

REPORT OF THE EXPERT PANEL ON THE REACCREDITATION OF THE UNIVERSITY POSTGRADUATE (DOCTORAL) PROGRAMME BUSINESS ECONOMICS AND ECONOMICS FACULTY OF ECONOMICS, UNIVERSITY OF RIJEKA

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CONTENTS

INTRODUCTION	3
SHORT DESCRIPTION OF THE STUDY PROGRAMME	5
RECOMMENDATION BY THE EXPERT PANEL TO THE ASHE'S ACCREDITATION COUNCIL	6
RECOMMENDATIONS FOR THE IMPROVEMENT OF THE STUDY PROGRAMME	7
ADVANTAGES OF THE STUDY PROGRAMME	8
DISADVANTAGES OF THE STUDY PROGRAMME	8
EXAMPLES OF GOOD PRACTICE	8
COMPLIANCE WITH THE PRESCRIBED CONDITIONS FOR THE DELIVERY OF A STUDY PROGRAMME	9
QUALITY ASSESSMENT	12

INTRODUCTION

The Expert Panel appointed by the Agency for Science and Higher Education (ASHE) created this Report on the Re-accreditation of the University Postgraduate (Doctoral) Programme **Business Economics and Economics** on the basis of the Self-Evaluation Report of the Programme, other documentation submitted and a visit to the **Faculty of Economics, University of Rijeka**.

The Agency for Science and Higher Education (ASHE), a public body listed in EQAR (European Quality Assurance Register for Higher Education) and a full member of ENQA (European Association for Quality Assurance in Higher Education), re-accredits higher education institutions (hereinafter: HEIs) and their study programmes in line with the Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09) and the Ordinance on the Content of a Licence and Conditions for Issuing a Licence for Performing Higher Education Activity, Carrying out a Study Programme and Re-Accreditation of Higher Education Institutions (OG 24/10). In this procedure parts of activities of higher education institutions and university postgraduate study programmes are re-accredited.

Expert Panel is appointed by the Agency's Accreditation Council, an independent expert body, to carry out independent evaluation of post-graduate university study programmes.

The Report contains the following elements:

- Short description of the study programme,
- The recommendation of the Expert Panel to the Agency's Accreditation Council,
- Recommendations for institutional improvement and measures to be implemented in the following period (and checked within a follow-up procedure),
- A brief analysis of the institutional advantages and disadvantages,
- A list of good practices found at the institution,
- Conclusions on compliance with the prescribed conditions of delivery of a study programme,
- Conclusions on compliance with the criteria for quality assessment.

Members of the Expert Panel:

- President of the Expert Panel: Prof. Peter Mason, London Metropolitan University, United Kingdom;
- Prof. Aleksandra Mrčela Kanjuo, vice rector of the doctoral school, University of Ljubljana, Slovenia;
- Prof. Rainer Niemann, Karl-Franzens-Universität Graz, Austria;
- Prof. Anand Murugesan, Central European University, Hungary;
- Prof. Peter-Wim Zuidhof, University of Amsterdam, Netherlands;
- Prof. Wendy Sigle, London School of Economics and Political Science, United Kingdom;
- Doc. dr. Maja Turnšek-Hančić, University of Maribor, Slovenia;
- Prof. Julius Horvath, Central European University Business School, Hungary;
- Prof. Adele Ladkin, Bournemouth University, United Kingdom;

- Ieva Krumina, doctoral candidate, Latvian University of Agriculture, Latvia;
- Hrvoje Stojić, doctoral candidate, University Pompeu Fabra, Spain;
- Jeremiás Máté Balogh, doctoral candidate, Corvinus University of Budapest, Hungary;
- Kanad Bagchi, doctoral candidate, Max Planck Institute for Comparative Public Law and International Law, Germany.

The higher education institution was visited by the following Expert Panel members:

- Prof. Julius Horvath, Central European University Business School, Hungary;
- Prof. Peter Mason, London Metropolitan University, United Kingdom;
- Doc. Maja Turnšek-Hančić, University of Maribor, Slovenia;
- Ieva Krumina, doctoral candidate, Latvian University of Agriculture, Latvia;
- Hrvoje Stojić, doctoral candidate, University Pompeu Fabra, Spain;
- Prof. Adele Ladkin, Bournemouth University, United Kingdom.

In the analysis of the documentation, site visit and writing of the report the Panel was supported by:

- Frano Pavić, coordinator, ASHE;
- Vlatka Šušnjak-Kuljiš, coordinator, ASHE;
- Marina Matešić, interpreter at the site visit;
- Đuđica Dragojević, interpreter at the site visit;
- Đurđica Dragojević, translator of the Report, ASHE.

During the visit to the Institution the Expert Panel held meetings with the representatives of the following groups:

- Management,
- Study programme coordinators,
- Doctoral candidates,
- Teachers and supervisors,
- External stakeholders,
- Alumni.

The Expert Panel (henceforth 'the panel') also had a tour of the library, IT rooms, candidate register desk and the classrooms.

SHORT DESCRIPTION OF THE STUDY PROGRAMME

Name of the study programme contained in the licence: Business Economics and Economics

Institution delivering the programme: Faculty of Economics, University of Rijeka

Institution providing the programme: Faculty of Economics, University of Rijeka

Place of delivery: Rijeka

Scientific area and field: Social sciences, Economics

Number of doctoral candidates: 201 (61 are inactive at the moment)

Number of doctoral candidates with funding (employed as research assistants at the Faculty, another HEI or institute): 20

Number of doctoral candidates whose fees are paid by themselves or by the employer-firm: 92

Number of teachers (and potential supervisors):

- 38 teachers of the Faculty,
- 3 external teachers from Croatia,
- 17 external teachers from abroad.

Number of supervisors: Officially 20 supervisors have been assigned (12 full-time and 8 external) and 5 co-supervisors - who are currently supervising around 25 doctoral candidates. Ratio between supervisors and doctoral candidates: 1:1.25.

Ratio between the number of enrolled and the number of completed doctoral candidates in the last five years is around 128 to 26, i.e. around 5:1.

Learning outcomes of the study programme:

Upon completion the doctoral studies the candidates will have the following competencies:

- LO 1.: specific scientific skills, such as skills in gathering information and literature, critical reading and detecting bias, interviewing skills, construction, measuring instruments, etc.;
- LO 2.: planning skills and project management (drafting of scientific research, conducting research, timely detecting potential problems, identifying the necessary funds, and coordinating the research team);
- LO 3.: knowledge of research methodology and reasoning skills (computer skills and appropriate programs, knowledge of statistical analysis, quantitative knowledge of econometric models, statistical reasoning skills, the ability to draw conclusions based on quantitative data);
- LO 4.: writing and reporting skills (language skills and listening skills, the ability to present data and findings to non-expert audience);
- LO 5.: skills to express personal, professional and ethical authority;
- LO 6.: readiness to take ethical and social responsibility for successful implementation of the scientific research, social benefits out of research results and readiness for possible social consequences;
- LO 7.: readiness to cope with the new challenges of society and economy;
- LO 8.: in-depth understanding of economic theory in connection with the relevant interdisciplinary areas and in the context of changes in the business environment. Understanding and application of innovative research methods to identify and solve complex problems in business practice.

These learning outcomes represent sufficient preparation of the doctoral candidates, either for an academic or business career.

The structure of the programme devised is to offer (in ECTS credits) 40 credits of courses and 140 credits of research related activities. Taught (lectures, seminars) are presented in core and in elective courses.

Research activities (140 ECTS in total) consists of 15 ECTS credits for defending research proposal; 50 credits in elective activities (20 for published paper; 10 for conference presentation, 20 for doctoral seminars, 10 for mobility or teaching assistantship); and 75 for dissertation defence.

RECOMMENDATION BY THE EXPERT PANEL TO THE ASHE'S ACCREDITA-TION COUNCIL

Upon the completion of the re-accreditation procedure and the examination of the materials submitted (Self-Evaluation Report etc.), the visit to the higher education institution and interviews with HEI members in accordance with the visit protocol, the Expert Panel renders its opinion in which it recommends to the Accreditation Council of the Agency the following:

Issue a letter of expectation for the period of three (3) years with suspension of enrolment during this time.

Joint recommendations for all of the evaluated study programmes in the cluster of social sciences and the field of economics:

- 1. A research proposal should accompany applications of candidates and should be part of the assessment process when choosing the best candidates for enrolment.
- 2. A supervisor should be appointed at the start of the programme.
- 3. Transparency of doctoral students' funding should be improved.
- 4. Justification of fee level should be improved.
- 5. There should be an equal treatment of part-time and full-time (fully-funded) students.
- 6. All doctoral students should have at least 3 years of independent research in full capacity. With current teaching content taking large portion of the programmes, programmes should be prolonged to last possibly 4 or 5 years, with first (classroom) part as a Masters (Research) level.
- 7. Systematic internationalisation of curriculum, faculty and students (incl. student experience) should be a priority.

RECOMMENDATIONS FOR THE IMPROVEMENT OF THE STUDY PROGRAMME

- 1. According to the EU and national regulations, a doctoral qualification requires three years of full time research. Currently the programme has, at most, a year and a half dedicated to research and this is due to a large number of non-research oriented courses. The panel recommends two options. (1) Keep the three-year programme, but reduce the coursework overall and modify the courses so that they are strictly research oriented. Start with supervision immediately upon admission and develop the thesis proposal by the end of the first year. This would mean selection criteria need to be stricter and a detailed research proposal needs to be submitted on application. (2) Extend the programme to five years where candidates would have extensive coursework in the first two years, focusing on quantitative methods (often called a 'Master of Research' phase), followed by a research-only phase with a duration of three years. Under these circumstances selection criteria could stay the same. This option is one adopted by some of the best programmes in the EU and is the preferred option of the panel.
- 2. Both the quota (40) and the average number of admitted candidates annually (25) is too high for the HEI's capacity and resources. The panel believe this is a major reason for very poor completion rates (only 26 graduates in the last five years out of 201 admitted candidates). Annual quota in the best programmes in the EU is closer to 10, with more resources available. The HEI should reduce the quota to a similar number. If a five-year programme is adopted, the quota can be substantially higher, conditional on further selection before the research phase starts. The panel believes it is necessary to stop the recruitment of candidates for the next three years until the number of candidates is aligned with the HEI's capacities.
- 3. A full-time mode of study is the most likely way to ensure high quality outcomes and to ensure that three years are indeed spent on independent research, per requirements of the EU and national qualification framework. Hence, most candidates should be full-time, not part-time, as is the case at the moment. The HEI should increase the amount of funding for the full-time mode. For example, the HEI could use its excellent ties with the local private sector organisations and introduce scholarships for the full-time degree. At the same time, the part-time mode should be modified. Candidates funded by the private sector should have a more balanced proportion of time spent on research in relation to their regular jobs; special agreements should be made with employers regarding this. The admission process could also be stricter for part-time candidates, given that they would have less time for research.
- 4. Currently, funding for research activities (data collection, conferences etc.) is poor, and the support provided to part-time candidates seems to be particularly poor. The HEI should increase funding for research activities and make the funding allocation transparent. For example, an annual sum could be given to each candidate regardless of their status. Given the high level of tuition fees, the panel see this as a reasonable request.
- 5. To improve the international aspects, the panel recommends announcing the call much sooner (in April at the latest), offering teaching and supervision in English, advertising application calls internationally (in particular on popular academic jobs websites, such as www.jobs.ac.uk, www.jobs.ac.uk, or www.econjobmarket.org) and improving regulations

regarding writing the thesis in the form of articles, as currently publication requirements are too stringent.

