

Assessment report
Limited Programme Assessment

Master Economics and Business

Erasmus University Rotterdam

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1. Executive summary

In this executive summary, the panel presents the main considerations which have led to the assessment of the quality of the programme Master Economics and Business of Erasmus University Rotterdam, which has been assessed according to the NVAO Assessment Framework.

The panel observes programme management has taken a wide range of measures in response to the recommendations made in the previous external assessment in 2009 and in the internal evaluation in 2012. Programme management has, among others, revised the programme intended learning outcomes, installed an Advisory Board and redesigned the Examination Board responsibilities.

The panel approves of the objectives of the programme, to educate students in one of the sub-domains of the economics discipline, to teach them thoroughly academic research knowledge and skills and to train them to acquire professional skills. The panel is especially positive about the strong research orientation of the programme. The panel supports the intentions of programme management to prepare students for positions in the labour market and welcomes the wide variety of specialisations which are offered in the programme.

The panel studied the intended learning outcomes of the programme and observes these to meet the programme objectives, exhibiting in-depth and systematic knowledge and understanding of the specialisation students have chosen, thorough academic research competencies, and professional skills.

In the panel's view the learning outcomes are consistent with the domain-specific reference framework, which was drafted by Erasmus School of Economics and the economics programmes of Vrije Universiteit Amsterdam and of Wageningen University. In addition, they correspond to the master level requirements of the programme.

The panel feels the involvement of the professional field through the Advisory Boards of the specialisations within the programme is satisfactory and is helpful in aligning the programme with the professional field requirements.

The admission requirements and processes are well designed and strict, allowing only students in, who may be regarded to have the capacities to complete the programme. The panel is positive about the pre-master programme for students with deficiencies.

The curriculum reflects all of the intended learning outcomes of the programme adequately and evenly. The panel considers the curriculum to be very well designed and effective, offering students in-depth the theory and methodology of the specialisation they have chosen and giving them ample opportunities to address real-life problems. Students expressed to be very positive about the curriculum contents.

The panel approves of the educational principles and the study methods of the programme, as they foster the students achieving the intended learning outcomes. Students and lecturers expressed being positive about the small-scale dimension of the programme. The panel welcomes the steps Erasmus School of Economics takes to ensure small-scale teaching, even in relatively large-scale specialisations.

Programme management has taken measures to raise the student success rates. The panel regards the student success rates to be appropriate and encourages programme management to try and raise these further. The panel recommends to improve the information provided to the students. The School uses various platforms (Blackboard, Sin-online, Osiris), which is not very transparent for students.

The panel is very positive about the lecturers' research track records. The panel also approves of their educational capabilities, as may be deduced from the proportion of lecturers holding the BKO-certificate.

The panel approves of the examination and assessment policies and rules and regulations of the Erasmus School of Economics, in force for this and the other programmes of the School. They ensure the validity of the examinations, the reliability of the assessments, the competencies and expertise of examiners and the transparency of the examination processes. The Examination Board works along the lines as intended by Dutch applicable law. The Board monitors the examination and assessment processes, analyses the examinations and regularly inspects the theses.

The panel regards the examination methods to be adequate. The diversity of examination methods in courses and across courses allows for the assessment of knowledge and skills, relevant to the programme.

The thesis process is satisfactorily organised, especially since the *Thesis Workflow System* has been implemented. The panel recommends, however, to inform students more clearly and comprehensively about the thesis process and the thesis assessment. The assessment of the theses is a reliable process, as two examiners are involved and sound assessment forms with relevant assessment criteria are used. As the thesis processes and thesis assessments differ to a certain extent across the master specialisations, the panel recommends to align the processes and to establish more homogeneity therein. In addition, the panel recommends considering using weighted criteria in the thesis assessment.

The panel regards the examinations of the courses to be challenging and to definitely meet the courses' learning goals. Students will have achieved most of the programme intended learning outcomes, if they have passed all of these examinations.

The average grade of the theses in the year 2014 – 2015 is 7.6. The panel studied six theses of students in the programme. These theses are assessed by the panel to be at least satisfactory and some of them to be quite good.

Graduates have good career perspectives and tend to find suitable positions relatively shortly after graduation.

The panel assesses the programme Master Economics and Business of Erasmus University Rotterdam to be satisfactory and recommends NVAO to grant re-accreditation to this programme.

Rotterdam, 6 March 2017

Panel chair
Prof. dr. T.J. Wansbeek

Secretary
drs. W. Vercouteren RC

2. Assessment process

Certiked VBI received a request to conduct a limited programme assessment for the re-accreditation of the academic degree programme Master Economics and Business. This request was submitted by Erasmus University Rotterdam.

