg (2009). *Pensions and Intergenerational Risk Sharing in General Equilibrium*, Economica 76, 302, 364-386
- Gollier, C. (2008), *Intergenerational Risk-Sharing and Risk-Taking of a Pension Fund*,

- Journal of Public Economics 92, 5-6, 1463-1485
- Rauh, J. and R. Novy-Marx (2011). *Public Pension Promises: How Big Are They and What Are They Worth?*, Journal of Finance 66(4), 1207-1245
  - European Commission (2012). *The 2012 Ageing Report: Economic and budgetary projections for the EU27 Member States (2010-2060)*, European Economy 2/2012. Chapters 1 and 2 (approx. 100 pages)
  - European Commission (2012). *Fiscal Sustainability Report 2012*, European Economy 8/2012. Chapters 1-4 (approx. 36 pages)
  - OECD (2012). *OECD Pensions Outlook 2012*, OECD Publishing. Chapters 1 and 2
  - Beetsma, R., Romp, W.E., and S. J. Vos (2012). *Voluntary Participation and Intergenerational Risk Sharing in a Pension Fund*, European Economic Review 56, 1310-1324
  - Cooley, T.F. and J. Soares (2012). *A Positive Theory of Social Security Based on Reputation*, Journal of Political Economy 107, 1, 135-160
  - D'Amato, M. and V. Galasso (2010). *Political Intergenerational Risk Sharing*, Journal of Public Economics 94, 9-10, 628-637
  - Tabellini, G. (2000). *A Positive Theory of Social Security*, Scandinavian Journal of Economics 102, 3, 523-545

*Entrance requirements:*

Required: Microeconomics I (TI1201/I) and Macroeconomics I (TI1202/I)

Recommended (optional): Macroeconomics II (TI1202/II)

*Assessment:* The final grade is a weighted average of the quality of the participation (25%), the oral presentations (25%) and a take home test (50%).

### **TI1334 APPLIED MACROECONOMETRICS**

*Lecturers:* Prof. M. Giuliadori (UvA), Dr K. Macromatis (UvA) and Dr L.C.G. Pozzi (EUR)

*Short subject description:*

This course provides a comprehensive set of applications of econometric techniques that are commonly used in the field of macroeconomics and international economics.

*Course contents:*

This will be a 'hands on' course in which students will familiarize with the main econometric methods typically used in applied macroeconomics, and have the chance to apply them and gain experience in dealing with macro data.

*Course objective:*

The key objective of the course is applying these techniques rather than deriving econometric and statistical properties of estimators. Each session will be structured as follows. First the specific econometric topics will be introduced and their key elements outlined. Then, a critical discussion of the key empirical papers applying those methods will be provided. Finally, we will conclude each session providing information on the datasets, econometric package/commands, and research questions that students will be asked to address in the take-home assignments.

*Literature:* Lecture notes and selected papers.

*Entrance requirements:* Statistics and Econometrics I and II (TI1204 and TI1205), Macroeconomics I and II (TI1202/I+II)

*Assessment:* Take-home assignments to be submitted individually each week or every two weeks. No final exam.

### **CE1335 MONETARY POLICY AT THE ZERO LOWER BOUND**

*Lecturer:* Prof. J.R. Campbell (Federal Reserve Bank of Chicago/CentER)

*Course description:*

This course examines the conduct of monetary policy when economic fundamentals bring the natural rate of interest below the real expected return from holding cash, the "Zero Lower Bound." The experiences of Japan and the United States with very low interest rates will be studied in the light of new-Keynesian models of liquidity traps and the policy options for escaping them.

Remark: This course will be organized by CentER, from February 17-28, 2014

*Literature:* Selected articles.

*Assessment:* Regular graded homework assignments (20%) and a final take-home exam (80%).

### **TI1336 NUMERICAL METHODS**

*Lecturer:* Prof. W.J. den Haan (LSE)

*Short subject description:*

This course focuses on numerical solution techniques to solve dynamic stochastic general equilibrium models.

*Course content:*

Key numerical tools such as function approximation and numerical integration are discussed. Several simple numerical techniques such as linearization and parameterized expectations will be used to get started. After this two more general frameworks are developed. Those are perturbation and projection methods. Finally, we develop algorithms to solve models with heterogeneous agents. The techniques taught are useful in many branches of our profession not just in macroeconomics. Matlab programming exercises are an essential part of this course.

*Course objective:*

After the course students are able to solve and analyze dynamic stochastic general equilibrium models.

*Literature:*

Compulsory: Selected papers

Recommended: Selected papers

*Course entrance requirements:*

Required: Macroeconomics I (TI1202/I)

Recommended: Some rudimentary knowledge of Matlab

*Assessment:* Take-home assignments.

### **TI1341 ADVANCED INDUSTRIAL ORGANIZATION**

*Lecturers:* Prof. Ch. Fershtman (EUR/Tel Aviv University) and Prof. J. Hinloopen (UvA)

*Short subject description:*

This course consists of two parts. In the first part the course focuses on the dynamics of markets as reflected in R&D races and oligopolistic interaction. In the second part the course deals with recent experimental studies within the field of Industrial Organization.

*Course objective:*

The first part of the course intends to teach the student how to set up a dynamic model of strategic interaction, how to set up an algorithm to analyze it and how to understand and analyze dynamic

strategic interactions in oligopolistic markets. The second part of the course provides an overview of the field of Behavioural Industrial Organization; it discusses a number of key findings of experimental economics for our understanding of Industrial Organization and it discusses several recent experimental IO papers (including ongoing research).

*Literature:*

Compulsory:

- Hinlopen, J. and Normann, H.-T., 2009, Experiments and Competition Policy, Cambridge University Press.
- Selected papers

Recommended (optional):

- Selected papers

*Course entrance requirements:* Microeconomics I, II, III, V (TI1201/I+II+III+V)

*Assessment:* The first part of the course is assessed with a take home exam that counts for 50% of the final grade. The second part of the course is assessed through the presentation and discussion, by students, of particular papers that can be chosen from a pre-specified list of experimental IO papers.

## **TI1342 LAW AND ECONOMICS**

*Lecturers:* Prof. G. Dari-Mattiacci (UvA) and Dr C. Guerriero (UvA)

*Short subject description:*

Law & Economics studies the economic effects of legal rules and legal institutions and their evolution over time.

*Course contents:*

This course covers the fundamental contributions in the economic analysis of law from the classics to very recent findings. The first part (classes 1-3) introduces the students to some fundamental legal notions—such as those of entitlement, remedy, property, contract and tort—and covers models of torts and litigation, where parties come before the court in order to assess their rights and claim compensation for wrongdoings. An important feature of litigation is that it develops precedents that can be used in future cases and hence can shape the law. The second part (classes 4-7) builds on these insights to introduce the students to a political economy approach to the emergence of laws, moral norms, and institutions.

*Course objective:*

This course introduces the students to some of the classic works in Law & Economics, explains them fundamental legal notions and introduces them to the most used models of law and legal evolution. The students are expected to learn how to approach a legal problem from an economics perspective and how to build law into a model. Some of the most used models of law are examined in detail and students will learn how to work with them. Finally, additional material is presented during the course in order to illustrate recent advances, open problems and the frontier of the research in Law & Economics. A primary goal of this course is to provide the student theoretical and empirical tools to identify and analyze interesting open problems concerning the legal system and its impact on the economy.

*Literature:*

Compulsory: Selected papers.

*Course requirements:*

Recommended (optional): first year courses

*Assessment:* Each student is expected to write a research plan for a law & economics analysis on a problem chosen by the student. The proposal should include motivation, research questions, basic legal background, details of the methodological approach (theoretical, empirical or both), and

expected contribution to the literature.

### **TI1343 ADVANCED GAME THEORY: APPLICATIONS OF BARGAINING AND NETWORK THEORY**

*Lecturers:* Dr J.R. van den Brink (VU) and Dr H.E.D. Houba (VU)

*Short subject description:*

This course studies some frontier topics in game theory with a focus on its applications to economic theory.

*Course contents:*

Based on classic and recent articles, we discuss the development of game theoretic tools to analyze economic issues related to bargaining (part 1), coalition formation (part 2) and network analysis (part 3). In the first part, strategic bargaining models of bilateral negotiations, endogenous threats (e.g. strikes or trade wars) and competition to set the agenda are discussed. Several strategic bargaining models support well-known solutions in cooperative or axiomatic bargaining theory. Computational aspects will also be addressed. In the second part, the extension to multilateral negotiations with complete information, (im)perfect contracts and externalities is made to study endogenous coalition formation and the division of the gains from cooperation. Cooperative solution concepts are also applied to explain endogenous coalition formation. In the third part, game theoretic tools to analyze economic and social networks are introduced, and applied to economic allocation problems with an implicit or explicit network structure such as water allocation, sequencing, assignment and auction games.

*Course objective:*

This course intends the students to teach the students recent developments in game theory, and how to apply these to analyze economic problems. In particular, we focus on bargaining and network models.

*Literature:* Selected papers (will be announced during the course).

*Course entrance requirements:*

Required: Microeconomics II (TI1201/II) and IV (TI1201/IV)

Recommended (optional): Microeconomics I (TI1201/I), Mathematics (TI1203)

*Assessment:* Take home exam (75%) and homework assignments (25%).

### **TI1344 COMMUNICATION IN COMPLEX ORGANIZATIONS**

*Lecturer:* Prof. J. Sobel (UCSD)

*Short subject description:*

This class provides a basic overview/review of signaling and then move to a discussion of communication and complexity. The signaling segment will include a discussion of equilibrium selection.

*Course contents:*

The following list of the topics is tentative.

Lecture 1 Introduction to signaling games

Lecture 2 Cheap talk

Lecture 3 Equilibrium Selection

Lecture 4 Communication in Organizations

Lecture 5 Organizational Codes

Lecture 6 Vagueness and Ambiguity

Lecture 7 Complexity and Communication

*Course objective:*

The goal of the course is to provide an understanding of signaling games and an introduction to a topic of current research interest. Successful students should be able to formulate and solve games of communication and apply the main ideas of the class in novel situations. The class aspires to prepare students to write original research papers on the subject of communication and complexity.

*Literature:* Students will read selected articles and research monographs supplemented by lecture notes.

*Entrance requirements:* none

*Assessment:* Sit-in written examination (75%) and homework assignments (25%).

**TI1345 MARKETS WITH ASYMMETRIC INFORMATION (TI Economics Lectures 2014)**

*Lecturers:* Prof. J. Levin (Stanford Un.) and Prof. L. Einav (Stanford Un.)

*Course description:*

Market failures and inefficiencies due to asymmetric information have been at the heart of recent policy debates about credit markets, health insurance, and other regulatory and social programs. While the theory of asymmetric information has been well-established for decades, empirical research that attempts to identify and measure the sources and consequences of asymmetric information has blossomed only in the last decade. These lectures will cover recent work on demand, pricing, competition and regulation in markets with adverse selection and moral hazard problems, including consumer credit markets and insurance markets.

*Remarks:*

1. These lectures will take place June 2-4, 2014
2. First year students can only participate in this course upon approval by the DGS of their track. The DGS will decide on this in the progress meeting after block II.

*Literature:* Selected papers.

*Entrance requirements:* none

*Assessment:* Take-home exam.

**TI1351 RISK AND RATIONALITY**

*Lecturer:* Prof. P.P. Wakker (EUR)

*Short subject description:*

A behavioral approach (using psychological insights to improve economics) to decision under risk and uncertainty (ambiguity); the rational and classical expected utility & the descriptive and psychological, Nobel-awarded, prospect theory.

*Course contents:*

Risk and uncertainty are important in many decisions. They play a central role in many fields including insurance, game theory, health economics, game theory, business, and finance. Psychologists have discovered many irrationalities in human behavior, such as those underlying the equity premium puzzle. Kahneman and Tversky (1979) introduced prospect theory, which provides analytical tools for integrating empirical psychological findings with economic models. The theory provided a rational model of irrational behavior, something considered impossible up to that point. An important advance was made in 1992, when the theory was extended to also deal with ambiguity (unknown probabilities), which is the common case in economics and in our everyday decisions.

In experiments, the risk attitudes of the participants will be measured, and the best-fitting model will be determined for each. Financial advice will be given, based on theoretical foundations, such as, in general: (a) do not insure low-cost risks such as bike-theft; (b) invest pension-savings in stocks and not in bonds. In summary, this course shows how to incorporate irrational psychological behavior in economic models. At the end of the course, participants will be able to apply the modern models for risk and uncertainty to economic problems.

*Course objective:*

Prescribe, predict, and describe decisions under risk and uncertainty. Analyze them theoretically, measure them empirically, apply them in the student's research area, and improve private decisions. Learn about modern models of ambiguity. Learn about general behavioral principles relevant in many areas beyond risk (framing, riskless choices, intertemporal decisions, interpersonal decisions).

*Literature:*

Compulsory:

- Wakker, Peter P. (2010). *Prospect Theory: for Risk and Ambiguity*, Cambridge University Press, Cambridge (Paperback: ISBN-13:9780521748681; hardcover ISBN-13:9780521765015)

Recommended:

- Tversky & Kahneman (1981). *Science* 211, 453-458
- Tversky & Wakker (1995). *Econometrica* 63, 1255-1280
- Wakker, Thaler, & Tversky (1997). *Journal of Risk and Uncertainty* 15, 7-28

*Course entrance requirements:*

Elementary probability calculus; quantitative aptitude.

Recommended (optional): Microeconomics I (TI1201/I)

*Assessment:* Oral exam (100%); 1 take-home assignment & presenting some homework exercises are required to get access to oral exam. Class-performance plays no role. Students can take course as a-student (empirically oriented; fits well with psychologists), c-student (theoretically oriented; fits well with mathematicians), or b-student (in between; fits well with economists).

## **TI1352 EXPERIMENTAL ECONOMICS**

*Lecturer:* Prof. J.H. Sonnemans (UvA)

*Short subject description:*

Experimental Economics studies economic behavior in a controlled, laboratory or field environment.

*Course objective:*

This course intends to teach the student how to design an experiment aimed at answering a self-developed research question. In addition, it gives an overview of recent trends in Experimental Economics. The course will focus around a set of recent experimental papers and on experimental designs developed by the students.

*Literature:* Selected papers.

*Course entrance requirements:* Microeconomics III (TI1201/III)

*Assessment:* Each student is expected to actively participate in classes by presenting and discussing papers selected by the instructor (40%) and to develop an experimental design of his/her own (60%).

## **TI1353 EVOLUTIONARY GAME THEORY**

*Lecturer:* Prof. C.M. van Veelen (UvA)

*Short subject description:*

The goal of this course is to understand the basic principles of evolutionary dynamics and evolutionary game theory, and to be able to apply that in order to understand how evolution shapes human behavior in general and behavior in economic situations in particular.

*Course contents:*

We will learn to use static equilibrium concepts, such as the evolutionary stable strategy (ESS), dynamic concepts, such as the replicator dynamics, and the relation between the two. In finite population settings, we also learn what the Moran process is, and get accustomed to evolutionary graph theory.

We will also encounter kin selection, group selection and sexual selection – both Zahavi's handicap principle and Fisher's runaway process – in order to understand possible explanations for pro-social behavior. Also behavior in repeated games and the evolution of reciprocity will be discussed in order to understand laboratory findings concerning human behavior.

*Course objective:*

The course is meant to teach the student both mathematical techniques for evolutionary dynamics as well as ways in which those can help formulate predictions for human behavior.

*Literature:*

- Weibull, J.W. (1995). *Evolutionary Game Theory*, MIT Press, Cambridge, MA
- Nowak, M.A. (2006). *Evolutionary dynamics: exploring the equations of life*, Harvard University Press, Cambridge, MA

*Course entrance requirements:* none.

*Assessment:* Sit-in written exam (50%) and an assignment / project (50%).

## **UA1354 NON-LINEAR ECONOMIC DYNAMICS**

*Lecturers:* Prof. C.H. Hommes (UvA), D. Kopányi (UvA) and Dr D. Massaro (UvA)

*Short subject description:*

This course focuses on mathematical modeling of nonlinear dynamic phenomena and its application to economics and finance.

*Course content:*

- week 1: Introduction and motivation; stability analysis of 1-D maps; bifurcations in 1-D maps: period doubling, tangent, transcritical and pitchfork bifurcations; chaos
- week 2: Cantor sets; Lyapunov exponents; cobweb model: adaptive expectations, rational expectations, bounded rationality, adaptive learning, consistent expectations equilibrium
- week 3: Stability analysis of 2-D systems, bifurcations in 2-D systems: saddle-node and Hopf bifurcation; horseshoes, strange attractors, homoclinic bifurcation
- week 4: Evolutionary dynamics, heterogeneous expectations hypothesis, cobweb model, rational routes to randomness
- week 5: Financial markets as complex adaptive systems
- week 6: Experiments, applications
- week 7: Question hour: old exam, questions

*Course objective:*

After the course students are able to analyze nonlinear dynamic models, compute steady states, analyze their stability, compute bifurcation values, detect periodic and chaotic solutions by computer simulations and interpret the numerical results. Students are able to apply nonlinear dynamical system techniques to dynamic economic models and read and critically evaluate



literature on economic dynamics, in particular on behavioural models with boundedly rational agents.

*Literature:*

C.H. Hommes, Behavioral Rationality and Heterogeneous Expectations in Complex Economic Systems, Cambridge University Press, 2013

[http://www.cambridge.org/gb/knowledge/isbn/item6945169/?site\\_locale=en\\_GB](http://www.cambridge.org/gb/knowledge/isbn/item6945169/?site_locale=en_GB)

*Course entrance requirements:*

Recommended: Mathematics (T11203); Knowledge of local stability of systems of difference equations.

*Assessment:* F = 2/3

and A=average mark for the 2 assignments.

•E + 1/3

### **UA1355 BOUNDED RATIONALITY**

*Lecturer:* Dr D. Massaro (UvA)

*Short subject description:*

The leading paradigm in economic theory assumes that economic agents (households, firms) are perfectly rational in making their decisions. Experimental evidence and common sense indicate that this assumption is often too demanding. This course focuses on the analysis of “bounded” rationality models, where agents violate full rationality but behave more in accordance with experimental evidence.

*Course content:*

In this course we will review some experimental evidence of bounded rationality and study theoretical models of bounded rationality, as well as the tools used to analyze them. In particular we will cover: (a) different learning models, where agents use past observations to predict future prices, interest rates or actions of their opponents, and (b) evolutionary models, where agents choose between different types of behavior and market forces select for the best behavior.

*Course objective:*

After the course students will become familiar with concepts of bounded rationality and they will be able to apply them to game theoretical models, models from macro-economics, and models of financial markets.

*Literature:* Selected papers.

*Course entrance requirements:*

Required: Microeconomics I and II (T11201/I+II)

Recommended: Experimental Economics (T11252)

*Assessment:*

- An individual presentation of a paper. The result of this examination will account for 25% of the final mark.
- An individual short presentation discussing a paper. The result of this examination will account for 25% of the final mark.
- Two individual reports on two papers. The average result of the evaluation of the papers will account for 25% of the final mark.
- A final essay (about 5 pages) in the form of literature review or research proposal on a topic of bounded rationality. The result of this examination will account for 25% of the final mark.

### **T11361 INDUSTRIAL ORGANIZATION**

*Lecturer:* Prof. J.L. Moraga (VU)

*Short subject description:*

Many markets of interest are dominated by a few firms. These firms, among other things, do choose their prices, products, qualities, advertising and make investments in R\&D. They also decide to enter or exit markets, to merge or not with other firms, to vertically integrate or not with other actors in the value chain, to collude with rival firms etc. These choices have far reaching effects on the markets in which they operate and these effects may have wider repercussions throughout the economy. This course presents an approach - based on strategic decision making - for understanding the functioning of such markets. We also use this approach to clarify the role of the government in regulating economic activity.

*Course contents:*

This course consists of two parts. In the first part we study the extreme case of monopolized markets. We start by analyzing the decisions (prices, product quality, product variety, advertising, etc.) taken by a single producer and its implications from a social welfare viewpoint. The monopoly paradigm is compared against the also extreme case of a perfectly competitive market. Then, we present situations in which a monopoly can increase further its market power by using price-discrimination schemes, including two-part personalized tariffs, group pricing and menu pricing. We finish the first part of the course by illustrating the durable-goods problem, a context in which a firm cannot enjoy market power so much.

Another situation in which a firm has a limited ability to sustain prices above marginal costs is when other competitors are present in the market. This consideration gives rise to the second part of the course. In this part, we study firms decisions in an oligopoly context. Such decisions aim generally at alleviating the negative effects arising from firms' rivalry, to the extent possible. Understanding the functioning of oligopolistic markets is of crucial importance to assess whether some strategic actions can be considered anti-competitive for competition authorities. The course discusses basic models of competition, collusion, merger activity, product choice and research and development. Additional topics include advertising, consumer search, network externalities and two-sided markets.

*Course objective:*

The objective of the course is to familiarize the student with the workhorse models employed in Industrial Organization to address strategic interaction in oligopolistic markets.

*Literature:*

Compulsory:

- Tirole, J. (1988). *The theory of Industrial Organization*, MIT Press

Recommended (optional):

- Pepall, Richards and Norman (2005). *Industrial Organization: Contemporary Theory and Practice*, South-Western
- Motta (2004). *Competition Policy: Theory and Practice*, Cambridge University Press
- Scherer and Ross (1990). *Industrial Market Structure and Economic Performance*
- Martin, S. (1993). *Advanced Industrial Organization*, Blackwell

*Course entrance requirements:* Microeconomics I and II (TI1201/I+II)

*Assessment:* Homework assignments (100%).

## **TI1362 ENVIRONMENTAL AND RESOURCE ECONOMICS**

*Lecturer:* Prof. C.A.A.M. Withagen (VU), Prof. F. van der Ploeg (VU) and Dr S. Poelhekke (VU)

*Short subject description:*

The course provides insight in the economy-environment interactions at a theoretical as well as an empirical level.

*Course contents:*

In this course, we study some of the most important topics within the field of environmental and resource economics: valuation of nature and environmental damages, optimal environmental policy making, international environmental agreements, trade and the environment, and renewable and non-renewable resource management. Generic theories and models are presented, that can subsequently be applied to environmental issues as global warming, biodiversity loss, tropical deforestation, energy scarcity, etc. Emphasis is placed on predictions provided by theory, but we also look at empirical and experimental evidence supporting or contesting these predictions.

Every class consists of two parts. The first part comprises the teacher lecturing on the basis of chapters of an advanced textbook (Hanley et al.) and on journal articles, covering a specific topic. The second part is reserved for a student presenting a specific paper that is related to the topic of the day.

*Course objective:*

The aim of this course is to provide students with key insights regarding the nature of environmental problems and how environmental policy should be designed. The lectures offer a treatment of modern economic theories and methods to study the relationship between natural resources, environmental quality, economic structure and environmental policy. The student is expected to develop a thorough understanding of key economic, environmental and ethical aspects of environmental problems, and of the link between theory, methods and empirical analysis. The presentation/discussion sessions are intended to improve the participants' economic reasoning and communication skills.

After following this course, you:

- have a profound understanding of the fundamental factors why environmental problems materialize (positive and negative externalities)
- have a profound understanding about the strengths and weaknesses of the various environmental policy instruments (taxes, quotas, voluntary agreements)
- have a good understanding about how and why the practice of environmental regulation may differ from the theoretically preferred design
- have sharpened your economic reasoning and intuition, and have improved your presentation skills.
- The course provides insight in the economy-environment interactions at a theoretical as well as an empirical level.

*Literature:*

- N. Hanley, J. Shogren and B. White (2007). *Environmental Economics in Theory and Practice*, MacMillan, London
- Articles, to be distributed

*Course entrance requirements:* None.

*Assessment:* Sit-in written examination.

### **TI1363 SPATIAL AND TRANSPORT ECONOMICS**

*Lecturers:* Prof. H.L.F. de Groot (VU) and Prof. E.T. Verhoef (VU)

*Short subject description:*

This course focuses on the economic analysis of transport, urban and regional phenomena, including topics such as congestion, agglomeration, sorting and spatial interaction.