ADVANTAGES OF THE STUDY PROGRAMME

- 1. Very good/excellent facilities.
- 2. The strong inter-disciplinary character of the programme.
- 3. The international character of the programme.
- 4. High research quality of some of domestic faculty.
- 5. A good motivation system awarding research-intensive faculty.

DISADVANTAGES OF THE STUDY PROGRAMME

- 1. In the three year programme there is insufficient time left for independent research.
- 2. Poor availability of funding for the candidates.
- 3. The teaching load of many teachers and supervisors is very high.
- 4. A large number of part-time candidates requiring significant resources and many of these do not seem to receive sufficient support (research guidance, funding for research activities).
- 5. The drop-out rate of part-time candidates appears high, due, at least in part, to insufficient support.

EXAMPLES OF GOOD PRACTICE

- 1. The invitation of high-quality guest lecturers.
- 2. Steps introduced to guarantee prevention of plagiarism.
- 3. Topics of dissertation thesis are inter-disciplinarily orientated.
- 4. Advanced relationship with stakeholders from the business sector.
- 5. Desk-space and facilities for part-time candidates.

COMPLIANCE WITH THE PRESCRIBED CONDITIONS FOR THE DELIVERY OF A STUDY PROGRAMME

Minimal legal conditions:	YES/NO
	notes
1. Higher education institution (HEI) is listed in the Register of Scientific	YES
Organisations in the scientific area of the program, and has a positive	
reaccreditation decision on performing higher education activities and	
scientific activity.	
2. HEI delivers programmes in the two cycles leading to the doctoral	YES
programme, i.e., first two cycles in the same area and field/fields (for	
interdisciplinary programmes), and employs a sufficient number of	
teachers as defined by Article 6 of the Ordinance on the Content of a	
Licence and Conditions for Issuing a Licence for Performing Higher	
Education Activity, Carrying out a Study Programme and Re-Accreditation	
of Higher Education Institutions (OG 24/10).	
3. HEI employs a sufficient number of researchers, as defined by Article 7	YES
of the the Ordinance on Conditions for Issuing Licence for Scientific	
Activity, Conditions for Re-Accreditation of Scientific Organisations and	
Content of Licence (OG 83/2010).	
4. At least 50% of teaching as expressed in norm-hours is delivered by	YES
teachers employed at the HEI (full-time, elected into scientific-teaching	
titles).	
5. Student: teacher ratio at the HEI is below 30:1.	YES; even if the ratio
	seems too close to
	1:30
6. HEI ensures that doctoral theses are public.	YES; however in
	practice, generally
	only faculty, staff, and
	candidates are kept
	informed
7. HEI launches the procedure of revoking the academic title if it is	YES
determined that it has been attained contrary to the conditions stipulated	
for its attainment, by severe violation of the studying rules or based on a	
doctoral thesis (dissertation) that has proved to be a plagiarism or a	
forgery according to provisions of the statute or other enactments.	
Additional/ recommended conditions of the ASHE Accreditation	YES/NO
Council for passing a positive opinion	notes
1. HEI (or HEIs in joint programmes) has at least five teachers appointed	YES
to scientific-teaching titles in the field, or fields relevant for the	
programme involved in its delivery.	
2. In the most recent reaccreditation, HEI had the standard Scientific and	NO; ASHE Report from
Professional Activity marked as at least "partly implemented" (3).	2010 indicated early

	level of
	implementation
3. The doctoral programme is aligned with the HEI's research strategy.	Yes
4. The candidate : supervisor ratio at the HEI is not above 3:1.	YES. The ratio of officially appointed supervisors to PhD candidates is under 1:3. But NO, with the nominal 174 doctoral
	candidates and 34 potential supervisors;
	it is above 1:3
5. All supervisors meet the following conditions: a) PhD, elected into a scientific title, holds a scientific or a scientific-teaching position and/or has at least two years of postdoctoral research experience;	a) YES
	b) YES; While all are
b) active researcher in the scientific area of the programme, as evidenced by publications, participation in scientific conferences and/or projects in the past five years (table 2, Supervisors and candidates);	active researchers in terms of publications, some had no project activity (as
c) confirms feasibility of the draft research plan upon admission of the candidate (or submission of the proposal);	collaborators) in the past 5 years
d) ensures the conditions (and funding) necessary to implement the candidate's research (in line with the draft research plan) as a research project leader, co-leader, participant, collaborator or in other ways;	c) YES; the panel recommends that this should be done sooner in the study process
e) trained for the role before assuming it (through workshops, co- supervisions etc.);	d) NO. More funding is required.
f) received a positive opinion of the HEI on previous supervisory work.	
	e) YES
	f) YES
6. All teachers meet the following conditions:	a) YES
a) holds a scientific or a scientific-teaching position;b) active researcher, recognized in the field relevant for the course (table 1, Teachers).	b) YES
7. The supervisor normally does not participate in the assessment	YES

committees.	
8. The programme ensures that all candidates spend at at least three	NO; In the three years
years doing independent research while studying, individually, within or	of the official
outside courses), which includes writing the thesis, publishing,	programme duration,
participating in international conferences, field work, attending courses	due to a large non-
relevant for research etc.	research oriented
	coursework
	component,
	candidates are unable
	to spend three years
	doing independent
	research.
9. For joint programmes and doctoral schools (at the university level):	n/a
cooperation between HEIs is based on adequate contracts; joint	
programmes are delivered in cooperation with accredited HEIs; the HEI	
delivers the programme within a doctoral school in line with the	
regulations and ensures good coordination aimed at supporting the	
candidates; at least 80% of courses are delivered by teachers employed at	
HEIs within the consortium.	

QUALITY ASSESSMENT

1.	RESOURCES: TEACHERS, SUPERVISORS, RESEARCH CAPACITIES AND INFRASTRUCTURE	
1.1	. HEI is distinguished by its scientific/ artistic achievements in the discipline in which the doctoral study programme is delivered.	Improvements are necessary Generally the panel observed a dynamic Faculty with clear positive trends in terms of research activities. The HEI is active in various EU and national projects, has numerous international collaborations, participates in a good regional doctoral programme network and organizes international conferences. Faculty publications are dominantly in the field of applied economics and business, not economics per se. We have found very good quality of publications in the fields of energy economics and statistics, with some that are highly competitive. Nationally, with respect to the quality of research, HEI is one of the leading institutions. However, in terms of international standards, the quality of research is still lacking. Publications in top 5%, or even top 25% of journals, are extremely rare, which results in poor international visibility in terms of research. The HEI should incentivise researchers to publish more ambitiously, e.g. by explicitly rewarding publishing in toptier journals, or by reducing the teaching load of research-oriented faculty. However, these measures are likely to require a long time to achieve desired effects, so in the
		meantime, the HEI could try to employ staff with a strong research agenda. We recommend the HEI to use their good geographical position and recruit internationally.
		Improvements are necessary The programme is delivered by at least helf of its own
1.2	. The number and workload of teachers involved in the study programme ensure quality doctoral education.	The programme is delivered by at least half of its own faculty. The situation is somewhat unclear since the workload on coursers is divided between the HEI own staff and external teachers. Even though this might make the overall number of own teachers lower than the official number, this is a clear positive step towards internationalisation of the programme and we consider the

requirement to be satisfied.

Teachers are sufficient in number, but all have very high workloads. A number of teachers and supervisors have workloads above 360 norm hours. The situation is somewhat unclear due to electives – large deviations from the norm could occur, in some cases difference can be over 100 hours. Although the teaching load seems to be within legal constraints, comparing it with other EU institutions, it seems high and might influence doctoral education negatively. In our conversations with teachers and supervisors, they stated they are sometimes overwhelmed with teaching, confirming our belief that these teaching loads do not leave supervisors enough time to support and guide candidates.

The teaching workload should be reduced to the minimum required by the law for all teachers working as supervisors (to the best of our understanding, this is 300 norm hours). The HEI should regulate more strictly teaching activities of their teachers and supervisors at other institutions. The HEI should also reward teaching in the programme by reducing their obligations outside of it. Finally, currently only teaching hours are paid; supervision should also be compensated. If supervision was recognized as a source of income for the teachers, then this would provide an additional incentive for supervisors to work with candidates earlier and at the same time substitute for the income the supervisors now receive via teaching at other institutions.

1.3. The teachers are highly qualified researchers who actively engage with the topics they teach, providing a quality doctoral programme.

Improvements are necessary

Most of the teachers are active researchers as well. However, there are still some faculty with less than an adequate publication list, as judged by journal quality where they publish, and citations. These are, for example, Slavomir Vukmirović, Nataša Rupčić, Marija Kaštelan Mrak, Zvonko Čapko or Mario Pečarić. The HEI has taken the difficult but necessary steps to guarantee that in the doctoral programme only research-oriented faculty with international publications participate. In the panel's conversation with the Management, they stated that two years before they had introduced stricter criteria for

supervising doctoral candidates and that those with a poorer record were not supervising doctoral candidates any longer.

We recommend that the HEI should be far more selective in who should be allowed to teach in the doctoral programme. More stringent criteria for teaching fits well with our other recommendations of substantially reducing the number of courses in the programme (see Section 4). Otherwise, qualifications are well aligned for standard Master of Science level courses, in case the HEI would separate these courses from the PhD phase into a Master of Research phase (see Section 4.1).

Improvements are necessary

1.4. The number of supervisors and their qualifications provide for quality in producing the doctoral thesis.

The programme at the moment does not have a sufficient number of high-quality supervisors. Currently, the number of supervisors that are supervising at least one candidate is 20. The current maximum number of candidates per supervisor is 4, which is appropriate. According to the Faculty Management and the SER the candidate: supervisor ratio is lower than 3:1. The HEI did not calculate this ratio appropriately in our opinion. The total number of available supervisors is difficult to ascertain. The Management claims that out of a total faculty, 25% do not satisfy the new stricter requirements. The total number of employees that are assistant professors or above is 46, according to the Strategic Programme of Scientific Research of the Faculty of Economics in Rijeka for the period 2017-2020, and we excluded external supervisors from the calculation. While it is positive that the HEI selects research-oriented faculty with stricter criteria, it is unclear how many out of the total faculty precisely meet these new criteria. Our best estimate is 34. Taking into account the fact that there are currently 174 doctoral candidates, this number is extremely low (it would be low even if we took into account all of the 46 faculty members). Out of 174 current candidates, 25 have selected a topic and a supervisor and passed the proposal stage, while the other 86% candidates are officially not at that stage yet. In their calculation, the HEI appears to have ignored the candidates that had not officially selected a supervisor yet. This is inappropriate, as in our opinion candidates have not selected a supervisor because the HEI

does not have a sufficient number of supervisors. This is also partly due to the programme structure where candidates start with the independent research too late and are only then matched with supervisors. Hence, the HEI cannot claim that the number of candidates per supervisor does not exceed 3:1.

