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in Economics (research)

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Report of the limited programme assessment

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Executive summary

The outcome of the external assessment of the research master Tinbergen Institute Master of Philosophy in Economics (TI research master) by an NVAO approved panel is positive.

The English-taught TI research master is a two-year (120 EC) joint programme, offered by three universities in the Amsterdam-Rotterdam Consortium (ARC). The panel considers that the TI research master combines a unique position in the Dutch higher education landscape with a broad coverage of economics and scientific research. The programme's formulated intended learning outcomes demonstrate the level that may be expected of graduates of a research master's programme. However, the panel suggests evaluating and eventually rephrasing its learning outcomes to address more explicitly soft skills in the learning outcomes.

The programme intends to train students to become independent, open, and critical researchers. According to the panel, the programme can be more explicit about this vision in the sense that it needs to be clear(er) what the programme envisions to achieve and how unique this vision would be relative to alternative programmes with which it benchmarks itself.

The panel studied the curriculum of the programme and found it to be well-structured and research-oriented. In its opinion, the focus on small-scale education is appropriate for a research master's programme. The panel is positive about the specialised coursework (field courses) in the second year that allow students to build their own curriculum, in line with their personal preferences and research ambitions. However, according to the panel, the programme would benefit from a more explicit integration of soft skills, such as communicating research findings to a non-academic audience, creative thinking, and critical reflection within the curriculum.

The teaching staff allocated to the programme is properly qualified in terms of contents and academic skills. The teachers of the three participating faculties have informal contacts. The panel encourages the programme to empower these informal contacts with a more planned regular structure, which would allow to intensify these contacts, optimize learning and sharing of best practices.

The study guidance in general appears to be sufficiently well organised, although the panel encourages the programme to keep monitoring the matching process between student and thesis supervisor.

A point of attention is the perceived heavy study load. Although the programme already took some measures, the panel suggests to pay further attention to this heavy load by making some changes in the assessment of courses. Currently, traditional sit-in examinations count for 85% and assignments correspond to the other 15% of the grade of core courses in the first year of the programme. No retakes are scheduled. The panel suggests introducing retakes or midterm exams and changing the balance between exams and assignments in the first year.

The panel is positive about the current thesis grading procedure with detailed rubrics and independence of examiners. A point of attention is the quantity and quality of the provided narrative feedback on the thesis forms.

The Examination Board plays an active role in ensuring the quality of assessments. All learning outcomes are assessed in an integrated way in the master thesis. The panel is pleased with the quality and academic level of the fifteen theses it examined. According to the panel, the students reach a high level of achievement and are very well prepared for a career in scientific economic research.



Overall, the panel is convinced of the high quality of the research master's programme Tinbergen Institute Master of Philosophy in Economics.

Together with the application for re-accreditation, Tinbergen Institute also asked the panel to advise on a transformation into a joint degree programme and a name change from 'Tinbergen Institute Master of Philosophy in Economics (research)' to 'Tinbergen Institute Research Master in Economics'.

The panel observed that the programme already is a joint programme making use of the strengths of the three universities. Becoming a joint degree programme will decrease the administrative workload for the supporting staff and students, will create economies of scale, and will lead to a better market positioning. Therefore, the panel awards the NVAO a positive recommendation for a joint degree programme.

The panel agrees with the programme that a name change is desirable, because the current name creates wrong expectations. According to the panel it is important keeping 'Tinbergen Institute' in the name of the programme, because it is a strong brand name. Therefore, the panel awards the NVAO a positive recommendation for a name change.

The chair and the secretary of the panel hereby declare that all panel members have studied this report and that they agree with the judgements laid down in the report. They confirm that the assessment has been conducted in accordance with the demands relating to independence.

Date: 2 September 2021

Frank Witlox
(chair)

Annemarie Venemans
(secretary)



1. Introduction

1.1 Administrative data

Name of the programme:	M Tinbergen Institute Master of Philosophy in Economics (research)
CROHO number:	60162
Level of the programme:	Master of Science
Orientation of the programme:	Academic
Study load:	120 EC
Tracks:	Economics, Econometrics, Finance
Universities	University of Amsterdam, VU Amsterdam, Erasmus University Rotterdam
Location:	Amsterdam, Rotterdam
Variant:	Full-time
Submission deadline:	1 November 2021

1.1 Introduction

This report focuses on the assessment of the research master's programme Tinbergen Institute Master of Philosophy in Economics (hereafter referred to as TI research master). The report also deals with the intended change of the name of the programme and the request to become a joint degree programme.