*Course contents:*

This course covers advanced topics in theoretical and empirical research on spatial and transport economics. Key issues in the "spatial block" (4 lectures) are location and potential reasons for clustering of economic activity, patterns of regional economic convergence and divergence, the

role of geographic factors in explaining regional economic growth performance, the impact of (spatial) externalities of knowledge production, urban size and growth, housing issues, and the functioning of regional labour markets. Topics to be addressed in the “transport block” (3 lectures) include transport demand (including discrete choice analysis and dynamic aspects in consumer decision making) and transport supply (including cost functions and the economics of highway congestion analysis); market failures and government response in network markets; and second-best analysis and regulation. The course seeks a balance between theory and empirics, between analytical methodologies and policy analysis, and aims to integrate applied microeconomics and spatial and transport science.

*Literature:*

Compulsory:

- Brakman, Garretsen and Van Marrewijk (2009). *The New Introduction to Geographical Economics*, Cambridge University Press
- Small, K.A. and E.T. Verhoef (2006). *The Economics of Urban Transportation*, Routledge
- Selected papers

*Course entrance requirements:* Microeconomics I and IV (TI1201/I+IV), Macroeconomics I (TI1202/I)

*Assessment:* Sit-in written exam (3 hours; 60%, at least 5.0 required), oral presentation (20%) and two additional take-home assignments to be made during the course (10% each).

## **TI1364 PUBLIC FINANCE**

*Lecturer:* Prof. B. Jacobs (EUR)

*Short subject description:*

This course gives an in depth introduction into normative welfare economics, including optimal taxation, optimal income redistribution, optimal public-good provision and optimal corrective taxation.

*Course contents:*

We will discuss the Ramsey principles for optimal commodity taxation and Mirrlees' (1971) non-linear income tax. The main theorems of public finance will be covered: the Atkinson-Stiglitz theorem on the desirability of commodity/capital taxation and the Diamond-Mirrlees production efficiency theorem. The Samuelson-rule for the optimal provision of public goods in second-best settings with distortionary taxes will be discussed. Main principles will then be applied to various topics: optimal income redistribution, environmental taxation and the double dividend, capital income taxation, education policies and redistribution, government debt and fiscal policy, and the marginal cost of public funds.

*Course objective:*

The aim of this course is to give students a thorough background in the principles of public finance and to apply these principles to questions like: How progressive should the income tax be? Should the government employ indirect taxes besides the income tax? Should labour participation be subsidized? Should the government subsidize education? How does taxation affect human capital investment and how does this affect the progression of the income tax? How should the government set the optimal capital tax? How much public goods should the government provide and should less public goods be provided if taxation is more distortionary? How should the government internalize externalities, for example in the environment? After this course students should be able to understand

- the optimal non-linear income tax
- the optimal participation tax
- the optimal commodity tax and the debate on direct vs. indirect taxation
- the optimal tax on capital income
- the optimal taxation of human capital
- the optimal provision of public goods and the marginal cost of public funds

- the optimal corrective tax on externalities

*Literature:*

The main text is the book by Bas Jacobs (2014), *Principles of Public Finance*. A pdf of the book, additional reading and class materials will be made available on Blackboard.

*Entrance requirements:* Microeconomics I and IV (TI1201/I, TI1201/IV)

*Assessment:* Sit-in written examination (75%) and homework assignments (25%).

## **TI1371 INSTITUTIONS AND FINANCIAL STRUCTURE**

*Lecturer:* Prof. E.C. Perotti (UvA)

*Short subject description:*

This course reviews selectively the novel literature on comparative financial systems.

*Course contents:*

It covers theoretical and empirical explanation for the time series and cross country variation in the structure of governance, regulation and access across financial systems.

The new approach, related to the recent literature on institutional development, recognizes that financial contracting and control depends on rules and the nature of their enforcement. These are shaped by political, legal and cultural institutions. Disentangling their effect and specific channels is a fine scientific challenge.

The course will review structural models which can explain not just the cross country variation in financial structure but also their historical evolution. The intent is to a rigorous framework, drawing from the literature in institutions and growth, while grounding it in modern corporate finance theory.

*Course objective:*

The course will make students aware of the literature on institutions and its methodology. At the end of the course students should be able to use models of political economy and incomplete contracting as microfoundations for work on development and growth, financial development and macroeconomic stability.

*Literature:*

Compulsory: Selected papers

Recommended: Selected papers

*Course entrance requirements:*

Required: Microeconomics I-II (TI1201/I-II)

Recommended: Microeconomics V (TI1201/V), Corporate Finance Theory (TI1207/II)

*Assessment:* Sit-in written examination (75%) and homework assignments (25%).

## **TI1372 DYNAMIC CORPORATE FINANCE**

*Lecturer:* Dr S. Gryglewicz (EUR)

*Short subject description:*

This course provides an advanced introduction to the methods and results of dynamic corporate finance theory.

*Course contents:*

The course introduces students to fundamental models of corporate finance in a dynamic world. To provide some essential background, the course will start with an applied introduction to stochastic processes and stochastic calculus. Topics that will be covered include investment, capital structure, dividend policy, and agency conflicts. In later parts, we will study how these

dynamic corporate finance models can be linked to valuation and asset returns. Finally, the course will discuss empirical estimation of structural models in corporate finance.

*Course objective:*

After the course students can critically analyze and develop dynamic models of corporate finance and understand the methods for empirical estimation of these models.

*Literature:* Selected papers.

*Course entrance requirements:*

Required: none

Recommended: Microeconomics I-III (TI1201/I-III), Microeconomics V (TI1201/V), Corporate Finance Theory (TI1207/II)

*Assessment:* Sit-in written exam (3 hours; 55%, at least 5,0 required), discussion points (15%), active participation in classes (15%), written research proposal (15%).

### **TI1373 FINANCIAL CRISES**

*Lecturer:* Prof. S.J.G. van Wijnbergen (UvA)

*Short subject description:*

We use an analysis of the recent subprime crisis as a stepping stone towards a more general analysis of financial crises.

*Course contents:*

Overview of the subprime crisis; how a relatively small problem in the US mortgage market triggered a worldwide financial meltdown. Key words: Financial innovation and the fragility of the international banking system; theory of banking crises, optimal bank intervention; regulatory reform; macroeconomics and financial fragility, macroeconomic impact of tighter financial regulation; financial crises and growth. Macropolicy during the great recession (fiscal deficits, Quantitative Easing).

*Course objective:*

Students are introduced to current research and new insights in the economics of financial crises.

*Literature:* Selected papers.

*Course entrance requirements:*

Recommended: Asset Pricing (TI1207/I), Corporate Finance Theory (TI1207/IV), Macroeconomics IV (TI1202/IV)

*Assessment:* Take home exam, mandatory class attendance.

### **TI1374 EMPIRICAL CORPORATE FINANCE**

*Lecturers:* Dr Z. Sautner (UvA), Dr E. Giambona (UvA), Dr T. Ladika (UvA), Dr F. Peters (UvA), and Prof. P. Verwijmeren (EUR)

*Short subject description:*

This course will present a review of current research topics in the area, offering exposure for both MPhil in Finance and Economics to empirical issues in corporate finance and banking with relevance for firm behavior, governance and macro finance. It is deliberately structured as a series of lectures by several instructors to ensure a broad exposure.

*Course contents:*

Some attention will be given to topics on dysfunctional financial markets, driven by behavioral or

incentive distortions.

Readings cover individual papers. Grading will be based on reviewing an empirical paper in terms of its ability to validate a model, and possibly some assignments. Students will be requested to attend also one or two related faculty seminars at TI or DNB.

*Literature:* Selected papers.

*Course entrance requirements:*

Required: Microeconomics III and V (TI1201/III+V)

Recommended (optional): Corporate Finance Theory (TI1207/II)

*Assessment:* A referee report (50%) and a presentation of a research proposal (50%).

### **TI1375 BANKING**

*Lecturer:* Prof. E.C. Perotti (UvA)

*Short subject description:*

The course reviews the literature on financial intermediation, focusing on recent work complementing the contractual approach with a view of system-wide risk creation and risk shifting. It is relevant for students interested in finance, macroeconomics and governance issues.

*Course contents:*

Topics include debt optimality, moral hazard in risk choices, external effects of bank funding and asset choices, maturity and liquidity risk transformation, capital and liquidity regulation, shadow banking, microeconomic foundations for macroprudential policy.

*Course objective:*

This course teaches models of credit choice and risk incentives in individual banks, and derives implications for aggregate financial system behavior. Drawing from the lesson of the crisis, it focuses on the risk transformation role of banks and shadow banks, and the sources of endogenous credit cycles and instability. It will review the new foundations for regulatory policy and identify several areas where more conceptual and empirical work is needed.

*Literature:*

Required: Selected papers

Recommended textbook (optional): Bengt Holmstrom Jean Tirole. *Inside and Outside Liquidity*

*Course entrance requirements:*

Required: Contract Theory (TI1201/V)

Recommended (optional): Corporate Finance Theory (TI1207/II)

*Assessment:* The course has a sit-in final examination plus some homework assignments. The final grade will be a weighted average of the final exam (75%) and the take-home assignments (25%). Intelligent class participation will contribute at the margin. As an option, students can reduce the weight of the final exam by writing a review paper on a theme less covered in the course.

### **TI1376 MARKET MICROSTRUCTURE**

*Lecturers:* Prof. A.J. Menvelde (VU) and Prof. T. Foucault (HEC)

*Short subject description:*

The purpose of the course is to acquaint students with the field of market microstructure, both theoretically and empirically.

*Course contents:*

Market microstructure has grown rapidly as an important subfield of finance. Research in this field focuses on the intertwined relationships between volatility, liquidity, price discovery, market design, and ultimately welfare. Models in market microstructure provide a framework for the analysis of price movements and trading volume.

Frontier research in market microstructure is focused on the economics of electronic markets. The new eco system that technology facilitated has renewed interest in the field. Not only academics, but also regulators and market participants try to make economic sense of a variety of market structures (traditional exchanges, multilateral trading facilities, internalization pools, dark pools, etc.), algorithmic trading, high-frequency trading, etc. Many of the tools developed for human-intermediated market are still relevant for today's markets, but additional tools and models are actively being developed.

*Course objective:*

After the course students are aware of canonical models in microstructure. They will also be able to complement the models, interpret the outcomes, and assess the strong points as well as the limitations of these models. They have also learned what the appropriate econometric models are to test the predictions of microstructure models. They are aware of why particular models should be used and understand their relative advantages and drawbacks.

*Literature:*

Required:

- Foucault, Pagano, and Röell (2013). *Market Liquidity: Theory, Evidence, and Policy*, Oxford University Press, New York.
- Hasbrouck (2007). *Empirical Market Microstructure*, Oxford University Press, New York

Recommended:

- Hautsch (2012). *Econometrics of Financial High-Frequency Data*, Springer, Berlin.
- De Jong and Rindi (2009). *The Microstructure of Financial Markets*, Cambridge University Press, New York.

*Course entrance requirements:* A basic understanding of finance, econometrics and information economics.

*Assessment:* Sit-in written exam (3 hours; 50%, at least 5,0 required) and 2 additional take-home assignments (partly numerical computer work; 50%).

### **TI1377 PSYCHOLOGY ACROSS THE FINANCIAL LANDSCAPE (TI Finance Lectures 2013)**

*Lecturer:* Prof. H. Shefrin (SCU)

*Course description:*

These lectures discuss how a particular set of psychological concepts impact judgments and decisions across the financial landscape. The landscape includes financial professionals such as portfolio managers and security analysts, corporate managers, central bankers, as well as ordinary consumers and investors. Topics of special attention will be the implications of psychological pitfalls for market efficiency and financial stability, in the context of the global financial crisis.

Note: These lectures will take place January 13-15, 2014.

*Literature:* will be announced on the TI website.

*Assessment:* Sit-in written exam (100%).

### **TI1378 BEHAVIORAL FINANCE**

*Lecturers:* Dr F. Peters (UvA), Dr M.J. van den Assem (EUR) and Dr R.C.J. Zwinkels (EUR)



*Short subject description:*

The recent financial crisis and previous speculative episodes such as the Internet bubble have highlighted the failure of the rational representative investor paradigm as a foundation for financial decision-making and market equilibrium.

The objective of this course is to provide a comprehensive treatment of Behavioral Finance. This relatively new area integrates insights from psychology into economic models to better understand, predict, and possibly prevent (seemingly) irrational decision-making of investors and firms and the associated market outcomes.

*Course contents:*

The course consists of three main building blocks:

- Non-standard beliefs. Individuals are subject to distortions or biases in their beliefs and expectations such as overconfidence and optimism.
- Non-standard preferences. Individuals can have risk preferences that appear irrational such as reference-dependence, loss aversion, or narrow framing.
- Limits to Arbitrage. Financial market participants are subject to certain costs and risks that prevent full arbitrage. As a result, market anomalies can occur.

The lectures will describe the motivating original evidence from Psychology, discuss the related empirical evidence in Finance and Economics, and explain how these findings can be incorporated into models of financial decision-making in both financial markets and corporations.

*Course objective:*

At the end of this course, students should be aware of the main elements of Behavioral Finance, how they help to explain empirical regularities that are puzzling within the traditional framework of rational economics, and how they can be integrated into economic models.

*Literature:*

- Barber & Odean (2013). *The Behavior of Individual Investors*, Handbook of the Economics of Finance 2, Chapter 22, 1533-1570
- Kahneman & Tversky (1979). *Prospect Theory: An Analysis of Decision under Risk*, *Econometrica* 47, 263-291
- Tversky & Kahneman (1974). *Judgment under Uncertainty: Heuristics and Biases*, *Science* 185, 1124-1131
- Odean (1998). *Are Investors Reluctant to Realize Their Losses?*, *Journal of Finance* 53, 1775-1798
- Odean (1999). *Do Investors Trade Too Much?*, *American Economic Review* 89, 1279-1298
- Barber & Odean (2008). *All that Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors*, *Review of Financial Studies* 21, 785-818
- Benartzi & Thaler (2001). *Naive Diversification Strategies in Defined Contribution Saving Plans*, *American Economic Review* 91, 79-98
- De Long, Shleifer, Summer, & Waldman (1990). *Noise Trader Risk in Financial Markets*, *Journal of Political Economy* 98(4), 703-738
- Fama & French (1992). *The Cross-Section of Expected Stock Returns*, *Journal of Finance* 47, 427-465
- Bouman & Jacobsen (2002). *The Halloween Indicator, Sell in May and Go Away: Another Puzzle*, *American Economic Review* 92, 1618-1635
- Baker & Wurgler (2007). *Investor Sentiment in the Stock Market*, *Journal of Economic Perspectives* 21(2), 129-152
- Hong & Stein (2007). *Disagreement and the Stock Market*, *Journal of Economic Perspectives* 21, 109-128
- Hong & Stein (1999). *A Unified Theory of Underreaction, Momentum Trading, and Overreaction in Asset Markets*, *Journal of Finance* 54, 2143-2184
- Hong & Sraer (2012). *Speculative Betas*, NBER Workingpaper 18548
- DellaVigna & Pollet (2009). *Investor Inattention and Friday Earnings Announcements*, *Journal of Finance* 64, 709-749

- Baker and Wurgler (2013). *Behavioral Corporate Finance: A Current Survey*, Handbook of the Economics of Finance, Vol. 2, Chapter 5, 357-424
- Baker, Pan and Wurgler (2012). *The Effect of Reference Point Prices in Mergers and Acquisitions*, Journal of Financial Economics, 106(1), 49-71
- Dougal, Casey, Joseph Engelberg, Christopher Parsons and Edward Van Wesep (2013). *Anchoring and the Cost of Capital*, Working Paper
- Ben-David, Graham & Harvey (2013). *Managerial Miscalibration*, Quarterly Journal of Economics, 1547-1584
- Graham, Harvey & Puri (2013). *Managerial Attitudes and Corporate Actions*", Journal of Financial Economics 109, 103-121
- Baker and Wurgler (2002). *Market Timing and Capital Structure*, Journal of Finance 57(1), 1-32
- Shleifer and Vishny (2003). *Stock market driven acquisitions*, Journal of Financial Economics 70(3), 295–311
- Malmendier and Tate (2005). *CEO Overconfidence and Corporate Investment*, Journal of Finance 60(6), 2661-2700
- Malmendier and Tate (2008). *Who Makes Acquisitions? CEO Overconfidence and the Market's Reaction*, Journal of Financial Economics 89, 20-43

*Assessment:* Sit-in written 3-hour exam (100%).

## **DSF1381 CREDIT RISK MANAGEMENT**

*Lecturer:* Dr. L. Norden

*Course objectives:*

Credit risk is one of the major risks in the banking book. However, the risk is not limited to the banking book alone. Credit risk arises everywhere where delivery and settlement of goods or services are not simultaneous. The aim of this course is to familiarise students with the various aspects of credit risk, credit risk models, and credit risk management. The emphasis is on models under the physical measure (rather than under the risk neutral measure). The course starts with familiarising students with credit risk for individual counterparts and with models that exploit cross-sectional information on defaults. Next, students learn the specific complications of portfolio models for credit risk. Students will develop an understanding of the different mechanisms that introduce cross-sectional dependencies and time-variation in credit risk exposures, and the various models available to capture this. Students will not only become aware of the theory, but will also be able to implement the models, interpret the outcomes, and assess the strong points as well as the limitations of their credit risk analysis and advice.

*Learning outcomes:*

At the end of this course students are able to:

- Understand the drivers of single-name and multi-name credit risk;
- Understand the main mechanisms to mitigate and manage credit risk;
- Understand the models used for single-name and multiname credit risks;
- Implement these models using standard packages or self developed code;
- Assess the quality of credit risk models and assessments;
- Establish the link between credit risk models and the regulatory framework;
- Maintain a critical attitude towards the limitations of models used for credit risk.

*Assessment:* Written exam, assignments and lab report.

## **DSF1382 MARKET & SYSTEMIC RISK MANAGEMENT**

*Lecturer:* Prof. C.G. de Vries

*Course objectives:*

The main objective of this course is to develop and analyze a coherent framework for evaluating market risk at the level of the individual institution or portfolio and at the macro systemic level. The main tool that we exploit in devising this framework is the statistical theory about tail risk from Extreme Value Theory (EVT) in combination with standard concepts from finance and macro economics. More in particular, the course offers different methods to measure and manage financial risk and performance with special emphasis on downside risk measures such as Value-at-Risk (VAR), semi-variance, CvaR, Stress tests, worst case and scenario analysis, etc. Various statistical techniques are studied which are specifically designed to measure breakdown probabilities. Most asset returns turn out to be heavy tailed. That is to say, very bad outcomes occur more frequently than the normal distribution predicts. Therefore, heavy tailed distributions are studied in detail, especially their additive properties. Subsequently we investigate the EVT for the sake of stress testing and scenario analysis. These and other techniques are used to estimate and manage the VAR, both at the individual asset level and the portfolio level. The pc lab session implements the techniques. Given the link between proper risk management and stability of the financial system, we also pay attention to various aspects of risk management from a supervisory point of view. The inherent fragility of the financial system is explained and a scale for the system's stability is developed. The rigorous treatment of some of the techniques enables the student to independently analyze market risks and develop systemic risk indicators.

*Learning outcomes:*

At the end of this course students are able to:

- Identify the more rigorous and quantitative techniques available to analyze and manage market risk and to evaluate systemic risk
- Use various statistical techniques specifically designed to measure breakdown probabilities and shortfall Identify and handle the additive properties of heavy tailed distributions both over time and cross sectionally
- Select and use appropriate techniques to estimate and manage VAR (at individual asset and portfolio level), portfolio management and systemic risk
- Develop a scale for evaluating the stability of the financial system
- Apply EVT to real life case

## **TI1391 THE HISTORY OF MODERN MACROECONOMICS**

*Lecturer:* Dr ir M.J. Boumans (UvA)

*Short subject description:*

The term "macroeconomics" was invented only in the middle of the 20th century. In his well-known textbook Gregory Mankiw defines "macroeconomics" as the study of the economy as a whole. Economists typically take that definition to refer to the analysis on a "macro-level" of such "aggregates" as GDP, employment, unemployment, and inflation. Yet, this is not the only way to understand macroeconomics. Indeed, there are many different ways. In this course, we will study the history of macroeconomics in the 20th century from the point of view of the various ways of understanding the economy as a whole. Each of these ways of understanding aligned with various – often new – developments in science and technology.

*Course contents:*

The course is built around the history of these developments. Each more or less chronologically ordered section addresses one such a development: graphical analysis, analogue machines, mathematical models, national accounts and input-output tables, econometrics, formalism, and the computer.

In this course we analyze primary sources in historical context. In particular, we will examine the historical economic articles in which these new developments were introduced, and, using commentaries and secondary sources from the history of economics and the history of science, we will develop an understanding of the scientific and economic situations to which these new developments responded. The principal sections are:

1. The economy in graphs and diagrams
2. The economy as a mechanism or machine
3. The economy in mathematical models

4. The economy in accounting and tables
5. The economy in macroeconomic models
6. The economy in axioms and fixed points
7. The economy as an artificial world

*Course objective:*

The goal will be to understand how modern macroeconomics came into being as an interaction between problems to be solved – both policy and scientific problems – and the available tools.

*Literature:* Selected papers and lecture notes.

*Course entrance requirements:*

Required: Macroeconomics I (TI1202/I)

Recommended (optional): Macroeconomics II (TI1202/II), Econometrics I (TI1205/I)

*Assessment:* Two written summaries and oral presentation thereof (30%), final paper (40%) and oral exam (30%).

## Appendix I Information for 4-year PhD students directly hired by the faculties

### TI Research Qualification

As of September 1, 2012, Tinbergen Institute awards the TI Research Qualification to PhD students who meet TI's educational requirements. The educational requirements are given in detail below. For PhD students appointed on or after September 1, 2012, the TI Research Qualification is a condition for access to additional facilities e.g. support on the job market in the final phase of the PhD period including an additional budget to participate in international job market activities.

Students who have completed TI's MPhil program and students who have completed another, comparable high level research master program (to be assessed by the Directors of Graduate Studies) already fulfill TI's educational requirement and have access to the same additional facilities as students with the TI Research Qualification. All other students need to complete one of the educational paths, composed of TI courses, in the first 32 months of their PhD appointment.

Students who complete an educational path (40-52 ECTS, details below) will be awarded a TI Research Qualification.

### Four educational paths

Four educational paths lead to the TI Research Qualification. The objective of offering four different paths is to give individual PhD students the opportunity to participate in a limited program of PhD courses that is tailor-made to their needs and educational background, while maintaining some of the key characteristics of the full-fledged MPhil program:

- have an understanding of the core of economics by taking rigorous and common training in one or more of the core subjects and tools of economics,
- have a sufficiently deep understanding of one field of economic research by choosing a major field in which at least 4 field courses are taken.

One of the following paths (I-IV) may be chosen, depending on the student's background and interest:

Path	Core Requirement	ECTS	Field requirement	ECTS		ECTS	TOTAL ECTS
I	Microeconomics, or Econometrics or Advanced Econometrics	20	at least 4 courses in a chosen major field	12	3 other field courses or 2 additional core courses	8-9	40-41
II	Macroeconomics or Finance	16	at least 4 courses in a chosen major field	12	4 other field courses or 3 additional core courses	12	40
III	2 core sequences	32-40	at least 4 courses in a chosen major field	12			44-52
IV	3 core courses*	12	at least 4 courses in a chosen major field	12	7 other field courses	21	45

\* one or more of these core courses may be replaced by field courses

PhD students, who wish to receive rigorous training in the core of microeconomics, macroeconomics, econometrics or finance, choose either path I or II. Students who start their PhD without a firm background in economics may decide to focus their educational program at TI even more at the core principles by choosing path III. Compared to the other paths, this path gives more opportunities to catch-up, which is reflected in the somewhat higher number of ECTS involved. Students with a firm background in economics may decide to start immediately with taking specialized courses. Path IV is the path catered to the interests of these students. To deviate from one of the paths, students need official and written consent of the Examination Board.

At the end of the first full academic year after they were appointed as a PhD student, students need to have fulfilled at least 24 ECTS of their chosen path. 32 months after the start of their PhD, students should have fulfilled all educational requirements of their chosen path. Core or field courses are never exempted for PhD students who wish to qualify for the TI research qualification by taking one of the educational paths.

The DGS assesses whether the student meets the entrance requirements for the field courses. The Annual Study Guide stipulates the fields in which the field courses have been classified. Courses within one field count towards the field requirement. Students who have fulfilled the field requirement may take a single core course block which was not part of their core requirement, to replace a single field course. The number of credits awarded for a core course block is then 3 ECTS. Students have the option to substitute a field course which forms part of the field requirement for a field paper (3 ECTS). The paper should be connected to one of the taken field courses and is supervised by the lecturer of that course.