We recommend implementing several actions to remedy this problem. Firstly, the HEI should hire faculty with a clearer research driven agenda. They could use their good geographical location to recruit international staff. Secondly, they should reduce quotas and the number of enrolled candidates substantially. The HEI has enrolled a lower number of candidates in 2016/2017, compared to the past and that is the appropriate direction. They should continue on this path lowering the quota even further (there is a more detailed discussion on this in section 4). In the next three years, we recommend that the HEI should not enrol any candidate, until the backlog is cleared. Thirdly, candidates should start with research and supervision earlier in the programme. At interview students themselves mentioned that they would appreciate supervision and committing sooner.

There are some issues regarding the quality of supervisors' research output as well. Some supervisors have high enough quality publications. The new regulation is stricter and this is a positive change. Other current supervisors, however, do not seem to satisfy the new stricter criteria established by the Faculty. The HEI should continue on the path of stricter criteria for supervisors, but at the same time to provide public information about the exact number of those supervisors that meet these new criteria. Moreover, current candidates with supervisors that do not satisfy the criteria should receive more qualified cosupervisors.

In terms of research projects, the Faculty strives for national and international research projects and every current supervisor seems to have at least one ongoing project (according to the SER). This path should be continued in the future. When it comes to judging supervisors' quality with respect to candidates'

performance, there are weaknesses. Candidates do not seem to be ambitious in terms of placing their articles and they publish mostly in regional conference proceedings and journals. In the panel's conversations with students it seemed they are also not aware of good journals and authors in their fields. This indicates serious gaps in supervision. Although the panel recognizes this is a complex problem, it has to be dealt with by changing the programme structure and content, increasing the quality of both supervisors and candidates as well as expectations of the research output. The HEI should also track and publish placement records of the candidates to monitor the quality of the programme. An analysis of research topics of candidates in relation to work areas of the supervisors seems satisfactory.

Finally, as already discussed in section 1.2 for teachers, some supervisors have high teaching workload, potentially leaving too little time for quality supervision (for example, Heri Bezic, Nada Karaman Aksentijević or Dragomir Sundać have a particularly high workload). The HEI should put restrictions on supervision in terms of teaching load as well and should regulate external supervisors as well. For example, Đula Borozan and Marija Ham from the Faculty of Economics Osijek have teaching loads of 676 and 472 norm hours, respectively. This kind of teaching load does not leave sufficient time for quality supervision, in particular at an external institution.

Improvements are necessary

1.5. The HEI has developed methods of assessing the qualifications and competencies of teachers and supervisors.

The HEI has established certain procedures for assessing the competencies of teachers and supervisors. There is a tendency to nominate only research active faculty as supervisors. This is a very positive sign. Procedure-wise, this is implemented during the thesis proposal application. The criteria seem to go beyond the national criteria for election into academic positions and both research quality and activity in research projects is assessed. A committee for Postgraduate Studies and Doctorates assesses whether a researcher satisfies the criteria and Faculty Council gives a final approval.

The criteria could be stricter according to international

standards, however, and the HEI should improve these criteria further. For example, the first element of Minimal Criteria "Scientific activities of a supervisor as an author in the last five years" should impose stricter quality minima on publishing in good quality journals (first quartile, similar to those prescribed for Natural Sciences at the University of Rijeka). Publishing a book and two articles regardless of quality is a bar that is too low and should be modified or removed.

The procedures for choosing staff into teaching roles are lacking. According to the SER, at the moment teacher qualifications are evaluated when a teacher proposes the course content (it is unclear whether this is for any type of course or doctoral courses only). They do this by listing their scientific papers published in the last five years and both the Faculty and University review this proposal. There do not seem to be prescribed criteria, such as for supervision and the HEI should be much clearer in this respect. Criteria should be similarly strict, since the PhD level courses should be very research-oriented. Whatever the current evaluation criteria are, they seem to be too lax as research output of some teachers is of low quality (see Section 1.3).

High level of quality

1.6. The HEI has access to high-quality resources for research, as required by

the programme discipline.

The HEI clearly has access to high-quality research infrastructure. There is access to the most relevant journals provided through the National Library, and through their own subscriptions. The HEI has also good access to relevant data sources. The facilities available to PhD candidates (including part-time) are good and include access to deskspace, good IT equipment and relevant software packages like Stata. The common rooms are of good quality and candidates express satisfaction with those facilities. The HEI should ensure access to the office at all times, not only from 6 to 22 on weekdays. It is unclear whether desk-space and office facilities would be sufficient if all the currently enrolled candidates were active and under supervision. The resources provided by the library, however, could be improved and there is a lack of more recently published books. A systematic approach should be made in cases where candidates indicate a need for additional literature

(e.g. buying books on the basis of their inputs about their needs).

2. INTERNAL QUALITY ASSURANCE OF THE PROGRAMME

Improvements are necessary

The University has an Ordinance in place for proposing and approving their study programs – *Regulations on Accreditation of Study Programmes at the University of Rijeka*. In addition, the HEI has provisions in *the Statute of the Faculty* further regulating procedures for proposing and accepting new study programmes. The current procedure is quite comprehensive, where descriptions of cultural, social and economic needs have to be provided along with many other details. Identification of scientific/artistic needs is quite unclear in the current procedures, however, more focus is put on economic and individual/social needs. The procedure appropriately relies on an external review.

2.1. The HEI has established and accepted effective procedures for proposing, approving and delivering doctoral education. The procedures include identification of scientific/ artistic, cultural, social and economic needs.

Although current regulations are quite good, the panel were not able to completely assess how the doctoral programme itself was established. The regulating documents stated in the SER are more recent (for example, the Statute is dated in 2014, and University Ordinance is dated 2015), after the programme has been already established. Hence, it is not clear what the regulations were when the programme was launched. Moreover, the panel were not supplied with documents from the programme evaluation when it was initially proposed. The discussions with the staff suggest that there is a rationale for this programme. According to them, the programme is satisfying social and economic needs - the HEI has identified different target markets, aiming at both full-time and part-time candidates. However, they did not provide sufficient rationale for the structure and the content of the programme. For example, the rationale for taught elements, specifically those which do not focus on research, and time left for independent research, is not clear. It is also unclear how the current programme passed the initial review given that it clearly does not satisfy the EU qualifications framework of providing three years of full-time independent research.

The panel recommend that the HEI conducts an analysis of the programme and produces a clear rationale for all elements. This should be done according to the current regulations that we deem satisfactory. In fact, according to our recommendations, throughout the report we believe that the amount of changes would warrant launching a new accreditation process of the programme according to the University regulation. Importantly, this would trigger a new external review that would determine whether all the changes are correctly implemented and the new programme satisfies the EU and CroQF qualifications framework.

Improvements are necessary

In our opinion the programme is not aligned well enough with the Faculty's research strategy and the panel have several comments on the quality of the research strategy. Detailed research strategies exist at both University and Faculty level. The panel focus on the core document, the Strategic Programme of Scientific Research of the Faculty of Economics in Rijeka for the period 2017-2020.

The SER and the Strategy state that HEI has two core strategic objectives related to the enhancement of scientific research:

- 1. Increased volume and quality of research activities; its connection to the development needs of the economy and the society and better international visibility.
- 2. Increased number of defended doctoral dissertations.

The first objective puts too much focus on quantity. Current output in terms of volume is high enough, in fact, it could be even lower, if the quality of these publications were to increase.

Overall, the HEI puts too much focus on quantity and not enough on quality in the Strategy. For example, in the SWOT analysis, the number of publications is stressed as a weakness. Performance indicators for both staff and candidates are in terms of numbers of articles published, and as a sign of quality, number of articles published in journals indexed by Web of Science or Scopus. Even though the HEI obviously cares about the quality, Web of Science is

2.2. The programme is aligned with the HEI research mission and vision, i.e. research strategy.

a bar that is set too low. The HEI should track also publications in the top 5% or top 25% journals and have a primary goal of increasing that number. These publications are a better indicator of quality and matter more for international visibility and HEI should include these types of performance indicators and prioritize their improvement. We also recommend the HEI to single out particular research areas where they have better competencies and focus efforts on them. At the moment, the Strategy states the HEI covers all fields of research in economics and business, without focusing on any and building a specific reputation. Some degree of specialization is needed and is a good way to compete with other HEIs in the EU; even the best economics and business departments cannot afford to invest in all areas, for example, when recruiting new faculty. The HEI mentions some areas in the SWOT analysis for which they seem to have comparative advantages: energy economics, sustainable development, water resources management, waste disposal management. We suggest HEI to focus more explicitly on building up research areas such as these.

The second objective, 'increased number of defended doctoral dissertations', the HEI intends to achieve through high-quality doctoral programmes, more efficient management of resources and better integration of candidates into research projects of the staff. Our view is that current number of doctoral students (174) and quotas are much too high (40 candidates in the last call) for the amount of resources the HEI has. Increase in the number of enrolled students is seemingly well aligned with this objective. However, this seems to have come with decrease criteria and lower quality of candidates, consequently in a decrease of the programme quality. It is also in conflict with rational management of resources as the HEI does not have the capacity to provide good supervision of such a large number of candidates. In our opinion, the current number of dissertations (26 in the last five year) is aligned with the HEI's resources. The best economics and business departments in the EU rarely produce more than 10 candidates annually, with more resources at their disposal. Hence, this objective is inappropriate in our view and the focus should shift rather

to 'an increase in the quality of the dissertations'.

Finally, there is some misalignment with the HEI's vision, laid out in the Strategy: "Integration into the European Higher Education Area and the European Research Area and provision of an overwhelming support to the development of the economy. Its integration can be seen through the competitiveness of its study programmes, the mobility of its students, academic and administrative personnel, joint international studies and research projects." Currently, the doctoral programme does not satisfy the prescriptions of the EU qualification framework, since candidates do not officially have three years of independent research in the HEI's three year programme, as too much time spent on non-research coursework. Moreover, with large quotas and low enrolment criteria, the quality of the programme is lower and consequently less competitive in the EU educational market.

Improvements are necessary

The HEI has partially established a mechanism for systematic monitoring of the programme success. The University has an established procedure for implementing changes in their study programmes - Regulation on Accreditation of Study Programmes at the University of Rijeka. The panel did not see any evidence that there is an ordinance or guidelines stipulating an official international or national **periodic review** of the programme. According 2.3. The HEI systematically monitors the to the SER, there was an international review in 2010 and another evaluation in 2013 by ASHE. It is not clear what changes were made following these evaluative reviews.

> The SER and interviews with staff and candidates suggest that the HEI monitors the success of the PhD programme. The HEI systematically monitors the research output of the staff and the candidates which forms the basis for election in academic positions for the staff and ECTS credits for candidates. According to the SER, the HEI conducts various polls, collecting opinions from candidates and alumni on the programme and individual courses. This was confirmed through the panel's interviews with the candidates. Candidates and supervisors also submit annual reports with details on research work and supervision. While the panel have seen examples of these reports, it seems like that they

success of the programmes through periodic reviews, and implements improvements.

have not been filled out regularly, despite the Ordinance prescribing so. This is according to some of the students and in some annual reports students complained about the very same issue (see, for example, the report of Davor Mance in 2014). Supervisors also indicated at interview that they have an annual review of their progress with their line manager. The SER states that surveys of alumni and employers are conducted as well, however, in their conversations with the alumni they stated they have not seen any such survey. According to the SER, the HEI seems to be using all of this information in their annual evaluation, conducted by the Committee for Postgraduate Studies and Doctorates of the Faculty.