Certiked requested the approval by NVAO of the proposed panel of experts to conduct this assessment. NVAO have given their approval. The panel composition was as follows (for more detailed information please refer to Annex 4: Assessment panel composition):

- Prof. dr. T.J. Wansbeek, Emeritus Professor of Statistics and Econometrics, University of Groningen (panel chair);
- Prof. dr. J. Hartog, Emeritus Professor of Microeconomics with visiting scholar position, University of Amsterdam (panel member);
- Prof. dr. R. Kabir, Professor and Chair of Corporate Finance and Risk Management, University of Twente (panel member);
- S.M. van den Hoek, student Bachelor programme Tax Economics, University of Amsterdam (student member).

On behalf of Certiked, drs. W. Vercouteren RC was responsible for the process coordination and for drafting the panel's report. All panel members and the secretary signed a statement of independence and confidentiality.

The panel conducted this assessment on the basis of the NVAO Assessment Framework of 19 December 2014 (Staatscourant nr. 36791). Regarding the selection of the theses, the panel proceeded in line with the NVAO Guidelines for the assessment of final projects during external assessments of 18 February 2015. On 19 September 2016, NVAO determined the number of theses to be studied by the panel in this case.

The following procedure was adopted. The panel members of the panel studied the documents presented beforehand by programme management, including a number of theses (please refer to Annex 2 and 3: Documents reviewed and Theses reviewed).

Before the date of the site visit, the panel chair and the panel secretary met to discuss the assessment procedures. On 30 November 2016, the panel had a meeting to discuss the preliminary findings concerning the quality of the programme. Beforehand, the panel members had sent in a number of questions to be put to the programme representatives during the site visit.

During the meeting on 30 November 2016, the findings of the panel members, including those concerning the theses, were discussed. On the basis of the input of the panel, the secretary summarised the questions, which served as a starting point for the discussions with the programme representatives during the site visit.

On 1 December 2016 and on 2 December 2016, the panel conducted the site visit on the Erasmus University Rotterdam campus. The site visit was conducted in accordance with the schedule drawn up beforehand (please refer to Annex 1: Site visit schedule). Prior to the site visit, programme management communicated the open office hours to the students in the programme and the staff. No one called on the panel.

A draft version of this report was finalised by the secretary, having taken into account the information presented as well as the findings and considerations of the panel. The panel members studied the draft report and made a number of changes. Thereupon, the secretary drew up the final report. This report was presented to programme management to be corrected for factual inaccuracies. After having been corrected for these factual inaccuracies, the report was sent to the institution's Board to accompany their request for re-accreditation.

3. Overview of the programme

3.1 Basic information about the programme

Administrative information about the programme:

Name programme in CROHO: Master Economics and Business
 Orientation, level programme: Academic Master
 Grade: MSc
 Number of credits: 60.0 EC
 Specialisations: Behavioural Economics
 Economics of Management and Organisation
 Industrial Dynamics and Strategy
 Financial Economics
 Health Economics
 International Economics
 Marketing
 Policy Economics
 Urban, Port and Transport Economics
 Location: Rotterdam
 Mode of study: Full-time (English-taught programme)
 Registration in CROHO: 60652

Administrative information about the institution:

Name of institution: Erasmus University Rotterdam
 Status of institution: Government-funded university
 Institution's quality assurance: Approved

Quantitative data about the programme

Percentage of students who completed the programme in two years (n+1)

Cohort	2012	2013	2014
Percentage of students	68 %	62 %	

Lecturers' qualifications

Qualification	MSc	PhD	BKO*
Percentage of lecturers	100 %	80 %	56 %

*BKO means having obtained Dutch University Teaching Qualification. In the figure exemptions are included. Of the lecturers, an additional 10 % are in the process of obtaining the BKO-certificate.

Student-to-staff ratio

The student-to-staff ratio is 25 : 1 (study year 2015 – 2016)

Contact hours are 7 hours per week.

3.2 Main facts about the institution

The degree programme Master Economics and Business is a programme of Erasmus School of Economics of Erasmus University Rotterdam.

In its own words, Erasmus University Rotterdam is a research University, with a pronounced social orientation in its education and research. Academics and students at the university are expected to endeavour to solve global social challenges, drawing inspiration from the metropolis Rotterdam. The university spearheads in education and research are health (from molecule to human to society and back), wealth (sustainable economic growth), governance (the organization of companies and society) and culture (happiness and identity in the modern urban society). According to its strategic plan for 2014 – 2018, Erasmus University Rotterdam has set as a goal to strengthen the international impact and relevance of its education and research. The University works together closely with Delft University of Technology and Leiden University.

Erasmus University Rotterdam employs more than 2,700 staff, lecturers as well as support staff. Over 26,000 students study at this University, being composed of more than 16,000 bachelor students and more than 10,000 master students.

Erasmus University Rotterdam is composed of seven faculties, these being Erasmus School of Economics, Erasmus School of Law, Faculty of Social Sciences, Erasmus Medical Centre, Faculty of Philosophy, Erasmus School of History, Culture and Communication and Rotterdam School of Management. In addition, the university includes the Institute of Health Policy & Management, the International Institute of Social Studies and the Institute for Housing and Urban Development Studies.