The assessment is based on the standards and criteria described in the NVAO Assessment framework for the higher education accreditation system of the Netherlands 2018 (limited framework). Research master's programmes must meet a number of additional criteria as described by the NVAO (specification of additional criteria for research master's programmes, 2016).

1.2 Panel composition

For this online visit, a panel was composed, based on the expertise and availability of panel members. The panel consisted of the following members:

- Prof. dr. Frank Witlox (chair), Professor of Economic Geography, Ghent University and University of Tartu (Estonia);
- Prof. dr. Jozef Konings, Professor Economics, KU Leuven and Nazarbayev University Graduate School of Business;
- Prof. dr. Erik Stam, Professor Economics; Utrecht University
- Prof. dr. Reinhilde Veugelers, Professor Economics, KU Leuven;
- Xiaoyue Zhang, MSc (student member), PhD candidate, Tilburg University.

The panel was supported by dr. Annemarie Venemans-Jellema, who acted as secretary.



All panel members and the secretary have signed a declaration of independence and confidentiality. In this declaration they affirm not to have had any business or personal ties with the programme in question for at least five years prior to the review.

The NVAO approved the composition of the panel on 3 December 2020.

1.3 Working method

Preparation

On 17 June 2021, the panel held an online kick off meeting. In this meeting, the panel received an introduction to the assessment framework and discussed the working methods in preparation to and during the online visit.

The programme drew up a self-evaluation describing the programme's strengths and weaknesses. This self-evaluation included a chapter in which the students reflected on the programme. The panel members prepared the assessment by analysing the self-evaluation report and the appendices provided by the institution. The panel also evaluated a selection of fifteen master theses and the accompanying assessment forms from the programme. The theses selection was made by the panel's secretary based on a provided list of at least fifty theses from the most recent years. In the selection, consideration was given to a variation in assessments (grades), topics and location.

The panel members individually formulated their preliminary findings and a number of questions they wanted to raise during the online visit. The secretary made an overview of these preliminary findings and questions and sent it to the panel members as a starting point for the preparation of the panel during the online visit.

Online visit

The online visit took place on 22 June 2021 (see Appendix B for the schedule). During the preparatory meeting, the panel discussed the preliminary findings and decided which questions to raise in their meetings with the programme representatives. During the visit, the panel spoke with representatives of the management, students, lecturers, alumni and the Examination Board. Everyone involved in the programme had the opportunity to inform the panel in confidence about matters they consider important to the assessment. No one made use of this opportunity. The panel used the last part of the online visit to evaluate the interviews and had a second meeting with the programme's management to receive answers to any remaining questions. At the end of the visit, the chair presented the panel's preliminary findings and their first impressions of the programme.

Report

The secretary drew up a draft report based on the panel's findings. This draft report was submitted to the members of the panel and adjusted on the basis of their review and feedback. After adoption, the draft report was sent to the institution for verification of factual inaccuracies. The secretary discussed the programme's comments with the chair, after which the secretary drew up the final report and circulated it to the panel for a final round of comments.

The report follows the four standards such as set of in the NVAO's Assessment Framework 2018 (limited framework): 1) the intended learning outcomes, 2) the teaching-learning environment, 3)



assessment, and 4) achieved learning outcomes. Regarding each of the standards, the assessment panel gave a substantiated judgement on a three-point scale: meets, does not meet, or partially meets the standard. The panel subsequently gave a substantiated final conclusion regarding the quality of the programme, also on a three-point scale: positive, conditionally positive, or negative.

Development dialogue

Although clearly separated from the process of the programme assessment, the assessment panel members and programme representatives conduct a development dialogue, with the objective to discuss future developments of the programme in light of the outcomes of the assessment report.



2. Request for a joint degree

The Tinbergen Institute was established in 1987 as a scientific research and PhD institute, jointly operated by the Erasmus School of Economics of the Erasmus University Rotterdam (EUR), the Faculty of Economics and Business of the University of Amsterdam (UvA), and the School of Business and Economics of the Vrije Universiteit Amsterdam (VU). In 2003, the TI research master was accredited as a two-year research master's programme in Economics, Econometrics and Finance.