With the official written consent of the Examination Board, students may substitute TI field courses for PhD level courses organized by other graduate schools or by inter-university networks (e.g. Landelijk Netwerk Mathematische Besliskunde or LNMB). The number of ECTS as determined by the school offering the course applies.

Students can pass core courses consisting of 4 or 5 blocks and obtain all ECTS for this core course either by passing all course blocks within this course with a grade 6 or higher, or by obtaining a grade 5 for one course block in the course, a grade 7 or up for one other course block in the course, and a grade 6 or up for the remaining course blocks in the course. A 4 or lower for one course block and/or a 5 for more than one course block in the course cannot be compensated and mean that the student did not pass the course. This compensation rule does not apply if students follow a selection of course blocks instead of the complete core course. The compensation rule applies across academic years.

Students are required to register for courses through the TI website. They have the right to withdraw from a course without costs for their department/faculty during the first course week, before the Monday of the second course week.

For detailed information on the educational requirement, we refer to the **Academic and Examination Regulations for the TI Research Qualification** on the Intranet.

### **How to proceed**

At the start of the PhD track, the student selects in consultation with his/her supervisor one of the educational paths described above and selects courses accordingly (see paragraphs 3.3 and 3.4.1 of this brochure for the list of courses and chapter 4 for all the course descriptions). Both the TI Director of Graduate Studies (DGS) or the ESE DGS (for EUR students) and the supervisor need to give approval to the selected course package. The DGS will decide if a student meets the entrance requirements for the selected courses. The path and course package chosen are explicitly stated in the Plan for PhD training and guidance which forms part of the PhD student's employment contract. PhD students should register for TI courses in the usual way, so by means of the the online registration form on TI's website.

Fees (75% of external fee, i.e. € 1.125 for a core course and € 937.50 for a field course) are charged to the three TI faculties for participation of their PhD students in TI courses. Indirectly, these fees are paid back to the faculties as lecturer compensation.

#### **TI PhD students hired before September 1, 2012 and the TI Research Qualification**

TI PhD students hired before September 1, 2012, and at this date active as TI PhD student and employed as a PhD student at the economics faculty of EUR, UvA or VU, who meet the educational requirements for the TI Research Qualification, are entitled to the TI Research Qualification.

#### **PhD students appointed at the economics faculties of EUR, UvA and VU**

PhD students appointed directly by the faculties on four-year employment positions, no matter if they are affiliated to Tinbergen Institute, may take single courses from TI's MPhil program. These students can participate in all courses for which they meet the entrance requirements, subject to capacity constraints.

Fees are charged to the three TI faculties for participation of their PhD students in TI courses. Internal fees (75% of external fees i.e. € 1.125 for a core course and € 937.50 for a field course) apply only if a TI faculty is billed. Indirectly, these fees are paid back to the faculties as lecturer compensation.

#### **Registration for and withdrawal from courses**

PhD students should register for courses using the online course registration form before August 15, 2013. TI PhD students use the course registration form that is available on TI's intranet. PhD students not affiliated to TI use the course registration form for external students ([www.tinbergen.nl/online-registration-form/](http://www.tinbergen.nl/online-registration-form/))

PhD students will only be admitted if they meet some equivalent of the TI course entrance criteria. Capacity restrictions apply to all courses, and are particularly relevant for core courses.

PhD students who would like to withdraw from courses should notify Carine Horbach by email ([courses@tinbergen.nl](mailto:courses@tinbergen.nl)) no later than Sunday after the first lecture (all TI courses except intensive field courses) or the day of the first lecture (intensive TI field courses, marked with "\*" in Section 3.4.1, only). Fees will be charged in case of late withdrawal.

**Appendix II Teaching associates 2013/2014**

Prof. E.J. Bartelsman (VU)	e.j.bartelsman@vu.nl
Prof. R.M.W.J. Beetsma (UvA)	r.m.w.j.beetsma@uva.nl
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**Tinbergen Institute Economics Lectures 2014:**

Prof. J. Levin (Stanford University) and Prof. L. Einav (Stanford University)

**Tinbergen Institute Econometrics Lectures 2013:**

Prof. A. Pagan (University of Sydney) and Prof. D. Harding (University of La Trobe)

**Tinbergen Institute Finance Lectures 2014:**

Prof. H. Shefrin (Santa Clara University)

### Appendix III Addresses and directions

Tinbergen Institute Amsterdam (TIA)  
Gustav Mahlerplein 117  
1082 MS Amsterdam

Tel.: +31 (0)20-5251600  
E-mail: [tinbergen@tinbergen.nl](mailto:tinbergen@tinbergen.nl)

[www.tinbergen.nl](http://www.tinbergen.nl)

(Public transport: From Amsterdam Central Station: Tram line 5 stop: Station Amsterdam Zuid WTC or metro 51, stop: Station Amsterdam Zuid WTC:)

Tinbergen Institute Rotterdam (TIR)  
Burg. Oudlaan 50  
3062 PA Rotterdam

Tel.: +31 (0)10-4088900  
E-mail: [tinbergen@tinbergen.nl](mailto:tinbergen@tinbergen.nl)

[www.tinbergen.nl](http://www.tinbergen.nl)

(Public transport: From Rotterdam Central Station: tram line 7, direction Woudestein campus/Erasmus University. TI is located in the H-building)

Erasmus University Rotterdam (EUR)  
Erasmus School of Economics  
Burg. Oudlaan 50  
3062 PA Rotterdam

[www.eur.nl/ese](http://www.eur.nl/ese)

(Directions: see TIR)

University of Amsterdam (UvA)  
Faculty of Economics and Business  
Roetersstraat 11  
1018 WB Amsterdam

[www.feb.uva.nl](http://www.feb.uva.nl)

(Directions: from Amsterdam Central Station, Amstel Station, or Zuid-WTC Station take a metro to Weesperplein: alternatively, exploit that trams 6, 7, and 10 have stops nearby)

VU University Amsterdam (VU)  
Faculty of Economics and Business Administration  
De Boelelaan 1105  
1081 HV Amsterdam

[www.feweb.vu.nl](http://www.feweb.vu.nl)

(Directions: the VU is a short walk from Amsterdam Zuid-WTC Station; alternatively, take tram 5 or metro 51 and exit at VU)

Duisenberg school of finance  
Gustav Mahlerplein 117  
1082 MS Amsterdam

[www.dsf.nl](http://www.dsf.nl)

(Directions: see TIA)

## **2. Academic and Examination Regulations Tinbergen Institute Master of Philosophy in Economics, June 18, 2013**

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### **Section 1 *Scope of the Regulations***

1. These regulations apply to the courses and examinations of the English-language Tinbergen Institute Master of Philosophy (M.Phil.) in Economics program (CROHO 60162)
2. The Tinbergen Institute is part of the Economics Departments of Erasmus University Rotterdam, VU University Amsterdam and University of Amsterdam, to be referred to hereafter as: 'the TI-departments'.
3. The Study Guide (appearing annually) forms part of these regulations.
4. These regulations are established by the Faculty Boards of the Faculty of Economics and Business Administration, VU University Amsterdam  
Faculty of Economics and Business, University of Amsterdam  
Erasmus school of Economics, Erasmus University Rotterdam.

### **Section 2 *Definition of terms***

1. The Act: the Higher Education and Research Act (WHW; Wet op Hoger Onderwijs en Wetenschappelijk Onderzoek).
2. Examination Board: the Examination Board of the Tinbergen Institute.
3. Admission Board: the Admission Board of the Tinbergen Institute. Members of the Admission Board are appointed by the Boards of the departments participating in the Tinbergen Institute.
4. Study Guide: Tinbergen Institute's study guide.
5. Director of Graduate Studies (DGS): Director of Graduate Studies of the Tinbergen Institute.
6. ECTS: a unit of 28 study load hours, in accordance with the European Credit Transfer System.
7. Examination: an investigation of the knowledge, insight and skills of the examination candidate, as well as the evaluation of the results of that investigation.
8. Constituent examination: part of an examination, as well as the evaluation of that part.
9. Grade: the final grade for that component.
10. Practical: a practical component taking one of the following forms:
  - writing a study assignment
  - carrying out an assignment
  - participating in other educational activities with the aim of developing specific skills

11. Track: Tinbergen Institute offers three tracks i.e. specializations in the first year: economics, econometrics and finance.
12. Core course: a number of coherent course blocks together form a core course. Core courses are: Microeconomics, Macroeconomics, Econometrics (including Mathematics and Statistics), Advanced Econometrics (including Mathematics II and Measure Theory & Stochastic Processes). In the Macroeconomics core course, 2 course blocks may be replaced by 2 Finance course blocks. The 2 macro course blocks form together with the 2 finance course blocks one core course. In the annual study guide is stipulated which macro course blocks may be replaced by finance core course blocks. In the Econometrics core course, Mathematics I may be replaced by Measure Theory & Stochastic Processes.
13. Course block: a sequence of weekly lectures (approximately 7), concluded by a written examination, within a core course.
14. Field course: Specialized course in a field.
15. A major is the specialization of the student in the second year.

### **Section 3 General Stipulations**

1. The Tinbergen Institute M.Phil. program was accredited by the NVAO in September 2003 and in 2009.
2. The educational program of the Tinbergen Institute is a research Master's in economics. The program takes two years (120 ECTS).
3. The program is a selective M.Phil. program, according to the Act. Selection criteria are defined in Section 5.
4. The program starts each year in September.
5. The language of tuition is English: all courses and exams are in English. All written assignments, theses etc. must be written in English.
6. The M.Phil. program can only be followed on a full-time basis.

### **Section 4 Objective of the Program**

1. The M.Phil. program aims to
  - give students a thorough knowledge of economic principles, economic theory, quantitative methods for theoretical and empirical research, and empirical and experimental economics;
  - to provide them with a rigorous training in these subjects, allowing them to participate in and contribute to the scientific discussion in economics at the very highest level;
  - and to prepare them to successfully write and defend a PhD thesis and be fully part of the international community of scholars in economics.

### **Section 5 Admission Criteria**

1. Students must have at least a Bachelor's degree, preferably in economics, econometrics, mathematics or physics. The Bachelor's program should have been completed before the start of the M.Phil. program.
2. The Admission Board of the Tinbergen Institute decides on the aptitude of the applicants and on the admissions. Preference is given to candidates who show potential for higher academic performance. The decision of the Admission Board is based on the application

file, provided by the student. The application file contains at least a GRE General Test score report, a recent vitae, two recommendation letters and a written statement of purpose.

## **Section 6 Examination Board**

### **Art. 1: Examination Board**

1. The Tinbergen Institute has an Examination Board consisting of three members, appointed by the Boards of the faculties participating in the Tinbergen Institute. These members choose a chairperson amongst themselves. The members are appointed for three years, with a possible prolongation of one term. The Examination Board is supported by a secretary. The secretary is not a member of the Examination Board.
2. All official documents issued by the Examination Board must be signed by the chairperson.
3. All requests must be dealt with within six weeks after receipt.
4. In the event of a tie, the vote of the Chairman of the Examination Board carries the vote.

### **Art. 2: Duties of the Examination Board**

5. The Examination Board awards the degree and ensures that the program's graduates have achieved the learning outcomes as formulated for the TI research master program.
6. The Examination Board issues guidelines for adequate testing.
7. The Examination Board has the general supervision regarding all aspects of the quality assurance of the examinations. The Examination Board supervises the practical organization of the examinations, ensures that the tests are adequate and transparent, checks if the tests comply with TI's assessment policy and takes measures in case of fraud and plagiarism, supervises the administrative handling of the students' grades, the archiving of tests (student's work as well as assignments), papers and final theses.
8. The Examination Board composes an annual report of its activities for the Supervisory Board of Tinbergen Institute. The annual report provides at least a summary of the results of the several monitoring systems and evaluations and advice for improvement as well as a list of complaints and requests handled by the Board including the resulting actions or decisions. Measures issued by the Examination Board are binding for the Director of Graduate Studies.
9. The Examination Board sees to it that the Academic and Exam Regulations are properly implemented.
10. The Examination Board decides on deviations from the curriculum that might have a bearing on the degree. Students must obtain written permission from the Examination Board for replacement of parts of the curriculum through education provided by third parties, exemptions and postponement of deadlines. Postponement of deadlines may be requested by the student in case of personal circumstances beyond someone's control. In case of illness of the student, a doctor's certificate has to be produced.
11. The Examination Board provides a study evaluation and urgent advice about continuation in the program to all students no later than August 1 in the second semester of the first year. The evaluation is based on the number of credits that have been obtained (or the student has been exempted from) at the time of the evaluation. The Examination Board has access to the grades of all students.
12. Students who wish to dispute a decision of the Examination Board can submit a written, detailed notice of objection to the Examination Board of the Tinbergen Institute. Following the decision of the Examination Board, the student in question has the option of lodging an appeal with the university's Examination Appeals Board, where he/she is enrolled (VU, UvA, EUR). Appeals must be lodged within 28 days of the decision in question.

## **Section 7 Educational Board**

### **Art. 1: Educational Board**

1. The Tinbergen Institute has an Educational Board, consisting of six members. Three members are M.Phil. students of the Tinbergen Institute, three members are research fellows of the Tinbergen Institute. All members are appointed or reappointed annually. The Directors of Graduate Studies are secretaries to the Educational Board but are not members.
2. The student members of the Educational Board are appointed by the Board of the faculty where they are registered as a student. The students' council of TI proposes for appointment candidates for student membership. One of the student members is a student in TI's Econometrics track; one student member is a student in TI's finance track, the third student member is a student in the Economics track.
3. The members of the Educational Board who are research fellows are appointed by the Board of the faculty where they are employed. The DGS proposes candidates for appointment.
4. Membership of the Educational Board is not confined to a maximum term.
5. Members who no longer meet membership criteria during their terms will be replaced within 6 months.

The Educational Board meets twice a year or more often if considered necessary by one or more of the members.

### **Art. 2: Duties of the Educational Board**

6. The Educational Board provides advice, both solicited and unsolicited, to the Board of the Tinbergen Institute, the Faculty Boards and to the Faculty Councils on all matters concerning the educational program.

## **Section 8 Curriculum**

### **Art. 1: Requirements of the program**

1. A description of the curriculum can be found in the Study Guide. The total study load consists of 60 ECTS in the first year, and 60 in the second, and is completed by a Master exam.
2. The program offers an economics track, a finance track and an econometrics track.

Students who wish to graduate in the econometrics track, are required to take the Advanced Econometrics core course in the first year, the course block Measure Theory & Stochastic Processes preferably in the first year, and econometrics as a major in the second year. Taking the course block Measure Theory & Stochastic Processes in the second year of the program means that students should fulfil the requirements for Math I in the first year.

Students who wish to graduate in the finance track are required to replace in the first year 2 course blocks in the Macroeconomics core course with 2 Finance course blocks. In the annual study guide is stipulated which macro course blocks may be replaced by finance core course blocks. Students who choose the finance track are required to choose finance as a major in the second year.

Taking the Advanced Econometrics Core Course or the 2 Finance course blocks in the first year, does not constrain students in their options to choose a major in the second year.

Tinbergen Institute offers a fast track for selected MSc students from the TI departments. See Section 9.

3. A seminar series (1 ECTS) is a mandatory part of the first year curriculum. Attending the seminars is a requirement of the first year program. The series are not concluded with an examination.
4. The maximum exemption level without affecting the right to the master degree of the Tinbergen Institute is 60 ECTS.
5. The entrance requirement for the second year field courses is that students have completed at least 48 ECTS of first year's credits plus the seminar series. In addition, for each field course specific entrance requirements will be determined in the study guide. The 48 ECTS may include the ECTS obtained by the compensation rule under Art. 2.17 of this section.
6. Students should comply with the field course requirements of the academic year that coincides with their second year in the program. One of the requirements is that they choose a major field. Students complete at least four field courses in their major field. Detailed requirements are determined annually in the study guide.
7. The requirement for the second year is that students complete at least 10 field courses (3 ECTS each) and the MPhil thesis (30 ECTS). TI allocates 3 ECTS to a field course, irrespective of the amount of credits allocated to the same course elsewhere. This also applies for TI core courses taken as field course (the annual study guide stipulates the conditions for taking a core course as field course).
8. The official defence of the M.Phil. thesis (see Art. 2.24 of this section) can only take place if the student has passed the core and field course obligations.
9. Examinations results are valid for 29 months.
10. At request, the secretariat of the Tinbergen Institute provides to the student an overview of the students' grades twice a year.

## **Art. 2: Examinations**

11. All *core course* blocks will be concluded by a sit-in examination. Apart from the sit-in examination, results of homework assignments may form part of the examination and may contribute to the final grade for a course block. If the grade for the sit-in examination is below 4.5, the grade for the sit-in examination (rounded off) is the final grade for the course block. If the grade for the sit-in examination is 4.5 or more, the final grade for the course block is composed of the weighted average grade for the homework assignments and the grade for the sit-in examination. Details of the composition and weight of all composing elements will be given annually in the study guide.
12. Examination and composition of the final grade of each *field course* block will be described annually in the study guide. Oral examinations are held in public, although in special cases the Examination Board has the authority to decide otherwise.
13. The final grade of each course block is always reported as a whole number. Final grades ending with a 0.5 or higher are rounded up; any ending less than 0.5 is rounded down. Composing elements of the examination will not be rounded off. Only the final grade of each course block will be.
14. A grade of 6 or higher is passing. A result of 5 or lower is not passing.
15. To pass in cases where the final grade of a course block is composed of grades for various elements, the weighted average of the grades of all the elements within the course block should, after rounding off, be a 6 or higher.
16. Students can pass core courses consisting of 4 or 5 blocks and obtain all ECTS for this core course either by passing (or being exempted from) all course blocks within this course with a grade 6 or higher, or by obtaining a grade 5 for one course block in the

course, a grade 7 or up for one other course block in the course, and a grade 6 or up for the remaining course blocks in the course. A 4 or lower for one course block and/or a 5 for more than one course block in the course cannot be compensated and means that the student did not pass the course. The compensation rule applies across years, except for students who have not earned at least 48 ECTS of first year's credits by July 1 of the first year and/or have not completed the seminar series.

17. Core exams cannot be retaken. Students should retake in their second year all core course blocks for which they have not obtained credits in their first year.
18. There are no scheduled retakes for exams of field courses with a TI code in the second year of the program.
19. Students cannot resit any examination that they have already passed.
20. If a student cannot take an exam due to verifiable illness or any other reason beyond that student's control, he or she may apply to the Examination Board for another chance to take the exam as soon as possible. See Section 6.
21. Grades for written exams will be reported within 15 days to TI's secretariat, which will pass this information on to students within three days. Exams taken in June: grades will be reported within 15 days, though before July 1.
22. After the results of a written final exam are made known, a student may have access to his or her exam by submitting a request within 28 days of the posting of the results.
23. The M.Phil. thesis shows that the student is able to carry out research independently and to make a contribution to the scientific debate. It is assumed that the thesis will be of exceptional quality and publishable in an international scientific journal. The thesis proposal and first results will be presented to the community of TI students and research fellows in a workshop (Spring in the second year of the program). Participation in the annual thesis workshop is mandatory for all second year students.
24. The MPhil thesis will be graded by a committee established by the DGS. The committee consists of three research fellows of the institute, one of which may also be the thesis supervisor. Preferably, at least one of the committee members is affiliated to another university than the supervisor. In exceptional cases, the committee may include members who are not research fellows of the institute. Part of the examination is a public defence of the thesis before the thesis committee.
25. The grade for the MPhil thesis will only become valid once the thesis has been checked for plagiarism.
26. Results of exams are officially registered at the university where the student is enrolled (UvA, VU, EUR). The secretariat of the Tinbergen Institute also keeps account of the results of exams and final exams.
27. A weighted average of 8 or higher on all examinations on the first try, without a compensated grade 5, within 24 months after the start of the program, entitles the student to the distinction of 'cum laude'.
28. Students with certain handicaps are offered the opportunity to take the examinations in a way that is adapted as far as possible to their individual handicaps.
29. Students who wish to lodge an appeal against the results of an examination or a thesis evaluation, can submit a written, detailed notice of objection to the Examination Board of the Tinbergen Institute. Following the verdict of the Examination Board, the student in question has the option of lodging an appeal with the university's Examination Appeals Board, where he/she is enrolled (VU, UvA, EUR). Appeals must be lodged within 30 days of the decision in question.



### **Art. 3: Qualifying Exams**

30. Annually, before the start of the academic year, prospective first year students are given the opportunity to take Qualifying Exams in all first year core courses. Passing a qualifying exam leads to an exemption for the corresponding first year course i.e. fulfilling the entrance requirements for second-year field courses. Not passing does not influence the number of opportunities to take an examination during the academic year. For students in the fast track, TI organizes Qualifying Exams for the course blocks Microeconomics I-IV in the Spring.

### **Section 9: *Fast Track***

1. Selected students in an MSc econometrics program at one of the TI departments may follow a fast track (details below). The completion of the fast track will lead to a Research Master's diploma in economics equal to the diploma awarded to the TI MPhil students.
2. Students in the fast track are exempted from the core course econometrics (20 ECTS) and from the MPhil seminar series (1 ECTS). The course block Measure theory and stochastic processes is mandatory for fast track students.
3. Students in the fast track have two options to pass the core course Microeconomics:
  - by passing the qualifying exams for the microeconomics course blocks I-IV and participating in the microeconomics core course block V and passing the exam,
  - by participating in the core course microeconomics and passing the exams.
4. Students in the fast track may continue to the second year if they have an MSc diploma with a GPA of 7.5 or higher (for the ECTS in the MSc taken at the sending department), have an 8 or higher for the MSc thesis and have passed the Microeconomics core course and the Macroeconomics core course.
5. For students in the fast track all other regulations of Section 8 apply.

### **Section 10: *Final Articles***

1. Under special circumstances, the Examination Board may decide to deviate from the existing regulations and guidelines, and/or from the conditions to be imposed.
2. All cases not covered by this Regulation will be decided upon by the Examination Board.



### 3. Assessment report Tinbergen Institute master's thesis

<b>Name of student</b>	
<b>Student number</b>	
<b>Thesis title</b>	
<b>Major field</b>	
<b>Date (dd/mm/yyyy)</b>	

<b>Grade (30 ECTS)</b>	
------------------------	--

Name of the thesis supervisor(s)

(Name supervisor)                      Signature \_\_\_\_\_  
 Affiliation: \_\_\_\_\_

(Name supervisor)                      Signature \_\_\_\_\_  
 Affiliation: \_\_\_\_\_

Name of other committee members

(Name )                                      Signature \_\_\_\_\_  
 Affiliation: \_\_\_\_\_

(Name)                                      Signature \_\_\_\_\_  
 Affiliation: \_\_\_\_\_

Please complete the assessment form on the back side — this assessment form represents the opinions of the committee as a whole.

The completed form should be submitted to the TI secretariat by the supervisor or one of the committee members. A copy of this form will be given to the student.

At the same time this form is submitted, the supervisor will also submit the first page of the plagiarism scan report.

**This thesis has been scanned for plagiarism**

\_\_\_\_\_  
 Signature supervisor

**Important note to committee members:**

The grade for the MPhil thesis should also reflect the student's study and working skills: to what extent did the student demonstrate skills to organize a scientific research project? To what extent was the work process self-directed?