While the panel have seen sufficient evidence of monitoring the success of the programme in various ways, the panel have not seen any serious analysis of the data collected, summarizing program outcomes, comparing it with other international and national programmes, etc. Similarly, the panel have not seen any evidence of changes being implemented following this analysis. For example, it is unclear what follow-up there was in relation to a supervisor's individual performance after their interviews with their line manager, or what the results of candidates, alumni or employer surveys were and how the HEI used this feedback. Moreover, the panel have found several complaints in the annual reports, even though leadership stated they had no significant complaints so far. For example, Davor Mance in 2014 reported he had an issue with a member of the doctoral committee and the staff seemed to be aware of it. That these issues lasted for that long indicates that the HEI did not react appropriately. In 2016, Martina Ferencic, a part-time candidate, complained about the HEI not helping enough with her supervisor search and complained about having the same tuition fee even though she did not have to do the first-year coursework. Given the leadership statements the panel have to conclude that HEI does not take sufficient action based on annual reports.

The panel have several recommendations. First, the HEI should establish a procedure for periodic evaluation of the programne where all of the data gathered through the

monitoring activities would be analysed and improvements implemented. This procedure should make it obligatory rather than simply allowing for changes, as is currently the case in the University's Ordinance. In this process, the HEI should be transparent and provide the rationale for changes made to the programme. The panel recommend a regular five-year review, performed by an external, and ideally, international committee of evaluators. The HEI should not wait for, or rely on, externally imposed re-accreditation processes such as this one.

Second, the HEI should go beyond just collecting the data and actually perform a serious analysis of it. If the HEI indeed did the analysis, results should be made available. For most of these analyses, if not all, the panel do not see any reason why they could not be made available publicly. The HEI should publish regular reports with results of surveys of current candidates, alumni and employers, overview of the research output and comparison with other programmes in the EU. For example, such information would help prospective candidates to estimate the value of the programme.

Third, annual candidate reports could also be substantially improved. When evaluating the programme, there is only general satisfaction question and candidates are allowed to leave comments only if the answer is 1 or 2 (unsatisfied). This evaluation should include satisfaction with a number of dimensions such as monitoring procedures, facilities etc.

Improvements are necessary

2.4. HEI continuously monitors supervisors' performance and has mechanisms for evaluating supervisors, and, if necessary, changing them and mediating between the supervisors and the candidates.

The SER and interviews with staff indicate that the HEI monitors supervisors' performance through annual reports of the candidates. According to the Management, students so far did not raise any serious complaints through these reports and there was no need to react on them. However, the panel did not see evidence that the HEI seriously analysed data collected through these reports. For example, supervisors are rated on several dimensions, and if these are consistently low the HEI should act on this. The HEI should regularly analyse the cumulative data collected on each supervisor, establish criteria based upon it could reassess whether a researcher should be allowed to

supervise and/or candidate should be matched with another researcher. Additionally, the HEI could use the reports to continually monitor supervisors' performance in relation to student progression and completion. With regards to the annual reports, dimensions on which supervisors are assessed could be more comprehensive, e.g. they could include how much a supervisor is directly involved in a candidate's projects. Also, to reduce the focus on negative factors, the HEI could establish an annual reward for the best supervisor.

As an additional way of monitoring both supervision and candidate's progress, we recommend the HEI to introduce an electronic system for recording meetings between supervisors and candidates. In the system a candidate initially completes the report with questions discussed and conclusions, and then this is checked by the supervisor.

The HEI also monitors supervisors' research output, as well as that of candidates. As indicated elsewhere in this report, monitoring can be improved by measuring the performance in terms of publishing in the top journals. The HEI should go beyond A1 and A2 categories that prescribe a rather low bar for quality. Expectations from the candidates in terms of publishing should be increased as well. The HEI could reward students with more ECTS for publishing in a journal from the top 25% than A1 or A2 journal. The HEI should also consider using other measures of success, such as placement of candidates after the PhD, often used internationally as a measure of quality of supervisors and the programme. Similarly as for annual reports, the HEI does not seem to seriously analyse this data and publishing reports on research performance, comparing it with other HEI's etc.

The Ordinance stipulates that it is possible to change a supervisor once. During the discussions with staff it was clear that this is possible and candidates were fully aware of this. Regarding the mediation, in case there are problems candidates could talk to the Head of the program who would attempt to mediate. The procedure for mediation, however, is not specified in the Ordinance and it would be better if this procedure was clearer. The panel recommend to HEI to

use mediation as a first course of action in cases when a candidate wishes to change a supervisor, to avoid possible conflicts.

Finally, the panel would recommend the HEI to introduce a pastoral support system for candidates. This could take the form of an independent counsellor with whom candidates would meet occasionally (but regularly) throughout the programme, discuss research and any other issues they might have.

Improvements are necessary

The HEI has procedures that assure academic integrity. In this regard, the new Ordinance from 2017 establishes the procedure of revocation of a doctoral degree, if it was obtained by non-ethical method.

With regards to ethical behaviour throughout the

programme (writing essays, articles and the thesis) the programme Ordinance is silent and HEI relies on the Code of Ethics of the University of Rijeka. However, the panel have not seen evidence that the HEI has regulations stipulating the procedures and consequences of unethical behaviour during the programme. The SER indicates that the HEI does have appropriate practical procedures for detecting plagiarism (for example, staff regularly uses Turnitin software). However, following interviews, the panel considers that some candidates did not have a full understanding of the nature of plagiarism, and did not have a complete grasp of possible penalties if they are detected as committing plagiarism. The problem was reinforced through the panel's conversations with teachers and supervisors. They have mentioned cases where they had to return submitted work several times until it conformed to the ethical guidelines. The panel recommend a more explicit exposure early in the Programme on the nature of, and penalties for committing plagiarism. For example, it could be taught in a research methods course. Additionally, the panel recommend the Faculty to ensure continual, rigorous checking of candidates' works to detect any

There seems to be guaranteed freedom of research in the

plagiarism.

HEI assures academic integrity and freedom.

		programme, as regulated by the Code of Ethics. In the panel's conversations with candidates they have supported this opinion as well.
		Improvements are necessary
2.6.	The process of developing and defending the thesis proposal is transparent and objective, and includes a public presentation.	The programme has mostly adequate and appropriate procedures for producing and defending the thesis proposal. The procedure for submitting and defending the proposal is stipulated in the Ordinance and forms for submission and assessing the proposal are available on the HEI webpage. A committee is formed, but there is no requirement that at least one member is external. The HEI should include this requirement in the Ordinance. The procedure of defence of the proposal includes a public defence. While there is a thesis defence protocol, there is no such protocol for the proposal defence. Also, detailed presentation guidelines are missing (although the Ordinance gives an overview of the defence). The HEI should publish the missing documents to obtain a high-quality mark on this criterion.
2.7.	Thesis assessment results from a scientifically sound assessment of an independent committee.	Improvements are necessary As far as can be discerned from the SER, the Faculty has generally scientifically sound procedures of assessment for the thesis. The programme has established procedures of developing and defending the doctoral thesis, described in sufficient detail in the Ordinance. The Faculty has published appropriate thesis defence protocol and thesis assessment guidelines, as well as guidelines for formatting the thesis (formatting guidelines should be followed up with templates in MS office/Libre office and LaTeX). The panel recommend the HEI to strongly encourage candidates to publish in top-rated journals. In the economics area at the moment it is impossible to publish during the programme, even if a candidate has ambitions to publish in a good journal. Hence, the panel do not recommend HEI to require it, as this would effectively decrease candidates' ambitions. In business-related fields, the situation is different and candidates usually publish during the programme and expectations should be of one high-level publication at the minimum.

committee members and the panel recommends that the Faculty makes much greater use of foreign staff in the PhD examination process. In relation to this, the Faculty should give serious consideration to the defence being conducted in English. The panel recognize international committee increases the costs of the defence, but both the HEI and candidate would benefit from it. It would likely improve a candidate's career prospects and encourage candidates to write in English, thus improving international aspects of the programme. The HEI could also use the opportunity of the visit of international staff, for example, to get a highquality seminar talk and increase prospects international research collaborations.

Although the thesis can be written in a modern format, as a collection of articles, the current regulations stipulates they have to have been published already. In economics, articles as a rule do not have to be published (publication lag time is quite long), while in management and other business topics rules vary and in practice candidates do often publish one, at most two articles during their PhD research time. In the HEI's programme at the moment, it is very difficult to write a thesis as a collection of articles, as the publication barrier is too high, in particular in economics. The HEI should consider relaxing these regulations.

Improvements are necessary

2.8. The HEI publishes all necessary information on the study programme, progression and completion, accessible outlets and media.

The SER indicates that the Faculty publishes relevant information on the study programme, admissions, delivery and conditions for progression and completion. Some information is found on the HEI's webpage, section on doctoral studies, as indicated in the SER. Information could be more complete, however. For example, the Ordinance admissions, delivery and conditions for regulating the programme should be linked, as well as all in related forms and guidelines (formatting the thesis proposal and the thesis presentation) regarding the programme. Although the HEI has English versions of the section, it has even less information than the Croatian version (for example, the application call for a new cohort was not published there).

Improvements are necessary

The SER gives only a broad overview of costs with no details or actual numbers on sources of income and costs, without which it is difficult to judge how sustainable the system of funding is. The HEI seems to collects funds for the doctoral education primarily through tuition fees and does not seem to be putting an effort into financing the programme in any other way. As a result they have a large number of part-time candidates who cannot spend enough time on research. We see this as a major impediment to high quality of the programme. Hence, the HEI should find means to fund the programme in other ways. For example, they could use their ties with the local private sector to secure scholarships for full-time studies. The HEI could put more effort into applying for research grants that would include funding for candidates, and improve support for the staff in making these applications.

2.9. Funds collected for the needs of doctoral education are distributed transparently and in a way that ensures sustainability and further development of doctoral education (ensures that candidates' research is carried out and supported, so that doctoral education can be completed successfully).

Existing funds do not seem to be allocated in a transparent fashion. It is not clear from either the SER or the interviews with staff and candidates, precisely how the funds are distributed and the rationale for this distribution. As far as could be discerned at interview with candidates, full-time candidates receive funding in various forms (do not pay tuition fees, conferences are paid for), but with the exception of a small minority, this is not the case with parttime candidates. Many of the candidates pointed out funding for research activities and its distribution as an important area that should be improved. This differential treatment of candidates should be eliminated and the panel strongly recommend establishing a more transparent system for allocating funds to candidates. For example, each candidate could be provided with an annual amount that can be spent on conferences, workshops and any other research activity. The HEI should reduce the enrolment of part-time candidates until a more transparent system of allocating funds has been introduced and this has been monitored and evaluated to ascertain that it is functioning appropriately.

Tuition fees are determined on the basis of transparent criteria (and real costs of studying).