On the website, Erasmus School of Economics expresses to be an internationally renowned institute that contributes scientific knowledge to future economic issues and aims to answer currently relevant issues of concern to government and firms. The School's focus is on the creation, the dissemination and the application of scientific knowledge, all from an economic perspective. Erasmus School of Economics' portfolio of programmes includes three bachelor programmes, four master programmes, two research master programmes and four postgraduate programmes. The School employs nearly 500 staff, whereas about 4,500 students study at the School.

3.3 Intended learning outcomes

The intended learning outcomes of the programme are as follows.

- Students possess in-depth and systematic knowledge of an area within economics and business.
- Students analyse and explain complex phenomena and issues in the economics of government and business by using their knowledge of the theories and methods of economics and business economics and, in doing so, are critical and creative.
- Students formulate problem statements and research questions based on scientific concepts and theories.
- Students select a research set-up appropriate to the research question. They select or create one or more suitable methods for data collection and analysis.
- Students formulate clear conclusions and recommendations based on research and, in doing so, behave as creative professionals.
- Students use different interpretation frameworks in making statements about reality.
- Students evaluate their ideas for internal consistency, empirical validity and strength, and make the necessary adaptations.
- Students communicate effectively and at a high level, both in writing and verbally, with persons and groups of a diverse nature.
- Students demonstrate self-direction and originality in dealing with and resolving problems in the field of study.

3.4 Outline of the curriculum

In the table below, the programme curriculum is presented.

Courses	Credits
Core course	4.0 EC
Core course	4.0 EC
Core course	4.0 EC
Seminar	10 EC/12.0 EC
Seminar	10 EC/12.0 EC
Core course	4.0 EC
Core course	4.0 EC
(Core course)	(4.0 EC)
Thesis	16.0 EC
Total credits of the programme	60.0 EC

4. Overview of assessments

Standard	Assessment
Standard 1. Intended learning outcomes	Satisfactory
Standard 2: Teaching-learning environment	Good
Standard 3: Assessment	Satisfactory
Standard 4: Achieved learning outcomes	Satisfactory
Programme	Satisfactory

5. Findings, considerations and assessments per standard

5.1 Standard 1: Intended learning outcomes

The intended learning outcomes of the programme have been concretised with regard to contents, level and orientation; they meet international requirements.

Findings

In preparation of this external assessment, the Erasmus School of Economics in collaboration with the management of the economics programmes of Vrije Universiteit Amsterdam and Wageningen University updated the domain-specific reference framework for economics. The current reference framework is an update on a number of non-essential points of the 2009 edition, which was approved by the Deans of all Economics Faculties in the Netherlands. The major change has been the removal of sections referring to business administration.

Programme management informed the panel that, whereas the main goal of the bachelor programmes of Erasmus School of Economics is to educate students in the fundamentals of the economics domain, the master programmes of the School are meant to give students the opportunities to specialise in one of the sub-domains of economics. In the master programmes, students are prepared for positions in the labour market, which require the knowledge and skills of the specialisation.

The objectives of the programme are to provide students with specialised knowledge and understanding within the economics domain, to educate them thoroughly in academic research competencies and to train them in professional skills.

In the programme, a wide variety of specialisations are offered. These specialisations are *Behavioural Economics, Economics of Management and Organisation, Financial Economics, Health Economics, Industrial Dynamics and Strategy, International Economics, Marketing, Policy Economics* and *Urban, Port and Transport Economics*. In each of these specialisations, the objectives are to educate students in-depth in the sub-domain the specialisation addresses.

In case new areas of study or new fields of interest would emerge within the economics discipline, programme management may add the corresponding specialisation to the portfolio of specialisations mentioned.

Programme management drafted the programme intended learning outcomes. These specify in-depth and systematic knowledge and understanding of the specialisation, academic research skills and professional skills. The professional skills include communication skills, the sense of self-direction and originality in problem solving.

Programme management drafted a table, to show the correspondence of the intended learning outcomes of the programme to the Dublin-descriptors for master programmes. From this table may be deduced the programme intended learning outcomes match these Dublin-descriptors.

For each of the specialisations of the master programmes, an Advisory Board with representatives of the professional field has been installed. These Advisory Boards are asked for advice on the intended learning outcomes and the curricula of these programmes.

Considerations

The panel welcomes the efforts of Erasmus School of Economics and of the economics programmes of Vrije Universiteit Amsterdam and of Wageningen University to draft the update of the 2009 domain-specific reference framework.

The panel approves of the intentions of programme management to prepare students for positions in the labour market, equipping them with specialised knowledge of one of the sub-domains of the economics discipline. The panel welcomes the wide variety of specialisations which are offered in the programme.