		Insufficient	Sufficient	Good	Excellent
<b>I. The Thesis</b>		weight			
	85%				
<b>Knowledge of the subject area and critical use of literature and sources</b>					
The research topic is relevant to the developments in the scientific field.					
The selection of literature and sources demonstrates familiarity with the research area.					
Literature and sources are critically analyzed.					
The student is capable of taking a motivated position.					
<b>Purpose and planning</b>					
The subject outline and research questions are clearly defined.					
The research questions are translated into an appropriate research strategy.					
<b>Research approach and methodology</b>					
The research methods are described and legitimized.					
The research methods are appropriate with regard to the formulated question.					
The research methods are applied in a correct manner.					
The research methods applied are state-of-the-art.					
<b>Presentation of results</b>					
The thesis has a clear and coherent structure.					
The presentation of the results is clear and convincing.					
The text is written in a fluent academic style and is easy to read.					
<b>Conclusions and potential</b>					
The conclusions are substantiated.					
The entire work reflects scientific thought and insight into the matter.					
The research results show potential for publication in an international peer-reviewed journal					
<b>II. Defense</b>		15%			
<b>Quality of the public defense of the thesis</b>					
The presentation has a clear and coherent structure					
The presentation gives a good synopsis of the thesis and its main results					
Questions are addressed in an appropriate way					

#### 4. Matrix learning outcomes and courses and Dublin descriptors related to learning outcomes of the TI MPhil program

##### Matrix learning outcomes and courses

Learning objectives	Year 1				Year 2	
	Micro Core	Macro/Finance Core	(Advanced) Econometrics	Mathematics, statistics, programming	Field courses	MPhil thesis
<b>1 Knowledge and understanding</b>						
Become knowledgeable about the core subjects of economics and the core research methodologies	X	X	X	X		
Acquire in-depth and systematic knowledge about a specific field of economic research					X	X
<b>2 Application of knowledge and understanding</b>						
Learn to make relevant contributions to the scientific debate					X	X
Learn to apply the knowledge and understanding, and problem solving abilities to new or unfamiliar economic problems and phenomena related to the field of study		X	X		X	X
Learn to compose theses/claims					X	X
Learn to formulate research questions					X	X
Learn to translate research questions into an appropriate research strategy					X	X
Learn to create and collect mathematical, empirical or experimental evidence able to prove or falsify a formulated thesis	X	X	X		X	X
Learn to write research papers in economics that can be submitted to international, peer-reviewed journals for publication						X
<b>3 Formulate judgments</b>						
Learn to be critical towards one's own convictions in light of (novel) scientific, societal and ethical insights					X	X
Learn to critically evaluate the research of others and to translate this criticism into constructive feedback					X	X
<b>4 Communication</b>						
Learn to report on complex research and research results, both in oral as written form	X	X	X		X	X
Learn to defend complex research to an audience of academic researchers					X	X
<b>5 Learning skills</b>						
Learn to read and understand in-depth scientific articles	X	X	X			
Develop an attitude to independently keep track of the developments in the field of specialization					X	X
Learn how to organize a scientific research project						X

## Dublin descriptors related to learning outcomes of the TI MPhil program

Dublin Indicators		TI Learning Outcomes	
<b>i.</b>		<b>i.</b>	
	have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with Bachelor's level, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context;		have an understanding of the core of economics— microeconomics, macroeconomics, and econometrics— that allows them to <b>a.</b> broadly read and understand the current scientific literature in economics and follow scientific debates across the economics sciences and <b>b.</b> successfully embark on independent study of specialized fields of economic research;
<b>ii.</b>		<b>ii.</b>	
	can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study;		have a sufficiently deep understanding of one field of economic research to allow them to a. actively participate in current scientific debates in this field and b. contribute original research to this field, initially under academic supervision;
<b>iii.</b>		<b>iii.</b>	
	have the ability to integrate knowledge and handle complexity, and formulate judgments with incomplete or limited information, but that include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments;		be able, initially under academic supervision, to write research papers in economics that can be submitted to an international, peer-reviewed journal for publication;
<b>iv.</b>		<b>iv.</b>	
	can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously;		be able to present and defend their research to an audience of academic researchers;
<b>v.</b>		<b>v.</b>	
	have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.		have an attitude to independently keep track of the developments in the field of specialization.

## **Appendix V**

### **Student outflow**

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1. Program design and success rates
2. Position of students with TI diploma
3. Results during PhD
4. Career after PhD
5. Overview of published MPhil theses





## Appendix V

### Student outflow

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#### 1. Program design and success rates

Tinbergen Institute's aim is that at least 80% of the entering students pass to the second year and complete the MPhil program. A secondary aim is that attrition is limited to the first year of the program.

The first year of the educational program is designed to stimulate students to work on the course material regularly. The examination schedule in the first year is very rigorous: each course block (4 ECTS) involves seven weeks of lectures and classes, followed by a sit-in exam in the eighth week. Regular graded homework assignments induce students to study the course material from "day-one" of the course (instead of only preparing for the exam). For first-year courses, no retakes are scheduled in the same year: students who fail a course block must retake the course in the second year. Only under exceptional circumstances (e.g. verifiable illness of a student) will the Examination Board consider granting students a retake during the same academic year. Within course sequences and under certain conditions, one '5' may be compensated by a grade of '7' or higher. In a program without retakes, the compensation rule protects students with an overall good performance from getting stuck in the program due to an incidental failure.

For second-year courses, entrance requirements apply: access to second-year courses is denied to students who have not completed at least 48 ECTS in the first year. On top of that, specific requirements apply for each separate field course. All examination results are valid for 29 months. The intention of this stipulation is twofold: first, it helps familiarize students with a work pace required for a successful PhD track; second, it discourages students who are making little progress from continuing in the program.

**Table 1.**  
**Dropout and success rates for the cohorts 2008-2011; duration until MPhil diploma**

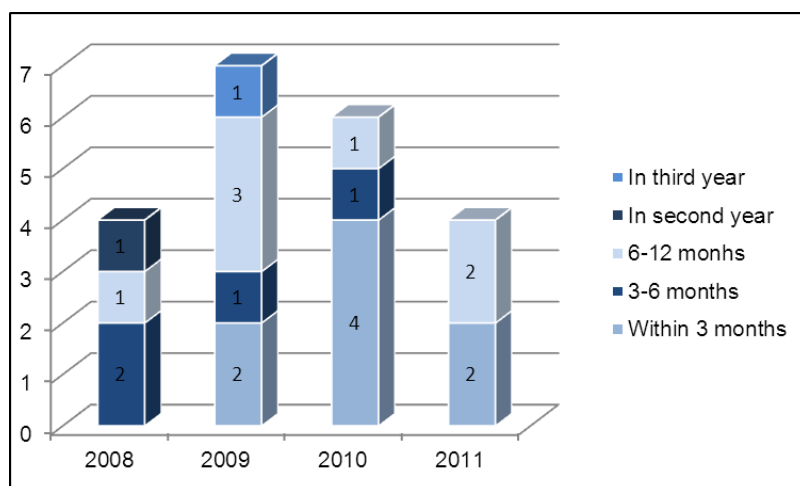
	Dropout rates	Success rates	Average duration until diploma in months	Number of students needing 30 months
2008	14,3%	85,7%	25,7	5
2009	18,4%	81,6%	24,1	1
2010	16,2%	83,8%	24,5	1
2011	14,8%	85,2%	24,4	0

Table 1 provides the success and dropout rates for the cohorts 2008-2011. Final percentages for the cohorts 2012 and 2013 are not yet available.

The average duration until diploma is just over 24 months for the cohorts 2008-2011. Some students have a small delay due to the absence of one or more members of the MPhil thesis committee during the summer, and defend their thesis in September. In a few cases, students needed the maximum amount of 30 months to finish the program (see Table 1; in one case, delay was caused by a serious illness of the student). Finishing after more than 30 months is complicated because of the rule that exam results expire after 29 months. This means that the results of the first block of year one expire in March of year three, and students have to retake these examinations in order to complete the program and earn the degree. In exceptional cases, the Examination Board has decided to deviate from this rule and has extended the validity of exam results with a couple of months.

Dropping out of the program occurs for several reasons, but is in most cases due to unsatisfactory performance. Students who have earned less than 48 ECTS (out of 60) during the first year are usually advised by the Director of Graduate Studies to leave the program. Apart from withholding the TI scholarship, Tinbergen Institute has no instruments to prevent unsuccessful students from re-registering for the second (or even third) year of the program. Table 2 shows the duration until dropout.

**Table 2. Duration until dropout**

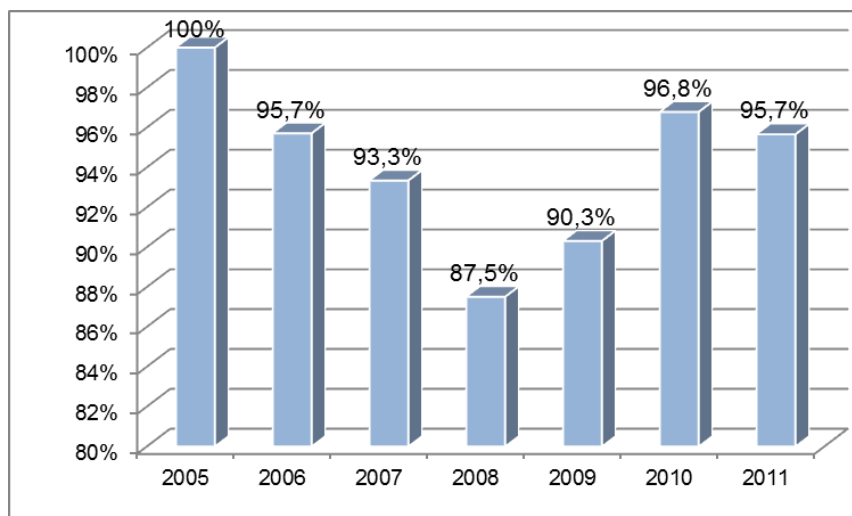


## 2. Position of students with TI diploma

Over 94% of the students who have completed TI's MPhil program continue in a PhD track, generally at one of the three faculties participating in Tinbergen Institute. Usually, the MPhil thesis supervisor also acts as PhD supervisor—and in most cases the MPhil thesis is transformed into a chapter of the PhD thesis. This gives TI students a head start in the PhD track, compared to students coming from other programs. Students who continued their academic career elsewhere took up PhD programs at Tilburg University (2), Georgetown University and Georg August University Göttingen. Since the aim of the MPhil program is to prepare students for PhD research, 94% of the graduates continuing in a PhD program is a satisfactory result.

Some students cannot or do not want to continue in a PhD track. These students have found positions in the financial sector, in consultancy firms or in government organizations. Half of them have research position.

**Table 3. Outflow in a PhD position (in %) for the cohorts 2005-2011**



### 3. Results during PhD

Below, Table 4 reports for each year group of MPhil students the duration until the actual PhD thesis defense date. Please note that the students of year group 2003 started to work on their PhD thesis from September 2005 onward; the year group 2004 from 2006 onward, and so on. The table shows that only a few students manage to defend their PhD thesis within three years. This is hardly surprising, since waiting for the results of the reading committee and planning a date for the defense is a lengthy process that easily takes more than four months. Another reason for delays is that students find a job before they defend their PhD thesis. This may actually be a sign that many of our students are attractive for employers.

Over the past years, between 50 and 60% of the TI students have defended their PhD thesis within four years. Others needed five or even more years to finish. The fact that a considerable number of PhD students experience delay is not a particular characteristic of TI PhD students, but seems to be a more general issue. The faculties have acknowledged this and are currently developing plans to offer PhD students a course that will help them to work more effectively. Also, the PhD monitoring at the faculties has been improved—for example, by the appointment of a PhD Director at the Economics faculty of Erasmus University. Tinbergen Institute will offer a writing course as a mandatory part of the MPhil program, which will bolster the writing skills of students in the MPhil as well as in the PhD phase of their studies. A writing course will also be offered to PhD students at the faculties. Dropout rates for PhD students who started with the TI MPhil program are relatively low.

**Table 4. Duration until PhD defense for TI MPhil graduates**

MPhil year group	Duration until PhD defense							Not yet finished	Dis-continued
	#	≤ 36 months	≤ 39 months	≤ 42 months	≤ 48 months	≤ 54 months	Total		
2003	8		25,0%	50,0%	50,0%	62,5%	75,0%		25,0%
2004	8			25,0%	50,0%	75,0%	87,5%	12,5%	
2005	14	14,3%	28,6%	42,9%	57,1%	75,0%	92,9%	7,1%	
2006	21		28,6%	42,9%	52,4%	57,1%	66,7%	33,3%	
2007	14	7,1%	14,3%	35,7%	57,1%	64,3%	64,3%	35,7%	

#### 4. Career after PhD

Tinbergen Institute has set up a program to improve the position of TI PhD students on the competitive international job market. Especially among Dutch students and supervisors, it is crucial to raise awareness of the importance of a thorough preparation for the international job market. Good placement of PhD students is not only beneficial for the students but also reflects well on Tinbergen Institute: a good placement record will attract more and better students to the TI MPhil program.

Tinbergen Institute has therefore appointed a Placement Director who organizes a training program for students who are in the final year of the PhD appointment. This training includes general guidance in the do's and don'ts, mock interviews and training of presentation techniques. Successful alumni give presentations of their experience on the international job market to an audience of MPhil and PhD students in any stage of their career. Tinbergen Institute has dedicated a separate budget to cover the travel costs for students who attend the international job market events. TI also supports the application process by taking care of the dispatch of the recommendation letters.

Tinbergen Institute keeps close track of future career developments of the TI MPhil-PhD alumni. This intention is facilitated and supported by the TI alumni association, which maintains relations with TI alumni all over the world.

In June 2013, Tinbergen Institute compared the careers of the TI MPhil-PhD alumni to the careers of the other PhD alumni of the three faculties. Though numbers are relatively small, and in most cases it is too early yet to say how the career of the alumni will develop, one observation could already be made: 70% of the TI MPhil-PhD students have their first position after the PhD defense in academia, as opposed to 52% of the other PhD alumni. Also, a count was made of the publication points for each alumnus by attributing points to each of their publications, based on the Eigenfactor ranking of the journal in which the publication appeared. Here the difference between TI and other alumni is negligible: TI MPhil-PhD alumni within academia had an average of 1.73 publication points versus 1.66 points for the other alumni within academia.

#### 5. Overview of published MPhil theses

##### Monique de Haan, MPhil graduate 2005

Monique de Haan, Birth order, family size and educational attainment, in: *Economics of Education Review* (Volume 29, Issue 4, August 2010, Pages 576–588)

##### Yevgeniy Stotyka, MPhil graduate 2005

Y. Stotyka, Joint Dominance: Mobile Telecommunications in the Ukraine, in: *World Competition: Law and Economics Review*, Vol. 30, No. 2, 2007

##### Stefan Trautmann, MPhil graduate 2006

(MPhil thesis split up in 3 articles)

Trautmann, S. T. (2009). A Tractable Model of Process Fairness under Risk, in: *Journal of Economic Psychology* 30, 803–813.

Trautmann, S. T. (2010). Individual Fairness in Harsanyi's Utilitarianism: Operationalizing All-Inclusive Utility, in: *Theory and Decision* 68, 405–415.

Trautmann, S. T. and P. P. Wakker (2010). Process Fairness and Dynamic Consistency, in: *Economics Letters* 109, 187–189.

Jonneke Bolhaar , MPhil graduate 2006

Jonneke Bolhaar, Maarten Lindeboom, Bas van der Klaauw; A dynamic analysis of the demand for health insurance and health care, in: *European Economic Review*, Volume 56, Issue 4, May 2012, Pages 669–690

Nalan Basturk, MPhil graduate 2007

Basturk, N., R. Paap and D.J.C. van Dijk, 2012, Structural Differences in Economic Growth: An Endogenous Clustering Approach, in: *Applied Economics*, 44(1):119-134.

Peter Exterkate, MPhil graduate 2008

Peter Exterkate, Dick van Dijk, Christiaan Heij, Patrick J. F. Groenen: Forecasting the Yield Curve in a Data-Rich Environment Using the Factor-Augmented Nelson-Siegel Model, in: *Journal of Forecasting*, Volume 32, Issue 3, April 2013, pages 193–214

Petr Sedlacek, MPhil graduate 2008

Petr Sedlacek, Inefficient Continuation Decisions, Job Creation Costs, and the Cost of Business Cycles, accepted for publication in *Quantitative Economics* (October 2013)

Paolo Zeppini, MPhil graduate 2008

Paolo Zeppini, Jeroen C.J.M. van den Bergh, Optimal diversity in investments with recombinant innovation, in: *Structural Change and Economic Dynamics*, Volume 24, March 2013, Pages 141–156

Jona Linde, MPhil graduate 2008

Jona Linde, Joep Sonnemans, Social comparison and risky choices, in: *Journal of Risk and Uncertainty*, February 2012, Volume 44, Issue 1, pp 45-72.

Bernd Schwaab, MPhil graduate 2009

Siem Jan Koopman, André Lucas, Bernd Schwaab: Modeling frailty-correlated defaults using many macroeconomic covariates, in: *Journal of Econometrics*, Volume 162, Issue 2, June 2011, Pages 312–325.

Tim Salimans, MPhil graduate 2009

Tim Salimans, Variable selection and functional form uncertainty in cross-country growth regressions, in: *Journal of Econometrics*, Volume 171, Issue 2, December 2012, Pages 267–280

Te Bao, MPhil graduate 2009

Te Bao, Cars Hommes, Joep Sonnemans, Jan Tuinstra: Individual expectations, limited rationality and aggregate outcomes, *Journal of Economic Dynamics and Control*, Volume 36, Issue 8, August 2012, Pages 1101–1120

Yun Dai, MPhil graduate 2010

Yun Dai, Sebastian Gryglewicz, Han T.J. Smit, Wouter De Maeseneire, Similar bidders in takeover contests, in: *Games and Economic Behavior*, Volume 82, November 2013, Pages 544–561

Dávid Kopányi, MPhil graduate 2011

Mikhail Anufriev, Dávid Kopányi, Jan Tuinstra, Learning cycles in Bertrand competition with differentiated commodities and competing learning rules, in: *Journal of Economic Dynamics and Control*, Volume 37, Issue 12, December 2013, Pages 2562–2581





## **Appendix VI**

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**Evaluation Report of the International Peer Review Committee,  
November 2010**





**Tinbergen Institute:  
Evaluation Report of the International Peer Review  
Committee**

**November, 2010**

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## **Part I: Assessment of the Institute**



## **1. Introduction**

### **1.1 Peer Review Committee: Membership and organisation**

In March 2010 the Review Committee was asked to conduct a peer review of Tinbergen Institute following the guidelines provided by the Standard Evaluation Protocol. The Review Committee consisted of the following persons:

Richard Blundell, Chair (University College London),  
Robert Engle (New York University Stern),  
Andreu Mas-Colell (Barcelona Graduate School of Economics),  
Torsten Persson (Stockholm University),  
Tony Venables (Oxford University),  
Ina Putter, Secretary (VU University Amsterdam)

The review would look at the period 2005-2010 and would evaluate the overall Institute, the Graduate programs and the Research programs.

The Committee was sent a TI self-assessment report entitled “Past to the Present: View towards the Future” on which to base its review. The committee met by conference call in early September and then conducted a site visit on September 16 and 17. The first day of the site visit was spent at the TI site in Amsterdam and the second day at the TI site in Rotterdam (see appendix C for the complete schedule of the meetings).

The committee was also provided with details of the program of the graduate school, teaching loads of the fellows, the placements of recent graduating students, the details of fellows appointed to the TI, the QANU Review document 2009, background documents on the legal status of the TI and the relationship with the DSF.

It was agreed a final written report would be submitted by October 2010.

## **1.2 The Tinbergen Institute: A brief description**

Tinbergen Institute (TI) is founded in 1987 as a joint initiative of the School of Economics of Erasmus University Rotterdam, the faculty of Economics and Econometrics of the University of Amsterdam, and the faculty of Economics and Business Administration of VU University Amsterdam. TI was first accredited as a Research School by the Royal Netherlands Academy of Arts and Sciences (KNAW) in December 1996. The accreditation has been renewed in 2001 and 2006. Erasmus University acts as secretary of TI.

The mission of the TI is to further improve the quality and international visibility of economic research at the three economic departments it represents. To accomplish this, the Institute agreed to two objectives:

1. Facilitate and stimulate fundamental and applied economic research that meets the highest international standards in the following four related research themes:
  - A. Institutions and Decision Analysis
  - B. Financial and International Markets
  - C. Labour, Region and Environment
  - D. Econometrics and Operations Research
  
2. Offer an MPhil program and PhD training in these areas of economics, econometrics and finance to the highest of international standards, in order to attract the best young scholars in the Netherlands and worldwide.

The three economics faculties participating in TI have delegated the organization of the joint research master program to TI. The corresponding research master program has been accredited by the Accreditation Organization of the Netherlands and Flanders in 2003 and 2009. TI decides on the admission of students and the curriculum, selects the lecturers in the program, and monitors student progress.

The TI makes a strict selection among the existing faculty members of the three departments for the position of TI Fellow. Publication records in international leading scientific journals and citation scores play an important role in the selection process. The faculties have agreed to honor research time for TI's selected fellows.

Budgets for conferences, workshops, seminars, visits and summer schools are allocated to TI. The Institute has two locations: one in Amsterdam and one in Rotterdam.

Since 2009, TI has a formal partnership with the Duisenberg School of finance. Together with Duisenberg School, TI organizes an MPhil and PhD track in finance.

## **2. The assessment of the institute overall**

In this review, the committee has followed the guidelines in the SEP<sup>1</sup>. In so doing, we provide a general assessment of the institute overall as well as a separate assessment of the research groups individually.

During our visit, we had extensive discussions and meetings with the most important stakeholders of TI, including PhD and MPhil students, Research Fellows, TI Directors, TI Board members and the Deans of the three parent universities. Without exception, we found an extremely positive attitude towards the TI. All stakeholders expressed a strong desire to work together in consolidating the important achievements of the TI and take the institute to an even higher position at the world stage.

### **2.1 Quality**

#### *2.1.1 Quality and scientific relevance of the research*

Research at the TI is separated in to four related areas:

- A. Institutions and Decision Analysis
- B. Financial and International Markets
- C. Labour, Region and Environment
- D. Econometrics and Operations Research

The research programs form a creative and coherent base for the development of the very best research in the three institutions. They provide an effective mechanism for bringing together the top researchers in the three departments.

In each of these areas, we found excellent research output, strong interaction between the fellows, and a strong ambition to maintain and improve TI's position on the world stage.

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<sup>1</sup> Standard Evaluation Protocol 2009-2015, the protocol for research assessment in the Netherlands.



Our judgment of quality and impact is in line with the overall evaluation conducted by the QANU in 2009. The research is of an internationally outstanding quality. It has a clear vision and is highly relevant to the needs of society. We strongly support reaccreditation.

In Part II of this report we consider each of the research groups and try to give advice on how they could develop their activities even further. This does not in any sense detract from our overall conclusions on the international quality, vitality and vision of the research program at the Tinbergen Institute.

Each of the research groups is contributing at a high level to quality research. They are extremely well organized and show high levels of productivity, vitality and visibility.

The new location of the Amsterdam TI branch should bring better integration with the Duisenberg School of Finance. There will be improved facilities and easier travel to Rotterdam.

Our recommendations are aimed at generating further excellence in each of the research programs and in building the TI brand in research.

First, to further build the interaction between fellows and research students we suggest that each of the programs formally organize a weekly Research Seminar Day at a TI location and encourage students and the speaker to meet and discuss ideas around the focal point of the seminar.

Second, to make sure all research active faculty members at the three institutions feel they belong to the institute, we suggest that TI is involved with tenure-track appointments from the outset. New tenure-track appointments could be made jointly between TI and the parent departments. Appointment to TI Fellow would then be lined up with tenure in the respective department. This already happens to some extent across the three faculties. To foster brand name and a common goal, all publications should be signed jointly with department and TI.

Third, to make sure the TI is involved in all appointments. This would enhance the link between the TI and the new hires in the three departments. Such a link would bring benefits to the Institute overall and the three parent institutions allowing greater visibility and the ability to select among the best candidates on the international job market.

Finally, to guarantee TI Fellows a lower teaching load and more research time. To ensure that TI Fellows find it attractive to teach TI courses, we would suggest the compensation in terms of teaching

hours for TI courses is re-examined. There may be a good case for adjusting the balance in favor of TI course hours vs. other teaching hours.

### *2.1.2 Leadership*

Tinbergen Institute is governed by a Board consisting of five members. Three members are internal members i.e. appointed at one of the departments participating in TI. Usually, the research director of the department is also TI Board member. Two members are external members; they hold high positions outside academics, but are familiar with the academic world and hold at least a PhD. The Board decides on the main policy issues of the institute, determines the admission criteria for research fellows and appoints members of several of TI's governing boards. The Board members are appointed by the deans of the three participating departments.

TI is managed by the General Director and the Directors of Graduate Studies. As a team, the Directors are responsible for the day-to-day operations of the institute, and are accountable to the Board. The Directors are appointed by the dean of the EUR, in consultation with the deans of the other TI departments, for a period of five years.

The Admission Board decides on TI's admission criteria for the MPhil program and on the selection of students. It has representatives of the three participating departments.

The Educational Board provides advice to the Board of the TI on all matters concerning the educational program. It consists of 6 members: three students and three members of TI's teaching staff.

The Research Council of TI consists of the coordinators of the four research programs in TI. The coordinators advise the Board on all issues concerning research. They are appointed by the TI Board.