Since the initiation of the TI research master, the programme is a joint programme. However, the TI research master does not have the formal status of a joint degree: students have their primary registration with one of the partner universities and are awarded a degree by this university. Together with the application for re-accreditation, the programme also requests to transform the programme into a joint degree.

The panel supports the plan of the programme management to acquire the formal status of a joint degree. As the panel has observed, students in effect are in one programme. According to the panel, the structure of the programme is clearly a joint one, making use of the strengths of the three universities. Having obtained a joint degree status, this would appropriately be reflected on the diplomas of the students. Students whom the panel met, appreciate the jointness of the programme. They mentioned that through this programme they receive a broad assortment of research areas and have access to a broad range of resources.

The TI research master already has its own Admissions Board with representatives from the three partner universities. The three partner schools are also represented in the Programme Committee and Examination Board.

The panel established that a joint degree programme will decrease the administrative workload for the supporting staff and students. In addition, it will create economies of scale from using educational (process) software, for example applications and admissions, student progress, course scheduling and the digital learning environment. Moreover, according to the panel, a joint degree will lead to a better market positioning.

Based on this assessment, the panel awards the NVAO a positive recommendation for a joint degree.



3. Request for a name change

The programme requests for an assessment of an intended change of the name of the programme, from 'Tinbergen Institute Master of Philosophy in Economics (research)' to 'Tinbergen Institute Research Master in Economics'. The panel assessed the suitability of the new name by judging a written and oral explanation of the management of the programme.

The programme's main motivation for the change is that the MPhil degree is not acknowledged in the Netherlands. The current name of the programme may create false expectations for (prospective) students: students graduating from the programme do not acquire an MPhil degree but an MSc degree.

According to the programme management, most applicants of the programme are referred to the Tinbergen Institute programme by academic supervisors affiliated to research universities in Europe, Asia and South America. To further benefit from this reputation, the programme requests to maintain the reference to the Tinbergen Institute in the programme's name. Keeping this reference will also be beneficial to the students since the official name of the programme will be printed on the degree certificates.

The panel agrees with the programme that a name change is desirable, because the current name creates wrong expectations. According to the panel it is important to keep 'Tinbergen Institute' in the name of the programme because it is a strong brand name.

The panel established that the programme's content will not be adjusted on the basis of this name change and the new name fits in well with the current final objectives of the programme. In addition, the name change does not lead to classification of the programme in another CROHO section.

Based on this assessment, the panel awards the NVAO a positive recommendation for the new name.



4. Review

4.1 Intended learning outcomes

The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.

Findings, analysis, and considerations

The TI research master aims to a) give students a thorough knowledge of economic principles, economic theory, and quantitative methods for theoretical, experimental, and empirical research; b) provide students with rigorous training in these subjects, allowing them to participate in and contribute to the scientific discussion in economics at the very highest level; and c) prepare them for research, to write and defend a PhD thesis, and to subsequently become part of the international community of researchers in the world's leading institutions as scholars in economics, econometrics or finance.

The self-evaluation report states that the programme prepares students for the next phase of their scientific research career, namely as a PhD student or as a qualified professional (research) economist in non-academic positions. During the visit the panel extensively deliberated with the programme management about this goal. It learned that the programme intends to train students to become independent, open and critical researchers. However, the panel established that within the programme there are several options and views on this goal. Some of the representatives consider the programme as a package deal of a research master and a PhD programme. Other representatives see the programme as the recruitment source for the three participating faculties. And some of the representatives are of the opinion that students can also end up in positions outside academia. The panel recommends the programme considering all these directions and be more explicit about its vision.

The panel considers that the TI research master combines a unique position in the Dutch higher education landscape with a broad coverage of economics and scientific research. Internationally, the programme benchmarks itself with master's programmes of the London School of Economics', Oxford University's, Harvard University, and the University of Chicago. The panel highly appreciates the ambition to keep up with these leading institutes in the world.

The panel noticed that the programme's objectives are reflected in its intended learning outcomes (ILO's), which comply with the Dublin descriptors for a master's level. According to the panel, the ILO's are described precisely and formulated adequately. The panel considers that the research-oriented nature of the programme is very much present in the objectives. Therefore, it is of the opinion that the intended learning outcomes meet the research master's requirements.