Improvements are necessary

From the SER and the last application call for the doctoral

programme it is clear that the tuition fee is relatively high, at 75.000kn. The SER simply states that the fee is based on coursework costs and various other research related costs, without providing details and actual sums involved. Hence, the HEI did not provide a detailed enough breakdown of the costs for the panel to be able to confidently assess whether the tuition fee is determined on the basis of real costs of studying. Some information is also conflicting; supervision is mentioned as a variable cost, even though staff stated supervision is not compensated. Senior managers at interview suggested to the panel that fees are not high in comparison with other economics programmes. However, the fees are two to three times higher than those for the programmes in natural sciences, where research costs are substantially higher. Taking into account this information, as well as statements of candidates about the lack of support for their research activities, the panel have to conclude that the fees are not determined transparently and based on real costs of study. Finally, a high percentage of the fee (40%) goes to a rather vague category called "development of activities of the Faculty" which suggests that the doctoral programme is used to obtain additional funds for the department. This is highly unusual and the HEI should work on reducing this percentage to a minimum.

The panel recommend establishing a more transparent system, which provides a clear indication of the specific criteria used to determine fees. The HEI should also provide a detailed breakdown in terms of prices and quantity for each component. Related to the previous section, this system should indicate how fees are used and distributed to candidates. Regarding the level of fees, they could be lower if the first-year coursework is eliminated according to the panel's suggestions (see Section 4) and the percentage going to the Faculty is reduced. On the other hand, fees could be kept as they are if the suggested savings went into a fund for research activities of the candidates, which do not seem to be in place at the moment. The panel are not against fees in principle, however, the HEI should ensure that these fees are not paid by the candidate, covered instead through other sources of funding (donations from companies, grants from government agencies, etc.).

3. SUPPORT TO DOCTORAL CANDIDATES AND THEIR PROGRESSION

Improvements are necessary

3.1. The HEI establishes admission quotas with respect to its teaching and supervision capacities.

Admission quotas are not well aligned with HEI's supervision and teaching capacities. Current the quota is 40 candidates annually, which is too large for the HEI's supervision capacity - 34 supervisors. This number is our estimate, according to new stricter criteria out of total faculty, ignoring the external supervisors which do not count for this criterion. In the SER the HEI claims that supervision capacity is sufficient, however, they take into account only the candidates that have reached thesis stage. There are issues with assigning the supervisor at the beginning, most candidates seem never to graduate but fall through the cracks without a supervisor. This is incorrect in our opinion in general, as we have discussed in detail in Section 1.4, but in particular for establishing the quota where total availability is what matters. If HEI would accept 40 candidates annually and assign them a supervisor during the first year according to our recommendations, the faculty would be over-stretched and the ratio would be much higher than 1:3. In practice, the number of accepted candidates is smaller, 25 on average. This does not change the issue much, if all would be assigned a supervisor, the result would be the same. The quota should be dramatically reduced, to about 10 candidates per year, which roughly corresponds to quotas at the best programmes in economics and business in the EU. The quota could be higher if the HEI would follow our recommendation of having a five-year programme with additional selection before entering the research, PhD phase. The quota for parttime candidates admitted should be significantly reduced, and the admission criteria for them made stricter, given that they cannot invest as much time into the degree as full-time candidates.

Commendably, the HEI does seem to take into account when assessing applicants whether there are supervisors with complementary competencies. This is evident for example, from selection results in 2015, where a number of applicants were not offered a position as there was no potential

supervisor who specializes in that field.

Finally, the HEI quotas are not aligned well with its capacities due to the teaching load of the staff. Many professors teach over 400 hours annually and often teach at other institutions, which adds additional travel time. While this seems to be within legal limits, the panel's opinion is that such workload is too high and might not leave enough time for proper guidance. In the panel's discussions with the supervisors, they stated as well that sometimes too little time is left for anything else due to teaching. The HEI should decrease the teaching load of supervisors to make more time for supervision. This could be achieved in various ways. For example, by eliminating the teaching activities in the first year, as suggested elsewhere in the document. The HEI should be also stricter regarding supervisors' teaching at external institutions and impose limits in terms of teaching load for being able to supervise candidates. Finally, supervision and work with the candidate could be officially recognized and be a substitute for the teaching they are required to do.

Improvements are necessary

3.2. The HEI establishes admission quotas on the basis of scientific/ artistic, cultural, social, economic and other needs.

From the panel's conversations with alumni and stakeholders, it was clear that the local community values the programme highly and they think that companies and the public sector have a need for the doctoral education provided by the HEI. With a large number of students for the part-time mode, the quota seems to be at least partly based on the needs of the local private sector. However, the HEI did not provide any systematic evidence of private sector need for doctoral education (e.g. surveys of employers). This is despite their claim in the SER that they conduct market research and modify the enrolment quota according to the needs of the economy, society and Faculty's capacities, six months prior to the call (also stipulated in the Ordinance). To make the decision process better informed, the HEI could conduct a proper survey of the companies and public bodies, examining the needs for people with skills and knowledge provided by the programme. Moreover, the panel believe that the current part-time mode is not an appropriate approach to satisfying these needs. As the panel discuss in greater detail in Section 4, one solution

would be to make special agreements with companies whose employees are applying to study whereby half of the time is spent in the programme and half in the company. In some countries in EU, this is formalized as an 'Industry PhD' (a professional doctorate), which could be implemented as a country-level solution.

On average 25 doctoral candidates are admitted into the programme annually (with a quota of 40) while only 26 candidates finished in the last five years. All PhD graduates are currently employed, most of them in academic institutions and a minority in industry. This fact seemingly justifies the quota, but this is not entirely the case, as expected completion rate should be much higher - the current one is extremely low. It is also not a particularly positive sign that most candidates are employed by the HEI. This reduces the amount and diversity of knowledge among the faculty. Quality of international doctoral programmes is usually measured in placement of PhD graduates at other universities in the world. According to this measure, the HEI has a long way to go and the panel recommend the HEI introduces this measure as a performance indicator. The HEI should also start participating in the European academic job market by sending (with financial support) graduating candidates to popular job market conferences in Europe (for example, the Spanish Economic Association Job Market conference (SAEe) or Royal Economic Society PhD Meetings in UK).

3.3. The HEI establishes the admission quotas taking into account the funding available to the candidates, that is, on the basis of the absorption potentials of research projects or other sources of funding.

Improvements are necessary

It is clear that the HEI does not take into account the funding available for candidates when establishing the quota. This is one of the major flaws of the programme. Overall, too few candidates are fully funded, whether they are employed by the HEI, having full scholarships or working on research projects. In the announced quota from the call in 2016, out of 40 candidates, 5 only were envisaged to be full-time candidates. When we focus on the quota for full-time candidates, it is overstated as well, as in practice only 8 candidates since 2011 were offered a full-time position. Funding for full-time studies is crucial as this is the only way to ensure the PhD learning outcomes are indeed acquired and that candidates will produce high-quality research.

Moreover, the quota is misaligned with HEI funding available for research activities (covering data collection expenses, conference costs etc.). There is some funding available, but there is differential treatment of full-time compared with part-time candidates. Part-time candidates only have competitive calls to cover part of the costs of participating in conferences, publishing etc. Part-time candidates are also not involved sufficiently in research projects with faculty

The HEI should reduce the quota to the level where the majority of the candidates are provided with funding and are able to do research in a full-time capacity. The panel recognize that the funding for candidates is not easy to acquire; the HEI could use their good ties to the private sector and arrange scholarships for the candidates. Another option is to announce official calls for joint applications of the Faculty and potential candidates for international scholarships and provide support to candidates in applying for them.

Improvements are necessary

As extensively discussed in previous sections, the quota as well as the number of admitted candidates is too large to provide each candidate with a supervisor, given the supervision capacity. The HEI should significantly reduce the number of candidates admitted.

At admission the HEI is doing a good job at trying to select those candidates with a sustainable research plan and matching applicants to the programme with a potential supervisor. Applicants submit a basic research plan upon admission and the match with a potential advisor is assessed in an interview. Unfortunately, the official appointment of a supervisor (with all the rights and obligation) comes rather late, after the dissertation proposal at the end of the second year. From our interviews with the candidates it does seem, that in some cases at least, candidates and their future supervisors start communicating before the dissertation proposal. All of this is insufficient in our opinion and more systematic changes should be introduced in the structure of the programme. Due to the first year that focuses on non-research oriented

3.4. The HEI should pay attention to the number of candidates admitted as to provide each with an advisor (a potential supervisor). From the point of admission to the end of doctoral education, efforts are invested so that each candidate has a sustainable research plan and is able to complete doctoral research successfully.

coursework (discussed extensively in section 4) candidates do not enter the supervision process early enough and usually do not have a serious research plan in the first year. The HEI should remove the first-year coursework completely (if the HEI wants to keep the three-year programme) and candidates should get an official supervisor by the end of the first year at the latest. The panel also recommend HEI to introduce additional procedure for monitoring the candidates' progress. For example, the HEI could introduce a research seminar (where faculty, and supervisors in particular, would regularly participate) in which candidates are required to present an update on their research twice a year.

The part-time mode introduces specific issues – due to their everyday jobs part-time candidates are not able to invest sufficient time in progressing with their research. This is not necessarily to do with the number of candidates or faculty not putting enough effort - we did see evidence that the teaching staff and potential mentors try to ensure that candidates are on track. This is rather, a reflection of a parttime mode not set-up well enough and too low criteria for part-time candidates. As the panel discuss in greater detail in Section 4, one solution would be to make special agreements with companies whose employees are applying whereby half of the time is spent in the programme and half in the company. The HEI should also increase the selection criteria for part-time candidates given that they would be able to invest a smaller amount of time into the research. The HEI should also introduce stricter procedures in relation to those candidates who show insufficient progress.

Improvements are necessary

and highly motivated candidates are recruited internationally.

There is currently a lot of room for improvement with regards to recruiting motivated and talented candidates 3.5. The HEI ensures that interested, talented internationally. First, most of the candidates that undertake the degree alongside their main job are part-time. These candidates are unlikely to continue their career in research and are likely to be less motivated (this might partly be the reason behind the inactivity of so many part-time candidates). The criteria seem to be lower for the part-time candidates, which reduces the chances of recruiting the best candidates. The HEI should decrease the number of parttime candidates to a minor part of each cohort, not the majority as is the case at the moment, as well as improve the selection criteria for the part-time candidates.

Second, the HEI is showing some signs that they are trying to recruit internationally - the SER states that they advertise the call at EURAXESS portal. The HEI has taken some steps towards the internalization of the programme with a number of international faculty. This could contribute significantly towards attracting talented international candidates. While these changes are positive, much more can be done. The HEI should put more effort into advertising the programme. For example, a call was not published on their webpage (English version). It could be published on popular academic job search websites (e.g. www.econjobmarket.org, www.jobs.ac.uk, www.inomics.com, www.akadeus.com etc), in particular for the full-time positions. The HEI should offer courses and supervision in English, as used at most other programmes at institutions in the EU, to make the programme more attractive for international candidates.

Improvements are necessary

The HEI does not publish calls in a timely manner. For example, the call for the 2016/2017 academic year was published on July 18, 2016. While this might be enough time for local candidates, for international candidates it is clearly too late. In comparison, US universities would have a deadline for applications in December 2015, while good programmes in the EU would have deadlines from January to April 2016. The HEI should publish the call much more in advance – current timing is strongly dis-incentivising international candidates to apply. We recommend the HEI synchronizes it with other programmes in the EU - April during the same year at the latest.