The Examination Board is responsible for and supervises the organization and coordination of the exams. Each department selects its own representative.

Finally, there are three coordinators Core Courses, and 13 Field coordinators.

The management and leadership structure is effective and works well. All the participating departments are well represented in the management of TI.

The mission of the TI is to further improve the quality and international visibility of economic research at the three economic departments it represents. To accomplish this, TI agreed to two objectives:

1. Facilitate and stimulate fundamental and applied economic research that meets the highest international standards in the following four related research themes:
  - A. Institutions and Decision Analysis
  - B. Financial and International markets
  - C. Labour, Region and Environment
  - D. Econometrics and Operations Research
  
2. Offer an MPhil programme and PhD training in these areas of economics, econometrics and finance to the highest of international standards, in order to attract the best young scholars in the Netherlands and worldwide.

Overall, the committee was impressed by the way the TI is conducting its activities. These activities are of a high quality. They show a high level of productivity by the researchers and a vitality, visibility and relevance that accord well with the mission of the TI. We found a very collegial atmosphere operating among the research fellows. The students were also very satisfied with the teaching program and the research supervision. We judged the graduate programs to be excellent. We were also favorably impressed by the successful joint activities with the recently established DSF. We feel that this development provides a signpost towards further innovation at TI.

The Strategy of the TI is the following:

1. The MPhil program is taught by TI's own fellows and outside lecturers coming from universities that are leading in the profession. The quality of the program is constantly monitored and subject to improvement.
2. PhD students are supervised by fellows who work at the frontiers of economic knowledge.
3. The admission procedure for the TI Fellowship is based on strict criteria such that only the best of the junior and senior faculty members of the departments participating in TI are selected.
4. TI fellows enjoy a guaranteed research time and are very well qualified to obtain outside funding for research from the Netherlands Organization of Research and other external funding agencies.
5. Networks between TI fellows are strengthened through a set of focused research themes.
6. Continued efforts towards building strong external, international, partnerships. The partnership established with the Duisenberg School of finance creates the opportunity for a leading position in the field of finance.

The TI has made substantial progress over the relatively short period of its existence. It took seriously the recommendations of the last visiting international peer review, and now acts as a focus for excellence in research and graduate teaching across the three universities.

### *2.1.3 Academic reputation*

According to the TI report “Path to the Present, View towards the Future,” TI fellows have a very good academic reputation. The fellows score well on national and international publication and citation rankings, and have gained awards, grants, and honorary positions.

The TI is now in a position to become a centre of world-class research to rival other leading research groupings in Europe and North America. Success in this endeavor would strongly enhance the position of research and graduate teaching in economics and finance in the Netherlands, in general, and the three departments, in particular.

### *2.1.4 Resources*

TI does not employ its fellows. For the quality of potential fellows, TI depends on the hiring decisions of the three departments. To receive the status of TI fellow researchers must hold a PhD, they must have a position at one of the departments participating in TI, and they must have excellent academic performance. To attract new young talent, the TI has created two new categories: junior fellows and candidate fellows.

During the past few years, TI initiated a process of obtaining external funding for TI broadly, and more in particular, for scholarships. The efforts of TI’s external board members were instrumental for the establishment of the Duisenberg School of Finance (DSF) in 2008.

Obtaining outside funding is becoming more and more important, in particular since the recent and announced restrictions in many European countries including the Netherlands. TI is aware that she has to play a more important role in stimulating fellows and clusters of fellows to obtain such outside funding near the future.

The review committee recommends three key courses of action:

First, the TI should aim at generating independent financial resources. It should set up a small development office to keep close track of its alumni, to develop the TI brand, and to seek out creative ways of generating income. A program of specialized courses directed at business and government researchers in the key fields of the TI could be a very attractive income-generating option. Such

courses would also serve to enhance visibility of the TI brand among researchers in key policy and business positions. The overall aim would be to provide a stream of independent finance, allowing TI to supplement its fellows and graduate students. TI may also wish to reconsider its current legal status to enable the full exploitation of independent funding.

Second, all tenure-track appointments at the three departments should be joint with a junior and candidate fellow appointment at the TI. Junior positions at the departments would be advertised this way and job-market seminars would be held jointly with the TI. We see this as a mechanism to widen the field of quality international applicants. The TI, in conjunction with the three departments, should be on the international job market each year. All publications should be signed jointly with department and TI.

Third, the allocation of students to supervisors should be directed by the TI. In line with this, financial resources for graduate students should be pooled across the three departments and allocated by the TI.

#### *2.1.5 MPhil and PhD program*

The graduate program consists of the research masters and the PhD. There are two tracks: the Economics track and the, more recently established, Finance track. Newly admitted students enter on a common core of taught courses in the first year of the MPhil program, and then select second-year courses from a wide range of fields.

The research master program is taught by the best researchers in economics and finance of the three universities participating in the institute and by internationally renowned guest lecturers. Students are carefully selected from a large international pool of applicants. Each year at most 45 students are admitted and thorough selection is part of the admission procedure. Students who pass the final examination of the MPhil program are entitled to the in the Netherlands legally acknowledged degree “Master of Science” (MSc).

Tinbergen Institute's research master program (MPhil program) is a gateway to PhD thesis research. All students who successfully completed the program and wished to continue in academics have transferred to a PhD position. The PhD program takes three years and leads to a PhD degree. These three years are primarily spent on writing research papers for the PhD thesis and on participation in international conferences, workshops, and seminars.

Tinbergen Institute runs its own scholarship program for master students, sponsored by the economics departments and the Duisenberg School of finance. PhD positions are fully paid positions with a good salary.

### ***The MPhil program***

We conducted a detailed assessment of the MPhil program in Economics and the new track in Finance. We examined course content, quality of teaching, quality of student selection and student satisfaction. In all aspects of our assessment, we found the programs to be of an excellent international standard. The success rates for MPhil graduates are high.

The medium-term aim for the TI MPhil program is to have entering cohorts of 30 students in the Economics track and 8 students in the Finance track. This goal is close to being fulfilled and provides a solid base for the breadth and quality of courses on offer. It would be quite reasonable to see student numbers increase over the coming few years, especially in Finance.

During the visit we met with a range of current and past students from the MPhil program. We were impressed by the mature way in which they approached their studies. The courses appear to be challenging but well designed for a highly selected group of research-oriented students.

The teaching program was sufficiently flexible to allow the smooth integration of new areas of teaching, behavioural economics being a good example.

The establishment of the three new Tinbergen Lectures series and their inclusion in the graduate course program is an important and creative development, bringing in top external researchers to deliver the lectures and increasing the visibility of the TI graduate program to the wider world.

### ***The PhD program***

The PhD program at TI provides excellent research training and supervision. During the visit we met with a group of first, second and final-year students. Some of these students had not attended the MPhil. We were impressed by their approach to research.

There has been good progress in the matching of students to potential supervisors since the last peer review. This matching is now organized during the second year of study. The biggest remaining constraint concerns the coordination of financial resources with the matching of students to supervisors, a constraint that has been highlighted recently by the financial difficulties at one of the

parent departments. However, we feel that if the TI is to be fully effective in generating the best match of students to fellows it must have control of resource allocation. We therefore recommend that the three institutions act to pool financial resources for PhD study and allow TI to allocate according to research quality and productivity.

This process would be easier to realize if the TI was in a position to add its own funds to the resources available for PhD students. For students in the finance track, the DSF has managed to generate external funding for such purpose. The committee encourages TI to follow a similar course. Even if the TI were only able to provide a small share of the resources for PhD study it would nonetheless provide the catalyst for TI being more formally involved in the control of funding to students in the TI graduate program.

Alongside the newer MPhil-PhD (2-3) graduate program, a substantial proportion of students follow the older style (1-4) PhD. The latter students enter a four-year PhD after having completed a single-year Master of Science. These masters have a long tradition and some -- most notably the Master in Econometrics -- are highly sought after in the job market. Despite this, the background training is not sufficient for PhD study at TI and many students follow a selection of additional courses from the MPhil program. We believe that this practice should be enhanced and formalized. Our recommendation would be that all students pursuing a PhD at TI successfully complete the MPhil.

We can see an argument for allowing exemptions for courses taken in the Masters. In special circumstances, we could even envisage students entering directly to the second-year MPhil, but with the proviso that they have satisfied requirements on the key first year courses (or equivalents). In this respect, one might imagine an "honors" level Masters to enhance the existing Masters courses with courses from the first-year of the MPhil, to make sure gaps were filled before entry in the second year MPhil. This way the students would retain the Masters qualification on their CV.

Despite such a possibility, many students may wish to enter the MPhil after completing their masters. This is, in fact, the norm in leading European and North American graduate programs. Currently, Dutch law appears to discriminate against domestic students following this norm. Specifically, Dutch students who have completed a master degree are denied eligibility to a further two years of funding, which would be required for the 2+3 year (MPhil + PhD) program. A change in law gives universities the option to charge Dutch students with a master degree a higher tuition fee. So far, the departments have charged all Dutch students a fee equal to the legal tuition fee paid by regular master students. We strongly urge TI and the three departments to continue to not discriminate TI students based on degrees obtained.

Under current practice, the link with the TI weakens once students have moved from the MPhil program to their PhD studies. We think this is to the disadvantage of the students and the TI alike. We suggest a number of ways in which students could maintain a closer attachment to the TI throughout their studies. There are three key suggestions.

The first is to organize a regular research day, preferably weekly, at the TI in each of the four TI research areas and encourage PhD students and fellows to attend. This could be coordinated with the research-group seminars to provide interaction between students, seminar speakers and Fellows.

Our second suggestion is that TI should look after the job-market placements of all TI graduates. It should coordinate their job-market preparation. Bringing all TI PhD students together to help with their job-market papers and presentations, CVs, and help with interviewing skills would have obvious returns to scale and scope.

Our third suggestion is that students be encouraged to attend job-market seminars of applicants to the positions at TI and the three departments. Exposing the TI PhD students to the best young researchers on the academic job market is one of the most effective ways for them to learn about the way the job market works and about new exciting areas of research. Together with coordinated job-market preparations, exposure to the other side of the market would also help to put productive social pressure on students to contemplate the option of looking for an international academic job.

Our fourth suggestion is that those PhD students who have a Master of Science are recommended to complete the full MPhil requirements. In relation to this, a change in law gives universities the option to charge Dutch students with a master degree a higher tuition fee. So far, the departments have charged all Dutch students a fee equal to the legal tuition fee paid by regular master students. We strongly urge TI and the three departments to continue to not discriminate TI students based on degrees obtained.

## **2.2 Productivity**

### *2.2.1 Productivity strategy*

TI does not employ its fellows; however, TI does play an informal role in faculty hiring. TI appears to have an enormous positive influence on the three participating institutions because of its role as the standard setter for research performance. Researchers must be productive to be able to become a TI fellow.



### *2.2.2 Productivity*

The productivity of TI fellows is high. In 1996-2000 TI fellows produced 79 papers in top journals; in 2001-2005 there were 171 papers in top journals, with a 33% increase of TI fellows. For the period 2005-2010 again a substantial increase occurred in output with 260 papers in top journals. Beside of these publications, fellows produce a great number of other paper journals, chapters, books and professional publications.

Each of the research groups is contributing at a high level to quality research. They are extremely well organized and show high levels of productivity, vitality and visibility.

## **2.3 Relevance**

### *2.3.1 Societal relevance*

The research of TI fellows is of an internationally outstanding quality. It has a clear vision and is highly relevant to the needs of society. Most of the research has direct relevance to policy makers and other decision makers. A great number of fellows undertake advisory work in the public and private sectors.

The research master and graduate program is highly relevant to society's needs. The research master is a gateway to PhD thesis research. All students who successfully completed the program and wished to continue in academics have transferred to a PhD position.

## **2.4 Vitality and feasibility**

### *2.4.1 Strategy*

The main future ambition of TI is to remain amongst the leading graduate schools in economics in Europe and to belong to the top 30 schools in the world. This will be done by pursuing its mission and core strategy fully: Constant improvement of the MPhil program that is embedded in and supported by the research of fellows working on the frontiers of economic knowledge.

TI aims to further increase its visibility through the following measures:

1. Broadening its partnership with DSF
2. Creating more networks with leading universities
3. Develop a visitor program for high quality researchers

The review committee thinks that by becoming a true partner to the constituent departments in recruiting students, matching students to supervisors and in hiring research faculty, TI can be the catalyst to launch economics teaching and research in the three departments towards the very top in Europe and the world.

#### *2.4.2 SWOT-analysis*

In carrying out this review, the committee has seen their remit as examining the strengths and weaknesses of the TI, and giving guidance to further improvement. Their aim has been to give practical advice on how to maintain and enhance the TI's position on the world stage.

The committee found the graduate program to be excellent. It provides teaching and research training at a level equivalent to leading institutions worldwide. It is highly relevant to society's needs and is efficiently managed. It is thoroughly deserving of re-accreditation. The four research programs perform all very good to excellent. We fully support the QANU research review of 2009.

In our evaluation we gave recommendations which inevitably give more control to the TI. However, we believe the TI has reached a level of maturity and has established a sufficiently strong track record that the changes we recommend would benefit all the parties involved. Indeed, in our discussions with senior members of the TI and with the Deans of the three institutions, we found very strong support for the broad direction of our recommendations.

#### *2.4.3 Robustness and stability*

Research facilities at TI and the participating departments are good. Concerning financial resources, it has become more and more important to attract external funding since the participating departments are facing budget restrictions. TI should aim at generating independent financial resources, allowing TI to supplement its fellows and graduate students. TI may also wish to reconsider its current legal status to enable the full exploitation of independent funding.

The number of fellows of TI has increased from 74 in 1996 to 135 in 2010. Recently, TI is attracting new young talent by introducing junior fellows and candidate fellows. The committee recommends that all tenure-track appointments at the three departments should be joint with a junior and candidate fellow appointment at the TI.

In the number of incoming students over the years there has been some fluctuation. The annual capacity of the MPhil program has increased from 30 to about 38 positions due to the introduction of the Finance track. The number of applicants has increased the recent years thanks to the improved scholarship program and TI's reputation. The number of applicants increased from 115 in 2007 to 243 in 2010. The drop-out rates have been stable around 20%.

The graduation rates show that the MPhil program has been successful in preparing candidates for a PhD position. Almost 50% of TI PhD graduates stay in academics.

The committee recommends that TI should look after the job-market placements of all TI graduates. It should also coordinate their job-market preparation. Beside of that, TI students should be encouraged to attend job-market seminars of applicants to the three departments.

The new location of the Amsterdam TI at the financial centre of Amsterdam should bring better integration with the Duisenberg School of finance. There will be improved facilities and easier travel to Rotterdam. Our recommendations are aimed at generating further excellence in each of the research programs and in building the TI brand in research.

### **3. Conclusion**

TI has reached the stage to become a truly world class institution attracting the very top students and researchers in economics and finance from around the world. The research masters and graduate programs are of the very highest quality. The research programs form a creative and coherent base for the development of the very best research in the three institutions. They provide an effective mechanism for bringing together the top researchers in the three departments.

By becoming a central component in recruiting students, matching students to supervisors and hiring research faculty, TI can be the catalyst to make economics teaching and research in the three departments at VU University, University of Amsterdam, and Erasmus University of Rotterdam at the very top in the world.

In summary our key recommendations are:

- TI should aim at generating independent financial resources.
- All tenure track appointments at the three departments should be joint with a junior/candidate fellow appointment at the TI.
- The allocation of students to supervisors should be directed by the TI and the resources for these students should be pooled across the three institutions.

- Each research program of the TI should organize a regular research seminar day for PhD students and Fellows.
- TI should look after the job market placements of all TI graduates. It should also coordinate their job market preparation.
- TI students should be encouraged to attend job market seminars of applicants to the three departments of the TI.
- PhD students who have a Master of Science should be encouraged to complete the full MPhil requirements.



## **Part II Assessment of the Research Programs**



## **A. Institutions and Decision Analysis**

Program: **Institutions and Decision Analysis**

Program coordinators: Joep Sonnemans and Otto Swank

Assessments:	Quality:	4.5
	Productivity:	4.5
	Relevance:	4.5
	Viability:	4.5

### *Short description*

Research themes are: Theoretical and empirical analysis of individual and collective decision-making. Analysis of economic welfare, market structure and pricing. Game theory and the design of experiments. General equilibrium and disequilibrium.

TI has a large group of fellows (38 in total) implicated in the Institutions and Decision Analysis program, both at the theoretical and applied levels.

### *Quality*

There is significant strength in, among others, experimental economics, game theory (cooperative), computational economics/Operations Research, and decision theory broadly understood. Very good characteristics of the mix are that there is also strength in more applied areas, such as Health Economics and Industrial Organization, and that many of the participants in the group are quite versatile in their dedication to theoretical and applied work. The same is true of a very strong group in Marketing which, in addition, seems to interact well with other Fellows, both within the Institutions and Decisions Program and with other programs. The demographics of the program seem also adequate.

### *Productivity*

They publish well (12 and 73 publications in, respectively, the AA and A journals categories for the period 2005-10) and their presence is felt in the international scene, especially in Europe.

### *Relevance*

Some of the program's approach and results are mostly at the fundamental level, but it can potentially influence mainstream economics research as well as other fields of social and human sciences. Some group members undertake advisory work in the public and private sectors.



### *Viability*

In our judgment, the future of the program does not lie in any major departure. It makes sense to keep focusing on the areas of strength currently available. However, the probability of a substantial step forward would be enhanced by engaging in sustained efforts of recruitment (and its unavoidable twin: retention), both at the junior and the senior level and in a decidedly international perspective. The TI is, indeed, very well positioned to deepen the inventory of international leadership it already displays.

### **Conclusion**

The research group performs very good to excellent overall.

## **B. Financial and International Markets**

Program:	<b>Financial and International Markets</b>		
Program coordinators:	Albert Menkveld and Jean-Marie Viaene		
Assessments:	Quality:	4.5	
	Productivity:	4.5	
	Relevance:	4.5	
	Viability:	4	

### *Short description*

Research themes are: Analysis of the functioning of financial markets, the structure of financial systems and monetary policy. International finance, corporate finance and governance. Research on international trade and capital flows, with a focus on the changing position of developing countries and economies in transition. Analysis of international environmental policies.

This research area organizes some 30 researchers, with the largest group at the University of Amsterdam.

### *Quality*

The research by the University of Amsterdam group in Corporate Finance and Financial Systems is probably the most internationally visible, including Arnoud Boot's work on banking and regulation, and Enrico Perotti's work on privatization and governance structures. The other four groups, and the other two universities, also have a number of recognized fellows who work on interesting topics and continue to publish in high-quality outlets on a variety of topics in finance, macroeconomics, and international economics. The Financial and International Markets area also includes a couple of high-profile foreign members – Florencio Lopez-de-Silanes and Chaim Fershtman – with part-time appointments (at University of Amsterdam and Erasmus University Rotterdam, respectively).

### *Productivity*

The overall publication record since 2005 is good, with 8 papers in the Journal of Finance, 4 papers in top-five economics journals, and almost 50 papers in journals at the next quality level.

### *Relevance*

Some of the work done by this group is connected with important issues faced by policy makers dealing with development economics and financial problems. Some program members have been able to build strong contacts with international policy institutions.

### *Viability*

While the research of some of the more senior members in the area may have slowed down in recent years, there are good signs that a number of younger researchers, e.g., Ingolf Dittman (EUR) and Albert Menkveld (VU), are leading the way with new and exciting research in different subfields.

### **Conclusion**

The research group performs very good to excellent overall.

## C. Labour, Region and Environment

Program: **Labour, Region and Environment**

Program coordinators: Erik Plug and Cees Withagen

Assessments:	Quality:	4.5
	Productivity:	4.5
	Relevance:	5
	Viability:	4.5

### *Short description*

Research themes are: Analysis of the functioning of labor markets, with a focus on the Dutch labor market. Research on unemployment and vacancies, human capital and wages. Analysis of regional dimensions of economies, including mobility and transport within and between regions. Analysis of economic factors behind environmental problems, and policy responses to these. Research on the interaction between the labor market and mobility, and on the environmental effects of changes in transportation patterns.

This research area involves more than 25 Fellows and covers a fairly broad and diverse set of areas.

### *Quality*

There are good publications on the analysis of unemployment insurance and the development of related econometric methods, in the analysis of labor supply, active labor-market programs and job search, on consumer credit, on the interactions between education and health, on health care utilisation, on congestion charging and road pricing, on the allocation of water resources, on incentives for student achievement, and on the analysis of inequality.

### *Productivity*

The overall publication record since 2005 is good, with 7 papers in top quality journals and more than 60 papers in journals at the next quality level.

### *Relevance*

Although this research program covers a wide range of areas from the analysis of labor supply and job search through to road pricing, there do appear to be strong synergies between the work by different sets of fellows, e.g., interactions among those doing research on labor-market, education and health outcomes. There is also a strong link between the development of econometric methods to analyse the various policy questions and the development of applied theory models to help understand the various interactions, and to develop measures of welfare effects of labor-market, health, education and environmental policies. This is a potentially exciting aspect of this research program that could be

developed further and would form an excellent learning environment for research students, working in applied microeconomics, broadly defined.

*Viability*

Given the maturity of this group it would seem sensible to aim now for quality over quantity, and try to gain more visibility in the very top general journals.

**Conclusion**

The research group performs very good to excellent overall.

## D. Econometrics and Operations Research

**Program:** Econometrics and Operations Research

Program coordinators: Siem Jan Koopman and Albert Wagelmans

Assessments:	Quality:	4.5
	Productivity:	4.5
	Relevance:	4.5
	Viability:	4

### *Short description*

Research themes are: Research on the development and application of economic methods for quantitative analysis of economic phenomena. In particular, research on dynamic econometric models, diagnostic testing, simulation methods and quantitative models for operational decision-making.

The econometrics group has a long and exalted history. Starting from Tinbergen himself, the group includes many of the early pioneers of econometrics with strong connections to the Cowles Commission and the simultaneous equations model.

### *Quality*

Many of the faculty have high citation counts which imperfectly measure the impact of the program.

### *Productivity*

The publications of the Econometrics fellows are in a wide range of areas with prominent examples in financial econometrics, marketing and macro econometrics as well as more traditional topics in time series and Bayesian analysis. The top two tiers of publications include more than 50 papers. The fact that there is only one AA publication is largely a result of the classification of journals so that among the six AA ranked journals, only *Econometrica* is a venue for econometrics, and it is a challenging one. This is a very good rate of publication but not extraordinary.

### *Relevance*

Today, the econometrics and operations research fellows form a very good group actively pursuing research and teaching in the popular econometrics masters programs. Students find ready employment in the private sector and some remain in school to do a PhD. Unfortunately, the luster of the past is a tough standard. The group has some highly respected researchers who publish regularly in major journals and are invited to speak in international meetings.

### *Viability*

A promising trend is the collaboration between the econometrics group and several applied areas. In fact there are several fellows in applied groups who would be considered as econometricians. This appears to be the smallest of the groups but this may just be a natural consequence of the listing of fields. We believe that the inspiration from the past should make it possible for this program to achieve even more prominence in the international scene, and we encourage this effort.

### **Conclusion**

The research group performs very good to excellent overall.

## Appendix A: Curricula Vitae of the Committee Members

**Richard Blundell**, chairman of the Committee, holds the *David Ricardo Chair of Political Economy* at University College London where he was appointed Professor of Economics in 1984. He was Head of Department 1988 - 1992. He is a graduate of the University of Bristol and London School of Economics. Since 1986 he has been Research Director of the Institute for Fiscal Studies, where he is also Director of the ESRC Centre for the Microeconomic Analysis of Public Policy. He has held visiting professor positions at UBC, MIT and Berkeley. He was awarded a Leverhulme Personal Professorship in 1998. In 2004 he was President of the European Economics Association. He was President of the Econometric Society in 2006. He is President Elect of the Society of Labor Economics. He is also President elect of the Royal Economic Society. His main research interests are Empirical Evidence and Earnings Taxation, Mirrlees Review and Tax Reform, Consumption and Income Inequality, Revealed Preference and Consumer Behaviour.