However, the panel is of the opinion that the intended learning outcomes could be regularly evaluated on being sufficiently future proof. To this end, the panel encourages the institute to consider strengthening soft skills like communicating research to a broader audience, critical reflection, creativity, and dealing with cultural differences and diversity.



Conclusion

The panel concludes that the TI research master is a unique programme that prepares students for a research career in economics. The intended learning outcomes correspond to the academic master's requirements with a research orientation. The programme therefore meets standard 1.

4.2 Teaching-learning environment

The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.

*Findings, analysis, and considerations**Curriculum*

The TI research master is a full-time two-year programme of 120 EC, that consists of five blocks of eight weeks each per year. At the start of the programme, students choose between the Econometrics and Advanced Econometrics track. In the first year, the curriculum consists of the 'Principles of Programming in Econometrics' course (1 EC), thirteen core courses (4 EC each), two field courses (3 EC each, to be chosen from a selection of eight courses), and the seminar series (1 EC).

During the first week of the curriculum, all students follow the 'Principles of Programming in Econometrics' core course in which the basics of programming in econometrics are taught. After this course, students start with the core courses that serve as a fundamental training in mathematics, statistics, microeconomics, macroeconomics, and econometrics. Each course consists of lectures, tutorials and (homework) assignments. Students who are interested in finance can substitute two of the core courses in macroeconomics or microeconomics with 'Asset Pricing Theory' and 'Corporate Finance Theory'. The two field courses in the fifth block are meant to help students identify the research areas they are most interested in. An important focus within these field courses is on teaching students to formulate research questions and to translate these into an appropriate research strategy.

The seminar series introduce the research groups at the three TI faculties to the first-year students. In the seminars, TI fellows describe ongoing research projects in their research groups. Aim of the seminar series is to facilitate the matching process between students and prospective supervisors.

In the second year, students can further specialise in their area of interest by choosing ten field courses from a wide range of relevant courses offered (3 EC each), in which they have the opportunity to deepen or broaden their research field or research capacities. It is mandatory to take at least four courses in one of the eight research majors corresponding to the TI research groups.

The field courses cover advanced research methods, advanced theory, and specialised applied research. The second year also offers an academic writing course, a presentation course and an academic integrity course (subsumed in the 30 EC of the master thesis). The course 'Academic Integrity' pays explicit attention to ethical dimensions of conducting research. The panel was pleased to note that from next year this course will be moved from the second to the first year of the curriculum.

The final component of the curriculum involves the writing of the master thesis. Aim of the thesis is to show that the student is able to carry out independent research and can make a contribution to the



scientific debate. The three faculties participating in Tinbergen Institute have three-year PhD positions available for students who have completed the TI research master programme. In many cases, the thesis supervisor will fulfil the role of PhD thesis supervisor. In a typical year, all students who perform well and pass the research master programme can transfer to a PhD position. However, Tinbergen Institute cannot guarantee that all students find a match and a PhD position within the three faculties. Therefore, students are also encouraged to investigate externally funded PhD opportunities available at the schools.

The panel observed that the structure of the curriculum is coherent and that the intended learning outcomes are translated adequately in the different courses of the programme. Studying the document linking the programme outcomes to the course objectives, the panel gathered that each programme outcome is addressed several times throughout the curriculum.

The panel established that the first year is designed to offer a broad view on economics, ensuring that all students acquire solid basic knowledge, regardless of their own background or the field courses they will choose. These core components of the curriculum are taught exclusively to research master's students. Alumni, the panel met with, mentioned that this broad education enabled them to connect in their current occupation to other subfields in economics.

The panel appreciates the broad range of field courses in the second year and recognises that it allows students to build their own curriculum, in line with their personal preferences and research ambitions.

The didactic model of the TI research master is to provide students with a small-group, research-oriented learning experience, to provide specialised knowledge in lectures, and to allow freedom of choice based on personal interests. Students value the small-scale education and the interactions with students and teachers. The panel is very positive about the small-group learning model, which is considered to be a strength of the programme.

According to the panel, the second year of the programme is research-oriented, in which students develop research skills in their specific area of interest. The academic context to the programme is not only embodied in the staff members and the curriculum, but also in but also in the opportunities for students to get involved in their supervisor's research and to participate in a wide range of research seminars, workshops, and conferences.