The criteria used are specified in the programme Ordinance in detail and listed in the call itself. The criteria are generally good – a grade average of 3.5 at minimum, previous research and awards and research interests assessed through an interview. However, the research proposal has not been part of the process thus far (the Ordinance does not mention it and only a statement of research interests is

3.6. The selection process is public and based on choosing the best applicants.

asked in practice) and letters of recommendations are required only if the grade average is below 3.5. The HEI should require reference letters in all cases and require serious research proposals (not a simple statement of research interests). Research proposals are particularly important given that the programme should begin immediately with the research phase (if the HEI were to opt for a five year programme - see section 4.1 - research proposals might not be necessary). Another option would be to require some certificate of mathematical or analytical competencies (for example, GMAT or GRE) and knowledge of English (for example, TOEFL or IELTS), together with some required level of performance, to be eligible. Such certificates can facilitate comparison of candidates coming from different institutions and countries. To make the process more international and attract candidates with good knowledge of English, the HEI could do the interview and ask for a research proposal in English.

There are two documents that candidates need to submit according to the call in 2016 that we believe adversely affects the likelihood of international applicants applying for the programme. One is that applicants with a degree from abroad should submit an official resolution (we assume of some government institution in Croatia) of recognition of their degree in Croatia. The panel recognize this is an important document, but this should be left to officially provide evidence, after the selection process, when the applicant has accepted the position on the programme. Another document is a birth certificate, a highly unusual international document to require by standards. International students are applying for many programmes at the same time and programmes asking for strange additional documents are likely to be dropped from consideration altogether. We recommend to drop this requirement entirely, unless there are strong legal reasons. Otherwise, it can also be left to be provided after the applicant has accepted the position.

Although the Ordinance does not stipulate that the candidates should have a degree in Economics to apply, in practice it appears that the HEI allows candidates from other disciplines only if they have a Master in Science or

Postgraduate Specialist degree in Economics. The programme could be more open to candidates that did not complete economics studies previously, if a five year programme were to be adopted. Improvement are necessary The Ordinance of the programme describes the selection process in sufficient detail. It does not give the candidate a right to complain, however, contrary to the claims in the SER. It is also not clear whether the list of admitted applicants is public, it is simply stated that applicants will be informed in a written form. The HEI should give applicants the right to complain against the application results, with a clear time limit for both complaints and responses to them this should be specified in the Ordinance. The Ordinance 3.7. The HEI ensures that the selection should be also clearer on making the list public. procedure is transparent and in line with published criteria, and that there is Even though the Ordinance specifies exact weights a transparent complaints procedure. attributed to each component, this information is not clear from the application call (for example, the call in 2016, is contrary to the claims in the SER). The HEI should either inform applicants how their application is graded in the call, or point them towards the Ordinance for details. Finally, at the moment, the Ordinance does not give a right to applicants who were not admitted to review the strengths and weaknesses of their application and, possibly, receive guidelines to improve their research plans, and generally their application package. The HEI should modify the Ordinance and allow such requests from the candidates that were not admitted. Improvements are necessary The HEI recognizes some of applicants' prior learning and achievements. The Ordinance stipulates that in case 3.8. There is a possibility to recognize candidates can document that they have a Postgraduate applicants' and candidates' prior Specialist or Master of Science degree, the HEI will assign learning. them 60 or 80 ECTS points, respectively. It is reasonable to expect a reduction in tuition fee in such cases, as the candidate will not incur a cost for the major part of the programme- coursework. However, at the moment the HEI

does not do give such a discount. There are some official

complaints about this as well. For example, in 2016 Martina Ferencic, a part-time candidate, complained about having the same tuition fee as others, even though she did not have to do the first-year coursework. The HEI should offer a discount in fees if prior learning is recognized.

Recognition of other achievements is not regulated by the Ordinance. For example, it is not clear whether and how prior publications are taken into account (although there are detailed sections on publications and conference attendance during the programme), accomplishments from another doctoral programme, as well as non-formal and informal learning. The HEI should recognize explicitly these forms of accomplishments as well, and provide clear criteria in the Ordinance.

Improvement are necessary

There is a Committee for Post-graduate Studies and Doctorates which monitors the quality of the doctoral programme, which provides support to candidates in this respect. Advisors as well as doctoral candidates need to report on an annual basis to the Faculty and to this Committee. Candidates have the right to choose their supervisors, and their research area, and to choose electives. Candidates can turn to this committee when a problem arises.

Publicly available Ordinance of the doctoral programme defines the rights and obligations of all parties in detail - dealing with issues such as curriculum, recognition of credits, completion requirements, etc. There are also regulations concerning Quality Assurance.

There is still room for improvement, however. Supervisor's obligations and commitments are not defined in sufficient detail and the panel recommend the HEI to introduce a supervision contract between candidates and their supervisors that would define the rights and obligations in greater detail. The HEI should not require the supervisor to be an economist as well, since this could restrain interdisciplinary work, but one supervisor who is not an economist could work alongside one who is.

3.9. Candidates' rights and obligations are defined in relevant HEI regulations and a contract on studying that provides for a high level of supervisory and institutional support to the candidates.

Improvements are necessary

Institutional support to the candidates in their research and career development is rather poor at the moment. First, as mentioned throughout the report, most candidates do not receive full funding for the doctoral programme. Doing a doctoral degree is a full-time job and high-quality research is unlikely to be a result of a part-time mode. Hence, the HEI should ensure that most candidates are full-time and have full funding. Also, the overall level of support of research activities is quite low (data, experiments, conferences). For example, the SER does not mention at all the number of candidates for whom the funding for conferences was provided; and only 20 out of 201 candidates had access to research projects. The HEI should ensure appropriate level of funding for research activities, as already stated in previous sections. This should be feasible given the high tuition fees.

3.10. There are institutional support mechanisms for candidates' successful progression.

Second, there is a differential treatment in providing support in terms of funding for research activities - the HEI does provide some help in research and career development, but this is concentrated mostly on the full-time candidates. These candidates have greater access to (international) research projects and funds for their research and conferences.

It is true that for most part-time candidates, institutional career services are not particularly needed as a significant portion of them already has good placement in business and other sectors. However, they do need the same level of support in their research activities as full-time candidates. This should be ensured through a transparent mechanism for distributing the funds for research activities. For example, a fixed annual amount for each candidate. If there is not enough money for a significant fixed amount given to every candidate each year, they should allocate it on a merit basis, in a transparent fashion.

4. PROGRAMME AND OUTCOMES

4.1. The content and quality of the doctoral programme are aligned with internationally recognized standards.

Improvements are necessary

The current programme does not satisfy internationally

recognized standards. In accordance with the EU qualifications framework, CroQF prescribes 3 years of independent full-time research. However, out of 3 years of expected duration, almost 2 years are spent attending lectures, and only 1 year is formally left for research. The best PhD programmes in economics in the EU as a rule dedicate three years to research only - see, for example, economics and business departments at the London School of Economics, University of Bonn, University of Zurich, Universitat Pompeu Fabra, or London Business School These programmes often have a significant coursework component, however, it is separated from the PhD programme, takes place before the PhD independent research, and candidates usually get a degree for it (often called a Master of Research).

The HEI has compared its programme to a PhD programme at the University of Ljubljana and indeed there are a lot of similarities between the programmes. There are some important differences, however. In Ljubljana candidates have a more balanced workload between the coursework and research in the first year - for example, 30 ECTS have to be spent on research and candidates have to present the thesis proposal at the end of the first year. In Ljubljana the economics and business tracks are separated, and lectures are conducted in English. Even though a part-time mode is available in Ljubljana, the balance of full-time to part-time is quite different - for the 2017/18 academic year, out of 30 available places 25 are full-time and there is only 5 part-time places (and allowed only for the business track). While Ljubljana seems to be a leading programme in the region, in the EU there are many programmes that are of much higher quality and comparison should have also been made with one of these institutions, in an attempt to learn from practices of the leading institutions in the EU. This is particularly important given the global scope of research output. For this reason the panel will actually compare the HEI programme to the programmes of above mentioned institutions and similar high-quality institutions in EU (the panel will call these programmes the 'reference programmes').

It is possible that coursework can be a part of the

programme, but courses have to have a strong research orientation. While some of the courses do have a research component, they still have considerable non-research components (for example, evaluation through exams). Moreover, from reading the syllabi and discussions with the candidates, the panel concluded that most of the courses during the first two years are more appropriate for the 'Master of Science' level, rather than the PhD level, and some are more suitable for the Bachelor level. In comparison, the reference programmes as a rule have no coursework at all in the PhD part. However, some of the more quantitative courses (econometrics courses for example) do map well to the first year of Master of Research courses of the reference programmes. The language of teaching in the reference programmes is English (including in non-English speaking countries), while in the HEI's programme courses are taught in Croatian. Finally, there is also a lack of courses teaching transferable skills.

Regarding the admission procedures, the HEI has comparable procedures to a large extent with reference programmes. The difference is that reference programmes usually require some internationally recognized certificate of mathematical or analytical competencies (for example, GMAT or GRE) and knowledge of English (for example, TOEFL or IELTS). Regarding the admission criteria the HEI has lower criteria than the reference programme institutions. The panel recognize that these decisions are somewhat dependent on the pool of applicants. However, given the very high number of candidates accepted to the programme, the criteria are still too low. This is particularly the case for the part-time candidates, who according to their progression in the programme and discussions with the candidates, are often not prepared well enough to enter the PhD programme.

In the reference programmes, theses most often consist of a collection of articles, written in the English language. In economics, articles as a rule do not have to be published, while in management and other business topics rules vary and in practice candidates do often publish one, at most two articles during their PhD study. In the HEI's programme at the moment it is very difficult to write a thesis as a

collection of articles. The first issue here is that it is impossible to do this in three years, where there is only one year left for research. The second issue is that regulations are such that two articles from the thesis would have to be published – a bar that is impossible to reach in economics, especially if the candidate has high aspirations, to publish in a very good journal. We do recognize that this regulation is imposed by the University. No thesis in the HEI's programme has been written in English so far. Regarding the assessment committees, in the reference programmes the supervisor as a rule cannot be a part of the committee. The HEI did introduce the same rule recently.

Through their examination of the theses the panel found several interdisciplinary theses, using methods and knowledge from computer science (for example, artificial neural networks) and physics (for example, environment dynamics), and according to SER there are two theses with co-supervisors from other disciplines. We were not able to assess whether candidates were able to take courses from other departments within the University.

Overall, substantial changes are needed to align the programme with the CroQF/EU qualifications framework and international standards. The panel see two possible solutions, both including a formal 3-year phase strictly reserved for independent research, with little or no coursework, and eliminating or substantially reducing the proportion of part-time candidates.

1. The HEI could keep the 3-year programme, but eliminate almost all the coursework in the first two years. This would leave enough time for independent research and formally satisfy the requirements. Courses with a strong research component could be included in the programme, but there should be relatively few. These courses should not have traditional exams that are common in the current courses, instead leaving candidates to work on their topics, working on first articles and using the courses to get continuous and detailed feedback. This option, however, would also require a far more stringent selection process, where accepted candidates would already have sufficient competencies and be ready to enter the research phase. This particularly

concerns the criteria for part-time candidates that seem to be less prepared to start with research. Candidates should commence with the research immediately upon entering the programme, matched with a supervisor and submit a research proposal by the end of the first year at the latest. However, this option is not particularly well aligned with the practices of the best economics and management programmes in EU and the world.