The panel supports the objectives of the programme, to educate students in one of the sub-domains of the economics discipline, to teach them thoroughly academic research knowledge and skills and to train them to acquire professional skills. The panel is especially positive about the strong research orientation of the programme.

The panel studied the intended learning outcomes of the programme and observes these to meet the programme objectives, exhibiting in-depth and systematic knowledge and understanding of the specialisation students have chosen, thorough academic research competencies, and a range of professional skills.

In the panel's view, the programme learning outcomes are consistent with the domain-specific reference framework.

The panel ascertains the intended learning outcomes of the programme to match the Dublin-descriptors for master programmes and, therefore, to meet the requirements of a master level programme.

The panel considers the involvement of the professional field through the Advisory Boards of the specialisations within the programme to be satisfactory and to be helpful in aligning the programme with the requirements of the professional field.

Assessment of this standard

These considerations have led the assessment panel to assess standard 1, *Intended learning outcomes* to be satisfactory.

5.2 Standard 2: Teaching-learning environment

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

Findings

The responsibility for all of the programmes of the Erasmus School of Economics rests with the Dean of the School. The Vice Dean is the programme director of all of these programmes. Consequently, the quality of all of the programmes of the School is his responsibility. For each of the bachelor programmes, the bachelor coordinator monitors the processes of these programmes. The master coordinator takes care of the organisation of all of the master programmes. Academic directors are responsible for the curriculum and the teaching in the master specialisations. Programme management, being the programme director, the bachelor coordinators and the master coordinator, meet very regularly to discuss the organisation and the processes of the programmes. The academic directors meet to discuss the contents of the master specialisations. In each of the bachelor and master programmes, an Educational Committee, being composed of an equal number of lecturers and students, advises programme management on the programme quality. For all of the School's programmes, an Examination Board has the responsibility to monitor the examinations' and assessments' quality.

The number of students enrolling in the programme increased substantially the last six years from an influx of 575 students in 2011 to an influx of 717 students in 2016. Nearly 50 % of the incoming students are from the Erasmus School of Economics bachelor programmes, about 20 % have a bachelor diploma of another Dutch university and about 30 % come from abroad. Small proportions of incoming students do not fully meet the entry requirements or have as their previous education a vocational bachelor degree. These two categories of students are to take the pre-master programme.

Applicants having completed the Bachelor Economics and Business Economics of Erasmus School of Economics are admitted without condition. Incoming students with a bachelor degree of another Dutch university may be admitted as well. Some of these students may be required to take the GMAT-test, to test for their analytical skills. Applicants coming from abroad have to show their diploma being equivalent to the Dutch diplomas, to be checked by programme management on the basis of Nuffic standards. In addition, these students should demonstrate proficiency in English. Incoming students with deficiencies, among whom students with a vocational bachelor degree, some foreign students and students with other bachelor degrees than economics, have to take the one-year pre-master programme, which is offered in Dutch and in English. The requirements for students with vocational bachelor degrees have been tightened. As a consequence, the number of students with this background diminished drastically. On the other hand, talented vocational bachelor students are being offered minors in their own vocational bachelor programmes to prepare for this master programme. These minors are equivalent to the pre-master programmes. These students obtain satisfactory results in this master programme.

Programme management presented tables in which the relations between the intended learning outcomes and the curriculum components of all of the specialisations have been specified. From these tables, it may be deduced that for each of the specialisations all of the intended learning outcomes are addressed in one or more courses.

The design of the curriculum is identical for all of the specialisations. Only the set-up of the specialisation *Health Economics* differs, as this specialisation is offered in collaboration with the Institute of Health Policy & Management (iBMG) of Erasmus University Rotterdam. In all of the specialisations, including the exception mentioned, students take five to six core courses (4.0 EC each) and two seminars (10 .0 EC or 12.0 EC each). Students complete the programme with the master thesis. In some of the specialisations the core courses are pre-determined, while in others students may select the courses from a limited list of electives. The core courses address the subjects of the specialisation and are meant to teach students the theoretical and methodological knowledge of the specialisation. In some of these courses, students are required to draft papers and give presentations. In the seminars, students apply and integrate the knowledge they acquired in the courses. These seminars are meant to bridge the gap between theory and practice and to educate students to meet the challenges of the specialisation. In these seminars, students work in groups, study academic literature, critically assess this literature, discuss their findings, draft reports and give presentations. Seminars may prepare students for the master thesis. In the master thesis, students are required to show having achieved all the learning outcomes of the programme by writing an individual research paper. The students with whom the panel met during the site visit, expressed being very positive about the contents of the curriculum, describing it as providing a profound and broad training in economics. Especially the seminars were considered by these students to be very instrumental in learning how to reflect on and how to discuss real-life problems in the specialisation and to present their findings and considerations orally and in writing.