In view of the panel, this research orientation is less visible in the first year. Although the panel agrees with the programme that acquiring a solid knowledge basis is pivotal in the first year, it suggests the programme to further incorporate soft skills, such as academic reasoning, creative thinking, and critical reflection in the first-year curriculum. In this way the balance between the substantive content and research skills which are typically expected from a research master's student can be improved. The panel learned that some lecturers already pay attention to these soft skills in the core courses, but the panel believes that the programme would benefit from a more explicit integration of soft skills within (especially the first year of) the curriculum. During the visit, the programme management mentioned that it considers introducing a research clinic dedicated to the dissemination of best practices when it comes to the generation of research ideas. The panel is positive about this idea.

The panel established that the matching process between student and thesis supervisor is an important step in the programme, because of the fact that in most cases the thesis supervisor will also become the PhD supervisor. The programme has taken several steps to improve the communication of this process. For example, the Director of Graduate Studies (DGS) gives an introductory presentation to first-year students and then sets up regular meetings with students from



then onwards. The panel was pleased to note that this process has been improved, but encourages the programme to keep monitoring this matching process.

The language of instruction is English. The programme management substantiates its choice by arguing that the international background of the academic staff and the internationally diverse influx of students necessitate an English-taught programme. In addition, English is the current lingua franca of scientific research and renowned research is carried out in an international context. The panel supports this choice.

Based on the self-evaluation report and interviews during the visit, the panel established that the programme would benefit from more diversity within both the student population and the staff. Diversity issues are already part of the recruitment process of students and lecturers. All else equal, priority is given to female candidates and candidates from special merit groups (developing countries, minorities, etc.). The panel welcomes the initiatives taken so far and encourages all responsible bodies to further step up their efforts in recruiting a more diverse student body that is taught by a more diverse faculty.

Admission

The TI research master is open for excellent students who want to pursue a PhD in economics, econometrics, or finance at one of the economics and business faculties affiliated with the Tinbergen Institute. Candidates are selected based on motivation, academic achievements, requirements regarding mathematics, and English language proficiency. The panel is of the opinion that the admission criteria are formulated clearly and adequately reflect the research-oriented nature and high demands of the programme.

The programme aims at enrolling 25 new students from all over the world per academic year thereby creating an international classroom. The panel noted that the number of applicants (around 300 applicants) is much higher than the number of admitted students, which illustrates the selective nature of the programme.

Staff

As stated in the self-evaluation report nearly all teachers involved in the TI Research Master programme are TI Research Fellows - researchers selected on scientific quality from the schools of Economics of EUR, UvA, and VU. According to the panel, the excellent research quality of TI Research Fellows is evident from the number of European Research Council (ERC) grants (six out of seven ERC grants going to The Netherlands in Economics in the past decade were received by TI Fellows) and ranking of the fellows (27 of the top-40 economists in The Netherlands are TI Fellows according to a Dutch journal for economists, ESB).

The panel has met with a team of lecturers from all partners universities. It is clear to the panel that students are part of a high-quality and committed research environment. The content of the courses is closely connected to the research conducted by teachers and supervisors within the TI research master, so that students are up to date on recent developments and findings and participate in current research. The panel was pleased to learn that the vast majority of staff members possess their University Teaching Qualification (UTQ).

During the online visit, the panel confirmed the extensive involvement and enthusiasm of the staff. In addition, students were very pleased about the involvement of staff members. According to the



students, there is always a lot of interaction between the staff and the students. Students appreciate the open-door policy and accessibility of the staff.

The panel noted that the teaching community relies on informal structures. During the visit, lecturers mentioned that there is also a lot of informal contact between lecturers from all three participating faculties. To increase the cohesion between courses, the panel was pleased to note that the DGS recently implemented an annual plenary meeting of teachers before the beginning of the academic year, during which communication and interaction between all instructors is fostered. The panel encourages the programme to intensify these formal meetings between lecturers, in which they also can share best practices.

Facilities

The TI research master has its own seminar rooms, computer facilities, and office space at the ARC venue in Amsterdam (Zuidas). Some classes are offered at the Woudestein campus at EUR in Rotterdam. Students are satisfied with the facilities, but would like to have dedicated Tinbergen Institute facilities in Rotterdam as well.

For first-year students, Tinbergen Institute offers full or partial scholarships and tuition fee waivers to selected students. A scholarship is also available in the second year, dependent on the student's individual performance.

Study load and mentoring

The student success rates of the TI research master are favourable, with an overall success rate of 88%. Also, the nominal completion rates have been consistently good. Students complete the programme in general within two years.