2. The HEI could form a five-year programme (potentially 4 years), consisting of two years (potentially one year as in the UK, for example) Master of Research phase with a mixture of advanced courses taught in a traditional manner and research oriented courses, followed by a formal threeyear PhD phase. This is the approach taken by the reference programmes. Following this international standard, the HEI could keep the coursework, but separate it into a (obligatory) one or two year-long Master of Research phase. In a two-year option, the current first-year programme could be kept more or less as it is. Course material should be more advanced than it currently is and focus should be on building strong methodological foundations. The second year should focus on topics/courses that would be thoroughly research-oriented with the material based on articles from the top-field journals. Candidates should not be evaluated through traditional exams, instead, they should be allowed to develop research interests and conduct small research projects that could evolve to chapters in their thesis that would allow them to quickly progress with their thesis proposal. Most of the courses should be electives to allow candidates to tailor the content according to their interests. The HEI should also consider separating the business and economics track. Candidates should get an official degree after this period, if nothing else is available according to the regulations, perhaps as a postgraduate specialist in economics or business degree with science orientation. The performance of the candidates in the Master of Research phase can be used to further select the candidates for the PhD phase of the programme. The Master of Research phase is then followed by a PhD phase that would formally consist of independent research in duration of three years. In this phase, there should be no coursework, allowing candidates to focus on their research. As a way to monitor candidates' progress and to actively involve them in the

research community they should regularly attend a research seminar closest to their field and make a presentation on it at least once a year. This option would allow for somewhat lower entrance criteria and a larger intake of candidates, in case there is another selection after the Master of Research phase. The panel believe that this option is more suitable for the HEI's situation, given that it does not have access to a pool of applicants with high enough competencies to start with research immediately. In case they do get such applicants, the HEI can always allow them to transfer to the PhD phase immediately.

Finally, while 181 out of 201 candidates at the HEI's programme were part-time, in the reference programmes a part-time mode of PhD studies as a rule does not exist (although some are considering offering a part-time option in the future - for example, Oxford University). The full-time mode is the best way to ensure that sufficient skills are acquired and three years are spent in research. From our discussions with the stakeholders, we recognize there is a need for part-time studies in the local private sector. Serving the needs of the private sector is also well aligned with the Croatian 2020 Strategy for Education, Science and Technology, where one of the objectives is improved cooperation with the world of business. Hence, the HEI could keep the part-time mode of studies, but the proportion of candidates should be substantially reduced - to about 20% of the annual intake. While serving the needs of the private sector is welcome, it needs to be done in a manner that is well aligned with the level 8.2. of the CroQF. First, current part-time candidates, even if envisaged six-year duration is taken into account, cannot spend three years doing full-time research alongside a full-time regular job. The panel recommends the HEI to make special agreements with the companies whose employees are applying to the programme whereby candidates are spending 50% of their worktime at the HEI working on research. This is close to the concept of the 'Industrial PhD' introduced in some countries in EU. Second, selection criteria should be increased and committees should be particularly careful when selecting the part-time candidates, as impressions from our discussions with the staff and candidates is that the part-time candidates are less prepared for the PhD and

come with lower competencies.

Existence of the part-time mode is also related to an issue with the quota. The number of candidates admitted annually is unrealistically large (the advertised quota is 40, 5 full-time and 35 part-time candidates, and on average 25 candidates have been enrolled in last five years), out of which most are part-time candidates. As discussed before, we do not see how the HEI can have enough resources to supervise the number of candidates they advertise and currently have. The mismatch between the quota and the resources is particularly clear when we compare the HEI's quota with the usual quota in reference programmes, which is closer to 10 candidates annually, and with reference institutions having substantially more resources than the HEI. Note that the reference programmes might enrol similarly large number of candidates into their Master of Research phase, however in these cases there is usually a stringent selection process and fewer candidates continue to the PhD programme. To conclude this point, the HEI should substantially reduce their advertised quotas for the PhD programme to a more realistic number, as well as their annual intake.

To align their programme with international standards further the HEI should also (partly or completely) teach and supervise in English. In our discussion with the teaching staff and supervisors, the panel saw they are open to this. Implementing this more officially and advertising it would motivate candidates further to write their essays and thesis in English, preparing them better for an academic career. This is likely to attract more international candidates, enriching the programme further.

4.2. Programme learning outcomes, as well as the learning outcomes of modules and subject units, are aligned with the level 8.2 of the CroQF. They clearly describe the competencies the candidates will develop during the doctoral programme, including the ethical requirements of doing research.

Improvements are necessary

The programme learning outcomes are mostly aligned with the level 8.2 of the CroQF. The SER describes the competencies the candidates develop through the programme in a clear manner and corresponds to the level 8.2 of the CroQF. One exception regarding the programme learning outcomes is that teaching and assessment competencies are not included, and the HEI should include them in the programme learning outcomes. Due care should

be taken that both full-time and part-time candidates have access to such training.

With respect to the learning outcomes of the courses, we find that they are not well aligned with the level 8.2 of the CroQF. Syllabi of the individual courses (supplied by the HEI) do have detailed descriptions of course objectives, intended learning outcomes, content, teaching and learning methods, candidates' obligations, as well as assessment procedures. Even though such clear descriptions allow for quality monitoring, learning outcomes of courses are not well aligned with the level 8.2 of the CroQF. Many of the courses have too much weight on 'consuming knowledge' rather than producing knowledge. Courses are more appropriate for Master of Sciences and Bachelor rather than the PhD level, although there is evidence that a research focus is embedded in some of the courses. With the exception of a few courses teaching research methodology and non-research skills, the remainder of the courses should have a pure research orientation. In such research courses, teaching material should be based on articles from the top field journals, and candidates should be allowed to develop research interests and conduct small research project that could evolve to chapters in their thesis that would allow them to quickly progress with their thesis proposal. Assessment should be then based on such research output instead of traditional exams.

Finally, ethical aspect of conducting research seems to be superficially covered in a single course. There is also no mention whether issues of data privacy and confidentiality in cases of primary data collection (for example, surveys, which some of the theses used) is covered. These topics could be explicitly covered, for example, in the "Methodology of Scientific Research" course.

4.3. Programme learning outcomes are logically and clearly connected with teaching contents, as well as the contents included in supervision and research.

Improvements are necessary

The programme learning outcomes are insufficiently aligned with individual courses, supervisory work and research. The largest disconnect is in the amount of teaching content that is not research oriented and proportion of the coursework in the total duration of the programme. As a result, not enough time is left for

supervision and research, and achieving the intended research related outcomes (research skills, knowledge of the literature, methods, critical reading, writing, etc.). The panel recommend that HEI reduces the teaching content overall. Candidates are supposed to spend three years conducting research full-time to acquire the doctorate qualification, according to the EU qualifications framework and level 8.2. of the CroQF. With the current coursework load, even if all the courses were research oriented, this is not achievable. The obligatory coursework load should be reduced to at most one semester's worth of full-time courses. Some courses could be potentially kept in the programme, but as electives that can be taken by candidates if required by their particular topic of research. Reducing the coursework load would allow starting with the research sooner - the thesis proposal deadline should then be moved to the end of the first year and supervisors should be officially matched with candidates already during the first year, ideally by the end of the first semester. If candidates had more time for supervision and research, they should have more time for achieving learning outcomes specifically related to research - critical reading, good knowledge of the relevant literature, modelling approaches used in the field, etc.

There are also several specific concerns regarding the teaching content. First, there is a disconnect, due to courses not being advanced enough. Content of many of the courses is more suitable for Master of Science level and some for Bachelor level. This is most easily seen in literature used in the courses – as a rule they rely on textbooks and not on articles that are at the frontier of knowledge. Candidates are simply not exposed enough to the most advanced material that is pushing the boundaries. To align the teaching content with the programme learning outcomes, the HEI should have more advanced courses, with content that is highly specialized, at the frontier of the fields, relying on the latest articles.

Second, our examination of the individual courses indicated that programme learning outcomes regarding research ethics is insufficiently covered. While the panel recognize that these topics are likely to be well covered in the individual work with supervisors, it is not formalized in the

programme. Moreover, the panel discussions with teaching staff and supervisors suggested that more formal education about ethical aspects of research is indeed needed – there are accounts of candidates getting back their essays for correction for not passing the plagiarism check. Again, as previously mentioned, in methods courses the HEI should ensure that ethical aspects of conducting research are covered in depth.

Third, programme learning outcomes regarding non-research skills - project planning, management, reading and writing, an important aspect of the level 8.2 of the CroQF - are not aligned with the teaching content. Similar to research ethics issue, these outcomes are implicitly acquired through the research and supervision, but there is room for improvements. This is particularly important as many of the graduates are unlikely to stay in academia (although statistics vary from university to university, estimates are very low, about 10%) and will have a need for such skills for gaining employment outside academia. The HEI should provide a selection of courses focused on building non-research competencies. These courses could be offered by the University, not necessarily by the HEI.

There are two issues concerning the connection of programme learning outcomes with supervision and research. First, interviews with candidates indicated that they might have insufficient knowledge of the literature in their fields. Some had difficulties with naming the most relevant journals and/or authors in their fields or best journals in economics or business. This suggests that gaps in supervision might exist, supervisors not guiding candidates well enough in collecting the information and examining the relevant sources. This is most likely due to not enough time left for supervision and research. Second, the panel heard accounts from both supervisors and candidates about not having the competencies to tackle the quantitative aspects of the research projects. Of course, the panel recognize that researchers cannot be experts in all methods, but the comments suggested that it was the question of quantitative analysis in general. The panel are worried that candidates with supervisors having a lack of quantitative skills will not be able to achieve intended

competencies in research methods. The HEI should ensure that candidates have supervisors with sufficient quantitative skills. If certain supervisors have a lower level, this should be resolved by assigning a co-supervisor who is well versed in quantitative methods. Both of these issues might be partly due to disconnect with the teaching content, courses that are not research oriented enough, and relatively low entrance criteria.

The panel recognize that candidates applying to the programme, according to their own words, have a need for further traditional courses with advanced level of the material (in particular, they have mentioned quantitative methods, statistics and econometrics). However, according to the EU qualifications framework and level 8.2 of the CroQF there is no room for such education. Candidates should arrive to the PhD programme with such competencies reflecting already, our previous recommendation of raising the selection criteria and reducing the quota. An option previously mentioned is to require candidates to pass first through the Master of Research programme (or Postgraduate programme with science orientation) where most of the current courses would fit well. Having a separate phase dedicated to acquiring advanced level of skills and knowledge required for conducting research on PhD level would go a long way in creating candidates that are ready to start with research immediately in the PhD programme.

4.4. The doctoral programme ensures the achievement of learning outcomes and competencies aligned with the level 8.2 of the CroQF.

Improvements are necessary

For those candidates who have completed the programme, the learning outcomes and competences reflect alignment with level 8.2 of the CroQF. Evidence from the candidates' thesis, publications, and seminar and conference articles demonstrates competence. However, candidates as a rule take more than three years to acquire these competencies, more than the programme should formally last. This reflects the fact that candidates are not left enough time for research in the official programme. As stated previously, the HEI should reduce the coursework load to the minimum and leave three full years of independent research to candidates.