To give an example of the curriculum of one of the specialisations offered, the core courses in the specialisation *Policy Economics* are *Applied Econometrics*, *Advanced Public Economics* and *Advanced Macroeconomics*. The seminars in the curriculum include *Seminar Cases in Policy Evaluation* and one out of two seminars *Seminar Quantitative Macroeconomics* or *Seminar Economic Policy*. In addition, students may select three electives out of a list of eight courses, which include *Advanced Behavioural Economics*, *Economics of Organisation* and *The Practice of Economic Policy Making*.

The coherence of the curriculum is discussed on a regular basis by programme management and is, for each of the specialisations, monitored by the academic directors. The master thesis processes are organised by the thesis coordinators, one coordinator being responsible for each one of the specialisations.

The educational principle of the programme is mainly directed towards enabling students to achieve the intended learning outcomes. Study methods in the courses are plenary lectures and may include assignments and presentations. In the seminars, the classes are small with a maximum of 24 students in the seminar and students work intensively on assignments. Additional funds have been made available by Erasmus School of Economics to promote small-scale teaching in specialisations with large student populations. The student-to-staff ratio of the programme is 25 : 1. The students with whom the panel met, regarded the courses and the seminars to ensure relatively small-scale teaching in the programme. The number of contact hours is on average 7 hours per week. The programme director explained Erasmus School of Economics to be experimenting with new study methods, such as MOOC's. Implementation of these methods has just started.

Programme management has taken a number of measures to foster the students' study pace and to raise the student success rates. Entry requirements have been tightened, to ensure students, especially students with a vocational bachelor degree, to have satisfactory mathematical and statistical knowledge. Small-scale teaching may foster students' study pace as well. Students may turn to study advisors in case of study problems. The proportion of students completing the programme in one year was on average 21 % in the last three years, whereas the figure for completion in two years was from 62 % to 68 % (figures for last two cohorts).

Lecturers are appointed at one of Erasmus School of Economics departments, being the Departments of Applied Economics, Business Economics, Econometrics or Economics. Lecturers are to qualify for one of the research institutes of the School. The panel studied the list of publications by staff members, lecturing in the programme. Lecturers are to demonstrate their skills in education by obtaining the BKO-certificate. Lecturers may have an exemption, if they have been rated 3.5 on a 5-point scale in student evaluations of five separate courses. Course evaluations are part of the annual lecturers' performance interviews. Of the lecturers, 80 % have obtained a PhD, whereas 56 % are in possession of the BKO-certificate or have been exempt. Another 10 % of the lecturers are in the process of obtaining this certificate.

Considerations

In the panel's opinion, the admission requirements and the admission processes are well designed and strict, allowing only students in who may be regarded to have the capacities to complete the programme. The panel is positive about the pre-master programme for students with deficiencies.

The curriculum reflects all of the intended learning outcomes of the programme adequately and evenly. The panel considers the curriculum to be very well designed and effective in teaching students in-depth the theory and the methodology of the specialisation they have chosen. In addition, students are offered ample opportunities to address real-life problems, typical of their specialisation. The students with whom the panel met, expressed to be very positive about the curriculum contents.

The panel approves of the educational principles and the study methods of the programme, as they foster the students achieving the intended learning outcomes. Students and lecturers expressed being positive about the small-scale dimension of the programme. The panel feels the programme to be well managed in this respect. The panel welcomes the steps Erasmus School of Economics takes to ensure small-scale teaching, even in relatively large-scale specialisations. The panel regards the number of contact hours to be satisfactory.

Programme management has taken steps to raise the student success rates. The panel regards the student success rates to be appropriate and encourages programme management to try and raise these further. The panel recommends to improve the information provided to the students. For the communication, the School uses various platforms (Blackboard, Sin-online, Osiris), which is not very transparent for students.

The panel finds the research records of the lecturers impressive, as may, among others, be deduced from the list of their publications. In addition, the panel approves of the lecturers' educational capabilities. The proportion of lecturers holding the BKO-certificate is quite substantial.

Assessment of this standard

These considerations have led the assessment panel to assess standard 2, *Teaching-learning environment* to be good.

5.3 Standard 3: Assessment

The programme has an adequate assessment system in place.

Findings

The examinations and assessments of this programme, as of all the other programmes of the Erasmus School of Economics, are governed by the Erasmus School of Economics Examination Policy. This Examination Policy provides the framework for the examinations and assessments for each of the bachelor and master programmes of the School. In addition, the Examination Board publishes each academic year the Rules and Regulations for the examinations and assessments. These may deviate on certain points from the Rules and Regulations of the previous year. The examination regulations and procedures are very similar, if not identical for all of the programmes of the School.

For all the programmes of the Erasmus School of Economics, one single Examination Board has been installed. The Examination Board works in accordance with applicable Dutch law. The Board, among others, assures the quality of examinations and assessments, appoints examiners, grants exemptions, handles cases of fraud, advises on the Teaching and Examination Regulations and ensures programmes complying with these Regulations.