**Robert Engle** is currently the Director of the newly created NYU Stern Volatility Institute and is the Co-Founding President of the Society for Financial Econometrics (SoFiE). Before joining NYU Stern in 2000, he was Chancellor's Associates Professor and Economics Department Chair at the University of California, San Diego, and Associate Professor of Economics at the Massachusetts Institute of Technology. He is Michael Armellino Professor In the Management of Financial Services. He was awarded the 2003 Nobel Prize in Economics for his research on the concept of autoregressive conditional heteroskedasticity. His main research interests are time series analysis with a long-standing interest in the analysis of financial markets. His ARCH model and its generalizations have become indispensable tools not only for researchers, but also for analysts of financial markets, who use them in asset pricing and in evaluating portfolio risk. His research has also produced such innovative statistical methods as cointegration, common features, autoregressive conditional duration (ACD), CAViaR and now dynamic conditional correlation (DCC) models.

**Andreu Mas-Colell** is a Professor of Economics (Catedrático) at the Universitat Pompeu Fabra, Barcelona, Spain and Chairman of the Barcelona Graduate School of Economics. Formerly he was Professor of Economics at Harvard University (1981-96) and Professor of Economics and Mathematics at the University of California, Berkeley (1972-80). He has been a Sloan Fellow and Guggenheim Fellow. He holds Honoris Causa Doctorates from the universities of Alacant, Toulouse, HEC (Paris) and Universidad Nacional del Sur (Argentina). He has received the Rey Juan Carlos I Prize in Economics (1988), the Pascual Madoz (National Research Prize), (2006) and the Premio Fundación BBVA Fronteras del Conocimiento en Economía, Finanzas y Gestión de Empresas (2009) - shared with H. Sonnenschein. In the year 2006 he served as President of the European Economic Association. From 2000 to 2003 he was Minister for Universities and Research of the Government of



Catalonia and President of the Advisory Scientific Committee of Telefónica Investigación y Desarrollo (2005-2008). He has been designated General Secretary of the European Research Council from July 2009 to 2011. His main research interests are abstract general equilibrium theory, the structure of financial markets, and pricing policy for public firms.

**Torsten Persson** is Professor of Economics of the Institute for International Economic Studies in Stockholm. He holds the Torsten and Ragnar Söderberg Chair in Economic Sciences. He is Centennial Professor of the London School of Economics, since 1999. He was a Director of the Institute for International Economic Studies, 1998-2009. He was a President of the European Economic Association in 2003. He was elected Foreign Honorary Member in 2001 of the American Academy of Arts and Sciences. His main research interests are Political Economics, Development Economics, Macroeconomics, International Economics, and Public Economics.

**Tony Venables** Tony Venables CBE is Professor of Economics at the University of Oxford where he also directs the Centre for the Analysis of Resource Rich Economies. He is a Fellow of the British Academy and of the Econometric Society. Former positions include Chief Economist at the UK Department for International Development, professor at the London School of Economics, research manager of the trade research group in the World Bank, and advisor to the UK Treasury. His main research interests are International Economics, Spatial Economics, Development Economics, and Resource Economics.

## 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**

### **Schedule site visit Tinbergen Institute**

#### **September 16, 2010**

##### **Tinbergen Institute Amsterdam**

- 10.00 AM First meeting committee (closed session)
- 12.00 AM Meeting with chair of the Board and Director (J.J.M. Kremers and H.K. van Dijk)
- 12.45 PM Lunch with Directors
- 2.00 PM Meeting with Dean of Duisenberg school of finance (D. Schoenmaker)
- 2.45 PM Meeting with MPhil students, MPhil graduates and PhD students
- 4.00 PM (*Public seminar Professor R.F. Engle*)
- 5.30 PM Departure for dinner with Board Tinbergen Institute
- 8.00 PM Royal Concertgebouw

#### **September 17, 2010**

##### **Tinbergen Institute Rotterdam**

- 9.00 AM Departure to Rotterdam
- 10.30 AM Meeting with research program co-ordinators and research fellows
- 12.00 AM Lunch with Deans of the economics departments participating in TI
- 1.30 PM Meeting with lecturers and co-ordinators of TI MPhil program
- 2.45 PM Meeting committee (closed session: first conclusions)
- 3.30 PM Meeting with Directors
- 4.30 PM End of the Meeting

## Appendix VII

### Advice of the assessment committee of the Royal Netherlands Academy of Arts and Sciences

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*Translated from the Dutch text.*

*This was the advice of the KNAW assessment committee for the re-accreditation of Tinbergen Institute's MPhil in economics in 2009.*

**The advice of the assessment committee of the Royal Netherlands Academy of Arts & Sciences (KNAW) on research masters' programs in social sciences on behalf of the Netherlands Dutch-Flemish Accreditation Organization (Dutch: NVAO) regarding accreditation of the research-oriented masters' program *Economics* taught at the Tinbergen Institute.**

#### **Procedure**

The assessment committee on research masters' programs in social sciences of the Royal Netherlands Academy of Arts & Sciences (Dutch: KNAW) has assessed the application for accreditation of the research masters' program *Economics*. The committee has based its advice on the criteria formulated on the 12<sup>th</sup> of October 2007, in the 'Accreditation Framework Program: domain specific elaboration for research masters' degrees', which has been determined by the board of the Dutch-Flemish Accreditation Organization (NVAO). The chairman of the committee, Prof. G.A. van der Knaap, has withdrawn from this assessment due to his affiliation with the Erasmus University, which is one of the three founders of the Tinbergen Institute. Upon request, Prof. W. Raub (Professor of Theoretical Sociology at the University of Utrecht), stated that he was willing to serve as chairman. The KNAW committee was reinforced by Mr. K. Breumer, staff member of the Advisory Body for Scientific and Technological Policy (Dutch: AWT) and alumnus of the research masters' program in cultural sciences at the University of Maastricht, who served as a student member of the committee.

The committee has studied the application file and has discussed it during an initial meeting held on the 8<sup>th</sup> of October 2008. Based on the application file, the committee has also decided to seek the external advice of a specialist who is knowledgeable about this program. On the 6<sup>th</sup> of October 2008, the advice was received and taken into account in the assessment. The application submitted to the committee induced it to obtain more information from the initiators. This dealt with a few questions concerning content and factual/organizational questions, including questions about the status of the new *Finance* track. In addition, six theses were requested and distributed among the committee members. The committee members studied and assessed them.

On the 14<sup>th</sup> of November 2008, the answers to the questions sent by letter were received. On the 18<sup>th</sup> of November 2008, the additional information was discussed by the committee, preceding the hearing at the

KNAW Bureau. On the same day the committee talked to the management of the program, the teachers and a delegation of students. Half of the students group that the committee interviewed was selected randomly by the committee's secretary.

The committee based its advice on the application file, the written clarification submitted in response to the committee's questions, the advice of the external expert and the hearing. For the record, the committee would like to add the following clarification with regard to the appendix in which the committee's advice is stated per subject and per aspect. According to the rules of the NVAO, a 'subject' can only be evaluated as 'satisfactory' or 'unsatisfactory'. The 'aspects' uses a four-point scale: unsatisfactory, satisfactory, good and excellent. Certain aspects, such as 'duration' can only be evaluated as 'satisfactory' and 'unsatisfactory'. In addition, a 'satisfactory' mark is considered the basic standard. According to the rules of the NVAO, this means that the program has complied with the high demands of research masters' and thus, it should not be interpreted as a disqualification. Marks of 'good' and 'excellent' are quite rare.

The research masters' *Economics* is offered by the research institute and graduate school Tinbergen Institute (TI). TI is part of the Erasmus University (EUR), the University of Amsterdam (UvA) and the VU University (VU). The research program connected to the masters' program has four themes: (1) *Institutions and Decision Analysis*, (2) *Financial and International Markets*, (3) *Labour, Region and the Environment* and (4) *Econometrics*.

## **Assessment**

### **Objectives**

The two-year masters' program *Economics* (120 ECTS) is a research masters' program with the initial objective of educating future doctorate students (PhD students). The program wants to meet the high standards of top universities in Europe and the United States. The application file indicates in detail that the program offered can be compared to programs of internationally recognized top universities. This is partially based on an external audit arranged by the KNAW in 2005. The program is currently competing with the top European programs and the ambition is to compete with the best American ones (Chicago and Harvard). The committee has taken notice of these ambitions with consent and it has great confidence in the program.

Starting in the 2008-2009 academic year, the *Finance* track has been offered from the first year of the *Economics* program. This track does not deviate more than 20 ECTS from the original program (in which this track was offered from the second year) and thus meets the requirement of the NVAO that new tracks in an accredited program do not deviate more than 40% from the existing program. The committee appreciates this initiative and also understands that this decision has been made in consideration of the competition. This track is partially financed by an external donor (Duisenberg school of finance). A separate director has been appointed for this track.

The committee has studied the information brochure about the programs in 2008-2009 and found it improper that both cover and text graphically present the Finance track as a unique research masters'. The committee would like to see this clarified.

The biggest difference with the initial application for accreditation of the new *Economics* program is the aforementioned *Finance* track. In addition, there are a few minor differences, such as no longer deploying the Netherlands Network of Economics (NAKE), because the TI does not consider its level in all aspects high enough for the TI's research masters'.

## **Program**

In the first year the program is divided into three components (each 20 ECTS): Microeconomics, Macroeconomics and Econometrics. In the second year the students choose a major, consisting of four courses (3 ECTS each) and a minor, consisting of three courses (3 ECTS each), along with other optional courses that together add up to 30 ECTS. The thesis counts for 30 ECTS and it should be publishable. The supervisors emphasize to the students that the program reserves a maximum of 6 months for writing a thesis. Together with the institute, the committee observed that time might elapse between completing the thesis and its publication.

The program is embedded in a very high-level research environment. The researchers of this institute work superbly on an international level, publish in the best periodicals, and have excellent reputations. There are excellent international contacts.

There is an active recruiting policy among the involved schools as well as abroad. The networks of professors and researchers are also used for this purpose. The website of the TI is maintained meticulously and offers extensive information about how to register. The admittance procedure is clear and adequate. The committee appreciates the good selection procedure. One out of two students receives a scholarship.

The students who are admitted are among the top 10% of students who sit the Graduate Record Examinations (GRE), with regard to the quantitative part of the test. Until now the TI has not offered any mathematics courses for students with a deficiency in that area, but the possibility is being considered. The program, the didactical concept, the teaching methods and examinations reflect the final qualifications to be attained from the program. The program exhibits good coherence and is focused on acquainting students with research and training them in this field.

The program considers it very important that the thesis will become part of the doctoral thesis. This is also pointed out to students during classes. This is indeed the case with almost 70% of the PhD students (2003 and 2004 cohorts).

## **Personnel**

The research groups involved in the research masters' program are on a very high level. The program is embedded in an academic environment of sufficient research capacity that has demonstrated a good to excellent level. Information from and discussions with students prove that teachers are role models for beginner researchers. The students are stimulated to conduct independent research. There is enough staff to realize this program with regard to content, education and organization.

## **Facilities**

The facilities are good. The university in which the student is registered (EUR, UvA or VU) takes care of the necessary facilities. There seem to be sufficient financial means. The *Finance* track is also financed externally.

## **Internal Quality Assurance**

There is a systematic approach to quality assurance. Evaluations are taken to heart and are a starting point for carrying out adjustments and improvements. The students with whom the committee spoke confirm this view.

Students and staff members are actively involved in the internal quality assurance. The universities are also trying to get the alumni to be more involved in the area of quality assurance.

## **Results**

An increasing number of students have registered for the program (from 53 students in 2004 to 115 students in 2008). During the initial year the performance rate was low: in 2003 an intake of 18 students with a 40% drop-out rate and in 2004 an intake of 13 students with a 50% drop-out rate. In all these cases the students left the program before the second year. The institute realizes that during its first two years (starting in 2003) the program was less effective than it had hoped it would be. The students of the 2005 cohort (intake of 17 students) were better informed about the program and went through a stricter

admittance procedure, which resulted in an 18% drop-out rate. The students of the 2006 cohort (intake of 32 students) had a drop-out rate of 30%. This is still more than the target figure of a maximum of 20%. The duration of the program is good. Most students graduate within 26 months and the committee compliments the institute for achieving this. If needed, the students are supervised intensively. There is also an incentive for the teachers to graduate students within the given time, because this leads the way to an appointment as PhD student. Each year 20-22 PhD appointments are available at the three schools to students who have successfully completed the Tinbergen Institute program. The students have to meet high demands; the level of the masters' thesis has to be high enough that it will be used in the PhD thesis. The theses that the committee has studied were of a high level and the committee agreed with the grades. The committee gave a positive assessment to the final level and it was pleased to observe that a large number of graduates move on to a PhD track.

### **Remarks**

The committee appreciates the carefully compiled application file submitted by the institute. This also applies to the submitted written answers to the additional questions of the committee as well as for the attendance of the delegations during the hearing.

### **Advice**

Based on the information it gathered from the self-assessment report, the answers to the written questions and the hearing, the committee has reached a positive final assessment with regard to the application.

In conclusion, the committee holds the view that the research masters' *Economics* meets the requirements set by the Dutch-Flemish Accreditation Organization, as formulated on the 12<sup>th</sup> of October 2007 in the 'Accreditation framework: domain-specific elaboration for research masters'.

Amsterdam, 23 January 2009

On behalf of the committee Assessment of research masters programs in Social Sciences

Prof. W. Raub  
Substitute chairman

J.W.Meijer,  
Secretary



**Appendix: Assessment overview of the KNAW committee Social Sciences**

Subject	Aspect	Assessment of the KNAW Committee
<b>1. Objective</b>	1.1 field specific demands	G
	1.2 level of research master	G
	1.3 orientation (university)	G
	<b>Assessment of subject</b>	<b>Satisfactory</b>
<b>2. Program</b>	2.1 demands (university)	E
	2.2 relation between objective and program	E
	2.3 coherency of the program	E
	2.4 study load	S
	2.5 intake	G
	2.6 duration	S
	2.7 coordination of form and content	G
	2.8 evaluation and testing	G
	<b>Assessment of subject</b>	<b>Satisfactory</b>
<b>3. Staff</b>	3.1 demands (university)	G
	3.2 number of staff members	S
	3.3 quality of the staff	E
	<b>Assessment of subject</b>	<b>Satisfactory</b>
<b>4. Facilities</b>	4.1 physical facilities	G
	4.2 study supervision	G
	<b>Assessment of subject</b>	<b>Satisfactory</b>
<b>5. Internal quality assurance</b>	5.1 evaluation of results	E
	5.2 improvement measures	G
	5.3 involvement of staff members, students, alumni and professionals in the field	G
	<b>Assessment of subject</b>	<b>Satisfactory</b>
<b>6. Results</b>	6.1 realized level	G
	6.2 performance of the program	G
	<b>Assessment of subject</b>	<b>Satisfactory</b>

E=Excellent; G=Good; S=Satisfactory; U=Unsatisfactory



## Appendix VIII

### Report mid-term review 2011

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#### Mid-term review Tinbergen Instituut

##### 1. Achtergrond en doel

De commissie heeft op verzoek van het Tinbergen Instituut op 6 december 2011 een zgn *mid-term review* verricht van haar onderzoeksmasteropleiding. Deze review vond plaats in het kader van de universiteitsbrede kwaliteitszorg van het onderwijs binnen de Erasmus Universiteit Rotterdam met als doel na te gaan of het TI op de goede weg is om in 2015 opnieuw geaccrediteerd te worden.

De opleiding van het TI is ingeschreven in het CROHO als één opleiding bij drie universiteiten (EUR, UvA en VU) en is in 2003 door de NVAO geaccrediteerd als een tweejarige research masteropleiding. De accreditatie is verlengd in 2009. In 2014 zal het TI weer een verzoek om verlenging van de accreditatie indienen bij de NVAO (het besluit wordt verwacht in 2015). Naar verwachting zal dit dan gaan om een 'beperkte opleidingsbeoordeling' aangezien de EUR, UvA en VU alle drie werken aan een instellingsaccreditatie van de NVAO. Mocht deze instellingsaccreditatie inderdaad worden toegekend, dan gaat de NVAO er van uit dat de kwaliteitszorg bij de hele instelling in orde is en kan de aanvraag voor de verlenging van de accreditatie minder uitgebreid zijn. Omdat het hier een beperkte opleidingsbeoordeling betreft, lag het niet binnen het bereik van de commissie om het TI masterprogramma op alle aspecten uitgebreid te beoordelen; zij heeft eerder een review 'light' gedaan.

##### 2. Samenstelling van de commissie

De commissie was als volgt samengesteld:

- Prof. Jean-Marie Viaene, hoogleraar Erasmus School of Economics (voorzitter);
- Drs. Rob de Crom, directeur onderwijs Faculteit Economische Wetenschappen en Bedrijfskunde VU (secretaris);
- Mevr. drs. Nadine Ketel, MPhil, onderzoeker VU/UvA, alumna TI (lid).

##### 3. Procedure

De commissie heeft voorafgaand aan de site visit de volgende, door de opleiding aangeleverde documenten bestudeerd:

1. Description of the Tinbergen Institute MPhil in Economics;
2. Statistics of the Tinbergen Institute MPhil program;
3. TI's policy on assessments and examinations;
4. Internal quality control;
5. Academic and examination regulations 2011/12;

6. Program of the graduate school, MPhil and PhD program in economics, econometrics and finance 2011/12;
7. Beoordelingskaders voor onderzoeksmasters, 14 maart 2011 (NVAO);
8. Advies van de beoordelingscommissie onderzoeksmasteropleidingen Maatschappijwetenschappen van de KNAW ten behoeve van de NVAO over de aanvraag om accreditatie van de onderzoeksgerichte masteropleiding *Economics* van het Tinbergen Instituut , 23 januari 2009;
9. Evaluation Report of the International Peer Review Committee, november 2010.

De commissie heeft vervolgens op 6 december 2011 een bezoek gebracht aan de instelling en gesproken met de onderwijsdirectie, de voorzitter van de opleidingscommissie en een delegatie van studenten.

Voorafgaand aan de gesprekken heeft de commissie in beslotenheid de documentatie besproken, aan de hand hiervan vragen opgesteld en onderling verdeeld. In navolging van het NVAO protocol<sup>1</sup> voor onderzoeksmasters heeft de commissie zich hierbij geconcentreerd op de volgende aspecten van de opleiding:

*Beoogde eindkwalificaties:*

Zijn de doelstelling van de opleiding duidelijk, zijn deze vertaald in eindkwalificaties en gerelateerd aan de zgn Dublin Descriptoren in overeenstemming met het NVAO protocol?

*Onderwijsleeromgeving:*

Stelt de onderwijsleeromgeving de toegelaten studenten in staat om het programma met succes af te ronden?

*Toetsing en gerealiseerde eindkwalificaties:*

Is toetsing transparant, adequaat en zo vorm gegeven dat eindkwalificaties getoetst worden?

*Formele procedures en interne kwaliteitszorg*

In het protocol voor de 'beperkte opleidingsbeoordeling' wordt kwaliteitszorg niet genoemd omdat deze in de toekomst afgedekt zal zijn door de instellingsaccreditatie. Op uitdrukkelijk verzoek van het Tinbergen Instituut is door de commissie toch aan dit aspect aandacht besteed omdat in een kleine en informele organisatie als het TI juist deze aspecten niet altijd de juiste aandacht dreigen te krijgen.

## **4. Beoordeling**

*a. Beoogde eindkwalificaties*

Het TI beoogt studenten een intensieve en hoogwaardige training te geven als researcher, met als doel door kunnen stromen naar een PhD positie. De commissie heeft geconstateerd dat de leerdoelen en eindtermen van de opleiding duidelijk en helder zijn beschreven. Zij zijn ook duidelijk en helder afgeleid van de Dublin Descriptoren voor masteropleidingen. De commissie heeft tevens vastgesteld dat deze eindtermen in voldoende mate waarborgen dat de opleiding aansluiting biedt op trajecten die opleiden tot het verkrijgen van de doctorsgraad en aansluiten bij de actuele eisen die in internationaal perspectief aan de opleiding worden gesteld.

In de gesprekken werd duidelijk dat alle eindkwalificaties in het onderwijsprogramma worden onderwezen en dat vrijwel alle worden getoetst. De commissie heeft hierbij twee opmerkingen:

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<sup>1</sup> NVAO Beoordelingskader voor onderzoeksmasters 14 maart 2011, p. 7-15,  
[http://www.nvaio.net/page/downloads/Beoordelingskaders\\_OZM\\_14\\_maart\\_2011.pdf](http://www.nvaio.net/page/downloads/Beoordelingskaders_OZM_14_maart_2011.pdf)

Dublin indicator IV stelt dat studenten “can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously.” Dat studenten hun onderzoek kunnen presenteren aan gelijken en specialisten, is duidelijk en wordt ook getoetst. Of zij dat ook kunnen ten overstaan van ‘non-specialist audiences’ is niet duidelijk. Het wordt in elk geval niet getoetst.

Dublin indicator V stelt dat studenten “have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.” Het is de commissie niet duidelijk geworden of dit gebeurt en zo ja, hoe. Het komt niet terug in de doelstellingen en lijkt eerder impliciet onderricht te worden: als een student deze vaardigheden niet ontwikkelt, valt hij vanzelf af.

*b. Onderwijsleeromgeving:*

Naar het oordeel van de commissie stelt de onderwijsleeromgeving toegelaten studenten in staat het programma succesvol af te ronden en de doelstellingen te bereiken. Tijdens de site visit is in dit kader speciale aandacht besteed aan selectie, aan duidelijkheid van regelgeving, aan studenttevredenheid en aan de matching van afgestudeerden met beschikbare PhD plaatsen op de deelnemende universiteiten.

De selectie van het TI is streng en concurrerend. De selectie is in lijn met wat gehanteerd wordt op vergelijkbare internationale instellingen. De selectie is de afgelopen jaren ook strenger geworden, wat zijn vruchten afwerpt bij de kwaliteit van de afgestudeerden. De commissie heeft hier waardering voor en ziet geen reden om hier verandering in aan te brengen. Tegelijkertijd wordt vastgesteld dat het op peil houden van de instroom van Nederlandse studenten steeds moeilijker wordt. Dit wordt deels veroorzaakt door het feit dat het niveau van het TI zo hoog is, dat aangenomen wordt dat Nederlandse studenten eerst een masteropleiding voltooid moeten hebben om dit niveau aan te kunnen. Het volgen van een tweede masteropleiding is echter duur (9200 euro per jaar, terwijl een eerste masteropleiding 1771 euro kost). Tegelijkertijd is in de gesprekken gebleken dat de opleiding moeite heeft om Nederlandse bachelorstudenten tijdens hun opleiding te bereiken en te interesseren voor het TI. Met ingang van 2012-2013 wordt in de bacheloropleidingen van de drie deelnemende universiteiten een door het TI verzorgd ‘honoursvak’ aangeboden, om studenten vroegtijdig bekend te maken met deze researchopleiding.

Wat betreft de regelgeving: deze is op papier duidelijk en transparant. Het TI is echter een klein en daardoor informeel instituut. Van regels kan afgeweken worden. Dat is op zich geen probleem, wanneer dit het verplaatsen van een college betreft. Het wordt wellicht wel een probleem wanneer de vorm van een tentamen veranderd wordt. In de woorden van de voorzitter van de opleidingscommissie: ‘het TI is nu volwassen geworden, het wat strakker en strikter hanteren van de bestaande regels zou de duidelijkheid ten goede komen.’ De commissie heeft de indruk dat strakker naleven van de regels onduidelijkheid en onzekerheid zouden kunnen voorkomen.

Studenten geven aan buitengewoon tevreden te zijn met de opleiding, maar stellen ook dat er zeer hoge eisen worden gesteld. De opleiding beantwoordt aan hun verwachtingen. De aantrekkelijkheid, zo stellen zij, zit in de ‘small-scale, informal surroundings,’ in het feit dat ‘problems are tackled quickly and efficiently,’ en vooral het aanbod van een PhD positie als zij afstuderen. De tevredenheid geldt ook voor zaken die niet direct met de inhoud van opleiding te maken hebben, zoals assistentie bij huisvesting en visaprocedures.