There is room for improvement in a number of areas.

Several theses have required quantitative elements, as a rule they include modelling and/or econometric analysis. In contrast, very few of the research essays and conference articles that the panel examined have these elements. Discussions with candidates revealed some gaps in this respect, and a number could not specify clearly the methods (in terms of modelling or econometrics) they were using in their research and/or name software packages. Moreover, candidates stated they lacked advanced education in econometrics, in terms of coursework and sometimes in terms of guidance from supervisors. Overall, the level is closer to the minimum expected and candidates' competencies in this regard can improve substantially. Unfortunately, introducing advanced level courses in the programme is not in accordance with the CroQF framework. The HEI should require candidates to pass a comprehensive Master of Research (Postgraduate specialist with scientific orientation) phase where they would be exposed to the required coursework and/or make the enrolment process more selective.

Articles from the thesis are published in reasonably good regional journals. While this is a satisfactory level according to national regulations, candidates should strive to publish in top journals in the field. Interviews with candidates revealed a lack of ambition in those terms, partly because of a lack of awareness - for example, they were not able to name the top journals in their fields (e.g. Quarterly Journal of Economics or Econometrica in economics, Management Science or Journal of Consumer Research in business). As previously suggested this might be due to supervisors not guiding candidates well enough in collecting the information and examining the relevant sources, and/or not having research oriented courses with exposure to good journals and articles. Interestingly, the theses we have examined do often include articles from these journals. Lack of ambitions in terms of journals can be partly alleviated with courses that would be more research oriented - using articles from top journals in the field instead of textbooks that are mostly used at the moment. This should ensure that candidates are at least aware of good journals in the field. The HEI should do more in increasing the proportion of candidates that attend summer schools and go to lengthier research stays at the

best programmes in EU (funding, disseminating information etc.). Exposure to such environments is likely to increase their awareness and ambitions. The HEI and supervisors could also set their expectations higher.

Finally, regarding the quality assurance procedures there is room for improvement as well. While candidates can give comments about the programme and supervisor in their annual reports, these are not anonymous. Candidates are completing surveys about individual courses, but we did not see surveys about the programme in general. Moreover, candidates often have better perspective on their learning outcomes and how valuable they are after the programme is completed. Although in the SER surveys are mentioned, we have not seen any evidence of it. The HEI should conduct regular anonymous surveys of their candidates and occasional surveys of alumni about their satisfaction with the programme and about learning outcomes, and publish the results of the analysis.

Improvements are necessary

Teaching methods are not well aligned with level 8.2 of the CroQF. Learning outcomes for this level consist of creating and evaluating new knowledge and methods, while most of the courses utilize methods aimed at consuming existing knowledge, more appropriate for levels lower than level 8. Relating to the points made in the earlier parts of the report, if the number of courses were reduced, with those delivered carrying higher ECTS credit, this would allow for course content to be at a higher level with teaching methods reflecting smaller group and research-led activities and assignments.

More precisely, the course descriptions indicate that the majority of them use *ex-cathedra* as a dominant teaching method. Research-oriented methods are often present as well, but they form a smaller part. This share can be discerned from course objectives, content, type of evaluation and type of literature used. As a result, research related competencies – the core of the PhD education – are not acquired to a large enough extent through the coursework. The HEI should reduce ex-cathedra teaching to the minimum. Candidates should have more opportunity to

4.5. Teaching methods (and ECTS, if applicable) are appropriate for level 8.2 of the CroQF and assure achievement of clearly defined learning outcomes.

engage in critical reading, writing and presenting original research – for example, by writing referee reports of latest papers, developing their own research ideas and using the courses to improve, discuss and present them. This should be reflected in the type of assessment – candidates should be assessed by their research output, not exams. The courses should frame the topics discussed and provide a forum that will allow candidates to create and evaluate new knowledge.

Improvements are necessary

Candidates have the opportunity to develop transferable skills by leading their research projects, and in some aspects of the taught programme in relation to research-led assignments. They are also encouraged and able to participate in workshops, the doctoral conference organised internally and also external conferences. By participating in these activities candidates develop writing and presentation skills. The full-time candidates who are also Faculty members have more opportunity to engage in activities that are directly related to research such as project management skills and teaching. For the same reason, the part-time candidates have fewer opportunities for the development of transferable skills.

4.6. The programme enables acquisition of general (transferable) skills.

These outcomes, however, arise rather indirectly and we did not see evidence that candidates have access to workshops or courses that are more explicitly aimed at teaching business and managerial skills, presentation, writing and project management skills. Acquiring such skills is important for the small percentage of PhD candidates that will eventually work in academia, but even more important for the majority that will not.

The HEI should organize elective courses and workshops that explicitly teach transferable skills (for example, courses on project management, developing grant proposals, writing, presenting) and incentivize candidates to attend them with ECTS points. This should also alleviate the issue with fewer opportunities for the part-time candidates. We also recommend the HEI to organize events where candidates present their projects in a succinct manner, accessible to a lay audience (see, for example, FameLab

organized by the British Council https: //www.britishcouncil.cz/en/programmes/society/famelab) . The HEI could leverage its excellent ties with the private sector when organizing these activities. These activities and courses are cross-disciplinary and could be offered by the University, in this case the HEI does not need to organize them, but it should actively promote them and incentivise candidates to attend them, once again using ECTS points.

Improvements are necessary

4.7. Teaching content is adapted to the needs of current and future research and candidates' training (individual course plans, generic skills etc.).

The taught aspect of the programme allows for flexibility in the selection of classes, and research plans are developed for each candidate. Candidates do have considerable freedom of choice and input into the development of their research plans. This being said, candidates still have a too large section of obligatory teaching content - five core courses in the first year and two courses in the second year. Finally, candidates are severely limited by the choice of courses with advanced content appropriate for the level 8.2. of the CroQF, as mentioned in several places in this section of the report (e.g. section 4.3 or 4.5).

As stated earlier, fewer courses (with a larger ECTS value) would be more appropriate. Following this advice would automatically reduce the number of obligatory courses as well. To improve the quality of the choice of courses, all recommendations regarding the teaching, as indicated in sections 4.3 and 4.5 apply here as well.

High level of quality

4.8. The programme ensures quality through international connections and teacher and candidate mobility.

The HEI is well advanced in its internationalisation strategy. It is connected through European charters and specific cooperation agreements. Faculty and candidates engage in mobility through ERASMUS +, CEEPUS and CESEEEPHD. The HEI has a number of international collaborators, and has visiting international staff who participate in the doctoral programme. For example, core courses have at least two lecturers, one of which is always coming from external, often international, institution. HEI members also have international experience and in some cases were educated outside of Croatia.

There is evidence that candidates are supported and encouraged to attend international conferences and to publish in international journals. These opportunities are communicated to candidates via different means, but importantly through the supervisors. We commend the HEI for incentivizing mobility with ECTS points - candidates receive 10 ECTS points for conference participation and 20 ECTS for research stays of more than 3 months. While candidates do attend conferences and various workshops, these are mostly events in Croatia and neighbouring countries. However, funding is often inadequate and when it is provided, it seems to be done in a non-transparent way. In particular, according to our interviews with the candidates there seems to be an unequal treatment of part-time and full-time candidates. We understand that because of working/business commitments part-time candidates may not be able to take part in international mobility in the same way as full-time candidates. Taking this into account, we still found evidence that full-time candidates receive greater support. Moreover, we find poor funding surprising, given the tuition fees the candidates are paying for the programme. Regarding lengthier stays abroad, even though the HEI provides good opportunities (e.g. CESEEPHD), candidates do not seem to use them. The HEI should encourage candidates to attend events outside of the region, for example, with larger number of ECTS points for attending the best international conferences in the field. Together with larger funding in place, and more information, candidates will be more likely to use the opportunity and attend events outside of the region. Funding is particularly important for lengthier research stays abroad, as without such support candidates are highly unlikely to use such opportunities. As mentioned previously, issues with the discrepancy in opportunities between the full-time and the part-time candidates can be easily resolved by providing each candidate, regardless of their status, with the same annual amount of money they can spend on research activities. This is a standard way of distributing the funds to the candidates in good doctoral programmes. The amount should be considerable, given the tuition fees candidates are paying. Reduction in quota that we have mentioned elsewhere should help, as well, with increasing funding available to each candidate.

Finally, candidates have the opportunity to write a thesis in a different language. Currently, they are required to include an extended abstract in English in their thesis. However, no candidate has written a whole thesis in English yet. Candidates would be more likely to do it if they had more experience with writing in English. For example, this could be achieved by conducting some courses in English where candidates would be required to write their essays, article reviews and small research papers in English.

* NOTE: RECOMMENDATIONS OF THE EXPERT PANEL TO THE ASHE'S ACCREDITATION COUNCIL AND QUALITY LABEL

The role of the Expert Panel in the re-accreditation of doctoral study programmes is manifold. The Expert Panel or part of the Expert Panel visiting a higher education institution drafts a report on the basis of a self-evaluation report, the accompanying relevant documentation, and a site visit to HEI. The draft report is adopted by all members of the Cluster Expert Panel, while the president of the Cluster Expert Panel is responsible for coordinating the assessment levels.

The report contains an assessment on whether a doctoral study programme delivered at a higher education institution complies with the prescribed laws and by-laws, as well as any additional/recommended requirements defined by the Agency's Accreditation Council, and whether a higher education institution can obtain a positive, i.e. satisfactory quality assessment according to the criteria set out in this document. Moreover, the Expert Panel must make recommendations for quality improvement.

Based on the assessment of all these elements, the Expert Panel may propose to the Accreditation Council of the Agency to issue either a confirmation on compliance, a letter of expectation for the period up to three (3) years in which period the higher education institution should eliminate the identified deficiencies, or to deny the license.

If the Expert Panel has assessed that a doctoral study programme delivered by a higher education institution does not meet legal and other requirements or that the quality of a study programme is not ensured (i.e. that HEI does not meet additional requirements or recommendations made by the Accreditation Council, or has a very poor quality assessment), they should propose to the Accreditation Council to deny the license.

If the Expert Panel considers that the relevant laws and bylaws have been met by a higher education institution, but that certain elements mentioned above do not meet the quality requirements, while they consider that the identified shortcomings can be corrected within a time frame of three years, they should issue a letter of expectation.

If the Expert Panel considers that all legal and additional/recommended requirements have been met and the quality assessment is satisfactory, i.e. that a study programme fulfils the learning outcomes appropriately defined for that level and scientific area, they may propose the issuance of a certificate and have a HEI commit to quality improvement and reporting to the Agency during the follow-up period.

Finally, if the Expert Panel has, in accordance with the criteria mentioned above, proposed issuing the certificate of compliance and assessed that, in addition to meeting the minimum quality requirements – i.e. the qualification framework level - for a study programme, the programme should be identified as a doctoral programme of a 'high level of quality', the Expert Panel may propose to the Agency's Accreditation Council that such a doctoral study programme be awarded the 'high quality label'. Thus the Agency, with the consent of the Accreditation Council, grants a higher education institution the right to use the label for their academic and promotional purposes.

The 'high quality label' cannot be proposed or awarded to a programme or a higher education institution that does not comply with the requirements laid down by the laws and bylaws mentioned in this document, and any additional requirements recommended by the Accreditation Council.