Despite these favourable figures, students reported to the panel that they feel that the programme is challenging. The panel noted that many students experienced a lot of stress and heavy workloads during their studies. Students mentioned that especially obtaining scholarships in the second year and the matching process are causes of stress. The panel noted that the programme is well aware of this and takes measures to reduce the perceived study load. For example, they currently develop and foster bottom-up and peer-to-peer mental health policies. The panel is pleased that the programme takes this issue seriously and has a system in place to guide students. However, it recommends the programme to take further steps in reducing stress. It suggests to make some adjustments in the assessment procedures (see standard 3).

The study guidance in general appears to be sufficiently well organised, although formal support services rely currently on the services of the three universities. The panel noted that the DGS plays a pivotal role in stimulating interaction and cohesion amongst students and staff. The DGS has regular progress meetings with all students, both individually and per cohort, and closely watches the progress students make in course work, eligibility for funding and for finding a thesis supervisor. The panel considers the strong involvement of (and for students the easy access to) the DGS a clear strength.

The programme does not have a formal mentorship programme. Students mentioned that there is informal contact between first- and second-year students. The panel is of the opinion that more formal mentorship is desirable.



COVID-19

Due to COVID-19 almost all education of the programme switched to online teaching in the past year. The panel asked students and teachers about their experience with online teaching. Whilst COVID-19 evidently had an impact on the interaction between student and teachers, they both mentioned that there was still a lot of social interaction and discussion possible.

The panel concluded that the programme adequately adapted to the COVID-19 situation and still allows students to achieve the academic objectives. Although the COVID-19 situation is not an optimal teaching and learning situation, the pandemic has also brought some positive developments, such as blended learning and online international seminars. The panel suggests the programme to explore what measures might be kept after COVID-19.

Conclusion

In sum, the panel is convinced that the programme offers a suitable teaching-learning environment with strong elements such as the major structure with field courses, the small-scale teaching, and the dedicated staff members. The programme therefore meets standard 2.

4.3 Student assessment

The programme has an adequate system of student assessment in place.

*Findings, analysis, and considerations**Assessment policy and methods*

The panel noted that the programme developed a thorough and well-considered assessment policy. The programme's assessment policy is based on validity, reliability, and transparency. To safeguard validity, the programme aligns assessments with the learning goals. To safeguard reliability, the programme makes sure that tests are consistent and stable (for example by an answer key/model made and checked before the test). To safeguard transparency, students are informed about the assessment procedures and requirements, for example by an exam rubric.

The panel is pleased to note that every test is checked by a second reader to ensure the quality and completeness of the questions.

First-year core courses have two assessment components: sit-in examinations, that count for 85% and assignments that correspond to the other 15% of the grade. As stated in the student chapter of the self-evaluation report, assignments can be either weekly or with a lower frequency, individual or in groups and are intended to keep students studying during the whole block and not only right before the exam. The assessment of field courses is based on assignments, such as presentations, discussions, reports, performance in class, take-home exams, essays, and research proposals.

The panel is positive about the variety of assessments during courses, especially in the field courses. However, in the panel's opinion, in the core courses there is too much weight on the exams compared to the assignments. Changing the balance between both, better fits with a research master and could alleviate some of the stress, students experience.



No retakes are scheduled in the same year: students who fail a core course must retake the course in the next year. Students who fail a field course can take another field course or have the option to write a field paper. Only under exceptional circumstances (e.g. verifiable illness of a student) the Examination Board (EB) will grant students a retake during the same academic year. Under certain conditions, one 5 may be compensated by a grade of 7.5 or higher.

During the visit, the programme management advocated this measure by mentioning that given the student's high quality, the group that fails is extremely low. In addition, students work harder if they do not have a retake. However, the panel is of the opinion, that no retake might cause a lot of stress, also among very good students. It therefore suggests to introduce retake possibilities or a formative midterm exam and to consider additional permanent evaluation tools.

Grading of the theses

In response to the previous accreditation, the TI research master further developed its thesis assessment process by introducing detailed rubrics and by improving the independence of examiners and documentation of the grading and review process.