Tenslotte is de match van aanstaande afgestudeerden met het aantal beschikbare PhD plaatsen aan de orde gekomen. Studenten, maar ook opleidingsdirectie, geven aan dat het vaak pas laat duidelijk wordt welke PhD posities op welke plek beschikbaar zijn. Omdat de TI thesisbegeleider na het afstuderen ook de PhD supervisor wordt, geeft dit vaak lang onzekerheid omtrent de keuze van een onderwerp of begeleider. Het grootste probleem hierbij lijkt onduidelijkheid voor studenten. Dit kunnen incidenten zijn, maar gezien de steeds sneller veranderende omgeving waarin universiteiten zich

bevinden, zou dit ook wel eens structureel kunnen worden. De commissie beveelt de deelnemende faculteiten aan om de onderwijsdirectie in staat te stellen om in elk geval aan het begin van het tweede jaar het aantal PhD plaatsen per universiteit duidelijk te hebben, alsmede de procedure om deze te bemachtigen. Of studenten de positie van hun keuze krijgen is dan niet duidelijk, maar hoe ze dat moeten doen wel. Deze aanbeveling wordt gedaan aan de drie faculteiten omdat tijdige beschikbaarstelling van PhD-posities buiten de invloedssfeer van het TI ligt.

*c. Toetsing en gerealiseerde eindkwalificaties:*

Uit de bestudeerde documentatie en uit de gesprekken is gebleken dat toetsing transparant, serieus en streng gebeurt en inhoudelijk de eindkwalificaties afdekken. Er zijn geen misstanden gesignaleerd.

In het eerste jaar leggen studenten meteen na het afsluiten van de cursus het tentamen af. Dit telt voor 75% mee, de tijdens de cursus gemaakte assignments voor 25%. Er zijn geen herkansingen, tenzij een student door aantoonbare overmacht niet in staat was om deel te nemen aan het tentamen. Volgens de opleidingscommissie wordt hier rechtvaardig mee omgesprongen. In het tweede leerjaar zijn de toetsvormen diverser en hier komt het een enkele keer voor dat de weging van onderdelen van de examens niet transparant is. In het voorbeeld dat door studenten werd gegeven betrof dit een vak dat door twee docenten gedoceerd werd. Soms werd ook de vorm van het tentamen veranderd. Dit gebeurde dan wel voordat het vak startte.

Een substantieel gedeelte van de beoordeling vindt plaats aan de hand van ingeleverde papers, werkstukken, take-home assignments, en natuurlijk de masterthesis. De commissie heeft geconstateerd dat examinatoren wel checken op mogelijk plagiaat, maar dat dit vooral gezien wordt als de individuele verantwoordelijkheid van de examiner. Een structurele manier wordt niet gehanteerd.

De commissie constateert ook dat om na het afstuderen een PhD plaats te bemachtigen, er eisen aan het cijfer van de scriptie worden gesteld (UvA bij sommige afdelingen tenminste 8, VU tenminste 7). Hier zou het risico op cijferinflatie kunnen optreden. De opleiding probeert dit te voorkomen door de thesis in het openbaar te laten verdedigen ten overstaan van drie examinatoren, waarvan tenminste een van een andere universiteit dan de begeleider. De commissie vindt dit een goede zaak maar tekent aan dat wanneer de begeleider zelf zijn twee mede-examinatoren mag uitzoeken, het effect een beetje verloren gaat. Studenten geven overigens aan dat zij vinden dat tentamens voldoende streng worden gecorrigeerd: er wordt regelmatig een onvoldoende gegeven en ook het cijfer 6 (zes) komt regelmatig voor.

Voor wat betreft de toetsing van de eindkwalificaties *learning skills* en presentatievaardigheden verwijzen wij naar het gestelde in 4a: *Beoogde eindkwalificaties*.

Tenslotte hecht de commissie eraan te vermelden dat zij niet heeft gesproken met de Examencommissie en dus geen oordeel kan uitspreken over het monitoren van de kwaliteit van de toetsing anders dan wat is beschreven in de documentatie. Daar ontbreekt echter het jaarverslag, alsmede een duidelijke beschrijving van de taken en bevoegdheden, zoals het benoemen van de examinatoren.

*d. Formele procedures en interne kwaliteitszorg*

Op verzoek van het TI heeft de commissie aandacht besteed aan de formele procedures en vooral aan de interne kwaliteitszorg. Zij constateert dat de procedure die op papier beschreven is, grotendeels in de praktijk functioneert. Zo worden alle vakken geëvalueerd, alsmede alle examens. Deze evaluaties worden besproken in de opleidingscommissie, die aangeeft dat de punten die zij aandragen serieus worden opgepakt door de onderwijsdirectie. Opmerkelijk is in dit verband dat studenten goed op de hoogte zijn van de problemen van vorig jaar en hoe deze vervolgens zijn aangepakt of opgelost. De informele sfeer op het TI leidt tot grote betrokkenheid bij de opleiding.

Evaluaties worden ook besproken door de Student Council. De functie hiervan is een beetje onduidelijk: het lijkt alsof zij input geven aan de student-leden van de opleidingscommissie, en dus geen formele status hebben. In de documentatie wordt hun wel een formele status op dit gebied toegekend. De Student Council organiseert verder vooral 'Social Events,' volgens de studenten. De evaluaties worden soms aan het einde van de cursus, dus voor het examen, afgenomen, soms na het examen, maar niet structureel op hetzelfde tijdstip.

De Director of Graduate Studies heeft driemaal per jaar een individueel gesprek met elke eerstejaars student over resultaten, vorderingen en verwachtingen. Van deze gesprekken wordt vrijwel altijd een verslag gemaakt en gearchiveerd. In de incidentele gevallen waar geen verslag is gemaakt, betrof dit studenten die zo goed waren, dat dit niet nodig werd geacht.

De commissie constateert dat in de documentatie de kwaliteitscirkel niet duidelijk beschreven is. Hoewel hier geen echte noodzaak voor lijkt, de resultaten van de kwaliteitszorg zijn immers goed en zowel de voorzitter van de Opleidingscommissie als de studenten geven aan dat hun opmerkingen en aandachtspunten serieus worden opgepakt, is het toch wenselijk dit eenduidig te formuleren.

## **5. Conclusie**

De uitvoerige documentatie alsmede de gesprekken met onderwijsdirectie, opleidingscommissie en studenten hebben de commissie ervan overtuigd dat het TI een uitstekende opleiding aanbiedt, van zeer hoog niveau en vergelijkbaar met top-opleidingen op dit gebied in het buitenland. De commissie heeft enkele suggesties ter verbetering, die in de bijlage zijn opgenomen en als input kunnen dienen om de opleiding verder te verbeteren.

Amsterdam, 19 december 2011

Namens de mid-term review commissie

Prof. dr. J.-M.A.R.G. Viaene  
voorzitter

drs. R.W. de Crom  
secretaris

## Bijlage

### Aanbevelingen

1. De organisatie is nu 'volwassen' geworden; regels en procedures zouden strakker en strikter gehanteerd kunnen worden. Dit geeft ook duidelijkheid.
2. Voer een systematische check op plagiaat in.
3. De invoering van een DLO als *Blackboard* zou in dit verband kunnen helpen, zowel bij het automatisch scannen op plagiaat als hulpmiddel bij inrichten vak. Het kan immers ook als checklist voor de docent gebruikt worden en geeft de onderwijsdirectie ook meteen inzicht in de inrichting en uitvoering van het vak.
4. Besteed aandacht aan de *Learning skills* genoemd in de Dublin Indicatoren
5. Besteed aandacht aan presentatievaardigheden, vooral aan het presenteren van ingewikkelde materie aan niet-experts. Dergelijke presentatievaardigheden zullen studenten van dit niveau buitengewoon goed van pas komen, omdat presentatie van eigen werk en persoon een steeds belangrijkere rol speelt.
6. Verschaf tijdig duidelijkheid aan de MPhil studenten (bij voorkeur als zij net aan het tweede jaar begonnen zijn) over het aantal PhD posities per universiteit en over de procedure voor toewijzing. De daadwerkelijke verdeling en toewijzing kan later, maar de onduidelijkheid en onzekerheid over aantal posities en hoe deze te verkrijgen zijn in elk geval geëlimineerd. De commissie realiseert zich dat dit buiten de invloedssfeer van het Tinbergen Instituut ligt en doet daarom deze aanbeveling aan de deelnemende faculteiten.





## **Appendix IX**

### **Summary of the results of the survey among MPhil graduates, June 2013**

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In June 2013, Tinbergen Institute held a survey among the (then) 159 MPhil graduates; 105 of them responded. Tinbergen Institute's intention was to hear from its former students how they experienced the MPhil/PhD track from a more or less distant position. The survey was anonymous.

Questions and responses can be found in the following pages. All open-ended questions have been left out of the version we report here.



# Appendix IX

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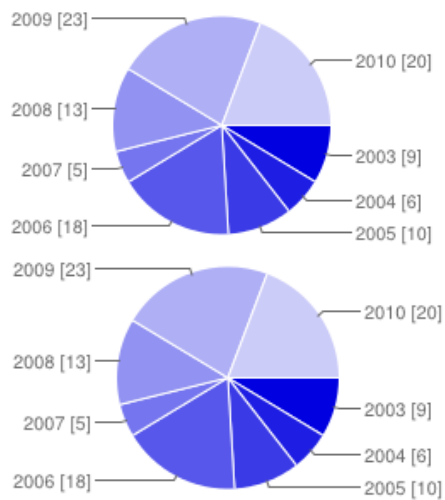
## Survey among TI MPhil graduates, June 2013

### Summary

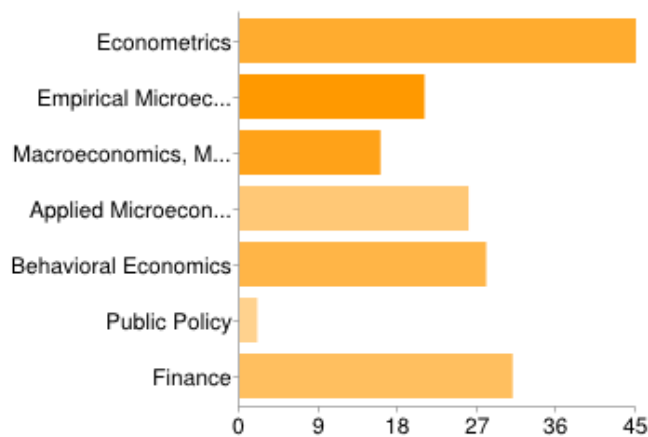
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#### I. PERSONAL AND EDUCATIONAL BACKGROUND

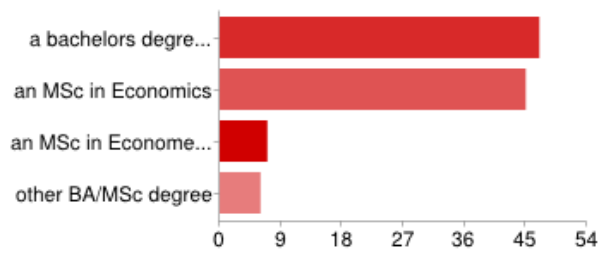
##### 1. Year of start of MPhil program



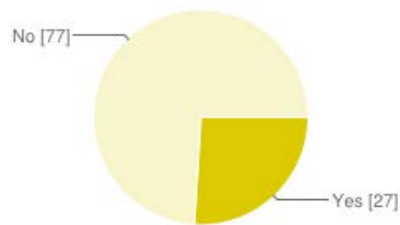
##### 2. Field(s) of specialization in MPhil program (up to three)



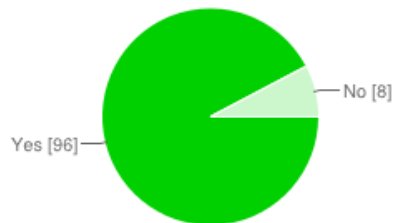
### 3. I entered the MPhil program with



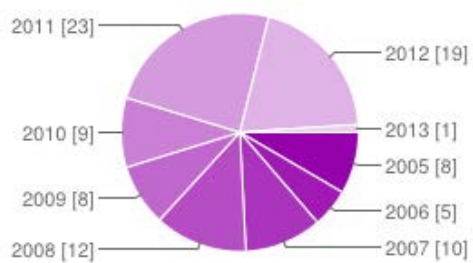
### 4. Did you graduate cum laude (with distinction)?



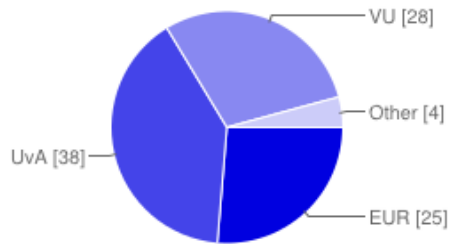
### 5. Did you start a PhD?



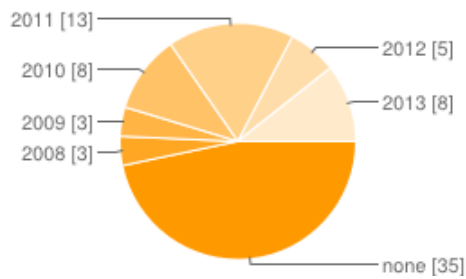
### 6. Year of start of PhD



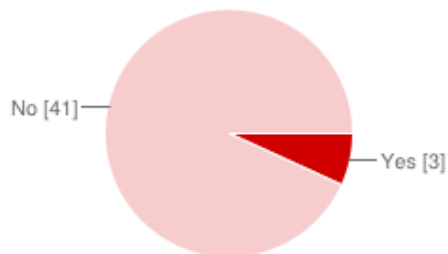
### 7. Appointed at



### 8. Year of PhD defense

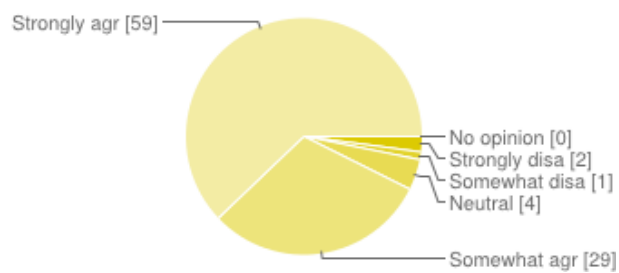


### 9. If you completed your PhD: did you graduate cum laude (with distinction)?

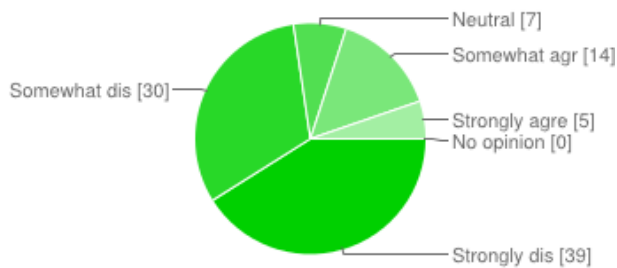


## Part II: How well does the TI MPhil program prepare students for PhD research?

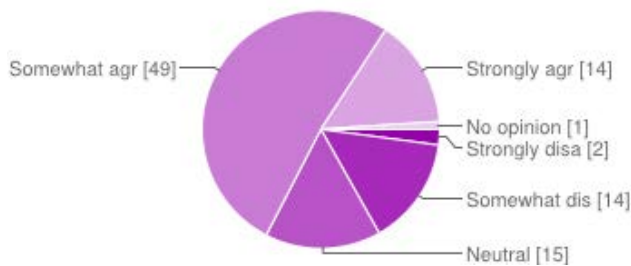
### a. The first year of the MPhil program should consist of mandatory coursework.



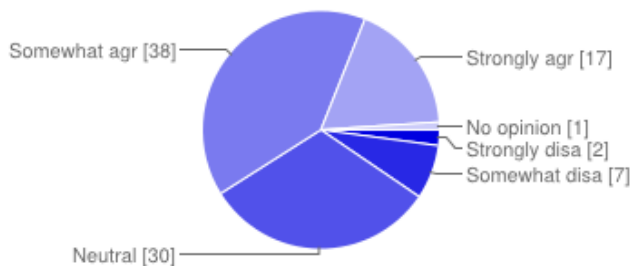
**b. The MPhil program should already offer students the option to skip core course sequences (micro, macro, econometrics) and to specialize in their field of interest in the first year.**



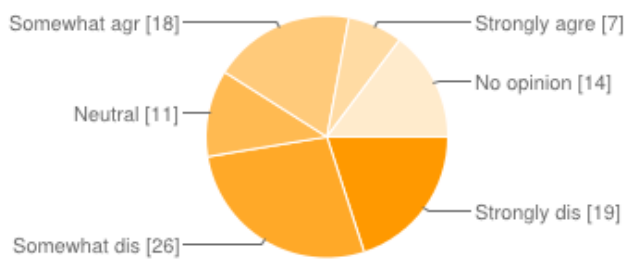
**c. The field courses (second year of the MPhil program) reflect the current discussions in the top journals in economics.**



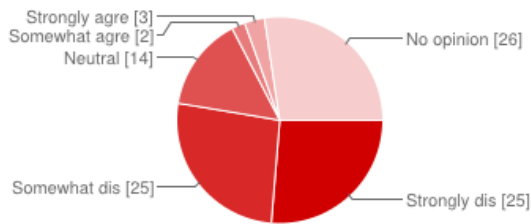
**d. The MPhil program should dedicate more time to current developments in economics.**



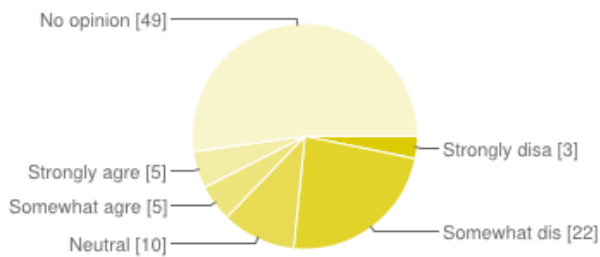
**e. The level of the MPhil program is too demanding for students with a bachelor degree as their highest degree.**



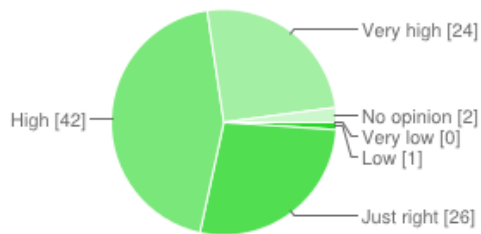
**f. The level of the MPhil program is too low for students who have completed a one-year MSc economics before entering the MPhil program.**



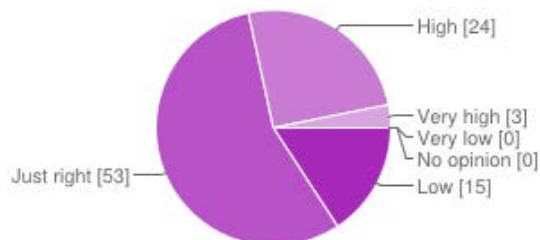
**g. The level of the MPhil program is too low for students who have completed a one-year MSc econometrics before entering the MPhil program.**



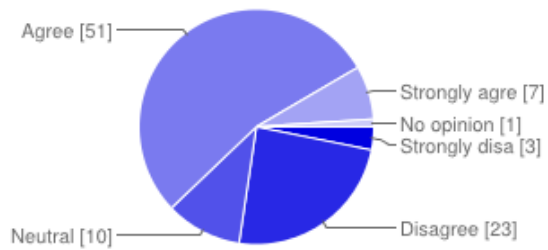
**h. The workload in the first year was**



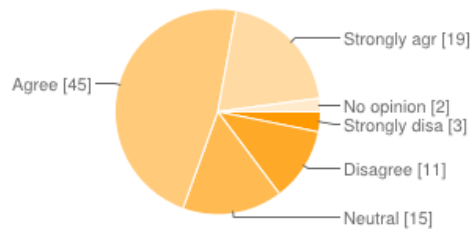
**i. The workload in the second year was**



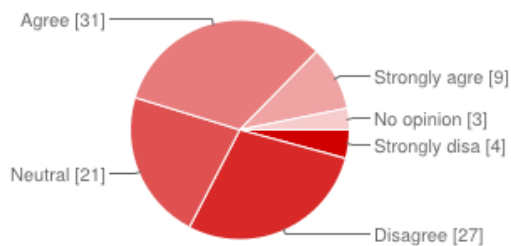
**j. The MPhil program prepares students to select a topic for PhD research.**



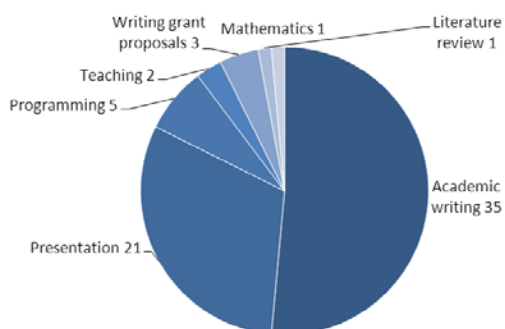
**k. The transition from the MPhil into the PhD phase was smooth.**



**l. After the completion of the MPhil program, additional (field) courses were needed for my PhD research.**



**m. Suppose that Tinbergen Institute would dedicate more time to skills courses (e.g. academic writing, presentation skills), which courses would you then like to take and in the MPhil?**

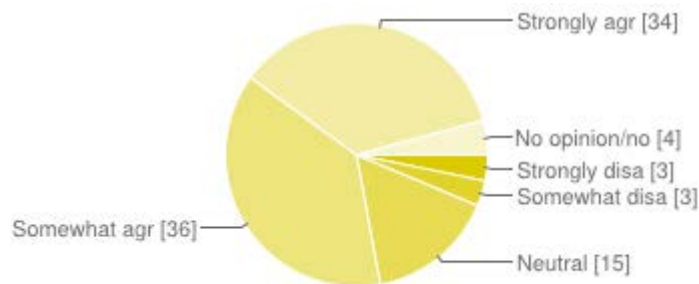




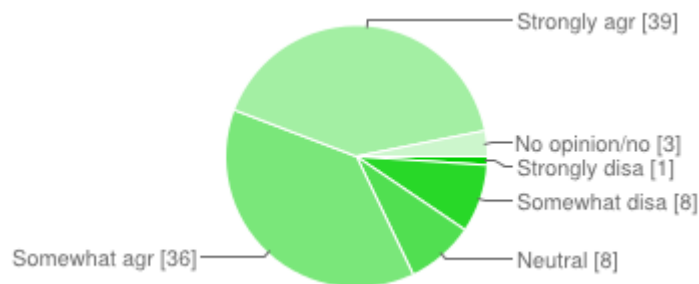
## Part III Your PhD experience

To what extent do you agree with the following statements:

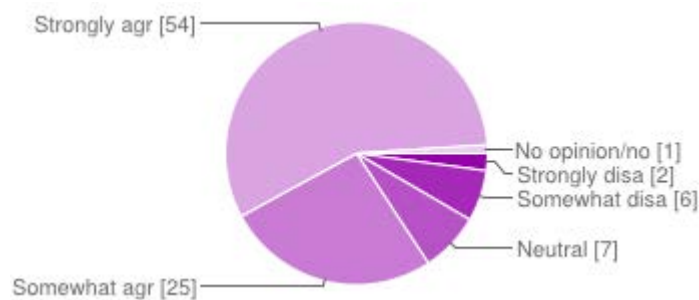
**1. The MPhil program allowed me to select a suitable supervisor among the TI research fellows.**



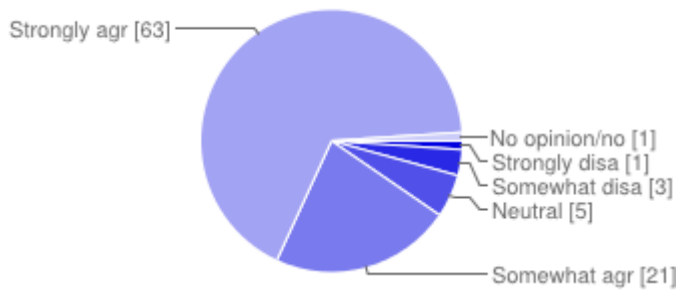
**2. The writing of the MPhil thesis offered the opportunity to find out if my supervisor was a good match.**



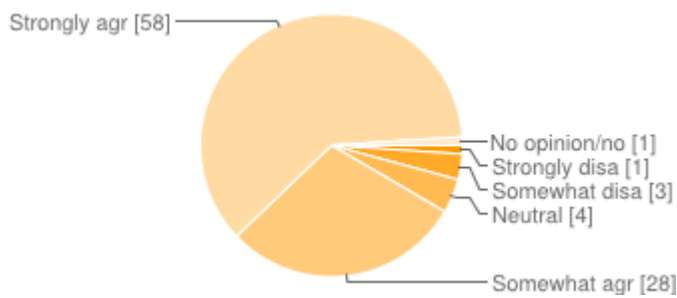
**3. My supervisor and me are/were a good match.**