In the context of the Examination Policy of the School and the Rules and Regulations of the Examination Board, a number of measures have been taken by programme management to ensure the validity of examinations, the reliability of assessments and the transparency of the examination processes. To enhance the validity of the examinations, each of the examinations is prepared by one of the lecturers and is presented to another lecturer for review. On recommendation by the management of the various programmes, the Examination Board appoints the examiners for the course examinations and for the thesis assessments. The examiners meet specific requirements, set by the Examination Board. In the case of master theses, one of the examiners should hold a PhD. The results of each of the examinations in the School are analysed. Should the pass rate be outside of the 50 % – 90 % range, the Examination Board will inspect the examination more closely to check the reliability of the assessment. Every year, the Examination Board inspects about 40 theses from this and other programmes of Erasmus School of Economics to verify if these meet the requirements set and have been assessed in a correct way. The grades of the theses in the sample range from 5.5 to 7.0 and 9.0 and more. About eight members of the Board are involved, covering the various sub-disciplines of the programmes. If the Examination Board finds one or more of the theses unsatisfactory, these will be discussed with the academic director of the specialisation and through him or her with the examiners. To promote the transparency of the examinations, students are informed about the assessment criteria of the courses, are provided with model examinations and may inspect the grading of their work.

Examination methods include written examinations with open questions, mid-term tests, oral examinations, individual and group assignments and presentations. No multiple-choice examinations are used to test the students' knowledge. In most of the courses, multiple examinations are to be taken by the students and the final grade of the courses is a composite grade, this being the weighed outcome of the grades of the course components.

At the end of the programme, students are required to complete their thesis. For each of the master specialisations, a thesis manual has been drafted by the thesis coordinator of the department or section involved. Students are entitled to guidance during the thesis writing process by a supervisor, being a lecturer in the programme. The Erasmus School of Economics is in the process of implementing the

Thesis Workflow System. This system has been implemented in the master programmes of the School. This system is an ICT-system, allowing to monitor the thesis writing process and the thesis assessment process more consistently and in a more organised way. The thesis proposal is to be approved by the thesis supervisor, before the student can start writing the thesis. The student needs to present drafts of the thesis to be discussed with the supervisor. In the Thesis Workflow System, the supervisor may check more easily the progress of the student and his meeting the requirements in the process, such as uploading the approved proposal. The students with whom the panel met, were not very content with the information about the thesis process and the thesis assessment.

Theses are assessed by both the thesis supervisor and the second assessor. The assessment criteria for the thesis are the same across the master specialisations. These criteria are to be assessed using a Likert-scale, ranging from unsatisfactory to excellent. The supervisor assesses the thesis process, including the degree of independent work on the part of the student and assesses the report. The second assessor only assesses the written report. These two examiners review and grade the thesis independently and meet to arrive at the final grade. In the master specialisations, an oral defence of the thesis by the student is mandatory. Theses are checked for plagiarism and plagiarism scores are mentioned on the assessment form.

Considerations

The panel approves of the examination and assessment policies and rules and regulations of the Erasmus School of Economics, in force for this and the other programmes of the School. They ensure the validity of the examinations, the reliability of the assessments, the competencies and expertise of examiners and the transparency of the examination processes.

The panel considers the Examination Board to have the responsibilities and to work along the lines as intended by Dutch applicable law. The Board monitors the examination and assessment processes, analyses the examinations and regularly inspects the theses.

The panel approves of the examination methods programme management has selected. The diversity of examination methods in courses and across courses allows for the assessment of both knowledge and skills, relevant to the programme.

In the panel's view, the thesis process is satisfactorily organised, especially since the Thesis Workflow System has been implemented. The panel recommends to inform students more clearly and more comprehensively about the thesis process and the thesis assessment. The assessment of the theses is a reliable process, as two examiners are involved and sound assessment forms with relevant assessment criteria are used. The panel noted the thesis processes and thesis assessments to differ to a certain extent across the specialisations. Therefore, the panel recommends to align these processes across the specialisations and to establish more homogeneity therein. In addition, the panel recommends considering using weighted criteria in the thesis assessment.

Assessment of this standard

The considerations have led the assessment panel to assess standard 3, *Assessment* to be satisfactory.

5.4 Standard 4: Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings

In 2014 – 2015, the average grade for the master theses as estimations for the learning outcomes achieved by the graduates, was 7.6. In the same year, the proportion of students graduating cum laude was 13 %.

As has been mentioned when discussing standard 1, the graduates of the programme are trained to enter the labour market. Graduates have good career perspectives and tend to find positions relatively shortly after their graduation. They are employed by a wide variety of organisations, such as consultancy companies, banks, research institutes and governmental organisations. Some of the graduates continue their career in the academic world as a PhD-student.