The grade of the thesis is based on a) the thesis itself, b) the process as reported by the supervisor, and c) the presentation and defence of the thesis. The thesis committee members are the examiners of the thesis. The committee consists of the supervisor(s) and at least two other committee members (TI research fellows) who were not involved in the supervision. At least one committee member is from a different university than the thesis supervisor. Grading of the thesis is done by the committee members who are not the supervisor(s) of the thesis with the help of a rubric. After the thesis defence, the supervisor of the thesis reports to the other committee members to which extent the student has worked independently and has taken initiative during the process. After that, the committee members who have not been involved in the supervision decide on the grade.

The panel is positive about the current thesis grading procedure. It appreciates the transparency of the process and the grading by independent examiners. One point of attention is the quantity and quality of the provided narrative feedback on the thesis forms. More qualitative feedback to underpin the mark on individual rubrics and the overall score would further increase the quality of the assessment and make the information provided by the assessors more visible and traceable for an external reviewer

Examination Board

There is a shared EB for the TI research master and research master Business Data Science, a joint degree research master also governed by the ARC. The EB consists of four members, one of each faculty participating in the research master's programme and one external member. The responsibilities and tasks of the EB are explained in the Academic and Examination Regulations (AER) and in the Rules and Regulations (RR) for the EB.

The panel reviewed the activities of the EB in monitoring the quality of examinations. It checks whether the tests comply with the AER, the Assessment Plan and the Assessment Policy and adequately measure the extent to which students have accomplished the learning objectives. The EB hereby uses pass and fail rates for each examination; dropout rates and reason for drop out; student evaluations, reviews of a sample of graded exams and reviews of a sample of graded theses. The panel is of the opinion that the EB is very well organised and safeguards the quality of the assessments in a structured and accurate manner.



Conclusion

The programme has an adequate assessment system. Therefore, the programme meets standard 3.

4.4 Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings, analysis, and considerations

The TI research master considers the master thesis as the final exam or capstone integrating all ILO's of the programme. According to the self-evaluation report, the thesis must show that the student is able to carry out independent research and can contribute to the scientific debate. The programme aims at theses of exceptional quality such that, after further polishing, they can be part of the PhD thesis and can be published in an international, peer-reviewed scientific journal. The panel studied theses of fifteen graduates from recent cohorts.

According to the panel, the sample of theses demonstrated that each thesis fulfilled the minimum criteria that can be expected of a final product at research master level. In general, the theses were well-constructed and demonstrated a high level of in-depth knowledge of the respective economic topics and techniques. While the theses the panel studied fit well in the scientific journals, the panel did not observe any translation of the thesis results in the broader debates. As students are also educated as academics with a feel for the general broad societal debate, the panel would have welcomed this being reflected in the theses. This confirms the findings of a survey among PhD supervisors and alumni. Both alumni and PhD-supervisors value the excellent training in technical skills and theory, but feel that students could benefit from courses to improve research relevant skills and presentation skills, e.g. writing skills, academic reasoning, generating research ideas, and creativity.

The panel is positive about the number of theses that led to a publication. At least three quarters of the master theses become a chapter of the PhD thesis and nearly seventy percent have been reworked for submission to peer reviewed international journal articles.

Roughly ninety percent of the programme's graduates continue in a PhD trajectory with the supervisor of their master thesis. Two to three graduated students per cohort start at positions in the financial sector, in consultancy firms or in government organizations directly following their master programme. The panel observed that those graduates moving on to PhD positions were often successful and continued their academic career at good research universities. The panel considers the number of graduates having been able to enter PhD programmes to be applaudable. It therefore concludes that the programme succeeds in preparing students very well for PhD programmes and, subsequently, for careers in academia.

During the online visit, the panel talked to a diverse group of alumni, who are currently working as a researcher inside or outside academia. They indicated that they were well prepared by the programme for their current positions. The panel appreciates the role alumni play in the programme. Once a year, all alumni (up to four years after graduation) are invited for an evaluation meeting by the DGS to comment on the curriculum and to provide ideas. In addition, alumni whom the panel met during the online visit, mentioned that there is quite a lot of informal contact between alumni and the programme.



Conclusion

Summing up, the panel considers that the intended learning outcomes of the research master's programme are achieved by the end of the curriculum. The programme therefore meets standard 4.