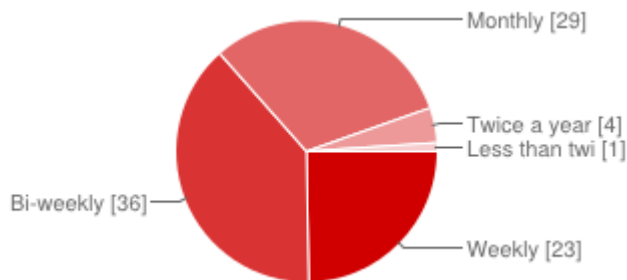
**4. I value/valued the guidance and supervision provided by my supervisor.**



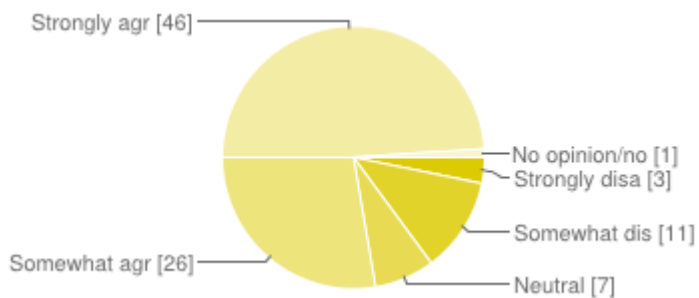
**5. My supervisor is/was usually available for discussion or questions.**



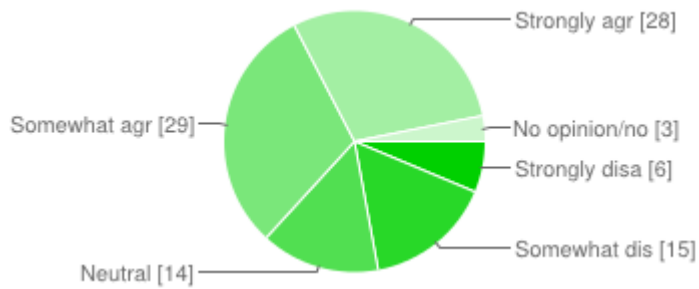
**6. I have/used to have regular meetings with my supervisor.**



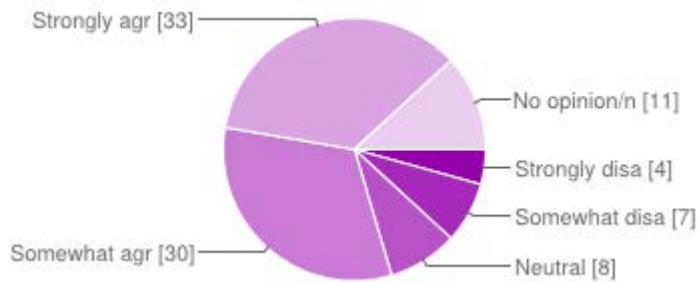
**7. If I submit/submitted work to my supervisor it is/was returned to me promptly with comments.**



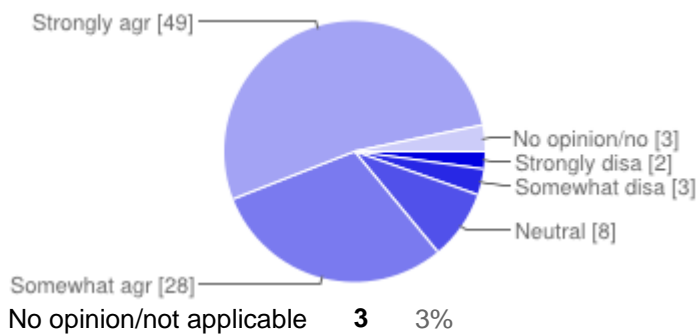
**8. The standards for completing a PhD thesis are/were clear to me during my PhD years.**



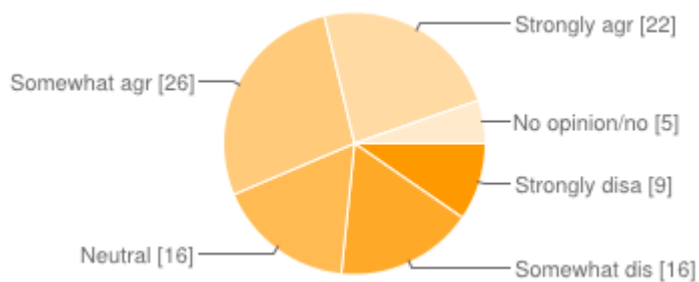
**9. My supervisor's guidance will help me/helped me to finish my PhD thesis on time.**



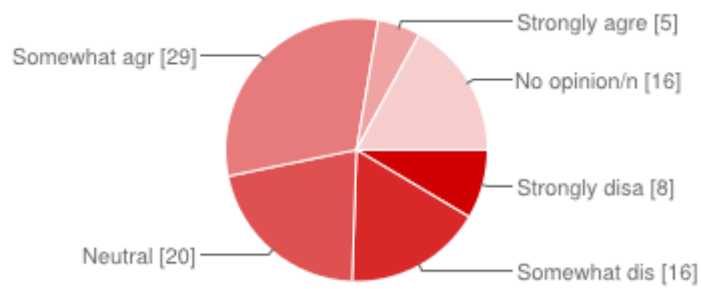
**10. My supervisor trains/trained me to become an independent researcher.**



**11. My supervisor informs/informed me on the do's and don'ts if I aim for an academic career after my PhD.**

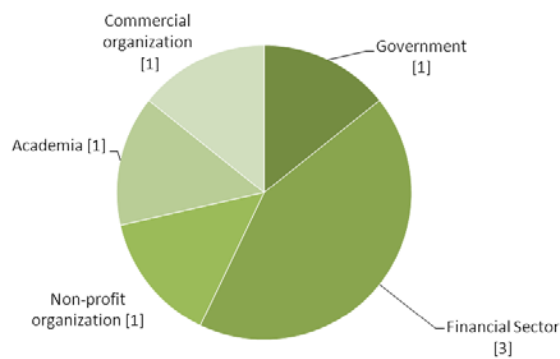


**12. I am/was well informed about and prepared for the academic job market.**

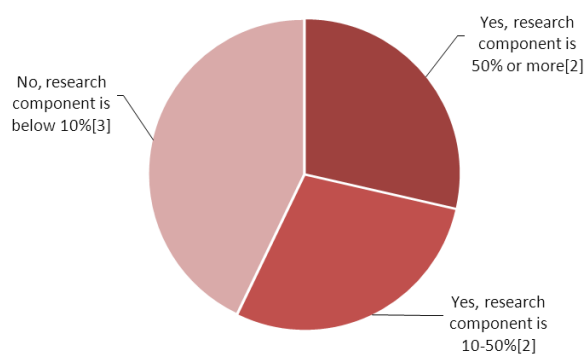


**Part IV: To be completed by MPhil alumni currently employed outside academia**

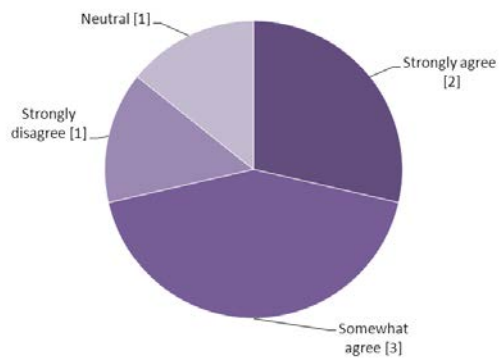
**1. My current job is in**



**2. Would you describe your current position as a research position?**

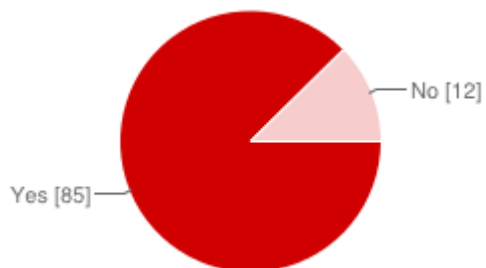


**3. Do you feel that the fact that you completed the MPhil program gave you a head start when you applied for your current job?**



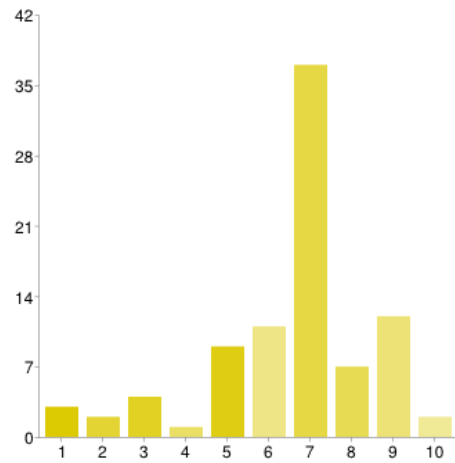
## Part V: Looking back on your MPhil/PhD

**1. Suppose that at the time of entering the MPhil program, you had had the information and experience you have today, would you have decided to apply for the MPhil program at TI?**

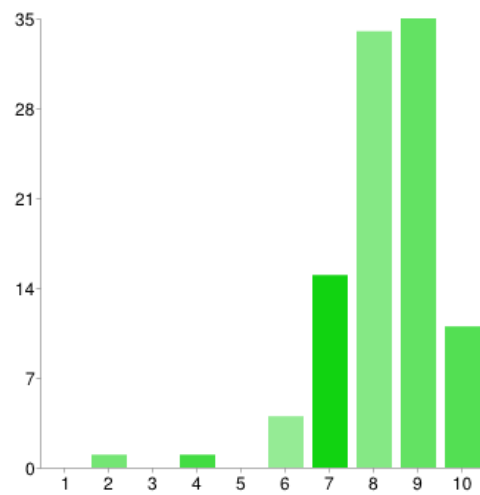


## 2. How did you experience the following aspects of your MPhil/PhD:

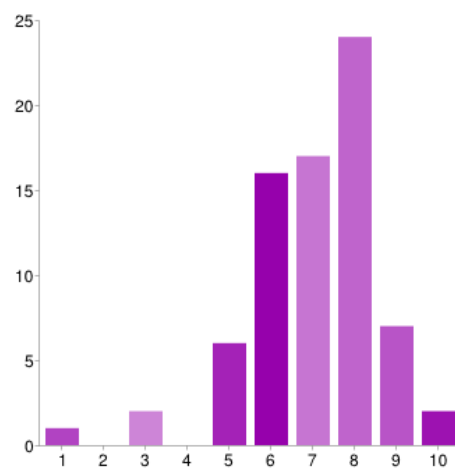
### a. Facilities (offices, software) offered by Tinbergen Institute Rotterdam



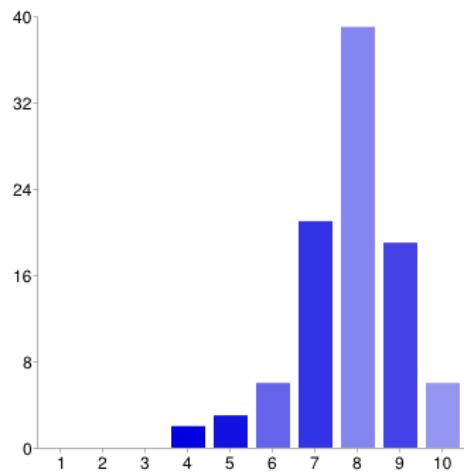
### b. Facilities (offices, software) offered by Tinbergen Institute Amsterdam



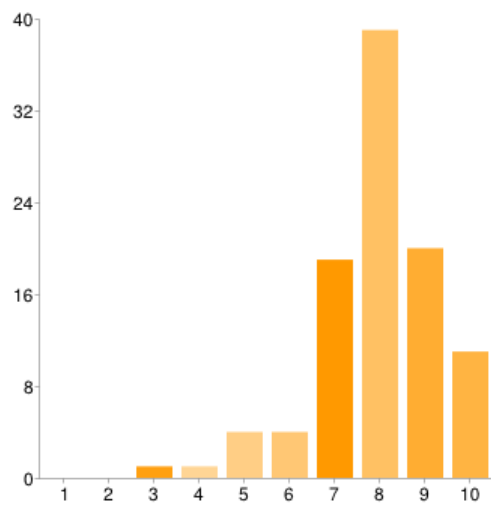
### c. Seminar series offered at Tinbergen Institute Rotterdam



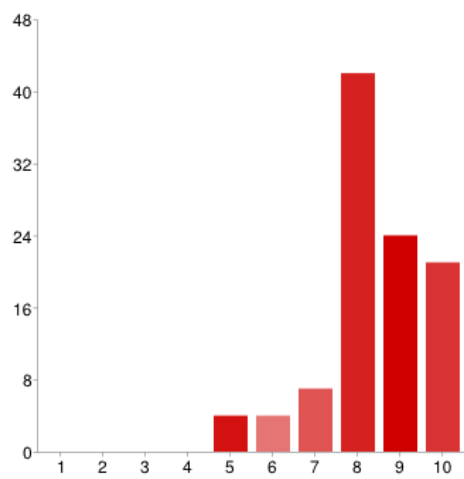
**d. Seminar series offered at Tinbergen Institute Amsterdam**



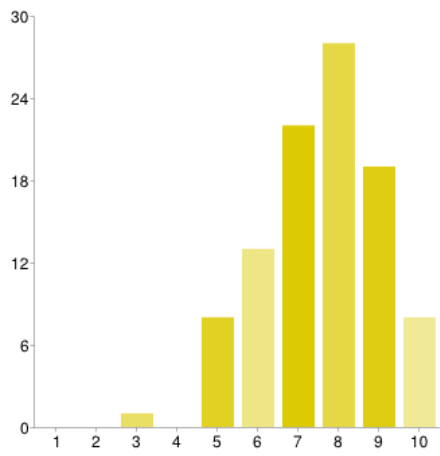
**e. Student life at TI:**



**f. Support from TI staff members**



### g. Guidance by the Director of Graduate Studies





## Appendix X

### List of MPhil theses of the cohorts 2010 and 2011

	Name (Student nr.)	Title thesis	Supervisors	Defense date	Grade	Mode of study
130	Marius Zoican (2108593)	<i>Routing Heterogeneity in Fragmented Markets</i>	Prof. A.J. Menkveld	10-07-12	9	Fin
131	Aaron Kamm (2108518)	<i>Turnout and Voting under Proportional Representation</i>	Prof. A.J.H.C. Schram	10-08-12	9	E
132	Tong Wang (2108550)	<i>The Interplay between Timing and Prospect Theory</i>	Prof. P.P. Wakker & C. Li	06-08-12	8	E
133	Arturas Juodis (2108488)	<i>On the Relative Merits of Bias Correction Methods in Panel VAR Models</i>	Prof. H.P. Boswijk & Dr. M.J.G. Bun	20-08-12	9	E
134	Steffen Lohmann (2108526)	<i>Information technologies and subjective well-being: Do material aspirations change?</i>	Prof. J.W. Gunning & Prof. C.T.M. Elbers	21-08-12	7	E
135	Christiaan van der Kwaak (6348025)	<i>Financial Fragility and Sovereign Default under Alternative Government Policies</i>	Prof. S.J.G. van Wijnbergen	21-08-12	9	E
136	Siyu Fang (2108453)	<i>Managerial Compensation and Firm's Debt Covenant Violations</i>	Prof. S.J.G. van Wijnbergen	21-08-12	6	Fin
137	Marcin Zamojski (2108569)	<i>From Alpha to Beta: Innovation and Imitation in the Hedge Fund Industry</i>	Prof. A. Lucas	22-08-12	8	Fin
138	Erkki Silde (6234682)	<i>Uncertainty in asset pricing return decompositions</i>	Prof. A. Lucas	23-08-12	8	Fin
139	Sait Ozturk (6234712)	<i>Intraday Price Discovery in Option Markets: A State Space Approach</i>	Prof. D.J.C. van Dijk & Dr. M. van der Wel	23-08-12	8	E
140	Piotr Denderski (6234739)	<i>Price setting under rational inattention and menu costs</i>	Prof. E.J. Bartelsman	27-08-12	9	E
141	Lin Zhao (2108577)	<i>A Real Option Perspective on Valuing Gas Fields</i>	Prof. S.J.G. van Wijnbergen & Prof. A.C.F. Vorst	27-08-12	7	Fin
142	Lucyna Gornicka (2108461)	<i>Financial Frictions and Capital Requirements in Macroeconomic Models: Impact of Capital Requirements on the Bank's Problem.</i>	Prof. S.J.G. van Wijnbergen	27-08-12	8	E

	Name (Student nr.)	Title thesis	Supervisors	Defense date	Grade	Mode of study
143	Violeta Misheva (2108534)	<i>The role of child maltreatment on crime</i>	Dr. D. Webbink	27-08-12	7	E
144	Uyanga Turmunkh (6237703)	<i>Economic and Psychological Perspectives on Time Inconsistency: A Case for Nonhyperbolic Time Inconsistency</i>	Prof. P.P. Wakker	28-08-12	8	E
145	Lydia Geijtenbeek (6270883)	<i>The influence of close neighbors on fertility, labor supply and income</i>	Prof. E.J.S. Plug	29-08-12	7	E
146	Timotej Homar (6388604)	<i>Recessions after Systemic Banking Crises: Bank Restructuring Measures Reduce Their Duration</i>	Prof. A.W.A. Boot & Prof. S.J.G. van Wijnbergen	29-08-12	8	Fin
147	Hao Zhang (6264816)	<i>What's Behind the Gender Difference Paradox in Health? Evidence from China</i>	Prof. E.K.A. van Doorslaer	30-08-12	7	E
148	Ben Loerakker (306320)	<i>The formation of negative ties in an affective tie model and its predictive power</i>	Prof. F.A.A.M. van Winden	30-08-12	8	E
149	Yuyu Zeng (6234690)	<i>Theory in River Sharing Problems: the Axiomatic and Strategic Approaches</i>	Prof. G. van der Laan & Dr. H.E.D. Houba	30-08-12	8	E
150	Eszter Czibor (1869914)	<i>Gender Differences at a Competitive Workplace</i>	Prof. C.M. van Praag & Prof. R. Sloof	30-08-12	9	E
151	Maximilian Hoyer (6237711)	<i>Social Value Orientation and Spillovers of Cooperation</i>	Prof. F.A.A.M. van Winden	30-08-12	8	E
152	Florian Sniekers (414271)	<i>Unemployment benefits and endogenous Beveridge cycles</i>	Prof. J. Tuinstra	31-08-12	9	E
153	Sandra Vriend (1620479)	<i>A Structural Model for Analysing Dutch Disability Insurance Program</i>	Prof. B. van der Klaauw & Prof. M. Lindeboom	31-08-12	9	E
154	Nico Dragt (5813344)	<i>Broker-Dealer Leverage, Effective Risk Aversion and the Option-Implied Price of Tail Risk</i>	Prof. A. Lucas	31-08-12	7	Fin
155	Karolina Ryszka (6362087)	<i>The Hotelling Rule in a Political Economy Framework</i>	Prof. C.A.A.M. Withagen	11-09-12	7	E
156	Lukas Toth (6237738)	<i>Agency issues within public agencies: performance effect of external budget</i>	Prof. M.P. Schinkel & Prof. J. Tuinstra	27-09-12	8	E
157	Lisette Swart (2107007)	<i>Irrational Financial Decision Making? Evidence From a Field Experiment in Rural Nigeria</i>	Prof. J.W. Gunning & Prof. C.T.M. Elbers	31-10-12	9	E
158	Inez Zwetsloot (5619289)	<i>A Robust EWMA Control Chart</i>	Prof. H.P. Boswijk & Prof. R.J.M.M. Does	31-10-12	7	E
159	Anghel Negriu (6234704)	<i>Innovation and Financial Architecture: The Role of External Finance in Shaping R&amp;D Decisions</i>	Dr J. Tuinstra & Dr. F.O.O. Wagener	07-03-13	8	E

	Name (Student nr.)	Title thesis	Supervisors	Defense date	Grade	Mode of study
160	Zhiling Wang (2504708)	<i>The Choice of Migration Destinations: Cultural Diversity versus Cultural Heterogeneity</i>	Prof. P. Nijkamp & Dr. T. de Graaff	12-08-13	7	E
161	Yang Liu (2504016)	<i>Dynamic High Frequency Copula-GAS Models</i>	Prof. H.P. Boswijk	15-08-13	7	Fin
162	Jia Zhu (2108585)	<i>Recreational Drug and Alcohol Use in Adolescence and Education and Labour Market Outcomes in Adulthood</i>	Prof. O.A. O'Donnell	23-08-13	6	E
163	Andrei Lalu (6028403)	<i>Option Pricing and Time-varying Jump Risk Premia</i>	Prof. H.P. Boswijk & Prof. R.J.A. Laeven	28-08-13	8	Fin
164	Ilke Aydogan (10233822)	<i>A Speculation on Experience Based Decision Making in the Face of Incomplete Information</i>	Prof. P.P. Wakker	28-08-13	8	E
165	Jindi Zheng (2503680)	<i>Homo Reciprocans Revisited: Survey Evidence</i>	Prof. A.J. Dur	28-08-13	7	E
166	Ieva Sakalauskaite (6093361)	<i>Fiscal Policy and Long-term Interest Rates: the Role of the Maturity Structure of Public Debt</i>	Prof. R.M.J.W. Beetsma & Prof. M. Giuliadori	28-08-13	7	E
167	Francisco Gomez Martinez (10227989)	<i>On Third Parties and the Crisis of Bipartidism : The Unequal Effect of External Constraints on the Political System.</i>	Dr. B.S.Y. Crutzen	28-08-13	8	E
168	David Smerdon (2506233)	<i>"Everybody's Doing It": On the Emergence and Persistence of Bad Social Norms</i>	Prof. T.J.S. Offerman & Prof. U. Gneezy	30-08-13	8	E
169	Lennart Ziegler (361743)	<i>Friendship Ties and Labour Market Outcomes</i>	Prof. E.J.S. Plug & Prof. B. van der Klaauw	30-08-13	8	E
170	Xiao Xiao (2503504)	<i>Systematic and idiosyncratic jump risks in the expected stock return</i>	Prof. C. de Vries & Dr. C. Zhou	30-08-13	7	Fin
171	Simin He (2503334)	<i>Why does communication foster cooperation?</i>	Prof. T.J.S. Offerman & Dr. J. van de Ven	30-08-13	8	E
172	Swapnil Singh (6028268)	<i>Optimal Monetary Policy under Sector Interconnections</i>	Prof. R.M.J.W. Beetsma	30-08-13	8	E
173	Uwe Thümmel (10224645)	<i>Globalization or skill-biased technical change? Exploring the proximate causes for rising wage inequality in the Dutch manufacturing sector.</i>	Prof. B. Jacobs & Dr. B. Brügemann	02-09-13	8	E
174	Luca Pegorari (363515)	<i>Fiscal Policy Uncertainty and Financial Frictions</i>	Dr. B. Brügemann	04-09-13	7	E
175	Zhaokun Zhang (359434)	<i>Unobserved Component Models with Switching Variances and Time-Varying Probabilities</i>	Prof. S.J. Koopman	06-09-13	7	Ectr

	<b>Name (Student nr.)</b>	<b>Title thesis</b>	<b>Supervisors</b>	<b>Defense date</b>	<b>Grade</b>	<b>Mode of study</b>
176	Travers Child (10225625)	<i>Community Preferences, Insurgency, and the Success of Reconstruction Spending</i>	Dr. R.H. Oostendorp & Prof. C.T.M. Elbers	06-09-13	8	E
177	Simas Kucinskas (10231226)	<i>Non-Equivalence of Banks and Mutual Funds Under Aggregate Risk</i>	Dr. B. Brügemann	06-09-13	8	Ectr
178	Stephanie Chan (10231811)	<i>Cocos, Contagion and Systemic Risk</i>	Prof. S.J.G. van Wijnbergen	06-09-13	7	E
179	Rutger Teulings (361952)	<i>The impact of gradual trade liberalization on Export</i>	Prof. F.J.G.M. Klaassen	15-10-13	7	E
180	Giulherme Oliveira (10232117)	<i>Extractive States: the Case of the Italian Unification</i>	Prof. G. Dari-Mattiacci & Dr. C. Guerriero	17-10-13	7	E
181	Alexandra Rusu (10232877)	<i>Optimal Capital Income Taxation with Liquidity Constraints</i>	Prof. B. Jacobs	20-11-13	7	E
182	Martin Wiegand (10224912)	<i>Optimal Targeting Regarding Local Perceptions of Poverty: How Survey Data and Participatory Wealth Rankings can be Combined</i>	Prof. M.P. Pradhan	03-12-13	9	E