Considerations

The panel studied the examinations of a number of courses in the programme. The panel establishes these examinations to be of adequate quality and of an appropriate level. The examinations are considered by the panel to be challenging and well elaborated and to meet the courses' learning goals. As the panel observed, students will have achieved most of the programme intended learning outcomes, if they have passed all of these examinations.

The panel studied six theses of students in the programme. These theses are assessed by the panel to be at least satisfactory, whereas some of them were quite good. For some theses, the panel would have given a somewhat higher grade and for some of them, a slightly lower grade.

Assessment of this standard

The considerations have led the assessment panel to assess standard 4, *Achieved learning outcomes* to be satisfactory.

6. Recommendations

In this report, a number of recommendations have been listed. For the sake of clarity, these are brought together below. The recommendations are the following.

- To improve the information provided to the students by aligning the different communication platforms.
- To inform students more clearly and more comprehensively about the thesis process and the thesis assessment.
- To align the thesis processes and the thesis assessments across the specialisations and to establish more homogeneity in these processes.
- To consider using weighted criteria in the thesis assessments.

Annex 1: Site visit schedule

The site visit was conducted in Rotterdam on 1 December 2016 and on 2 December 2016.

Site visit schedule for 1 December 2016.

08.30 h. – 09.00 h.	Arrival and deliberations panel (closed session)
09.00 h. – 09.45 h.	Board Prof. dr. Ph.H.B.F. Franses (Dean Erasmus School of Economics), prof. dr. I.J.M. Arnold (Vice Dean Erasmus School of Economics, programme director), W. Rowaan MA (senior policy adviser Education Erasmus School of Economics)
09.45 h. – 10.45 h.	Programme management/core lecturers Bachelor Economics and Business Economics Programme management/core lecturers Master Economics and Business Dr. B. Hoogendoorn (bachelor coordinator, Bachelor), dr. N.L. van der Sar (lecturer, Bachelor), dr. J. Delfgaauw (academic director Economics and Organisation track, Master), prof. dr. K.I.M. Rohde (academic director Behavioural Economics track, Master), prof. dr. J.T.J. Smit (academic director Financial Economics track, Master), prof. dr. T.G.M. van Ourti (academic director Health Economics track, Master)
11.00 h. – 11.45 h.	Lecturers/thesis examiners Bachelor Economics and Business Economics Lecturers/thesis examiners Master Economics and Business Dr. B. Karreman (lecturer/thesis examiner, Bachelor/Master), dr. V. Volosovych (lecturer/thesis examiner, member Education Committee, Bachelor/Master), dr. B.S.Y. Crutzen (lecturer/thesis examiner, Bachelor), dr. S.H. Bijkerk (lecturer/thesis examiner, Bachelor/Master), dr. A.C. Gielen (lecturer/thesis examiner, Bachelor/Master), dr. E.M. Bosker (lecturer/thesis examiner Bachelor/Master), dr. V.G. Hariharan (lecturer/thesis examiner, Bachelor/Master)
11.45 h. – 12.30 h.	Students and alumni Bachelor Economics and Business Economics Students and alumni Master Economics and Business D. Vodegel (student, member Education Committee, Dutch track, Bachelor), D.O. Anshah (student, member Education Committee, international track, Bachelor), R.T. van den Oord BSc (alumnus), T. Koning BSc (student, Master), M.A.J. van Hulsen BSc (student, Master), A.M.R. Woodend MSc (alumna), T. Reijnen MSc (alumnus)
12.30 h. – 13.30 h.	Lunch panel (closed session), open office hours 12.30 h. – 13.00 h.
13.30 h. – 14.30 h.	Programme management/core lecturers Bachelor Econometrics and Operations Research Programme management/core lecturers Master Econometrics and Management Science Dr. H.J.W.G. Kole (bachelor coordinator, Bachelor), prof. dr. D.J.C. van Dijk (academic director Quantitative Finance track, Master), prof. dr. A.P.M. Wagelmans (lecturer Operations Research and Quantitative Logistics track, Master), prof. dr. D. Fok (academic director Business Analytics Quantitative Marketing track, Master), prof. dr. R. Paap (academic director Econometrics track, Master)