5. Strengths and recommendations

5.1 Strengths of the programme

The panel is impressed by the following features:

- Curriculum structure – The programme structure gives students ample opportunities to tailor the programme to their own interests. The panel appreciates that all courses are taught exclusively to research master's students;
- Strong academic environment – The high-quality and strongly engaged teaching staff ensure that the programme is embedded in a strong academic environment;
- Small-scale teaching – The programme makes use of small-scale teaching, ensuring a highly interactive learning and tutoring environment with a great deal of attention to the students' individual needs, performance, and development;
- High quality end products – The theses reflect the high scientific standards of the research master.

5.2 Recommendations

For further improvement of the programme, the panel makes the following recommendations:

- Vision – Be more explicit about the vision of the programme in that sense that it needs to be clear what the programme envisions to achieve, and in particular where the programme wants students to end up after completion of the programme. The vision should be regularly revisited to check its future-proofness.
- Soft skills – Integrate soft skills, such as communicating research to a broad audience, creative thinking, and critical reflection, more explicitly in the curriculum, especially in the first year;
- Diversity – Take further actions in recruiting a more diverse student body that is taught by a more diverse faculty;
- Study load – Alleviate the student's stress by making some changes in the assessment system. The panel suggests introducing retakes or midterm exams and changing the balance between exams and assignments in the first year;
- Feedback – Provide more narrative feedback on the thesis forms.



6. Conclusion

The panel concludes that the objectives and intended learning outcomes of the Tinbergen Institute Master of Philosophy in Economics meet the standards required for an academic programme. It is of the opinion that the content and structure of the curriculum and the available staff constitute an attractive teaching-learning environment for the students. The programme has an adequate assessment system and demonstrates that the intended learning outcomes are achieved. The quality of the theses is good.

Standard	Judgement
Standard 1	Meets the standard
Standard 2	Meets the standard
Standard 3	Meets the standard
Standard 4	Meets the standard
Final conclusion	Positive



Appendix A – Schedule of the visit

22 June, 2021

Time	Session
08.30 – 10.00	Preparation panel
10.00 – 10.45	Management
10.45 – 11.00	Evaluation
11.00 – 11.45	Students
11.00 – 12.00	Evaluation
12.45 – 13.30	Lecturers
13.30 – 13.45	Evaluation
13.45 – 14.15	Alumni
14.15 – 14.30	Evaluation
14.30 – 15.00	Examinations Board
15.00 – 15.30	evaluation and preparing questions for management
15.30 -16.00	Second meeting management
16.00 – 17.30	Evaluation
17.30 – 17.45	Presentation of first findings



Appendix B – Documents studied

- Self-evaluation report with appendices;
 - Intended learning outcomes;
 - Student Chapter;
 - Students inflow and outflow;
 - Study Guide 2020-2021 (with links to short course descriptions);
 - Overview of key figures, teachers and thesis supervisors and their qualifications;
 - Academic and Examination Regulations 2020-2021;
 - Response to the COVID-19 pandemic;
 - Assessment report of the 2015 accreditation and Plan of Action based on recommendations;
 - Assessment report of the 2018 mid-term review and Plan of Action based on Recommendations;
 - Thesis manual for students;
 - Results Alumni and PhD-supervisor survey
 - Overview of final theses since 2014
- Research Environment, links to research groups featuring publications, prizes, awards;
- Fellowship Charter;
- TI journal list;
- Annual Research Report 2019;
- Annual Research Report 2020;
- Partnership Agreement Joint Degree programme (in Dutch);
- ARC samenwerkingsovereenkomst (in Dutch);
- Verwerkersovereenkomst (in Dutch);
- Thesis manual for supervisors;
- Thesis assessment forms;
- Course manuals (selection);
- Course materials (selection);
- Assessment plan;
- Assessment policy;
- R&R Examination Board;
- Annual Report 2019-2020 Examination Board;
- R&R Educational Board;
- Annual Report 2019-2020 Educational Board.



Appendix C – Abbreviations

AER	Academic and Examination Regulations
ARC	Amsterdam Rotterdam Consortium for Graduate Education in Economics and Business
DGS	Director of Graduate Studies
EB	Examination Board
EC	European Credit
ERC	European Research Council
EUR	Erasmus University Rotterdam
ILO	Intended Learning Outcome
NVAO	<i>Nederlands-Vlaamse Accreditatieorganisatie</i>
OER	<i>Onderwijs- en Examenreglement</i>
RR	Rules and Regulations
UTQ	University Teaching Qualification
UvA	University of Amsterdam
VU	<i>Vrije Universiteit</i>