- 14.30 h. – 15.15 h. Lecturers/thesis examiners Bachelor Econometrics and Operations Research
Lecturers/thesis examiners Master Econometrics and Management Science
Dr. C. Heij (lecturer/thesis examiner, chair Education Committee, Bachelor), dr. W. van den Heuvel (lecturer/thesis examiner, member Education Committee, Bachelor/Master), prof. dr. P.J.F. Groenen (lecturer/thesis examiner, Bachelor/Master), dr. R. Spliet (lecturer/thesis examiner, member Education Committee, Bachelor/Master), dr. M. van de Velden (lecturer/thesis examiner, Bachelor/Master), dr. E. Oldenkamp-Bazsa (lecturer/thesis examiner, Bachelor)
- 15.30 h. – 16.15 h. Students and alumni Bachelor Econometrics and Operations Research
Students and alumni Master Econometrics and Management Science
T.T. Wiemann (student, member Education Committee, international track, Bachelor), L. Li (student, Dutch track, Bachelor), M.T. Graftiaux (student, international track, Bachelor), M. van Breugel BSc (student, member Education Committee, Master), H.S. Doytchinova BSc (student, Master), L.W. Maassen MSc (alumnus), O.R. Pidenko MSc (alumna)
- 16.15 h. – 17.45 h. Deliberations panel (closed session)
- Site visit schedule for 2 December 2016.
- 09.00 h. – 10.00 h. Examination Board, all programmes
Prof. dr. J.M.A. Viaene (chair Examination Board), prof. dr. A. Dur (vice-chair Examination Board), drs. V.H.M. Beerkens (secretary Examination Board), K. Goudzwaard-Noot MSc (secretary Examination Board)
- 15.30 h. – 15.45 h. Board (second meeting)
Prof. dr. Ph.H.B.F. Franses (Dean Erasmus School of Economics)
- 15.45 h. – 17.00 h. Deliberations panel (closed session)
- 17.00 h. – 17.30 h. Main findings presented by panel chair to Dean and programme management

Annex 2: Documents reviewed

The panel studied the following documents, presented prior to the site visit

- Self-Assessment Report Master Economics and Business
- Areas and actions for improvement
- Domain-specific reference framework
- Matrix Dublin descriptors and intended learning outcomes
- Relation intended learning outcomes and curriculum
- Overview of curriculum
- Organisational structure of programme
- Overview teaching staff
- List of theses 2014 – 2015 and 2015 – 2016
- Teaching and Examination Regulations
- Annual Report of Examination Board
- Erasmus School of Economics Education Statistics
- Publication List Erasmus School of Economics

Prior to the site visit, panel members were given access electronically to course manuals and course material

On the day of the site visit, programme management presented the following documents

- Course material of a number of selected courses of the programme
- Examinations of a number of selected courses of the programme
- Programme Committee reports
- Examination analyses

Annex 3: Theses reviewed

The theses of the following six students have been selected for review by the panel.

- 324520
- 325847
- 331874
- 294512
- 372800
- 343767

Annex 4: Assessment panel composition

The assessment panel had the following composition:

- Prof. dr. T.J. Wansbeek, Emeritus Professor of Statistics and Econometrics, University of Groningen (panel chair);
- Prof. dr. J. Hartog, Emeritus Professor of Microeconomics with visiting scholar position, University of Amsterdam (panel member);
- Prof. dr. R. Kabir, Professor and Chair of Corporate Finance and Risk Management, University of Twente (panel member);
- S.M. van den Hoek, student Bachelor programme Tax Economics, University of Amsterdam (student member).

Prof. dr. T.J. Wansbeek, panel chair

Mr. Wansbeek is Emeritus Professor of Statistics and Econometrics at University of Groningen. He took his doctorate from University of Leiden. Among others, he held positions as Professor of Microeconomics at University of Amsterdam, as the Dean of the Faculty of Economics and Business of University of Amsterdam and as the Dean of the Faculty of Economics of University of Groningen. He was and is an editorial board member of a series of academic journals, such as *Journal of Econometrics*. Mr. Wansbeek held and holds a number of visiting scholar positions at, among others, University of Southern California, United States and Zhejiang University, China.

Prof. dr. J. Hartog, panel member

Mr. Hartog is Emeritus Professor of Microeconomics at University of Amsterdam, holding a visiting scholar position at this university. He took his doctorate from Erasmus University Rotterdam. At this university, he held the position of researcher and associate professor, subsequently becoming Professor of Microeconomics at University of Amsterdam. He held a number of visiting positions at universities in countries Europe, the United States and Asia. He also was an editor and referee for a number of international academic journals. Mr. Hartog is a member of the Royal Netherlands Academy of Sciences.

Prof. dr. R. Kabir, panel member

Mr. Kabir is Professor and Chair of Corporate Finance and Risk Management at University of Twente and Head of the Department of Finance and Accounting. He took his doctorate from Maastricht University. He held visiting scholar positions at, among others, Central University of Finance and Economics, Beijing, China, New York University, United States and University of Melbourne, Australia. Before becoming Professor at University of Twente, Mr. Kabir was Associate Professor of Finance at Tilburg University and Professor of Finance at University of Stirling, United Kingdom.

S.M. van den Hoek, student member

Ms. Van den Hoek is a student in the Bachelor programme Tax Economics of University of Amsterdam. She has taken on a number of extra-curricular activities, such as being the chair of the Student Association of her programme and being a member and the chair of the Student Council of the Faculty of Economics and Business of University of Amsterdam. In addition, Ms. Van den Hoek is employed by Canal Company as a guide and a host.